

Oracle Project Portfolio Management Cloud Implementing Project Financial Management

This guide also applies to on-premise implementations

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Oracle® Project Portfolio Management Cloud Implementing Project Financial Management

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Preface

This Preface introduces the guides, online help, and other information sources available to help you more effectively use Oracle Fusion Applications.

Oracle Fusion Applications Help

You can access Oracle Fusion Applications Help for the current page, section, activity, or task by clicking the help icon. The following figure depicts the help icon.



Note

If you don't see any help icons on your page, then click the Show Help icon button in the global area. However, not all pages have help icons.

You can add custom help files to replace or supplement the provided content. Each release update includes new help content to ensure you have access to the latest information. Patching does not affect your custom help content.

Oracle Fusion Applications Guides

Oracle Fusion Applications guides are a structured collection of the help topics, examples, and FAQs from the help system packaged for easy download and offline reference, and sequenced to facilitate learning. To access the guides, go to any page in Oracle Fusion Applications Help and select **Documentation Library** from the **Navigator** menu.

Guides are designed for specific audiences:

- **User Guides** address the tasks in one or more business processes. They are intended for users who perform these tasks, and managers looking for an overview of the business processes. They are organized by the business process activities and tasks.
- **Implementation Guides** address the tasks required to set up an offering, or selected features of an offering. They are intended for implementors. They are organized to follow the task list sequence of the offerings, as displayed within the Setup and Maintenance work area provided by Oracle Fusion Functional Setup Manager.
- **Concept Guides** explain the key concepts and decisions for a specific area of functionality. They are intended for decision makers, such as chief

financial officers, financial analysts, and implementation consultants. They are organized by the logical flow of features and functions.

- **Security Reference Manuals** describe the predefined data that is included in the security reference implementation for one offering. They are intended for implementors, security administrators, and auditors. They are organized by role.

These guides cover specific business processes and offerings. Common areas are addressed in the guides listed in the following table.

Guide	Intended Audience	Purpose
Common User Guide	All users	Explains tasks performed by most users.
Common Implementation Guide	Implementors	Explains tasks within the Define Common Applications Configuration task list, which is included in all offerings.
Functional Setup Manager User Guide	Implementors	Explains how to use Oracle Fusion Functional Setup Manager to plan, manage, and track your implementation projects, migrate setup data, and validate implementations.
Technical Guides	System administrators, application developers, and technical members of implementation teams	Explain how to install, patch, administer, and customize Oracle Fusion Applications. Note Limited content applicable to Oracle Cloud implementations.

For other guides, go to Oracle Technology Network at <http://www.oracle.com/technetwork/indexes/documentation>.

Other Information Sources

My Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Use the My Oracle Support Knowledge Browser to find documents for a product area. You can search for release-specific information, such as patches, alerts, white papers, and troubleshooting tips. Other services include health checks, guided lifecycle advice, and direct contact with industry experts through the My Oracle Support Community.

Oracle Enterprise Repository for Oracle Fusion Applications

Oracle Enterprise Repository for Oracle Fusion Applications provides details on service-oriented architecture assets to help you manage the lifecycle of your software from planning through implementation, testing, production, and changes.

In Oracle Fusion Applications, you can use Oracle Enterprise Repository at <http://fusionappsoer.oracle.com> for:

- Technical information about integrating with other applications, including services, operations, composites, events, and integration tables. The classification scheme shows the scenarios in which you use the assets, and includes diagrams, schematics, and links to other technical documentation.
- Other technical information such as reusable components, policies, architecture diagrams, and topology diagrams.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/us/corporate/accessibility/index.html>.

Comments and Suggestions

Your comments are important to us. We encourage you to send us feedback about Oracle Fusion Applications Help and guides. Please send your suggestions to oracle_fusion_applications_help_ww_grp@oracle.com. You can use **Send Feedback to Oracle** from the Settings and Actions menu in Oracle Fusion Applications Help.

Overview

Project Financial Management Offering: Overview

In the Project Management business process area, your enterprise can configure how you manage projects, including how to plan, budget, forecast, collect costs, bill customers, and report performance.

Before you begin, use the Getting Started page in the Setup and Maintenance work area to access reports for each offering, including full lists of setup tasks, the functional areas and features that you can select when you configure the offering, and business objects and enterprise applications that are associated with the offering.

The first implementation step is to configure the offerings in the Setup and Maintenance work area by selecting the offerings and functional areas that you want to make available to implement.

The following list describes the functional areas that are specific to the Project Financial Management offering.

Functional Area	Description
Project Organizations	Configure how you manage project units, project classifications, organization hierarchies, and business unit options.
Project Foundation	Configure how you manage project organizations, create projects, plan project tasks, and review project details. This common foundation is shared across the Oracle Fusion Project Financial Management products.
Burdening	Configure options used to calculate, group, and apply indirect costs to project expenditure items to report and account for the total cost of a project.
Project Control	Configure how you monitor project execution, progress, budgeting, and forecasting.
Project Integration Gateway	Configure how you integrate with third-party scheduling tools such as Primavera P6 Enterprise Project Portfolio Management.

Project Costing	Configure how you collect, monitor and influence the costs associated with the delivery of the project and management of capital assets.
Project Costing - Project Costing Base	Configure how you collect, monitor, and influence the costs associated with the delivery of the project.
Project Costing - Capital Projects	Configure how you record asset costs, calculate capitalized interest, and create events to group costs and assets.
Project Costing - Project Contracts	Configure the funding and billing relationships between the external parties who require the project and the parties who deliver the project.
Project Billing	Configure how you invoice customers and recognize revenue for project contracts, including contract management, intercompany billing, and the calculation of estimated taxes on invoices.
Project Billing - Project Billing Base	Configure how you invoice customers and recognize revenue for project contracts.
Project Billing - Intercompany Billing	Configure how you use internal invoices to share costs and revenue across projects and organizations.
Project Performance Reporting	Configure how you collect and review project performance data against defined performance areas.
Project Business Intelligence Analytics	Enable business intelligence reporting and analytics capabilities for project management data.
Project Revenue and Billing Business Intelligence Analytics	Enable business intelligence reporting and analytics capabilities for project revenue and billing data.
Project Performance Business Intelligence Analytics	Enable business intelligence reporting and analytics capabilities for project performance data.
Project Control and Costing Business Intelligence Analytics	Enable business intelligence reporting and analytics capabilities for project control and costing data.

Following is a list of functional areas that are in the Project Financial Management offering, but are not unique to this offering.

- Initial Users
- Enterprise Profile
- Legal Structures
- Financial Reporting Structures
- Organization Structures
- Workforce Structures
- Transactional Business Intelligence
- Application Extensions
- Transaction Tax

Next, create one or more implementation projects for the offerings and functional areas that you want to implement first, which generates task lists for each project. The application implementation manager can customize the task list and assign and track each task.

If you enable all functional areas and features, the generated task list for this offering will contain the groups of tasks listed in the following table:

Task List	Description
Define Common Applications Configuration for Project Financial Management	Define the configuration for common setup such as users, enterprise and HR structures, security, and common reference objects for Oracle Fusion Project Financial Management. You can find other information that supports the common implementation tasks in the Oracle Fusion Applications Concepts Guide.
Define Common Project Configuration	Configure components from other product offerings that are used by Oracle Fusion Project Portfolio Management.
Define Project Foundation Configuration	Configure all foundation components for creating and maintaining projects in Oracle Fusion Project Portfolio Management.
Define Project Costing Configuration	Configure Oracle Fusion Project Costing to collect, monitor, and influence the costs associated with the delivery of the project.
Define Project Control Configuration	Configure Oracle Fusion Project Control to monitor project execution, progress, budgeting, and forecasting.
Define Project Billing Configuration	Configure Oracle Fusion Project Billing to invoice customers and recognize revenue for project contracts.
Define Project Performance Reporting Configuration	Configure Oracle Fusion Project Performance Reporting to collect and review project data against defined performance areas.
Define Project Integration Gateway Configuration	Configure Oracle Fusion Project Integration Gateway to integrate with scheduling applications such as Primavera P6 Enterprise Project Portfolio Management or Oracle Fusion Project Management.
Manage Project Templates	Manage templates to quickly create projects that share common features, attributes, and options.
Define Transactional Business Intelligence Configuration	Define the configuration for Oracle Transactional Business Intelligence to enable business intelligence reporting with the Oracle Fusion Applications.
Define Extensions for Project Financial Management	Configure specific extensions for customization of Oracle Fusion Project Financial Management.

You can also customize and extend applications using other tools. For more information, see the Oracle Fusion Applications Extensibility Guide.

Define Common Applications Configuration for Project Financial Management: Overview

In the Define Common Applications Configuration for Project Financial Management activity, you perform common setup steps such as defining users, enterprise and human resource structures, security, and common reference objects for Project Financial Management applications in Oracle Fusion Project Portfolio Management.

Setup tasks in the Define Common Applications Configuration for Project Financial Management activity are grouped into the following task lists:

Task List	Description
Define Synchronization of Users and Roles from LDAP	Run a process to populate the product tables containing user and role information with the users and roles held in LDAP. This process is always the first implementation task but can also run periodically to keep the product tables synchronized with subsequent updates to LDAP.
Define Implementation Users	Create implementation users and roles. Provision implementation users with job and data roles.
Define Currencies and Currency Rates	Define the currencies and currency rates that your organization does business in.
Define Enterprise Structures for Project Financial Management	Access your enterprise organization, such as legal entities, legal jurisdictions and authorities, and business units, and specify their use in Oracle Fusion Project Financial Management. Define the accounting configuration and chart of accounts that serve as a framework for how financial records are maintained for an organization.
Define Security for Project Financial Management	Enable users to perform functions related to their job roles.
Define Automated Governance, Risk, and Performance Controls	Define the controls that automate the analysis of data-related and address-related issues to mitigate risk and optimize performance of an organization.
Define Approval Management for Project Financial Management	Define approval routing structures and controls to match the needs of your organization.
Define Help Configuration	Define what users can see and do in a local deployment of Oracle Fusion Applications Help.
Define Application Toolkit Configuration	Set up Oracle Fusion Application Toolkit features, which are common across Oracle Fusion applications.
Maintain Common Reference Objects	Review and manage objects, for example currencies and reference data sets, that are shared across applications. Perform setup that applies to Oracle Fusion Applications as a whole, for example Navigator menu customization and maintenance of common messages that can be used in any application.
Define WebLogic Communication Services Configuration	Configure WebLogic Communication Services, security, and gateways for third-party call control, session initiation protocol telephony, or soft switch serving the users within that domain, and automated dialing.

Common Implementation: Overview

Common implementation involves accessing tasks that are available in multiple offerings, or that apply to multiple products and product families. The Define

Common Applications Configuration task list and other activities include these common setup and implementation tasks.

You can find other information in support of common implementation in the Concepts Guide.

In addition, you can customize and extend applications using various tools. For more information, see the Oracle Sales Extensibility Guide.

Define Common Applications Configuration Task List

Use the Define Common Applications Configuration task list to set up and administer an implementation of behaviors across offerings.

Most Oracle Sales Cloud offerings include the Define Common Applications Configuration task list for implementing what is common in multiple or all applications available from Oracle Sales Cloud. The task lists and tasks within Define Common Applications Configuration can be present in all offerings, some, or just a single offering.

Common implementation includes such tasks as setting up security, defining enterprise structures, configuring Oracle Sales Cloud help, and setting options. Many of the common implementation tasks involve configuring reference objects provided by Oracle Middleware Extensions for Applications (Applications Core), such as messages, flexfields, document sequences, and profile options. Some common implementation tasks involve configuring features provided by Oracle Application Toolkit (ATK), such as the Watchlist. Other common implementation tasks involve products such as the Assign Balancing Segment Values to Ledger task in General Ledger.

Other Common Setup and Maintenance Tasks

Other setup and maintenance tasks exist in multiple offerings but not in the Define Common Applications Configuration task list. Use these other task lists to define an Oracle Transactional Business Intelligence configuration, and to define extensions such as custom Oracle Enterprise Scheduler jobs.

You can access common implementation tasks and task lists by starting in the Setup and Maintenance Overview page and searching for task lists by name. Setup and Maintenance is available from the Administration menu to users provisioned with appropriate roles. The Administration menu provides access to other tasks, such as for customization.

Getting Started with an Implementation: Overview

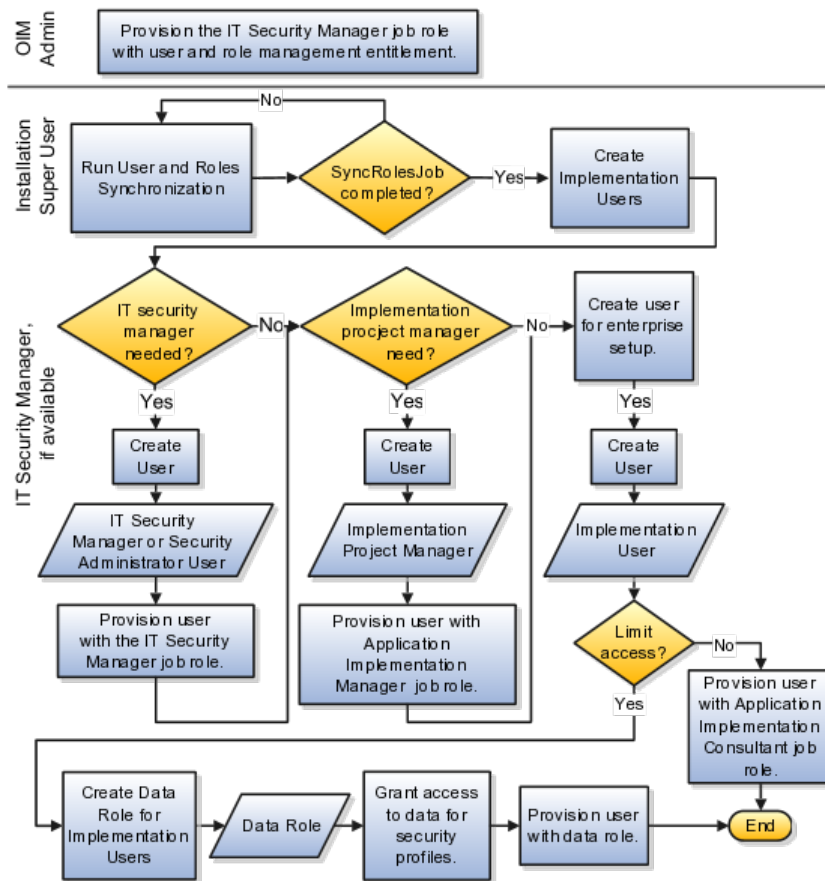
To start an Oracle Fusion Applications implementation, you must set up one or more initial users using the super user that was created during installation and provisioning of the Oracle Fusion Applications environment, or using the initial administrator user provided by Oracle for Oracle Cloud Application Services implementations. Because Oracle Fusion Applications is secure as delivered, the process of enabling the necessary setup access for initial users requires several specialized steps when getting started with an implementation.

The following high level steps are required for starting an implementation.

1. If you are not starting an Oracle Cloud Application Services implementation, sign into Oracle Identity Manager (OIM) as the OIM Administration users and provision the IT Security Manager job role with roles for user and role management. This enables the super user account, which is provisioned with the IT Security Manager job role, to create implementation users.

2. For starting all implementations, sign in as the user with initial access: either the Oracle Fusion Applications installation super user or the initial Oracle Cloud Application Services administrator user.
3. Select an offering to implement, and generate the setup tasks needed to implement the offering.
4. Perform the following security tasks:
 - a. Synchronize users and roles in the Lightweight Directory Access Protocol (LDAP) store with HCM user management by using the Run User and Roles Synchronization Process task.
 - b. Create an IT security manager user by using the Create Implementation Users task.
 - c. Provision the IT security manager with the IT Security Manager role by using the Provision Roles to Implementation Users task.
5. As the newly created IT security manager user, sign in to Oracle Fusion Applications and set up at least one implementation user for setting up enterprise structures.
 - a. Create an implementation user by using the Create Implementation Users task.
 - b. Provision the implementation user with the Application Implementation Manager job role or the Application Implementation Consultant job role by using the Provision Roles to Implementation Users task. The Application Implementation Consultant job role inherits from all product-specific application administrators and entitles the necessary View All access to all secured objects.
 - c. Optionally, create a data role for an implementation user who needs only the limited access of a product-specific Application Administrator by using the Create Data Role for Implementation Users. Then assign the resulting data role to the implementation user by using the Provision Roles to Implementation Users task.

The figure shows the task flow from provisioning the IT Security Manager job role with the user and role management entitlement to creating and provisioning implementation users for enterprise setup.



Manage Application Implementation

Manage Application Implementation: Overview

The Manage Applications Implementation business process enables rapid and efficient planning, configuration, implementation, deployment, and ongoing maintenance of Oracle Fusion applications through self-service administration.

The Setup and Maintenance work area offers you the following benefits:

- **Prepackaged Lists of Implementation Tasks**

Task lists can be easily configured and extended to better fit with business requirements. Auto-generated, sequential task lists include prerequisites and address dependencies to give full visibility to end-to-end setup requirements of Oracle Fusion applications.

- **Rapid Start**

Specific implementations can become templates to facilitate reuse and rapid-start for comparable Oracle Fusion applications across many instances.

- **Comprehensive Reporting**

A set of built-in reports helps to analyze, validate and audit configurations, implementations, and setup data of Oracle Fusion applications.

With Oracle Fusion Functional Setup Manager you can:

- Learn about and analyze implementation requirements.
- Configure Oracle Fusion applications to match your business needs.
- Achieve complete visibility to setup requirements through guided, sequential task lists downloadable into Excel for project planning.
- Enter setup data through easy-to-use user interfaces available directly from the task lists.
- Export and import data from one instance to another for rapid setup.
- Validate setup by reviewing setup data reports.
- Implement all Oracle Fusion applications through a standard and consistent process.

The following documentation resources are available for learning how to configure Oracle Fusion Applications.

- Functional Setup Manager Developer's Guide
- Common Implementation Guide
- Customer Data Management Implementation Guide
- Enterprise Contracts Implementation Guide
- Marketing Implementation Guide
- Sales Implementation Guide
- Fusion Accounting Hub Implementation Guide
- Financials Implementation Guide
- Compensation Management Implementation Guide
- Workforce Deployment Implementation Guide
- Workforce Development Implementation Guide
- Incentive Compensation Implementation Guide
- Procurement Implementation Guide
- P6 EPPM Administrator's Guide for an Oracle Database
- P6 EPPM Administrator's Guide for Microsoft SQL Server Database

Implementation Projects: Explained

An implementation project is the list of setup tasks you need to complete to implement selected offerings and functional areas. You create a project by selecting the offerings and functional areas you want to implement together. You manage the project as a unit throughout the implementation lifecycle. You can assign these tasks to users and track their completion using the included project management tools.

Maintaining Setup Data

You can also create an implementation project to maintain the setup of specific business processes and activities. In this case, you select specific setup task lists and tasks

Exporting and Importing

Implementation projects are also the foundation for setup export and import. You use them to identify which business objects, and consequently setup data, you will export or import and in which order.

Selecting Offerings

When creating an implementation project you see the list of offerings and functional areas that are configured for implementation. Implementation managers specify which of those offerings and functional areas to include in an implementation project. There are no hard and fast rules for how many offerings you should include in one implementation project. The implementation manager should decide based on how they plan to manage their implementations. For example, if you will implement and deploy different offerings at different times, then having separate implementation projects will make it easier to manage the implementation life cycles. Furthermore, the more offerings you included in an implementation project, the bigger the generated task list will be. This is because the implementation task list includes all setup tasks needed to implement all included offerings. Alternatively, segmenting into multiple implementation projects makes the process easier to manage.

Offerings: Explained

Offerings are application solution sets representing one or more business processes and activities that you typically provision and implement as a unit. They are, therefore, the primary drivers of functional setup of Oracle Fusion applications. Some of the examples of offerings are Financials, Procurement, Sales, Marketing, Order Orchestration, and Workforce Deployment. An offering may have one or more functional area, and one or more or features.

Implementation Task Lists

The configuration of the offerings will determine how the list of setup tasks is generated during the implementation phase. Only the setup tasks needed to

implement the selected offerings, functional areas and features will be included in the task list, giving you a targeted, clutter-free task list necessary to meet your implementation requirements.

Enabling Offerings

Offerings and their functional areas are presented in an expandable and collapsible hierarchy to facilitate progressive decision making when specifying whether or not an enterprise plans to implement them. An offering or its functional areas can either be selected or not be selected for implementation. Implementation managers decide which offerings to enable.

Provisioning Offerings

The Provisioned column on the Configure Offerings page shows whether or not an offering is provisioned. While you are not prevented from configuring offerings that have not been provisioned, ultimately the users are not able to perform the tasks needed to enter setup data for those offerings until appropriate enterprise applications (Java EE applications) are provisioned and their location (end point URLs) is registered.

Options: Explained

Each offering in general includes a set of standard functionality and a set of optional modules, which are called options. For example, in addition to standard Opportunity Management, the Sales offering includes optional functionality such as Sales Catalog, Sales Forecasting, Sales Prediction Engine, and Outlook Integration. These optional functions may not be relevant to all application implementations. Because these are subprocesses within an offering, you do not always implement options that are not core to the standard transactions of the offering.

Feature Choices: Explained

Offerings include optional or alternative business rules or processes called feature choices. You make feature selections according to your business requirements to get the best fit with the offering. If the selected offerings and options have dependent features then those features are applicable when you implement the corresponding offering or option. In general, the features are set with a default configuration based on their typical usage in most implementations. However, you should always review the available feature choices for their selected offerings and options and configure them as appropriate for the implementation.

You can configure feature choices in three different ways:

Yes or No

If a feature can either be applicable or not be applicable to an implementation, a single checkbox is presented for selection. Check or uncheck to specify yes or no respectively.

Single Select

If a feature has multiple choices but only one can be applicable to an implementation, multiple choices are presented as radio buttons. You can turn on only one of those choices.

Multi-Select

If the feature has multiple choices but one or more can be applicable to an implementation then all choices are presented with a checkbox. Select all that apply by checking the appropriate choices.

Common Applications Configuration: Define Synchronization of Users and Roles from LDAP

User and Role Synchronization: Explained

Oracle Identity Management (OIM) maintains Lightweight Directory Access Protocol (LDAP) user accounts for users of Oracle Fusion applications. OIM also stores the definitions of abstract, job, and data roles and holds information about roles provisioned to users. During implementation, any existing information about users, roles, and roles provisioned to users must be copied from the LDAP directory to the Oracle Fusion Applications tables. Once the Oracle Fusion Applications tables are initialized with this information, it is maintained automatically. To perform the initialization, you run the process Retrieve Latest LDAP Changes.

Note

For security and audit best practice, implementation users have person records and appropriate role-based security access. So that appropriate roles can be assigned to implementation users, you must run the process Retrieve Latest LDAP Changes before you create implementation users.

During initial implementation, the installation super user performs the task Run User and Role Synchronization Process to run the Retrieve Latest LDAP Changes process.

Tip

The user name and password of the installation super user are created during installation provisioning of Oracle Fusion Applications. For details of the user name and password, contact your system administrator or the person who installed Oracle Fusion Applications.

Common Applications Configuration: Define Implementation Users

Initial Security Administration: Critical Choices

After installation and provisioning, and before setting up enterprise structures and implementing projects, you must establish required entitlement for the super user account and at least one implementation user to proceed with the implementation. Once initial enterprise structure setup is complete, additional users may be created through processes available in Human Capital Management (HCM).

Initial security administration consists of the following.

- Preparing the IT Security Manager job role
- Synchronizing users and roles from Lightweight Directory Access Protocol (LDAP) with HCM
- Defining implementation users
- Optionally creating data roles for implementation users
- Provisioning implementation users with roles

Once the first implementation project begins and the enterprise work structure is set up, use standard user and security management processes such as the Manage Users task to create and manage additional users. Do not use the Create Implementation Users task after your enterprise has been set up.

Preparing the IT Security Manager Job Role

Initially the super user is not provisioned to manage users and roles.

You must add the following Oracle Identity Management (OIM) roles to the IT Security Manager job role's role hierarchy to enable the super user to create one or more initial implementation users.

- Identity User Administrators
- Role Administrators

Additionally, you must assign the Xellerate Users organization to the IT Security Manager role.

Synchronizing Users and Roles from LDAP

After configuring an offering and setting up the task lists for implementation, the Run User and Roles Synchronization Process task is available to the super user for synchronizing users and roles in the LDAP store with Oracle Fusion Human Capital Management (HCM).

Defining Initial Implementation Users

The super user is provisioned with roles that provide broad access to Oracle Fusion Middleware and Oracle Fusion Applications administration, and is not suitable as an implementation user in most enterprises. The super user should define at least one implementation user, which consists of creating the user account and provisioning it with at least the Application Implementation Consultant and Application Implementation Manager job roles.

As a security guideline, define an IT security manager user who in turn defines one or more implementation users to set up enterprise structures. The IT security manager users can provision the implementation user with the Application Implementation Consultant role, which entitles access to all enterprise structures. Or the IT security manager can create a data role that restricts access to enterprise structures of a specific product and provisioning that role.

Depending on the size of your implementation team, you may only need a single implementation user for security administration, implementation project management, enterprise structures setup, and application implementation. That single user must then be provisioned with all indicated roles, and therefore broad access.

Creating Implementation Users

The super user creates one or more implementation users by performing the Create Implementation Users task.

Note

This initial implementation user is a user account created in Oracle Identity Management only, specifically for setting up enterprise structures, and is not related to a real person or identity such as a user defined in HCM.

Creating Data Roles for Implementation Users

As an alternative to provisioning an implementation user with the Application Implementation Consultant role to access all enterprise structures, you may need implementation users with access restricted to enterprise structures for specific products. In this case, use the Create Data Roles for Implementation Users task to create a data role based on a job role with less broad access, such as the HCM Application Administrator job role.

Provisioning Roles to Implementation Users

After creating an implementation user, you must provision the user with one or more roles by performing the Provision Roles to Implementation Users task.

For example, assign a role to the implementation user that provides the access necessary for setting up the enterprise. Depending on need, provision to the implementation user the predefined Applications Implementation Consultant role or a product family-specific administrator data role, such as a data role based on the predefined Financials Applications Administrator.

Caution

The Application Implementation Consultant has broad access. It is a very useful role for experimentation or setting up a pilot environment, but may not be suitable for implementation users in a full implementation project.

Initial Security Administration: Worked Example

This example illustrates initial security administration after having installed and provisioned an Oracle Fusion Applications environment.

In Oracle Fusion Applications, you manage users and security through Oracle Fusion Human Capital Management (HCM) user management flows, which are included in each of the offering task lists. However, the HCM task flows require that enterprise structures have been set up, and yet to add users who can set up enterprise structures you need to have set up HCM. Therefore, you need to create one or more initial implementation users who are responsible for providing the following.

- Users and their applications security management
- Implementation project management
- Initial enterprise structures management

The following table summarizes key decisions for this scenario.

Decision	In this Example
How to sign in to Oracle Fusion Applications for the first time	Use the super user account that was created when installing and provisioning Oracle Fusion Applications (for example, FAADMIN).
How to ensure that the roles and users in the Lightweight Directory Access Protocol (LDAP) store match what is available for selection when defining implementation users	Perform the Run User and Roles Synchronization Process task.
How to create a first implementation user	Prepare the IT Security Manager job role for user and role management so the super user and any other user provisioned with the IT Security Manager job role can manage users and roles.
How to establish security administration users	Define an IT security manager user provisioned with the IT Security Manager job role.
How to establish an implementation user with access to set up enterprise structures	Define an implementation user provisioned with the Application Implementation Consultant job role.

You create an initial implementation user by performing the following tasks.

1. The Oracle Identity Management System Administrator user provisions the IT Security Manager job role with roles for user and role management.
2. The Oracle Fusion Applications super user synchronizes LDAP users with HCM user management so that users can be provisioned with roles through HCM.
3. The Oracle Fusion Applications super user performs the Create Implementation Users task to create one or more IT security manager and administrator users provisioned with security administrative entitlement.
4. The IT Security Manager user signs in to Oracle Fusion Applications and performs the Create Implementation Users task to create implementation managers and users.
5. The IT Security Manager user provisions implementation users for enterprise structure setup.

Note

The following tasks assume that the super user has configured an offering and set up task lists. When not following a task flow within an activity, you can find tasks in **Navigator > Tools > Setup and Maintenance > All Tasks**. Search for the task and click its **Go to Task** icon in the search results.

Preparing the IT Security Manager Role

The super user that was created when installing and provisioning Oracle Fusion Applications (for example, FAADMIN), or the initial administrator user provided by Oracle for Oracle Cloud Application Services, has all necessary access for implementing Oracle Fusion Applications and administering security. This access is provided by the following roles:

- Application Implementation Consultant
- IT Security Manager

Neither of these roles provides access needed for creating and managing Oracle Fusion Applications users. Therefore, you must add the following two OIM roles to the IT Security Manager role:

- Identity User Administrators
- Role Administrators

The following procedure is prerequisite to an IT security manager or administrator creating an initial one or more implementation users.

1. While signed into Oracle Identity Manager as the OIM System Administrator user, click the **Administration** link in the upper right of the Oracle Identity Manager.

This accesses the Welcome to Identity Manager Delegated Administration menu.

2. In the Roles list of tasks, click **Advanced Search - Roles**. Search for the Identity Users Administrators role by entering the role name in **Display Name** and clicking **Search**.

In the Search Results, click the role's Display Name.

3. On the Hierarchy tab, select **Inherits From** and click **Add**.
4. In the Add Parent Role to: IDENTITY USER ADMINISTRATORS window, select the role category: Common - Job Roles and add the IT Security Manager.

Click the arrow icon to show the list of available roles. Select IT Security Manager and move it to the **Roles to Add** list. Click **Save**.
5. Search for the Role Administrators role, and repeat steps 1 to 4 to add that role to the IT Security Manager role's role inheritance.
6. Assign the IT Security Manager role to the Xellerate Users organization.
 - a. In the Welcome to Identity Manager Delegated Administration menu (see step 1, above), in the Organizations list of tasks, click **Advanced Search - Organizations**.
 - b. Search for the Xellerate Users organization by entering Xellerate Users in **Display Name** and clicking **Search**.
 - c. In the Search Results, click the organization's Display Name. The Xellerate Users page appears.
 - d. Click the **Administrative Roles** link in the row of links above the Xellerate Users.
 - e. In **Filter By Role Name** of the Details window, enter the following string:

`*IT_SECURITY_MANAGER*`

Click **Find**.
 - f. Enable Read, Write, Delete, and Assign.
 - g. Click **Assign**.
 - h. Click **Confirm**.

Synchronizing Users and Roles from LDAP

Lightweight Directory Access Protocol (LDAP) must be synchronized with HCM user management so that users can be provisioned with roles through HCM.

1. Sign in to Oracle Fusion Applications using the super user's user name (for example FAADMIN) and password.

If you do not know the super user name and password, check with your system administrator or the person who installed Oracle Fusion Applications. For more information about account creation in Oracle Fusion Applications provisioning, see the Oracle Fusion Applications Installation Guide.
2. Perform the Run User and Roles Synchronization Process task by clicking **Submit** in the Process Details page.

The Retrieve Latest LDAP Changes process takes some time to complete the first time it is run.
3. Monitor completion of the Retrieve Latest LDAP Changes process from **Navigators > Tools > Scheduled Processes** before continuing with creating implementation users.

Defining an IT Security Manager User

The super user has broad access to Oracle Fusion Middleware and Oracle Fusion Applications administration. Due to this broad access, your enterprise needs users dedicated to managing users and applications security, such as an IT security manager user.

1. While signed in as the Oracle Fusion Applications super user, access the Create Implementation Users task and create an IT security manager.

The Oracle Identity Manager appears.

2. Click **Create User**.

For details, see the Creating Users section in the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

3. Provide the following attributes:

Attribute	Value	Example
Last name	<any valid string>	Smith
Organization	Xellerate Users	N/A
User type	Non Worker	N/A
User login	<any valid string>	IT_SECURITY_MANAGER
Login password	<any valid string>	SeKur1TyPa\$\$w0Rd

Note

In Oracle Fusion Applications, an implementation user is a user account created in OIM only, specifically for implementation tasks, and is not related to a real person or identity such as a user defined in HCM.

4. Click **Save**.
5. On the Roles tab in the IT_SECURITY_MANAGER user creation task flow, click **Assign**.
6. In the Add Role window, search for the IT Security Manager role and click **Add**.

Defining an Implementation User for Enterprise Structures Setup

1. Sign in to Oracle Fusion Applications using the IT security manager user's name and password.
2. Create and provision an implementation user using the same task flow as for creating the IT security manager user in the previous section, except provision the following roles.
 - Application Implementation Manager
 - Application Implementation Consultant

Note

For an implementation to begin, at least one user must be provisioned with the Application Implementation Manager role, and another or the same user must be provisioned with the Application Implementation Consultant role. The Application Implementation Consultant has broad access to set up all enterprise structures.

Common Applications Configuration: Define Currencies and Currency Rates

Manage Currencies

Defining Currencies: Points to Consider

When creating or editing currencies, consider these points relevant to entering the currency code, date range, or symbol for the currency.

Currency Codes

You cannot change a currency code after you enable the currency, even if you later disable that currency.

Date Ranges

Users can enter transactions denominated in the currency only for the dates within the specified range. If you do not enter a start date, then the currency is valid immediately. If you do not enter an end date, then the currency is valid indefinitely.

Symbols

Even if you enter a symbol for a currency, the symbol is not always displayed when an amount is displayed in this currency. Some applications use currency symbols when displaying amounts. Others, like Oracle Fusion General Ledger, do not.

Euro Currency Derivation: Explained

Use the Derivation Type, Derivation Factor, and Derivation Effective Date fields to define the relationship between the official currency (Euro) of the European

Monetary Union (EMU) and the national currencies of EMU member states. For each EMU currency, you define its Euro-to-EMU fixed conversion rate and the effective starting date.

Note

If you need to use a different currency code for Euro, you can disable the predefined Euro currency and create a new one.

Derivation Type

The **Euro currency** derivation type is used only for the Euro, and the **Euro derived** derivation type identifies national currencies of EMU member states. All other currencies do not have derivation types.

Derivation Factor

The derivation factor is the fixed conversion rate by which you multiply one Euro to derive the equivalent EMU currency amount. The Euro currency itself should not have a derivation factor.

Derivation Effective Date

The derivation effective date is the date on which the relationship between the EMU currency and the Euro begins.

FAQs for Manage Currencies**When do I create or enable currencies?**

Create currencies to use, for example for reporting purposes, if they are not already provided. All currencies from the International Organization for Standardization (ISO) 4217 standard are provided.

Enable any currency other than USD for use in Oracle Fusion Applications, for example for displaying monetary amounts, assigning to ledgers, entering transactions, and recording balances. Only USD is enabled by default.

What's the difference between precision, extended precision, and minimum accountable unit for a currency?

Precision is the number of digits to the right of the decimal point used in regular currency transactions. Extended precision is the number of digits to the right of the decimal point used in calculations for this currency, and it must be greater than or equal to the standard precision. For example, USD would have 2 for precision because amounts are transacted as such, for example \$1.00. For calculations, for example adding USD amounts, you might want the application

to be more precise than two decimal digits, and would enter an extended precision accordingly.

Note

Some applications use extended precision. Others, such as Oracle Fusion General Ledger, do not.

Minimum accountable unit is the smallest denomination for the currency. For example, for USD that would be .01 for the cent. This unit does not necessarily correspond to the precision for all currencies.

Manage Conversion Rate Types

Creating Conversion Rate Types: Critical Choices

Maintain different conversion rates between currencies for the same period with the Oracle Fusion General Ledger conversion rate types functionality. Four predefined daily conversion rate types are seeded: Spot, Corporate, User, and Fixed, allowing you to use different rate types for different business needs. During journal entry, the conversion rate is provided automatically by the General Ledger based on the selected conversion rate type and currency, unless the rate type is user. For user rate types, you must enter the conversion rate. Define additional rate types as needed. Set your most frequently used rate type as the default. Conversion rate types cannot be deleted.

Assign conversion rate types to automatically populate the associated rate for your period average and period end rates for the ledger. For example, you can assign the predefined rate type **Spot** to populate your period average rates and the predefined rate type **Corporate** to populate your period end rates. Period average and period end rates are used in translation of account balances.

Conversion rate types are used to automatically assign a rate when you perform the following accounting functions:

- Convert foreign currency journal amounts to ledger currency equivalents
- Convert journal amounts from source ledgers to reporting currencies or secondary ledgers
- Run Revaluation or Translation processes

In creating new conversion rates, decide whether to do the following:

- Enforce inverse relationships
- Select pivot currencies
- Select contra currencies
- Enable cross rates and allow cross rate overrides
- Maintain cross rate rules

Enforce Inverse Relationships

Check the **Enforce Inverse Relationship** check box to specify whether or not to enforce the automatic calculation of inverse conversion rates when defining daily rates.

Action	Results
Checked	When you enter a daily rate to convert currency A to currency B, General Ledger automatically calculates the inverse rate, currency B to A, and enters it in the adjacent column. If either rate is changed, the application automatically recalculates the other rate. You can update the application calculated inverse rate, but once you do, the related rate is updated. The check box enforces that the inverse relationship is maintained but does not prevent you from updating the rates.
Unchecked	General Ledger calculates the inverse rate but you can change the rate and update the daily rates table without the corresponding rate being updated.

Select Pivot Currencies

Select a pivot currency that is commonly used in your currency conversions. A pivot currency is the central currency that interacts with contra currencies. For example, you set up a daily rate between the US dollar (USD) and the Euro currency (EUR) and another between the USD and the Canadian dollar (CAD). USD is the pivot currency in creating a rate between EUR and CAD. EUR and CAD are the contra currencies. Select the pivot currency from the list of values which contains those currencies that are enabled, effective, and not a statistical (STAT) currency. The description of the pivot currency is populated automatically based on the currency definition.

If you want the application to create cross rates against a base currency, define the base currency as the pivot currency. Selected pivot currencies can be changed in the Rate Types page.

Select Contra Currencies

Select currencies available on the list of values as contra currencies. The available currencies are those currencies which are enabled, effective, not STAT currency, and not the pivot currency selected earlier. The description of the contra currency is populated automatically based on the currency definition. Add or delete contra currencies in the Contra Currencies region of the Rate Types page.

Enable Cross Rates and Allow Cross Rate Overrides

Check the **Enable Cross Rates** check box to calculate conversion rates based on defined currency rate relationships. General Ledger calculates cross rates

based on your defined cross rate rules. Associate your cross rate rules with a conversion rate type, pivot currency, and contra currencies. Cross rates facilitate the creation of daily rates by automatically creating the rates between contra currencies based on their relationship to a pivot currency. If the **Enable Cross Rates** check box is changed to unchecked after entering contra currencies, the application stops calculating cross rates going forward for that particular rate type. All the earlier calculated cross rates for that rate type remain in the database unless you manually delete them.

For example, if you have daily rates defined for the pivot currency, USD to the contra currency, EUR, and USD to another contra currency, CAD, the application will automatically create the rates between EUR to CAD and CAD to EUR. This prevents the need to manually define the EUR to CAD and CAD to EUR rates.

Check the **Allow Cross Rates Override** check box to permit your users to override application generated cross rates. If you accept the default of unchecked, the application generated cross rates cannot be overridden

Maintain Cross Rate Rules

Define or update your cross rate rules at any time by adding or removing contra currency assignments. Add a contra currency to a cross rate rule and run the Daily Rates Import and Calculation process to generate the new rates. If you remove a cross rate rule or a contra currency from a rule, any cross rates generated previously for that contra currency remain unless you manually delete them. Changes to the rule are not retroactive and will not affect previously stored cross rates. The Cross Rate process generates as many rates as possible and skips currencies where one component of the set is missing.

Note

With a defined web service that extracts daily currency conversion rates from external services, for example Reuters, currency conversion rates are automatically updated for the daily rates and all cross currency relationships.

Using Rate Types: Examples

There are four seeded conversion rate types in Oracle Fusion applications:

- Spot
- Corporate
- User
- Fixed

Scenario

You are the general ledger accountant for InFusion America Inc. You are entering a journal entry to capture three transactions that were transacted in three different foreign currencies:

- Canadian dollar (CAD): A very stable currency
- Mexican Peso (MXP): A fluctuating currency
- Hong Kong dollar (HKD): An infrequently used currency

You enter two lines with accounts and amounts for each foreign currency transaction. Based on your company procedures, you select the appropriate rate type to populate the rate for **Corporate** and **Spot** rate types from your daily rates table. You manually enter the current rate for the **User** rate type.

Currency Selected	Rate Type Selected	Reason
CAD	Corporate	Entered a periodic type of transaction. Your company has established a daily rate to use for the entire month across divisions for all transactions in CAD. CAD is a stable currency that only fluctuations slightly over the month.
MXP	Spot	Entered a periodic type of transaction. Your company enters daily rates each day for MXP because this currency is unstable and fluctuates.
HKD	User	Entered a one time transaction. Your company does not maintain daily rates in HKD.

Note

Your company does not currently use the **Fixed** rate type. From January 1, 1999, the conversion rate of the French franc (FRF) against the euro currency (EUR) was set at a fixed rate of 1 EUR to 6.55957 FRF. Your French operations were started in 2007, so you maintain all your French business records in the EUR.

FAQs for Manage Conversion Rate Types

What's the difference between spot, corporate, user, and fixed rate types?

Spot, corporate, user, and fixed conversion rate types differ based on the fluctuations of your entered foreign currency and your company procedures for maintaining daily rates.

Rate Type	Usage
Spot	For currencies with fluctuating conversion rates or when exact currency conversion is needed.
Corporate	For establishment of a standard rate across your organization for a stable currency.

User	For infrequent entries where your daily rates for the entered foreign currency are not set up.
Fixed	For rates where the conversion is constant between two currencies.

If you have infrequent foreign currency transactions, the user rate type can simplify your currency maintenance while providing an accurate conversion rate on the date of the transaction.

Manage Daily Rates

Entering Daily Rates Manually: Worked Example

You are required to enter the daily rates for currency conversion from Great Britain pounds sterling (GBP) to United States dollars (USD) each day for your company InFusion America Inc.

Oracle Application Development Framework (ADF) Desktop Integration is an Excel add-in that must be loaded onto each client. Because ADF Desktop Integration is an add-in to Microsoft Office products, you can use this feature only if they have Microsoft Excel 2007 or above, Internet Explorer 7 or above, and Microsoft Windows 7, XP Professional SP2, or Vista. Users must download the installation files from **Navigator - Tools - Download Desktop Integrator Installer**.

Entering Daily Rates

1. Navigate to the Period Close work area.
Use the Period Close work area to link to close processes and currency process.
2. Click the Manage Currency Rates link.
Use the Currency Rates Manager page to create, edit, and review currency rate types, daily rates, and historical rates.
3. Click the Daily Rates tab.
Use the Daily Rates tab to review and enter currency rates.
4. Click the Create in Spreadsheet button.
Use the Create Daily Rates spreadsheet to enter daily rates in a template that you can save and reuse.
5. Click in the From Currency field. Select the GBP - Pound Sterling list item.
6. Click in the To Currency field. Select the USD - US Dollar list item.
7. Click in the Conversion Rate field. Select the Spot list item
8. Click in the From Conversion field. Enter the desired information into the From Conversion field. Enter a valid value e.g. "8/1/2011".

9. Click in the To Conversion Date field. Enter the desired information into the To Conversion Date field. Enter a valid value e.g. "8/1/2011".
10. Click in the Conversion Rate field. Enter the desired information into the Conversion Rate field. Enter a valid value e.g. "1.33225".
11. Click the Submit button. Click the OK button twice.
12. Review the Record Status column to verify that all rows were loaded successfully.
13. Save the template to use to enter daily rates frequently. You can save the spreadsheet to either a local drive or a shared network drive.

Updating Currency Rates: Worked Example

You are required to change today's daily rates that were already entered. The rates you are changing are for currency conversion from Great Britain pounds sterling (GBP) to United States dollars (USD) for your company InFusion America Inc.

Currency conversion rates were entered by an automatic load to the Daily Rates table. They can also be entered through a spreadsheet.

Updating Currency Rates

1. Navigate to the Period Close work area.

Use the Period Close work area to link to close processes and currency process.

2. Click the Manage Currency Rates link.

Use the Currency Rates Manager page to create, edit, and review currency rate types, daily rates, and historical rates.

3. Click the Daily Rates tab.

Use the Daily Rates tab to review and enter currency rates.

4. Click the From Currency list. Select the GBP - Pound Sterling list item.

5. Click the To Currency list. Select the USD - US Dollar list item.

6. Enter the dates for the daily rates that you are changing. Enter today's date.

7. Click the Rate Type list. Select the Spot list item.

8. Click the Search button.

9. Click in the Rate field. Enter the new rate of 1.7 in the Rate field.

10. Click in the Inverse Rate field. Enter the new inverse rate of 0.58822 in the Inverse Rate field.

11. Click the Save button.

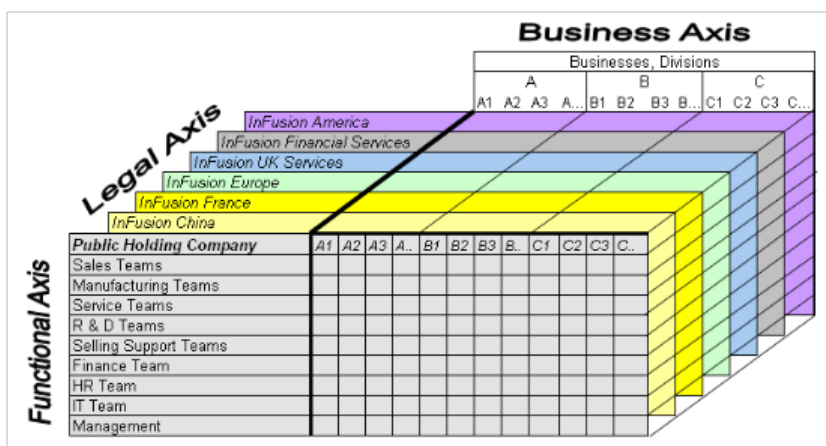
Common Applications Configuration: Define Enterprise Structures for Project Financial Management

Enterprise Structures: Overview

Oracle Fusion Applications have been designed to ensure your enterprise can be modeled to meet legal and management objectives. The decisions about your implementation of Oracle Fusion Applications are affected by your:

- Industry
- Business unit requirements for autonomy
- Business and accounting policies
- Business functions performed by business units and optionally, centralized in shared service centers
- Locations of facilities

Every enterprise has three fundamental structures, legal, managerial, and functional, that are used to describe its operations and provide a basis for reporting. In Oracle Fusion, these structures are implemented using the chart of accounts and organizations. Although many alternative hierarchies can be implemented and used for reporting, you are likely to have one primary structure that organizes your business into divisions, business units, and departments aligned by your strategic objectives.



Legal Structure

The figure above shows a typical group of legal entities, operating various business and functional organizations. Your ability to buy and sell, own, and employ comes from your charter in the legal system. A corporation is a distinct legal entity from its owners and managers. The corporation is owned by its shareholders, who may be individuals or other corporations. There are many other kinds of legal entities, such as sole proprietorships, partnerships, and government agencies.

A legally recognized entity can own and trade assets and employ people in the jurisdiction in which it is registered. When granted these privileges, legal entities are also assigned responsibilities to:

- Account for themselves to the public through statutory and external reporting
- Comply with legislation and regulations
- Pay income and transaction taxes
- Process value added tax (VAT) collection on behalf of the taxing authority

Many large enterprises isolate risk and optimize taxes by incorporating subsidiaries. They create legal entities to facilitate legal compliance, segregate operations, optimize taxes, complete contractual relationships, and isolate risk. Enterprises use legal entities to establish their enterprise's identity under the laws of each country in which their enterprise operates.

In the figure above, a separate card represents a series of registered companies. Each company, including the public holding company, InFusion America, must be registered in the countries where they do business. Each company consists of various divisions created for purposes of management reporting. These are shown as vertical columns on each card. For example, a group might have a separate company for each business in the United States (US), but have their United Kingdom (UK) legal entity represent all businesses in that country. The divisions are linked across the cards so that a business can appear on some or all of the cards. For example, the air quality monitoring systems business might be operated by the US, UK, and France companies. The list of business divisions is on the Business Axis. Each company's card is also horizontally striped by functional groups, such as the sales team and the finance team. This functional list is called the Functional Axis. The overall image suggests that information might, at a minimum, be tracked by company, business, division, and function in a group environment. In Oracle Fusion Applications, the legal structure is implemented using legal entities.

Management Structure

Successfully managing multiple businesses requires that you segregate them by their strategic objectives, and measure their results. Although related to your legal structure, the business organizational hierarchies do not need to be reflected directly in the legal structure of the enterprise. The management structure can include divisions, subdivisions, lines of business, strategic business units, and cost centers. In the figure above, the management structure is shown on the Business Axis. In Oracle Fusion Applications, the management structure is implemented using divisions and business units.

Functional Structure

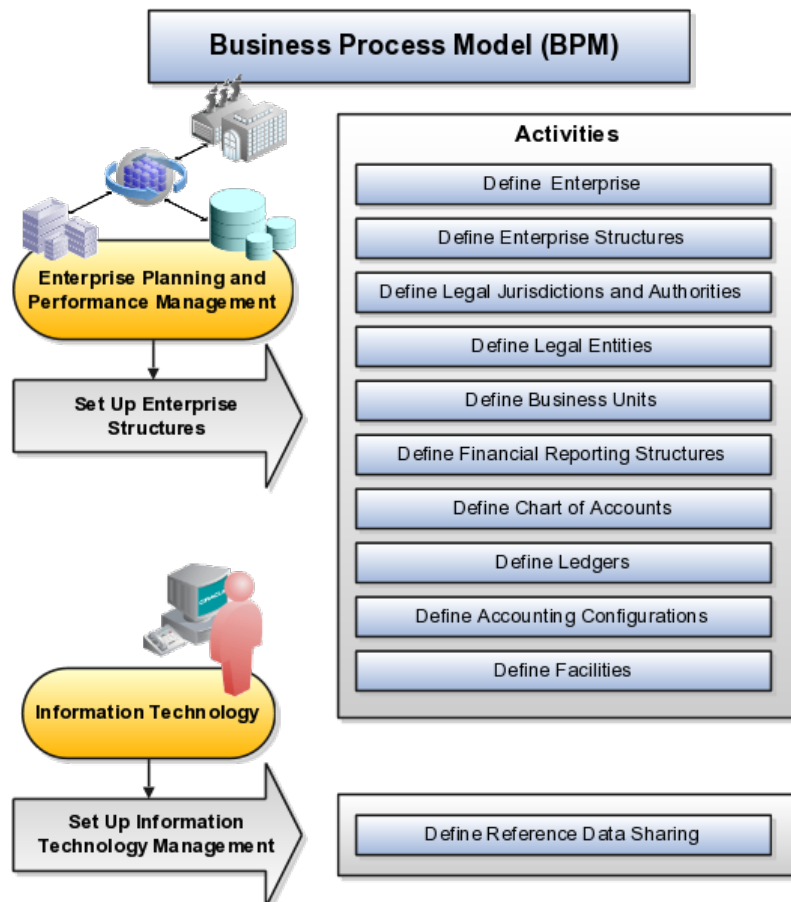
Straddling the legal and business organizations is a functional organization structured around people and their competencies. For example, sales, manufacturing, and service teams are functional organizations. This functional

structure is represented by the Functional Axis in the figure above. You reflect the efforts and expenses of your functional organizations directly on the income statement. Organizations must manage and report revenues, cost of sales, and functional expenses such as research and development (R&D) and selling, general, and administrative (SG&A) expenses. In Oracle Fusion Applications, the functional structure is implemented using departments and organizations, including sales, marketing, project, cost, and inventory organizations.

Enterprise Structures Business Process Model: Explained

In Oracle Fusion Applications, the Enterprise Performance and Planning Business Process Model illustrates the major implementation tasks that you perform to create your enterprise structures. This process model includes the Set Up Enterprise Structures business process, which consist of implementation activities that span many product families. Information Technology is a second Business Process Model which contains the Set Up Information Technology Management business process. Define Reference Data Sharing is one of the activities in this business process and is important in the implementation of the enterprise structures. This activity creates the mechanism to share reference data sets across multiple ledgers, business units, and warehouses, reducing the administrative burden and decreasing the time needed to implement.

The following figure and chart describes the Business Process Model structures and activities.



BPM Activities	Description
Define Enterprise	Define the enterprise to capture the name of the deploying enterprise and the location of the headquarters. There is normally a single enterprise organization in a production environment. Multiple enterprises are defined when the system is used to administer multiple customer companies, or when you choose to set up additional enterprises for testing or development.
Define Enterprise Structures	Define enterprise structures to represent an organization with one or more legal entities under common control. Define internal and external organizations to represent each area of business within the enterprise.
Define Legal Jurisdictions and Authorities	Define information for governing bodies that operate within a jurisdiction.
Define Legal Entities	Define legal entities and legal reporting units for business activities handled by the Oracle Fusion Applications.
Define Business Units	Define business units of an enterprise to allow for flexible implementation, to provide a consistent entity for controlling and reporting on transactions, and to be an anchor for the sharing of sets of reference data across applications.
Define Financial Reporting Structures	Define financial reporting structures, including organization structures, charts of accounts, organizational hierarchies, calendars, currencies and rates, ledgers, and document sequences which are used in organizing the financial data of a company.
Define Chart of Accounts	Define chart of accounts including hierarchies and values to enable tracking of financial transactions and reporting at legal entity, cost center, account, and other segment levels.
Define Ledgers	Define the primary accounting ledger and any secondary ledgers that provide an alternative accounting representation of the financial data.
Define Accounting Configurations	Define the accounting configuration that serves as a framework for how financial records are maintained for an organization.
Define Facilities	Define inventory, item, and cost organizations. Inventory organizations represent facilities that manufacture or store items. The item master organization holds a single definition of items that can be shared across many inventory organizations. Cost organizations group inventory organizations within a legal entity to establish the cost accounting policies.
Define Reference Data Sharing	Define how reference data in the applications is partitioned and shared.

Note

There are product specific implementation activities that are not listed here and depend on the applications you are implementing. For example, you can

Global Enterprise Configuration: Points to Consider

Start your global enterprise structure configuration by discussing what your organization's reporting needs are and how to represent those needs in the Oracle Fusion Applications. Consider deployment on a single instance, or at least, on as few instances as possible, to simplify reporting and consolidations for your global enterprises. The following are some questions and points to consider as you design your global enterprise structure in Oracle Fusion.

- Enterprise Configuration
- Business Unit Management
- Security Structure
- Compliance Requirements

Enterprise Configuration

What is the level of configuration needed to achieve the reporting and accounting requirements? What components of your enterprise do you need to report on separately? Which components can be represented by building a hierarchy of values to provide reporting at both detail and summary levels? Where are you on the spectrum of centralization versus decentralization?

Business Unit Management

What reporting do I need by business unit? How can you set up your departments or business unit accounts to achieve departmental hierarchies that report accurately on your lines of business? What reporting do you need to support the managers of your business units, and the executives who measure them? How often are business unit results aggregated? What level of reporting detail is required across business units?

Security Structure

What level of security and access is allowed? Are business unit managers and the people that report to them secured to transactions within their own business unit? Are the transactions for their business unit largely performed by a corporate department or shared service center?

Compliance Requirements

How do you comply with your corporate external reporting requirements and local statutory reporting requirements? Do you tend to prefer a corporate first or

an autonomous local approach? Where are you on a spectrum of centralization, very centralized or decentralized?

Modeling Your Enterprise Management Structure in Oracle Fusion: Example

This example uses a fictitious global company to demonstrate the analysis that can occur during the enterprise structure configuration planning process.

Scenario

Your company, InFusion Corporation, is a multinational conglomerate that operates in the United States (US) and the United Kingdom (UK). InFusion has purchased an Oracle Fusion enterprise resource planning (ERP) solution including Oracle Fusion General Ledger and all of the Oracle Fusion subledgers. You are chairing a committee to discuss creation of a model for your global enterprise structure including both your US and UK operations.

InFusion Corporation

InFusion Corporation has 400 plus employees and revenue of \$120 million. Your product line includes all the components to build and maintain air quality monitoring (AQM) systems for homes and businesses. You have two distribution centers and three warehouses that share a common item master in the US and UK. Your financial services organization provides funding to your customers for the start up costs of these systems.

Analysis

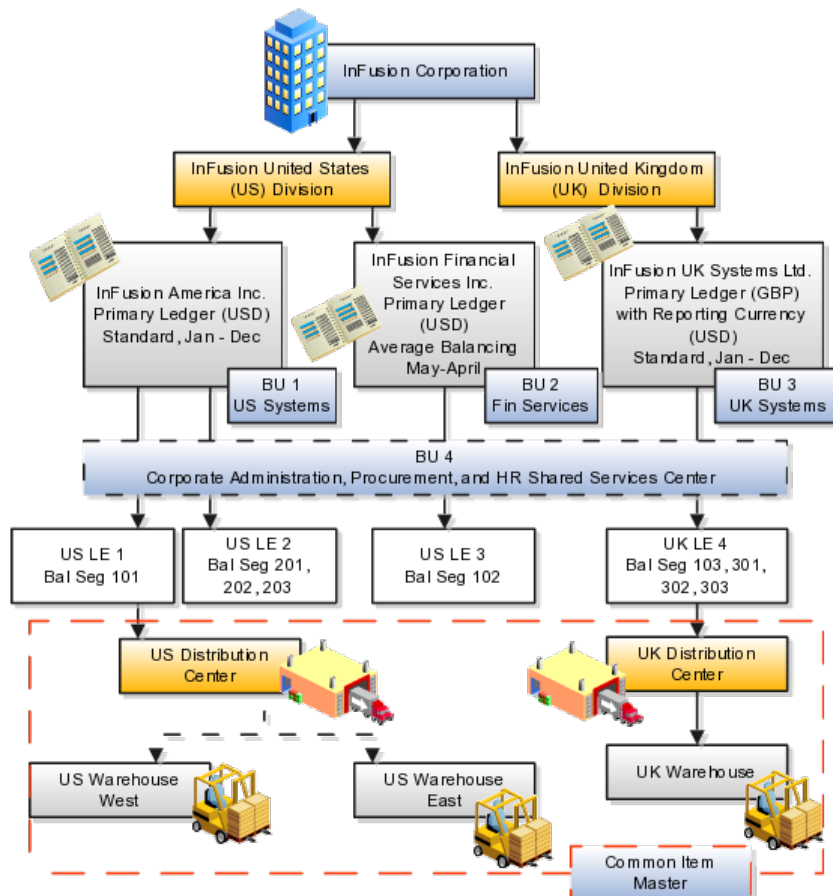
The following are elements you need to consider in creating your model for your global enterprise structure.

- Your company is required to report using US Generally Accepted Accounting Principles (GAAP) standards and UK Statements of Standard Accounting Practice and Financial Reporting Standards. How many ledgers do you need to achieve proper statutory reporting?
- Your managers need reports that show profit and loss (revenue and expenses) for their lines of business. Do you use business units and balancing segments to represent your divisions and businesses? Do you secure data by two segments in your chart of accounts which represents each department and legal entity or one segment that represents both to produce useful, but confidential management reports?
- Your corporate management requires reports showing total organizational performance with drill down capability to the supporting details. Do you need multiple balancing segment hierarchies to achieve proper rollup of balances for reporting requirements?
- Your company has all administrative, account payables, procurement, and human resources functions performed at their corporate headquarters. Do you need one or more business unit in which to perform all these functions? How will your shared service center be configured?

Global Enterprise Structure Model

The following figure and table summarize the model that your committee has designed and uses numerical values to provide a sample representation of your structure. The model includes the following recommendations:

- Creation of three separate ledgers representing your separate legal entities:
 - InFusion America Inc.
 - InFusion Financial Services Inc.
 - InFusion UK Services Ltd.
- Consolidation of results for system components, installations, and maintenance product lines across the enterprise
- All UK general and administrative costs processed at the UK headquarters
- US Systems' general and administrative costs processed at US Corporate headquarters
- US Financial Services maintains its own payables and receivables departments



Real World Entity	Entity Name	Enterprise	Legal Entity	BSV	Ledger	BU	Cost Center	Dept	Item Master Org	Inventory Org
Enterprise	InFusion Group	M								
Company	US LE 1		M	O	O					
Company	US LE 2		M	O	O					
Company	US LE 3		M	O	O					
Company	UK LE 4		M	O	O					
Business Unit	US Systems BU 1					M				
Business Unit	FIN Services BU 2					M				
Business Unit	UK Systems BU 3					M				
Division	InFusion UK			O			O			
Division	InFusion US			O			O			
Headquarters	BU 4					M				
Shared Service Center	BU 4					M				
Department	AP Department						O	M		
List of Items	Common Item Master								O	
Distribution Center	US Distribution Center									O
Distribution Center	UK Distribution Center									O
Warehouse	US Warehouse West									O
Warehouse	US Warehouse East									O
Warehouse	UK Warehouse									O
BSV = Balancing Segment Value										
BU = Business Unit										
Dept = Department										
Org = Organization										
M = Mandatory Setup										
O = Optional Setup										

In this chart, the green globe stands for mandatory and gold globe stands for optional setup. The following statements expand on the data in the chart.

- The enterprise is mandatory because it serves as an umbrella for the entire implementation. All organizations are created within an enterprise.
- Legal entities are also mandatory. They can be optionally mapped to balancing segment values or represented by ledgers. Mapping balancing segment values to legal entities is mandatory if you plan to use the intercompany functionality.
- At least one ledger is mandatory in an implementation in which you record your accounting transactions.
- Business units are also mandatory because financial transactions are processed in business units.
- A shared service center is optional, but if used, must be a business unit.
- Divisions are optional and can be represented with a hierarchy of cost centers or by a second balancing segment value.
- Departments are mandatory because they track your employees.
- Optionally, add an item master organization and inventory organizations if you are tracking your inventory transactions in Oracle Fusion Applications.

Note

Some Oracle Fusion Human Capital Management and Oracle Sales Cloud implementations do not require recording of accounting transactions and therefore, do not require implementation of a ledger.

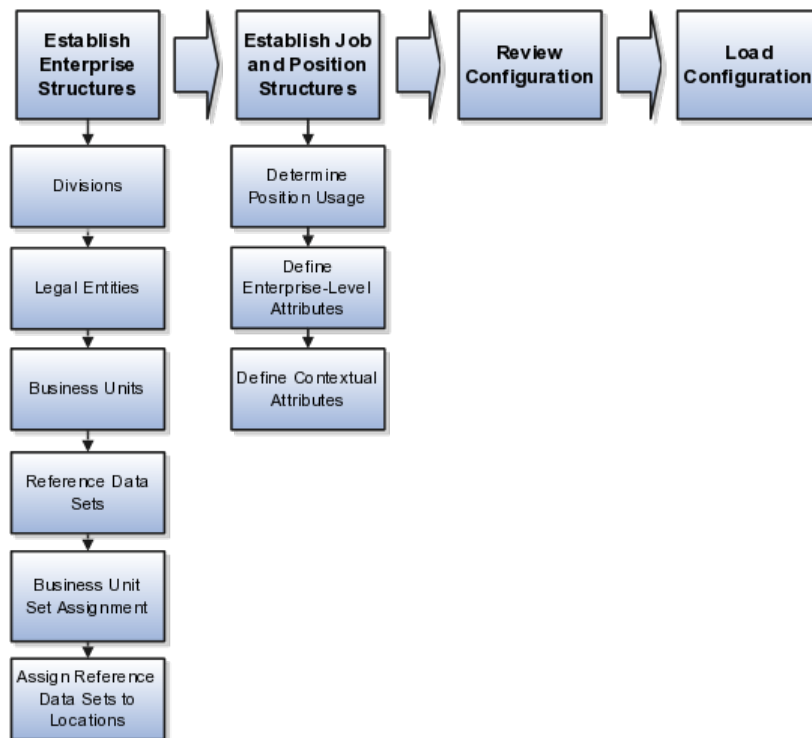
Note

Define Initial Configuration

Establishing Enterprise Structures Using the Enterprise Structures Configurator: Explained

The Enterprise Structures Configurator is an interview-based tool that guides you through the process of setting up a basic enterprise structure. By answering questions about your enterprise, the tool creates a structure of divisions, legal entities, business units, and reference data sets that reflects your enterprise structure. After you create your enterprise structure, you also follow a guided process to determine whether or not to use positions, and whether to set up additional attributes for jobs and positions. After you define your enterprise structure and your job and position structures, you can review them, make any necessary changes, and then load the final configuration.

This figure illustrates the process to configure your enterprise using the Enterprise Structures Configurator.



To be able to use the Enterprise Structures Configurator, you must select the Enterprise Structures Guided Flow feature for your offerings on the Configure Offerings page in the Setup and Maintenance work area. If you do not select this feature, then you must set up your enterprise structure using individual tasks provided elsewhere in the offerings, and you cannot create multiple configurations to compare different scenarios.

Establish Enterprise Structures

To define your enterprise structures, you use the guided flow within the Establish Enterprise Structures task to enter basic information about your enterprise, such as the primary industry and the location of your headquarters. You then create divisions, legal entities, business units, and reference data sets. The Establish Enterprise Structures task enables you to create multiple enterprise configurations so that you can compare different scenarios. Until you load a configuration, you can continue to create and edit multiple configurations until you arrive at one that best suits your enterprise.

Establish Job and Position Structures

You also use a guided process to determine whether you want to use jobs only, or jobs and positions. The primary industry that you select in the Establish Enterprise Structures task provides the application with the information needed to make an initial recommendation. You can either accept the recommendation, or you can answer additional questions about how you manage people in your enterprise, and then make a selection. After you select whether to use jobs or positions, the guided process prompts you to set up a descriptive flexfield structure for jobs, and for positions if you have chosen to use them. Descriptive flexfields enable you to capture additional information when you create jobs and positions.

Review Configuration

You can view a result of the interview process prior to loading the configuration. In the review results, you can view the divisions, legal entities, business units, reference data sets, and the management reporting structure that the application will create when you load the configuration.

Load Configuration

You can load only one configuration. When you load a configuration, the application creates the divisions, legal entities, business units, and so on. After you load the configuration, you then use individual tasks to edit, add, and delete enterprise structures.

Rolling Back an Enterprise Structure Configuration: Explained

The Enterprise Structures Configurator (ESC) provides the ability to roll back an enterprise configuration in the following circumstances:

Manual Rollback

You can manually roll back an enterprise configuration after loading it, for example, because you decide you do not want to use it. Clicking the Roll Back Configuration button on the Manage Enterprise Configuration page rolls back any enterprise structures that were created as a part of loading the configuration.

Automatic Rollback

If an error occurs during the process of loading the configuration, then the application automatically rolls back any enterprise structures that were created before the error was encountered.

Designing an Enterprise Configuration: Example

This example illustrates how to set up an enterprise based on a global company operating mainly in the US and the UK with a single primary industry.

Scenario

InFusion Corporation is a multinational enterprise in the high technology industry with product lines that include all the components that are required to build and maintain air quality monitoring (AQM) systems for homes and businesses. Its primary locations are in the US and the UK, but it has smaller outlets in France, Saudi Arabia, and the United Arab Emirates (UAE).

Enterprise Details

In the US, InFusion employs 400 people and has a company revenue of \$120 million. Outside the US, InFusion employs 200 people and has revenue of \$60 million.

Analysis

InFusion requires three divisions. The US division will cover the US locations. The Europe division will cover the UK and France. Saudi Arabia and the UAE will be covered by the Middle East division.

InFusion requires legal entities with legal employers, payroll statutory units, tax reporting units, and legislative data groups for the US, UK, France, Saudi Arabia, and UAE, in order to employ and pay its workers in those countries.

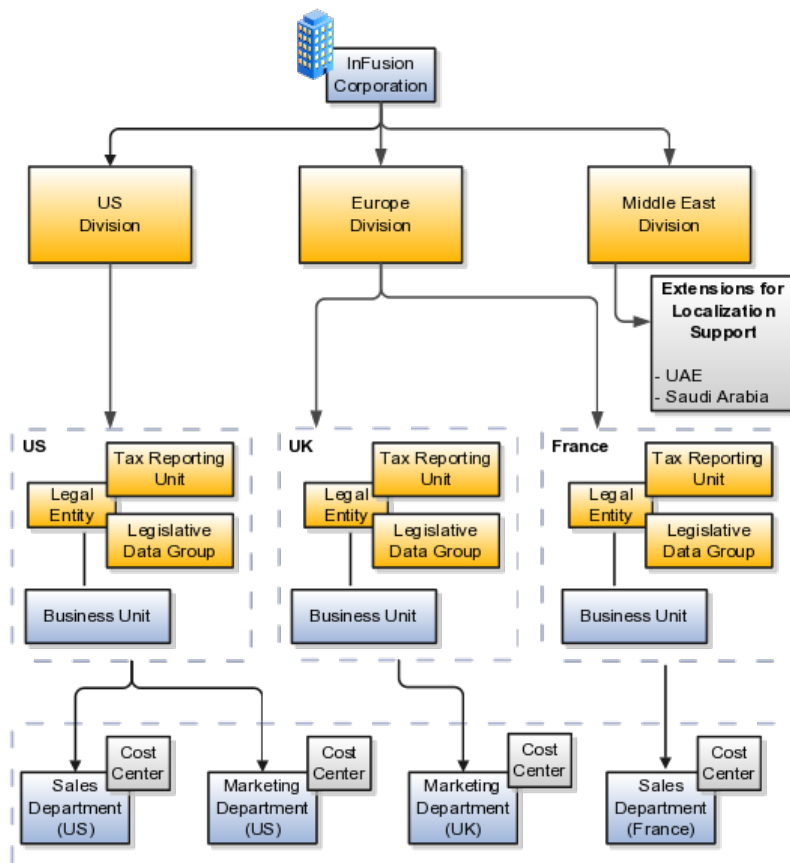
InFusion requires a number of departments across the enterprise for each area of business, such as sales and marketing, and a number of cost centers to track and report on the costs of those departments.

InFusion requires business units for human capital management (HCM) purposes. InFusion has general managers responsible for business units within each country. Those business units may share reference data. Some reference data can be defined within a reference data set that multiple business units may subscribe to. Business units are also required for financial purposes. Financial transactions are always processed within a business unit.

Resulting Enterprise Configuration

Based on this analysis, InFusion requires an enterprise with multiple divisions, ledgers, legal employers, payroll statutory units, tax reporting units, legislative data groups, departments, cost centers, and business units.

This figure illustrates the enterprise configuration that results from the analysis of InFusion Corporation.



Division: Explained

Managing multiple businesses requires that you segregate them by their strategic objectives and measure their results. Responsibility to reach objectives can be delegated along the management structure. Although related to your legal structure, the business organizational hierarchies do not need to reflect directly the legal structure of the enterprise. The management entities and structure can include divisions and subdivisions, lines of business, and other strategic business units, and include their own revenue and cost centers. These organizations can be included in many alternative hierarchies and used for reporting, as long as they have representation in the chart of accounts.

Divisions

A division refers to a business oriented subdivision within an enterprise, in which each division organizes itself differently to deliver products and services or address different markets. A division can operate in one or more countries, and can be comprised of many companies or parts of different companies that are represented by business units.

A division is a profit center or grouping of profit and cost centers, where the division manager is responsible for attaining business goals including profit

goals. A division can be responsible for a share of the company's existing product lines or for a separate business. Managers of divisions may also have return on investment goals requiring tracking of the assets and liabilities of the division. The division manager reports to a top corporate executive.

By definition a division can be represented in the chart of accounts. Companies may choose to represent product lines, brands, or geographies as their divisions: their choice represents the primary organizing principle of the enterprise. This may coincide with the management segment used in segment reporting.

Oracle Fusion Applications supports a qualified management segment and recommends that you use this segment to represent your hierarchy of business units and divisions. If managers of divisions have return on investment goals, make the management segment a balancing segment. Oracle Fusion applications allows up to three balancing segments. The values of the management segment can be comprised of business units that roll up in a hierarchy to report by division.

Historically, divisions were implemented as a node in a hierarchy of segment values. For example, Oracle E-Business Suite has only one balancing segment, and often the division and legal entity are combined into a single segment where each value stands for both division and legal entity.

Use of Divisions in Oracle Fusion Human Capital Management (HCM)

Divisions are used in HCM to define the management organization hierarchy, using the generic organization hierarchy. This hierarchy can be used to create organization based security profiles.

Legal Entities: Explained

A legal entity is a recognized party with rights and responsibilities given by legislation.

Legal entities have the right to own property, the right to trade, the responsibility to repay debt, and the responsibility to account for themselves to regulators, taxation authorities, and owners according to rules specified in the relevant legislation. Their rights and responsibilities may be enforced through the judicial system. Define a legal entity for each registered company or other entity recognized in law for which you want to record assets, liabilities, expenses and income, pay transaction taxes, or perform intercompany trading.

A legal entity has responsibility for elements of your enterprise for the following reasons:

- Facilitating local compliance
- Taking advantage of lower corporation taxation in some jurisdictions
- Preparing for acquisitions or disposals of parts of the enterprise
- Isolating one area of the business from risks in another area. For example, your enterprise develops property and also leases properties. You could operate the property development business as a separate legal entity to limit risk to your leasing business.

The Role of Your Legal Entities

In configuring your enterprise structure in Oracle Fusion Applications, you need to understand that the contracting party on any transaction is always the legal

entity. Individual legal entities own the assets of the enterprise, record sales and pay taxes on those sales, make purchases and incur expenses, and perform other transactions.

Legal entities must comply with the regulations of jurisdictions, in which they register. Europe now allows for companies to register in one member country and do business in all member countries, and the US allows for companies to register in one state and do business in all states. To support local reporting requirements, legal reporting units are created and registered.

You are required to publish specific and periodic disclosures of your legal entities' operations based on different jurisdictions' requirements. Certain annual or more frequent accounting reports are referred to as statutory or external reporting. These reports must be filed with specified national and regulatory authorities. For example, in the United States (US), your publicly owned entities (corporations) are required to file quarterly and annual reports, as well as other periodic reports, with the Securities and Exchange Commission (SEC), who enforces statutory reporting requirements for public corporations.

Individual entities privately held or held by public companies do not have to file separately. In other countries, your individual entities do have to file in their own name, as well as at the public group level. Disclosure requirements are diverse. For example, your local entities may have to file locally to comply with local regulations in a local currency, as well as being included in your enterprise's reporting requirements in different currency.

A legal entity can represent all or part of your enterprise's management framework. For example, if you operate in a large country such as the United Kingdom or Germany, you might incorporate each division in the country as a separate legal entity. In a smaller country, for example Austria, you might use a single legal entity to host all of your business operations across divisions.

Creating Legal Entities in the Enterprise Structures Configurator: Points to Consider

Using the Enterprise Structures Configurator (ESC), you can create legal entities for your enterprise automatically, based on the countries in which divisions of your business operate, or you can upload a list of legal entities from a spreadsheet.

Automatically Creating Legal Entities

If you are not certain of the number of legal entities that you need, you can create them automatically. To use this option, you first identify all of the countries in which your enterprise operates. The application opens the Map Divisions by Country page, which contains a matrix of the countries that you identified, your enterprise, and the divisions that you created. You select the check boxes where your enterprise and divisions intersect with the countries to identify the legal entities that you want the application to create. The enterprise is included for situations where your enterprise operates in a country and acts on behalf of several divisions within the enterprise and is a legal employer in a country. If you select the enterprise for a country, the application creates a country holding company.

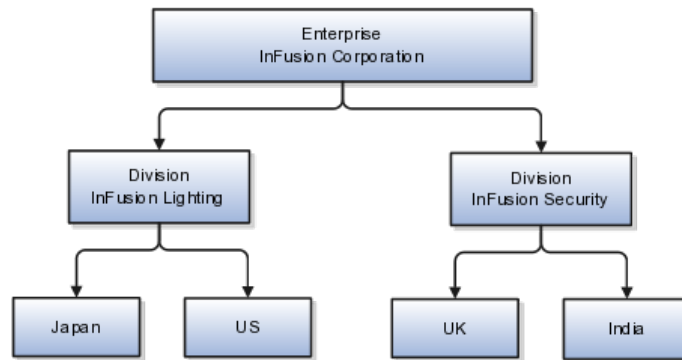
The application automatically creates the legal entities that you select, and identifies them as payroll statutory units and legal employers. For each country that you indicated that your enterprise operates in, and for each country that you created a location for, the application also automatically creates a legislative data group.

Any legal entities that you create automatically cannot be deleted from the Create Legal Entities page within the Enterprise Structures Configurator. You must return to the Map Divisions by Country page and deselect the legal entities that you no longer want.

Example: Creating Legal Entities Automatically

InFusion Corporation is using the ESC to set up their enterprise structure. They have identified two divisions, one for Lighting, and one for Security. The Lighting division operates in Japan and the US, and the Security division operates in the UK and India.

This figure illustrates InFusion Corporation's enterprise structure.



This table represents the selections that InFusion Corporation makes when specifying which legal entities to create on the Map Divisions by Country page.

Country	Enterprise	InFusion Lighting	InFusion Security
Japan	No	Yes	No
US	No	Yes	No
UK	No	No	Yes
India	No	No	Yes

Based on the selections made in the preceding table, the ESC creates the following four legal entities:

- InFusion Lighting Japan LE
- InFusion Lighting US LE
- InFusion Security UK LE
- InFusion Security India LE

Creating Legal Entities Using a Spreadsheet

If you have a list of legal entities already defined for your enterprise, you can upload them from a spreadsheet. To use this option, you first download a

spreadsheet template, then add your legal entity information to the spreadsheet, and then upload directly to your enterprise configuration. You can export and import the spreadsheet multiple times to accommodate revisions.

Legal Entity in Oracle Fusion: Points to Consider

Oracle Fusion Applications support the modeling of your legal entities. If you make purchases from or sell to other legal entities, define these other legal entities in your customer and supplier registers, which are part of the Oracle Fusion Trading Community Architecture. When your legal entities are trading with each other, you represent both of them as legal entities and also as customers and suppliers in your customer and supplier registers. Use legal entity relationships to determine which transactions are intercompany and require intercompany accounting. Your legal entities can be identified as legal employers and therefore, are available for use in Human Capital Management (HCM) applications.

There are several decisions that need to be considered in creating your legal entities.

- The importance of legal entity in transactions
- Legal entity and its relationship to business units
- Legal entity and its relationship to divisions
- Legal entity and its relationship to ledgers
- Legal entity and its relationship to balancing segments
- Legal entity and its relationship to consolidation rules
- Legal entity and its relationship to intercompany transactions
- Legal entity and its relationship to worker assignments and legal employer
- Legal entity and payroll reporting
- Legal reporting units

The Importance of Legal Entity in Transactions

All of the assets of the enterprise are owned by individual legal entities. Oracle Fusion Financials allow your users to enter legal entities on transactions that represent a movement in value or obligation.

For example, the creation of a sales order creates an obligation for the legal entity that books the order to deliver the goods on the acknowledged date, and an obligation of the purchaser to receive and pay for those goods. Under contract law in most countries, damages can be sought for both actual losses, putting the injured party in the same state as if they had not entered into the contract, and what is called loss of bargain, or the profit that would have made on a transaction.

In another example, if you revalued your inventory in a warehouse to account for raw material price increases, the revaluation and revaluation reserves must be reflected in your legal entity's accounts. In Oracle Fusion Applications, your

inventory within an inventory organization is managed by a single business unit and belongs to one legal entity.

Legal Entity and Its Relationship to Business Units

A business unit can process transactions on behalf of many legal entities. Frequently, a business unit is part of a single legal entity. In most cases the legal entity is explicit on your transactions. For example, a payables invoice has an explicit legal entity field. Your accounts payables department can process supplier invoices on behalf of one or many business units.

In some cases, your legal entity is inferred from your business unit that is processing the transaction. For example, your business unit A agrees on terms for the transfer of inventory to your business unit B. This transaction is binding on your default legal entities assigned to each business unit. Oracle Fusion Procurement, Oracle Fusion Projects, and Oracle Fusion Supply Chain applications rely on deriving the legal entity information from the business unit.

Legal Entity and Its Relationship to Divisions

The division is an area of management responsibility that can correspond to a collection of legal entities. If desired, you can aggregate the results for your divisions by legal entity or by combining parts of other legal entities. Define date-effective hierarchies for your cost center or legal entity segment in your chart of accounts to facilitate the aggregation and reporting by division. Divisions and legal entities are independent concepts.

Legal Entity and Its Relationship to Ledgers

One of your major responsibilities is to file financial statements for your legal entities. Map legal entities to specific ledgers using the Oracle Fusion General Ledger Accounting Configuration Manager. Within a ledger, you can optionally map a legal entity to one or more balancing segment values.

Legal Entity and Its Relationship to Balancing Segments

Oracle Fusion General Ledger supports up to three balancing segments. Best practices recommend that one of these segments represents your legal entity to ease your requirement to account for your operations to regulatory agencies, tax authorities, and investors. Accounting for your operations means you must produce a balanced trial balance sheet by legal entity. If you account for many legal entities in a single ledger, you must:

1. Identify the legal entities within the ledger.
2. Balance transactions that cross legal entity boundaries through intercompany transactions.
3. Decide which balancing segments correspond to each legal entity and assign them in Oracle Fusion General Ledger Accounting Configuration Manager. Once you assign one balancing segment value in a ledger, then all your balancing segment values must be assigned. This recommended best practice facilitates reporting on assets, liabilities, and income by legal entity.

Represent your legal entities by at least one balancing segment value. You may represent it by two or three balancing segment values if more granular reporting is required. For example, if your legal entity operates in multiple jurisdictions in Europe, you might define balancing segment values and map them to legal reporting units. You can represent a legal entity by more than one balancing segment value, do not use a single balancing segment value to represent more than one legal entity.

In Oracle Fusion General Ledger, there are three balancing segments. You can use separate balancing segments to represent your divisions or strategic business units to enable management reporting at the balance sheet level for each division or business unit. For example, use this solution to empower your business unit and divisional managers to track and assume responsibility for their asset utilization or return on investment. Using multiple balancing segments is also useful when you know at the time of implementation that you are disposing of a part of a legal entity and need to isolate the assets and liabilities for that entity.

Note

Implementing multiple balancing segments requires every journal entry that is not balanced by division or business unit, to generate balancing lines. Also, you cannot change to multiple balancing segments easily after you have begun to use the ledger because your historical data is not balanced by the new multiple balancing segments. Restating historical data must be done at that point.

To use this feature for disposal of a part of a legal entity, implement multiple balancing segments at the beginning of the legal entity's corporate life or on conversion to Oracle Fusion.

If you decided to account for each legal entity in a separate ledger, there is no requirement to identify the legal entity with a balancing segment value within the ledger.

Note

While transactions that cross balancing segments don't necessarily cross legal entity boundaries, all transactions that cross legal entity boundaries must cross balancing segments. If you make an acquisition or are preparing to dispose of a portion of your enterprise, you may want to account for that part of the enterprise in its own balancing segment even if it is not a separate legal entity. If you do not map legal entities sharing the same ledger to balancing segments, you will not be able to distinguish them using the intercompany functionality or track their individual equity.

Legal Entity and Its Relationship to Consolidation Rules

In Oracle Fusion Applications you can map legal entities to balancing segments and then define consolidation rules using your balancing segments. You are creating a relationship between the definition of your legal entities and their role in your consolidation.

Legal Entity and its Relationship to Intercompany Transactions

Use Oracle Fusion Intercompany functionality for automatic creation of intercompany entries across your balancing segments. Intercompany processing

updates legal ownership within the enterprise's groups of legal entities. Invoices or journals are created as needed. To limit the number of trading pairs for your enterprise, set up intercompany organizations and assign them to your authorized legal entities. Define processing options and intercompany accounts to use when creating intercompany transactions and to assist in consolidation elimination entries. These accounts are derived and automatically entered on your intercompany transactions based on legal entities assigned to your intercompany organizations.

Intracompany trading, in which legal ownership isn't changed but other organizational responsibilities are, is also supported. For example, you can track assets and liabilities that move between your departments within your legal entities by creating departmental level intercompany organizations.

Note

In the Oracle Fusion Supply Chain applications, model intercompany relationships using business units, from which legal entities are inferred.

Legal Entity and Its Relationship to Worker Assignments and Legal Employer

Legal entities that employ people are called legal employers in the Oracle Fusion Legal Entity Configurator. You must enter legal employers on worker assignments in Oracle Fusion HCM.

Legal Entity and Payroll Reporting

Your legal entities are required to pay payroll tax and social insurance such as social security on your payroll. In Oracle Fusion Applications, you can register payroll statutory units to pay and report on payroll tax and social insurance on behalf of many of your legal entities. As the legal employer, you might be required to pay payroll tax, not only at the national level, but also at the local level. You meet this obligation by establishing your legal entity as a place of work within the jurisdiction of a local authority. Set up legal reporting units to represent the part of your enterprise with a specific legal reporting obligation. You can also mark these legal reporting units as tax reporting units, if the legal entity must pay taxes as a result of establishing a place of business within the jurisdiction.

Business Units: Explained

A business unit is a unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy. A business unit can process transactions on behalf of many legal entities. Normally, it will have a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss. Roll business units up into divisions if you structure your chart of accounts with this type of hierarchy. In Oracle Fusion Applications, you assign your business units to one primary ledger. For example, if a business unit is processing payables invoices they will need to post to a particular ledger. This assignment is mandatory for your business units with business functions that produce financial transactions.

In Oracle Fusion Applications, use business unit as a securing mechanism for transactions. For example, if you run your export business separately from your

domestic sales business, secure the export business data to prevent access by the domestic sales employees. To accomplish this security, set up the export business and domestic sales business as two separate business units.

The Oracle Fusion Applications business unit model:

- Allows for flexible implementation
- Provides a consistent entity for controlling and reporting on transactions
- Anchors the sharing of sets of reference data across applications

Business units process transactions using reference data sets that reflect your business rules and policies and can differ from country to country. With Oracle Fusion Application functionality, you can choose to share reference data, such as payment terms and transaction types, across business units, or you can choose to have each business unit manage its own set depending on the level at which you wish to enforce common policies.

In countries where gapless and chronological sequencing of documents is required for subledger transactions, define your business units in alignment with your ledger definition, because the uniqueness of sequencing is only ensured within a ledger. In these cases, define a single ledger and assign one legal entity and business unit.

In summary, use business units in the following ways:

- Management reporting
- Processing of transactions
- Security of transactional data
- Reference data definition and sharing

Brief Overview of Business Unit Security

Business units are used by a number of Oracle Fusion Applications to implement data security. You assign data roles to your users to give them access to data in business units and permit them to perform specific functions on this data. When a business function is enabled for a business unit, the application can trigger the creation of data roles for this business unit based on the business function's related job roles.

For example, if a payables invoicing business function is enabled, then it is clear that there are employees in this business unit that perform the function of payables invoicing, and need access to the payables invoicing functionality. Therefore, based on the correspondence between the business function and the job roles, appropriate data roles are generated automatically. Use Human Capital Management (HCM) security profiles to administer security for employees in business units.

Creating Business Units in the Enterprise Structures Configurator: Points to Consider

Business units are used within Oracle Fusion applications for management reporting, processing of transactions, and security of transactional data. Using

the Enterprise Structures Configurator (ESC), you create business units for your enterprise either automatically or manually.

Automatically Creating Business Units

To create business units automatically, you must specify the level at which to create business units. Business units within your enterprise may be represented at the business function level, such as Sales, Consulting, Product Development, and so on, or they may be represented at a more detailed level, where a business unit exists for each combination of countries in which you operate and the functions in those countries.

You can automatically create business units at the following levels:

- Country
- Country and Division
- Country and business function
- Division
- Division and legal entity
- Division and business function
- Business function
- Legal entity
- Business function and legal entity

Select the option that best meets your business requirements, but consider the following:

- If you use Oracle Fusion Financials, the legal entity option is recommended because of the manner in which financial transactions are processed.
- The business unit level that you select determines how the application automatically creates reference data sets.

After you select a business unit level, the application generates a list of business units, and you select the ones you want the application to create. If you select a level that has two components, such as country and division, then the system displays a table listing both components, and you select the check boxes at the intersections of the components.

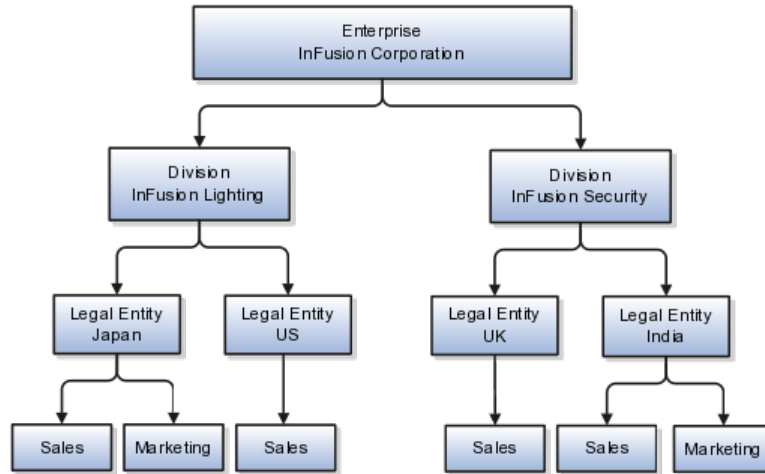
The business units listed by the application are suggestions only, and are meant to simplify the process to create business units. You are not required to select all of the business units suggested. When you navigate to the next page in the ESC guided flow, which is the Manage Business Units page, you cannot delete any of the business units that were created automatically. You must return to the Create Business Units page and deselect any business units that you no longer want.

Example: Selecting Business Unit Levels

InFusion Corporation is using the Enterprise Structures Configurator to set up their enterprise structure. They have identified two divisions, one for Lighting, and one for Security. They operate in four countries: US, UK, Japan, and India, and they have created a legal entity for each of the countries. The sales and

marketing functions are based in both India and Japan, while the US and the UK have only the sales function.

This figure illustrates InFusion Corporation's enterprise structure.



The following table lists the options for business unit levels and the resulting business units that the application suggests for InFusion Corporation.

Business Unit Level	Suggested Business Units
Country	• US • UK • Japan • India
Country and Division	• InFusion Lighting: Japan • InFusion Lighting: US • InFusion Security: UK • InFusion Security: India
Country and business function	• Sales: Japan • Marketing: Japan • Sales: US • Sales: UK • Marketing: India • Sales: India
Division	• InFusion Lighting • InFusion Security
Division and Legal Entity	• InFusion Lighting: Japan • InFusion Lighting: US • InFusion Security: UK • InFusion Security: India

Division and Business Function	• InFusion Lighting, Sales • InFusion Lighting, Marketing • InFusion Security, Sales • InFusion Security, Marketing
Business Function	• Sales • Marketing
Legal Entity	• Legal Entity: Japan • Legal Entity: US • Legal Entity: UK • Legal Entity India
Legal Entity and Business Function	• Legal Entity: Japan, Sales • Legal Entity: Japan, Marketing • Legal Entity: US, Sales • Legal Entity: UK, Sales • Legal Entity India, Marketing • Legal Entity India, Sales

Manually Creating Business Units

If none of the levels for creating business units meets your business needs, you can create business units manually, and you create them on the Manage Business Units page. If you create business units manually, then no reference data sets are created automatically. You must create them manually as well.

Reference Data Sets and Sharing Methods: Explained

Oracle Fusion Applications reference data sharing feature is also known as SetID. The reference data sharing functionality supports operations in multiple ledgers, business units, and warehouses, thereby reducing the administrative burden and decreasing the time needed to implement new business units. For example, you can share sales methods, transaction types, or payment terms across business units or selected other data across asset books, cost organizations, or project units.

The reference data sharing features use reference data sets to which reference data is assigned. The reference data sets group assigned reference data. The sets can be understood as buckets of reference data assigned to multiple business units or other application components.

Reference Data Sets

You begin this part of your implementation by creating and assigning reference data to sets. Make changes carefully as changes to a particular set will affect

all business units or application components using that set. You can assign a separate set to each business unit for the type of object that is being shared. For example, assign separate sets for payment terms, transaction types, and sales methods to your business units.

Your enterprise can decide that some aspects of corporate policy should affect all business units and leave other aspects to the discretion of the business unit manager. This allows your enterprise to balance autonomy and control for each business unit. For example, if your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level, you can let managers define their own sales methods, but define payment terms centrally. In this case, each business unit would have its own reference data set for sales methods, and there would be one central reference data set for payment terms assigned to all business units.

The reference data sharing is especially valuable for lowering the cost of setting up new business units. For example, your enterprise operates in the hospitality industry. You are adding a new business unit to track your new spa services. The hospitality divisional reference data set can be assigned to the new business unit to quickly setup data for this entity component. You can establish other business unit reference data in a business unit specific reference data set as needed

Reference Data Sharing Methods

There are variations in the methods used to share data in reference data sets across different types of objects. The following list identifies the methods:

- Assignment to one set only, no common values allowed. The simplest form of sharing reference data that allows assigning a reference data object instance to one and only one set. For example, Asset Prorate Conventions are defined and assigned to only one reference data set. This set can be shared across multiple asset books, but all the values are contained only in this one set.
- Assignment to one set only, with common values. The most commonly used method of sharing reference data that allows defining reference data object instance across all sets. For example, Receivables Transaction Types are assigned to a common set that is available to all the business units without the need to be explicitly assigned the transaction types to each business unit. In addition, you can assign a business unit specific set of transaction types. At transaction entry, the list of values for transaction types includes transaction types from the set assigned to the business unit, as well as transaction types assigned to the common set that is shared across all business units.
- Assignment to multiple sets, no common values allowed. The method of sharing reference data that allows a reference data object instance to be assigned to multiple sets. For instance, Payables Payment Terms use this method. It means that each payment term can be assigned to one or more than one set. For example, you assign the payment term Net 30 to several sets, but the payment term Net 15 is assigned to only your corporate business unit specific set. At transaction entry, the list of values for payment terms consists of only one set of data; the set that is assigned to the transaction's business unit.

Note: Oracle Fusion Applications contains a reference data set called Enterprise. Define any reference data that affects your entire enterprise in this set.

Business Units and Reference Data Sets: How They Work Together

Reference data sharing is a feature within Oracle Fusion that enables you to group set-enabled reference data such as jobs or grades so that the data can be shared across different parts of the organization. Sets also enable you to filter reference data at the transaction level so that only data that has been assigned to certain sets is available to select. To filter reference data, Oracle Fusion Human Capital Management (HCM), applications use the business unit on the transaction. To set up reference data sharing in Oracle Fusion HCM, you create business units and sets, and then assign the sets to the business units.

Common Set Versus Specific Sets

Some reference data in your organization may be considered global, and should therefore be made available for use within the entire enterprise. You can assign this type of data to the Common Set, which is a predefined set. Regardless of the business unit on a transaction, reference data that has been assigned to the Common Set will always be available, in addition to the reference data that has been assigned to the set that corresponds to the business unit on the transaction.

Other types of reference data may be specific to certain business units, so you want to restrict the use of the data to those business units. In this case, you can create sets specifically for this type of data, and assign the sets to the business units.

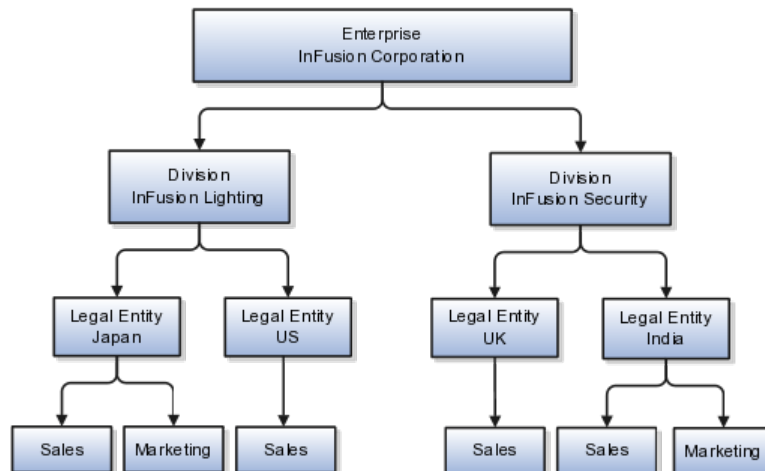
Business Unit Set Assignment

When you assign reference data sets to business units, you assign a default reference data set that will be used for all reference data types for that business unit. You can override the set assignment for one or more data types.

Example: Assigning Sets to Business Units

InFusion Corporation has two divisions: Lighting and Security, and the divisions each have two locations. Each location has one or more business functions.

The following figure illustrates the structure of InFusion Corporation.



When deciding how to create business units, InFusion decides to create them using the country and business function level. Therefore, they created the following business units:

- Sales_Japan
- Marketing_Japan
- Sales_US
- Sales_UK
- Marketing_India
- Sales_India

Because locations, departments, and grades are specific to each business unit, InFusion does not want to share these types of reference data across business units. They will create a reference data set for each business unit so that data of those types can be set up separately. Because the jobs in the Sales business function are the same across many locations, InFusion decides to create one additional set called Jobs and they will override the set assignment for the Jobs reference data group and assign it to the Jobs set. Based on these requirements, they create the following sets:

- Sales_Japan_Set
- Mktg_Japan_Set
- Sales_US_Set
- Sales_UK_Set
- Mktg_India_Set
- Sales_India_Set
- Grades_Set

InFusion assigns business units to sets as follows:

Business Unit	Default Set Assignment	Set Assignment Overrides
Sales_Japan	Sales_Japan_Set for grades, departments, and locations	Jobs set for jobs
Marketing_Japan	Mktg_Japan_Set for grades, departments, and locations	None
Sales_US	Sales_US_Set for grades, departments, and locations	Jobs set for jobs
Sales_UK	Sales_UK_Set for grades, departments, and locations	Jobs set for jobs
Marketing_India	Mktg_India_Set for grades, departments, and locations	None
Sales_India	Sales_India_Set for grades, departments, and locations	Jobs set for jobs

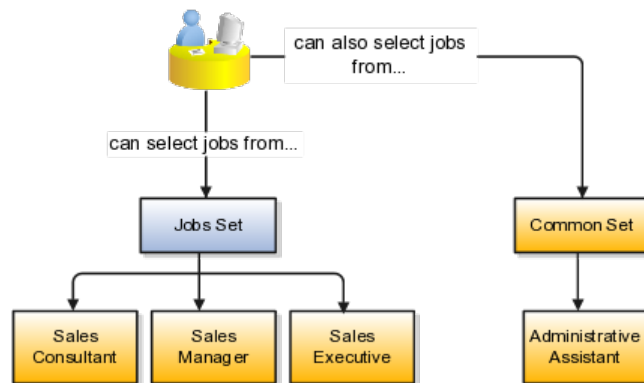
When setting up grades, departments, and locations for the business units, InFusion will assign the data to the default set for each business unit. When setting up jobs, they will assign the Jobs set and will assign the Common Set to any jobs that may be used throughout the entire organization.

When using grades, departments, and locations at the transaction level, users will be able to select data from the set that corresponds to the business unit that

they enter on the transaction, and any data that was assigned to the Common Set. For example, for transactions for the Marketing_Japan business unit, grades, locations, and departments from the Mktg_Japan_Set will be available to select, as well as from the Common Set.

When using jobs at the transaction level, users will be able to select jobs from the Jobs set and from the Common Set when they enter one of the Sales business units on the transaction. For example, when a manager hires an employee for the Sales_India business unit, the list of jobs will be filtered to show jobs from the Jobs set and from the Common Set.

The following figure illustrates what sets of jobs can be accessed when a manager creates an assignment for a worker.



Creating Reference Data Sets in the Enterprise Structures Configurator: Explained

If you created business units automatically, then the Enterprise Structures Configurator automatically creates reference data sets for you. The Enterprise Structures Configurator creates one reference data set for each business unit. You can add additional sets, but you cannot delete any of the sets that were created automatically.

A standard set called the Enterprise set is predefined.

Common Set

The common set is a predefined set that enables you to share reference data across business units. When you select set-enabled data at the transaction level, the list of values includes data in both the common set and the set associated with the data type for the business unit on the transaction. For example, when you create an assignment, the list of values for grades will include both grades in the common set and in the set that is assigned to grades for the business unit in which you creating the assignment.

Jobs: Example

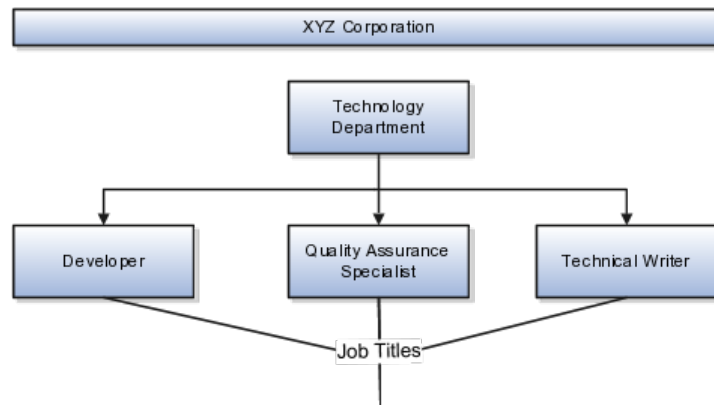
Jobs are typically used without positions by service industries where flexibility and organizational change are key features.

Software Industry

For example, XYZ Corporation has a director over the departments for developers, quality assurance, and technical writers. Recently, three developers have left the company. The director decides to redirect the head count to other areas. Instead of hiring all three back into development, one person is hired to each department, quality assurance, and technical writing.

In software industries, the organization is fluid. Using jobs gives an enterprise the flexibility to determine where to use head count, because the job only exists through the person performing it. In this example, when the three developers leave XYZ Corporation, their jobs no longer exist, therefore the corporation has the flexibility to move the headcount to other areas.

This figure illustrates the software industry job setup.



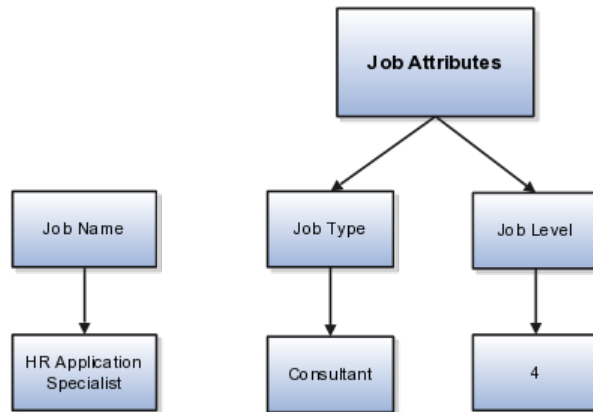
Job and Position Structures: Explained

Job and position structures identify the descriptive flexfield structure that enables you to specify additional attributes that you want to capture when you define jobs and positions. Job and position attributes provide further detail to make jobs and positions more specific. You also use attributes to define the structure of your jobs and positions. You can specify attributes at the enterprise level for jobs and positions, at the business unit level for positions, and at the reference data set level for jobs. Job and position structures are optional.

Enterprise-Level Job Attributes

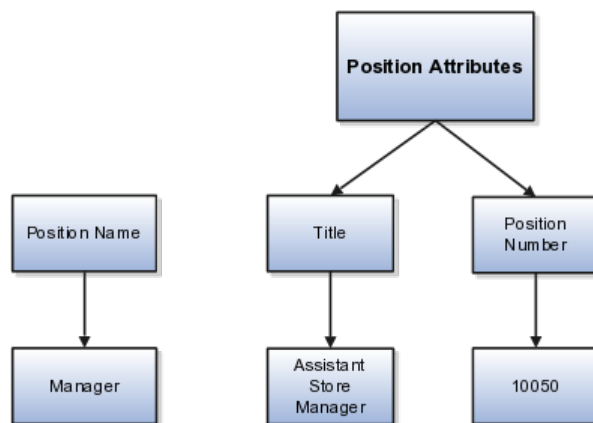
When you define a job, you enter a value for the name of the job. To make job names more specific, set up attributes that enable you to identify additional details about the job, such as the nature of the work that is performed or the relative skill level required for the job. If these attributes apply to all jobs within your enterprise, set up enterprise-level job attributes. Standard capabilities mean that you can use the different segments of the name to identify common jobs or job holders for analysis or compensation, or for grouping records in reports, for example, to find all jobs of a specific job type. You should not use attributes with values that change regularly, for example, salary ranges or expense approval levels that change every year.

This figure illustrates how job type and job level provide further details for the HR Application Specialist job.



Enterprise-Level Position Attributes

Position attributes at the enterprise level are similar to those for jobs. Each position that you define identifies a specific role in the enterprise, which you can manage independently of the person in the position, and it will belong to one specific department or organization. The name of each position must be unique. To simplify the process of managing unique names for positions, set up enterprise-level attributes to identify separate components of the position name. For example, you can set up an attribute for position title and one for position number. When defining the attributes that make up the structure of a position name you should also consider if any of your attributes are part of the definition of a common job type. Using job types for a position can help you manage common information that applies to many different positions. For example you can define a job type of Manager.Level 1 and use this for comparison of positions across departments or lines or business, or for setting common job requirements. You can then define multiple manager type positions in your HR department, each of which has responsibility for a different management function or group. This figure illustrates how title and position number provide further details for the manager position.



Business Unit-Level Attributes for Positions

If you have information that you want to capture for positions that is specific to each business unit, then you can define attributes at the business unit level for positions. When you create positions, these attributes appear in addition to any enterprise-level attributes. For example, you may want to identify the sales region for all positions in the sales business unit. You can set up a text attribute

called Sales Region and use it to enter the necessary information when creating positions for the sales business unit.

Reference Data Set-Level Attributes for Jobs

If you have information for jobs that applies to specific reference data sets, set up attributes for jobs at the reference data set level. When you create jobs, these attributes appear in addition to any enterprise-level attributes. For example, you may want to identify all information technology (IT) jobs within a specific set. You can set up a text attribute called Function and use it to enter IT in jobs that you create that perform an IT function within a specific set.

FAQs for Define Initial Configuration

What happens if I don't use the Enterprise Structures Configurator to set up my enterprise structures?

The Enterprise Structures Configurator is an interview-based tool that guides you through setting up divisions, legal entities, business units, and reference data sets. The tool also enables you to assign reference data sets to business units and locations. You can set up multiple configurations to perform what-if scenarios, and then print each configuration to compare the resulting enterprise structure. If you do not use the Enterprise Structures Configurator, then you must set up your enterprise structure using the individual tasks that correspond to each enterprise component. In addition, you will not be able to set up multiple configurations and compare different scenarios. It is recommended that you use the Enterprise Structures Configurator.

What's the default reference data set?

The reference data set that is assigned to a business unit for all reference data groups, such as grades, locations, departments, and jobs. You can override the default reference data set for any reference data group.

What happens if I override the set assignment?

For the selected business unit, you can override the default reference data set for one or more reference data groups. For example, assume you have three reference data groups: Vision 1 SET, Vision 2 SET, and Vision 3 SET, where Vision SET 1 is the default set for business unit United Kingdom Vision 1 BU. You can override the default so that grades are assigned to Vision 2 SET, departments are assigned to Vision 3 SET, and jobs are assigned to the default set, Vision 3 SET.

Define Reference Data Sharing

Reference Data Sharing: Explained

Reference data sharing facilitates sharing of configuration data such as jobs and payment terms, across organizational divisions or business units. You define

reference data sets and determine how the data is shared or partitioned. Use reference data sets to reduce duplication and maintenance by sharing common data across business entities where appropriate. Depending on the requirement (specific or common), each business unit can maintain its data at a central location, using a set of values either specific to it or shared by other business units.

You can share reference data after it is filtered on the basis of sets. A common reference data set is available as the default set, which can be assigned to several business units sharing the same reference data. For commonly used data such as currencies, you can use the common reference data set and assign it to multiple business units in various countries that use the same currency. In cases where the default set cannot be assigned to an entity, you can create specific sets. The data set visible on the transactional page depends on the sharing method used to share reference data.

For example, XYZ Corporation uses the same grades throughout the entire organization. Instead of managers in different business units setting up the same grades, XYZ Corporation decides to create a set called Grades and assign the grades reference data group for all business units in the organization to the Grades set, so that the grades can be shared.

Note

For specific information on configuring reference data sharing for a particular object or product, refer to its product documentation.

Reference Data Sets: Explained

Reference data sets are logical groups of reference data that can be accessed by various transactional entities depending on the business context. Oracle Fusion Applications contains a common reference data set as well as an enterprise set that may be used as a default set. Depending on your business requirement you can create and maintain additional reference data sets, while continuing to use the common reference data set.

Consider the following scenario.

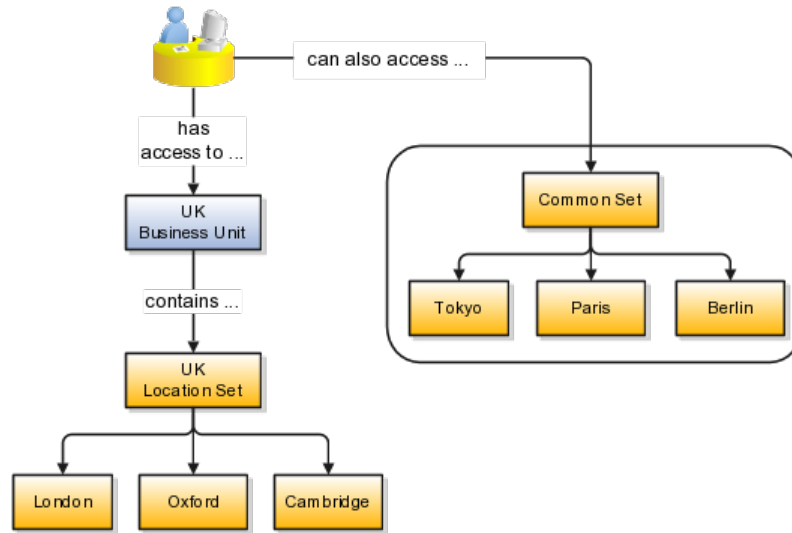
Your enterprise can decide that some aspects of corporate policy should affect all business units and leave other aspects to the discretion of the business unit manager. This allows your enterprise to balance autonomy and control for each business unit. For example, if your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level, you can let managers define their own sales methods, but define payment terms centrally. In this case, each business unit would have its own reference data set for sales methods, and there would be one central reference data set for payment terms assigned to all business units.

Partitioning

The partitioning of reference data and creation of data sets enable you to create reference entities across tables or lookup types, and share modular information and data processing options among business units. With the help of partitioning, you can choose to create separate sets and subsets for each business unit depending upon its business requirement, or create common sets or subsets to

enable sharing reference data between several business units, without the need for duplicating the reference data. Partitioning provides you the flexibility to handle the reference data in a way appropriate to your business needs.

The following figure illustrates the reference data sharing method (assignment to one set only, with common values) where the user can access the data assigned to a specific set in a particular business unit, as well as access the data assigned to the common set.



Reference Data Sets and Sharing Methods: Explained

Oracle Fusion Applications reference data sharing feature is also known as SetID. The reference data sharing functionality supports operations in multiple ledgers, business units, and warehouses, thereby reducing the administrative burden and decreasing the time needed to implement new business units. For example, you can share sales methods, transaction types, or payment terms across business units or selected other data across asset books, cost organizations, or project units.

The reference data sharing features use reference data sets to which reference data is assigned. The reference data sets group assigned reference data. The sets can be understood as buckets of reference data assigned to multiple business units or other application components.

Reference Data Sets

You begin this part of your implementation by creating and assigning reference data to sets. Make changes carefully as changes to a particular set will affect all business units or application components using that set. You can assign a separate set to each business unit for the type of object that is being shared. For example, assign separate sets for payment terms, transaction types, and sales methods to your business units.

Your enterprise can decide that some aspects of corporate policy should affect all business units and leave other aspects to the discretion of the business unit manager. This allows your enterprise to balance autonomy and control for each business unit. For example, if your enterprise holds business unit managers

accountable for their profit and loss, but manages working capital requirements at a corporate level, you can let managers define their own sales methods, but define payment terms centrally. In this case, each business unit would have its own reference data set for sales methods, and there would be one central reference data set for payment terms assigned to all business units.

The reference data sharing is especially valuable for lowering the cost of setting up new business units. For example, your enterprise operates in the hospitality industry. You are adding a new business unit to track your new spa services. The hospitality divisional reference data set can be assigned to the new business unit to quickly setup data for this entity component. You can establish other business unit reference data in a business unit specific reference data set as needed

Reference Data Sharing Methods

There are variations in the methods used to share data in reference data sets across different types of objects. The following list identifies the methods:

- Assignment to one set only, no common values allowed. The simplest form of sharing reference data that allows assigning a reference data object instance to one and only one set. For example, Asset Prorate Conventions are defined and assigned to only one reference data set. This set can be shared across multiple asset books, but all the values are contained only in this one set.
- Assignment to one set only, with common values. The most commonly used method of sharing reference data that allows defining reference data object instance across all sets. For example, Receivables Transaction Types are assigned to a common set that is available to all the business units without the need to be explicitly assigned the transaction types to each business unit. In addition, you can assign a business unit specific set of transaction types. At transaction entry, the list of values for transaction types includes transaction types from the set assigned to the business unit, as well as transaction types assigned to the common set that is shared across all business units.
- Assignment to multiple sets, no common values allowed. The method of sharing reference data that allows a reference data object instance to be assigned to multiple sets. For instance, Payables Payment Terms use this method. It means that each payment term can be assigned to one or more than one set. For example, you assign the payment term Net 30 to several sets, but the payment term Net 15 is assigned to only your corporate business unit specific set. At transaction entry, the list of values for payment terms consists of only one set of data; the set that is assigned to the transaction's business unit.

Note: Oracle Fusion Applications contains a reference data set called Enterprise. Define any reference data that affects your entire enterprise in this set.

Assigning Reference Data Sets to Reference Objects: Points to Consider

You can assign the reference data sets to reference objects on the Manage Reference Data Set Assignments page. For multiple assignments, you can classify different types of reference data sets into groups and assign them to reference entity objects. The assignment takes into consideration the determinant type, determinant, and reference group, if any.

Determinant Types

The partitioned reference data is shared based on a business context setting called the determinant type. It is the point of reference used in the data assignment process. The following table lists the determinant types used in the reference data assignment.

Type	Description
Asset Book	Information about the acquisition, depreciation, and retirement of an asset that belongs to a ledger or a business unit.
Business Unit	The departments or organizations within an enterprise.
Cost Organization	The organization used for cost accounting and reporting on various inventory and cost centers within an enterprise.
Project Unit	A logical organization within an enterprise that is responsible for enforcing consistent project management practices.
Reference Data Set	References to other shared reference data sets.

Determinant

The determinant or determinant value is the value that corresponds to the selected determinant type. The determinant is one of the criteria for selecting the appropriate reference data set. For example, when managing set assignments for the set determinant type, Reference Data Set is the determinant type, and you would enter the corresponding set code value as the corresponding determinant value.

Reference Groups

A transactional entity may have multiple reference entities (generally considered to be setup data) that are treated in the same manner because of commonness in implementing business policies and legal rules. Such reference entities in your application are grouped into logical units called reference groups, based on the functional area and the partitioning requirements that they have in common. For example, all tables and views that define Sales Order Type details might be part of the same reference group.

Note

The reference groups are predefined in the reference groups table and are available for selection and assignment.

Items and Supplier Site Reference Data Sharing: Explained

Some products required special logic for reference data sharing and have implemented their own domain specific ways for sharing data.

Items and supplier sites are two such product specific reference data objects that use product specific mechanisms to share data.

Items

If you share your items across warehouses or manufacturing facilities, you can access them through a common item master. Configure one or multiple item masters for your enterprise, based your enterprise structure. A single item master is recommended because it provides simpler and more efficient maintenance. However, in rare cases, it may be beneficial to keep multiple item masters. For example, if you acquire another enterprise and need to continue to operate your lines of business separately, maintaining a second item master might be the best decision.

Suppliers Sites

You can approve particular suppliers to supply specified commodities and authorize your business units to buy from those suppliers when the need arises. For example, you might be a household cleaning products manufacturer and need dyes, plastics, and perfumes to make your products. You purchase from a central supplier 70% of your perfume supplies with an additional supplier, in reserve, from whom you purchase the remaining 30%. At the same time, each of your business units purchases plastics and dyes from the same supplier, but from different local supplier sites to save transportation costs.

To implement business unit specific supplier sites, Oracle Fusion Procurement supports a method for defining suppliers sites as owned and managed by the business unit responsible for negotiating the supplier terms. Your other business units that have a service provider relationship defined with your procurement business unit, subscribe to the supplier sites using the supplier site assignments feature. In addition, Procurement allows sharing of the following procurement data objects across business units:

- Supplier qualification data, such as approved supplier lists
- Catalog content, such as agreements, smart forms, public shopping lists, and content zones
- Procurement configuration data

Set Assignments and Project Data: How They Work Together

Reference data set assignments determine how you share enterprise information, including project data, across organizational units. In other words, you can decide which data is global, which data can be shared by certain organizations, and which data must remain organization-specific. Reference data sharing enables enterprises to balance autonomy and control for organizations.

Oracle Fusion Projects employs two set determinants: business unit and project unit.

Business Unit as Set Determinant

Business units enable you to control and report on financial transactions, usually for specific geographical entities within the enterprise. For project management purposes, assign the Project Accounting business function to the business unit.

Business unit is a set determinant for the following project-related reference data objects.

Reference Data Object	Entities
Project Accounting Definition	Project types
Project Rates	Project rate schedules

You assign a default set to each business unit. You can optionally override the default set for the **Project Accounting Definition** and **Project Rates** reference data objects. To enable a project type or rate schedule for use within the business unit, you must assign the same reference data set to that entity.

Note

If you assign a common set to a rate schedule, then that rate schedule is available for use across business units.

Project Unit as Set Determinant

Use project units to enforce consistent project management practices across your enterprise. Project unit is a set determinant for the following reference data objects.

Reference Data Object	Entities
Project Definition	Class codes, financial plan types and project plan types, project roles, and project statuses
Project Transaction Types	Expenditure types and work types

When specifying project unit implementation options, you select a default set. You can optionally override the default set for the **Project Definition** and **Project Transaction Types** reference data objects. To enable an entity like a financial plan type for use on projects owned by a project unit, assign the set associated with the Project Definition reference data object to the financial plan type.

Similarly, to enable expenditure types and work types for use on projects owned by a project unit, assign the set associated with the Project Transaction Types reference data object to those entities.

Partitioning Project Data Using Set Determinants: Examples

Use business units and project units to independently manage access to financial and project management data based on the unique requirements of your enterprise.

This topic illustrates the following scenarios.

1. Maintaining separate project management methodologies and data across units within an enterprise while centralizing financial management of data
2. Enforcing a single project management methodology across units within an enterprise while partitioning financial data

Note

These examples are only illustrative. Any combination of business units and project units can exist.

Using Multiple Project Units with One Business Unit

Assume that Vision Corporation is a services company with facilities across the United States. Its business is based on research and development activities and consulting practice. Projects are used by each line of business as follows:

- Consulting uses projects to manage consulting engagements and provide billing details to contracts.
- Research and Development uses projects to manage design project schedules.
- Real Estate uses projects to manage facilities, including new construction and repairs.

Vision Corporation implemented project units and business units as follows:

- Project Units
 - Consulting
 - Real Estate
 - Research and Development
- Business Unit: Vision Corporation

Set assignments for reference data objects, where project unit is the set determinant, are as follows:

Project Unit	Default Set
Consulting	Consulting Set
Real Estate	Real Estate Set
Research and Development	Research and Development Set

Note

The default set is used as the reference data set for both the Project Definition and Project Transaction Types reference data objects.

Vision Corporation can maintain independent setup data for each project unit, while sharing a single approach to financial management across all project units. For example, Vision Corporation uses different expenditure types across project units, as described in the table below.

Expenditure Type	Sets
Labor	Consulting Set Real Estate Set Research and Development Set

Airfare	Consulting Set
Hotel	Consulting Set
Equipment	Real Estate Set

The Labor expenditure type can be used for projects belonging to any project unit. However, expenditure types for airfare and hotel accommodation are used only on consulting projects.

Using Multiple Business Units with One Project Unit

Assume that InFusion Corporation is a services and product development company with research and development facilities across the globe, including in the United States and Canada. Due to its international operations, financial data must be partitioned using separate business units. However, basic research and development activities, based on projects, are the same across the enterprise. Therefore, a single project unit is created.

The enterprise structure and set assignments are described below.

- Project Unit: Research and Development
- Business Units
 - InFusion United States
 - InFusion Canada

Default set assignments for the business units are as follows:

Business Unit	Default Set
InFusion United States	US Set
InFusion Canada	Canada Set

InFusion Corporation maintains independent financial data for each business unit, while employing a unified approach to project management that includes common financial and project plan types, project roles, and project statuses. As the enterprise must use different resource rates in each country, rate schedule setup is as follows.

Rate Schedule Name	Project Rates Set
Enterprise Project Rates: United States	US Set
Enterprise Project Rates: Canada	Canada Set
Common Enterprise Project Rates	Common Set

These set assignments govern how planned and actual amounts are calculated for projects.

For example, when InFusion Corporation defines organization costing rules for the InFusion United States business unit, they can select only the Enterprise Project Rates: United States or the Common Enterprise Project Rates rate schedules. Later, the application uses the selected rate schedule to calculate actual costs when project accountants import uncoded time cards for the InFusion United States business unit.

FAQs for Define Reference Data Sharing

What reference data objects can be shared across business units?

The following list contains the reference data objects for the Oracle Fusion Applications that can be shared across business units and the method in which the reference data for each is shared.

Application Name	Reference Data Object	Method of Sharing
Trading Community Model	Customer Account Relationship	Assignment to one set only, with common values
Trading Community Model	Customer Account Site	Assignment to one set only, with common values
Trading Community Model	Sales Person	Assignment to one set only, with common values
Opportunity Management	Sales Method Group	Assignment to one set only, with common values
Work Management	Assessment Templates	Assignment to one set only, with common values
Enterprise Contracts	Contract Types	Assignment to one set only, with common values
Sales	Sales Method	Assignment to one set only, with common values
Common Components	Activity Templates	Assignment to one set only, with common values
Payables	Payment Terms	Assignment to multiple sets, no common values allowed
Receivables	Accounting Rules	Assignment to one set only, with common values
Receivables	Aging Buckets	Assignment to one set only, with common values
Receivables	Auto Cash Rules	Assignment to one set only, with common values
Receivables	Collectors	Assignment to one set only, with common values
Receivables	Lockbox	Assignment to one set only, with common values
Receivables	Memo Lines	Assignment to one set only, with common values
Receivables	Payment Terms	Assignment to one set only, with common values
Receivables	Remit To Address	Assignment to one set only, with common values
Receivables	Revenue Contingencies	Assignment to one set only, with common values
Receivables	Transaction Source	Assignment to one set only, with common values

Receivables	Transaction Type	Assignment to one set only, with common values
Advanced Collections	Collections Setups	Assignment to one set only, with common values
Advanced Collections	Dunning Plans	Assignment to one set only, with common values
Tax	Tax Classification Codes	Assignment to one set only, with common values
Human Resources	Departments	Assignment to one set only, with common values
Human Resources	Jobs	Assignment to one set only, with common values
Human Resources	Locations	Assignment to one set only, with common values
Human Resources	Grades	Assignment to one set only, with common values
Project Billing	Project and Contract Billing	Assignment to multiple sets, common values not allowed
Project Foundation	Project Accounting Definition	Assignment to one set only, no common values allowed
Project Foundation	Project Rates	Assignment to one set only, with common values
Distributed Order Orchestration	Hold Codes	Assignment to one set only, with common values
Distributed Order Orchestration	Orchestration Process	Assignment to one set only, with common values

What reference data objects can be shared across cost organizations?

The following list contains the reference data objects for Oracle Fusion Cost Management that can be shared across cost organizations and the method in which the reference data for each is shared.

Application Name	Reference Data Object	Method of Sharing
Cost Management	Cost Structure	Assignment to one set only, no common values allowed

What reference data objects can be shared across project units?

The following list contains the reference data objects for Oracle Fusion Project Foundation that can be shared across project units and the method in which the reference data for each is shared.

Application Name	Reference Data Object	Method of Sharing
Project Foundation	Project Definition	Assignment to multiple sets, no common values allowed

Project Foundation	Project Transaction Types	Assignment to multiple sets, no common values allowed

Define Geographies

Defining Address Cleansing: Explained

Address cleansing provides a way to validate, correct, and standardize addresses that are entered in a user interface. Geography validation only validates the geography attributes of an address, for example, State, City, and Postal codes; address cleansing validates both the geography attributes and the address line attributes.

To be able to use the address cleansing functionality, you need to have license for the customer data quality application, because the feature is delivered using data quality integration.

You can specify the real time address cleansing level for each country by choosing either **None**, meaning that there is no real time address cleansing, or by choosing **Optional**, meaning that you will have the choice to cleanse addresses. Once you have enabled address cleansing for a country a **Verify Address** icon appears at address entry points in the application. You can then click the icon to perform address cleansing and receive a corrected, standardized address. If the application does not find a matching address it will alert you.

Geography Structure, Hierarchy, and Validation: How They Fit Together

There are three components that are dependent on each other when defining a country: geography structure, geography hierarchy, and geography validation. Every country has to have the geography structure defined first before the hierarchy can be defined, and the geography hierarchy has to be defined before the validation can be defined.

Geography Structure

Firstly, you need to create a geography structure for each country to define which geography types are part of the country structure, and how the geography types are hierarchically related within the country structure. For example, you can create geography types called State, City, and Postal Code. Then you can rank the State geography type as the highest level within the country, the City as the second level, and the Postal Code as the lowest level within the country structure. Geography structure can be defined using the **Manage Geographies** task, or can be imported using tasks in the **Define Geographies** activity.

Geography Hierarchy

Once the geography structure is defined, the geographies for each geography type can be added to the hierarchy. For example, below the United States you can create a geography called California using a State geography type.

As part of managing the geography hierarchy you can view, create, edit, and delete the geographies for each geography type in the country structure. You can also add a primary and alternate name and code for each geography. A geography hierarchy can be created using the **Manage Geographies** task, or can be imported using tasks in the **Define Geographies** activity.

Geography Validation

After defining the geography hierarchy, you need to specify the geography validations for the country. You can choose which address style formats you would like to use for the country, and for each selected address style format you can map geography types to address attributes. You can also select which geography types should be included in geography or tax validation, and which geography types will display in a list of values during address entry in other user interfaces. The geography validation level for the country, such as error or warning, can also be selected.

Geography Structures: Explained

A geography structure is a hierarchical grouping of geography types for a country. For example, the geography structure for the United States is the geography type of State at the top, then followed by the County, then the City, and finally the Postal Code.

You can use the geography structure to establish:

- How geographies can be related
- The types of geographies you can define for the country

How Geographies Can Be Related

You can determine how a country's geographies are hierarchically related by creating the hierarchy of the geography types in the geography structure. When you define a country's structure the country geography type is implicitly at the top of the geography structure, and the numbering of the subsequent levels start with 1 as the next geography level after country.

You must add a geography type as a level in the country structure before you can define a geography for that geography type in a country. For example, before defining the state of California, the State geography type must be added to the United States country structure. Only one geography type can be used for each level, you cannot define more than one geography type at the same level.

Note

After you first define a country structure you can only add geography types below the current lowest level, and delete geography types without defined geographies.

To simplify the creation of a country structure you can copy a structure from another country, and then amend the geography type hierarchy for the country.

The Types of Geographies You Can Define for the Country

The application provides you with a set of available master reference geography types. If required, you can create a geography type before adding it to the country structure. Each geography type is added below the current lowest level.

Note

If you want to delete a geography type that is not at the lowest level in the country structure, then you have to delete the geography type level and all the levels below it.

A geography type that you create within the country structure can be used for other country structures as well.

Geography Hierarchy: Explained

Geography hierarchy is a data model that lets you establish conceptual parent-child relationships between geographies. A geography, such as Tokyo or Peru, describes a boundary on the surface of the earth. The application can extrapolate information based on this network of hierarchical geographical relationships.

For example, in the geography hierarchy the state of California is defined as the parent of San Mateo county, which is the parent of Redwood City, which is the parent of the postal code 94065. If you enter just 94065, the application can determine that the postal code is in California, or that the corresponding city is Redwood City.

The application leverages geography hierarchy information to facilitate business processes that rely on geography information, for example, tax calculation, order sourcing rules, sales territory definition. The geography hierarchy information is centrally located and shared among other application offerings.

The top level of the geography hierarchy is Country, so the hierarchy essentially contains countries and their child geographies. Other aspects of the geography hierarchy include:

- Geography
- Geography type
- Geography usage
- Master reference geography hierarchy
- User defined zones

Geography

A geography is a boundary such as a country, state, province or city. It is a physical space with boundaries that is a defined instance of a geography type. For example, San Jose is a geography of the City geography type.

Geography Type

Geography types are a divisional grouping of geographies, which can be either geopolitical (for example, City, Province, and District) or user defined (for example, Continent, Country Regions, Tax Regions).

Geography Usage

Geography usage indicates how a geography type or geography is used in the application. A master reference geography always has the usage of Master Reference. User defined zones can have the usages of Tax, Shipping, or Territory, based on what is relevant for their purpose.

Master Reference Geography Hierarchy

The geography hierarchy data is considered to be the single source of truth for geographies. It comprises all geography related data, including geography types and geographies.

The geography usage for the entire hierarchy is the master reference, and defined geography types and geographies are considered as master reference geography types and geographies. For example, Country is a universally recognized geography type, and United States is considered a master geography.

User Defined Zones

User defined zones are a collection of geographical data, created from master reference data for a specific purpose. For example, territory zones are collections of master reference geographies ordered in a hierarchy. Tax and shipping zones are collections of master reference geographies without a hierarchical grouping.

Geography Validation: Explained

Geography validation determines the geography mapping and validation for a country's address styles, as well as the overall geography validation control for a country.

The **No Styles Format** address style format is the default address style format for a country. By defining the mapping and validation for this format you will ensure that validations can be performed for any address in the country. After the **No Styles Format** is defined you can set up additional mapping for specific address styles.

For each address style format, you can define the following:

- Map to attribute
- Enable list of values
- Tax validation
- Geography validation
- Geography validation control

Map to Attribute

For every address style format, you can map each geography type to an address attribute. For example, you can map the **State** geography type to the **State**

address attribute for the United States, or map the **State** geography type to the **County** address attribute for the United Kingdom. The geography types that appear are based on how the country structure is defined. The list of address attributes that appear are based on address formats delivered with the application, or your customer defined address formats.

Note

You only need to map geography types that you want to use for geography or tax validation purposes.

Enable List of Values

Once a geography type is mapped to an attribute, then you can specify whether the geography type will appear in a list of values during address entry in user interfaces. It is very important to review carefully if you want to enable a list of values. You should only enable a list of values if you have sufficient geography data imported or created for that geography. Once you have enabled a list of values for an address attribute, you can only select the geography data available for the geography type. This means that if a specific geography value is not available in the geography hierarchy, you cannot create an address with a different geography value.

Tax Validation

You can also specify whether a geography type will be included in tax validation. For example, for the United States North America address style format you specify that County, State, and City are used for tax validation. This will mean that when a transaction involves an address with the North America address style, the address must have the correct county, state, and city combination based on the geography hierarchy data, to be considered valid for tax calculation.

Geography Validation

You can specify whether a geography type will be included in geography validation. This will mean that, for example, when the user enters a United States address using the North America address style format, the address must have the correct country, state, and postal code combination based on geography hierarchy data to be considered geographically valid.

If an address element is mapped to a geography type, but not selected for geography validation usage, then during address entry suggested values will be provided for the address element, but the address element will not be validated.

Note

For either the tax or geography validation, do not skip more than one consecutive level unless you are certain that the selected geography types can uniquely identify geographies. For example, the United States country structure is: State, County, City, and Postal Code, and you want to select just State and Postal Code for geography or tax validation. However, for the combination of California and 94065, the city can be either Redwood Shores or Redwood City. In

this case, you should also select at least the City geography type for geography or tax validation.

Geography Validation Control

You can select the geography validation level for a country. Validation will check if the entered address maps to the geography hierarchy data available for the country, and the geography validation control determines whether you can save an address that did not pass validation during address entry. For example, if the validation level is **Error**, then an address cannot be saved if the values do not match the geography hierarchy data.

These are the geography validation levels you can choose:

- **Error** - only completely valid addresses can be saved, with all mandatory address elements entered.
- **No Validation** - all addresses can be saved including incomplete and invalid addresses.

Regardless of the result of validation, the validation process will try to map any address attribute to a geography of the country, and store any mapping it could establish based on the available data. This is called **Geography Name Referencing** and it is executed as part of validation. The result of this referencing is used in several business processes in the application to map an address to a specific geography or zone.

Note

The Geography Dimension value in territories is derived from sell-to addresses of sales accounts. To use geography dimensions in territories, ensure that the geography elements in addresses, such as state, city, and postal code, are validated. You can do so by enabling geography validation for each country using the Manage Geographies task. While doing so, ensure that at least one level in the geography hierarchy is enabled for geography validation. It is recommended that you enable geography validation for all geography levels that you intend to use for territory definition for each country. You can enable a list of values containing specific geography elements. This will help users search and select appropriate geography values during addresses entry and eliminate all possibilities of wrong address entry. You can also set geography validation control to Error in the Manage Geography Validation page. This ensures that users can only use valid geography elements in addresses. If you have already created addresses before setting up geography validation for a country, you must execute the Run Maintain Geography Name Referencing task for that country after enabling geography validation to ensure that all your geography elements are validated.

Importing Geographies: Explained

A geography, such as Tokyo or Peru, describes a boundary on the surface of the earth. You can create new geographies by importing data through interface tables. There are two options for populating the interface tables: using the tool of your preference to load the data or using file-based data import. If you plan to provide the data details in a source file, use the file-based import feature. If

you will populate the interface table directly, run the geography loader process to import the data. Having a good understanding of the import entity, interface table, and destination table will help you prepare your import data.

Consider the following when importing geographies:

- File-based import option
- Geography loader process option
- Import object entity, interface table, and destination tables

File-Based Import Option

The file-based import process reads the data included in your XML or text file, populates the interface tables, and imports the data into the application destination tables. The **File-Based Data Import Setup and Maintenance** task list includes the tasks needed to configure the geography import object, create source file mappings, and schedule the import activities.

Geography Loader Process Option

Populate the interface table with your import data, then navigate to the **Run Geography Loader Setup and Maintenance** task to schedule the import of data from the interface table to the destination table.

Import Object Entity, Interface Table, and Destination Tables

The geography import object consists of one entity and interface table that forms the geography. If you are using file-based import, you can map your source file data to import entity attributes that correspond to the interface table columns. The import activity process populates the interface table based on the mapping and your source file. If using the geography loader scheduled process, populate the interface table directly using your preferred tool. If you need the unique IDs of existing application data for your import data, use the **Define Data Export Setup and Maintenance** task list to export the information.

Note

Spreadsheets containing detailed information about each interface table, including the import attributes, corresponding interface table columns, defaults, and validations, are available from the Oracle Enterprise Repository by searching on a specific interface table name or initiating a search using the **FusionApps: Interface Table** asset type.

The following lists the object entity, tables, and resulting application object:

File-Based Import Entities	Interface Tables	Destination Tables	Application Object
ImpGeography	HZ_IMP_GEOGRAPHIES	HZ_GEOGRAPHIES HZ_GEOGRAPHY_IDEN HZ_GEOGRAPHY_TYPE HZ_HIERARCHY_NODE	Geography

Importing Country Structures Using File-Based Import: Explained

This topic explains how to prepare and import country structure data from an external data source into Oracle Sales Cloud using the File-Based Data Import feature. A country structure is a hierarchical grouping of geography types for a country. For example, the geography structure for the United States has the geography type of State at the top, followed by the County, then the City, and finally the Postal Code.

You can use the country structure to set up the following:

- The relationships between geographies within a country
- The types of geographies that you can define for a country

Consider the following questions when importing your data:

- How does your legacy system or source system represent the country structure compared to how Oracle Sales Cloud represents the same data?
- Do you have to configure values in Oracle Sales Cloud to map to your data values?
- Do you have to customize Oracle Sales Cloud to capture additional attributes that are critical to the way you do business?
- What import features are available for importing your business object?
- How do you verify your imported data?

Comparing Business Object Structures

You must understand how your country structure data corresponds with the data in Oracle Sales Cloud in order to be able to map your legacy data to the data needed by Oracle Sales Cloud. First, you must understand how Oracle Sales Cloud represents the structure of the data for a country structure.

You must import a separate country structure import object for each country. Each of these import objects must contain the geography types that are used in the country's structure, organized in a hierarchy using geography level numbers. For example, if you are importing the country structure of Australia, the country structure could be the following: 1: Country, 2: State, 3: County, 4: Town, 5: ZIP.

Import Objects for the Country Structure

To facilitate the import of country structures, Oracle Sales Cloud incorporates the structure of the country structure into import objects. The import object for country structures is GeoStructureLevel.

Comparing Business Object Data

Each import object is a collection of attributes that helps to map your data to the Oracle Sales Cloud data and to support one-to-many relationships between the structural components that make up the country structure.

A good understanding of the attribute details of the import objects is critical to preparing your import data. For information about the Oracle Sales Cloud attributes, see the Oracle Enterprise Repository. The reference files contain

descriptions, logic used to choose default values, and validation information for each of the Oracle Sales Cloud attributes. The validation information includes the navigation to the task where you can define values in Oracle Sales Cloud. For example, if you have values in your data that correlate to a choice list in Oracle Sales Cloud, then the validation information for that attribute provides the task name in the Setup and Maintenance work area where you can define your values. For additional information, including a list of reference file names and locations that you need to complete this task, see the following table.

Import Object	Related Import Object Topic
Country Structure	Country Structure Import Objects: How They Work Together

Extensible Attributes

If you need to extend the Oracle Sales Cloud object to import your legacy or source data, you must use Application Composer to design your object model extensions and to generate the required artifacts to register your extensions and make them available for importing. The corresponding import object is updated with the extensible attributes, which can then be mapped to your source file data. You can use the same source file to import both extensible custom attributes and the standard import object attributes.

Importing Country Structures Using File-Based Data Import

For the country structure business object, you must use the File-Based Data Import feature. You prepare XML or text source data files in a form that is suitable for file-based import. The file-based import process reads the data included in your source file, populates the interface tables according to your mapping, and imports the data into the application destination tables.

The Define File-Based Data Import Setup and Maintenance task list includes the tasks needed to configure the import objects, to create source-file mappings, and to schedule the import activities. You submit file-based import activities for each import object. When creating a new country structure, you import the Country Structure object.

You must be assigned the Master Data Management Administrator job role to access and submit the import activities for country structures.

Verifying Your Imported Data

You can view the list of import activities from the Manage Import Activities page. You can verify your imported data by clicking the Status column for your import activity.

Country Structure Import Objects: How They Work Together

This topic describes the Country Structure import object. You use the Country Structure import object when you submit a file-based import activity to import your country structure information. This topic introduces the following:

- Target import object concepts
- Target objects for the Country Structure import object
- Target import object attributes
- Target object attribute reference guide files

Target Import Object Concepts

The Country Structure import object is used to import a country structure hierarchy, including details, such as geography type, geography type name, parent geography type, geography level numbers, and so on. To map the source data in your import file to the target attributes in Oracle Sales Cloud, you must understand how the target objects are related and what attributes are included in each target object.

Country Structure Target Import Objects

The Country Structure import object contains one target import object that organizes the individual attributes of the different aspects of the geography structure. When updating an existing country structure, you must provide the parent reference information of the existing country structure. This reference information connects the imported geography structure to the existing one. Use the ImpGeoStructureLevel target import object to create and update country structure information.

Target Import Objects Attributes

You must compare the attributes that you want to import with the target object attributes that are available and their valid values. To evaluate your source data and Oracle Sales Cloud attributes for mapping and validation, you use an Oracle Enterprise Repository reference guide, which is available for each target import object. The reference guide file includes attribute descriptions, default values, and validations performed by the import process. Review the validation for each attribute to determine whether there are functional prerequisites or setup tasks that are required.

To import your source file data, you define a mapping between your source file data and the combination of the target object and target object attribute. You can predefine and manage import mappings using the File-Based Import Mapping task, or you can define the mapping when you define the import activity using the File-Based Import Activity task. Both tasks are available in the Setup and Maintenance work area.

Note

If any of the attributes you want to import does not have an equivalent target object attribute, then review the Application Composer extensibility features for country structures.

Target Import Objects Attributes Resources

To access the reference guide files for the country code's target import objects, see the File-Based Data Import assets in Oracle Enterprise Repository (<http://fusionappsoer.oracle.com>).

For detailed information on importing geographies using file-based import, refer to Document No. 1481758.1, Importing Master Reference Geography Data, on the Oracle Support site.

The following table lists the reference guide files that are available from the Documentation tab for the Country Code File-Based Data Import asset.

Target Import Object	Description	Reference Guide File Names
ImpGeoStructureLevel	Contains information that specifies a country's geography structure. Sample attributes: GeographyType, GeographyTypeName, LevelNumber, and ParentGeographyType. Reference attribute: CountryCode	HZ_IMP_GEO_STRUCTURE_LEVELS_Reference

Importing Geographies Using File-Based Import: Explained

This topic describes the tasks you must perform to import geography information. A geography is any region with a boundary around it, regardless of its size. It might be a state, a country, a city, a county, or a ward. You must create or import geographies before you can associate them with custom zones and addresses.

Consider the following questions when importing your data:

- How does your legacy system or source system represent the geography compared to how Oracle Sales Cloud represents the same data?
- Do you have to configure values in Oracle Sales Cloud to map to your data values?
- What import features are available for importing your business object?
- How do you verify your imported data?

Comparing Business Object Structures

You must understand how your geography data corresponds with the data in Oracle Sales Cloud in order to be able to map your legacy data to the data needed by Oracle Sales Cloud. First, you must understand how Oracle Sales Cloud represents the structure of the data for a geography.

You must import a separate country structure import object for each country. Each of these import objects must contain the geography types that are used in the country's structure, organized in a hierarchy using geography level numbers. For example, if you are importing the country structure of Australia, the country structure could be the following: 1: Country, 2: State, 3: County, 4: Town, 5: ZIP.

Import Objects for the Geography

To facilitate the import of geographies, Oracle Sales Cloud incorporates the structure of the geography into import objects. The import object for the geography is ImpGeography.

Comparing Business Object Data

Each import object is a collection of attributes that helps to map your data to the Oracle Sales Cloud data and to support one-to-many relationships between the structural components that make up the geography.

A good understanding of the attribute details of the import objects is critical to preparing your import data. For information about the Oracle Sales Cloud attributes, see the Oracle Enterprise Repository. The reference guide files contain descriptions, logic used to choose default values, and validation information for each import object attribute. The validation information includes the navigation to the task where you can define values in Oracle Sales Cloud. For example, if you have values in your data that correlate to a choice list in Oracle Sales Cloud, then the validation information for that attribute provides the task name in the Setup and Maintenance work area where you can define your values. For additional information, including a list of reference file names and locations that you need to complete this task, see the following table.

Import Object	Related Import Object Topic
ImpGeography	Geography Import Objects: How They Work Together

Hint: You can use the keyword importing geographies to search for related topics in Help.

Extensible Attributes

Oracle Sales Cloud does not support extensible attributes for geographies. You can only import data for attributes provided by Oracle Sales Cloud.

Importing Geographies Using File-Based Data Import

For the geography business object, you must use the File-Based Data Import feature. You prepare XML or text source data files in a form that is suitable for file-based import. The file-based import process reads the data included in your source file, populates the interface tables according to your mapping, and imports the data into the application destination tables.

The Define File-Based Data Import Setup and Maintenance task list includes the tasks needed to configure the import objects, to create source-file mappings, and to schedule the import activities. You submit file-based import activities for each import object. When creating a new geography, you import the Geography object. You must be assigned the Master Data Management Administrator job role to access and submit the import activities for geographies.

When importing geography information, you must provide the parent reference information for all parent levels for the entity.

Verifying Your Imported Data

Oracle Sales Cloud provides File-Based Import activity reports, which can be used to verify imported data. Users with the Master Data Management

Administrator job role can also navigate to the Manage Geographies work area to view the imported geographies.

Geography Import Objects: How They Work Together

This topic describes the Geography import object. You use the Geography import object to import geography information.

This topic introduces the following:

- Target import object concepts
- Target objects for the Geography import object
- Target import object attributes
- Target import object attribute reference guide files

Target Import Object Concepts

The Geography import object is used to import geography hierarchy information to create or update the geography data of a country. To map the source data in your import file to the target attributes in Oracle Sales Cloud, you must understand how the target objects are related and what attributes are included in each target object.

Geography Target Import Objects

The target import objects in the Geography import object contain information about the geography hierarchy. When updating an existing geography, you must provide the parent reference information of the existing geography, which connects the geography to the country of which it is a part.

Use the ImpGeography target import object to create and update geography information.

Note

Before you import geography data for a country, you must define the country's geography structure.

Target Import Objects Attributes

You must compare the attributes that you want to import with the target object attributes that are available and their valid values. To evaluate your source data and Oracle Sales Cloud attributes for mapping and validation, you use an Oracle Enterprise Repository reference guide, which is available for each target import object. The reference guide file includes attribute descriptions, default values, and validations performed by the import process. Review the validation for each attribute to determine whether there are functional prerequisites or setup tasks that are required.

To import your source file data, you define a mapping between your source file data and the combination of the target object and target object attribute. You can

predefine and manage import mappings using the File-Based Import Mapping task, or you can define the mapping when you define the import activity using the File-Based Import Activity task. Both tasks are available in the Setup and Maintenance work area.

Target Import Objects Attributes Resources

To access the reference guide files for the geography's target import objects, see the File-Based Data Import assets in Oracle Enterprise Repository (<http://fusionappsoer.oracle.com>).

For detailed information on importing geographies using file-based import, refer to Document No. 1481758.1, Importing Master Reference Geography Data, on the Oracle Support site.

The following table lists the reference guide files that are available from the Documentation tab for the Geography File-Based Data Import asset.

Target Import Object	Description	Attribute Reference Guide File Names
ImpGeography	Contains information that captures a country's geography hierarchy details. Sample attributes: CountryCode, GeoDataProvider, GeographyType, PrimaryGeographyCode, PrimaryGeographyCodeType, and PrimaryGeographyName. Reference attribute: CountryCode	HZ_IMP_GEOGRAPHIES_T _Reference

Importing Geographies Using File-based Data Import: Worked Example

This example demonstrates how to import data using the File-Based Data Import tool. In this particular example, you have a source file containing geography data that you want to import into the application, so that the geography data can be used for real time address validation and tax purposes.

The following table summarizes the key decisions that you need to make in this scenario:

Decisions to Consider	In This Example
What type of object are you importing?	Geography
What file type are you using for your source data?	Text file
Where are you uploading your source data file from?	Your desktop
What data type is your source data file?	Comma separated
Which fields are you importing into Oracle Sales Cloud?	All, except for the RecordTypeCode field
When do you want to process the import?	Immediately

Summary of the Tasks

These are the steps that are required to create an import activity and activate the import:

1. Determine what information is in the source file.
2. Create and schedule the import activity.
3. Monitor the import results.

Prerequisites When Importing Additional Geography Data After Your Initial Import

1. You need to ensure that the combination of Source ID and Parent Source ID values are unique for each row of data within a single import. However, your source data files do not need to have the same Source ID and Parent Source ID values as your previously imported geography data. If the geography structure levels and the parents for each geography value are the same, the changed IDs will not affect the import.
2. Ensure that all of the parents of a child geography are included in your data file so that the child geography can be added. For example, if you originally imported US, CA, and San Francisco, and now you want to import the city of San Jose in CA, then your data file needs to include US, CA, and San Jose.
3. Check that your source data file has the correct values for the geography data that you have already loaded. For example, if your initial import included the value US for country and CA as state, and in a subsequent import you have California as a state, your geography import will result in two state records (CA and California) in the application data, with the US as the country parent.

Determine What Information Is in the Source File

1. Your source geography data files should include a unique Source ID value for each row of data, and a Parent Source ID value which identifies the parent of that row of geography data. Source IDs, or Parent Source IDs, should not be longer than 18 characters. you could structure your geography source data as follows:

Geography Level	Name	Source ID	Parent Source ID
1 (Country)	US	1	
2 (State)	CA	11	1
3 (County)	Alameda	111	11
4 (City)	Pleasanton	1111	111
4 (City)	Dublin	1112	111

Create and Schedule the Import Activity

You create an import activity, enter the import details, and schedule the import. An import activity definition provides instructions for the import processing, including details related to selecting the source file, or file location; mapping

fields from the source file to the Oracle Sales Cloud database object and attribute; and scheduling the import.

1. Navigate to Setup and Maintenance and search for the **Manage File Import Activities** task. Click **Go to Task**.
2. In the Manage Import Activities page, click the **Create** icon.
3. In the Create Import Activity:Set Up page, create an import activity for the Geography object type by completing the fields, as shown in this table:

Field	Value
Name	Master Reference Geographies
Object	Geography
File Type	Text File
File Selection	Specific file
Upload From	Desktop
File Name	Choose relevant file from desktop
Data Type	Comma separated

Note

Ensure that the file type that you select in the Create Import Activity: Set Up page matches the file type of the source data file.

4. Click **Next**.
5. On the Create Import Activity: Map Fields page, map each field from your source file to the Oracle Sales Cloud database object and attribute, as shown in this example:

Column Header	Example Value	Ignore	Object	Attribute
Primary Geography Name	Primary Geography Name	United States	Imp Geography	Primary Geography Name
Country Code	US	No	Imp Geography	Country Code
Record Type Code	0	Yes	Imp Geography	Record Type Code
Source ID	10265	No	Imp Geography	Source ID
Parent Source ID	1053	No	Imp Geography	Parent Source ID

If you do not want to import a column in the text file you can select **Ignore**.

Note

If you have any difficulties mapping the fields from your source file to the relevant Oracle Sales Cloud database object, you can use the import object spreadsheets for reference.

6. Click **Next**.
7. On the Create Import Activity: Create Schedule page, select **Immediate** in the Schedule field so that the import will start as soon as you activate it.
Instead of immediately importing the data, you can choose a date and time to start the import. You can also specify if the import will be repeated, and the frequency of the repeated import.
8. Click **Next**.

Monitor the Import Results

You monitor the progress of the import activity processing, and view completion reports for both successful records and errors.

1. On the Create Import Activity: Review and Activate page, verify your import details in the Import Details, File Details, Import Options, and Schedule sections. Update the import details if required by navigating to the previous screens using the **Back** link.
2. Once you are sure your import details are correct, click **Activate** to submit the import.
Once the import activity has completed, the Status field value will change to Completed.

Importing and Exporting Territory Geography Zones: Explained

Territory geography zones are geographical boundaries that you can set up to replicate your organization's regions, such as a Pacific Northwest sales region. You can set up territory geography zones in one Oracle Sales Cloud applications instance, and then after the territory geography zones are defined you can export the territory zones and import them into another Oracle Sales Cloud instance.

To define your territory geography zones and then import your territory zones into another Oracle Sales Cloud instance, you need to complete the following steps:

1. Import the master reference geography data into the Oracle Sales Cloud.
2. Define your territory geography zones using the Manage Territory Geographies task.
3. Export the territory geography zones.
4. Import the territory geography zones into another Oracle Sales Cloud instance.

Import the master reference geography data

Firstly, you need to import the master reference geography data. Master reference geography data consists of geography elements such as country, state,

and city, and is required for any geographical information you store in the application, such as address information used in customer and sales records. For more information, refer to the Geography Hierarchy: Explained topic listed in the related topics section. Master reference geography data can be imported into the application using the Manage File Import Activities task in Setup and Maintenance - refer to the Importing Master Reference Geography Data: Worked Example topic listed in the related topics section for more information.

Define your territory geography zones

Once the master reference geography data has been imported, you can then create your territory geography zones in the application using the Manage Territory Geographies task in Setup and Maintenance. For more information, refer to the Managing Territory Geographies: Worked Example topic listed in the related topics section.

Export the territory geography zones

Once you have completed importing the master reference geography data and defining your territory geography zone tasks, you can create a configuration package to export the territory zone data. For more information, refer to the Exporting Setup Data demo listed in the related topics section.

Import the territory geography zones

Once you have downloaded your configuration package for your territory geography zone setup, you can import the territory zones into another Oracle Sales Cloud instance. For more information, refer to the Importing Setup Data listed in the related topics section.

Note

Ensure that you import your master reference geography data into the new Oracle Sales Cloud instance before you import the configuration package.

Managing Geography Structures, Hierarchies, and Validation: Worked Example

This example shows how to configure the geography structure, hierarchy, and validation for a country geography, using the United Kingdom country geography as an illustration.

The following table summarizes the key decisions for this scenario.

Decisions to Consider	In This Example
Copy an existing country structure?	No, create a new country structure.
What is the structure of the geography types?	Create geography types with the following ranking structure: 1. County 2. Post Town

What is the geography hierarchy?	Create the following hierarchy: 1. Country of United Kingdom 2. County of Berkshire 3. Post Town of Reading
Which address style format will you use when mapping geography validations?	The default address style format, called the No Styles Format.
Are you using Oracle Fusion Tax for tax purposes?	No, do not select Tax Validation for the geography types.

Add the County and Post Town geography types to the geography structure. Next, add the geographies for the County and Post Town geography types to define the geography hierarchy. Finally, specify the geography validations for the geography types you have added to the geography structure.

Defining the geography structure

Add the County and Post Town geography types to the United Kingdom geography structure.

1. On the Manage Geographies page, enter GB in the **Code** field. Click **Search**.
2. On the Manage Geographies page, click **Structure Defined**.
3. On the Manage Geography Structure page, click the **Create** button next to the **Copy Country Structure From** field.
4. In the Geography Structure section, select the County list item in the **Add Geography Type** field.
5. Click **Add**.
6. Select the Post Town list item in the **Add Geography Type** field.
7. Click **Add**.

Defining the geography hierarchy

To begin creating the geography hierarchy for the United Kingdom, you add the geographies for the County and Post Town geography types using the geography hierarchy user interfaces. You can also use the Manage File Import Activities task to import geography hierarchies using a csv or xml file.

1. On the Manage Geographies page, enter GB in the **Code** field. Click **Search**.
2. On the Manage Geographies page, click **Hierarchy Defined**.
3. On the Manage Geography Hierarchy page, Geography Hierarchy section, click the United Kingdom to highlight the table row.
4. Click the **Create** button.
5. In the **Create County** page, Primary and Alternate Names section, enter Berkshire in the **Name** field.
6. Click **Save and Close**.
7. On the Manage Geography Hierarchy page, Geography Hierarchy section, click Berkshire to highlight the table row.
8. Click the **Create** button.

9. In the **Create Post Town** page, Primary and Alternate Names section, enter Reading in the **Name** field.
10. Click Save and Close.

Defining the geography validations

Now you want to specify the geography validations for the geography types you have added to the United Kingdom. Define the geography mapping and validation for the United Kingdom default address style format. Then map the geography types to attributes, enable the geography types for Lists of Values and Geography validation, and set the geography validation level.

1. On the Manage Geographies page, click **Validation Defined**.
2. On the Manage Geography Validation page, Address Style section, click **No Styles Format** to highlight the table row.
3. For the County geography type, click the **County** list item in the **Map to Attribute** field.
4. Click the **Enable List of Values** option for the County geography type.
5. Click the **Geography Validation** option for the County geography type.
6. For the Post Town geography type, click the **City** list item in the **Map to Attribute** field.
7. Click the **Geography Validation** option for the Post Town geography type.
8. In the Geography Validation Control section, click the **Error** list item in the **Geography Validation Level for Country** field.
9. Click **Save and Close**.

FAQs for Define Geographies

When do I define address cleansing?

When address data entered into the application needs to conform to a particular format, in order to achieve consistency in the representation of addresses. For example, making sure that the incoming data is stored following the correct postal address format.

Why can't I update a geography structure by copying an existing country structure?

You can only update a geography structure by adding existing geography types, or by creating new geography types and then adding them to the geography structure. You can only copy an existing country structure when you are defining a new country structure.

Why can't I delete a level of the country geography structure?

If a geography exists for a country geography structure level then you cannot delete the level. For example, if a state geography has been created for the United

States country geography structure, then the State level cannot be deleted in the country geography structure.

Can I add any geography to the geography hierarchy?

Yes. However, the geography type for the geography that you want to add must be already added to the country geography structure.

Can I edit a specific geography in the geography hierarchy?

Yes. In the Manage Geography Hierarchy page you can edit details such as the geography's date range, primary and alternate names and codes, and parent geographies.

How can I add a geography that is the level below another geography in a geography hierarchy?

Select the geography that you want your geography to be created below, and then click the **Create** icon. This will allow you to create a geography for a geography type that is the level below the geography type you selected. The structure of the country's geography types are defined in the Manage Geography Structure page.

Enterprise for Project Financial Management: Manage Locations

Locations: Explained

A location identifies physical addresses of a workforce structure, such as a department or a job. You can also create locations to enter the addresses of external organizations that you want to maintain, such as employment agencies, tax authorities, and insurance or benefits carriers.

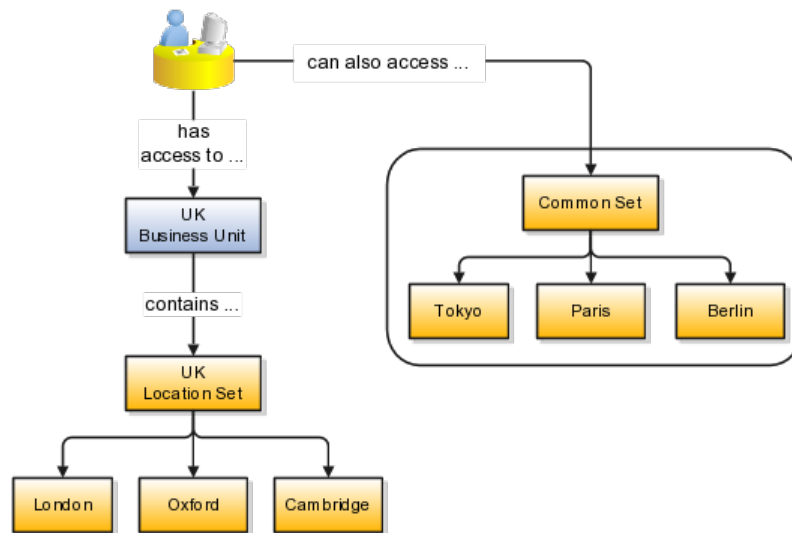
The locations that you create exist as separate structures that you can use for reporting purposes, and also in rules that determine employee eligibility for various types of compensation and benefits. You enter information about a location only once. Subsequently, when you set up other workforce structures you select the location from a list.

Location Sets

When you create a location, you must associate it with a set. Only those users who have access to the set's business unit can access the location set and other associated workforce structure sets, such as those that contain departments and jobs.

You can also associate the location to the common set so that users across your enterprise can access the location irrespective of their business unit. When users search for locations, they can see the locations that they have access to along with the locations in the common set.

The following figure shows how locations sets restrict access to users.



Uploading Locations Using a Spreadsheet

If you have a list of locations already defined for your enterprise, you can upload them from a spreadsheet. To use this option, you first download a spreadsheet template, add your location information to the spreadsheet, and then upload directly to your enterprise configuration. You can upload the spreadsheet multiple times to accommodate revisions.

FAQs for Manage Locations

Why can't I see my location in the search results?

You can search for approved locations only. Also, if you created a location in Oracle Fusion Trading Community Model, then you can't access that location from Oracle Fusion Global Human Resources. For use in Oracle Fusion HCM, you must recreate the location from the Manage Locations page.

What happens if I select a geographic hierarchy node when I'm creating or editing a location?

The calendar events that were created for the geographical node start to apply for the location and may impact the availability of worker assignments at that location. The geographical hierarchy nodes available for selection on the Locations page display from a predefined geographic hierarchy.

What happens if I inactivate a location?

Starting from the effective date that you entered, you can no longer associate the location with other workforce structures, assignments, or applications. If the

location is already in use, it will continue to be available to the components that currently use it.

Enterprise for Project Financial Management: Manage Enterprise HCM Information

Managing Enterprise Information for Non-Oracle Fusion HCM Users: Explained

The Manage Enterprise HCM Information task includes default settings for your enterprise such as the employment model, worker number generation, and so on. If you are not implementing Oracle Fusion Human Capital Management (HCM), then the only action you may need to perform using this task is to change the enterprise name, if necessary. The other settings are HCM-specific and are not relevant outside of Oracle Fusion HCM.

Define Legal Entities for Project Financial Management

Manage Legal Jurisdictions

Jurisdictions and Legal Authorities: Explained

You are required to register your legal entities with legal authorities in the jurisdictions where you conduct business. Register your legal entities as required by local business requirements or other relevant laws. For example, register your legal entities for tax reporting to report sales taxes or value added taxes.

Define jurisdictions and related legal authorities to support multiple legal entity registrations, which are used by Oracle Fusion Tax and Oracle Fusion Payroll. When you first create a legal entity, the Oracle Fusion Legal Entity Configurator automatically creates one legal reporting unit for that legal entity with a registration.

Jurisdictions: Explained

Jurisdiction is a physical territory such as a group of countries, country, state, county, or parish where a particular piece of legislation applies. French Labor Law, Singapore Transactions Tax Law, and US Income Tax Laws are examples of particular legislation that apply to legal entities operating in different countries' jurisdictions. Judicial authority may be exercised within a jurisdiction.

Types of jurisdictions are:

- Identifying Jurisdiction
- Income Tax Jurisdiction
- Transaction Tax Jurisdiction

Identifying Jurisdiction

For each legal entity, select an identifying jurisdiction. An identifying jurisdiction is your first jurisdiction you must register with to be allowed to do business in a country. If there is more than one jurisdiction that a legal entity needs to register with to commence business, select one as the identifying jurisdiction. Typically the identifying jurisdiction is the one you use to uniquely identify your legal entity.

Income tax jurisdictions and transaction tax jurisdictions do not represent the same jurisdiction. Although in some countries, the two jurisdictions are defined at the same geopolitical level, such as a country, and share the same legal authority, they are two distinct jurisdictions.

Income Tax Jurisdiction

Create income tax jurisdictions to properly report and remit income taxes to the legal authority. Income tax jurisdictions by law impose taxes on your financial income generated by all your entities within their jurisdiction. Income tax is a key source of funding that the government uses to fund its activities and serve the public.

Transaction Tax Jurisdiction

Create transaction tax jurisdictions through Oracle Fusion Tax in a separate business flow, because of the specific needs and complexities of various taxes. Tax jurisdictions and their respective rates are provided by suppliers and require periodic maintenance. Use transaction tax jurisdiction for legal reporting of sales and value added taxes.

Legal Authorities: Explained

A legal authority is a government or legal body that is charged with powers to make laws, levy and collect fees and taxes, and remit financial appropriations for a given jurisdiction.

For example, the Internal Revenue Service is the authority for enforcing income tax laws in United States. In some countries, such as India and Brazil, you are required to print legal authority information on your tax reports. Legal authorities are defined in the Oracle Fusion Legal Entity Configurator. Tax authorities are a subset of legal authorities and are defined using the same setup flow.

Legal authorities are not mandatory in Oracle Fusion Human Capital Management (HCM), but are recommended and are generally referenced on statutory reports.

Creating Legal Jurisdictions, Addresses and Authorities: Examples

Define legal jurisdictions and related legal authorities to support multiple legal entity registrations, which are used by Oracle Fusion Tax and Oracle Fusion Payroll.

Legal Jurisdictions

Create a legal jurisdiction by following these steps:

1. Navigate to the **Manage Legal Jurisdictions** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Jurisdictions** task and selecting **Go to Task**.
2. Select **Create**.
3. Enter a unique **Name**, United States Income Tax.
4. Select a **Territory**, United States.
5. Select a **Legislative Category**, Income tax.
6. Select **Identifying**, Yes. Identifying indicates the first jurisdiction a legal entity must register with to do business in a country.
7. Enter a **Start Date** if desired. You can also add an **End Date** to indicate a date that the jurisdiction may no longer be used.
8. Select a **Legal Entity Registration Code**, EIN or TIN.
9. Select a **Legal Reporting Unit Registration Code**, Legal Reporting Unit Registration Number.
10. Optionally enter one or more **Legal Functions**.
11. Select **Save and Close**.

Legal Addresses for Legal Entities and Reporting Units

Create a legal address for legal entities and reporting units by following these steps:

1. Navigate to the **Manage Legal Address** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Address** task and selecting **Go to Task**.
2. Select **Create**.
3. Select **Country**.
4. Enter **Address Line 1**, Oracle Parkway.
5. Optionally enter **Address Line 2**, and **Address Line 3**.
6. Enter or Select **Zip Code**, 94065.
7. Select **Geography** 94065 and **Parent Geography** Redwood Shores, San Mateo, CA.
8. Optionally enter a **Time Zone**, US Pacific Time.
9. Select **OK**.
10. Select **Save and Close**.

Legal Authorities

Create a legal authority by following these steps:

1. Navigate to the **Manage Legal Authorities** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Authorities** task and selecting **Go to Task**.
2. Enter the **Name**, California Franchise Tax Board.
3. Enter the **Tax Authority Type**, Reporting.

Note

Create an address for the legal authority.

4. Select **Create**.
 5. The **Site Number** is automatically assigned.
 6. Optionally enter a **Mail Stop**.
 7. Select **Country**, United States
 8. Enter **Address Line 1**, 121 Spear Street, Suite 400.
 9. Optionally enter **Address Line 2**, and **Address Line 3**.
 10. Enter or Select **Zip Code**, 94105.
 11. Select **Geography** 94105 and **Parent Geography** San Francisco, San Francisco, CA.
 12. Select **OK**.
 13. Optionally enter a **Time Zone**, US Pacific Time.
 14. Optionally click the **One-Time Address** check box.
 15. The **From Date** defaults to today's date. Update if necessary.
 16. Optionally enter a **To Date** to indicate the last day the address can be used.
-

Note

You can optionally enter **Address Purpose** details.

17. Select **Add Row**.
 18. Select **Purpose**.
 19. The **Purpose from Date** will default to today's date.
 20. Optionally enter a **Purpose to Date**.
 21. Select **OK**.
 22. Select **Save and Close**.
-

Creating Legal Entities, Registrations, and Reporting Units: Examples

Define a legal entity for each registered company or other entity recognized in law for which you want to record assets, liabilities, and income, pay transaction taxes, or perform intercompany trading.

Legal Entity

From within an implementation project, create a legal entity by following these steps:

Note

Working within an implementation project is required because you select a scope value within an implementation project. The scope value is the legal entity that you will create or select to work within for your implementation project.

1. Navigate to an implementation project that contains the **Define Legal Entities** task list from the **Setup and Maintenance** work area.
 2. Select **Go to Task** for the **Define Legal Entities** task list within the implementation project.
-

Note

The following message appears:

You must first select a scope value to perform the task.

- Select and add an existing scope value to the implementation project.
 - Create a new scope value and then add it to the implementation project.
-

3. Select **Create New**.
 4. From the **Manage Legal Entities** page select **Create**.
 5. Accept the default **Country**, United States.
 6. Enter **Name**, InFusion USA West.
 7. Enter **Legal Entity Identifier**, US0033.
 8. Optionally enter **Start Date**. When the start date is blank the legal entity is effective from the creation date.
 9. Optionally enter an **End Date**.
 10. Optionally, if your legal entity should be registered to report payroll tax and social insurance, select the **Payroll statutory unit** check box.
 11. Optionally, if your legal entity has employees, select the **Legal employer** check box.
 12. Optionally, if this legal entity is not a payroll statutory unit, select an existing payroll statutory unit to report payroll tax and social instance on behalf of this legal entity.
-

Note

Enter the **Registration Information**.

13. Accept the default **Identifying Jurisdiction**, United States Income Tax.
 14. Search for and select a **Legal Address**, 500 Oracle Parkway, Redwood Shores, CA 94065.
-

Note

The legal address must have been entered previously using the **Manage Legal Address** task.

15. Select **OK**.
16. Optionally enter a **Place of Registration**.
17. Enter the **EIN or TIN**.
18. Enter the **Legal Reporting Unit Registration Number**.
19. Select **Save and Close** to navigate back to the Manage Legal Entities page.
20. Select **Done** to return to your implementation project. An issue with the done button has been fixed in 11g Release 1 (11.1.4).
21. In the **Legal Entity** choice list in the implementation project (just below the implementation project name and code), click **Select and Add Legal Entity** to choose the legal entity that you just created, and set the scope for the remainder of your setup.
22. Search for and select your legal entity from the **Manage Legal Entities** page.
23. Select **Save and Close**.
This sets the scope for your task list to the selected legal entity, as indicated in the **Legal Entity** choice list above the **Tasks and Task Lists** table.

Legal Entity Registrations

A legal entity registration with the same name as that of the legal entity will be created by default. To verify this, locate the **Manage Legal Entity Registrations** task and then select **Go to Task**. To create another registration for the legal entity follow these steps:

1. Navigate to your implementation project from the **Setup and Maintenance** work area. Verify that the parent **Legal Entity** scope value is set correctly.
2. Expand the **Define Legal Entities** task list within the implementation project.
3. Select **Manage Legal Entity Registrations Go to Task**.
4. Select **Create**.
5. Enter **Jurisdiction**.
6. Enter **Registered Address**.
7. Enter **Registered Name**.
8. Optionally enter **Alternate Name**, **Registration Number**, **Place of Registration**, **Issuing Legal Authority**, and **Issuing Legal Authority Address**, **Start Date**, and **End Date**.
9. **Save and Close**.

Legal Reporting Unit

When a legal entity is created, a legal reporting unit with the same name as that of the entity is also automatically created. To create more legal reporting units or modify the settings follow these steps:

1. Navigate to your implementation project from the **Setup and Maintenance** work area. Verify that the parent **Legal Entity** scope value is set correctly.

2. Select **Go to Task** for the **Define Legal Entities** task list within the implementation project.
3. Select **Create**.
4. Enter **Territory**, United States.
5. Enter **Name**.
6. Optionally enter a **Start Date**.

Note

Enter **Registration Information**.

-
7. Search for and select **Jurisdiction**.

Note

Enter **Main Legal Reporting Unit** information.

-
8. Select the value Yes or No for the **Main Legal Reporting Unit**. Set value to yes only if you are creating a new main (primary) legal reporting unit.
 9. Enter the **Main Effective Start Date**, 1/1/11.
 10. **Save and Close**.

Manage Legal Addresses

Creating Legal Jurisdictions, Addresses and Authorities: Examples

Define legal jurisdictions and related legal authorities to support multiple legal entity registrations, which are used by Oracle Fusion Tax and Oracle Fusion Payroll.

Legal Jurisdictions

Create a legal jurisdiction by following these steps:

1. Navigate to the **Manage Legal Jurisdictions** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Jurisdictions** task and selecting **Go to Task**.
2. Select **Create**.
3. Enter a unique **Name**, United States Income Tax.
4. Select a **Territory**, United States.
5. Select a **Legislative Category**, Income tax.
6. Select **Identifying**, Yes. Identifying indicates the first jurisdiction a legal entity must register with to do business in a country.
7. Enter a **Start Date** if desired. You can also add an **End Date** to indicate a date that the jurisdiction may no longer be used.
8. Select a **Legal Entity Registration Code**, EIN or TIN.

9. Select a **Legal Reporting Unit Registration Code**, Legal Reporting Unit Registration Number.
10. Optionally enter one or more **Legal Functions**.
11. Select **Save and Close**.

Legal Addresses for Legal Entities and Reporting Units

Create a legal address for legal entities and reporting units by following these steps:

1. Navigate to the **Manage Legal Address** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Address** task and selecting **Go to Task**.
2. Select **Create**.
3. Select **Country**.
4. Enter **Address Line 1**, Oracle Parkway.
5. Optionally enter **Address Line 2**, and **Address Line 3**.
6. Enter or Select **Zip Code**, 94065.
7. Select **Geography** 94065 and **Parent Geography** Redwood Shores, San Mateo, CA.
8. Optionally enter a **Time Zone**, US Pacific Time.
9. Select **OK**.
10. Select **Save and Close**.

Legal Authorities

Create a legal authority by following these steps:

1. Navigate to the **Manage Legal Authorities** page from the **Setup and Maintenance** work area by querying on the **Manage Legal Authorities** task and selecting **Go to Task**.
2. Enter the **Name**, California Franchise Tax Board.
3. Enter the **Tax Authority Type**, Reporting.

Note

Create an address for the legal authority.

4. Select **Create**.
5. The **Site Number** is automatically assigned.
6. Optionally enter a **Mail Stop**.
7. Select **Country**, United States
8. Enter **Address Line 1**, 121 Spear Street, Suite 400.
9. Optionally enter **Address Line 2**, and **Address Line 3**.
10. Enter or Select **Zip Code**, 94105.

11. Select **Geography** 94105 and **Parent Geography** San Francisco, San Francisco, CA.
12. Select **OK**.
13. Optionally enter a **Time Zone**, US Pacific Time.
14. Optionally click the **One-Time Address** check box.
15. The **From Date** defaults to today's date. Update if necessary.
16. Optionally enter a **To Date** to indicate the last day the address can be used.

Note

You can optionally enter **Address Purpose** details.

17. Select **Add Row**.
18. Select **Purpose**.
19. The **Purpose from Date** will default to today's date.
20. Optionally enter a **Purpose to Date**.
21. Select **OK**.
22. Select **Save and Close**.

Manage Legal Entity

Legal Entities: Explained

A legal entity is a recognized party with rights and responsibilities given by legislation.

Legal entities have the right to own property, the right to trade, the responsibility to repay debt, and the responsibility to account for themselves to regulators, taxation authorities, and owners according to rules specified in the relevant legislation. Their rights and responsibilities may be enforced through the judicial system. Define a legal entity for each registered company or other entity recognized in law for which you want to record assets, liabilities, expenses and income, pay transaction taxes, or perform intercompany trading.

A legal entity has responsibility for elements of your enterprise for the following reasons:

- Facilitating local compliance
- Taking advantage of lower corporation taxation in some jurisdictions
- Preparing for acquisitions or disposals of parts of the enterprise
- Isolating one area of the business from risks in another area. For example, your enterprise develops property and also leases properties. You could operate the property development business as a separate legal entity to limit risk to your leasing business.

The Role of Your Legal Entities

In configuring your enterprise structure in Oracle Fusion Applications, you need to understand that the contracting party on any transaction is always the legal entity. Individual legal entities own the assets of the enterprise, record sales and pay taxes on those sales, make purchases and incur expenses, and perform other transactions.

Legal entities must comply with the regulations of jurisdictions, in which they register. Europe now allows for companies to register in one member country and do business in all member countries, and the US allows for companies to register in one state and do business in all states. To support local reporting requirements, legal reporting units are created and registered.

You are required to publish specific and periodic disclosures of your legal entities' operations based on different jurisdictions' requirements. Certain annual or more frequent accounting reports are referred to as statutory or external reporting. These reports must be filed with specified national and regulatory authorities. For example, in the United States (US), your publicly owned entities (corporations) are required to file quarterly and annual reports, as well as other periodic reports, with the Securities and Exchange Commission (SEC), who enforces statutory reporting requirements for public corporations.

Individual entities privately held or held by public companies do not have to file separately. In other countries, your individual entities do have to file in their own name, as well as at the public group level. Disclosure requirements are diverse. For example, your local entities may have to file locally to comply with local regulations in a local currency, as well as being included in your enterprise's reporting requirements in different currency.

A legal entity can represent all or part of your enterprise's management framework. For example, if you operate in a large country such as the United Kingdom or Germany, you might incorporate each division in the country as a separate legal entity. In a smaller country, for example Austria, you might use a single legal entity to host all of your business operations across divisions.

Legal Entity in Oracle Fusion: Points to Consider

Oracle Fusion Applications support the modeling of your legal entities. If you make purchases from or sell to other legal entities, define these other legal entities in your customer and supplier registers, which are part of the Oracle Fusion Trading Community Architecture. When your legal entities are trading with each other, you represent both of them as legal entities and also as customers and suppliers in your customer and supplier registers. Use legal entity relationships to determine which transactions are intercompany and require intercompany accounting. Your legal entities can be identified as legal employers and therefore, are available for use in Human Capital Management (HCM) applications.

There are several decisions that need to be considered in creating your legal entities.

- The importance of legal entity in transactions
- Legal entity and its relationship to business units

- Legal entity and its relationship to divisions
- Legal entity and its relationship to ledgers
- Legal entity and its relationship to balancing segments
- Legal entity and its relationship to consolidation rules
- Legal entity and its relationship to intercompany transactions
- Legal entity and its relationship to worker assignments and legal employer
- Legal entity and payroll reporting
- Legal reporting units

The Importance of Legal Entity in Transactions

All of the assets of the enterprise are owned by individual legal entities. Oracle Fusion Financials allow your users to enter legal entities on transactions that represent a movement in value or obligation.

For example, the creation of a sales order creates an obligation for the legal entity that books the order to deliver the goods on the acknowledged date, and an obligation of the purchaser to receive and pay for those goods. Under contract law in most countries, damages can be sought for both actual losses, putting the injured party in the same state as if they had not entered into the contract, and what is called loss of bargain, or the profit that would have made on a transaction.

In another example, if you revalued your inventory in a warehouse to account for raw material price increases, the revaluation and revaluation reserves must be reflected in your legal entity's accounts. In Oracle Fusion Applications, your inventory within an inventory organization is managed by a single business unit and belongs to one legal entity.

Legal Entity and Its Relationship to Business Units

A business unit can process transactions on behalf of many legal entities. Frequently, a business unit is part of a single legal entity. In most cases the legal entity is explicit on your transactions. For example, a payables invoice has an explicit legal entity field. Your accounts payables department can process supplier invoices on behalf of one or many business units.

In some cases, your legal entity is inferred from your business unit that is processing the transaction. For example, your business unit A agrees on terms for the transfer of inventory to your business unit B. This transaction is binding on your default legal entities assigned to each business unit. Oracle Fusion Procurement, Oracle Fusion Projects, and Oracle Fusion Supply Chain applications rely on deriving the legal entity information from the business unit.

Legal Entity and Its Relationship to Divisions

The division is an area of management responsibility that can correspond to a collection of legal entities. If desired, you can aggregate the results for your divisions by legal entity or by combining parts of other legal entities.

Define date-effective hierarchies for your cost center or legal entity segment in your chart of accounts to facilitate the aggregation and reporting by division. Divisions and legal entities are independent concepts.

Legal Entity and Its Relationship to Ledgers

One of your major responsibilities is to file financial statements for your legal entities. Map legal entities to specific ledgers using the Oracle Fusion General Ledger Accounting Configuration Manager. Within a ledger, you can optionally map a legal entity to one or more balancing segment values.

Legal Entity and Its Relationship to Balancing Segments

Oracle Fusion General Ledger supports up to three balancing segments. Best practices recommend that one of these segments represents your legal entity to ease your requirement to account for your operations to regulatory agencies, tax authorities, and investors. Accounting for your operations means you must produce a balanced trial balance sheet by legal entity. If you account for many legal entities in a single ledger, you must:

1. Identify the legal entities within the ledger.
2. Balance transactions that cross legal entity boundaries through intercompany transactions.
3. Decide which balancing segments correspond to each legal entity and assign them in Oracle Fusion General Ledger Accounting Configuration Manager. Once you assign one balancing segment value in a ledger, then all your balancing segment values must be assigned. This recommended best practice facilitates reporting on assets, liabilities, and income by legal entity.

Represent your legal entities by at least one balancing segment value. You may represent it by two or three balancing segment values if more granular reporting is required. For example, if your legal entity operates in multiple jurisdictions in Europe, you might define balancing segment values and map them to legal reporting units. You can represent a legal entity by more than one balancing segment value, do not use a single balancing segment value to represent more than one legal entity.

In Oracle Fusion General Ledger, there are three balancing segments. You can use separate balancing segments to represent your divisions or strategic business units to enable management reporting at the balance sheet level for each division or business unit. For example, use this solution to empower your business unit and divisional managers to track and assume responsibility for their asset utilization or return on investment. Using multiple balancing segments is also useful when you know at the time of implementation that you are disposing of a part of a legal entity and need to isolate the assets and liabilities for that entity.

Note

Implementing multiple balancing segments requires every journal entry that is not balanced by division or business unit, to generate balancing lines. Also, you cannot change to multiple balancing segments easily after you have begun to use the ledger because your historical data is not balanced by the new multiple balancing segments. Restating historical data must be done at that point.

To use this feature for disposal of a part of a legal entity, implement multiple balancing segments at the beginning of the legal entity's corporate life or on conversion to Oracle Fusion.

If you decided to account for each legal entity in a separate ledger, there is no requirement to identify the legal entity with a balancing segment value within the ledger.

Note

While transactions that cross balancing segments don't necessarily cross legal entity boundaries, all transactions that cross legal entity boundaries must cross balancing segments. If you make an acquisition or are preparing to dispose of a portion of your enterprise, you may want to account for that part of the enterprise in its own balancing segment even if it is not a separate legal entity. If you do not map legal entities sharing the same ledger to balancing segments, you will not be able to distinguish them using the intercompany functionality or track their individual equity.

Legal Entity and Its Relationship to Consolidation Rules

In Oracle Fusion Applications you can map legal entities to balancing segments and then define consolidation rules using your balancing segments. You are creating a relationship between the definition of your legal entities and their role in your consolidation.

Legal Entity and its Relationship to Intercompany Transactions

Use Oracle Fusion Intercompany functionality for automatic creation of intercompany entries across your balancing segments. Intercompany processing updates legal ownership within the enterprise's groups of legal entities. Invoices or journals are created as needed. To limit the number of trading pairs for your enterprise, set up intercompany organizations and assign them to your authorized legal entities. Define processing options and intercompany accounts to use when creating intercompany transactions and to assist in consolidation elimination entries. These accounts are derived and automatically entered on your intercompany transactions based on legal entities assigned to your intercompany organizations.

Intracompany trading, in which legal ownership isn't changed but other organizational responsibilities are, is also supported. For example, you can track assets and liabilities that move between your departments within your legal entities by creating departmental level intercompany organizations.

Note

In the Oracle Fusion Supply Chain applications, model intercompany relationships using business units, from which legal entities are inferred.

Legal Entity and Its Relationship to Worker Assignments and Legal Employer

Legal entities that employ people are called legal employers in the Oracle Fusion Legal Entity Configurator. You must enter legal employers on worker assignments in Oracle Fusion HCM.

Legal Entity and Payroll Reporting

Your legal entities are required to pay payroll tax and social insurance such as social security on your payroll. In Oracle Fusion Applications, you can register payroll statutory units to pay and report on payroll tax and social insurance on behalf of many of your legal entities. As the legal employer, you might be required to pay payroll tax, not only at the national level, but also at the local level. You meet this obligation by establishing your legal entity as a place of work within the jurisdiction of a local authority. Set up legal reporting units to represent the part of your enterprise with a specific legal reporting obligation. You can also mark these legal reporting units as tax reporting units, if the legal entity must pay taxes as a result of establishing a place of business within the jurisdiction.

Manage Legislative Data Groups

Legislative Data Groups: Explained

Legislative data groups are a means of partitioning payroll and related data. At least one legislative data group is required for each country where the enterprise operates. Each legislative data group is associated with one or more payroll statutory units.

Legislative Data Groups

Oracle Fusion Payroll is organized by legislative data groups. Each legislative data group marks a legislation in which payroll is processed, and is associated with a legislative code, currency and its own cost key flexfield structure. A legislative data group is a boundary that can share the same set up and still comply with the local laws. It can span many jurisdictions as long as they are within one country, and contain many legal entities that act as payroll statutory units. Each payroll statutory unit can belong to only one legislative data group.

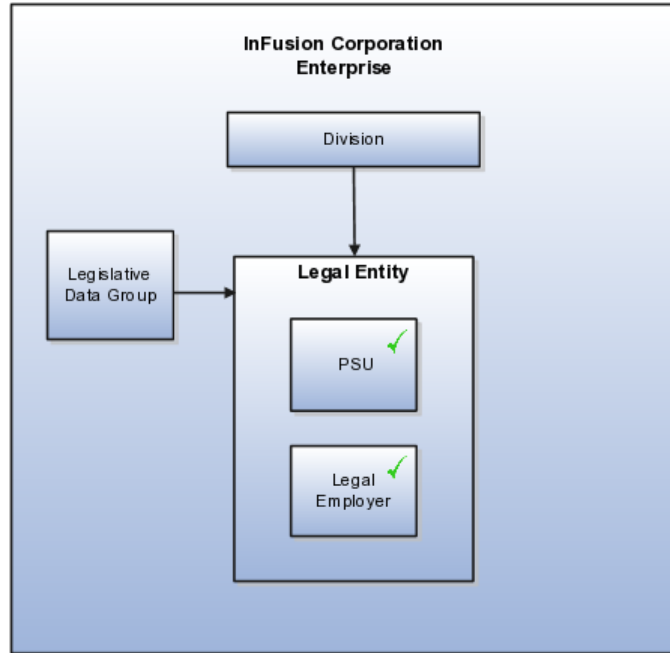
Define Legal Entities: Manage Legal Entity HCM Information

HCM Organization Models: Examples

These examples illustrate different models for human capital management (HCM) organizations. Each example includes a legislative data group (LDG). LDGs are not an organization classification, but they are included in the example to show how you associate them with a payroll statutory unit to partition payroll data.

Simple Configuration

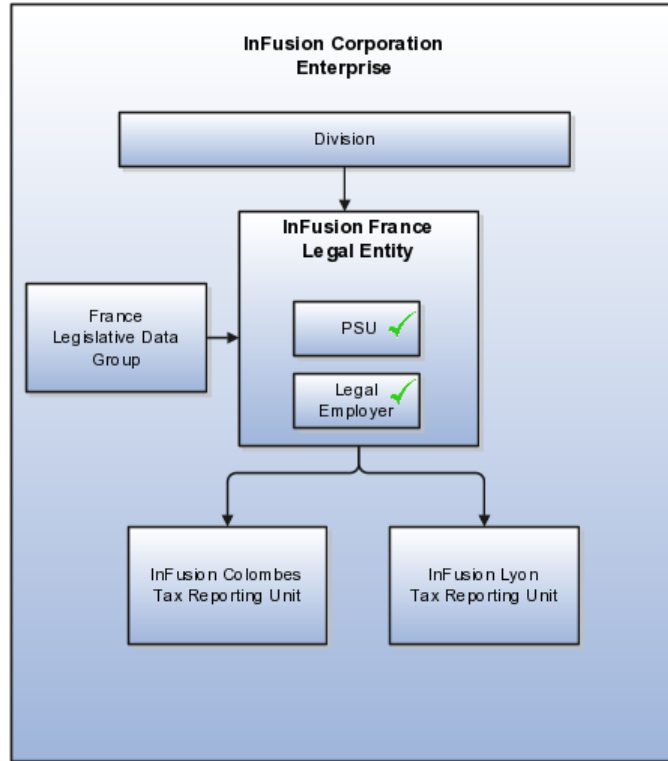
This example illustrates a simple configuration that does not include any tax reporting units. The legal employer and payroll statutory units are the same, sharing the same boundaries. Reporting can only be done at a single level. Countries such as Saudi Arabia and the United Arab Emirates (UAE) might use this type of model, as reporting in these countries is done at the legal entity level. This figure illustrates a simple configuration where the enterprise has only one legal entity that is both a payroll statutory unit and a legal employer.



Multiple Legal Employers and Tax Reporting Units Under One Payroll Statutory Unit

This example illustrates a more complex configuration. In this enterprise, one legal entity, InFusion US, is defined as a payroll statutory unit and has two separate legal entities, which are also legal employers. This model shows multiple legal employers that are associated with a single payroll statutory unit, and how tax reporting units are always associated with a specific legal employer (or employers) through the payroll statutory unit. The implication is that payroll statutory reporting boundaries vary from human resources (HR) management, and the balances can be categorized separately by either payroll statutory unit, legal employer, or tax reporting unit. This configuration is based on tax filing requirements, as some tax-related payments and reports are associated with a higher level than employers. An example of a country that might use this model is the US.

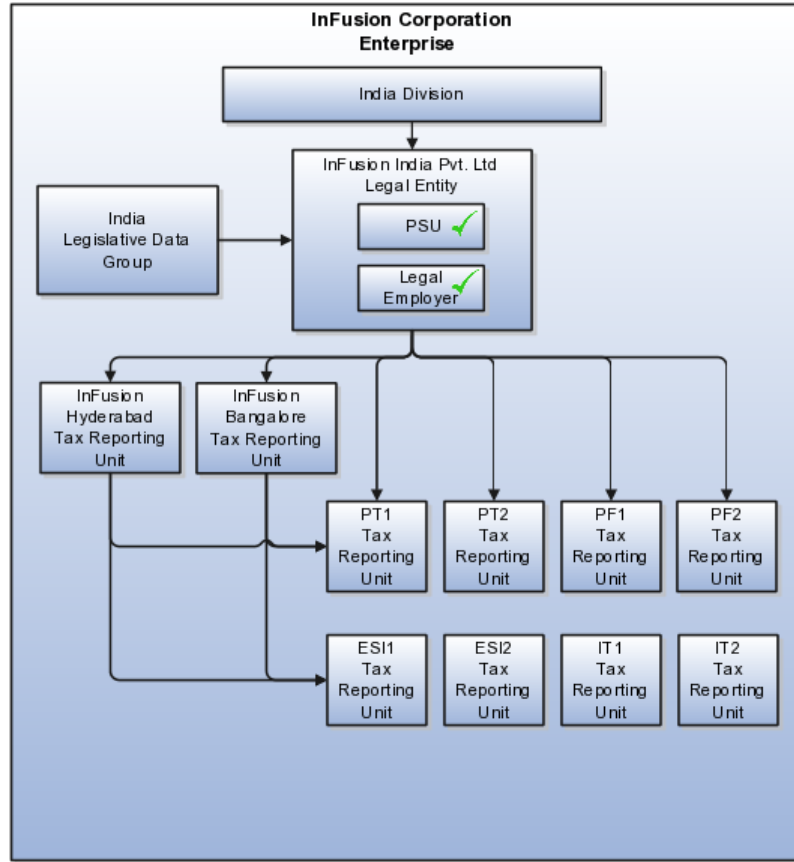
This figure illustrates an enterprise that has one payroll statutory unit and multiple legal employers and tax reporting units.



One Payroll Statutory Unit with Several Tax Reporting Units That Are Independent from the Legal Employer

In this model, the enterprise has one legal entity, and legal employers and tax reporting units are independent from each other within a payroll statutory unit, because there is no relationship from a legal perspective. Therefore, you can run reporting on both entities independently. Using this model, you would not typically need to report on tax reporting unit balances within a legal employer, and balances can be categorized by either or both organizations, as required. An example of a country that might use this model is India.

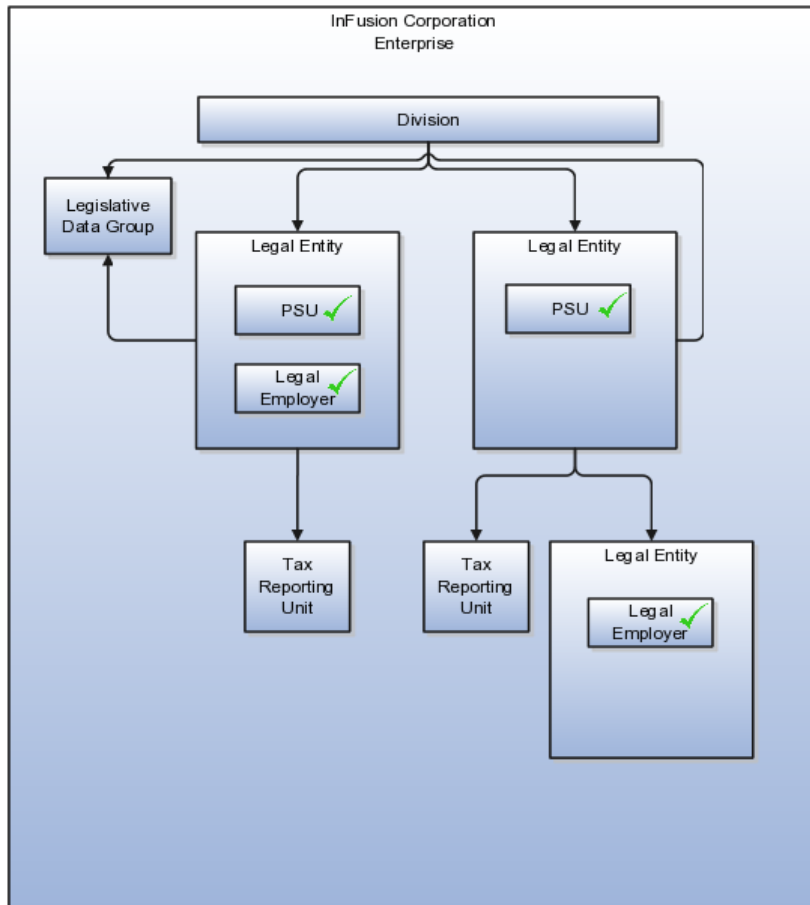
This figure illustrates an enterprise with one legal entity that is a payroll statutory unit and a legal employer, and the tax reporting units are independent from the legal employer.



Multiple Payroll Statutory Units with Several Tax Reporting Units that are Independent from the Legal Employer

In this model, the enterprise has two legal entities, and legal employers and tax reporting units are independent from each other within a payroll statutory unit, because there is no relationship from a legal perspective. Therefore, you can run reporting on both entities independently. Using this model, you would not typically need to report on tax reporting unit balances within a legal employer, and balances can be categorized by either or both organizations, as required. An example of a country that might use this model is the United Kingdom (UK).

This figure illustrates an enterprise with two legal entities, and legal employers and tax reporting units are independent from each other.



Payroll Statutory Units, Legal Employers, and Tax Reporting Units: How They Work Together

When you set up legal entities, you can identify them as legal employers and payroll statutory units, which makes them available for use in Oracle Fusion Human Capital Management (HCM). A tax reporting unit is created automatically when you add a legal entity and identify it as a payroll statutory unit. Depending on how your organization is structured, you may have only one legal entity that is also a payroll statutory unit and a legal employer, or you may have multiple legal entities, payroll statutory units, and legal employers.

Legal Employers and Payroll Statutory Unit

Payroll statutory units enable you to group legal employers so that you can perform statutory calculations at a higher level, such as for court orders or for United Kingdom (UK) statutory sick pay. In some cases, a legal employer is also a payroll statutory unit. However, your organization may have several legal employers under one payroll statutory unit. A legal employer can belong to only one payroll statutory unit.

Payroll Statutory Units and Tax Reporting Units

Payroll statutory units and tax reporting units have a parent-child relationship, with the payroll statutory unit being the parent.

Tax Reporting Units and Legal Employers

Tax reporting units are indirectly associated with a legal employer through the payroll statutory unit. One or more tax reporting units can be used by a single legal employer, and a tax reporting unit can be used by one or more legal employers. For example, assume that a single tax reporting unit is linked to a payroll statutory unit. Assume also that two legal employers are associated with this payroll statutory unit. In this example, both legal employers are associated with the single tax reporting unit.

FAQs for Manage Legal Entity HCM Information

What's a legal employer?

A legal employer is a legal entity that employs workers. You define a legal entity as a legal employer in the Oracle Fusion Legal Entity Configurator. The legal employer is captured at the work relationship level, and all employment terms and assignments within that relationship are automatically with that legal employer. Legal employer information for worker assignments is also used for reporting purposes.

What's a payroll statutory unit?

Payroll statutory units are legal entities that are responsible for paying workers, including the payment of payroll tax and social insurance. A payroll statutory unit can pay and report on payroll tax and social insurance on behalf of one or many legal entities, depending on the structure of your enterprise. For example, if you are a multinational, multicompany enterprise, then you register a payroll statutory unit in each country where you employ and pay people. You can optionally register a consolidated payroll statutory unit to pay and report on workers across multiple legal employers within the same country. You associate a legislative data group with a payroll statutory unit to provide the correct payroll information for workers.

Define Chart of Accounts of Enterprise Structures for Project Financial Management

Manage Chart of Accounts

Chart of Accounts: Explained

The chart of accounts is the underlying structure for organizing financial information and reporting. An entity records transactions with a set of codes representing balances by type, expenses by function, and other divisional or organizational codes that are important to its business.

A well-designed chart of accounts provides the following benefits:

- Effectively manages an organization's financial business
- Supports the audit and control of financial transactions
- Provides flexibility for management reporting and analysis

- Anticipates growth and maintenance needs as organizational changes occur
- Facilitates an efficient data processing flow
- Allows for delegation of responsibility for cost control, profit attainment, and asset utilization
- Measures performance against corporate objectives by your managers

The chart of accounts facilitates aggregating data from different operations, from within an operation, and from different business flows, thus enabling the organization to report using consistent definitions to their stakeholders in compliance with legislative and corporate reporting standards and aiding in management decisions.

Best practices include starting the design from external and management reporting requirements and making decisions about data storage in the general ledger, including thick versus thin general ledger concepts.

Chart of Accounts: How Its Components Fit Together

There are several important elements to the basic chart of accounts in Oracle Fusion Applications: a structure that defines the account values, segments, and their labels, and rules (security and validation). Account combinations link the values in the segments together and provide the accounting mechanism to capture financial transactions.

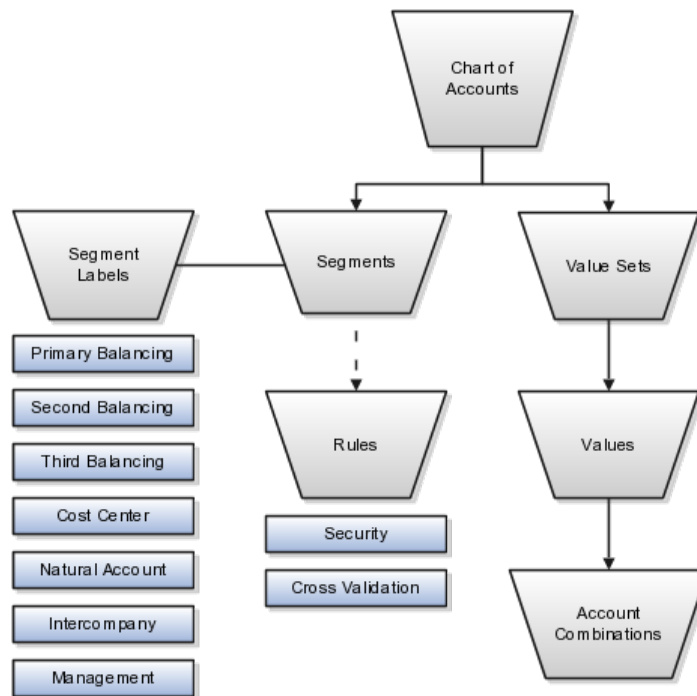


Chart of Accounts

The chart of accounts defines the number and attributes of various segments, including the order of segments, the width of segments, prompts, and segment labels, such as balancing, natural account, and cost center.

The chart of accounts further defines the combination of value sets associated with each segment of the chart of accounts, as well as the type, default value, additional conditions designating the source of the values using database tables, and the required and displayed properties for the segments.

Segments

A chart of accounts segment is a component of the account combination. Each segment has a value set attached to it to provide formatting and validation of the set of values used with that segment. The combination of segments creates the account combination used for recording and reporting financial transactions. Examples of segments that may be found in a chart of accounts are company, cost center, department, division, region, account, product, program, and location.

Value Sets and Values

The value sets define the attributes and values associated with a segment of the chart of accounts. You can think of a value set as a container for your values. You can set up your flexfield so that it automatically validates the segment values that you enter against a table of valid values. If you enter an invalid segment value, a list of valid values appears automatically so that you can select a valid value. You can assign a single value set to more than one segment, and you can share value sets across different flexfields.

Segment Labels

Segment labels identify certain segments in your chart of accounts and assign special functionality to those segments. Segment labels were referred to as flexfield qualifiers in Oracle E-Business Suite. Here are the segment labels that are available to use with the chart of accounts.

- **Balancing:** Ensures that all journals balance for each balancing segment value or combination of multiple balancing segment values to use in trial balance reporting. There are three balancing segment labels: primary, second, and third balancing. The primary balancing segment label is required.
- **Cost Center:** Facilitates grouping of natural accounts by functional cost types, accommodating tracking of specific business expenses across natural accounts. As cost centers combine expenses and headcount data into costs, they are useful for detailed analysis and reporting. Cost centers are optional, but required if you are accounting for depreciation, additions, and other transactions in Oracle Fusion Assets, and for storing expense approval limits in Oracle Fusion Expense Management.
- **Natural Account:** Determines the account type (asset, liability, expense, revenue, or equity) and other information specific to the segment value. The natural account segment label is required.
- **Management:** Optionally, denotes the segment that has management responsibility, such as the department, cost center, or line of business. Also can be attached to the same segment as one of the balancing segments to make legal entity reporting more granular.
- **Intercompany:** Optionally, assigns the segment to be used in intercompany balancing functionality.

Note

All segments have a segment qualifier that enables posting for each value. The predefined setting is Yes to post.

Account Combinations

An account combination is a completed code of segment values that uniquely identifies an account in the chart of accounts, for example 01-2900-500-123,

might represent InFusion America (company)-Monitor Sales (division)-Revenue (account)-Air Filters (product).

Rules

The chart of accounts uses two different types of rules to control functionality.

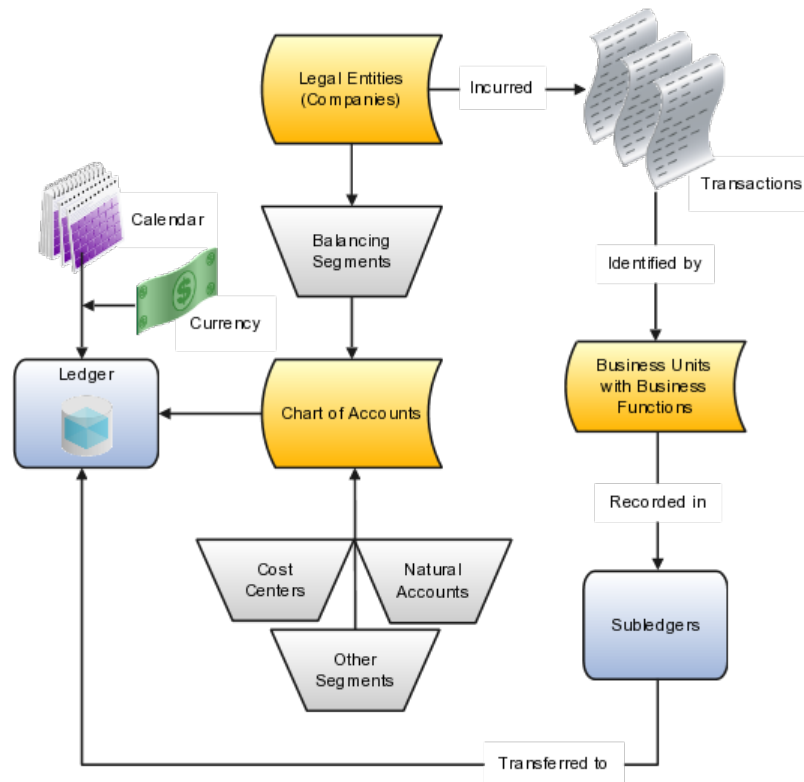
- Security rules: Prohibit certain users from accessing specific segment values. For example, you can create a security rule that grants a user access only to his or her department.
- Cross-validation rules: Control the account combinations that can be created during data entry. For example, you may decide that sales cost centers 600 to 699 should enter amounts only to product sales accounts 4000 to 4999.

Create Chart of Accounts, Ledger, Legal Entities, and Business Units in Spreadsheets: Explained

Represent your enterprise structures in your chart of accounts, ledger, legal entities, and business unit configuration to track and report on your financial objectives and meet your reporting requirements. These components are the underlying structure for organizing financial information and reporting.

The chart of accounts within the ledger facilitates aggregating data from different operations, from within an operation, and from different business flows. This functionality enables you to report using consistent definitions to your stakeholders in compliance with legislative and corporate reporting standards and aids in management decisions.

Rapid implementation is a way to configure the Oracle Fusion Financial Enterprise and Financial Reporting Structures quickly using sheets in a workbook to upload lists of companies (legal entities), ledgers, business units, chart of account values, and other similar data. Once the sheets have been uploaded, the application creates your ledger, business unit, and other components. The following graphic shows the relationship of these components.



- **Legal Entities:** Identifies a recognized party with rights and responsibilities given by legislation, which has the right to own property and the responsibility to account for themselves.
- **Chart of Accounts:** Configures accounts consisting of components called segments that are used to record balances and organize your financial information and reporting.
- **Segments:** Contains a value set that provides formatting and validation of the set of values used with that segment. When combined, several segments create an account for recording your transactions and journal entries.
- **Segment Labels:** Identifies certain segments in your chart of accounts and assigns special functionality to those segments. The three required segment labels are:
 - **Balancing Segment:** Ensures that all journals balance for each balancing segment value or combination of multiple balancing segment values to use in financial processes and reporting. The three balancing segment labels are: primary, second, and third balancing. The primary balancing segment label is required.
 - **Natural Account:** Facilitates processes in the General Ledger application, such as retained earnings posting. Determines the account type, which includes asset, liability, expense, revenue, or equity.
 - **Cost Center:** Facilitates grouping of natural accounts by functional cost types, accommodating tracking of specific business expenses across natural accounts.

- **Ledger:** Maintains the records and is a required component in your configuration. The Rapid implementation process:
 - Creates your ledger by combining your chart of accounts, calendar, and currency as well as other required options defined in the sheets.
 - Assigns a default for the fourth component, the subledger accounting method, used to group subledger journal entry rule sets together to define a consistent accounting treatment.
 - Creates a balances cube for each ledger with a unique chart of accounts and calendar. Each segment is created as a dimension in the balances cube.
- **Business Units with Business Functions:** Identifies where subledger transactions are posted and provides access to perform subledger business processes. Business units are assigned to a primary ledger, as well as a default legal entity, when configured and identify where subledger transactions are posted.
- **Subledgers:** Captures detailed transactional information, such as supplier invoices, customer payments, and asset acquisitions. Uses subledger accounting to transfer transactional balances to the ledger where they are posted.

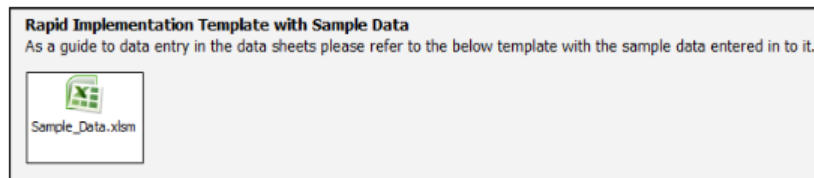
Create Chart of Accounts, Ledger, Legal Entities, and Business Units in Spreadsheets: How They Are Processed

The Create Chart of Accounts, Ledger, Legal Entities, and Business Units rapid implementation process consists of four steps.

1. Enter the data into the sheets.
2. Upload the XML files generated from the sheets.
3. Run the deployment process to finalize the chart of accounts configuration.
4. Upload the XML files generated from the sheets for the rest of the configuration.

Note

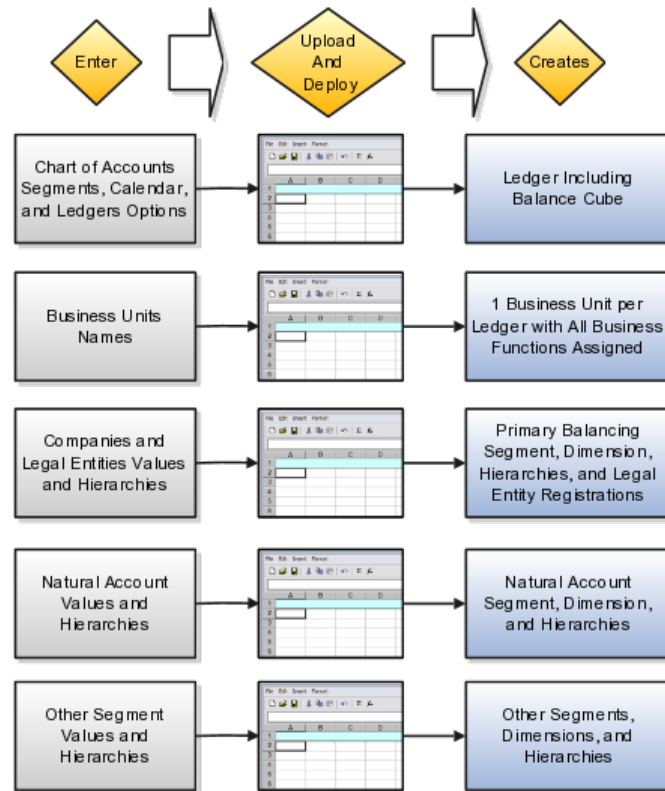
On the Instruction sheet is a link to a completed sample data workbook.



Process Overview

Begin by downloading the **Rapid Implementation for General Ledger** workbook using the **Create Chart of Accounts, Ledger, Legal Entities, and Business Units in Spreadsheet** task on the **Setup and Maintenance** work area.

The following figure illustrates the Create Chart of Accounts, Ledger, Legal Entities, and Business Units process, what data is entered into each sheet of the workbook, and the components that the process creates.



Process

Enter Data

The Create Chart of Accounts, Ledger, Legal Entities, and Business Units workbook provides five sheets.

1. Instructions
2. Chart of Accounts, Calendar, and Ledger
3. Business Units
4. Companies and Legal Entities
5. Natural Accounts

Sheets used to enter other segment values and hierarchies for additional segments are created by entering the segments on the Chart of Accounts, Calendar, and Ledger sheet and then clicking the **Add Segment Sheets** button.

Instructions Sheet

Read the planning tips, loading process, best practices, and recommendations.

Chart of Accounts, Calendar, and Ledger Sheet

Enter your data to create your ledger, its components, chart of accounts, currency, and calendar, and set the required ledger options.

Chart of Accounts, Calendar and Ledger

*Required

*Ledger: Infusion Corporation

*Ledger Currency: USD

*Retained Earnings Account: 101-00-3310-000-000-000

*Enable Average Balances: No

*Fiscal Year Start Date: 1-Jan-2010

Period Frequency: Monthly

*Adjusting Periods: Once at year end

Once at year end
Once at mid of year and once at year end
Quarterly
None

Step 1: Generate Chart of Accounts File

Step 2: Generate Ledger, LE and BU File

Chart of Accounts

*Segment	Segment Label	Short Prompt	*Display Width
Company	Primary Balancing Segment	CO	3
Line of Business	Second Balancing Segment	LOB	2
Account	Natural Account Segment	ACCT	4
Cost Center	Cost Center Segment	CC	3
Product		PROD	3
Intercompany	Intercompany Segment	IC	3

Add Segment Sheets

- **Ledger name** is the name of your primary ledger and often appears in report titles, so enter a printable name.
- **Ledger Currency** represents the currency that most of your transactions are entered.
- **Retained Earnings Account** is used when you open the first period of a new year. The application moves the total balances in your revenue and expense accounts to the Retained Earnings accounts by balancing segment.

Tip

When the data is uploaded, the **Allow Dynamic Insertion** option used to enable the generation of new account combinations dynamically instead of creating them manually is enabled by default. To prevent the creation of invalid accounts, you must define cross-validation rules. Define cross-validation rules before entering data or loading history. Cross-validation rules only prevent creation of new accounts, not disabling of preexisting accounts.

- **Enable Average Balances** is used to enable Average Balances functionality.

The Average Balance feature provides organizations with the ability to track average and end-of-day balances, report average balance sheets, and create custom reports using both standard and average balances. Average balance processing is important for financial institutions, since average balance sheets are required, in addition to standard balance sheets, by many regulatory agencies. Many organizations also use average balances for internal management reporting and profitability analysis.

Tip

If you select No and uploaded the options, this region cannot be changed and does not display on the Specify Ledger Options page.

- **Fiscal Year Start Date** is the beginning date of your calendar for the ledger and cannot be changed once the ledger is saved.

Important

Select a period before the first period you plan to load history or perform translations to enable running translation. You cannot run translation in the first defined period of a ledger calendar.

- **Period Frequency** must be Monthly and is predefined.

Note

If you require a calendar other than monthly, such as 4-4-5 or weekly, define the calendar in the regular calendar page.

- **Adjusting Periods** add one or more periods that are used to enter closing, audit, or other adjustments in the General Ledger at quarter or year end. The entries are tracked in the adjusting period and not in your monthly activity.
- **Chart of Accounts** region is where you enter your segments, segment labels, short prompts, and display length data that is used to create your chart of accounts. Plan this data carefully, as you are defining the basic structure for your accounting and reporting.
- **Display Length** sets the segment size so select carefully and leave room for growth. For example, if you have 89 cost centers, enter 3 for the Display Length to allow for more than 100 cost centers in the future.
- **Add Segment Sheets** button to create sheets for additional segments. Only the Company and Natural Account segment sheets are provided.

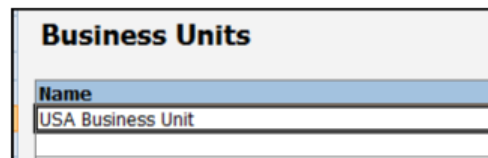
Note

If you select an intercompany segment, you must complete at least one intercompany rule and check the Enable Intercompany Balancing option in the Specify Ledger Options task for the Balancing API to perform intercompany balancing.

Business Units Sheet

Enter the name of your business unit.

You can enter more than one business unit per ledger but it is not recommended.



The screenshot shows a form titled "Business Units". Below the title is a text input field labeled "Name" which contains the text "USA Business Unit".

Note

Enter a list of your legal entities. Include their registration number and assigned parent or child value.

Companies and Legal Entities Sheet

You can create up to 9 levels of parent values to use to roll up your legal entities to meet corporate and local reporting requirements.

Parent1	Child Value	Company Description	Legal Entity Name	Legal Entity Identifier	Country	Address Line
100		Corporation	InFusion Corporation Inc.		United States	500 Oracle Parkway
	101 USA1		InFusion America Inc.	Inf_USA_1	United States	500 Oracle Parkway
	102 USA2		InFusion America High Technology Inc.	Inf_USA_3	United States	233 South Wacker Driv
	131 Health		InFusion USA Health Inc.	Inf_USA_3	United States	1015 15th Street NW

Natural Accounts Sheet

Enter your account values that are used to record the type of balance.

Parent2	Parent1	*Child Value	*Description	*Account Type	Financial Category
		1000	Assets	Asset	Other current assets
		11200	Cash	Asset	Cash
		11501	Cash Clearing	Asset	Cash
		2000	Liabilities	Liability	Other current liabilities
		22100	Accounts Payables	Liability	Accounts payable
		22190	Accounts Payable Clearing	Liability	Accounts payable

- **Parent and Child Values with Descriptions** are used to build hierarchies. Hierarchies are used for chart of accounts mappings, revaluations, data access sets, cross validation rules, and segment value security rules. The balances cube and account hierarchies are also used for financial reporting, Smart View queries, and allocations.
- **Account Type** is used to identify the type of account, Asset, Liability, Revenue, Expense, or Owner's Equity. Account types are used in year end close processes and to correctly categorize your account balances for reporting.
- **Financial Category** (optional) is used to identify groups of accounts for reporting with Oracle Fusion Transactional Business Intelligence.

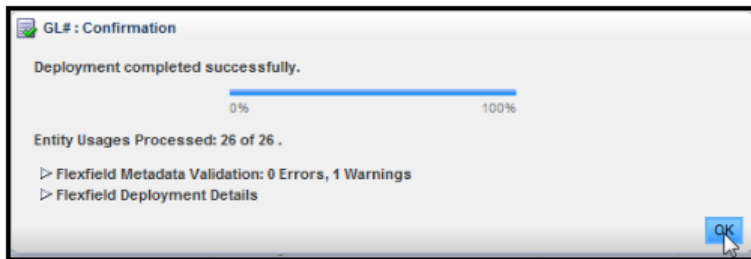
Upload the Sheets and Run Deployment

Return to the Chart of Accounts, Calendar, and Ledger sheet after completing the other sheets complete the following steps:

1. **(B) Generate Chart of Accounts File:** The program generates an XML data file for the entered chart of accounts and hierarchies setup data. Save the file to a network or local drive.
2. **(B) Generate Ledger, Legal Entity, and Business Units File:** The program generates an XML data file for the entered ledger, legal entities, and business unit setup data. Save the file a network or local drive.
3. **(N) Setup and Maintenance > Functional Setup Manager > Upload Chart of Accounts** task. The Upload Enterprise Structures process is launched.
4. **(B) Upload File.**
5. **(B) Browse.** Select the first file you saved: **ChartOfAccounts.xml**

6. **(B) Submit.**

7. Verify that the process was completed without errors or warnings.
8. **(N) Setup and Maintenance > Deploy Chart of Accounts task > (B) Deploy the Accounting Flexfield.**



9. **(I) Refresh** until the green check mark appears and verifies that the deployment is successful.
10. **(N) Setup and Maintenance > Upload Ledger, Legal Entities, and Business Units** task. The **Upload Enterprise Structures** process is launched.
11. **(B) Upload File.**
12. **(B) Browse.** Select the second file you saved:
FinancialsCommonEntities.xml
13. **(B) Submit.**
14. Verify that the process was completed without errors or warnings.

Tip

You cannot change the chart of accounts, accounting calendar, or currency for your ledger after the setup is created. Assign the data role that was automatically generated for the ledger to your users. Then open the first period to begin entering data.

Creating One Chart of Accounts Structure with Many Instances: Example

In Oracle Fusion General Ledger, the chart of accounts model is framed around the concept of a chart of accounts structure, under which one or more chart of accounts structure instances can be created.

Scenario

Your company, InFusion Corporation, is a multinational conglomerate that operates in the United States (US) and the United Kingdom (UK). InFusion has purchased an Oracle Fusion enterprise resource planning (ERP) solution including Oracle Fusion General Ledger and all of the Oracle Fusion subledgers. You are chairing a committee to discuss creation of a model for your global financial reporting structure including your charts of accounts for both your US and UK operations.

InFusion Corporation

InFusion Corporation has 400 plus employees and revenue of \$120 million. Your product line includes all the components to build and maintain air quality monitoring (AQM) systems for homes and businesses.

Analysis

In Oracle Fusion General Ledger, the chart of accounts model is framed around the concept of a chart of accounts structure, under which one or more chart of accounts structure instances can be created.

Chart of Accounts Model

The chart of accounts structure provides the general outline of the chart of accounts and determines the number of segments, the type, the length, and the label (qualifier) of each segment. This forms the foundation of the chart of accounts definition object.

For each chart of accounts structure, it is possible to associate one or more chart of accounts structure instances. Chart of accounts structure instances under the same structure share a common configuration with the same segments, in the same order, and the same characteristics. Using one chart of accounts structure with multiple instances simplifies your accounting and reporting.

At the chart of accounts structure instance level, each segment is associated with a value set that conforms to the characteristic of that segment. For example, you assign a value set with the same segment type and length to each segment. You are using hierarchies with your chart of accounts segments. Each structure instance segment is assigned a tree code to indicate the source of the hierarchy information for the associated value set. The same value set can be used multiple times within the same or across different chart of accounts instances within the same structure or in different structures. This functionality reduces your segment value creation and maintenance across your charts of accounts.

The collective assignment of value sets to each of the segments forms one chart of accounts instance. At the chart of accounts structure instance level, you can select to enable dynamic insertion. Dynamic insertion allows the creation of account code combinations automatically the first time your users enter that new account combination. The alternative is to create them manually. By deciding to enable dynamic insertion, you save data entry time and prevent delays caused by the manual creation of new code combinations. Well defined cross validation rules help prevent the creation of inappropriate account code combinations.

Perform deployment after a new chart of accounts structure and structure instances are defined or any of their modifiable attributes are updated. Deployment validates and regenerates the necessary objects to enable your charts of accounts and chart of accounts structure instances. By unifying and standardizing your organization's chart of accounts, you are positioned to take full advantage of future functionality in Oracle Fusion General Ledger.

In summary, you are recommending to your company to unify the organization's chart of accounts in a single chart of accounts structure based on chart of accounts commonalities across ledgers. You have also decided to use the chart of accounts structure instance construct to serve different accounting and reporting requirements by using value sets specific to each of your entities.

Creating Chart of Accounts Structure and Instances: Examples

In Oracle Fusion General Ledger, the chart of accounts model is framed around the concept of a chart of accounts structure, under which one or more chart of

accounts structure instances can be created. A chart of accounts structure defines the key attributes for your chart of accounts, such as the number of segments, the segment sequences, the segment names, segment prompts, segment labels, for example natural account and primary balancing, and default value sets.

The chart of accounts instance is exposed in the user interfaces and processes. By default, a chart of accounts instance inherits all the attributes of the chart of accounts structure, meaning that all instances of the same structure share a common shape and have the same segments in the same order. However, at the chart of accounts instance level, you can override the default value set assignments for your segments and assign a unique account hierarchy that determines the parent and child relationships between the value set values. At the chart of accounts instance level, determine if allow dynamic insertion is enabled to generate new account combinations dynamically instead of creating them manually.

Chart of Account Structure

You are creating a chart of accounts structure as you setup your chart of accounts for your enterprise, InFusion America, Inc. Follow these steps:

1. Navigate to the **Manage Chart of Accounts** page from the Functional Setup Manger by querying on **Manage Chart of Accounts** and clicking the **Go To Task**.
2. Select **General Ledger** from the Module list of values and click **Search**.
3. Click **Manage Structures** to open the **Manage Key Flexfield Structures** page.
4. Select the **General Ledger** row and click the **Create** to open the **Create Key Flexfield Structure** page.
5. Enter a unique Structure Code, **INFUSION_AM_COA_STRUCTURE**, and Name, **InFusion America COA Structure**. Provide an optional Description, **InFusion America Inc. Chart of Accounts Structure**.
6. Select the - Delimiter to visually separate your segment values.
7. Click **Save**.
8. To create a new segment, click the **Create** to open the **Create Key Flexfield Segment** page.
 - a. Enter the following parameters:

Parameter	Value
Segment Code	INFUSION_AM_CO
Name	InFusion America Company
Description	InFusion America Inc. Company
Sequence Number	1
Prompt	Company
Short Prompt	CO
Display Width	2
Column Name	Segment1

Default Value Set Code	INFUSION_AM_COMPANY

- b. Select a segment label, **Primary Balancing Segment**, to indicate its purpose within your chart of accounts.

Note

Two segment labels are required: primary balancing segment and natural account segment. These labels are not used with each other or with other labels in a specific segment.

- c. Click **Save and Close**.
- d. Click **Done**.
- e. Define additional segments following the same process.

Chart of Account Instance

You are creating a chart of accounts instance as you setup your chart of accounts for your enterprise, InFusion America, Inc. Follow these steps:

1. Navigate to the **Manage Chart of Accounts** page from the Functional Setup Manager by querying on **Manage Chart of Accounts** and clicking the **Go To Task**.
 2. Select **General Ledger** from the Module list of values and click **Search**.
 3. Select the **General Ledger** row and click **Manage Structure Instances** to open the **Manage Key Flexfield Structure Instance** page.
 4. Click the **Create** icon to open the **Create Key Flexfield Structure Instance** page.
 5. Enter a unique Structure Instance Code, **INFUSION_AM_COA_INSTANCE**, and Name, **InFusion America COA Instance**. Provide an optional Description, **InFusion America Inc. Chart of Accounts Structure Instance**.
 6. Select **Dynamic combination creation allowed** to indicate that you want to dynamically generate account combinations.
 7. Associate your instance with your Structure Name, **InFusion America Structure**.
-

Note

By default, an instance inherits the key attributes of the associated structure. Some attributes, such as the value set assigned to each the segment, can be modified.

8. Click **Save**.
 9. Optionally, select the segment row and click **Edit** to modify instance segments.
 10. Check **Required**, **Displayed**, and **BI enabled** check boxes.
-

Note

Check the Required and Displayed options for all segments including those intended for future use. The recommended best practice is to define one segment for future use and set a default value. This ensures room for expansion in your chart of accounts and that the extra segment is populated in the account combinations.

Check the BI (Business Intelligence) enabled option to use key flexfield segments in Oracle Fusion Transactional Business Intelligence. The business intelligence check box is only valid when enabled on segments with segment labels. The second step is to populate the BI Object Name field for each of the segment labels in the Manage Segment Label page opened from the Manage Key Flexfields page.

-
11. Click **OK**.
 12. Click **Save and Close**.
 13. Define additional instances following the same process.
-

Note

Alternatively, proceed directly with creating your value set values by selecting the corresponding **Value Set Code** in the Segment Instances table.

14. Click **Done**.
15. Click **Deploy Flexfield**.
16. Click **OK**.

Balancing Segments: Explained

Balancing segments ensure that all journals balance for each balancing segment value or combination of multiple balancing segment values. You can secure access to your primary balancing segment values only with data access sets. The general ledger application automatically calculates and creates balancing lines as required in journal entries. For example, recognizing an entity's receivable and the other entity's payable. There are three balancing segment labels: primary, second, and third balancing. The primary balancing segment label is required.

By enabling multiple balancing segments for your chart of accounts, it is possible to produce financial statements for each unique combination of segment values across not only one, but two or even three qualified balancing segments. This ability provides you greater insights into your operations as it affords you visibility along the critical fiscal dimensions you use to plan, monitor, and measure your financial performance.

The following explains processes that use balancing segments.

- Intercompany balancing: Adds lines to unbalanced journals using intercompany rules.
- Opening first period of the new accounting year: Calculates retained earnings amounts at the level of granularity that totals revenue and expense account balances for multiple balancing segment value combinations. This applies to standard and average balances.

- Importing journals: Adds lines using the suspense account on unbalanced journals.
- Posting journals: Adds additional lines to unbalanced journals for the following enabled account types:
 - Suspense
 - Rounding
 - Net income
 - Retained earnings
 - Cumulative translation adjustments from replication of revaluation journals to reporting currencies and for multiple reporting currency account type specific conversion
- Posting prior period journals: Calculates any income statement impact and posts to the appropriate retained earnings account.
- Translating balances: Supports multiple balancing segments for the following accounts:
 - Retained earnings: Calculated translated retained earnings are post to the retained earnings accounts by balancing segment. Retained earnings represents the summing of the translated revenue and expense accounts across multiple balancing segment values.
 - Cumulative translation adjustment: Amounts posted by balancing segment to these accounts represents currency fluctuation differences between ranges of accounts which use different rate types. For example, period end rates are used for asset and liability accounts and historical rates for equity accounts.
- Revaluing Balances: Supports multiple balancing segments when calculating gain or loss accounts.
- Creating Opening Balances: Initializes reporting currency balances by converting from the total primary currency. Any difference in the reporting currency amounts is offset by populating retained earnings accounts.
- Closing year end: Supports multiple balancing segments when calculating the income statement offset and closing account in the closing journals.

Multiple Balancing Segments: Points to Consider

Oracle Fusion General Ledger supports tracking financial results at a finer level of granularity than a single balancing segment. In addition to the required primary balancing segment for the chart of accounts, which is typically associated with the company dimension of a business organization, two additional segments of the chart of accounts can be optionally qualified as the second and third balancing segments respectively. Possible chart of accounts segments that can be tagged as these additional balancing segments include cost center or department, additional aspects of a business commonly used in measuring financial results.

There are several points to consider in using multiple balancing segments:

- Journal entry processing
- Implementation timing
- Change options
- Migration adjustments

Journal Entry Processing

Multiple balancing segments ensure that account balances come from journal entries where the debits equal the credits, and thus, the financial reports are properly generated for each unique instance of account value combinations across the balancing segments. Consider this option carefully as it provides more granular reporting but requires more processing resources.

Implementation Timing

When considering implementing the optional second and third balancing segments, keep in mind that these chart of accounts segment labels are set from the beginning of time and are actively used by your ledgers. This is important to ensure that balances are immediately maintained in accordance with the necessary balancing actions to produce consistent financial reporting for the desired business dimensions. Multiple balancing segment ledgers that are not maintained from the beginning of time require extensive manual balance adjustments to catch up and realign the balances in accordance with the multiple balancing segments.

Note

Do not set a segment already qualified as a natural account or intercompany segment as any of the three balancing segments. Validations are not performed when segment labels are assigned, so verify that all are assigned correctly before using your chart of accounts.

Change Options

Once a segment has been enabled and designated as a balancing segment, you must not change the segment. Do not disable the segment or remove the segment labels. These settings must be consistently maintained throughout the life of the chart of accounts to control the accuracy and integrity of the financial data.

Migration Adjustments

For charts of accounts migrated from Oracle E-Business Suite to Oracle Fusion General Ledger that use a segment with the secondary balance tracking segment qualifier, steps must be taken to ensure the proper transition to the second and third balancing segments. The required adjustments are extensive.

For ledgers associated with a migrated chart of accounts, its balances must be adjusted manually to be consistent with the second and third balancing segments as though these segment labels have been in place since the beginning of entries for these ledgers. This requires recomputing and updating of the following processes to reflect the correct balancing for each unique combination of segment values across the additional second and third balancing segments.

- Intercompany balancing
- Suspense posting
- Rounding imbalance adjustments on posting
- Entered currency balancing
- Revaluation gains or losses
- Retained earnings calculations at the opening of each new fiscal year
- Cumulative translation adjustments during translation

Note

All previously translated balances must also be purged, and new translations run to properly account for translated retained earnings and cumulative translation adjustments with the correct level of balancing.

Using Multiple Balancing Segments: Example

This simple example illustrates balancing along two balancing segments for a simple chart of accounts with three segments.

Scenario

Your company has a chart of accounts with two balancing segments and three segments, qualified as follows:

- Company: Primary balancing segment
- Cost Center: Second balancing segment
- Account: Natural account segment

The following multiple company and cost center journal has been entered to transfer advertising and phone expense from Company 1, Cost Center A to Company 2, Cost Center B.

Account	Debit	Credit
Company 1-Cost Center A-Advertising Expense Account	600	
Company 2-Cost Center B-Advertising Expense Account		600
Company 1-Cost Center A-Phone Expense Account	800	
Company 2-Cost Center B-Phone Expense Account		800

During the posting process, the last four lines are created to balance the entry across the primary and second balancing segments, company and cost center.

Account	Debit	Credit
Company 1-Cost Center A-Advertising Expense Account	600	
Company 2-Cost Center B-Advertising Expense Account		600

Company 1-Cost Center A-Phone Expense Account	800	
Company 2-Cost Center B-Phone Expense Account		800
Company 1-Cost Center A-Balancing Account		600
Company 2-Cost Center B-Balancing Account	600	
Company 1-Cost Center A-Balancing Account		800
Company 2-Cost Center B-Balancing Account	800	

FAQs for Manage Charts of Accounts

How can I use future accounting segments?

To plan for future growth in the business organization that requires additional segments in the chart of accounts, extra segments can be added to the chart of accounts structure during your original implementation. Since all segments of the chart are required and have to be enabled, these unused segments can be assigned value sets that have a single value in the chart of accounts structure instance. This value is set as a default for that segment so that the extra segments are automatically populated when an account code combination is used.

Manage Chart of Accounts Value Sets

Chart of Accounts Values Sets: Critical Choices

A value set is the collection of account values that are associated with a segment of a chart of accounts structure instance. When creating values sets, consider the following critical choices:

- Module Designation
- Validation Type
- Format Assignments
- Security Rules
- Values Definition

Module Designation

The module designation is used to tag value sets in Oracle Fusion Applications and sets the value sets apart during upgrades and other processes. Chart of accounts value sets upgraded from Oracle E-Business Suite Release 12 generically bear the module value of **Oracle Fusion Middleware**. When creating new value sets for a chart of accounts, the module can be specified as **Oracle**

Fusion General Ledger to distinctly identify its intended use in an accounting flexfield, basically a chart of accounts.

Validation Type

Assign one of the following validation types to chart of accounts value sets:

- **Independent:** The values are independently selected when filling out the segment in the account combination.
- **Table Validated:** The values are stored in an external table to facilitate maintenance and sharing of the reference data.

Format Assignments

Value sets for chart of accounts must use the **Value Data Type** of **Character**. The **Value Subtype** is set to **Text**. These two settings support values that are both numbers and characters, which are typical in natural account segment values. Set the maximum length of the value set to correspond to the length of the chart of accounts segment to which it is assigned. Best practices recommend restricting values to **Upper Case Only** or **Numeric** values that are zero filled by default.

Security Rules

If flexfield data security rules are to be applied to the chart of accounts segment associated with the value set, the **Enable Security** check box must be checked for the assigned value set. In addition, assign a data security resource name to enable creation of a data security object automatically for the value set. The data security object is used in the definition of flexfield data security rules.

Value Definition

Once these basic characteristics are defined for the value set, values can be added to the set in the Manage Values page.

- Set the values to conform to the value set length and type.
- Enter the value, its description, and its attributes including the **Enable** check box, **Start Date**, and **End Date**.
- Assign the following attributes: **Parent** or **Summary** check box, **Posting is allowed**, and **Budgeting is allowed**.

Note

If the value set is used with a natural account segment, the value also requires you set the **Natural Account Type**, with one of the following values: **Asset**, **Liability**, **Equity**, **Revenue** or **Expense**. Other attributes used are **Third Party Control Account**, **Reconciliation** indicator, and **Financial Category** used with Oracle Transaction Business Intelligence reporting.

Oracle Fusion General Ledger best practice is to define the values for the value set after the value set is assigned to a chart of accounts structure instance. Otherwise you are not able to define the mandatory value attributes, such as summary flag, posting allowed, and account type for natural account segment. The attributes must be added after the value set is assigned to a chart of accounts structure instance.

Creating a Value Set for Your Chart of Accounts: Example

Create your value sets before creating your chart of accounts. A value set can be shared by different charts of accounts or across different segments of the same chart of accounts.

Scenario

You are creating a company value set to be used in your chart of accounts for your enterprise, InFusion America, Inc. Follow these steps:

1. Navigate to the **Manage Chart of Accounts Value Sets** task from within your implementation project and click the **Go to Task**.
2. Click the **Create** icon on the toolbar of the Search Results table. The **Create Value Set** page opens.
3. Enter a unique Value Set Code, **InFusion America Company**, and an optional Description, **Company values for InFusion America Inc.**
4. Select **General Ledger** from the list in the Module field.
5. Select **Independent** as Validation Type.
6. Select **Character** as the Validation Data Type.
7. Click **Save and Close**.

Configuring Chart of Account Segment for Business Intelligence: Explained

To map the Oracle Fusion General Ledger Accounting Flexfield in Oracle Transaction Business Intelligence (BI) Repository file (RPD) for Oracle Fusion Financials, populate values in the Manage Key Flexfields user interface. These values enable the Chart of Accounts segments for Oracle Fusion Transactional BI and provide the mapping with BI Object names that are used as dimension for each of the Chart of Accounts segments.

Check each of the Chart of Accounts segments' **BI enabled** check box on all segments that you intend to map in the RPD by performing the following steps:

1. From your implementation project or the **Setup and Maintenance** page, query for **Manage Key Flexfields** and select the **Go to Task**.
2. Enter GL# in the **Key Flexfield Code** field.
3. Click **Search** button.
4. Click on **Manage Structure Instances** button.
5. Click the **Search** button.
6. Click on the desired chart of accounts and **Edit** icon.
7. Click on the desired segment and the **Edit** icon.
8. Edit each of the segments by checking the **BI enabled** check box.
9. Click on **Save** button. This should be done for all segments in every **Chart of Accounts Structure Instance** that you intend to be mapped in RPD.
10. Click the **Save and Close** button and the **Done** button.

Populate the **BI Object Name** for each of the **Segment Labels**. This name is the logical table name in the RPD which would be used as the dimension for the corresponding segment. Perform the following steps:

1. From your implementation project or the **Setup and Maintenance** page, query for **Manage Key Flexfields** and select the **Go to Task**.
2. Enter GL# in the **Key Flexfield Code** field.
3. Query for GL# as **Key Flexfield Code** in **Manage Key Flexfields** page.
4. Click **Search** button.
5. Chose **Actions** menu and click on **Manage Segment Labels**
6. Populate the **BI Object Name** for all the segment labels that are need to be mapped in the RPD.

Segment Label Code	BI Object Name
FA_COST_CTR	Dim - Cost Center
GL_BALANCING	Dim - Balancing Segment
GL_ACCOUNT	Dim - Natural Account Segment

7. Click the **Save** button.

Note

For all the non qualified segment labels, the **BI Object Name** should be populated with one of the following:

- Dim - GL Segment1
- Dim - GL Segment2
- Dim - GL Segment3
- Dim - GL Segment4
- Dim - GL Segment5
- Dim - GL Segment6
- Dim - GL Segment7
- Dim - GL Segment8
- Dim - GL Segment9
- Dim - GL Segment10

Deploy the flexfield using the **Deploy Flexfield** button from **Manage Key Flexfields** page.

Manage Accounting Calendars

Defining Accounting Calendars: Critical Choices

Define an accounting calendar to create your accounting year and the periods it contains. Specify common calendar options that the application uses to automatically generate a calendar with its periods. Specifying all the options makes defining a correct calendar easier and more intuitive with fewer errors.

The choices you make when specifying the following options are critical, because it is difficult to change your accounting calendar after a period status is set to open or future enterable.

- Start Date
- Period Frequency
- Adjusting Period Frequency
- Period Name Format

Note

In Oracle Fusion, the common calendar types, monthly, weekly, 4-4-5, 4-5-4, 5-4-4, 4-week, quarterly, and yearly, are automatically generated. This functionality makes it easier to create and maintain accounting calendars. By using the period frequency option, you no longer have to go through the tedious task of defining each period manually.

Start Date

If you plan to run translation, specify a calendar start date that is a full year before the start date of the year of the first translation period for your ledger. Translation cannot be run in the first period of a calendar. Consider how many years of history you are going to load from your previous system and back up the start date for those years plus one more. You cannot add previous years once the first calendar period has been opened.

Period Frequency

Use period frequency to set the interval for each subsequent period to occur, for example, monthly, quarterly, or yearly. If you select the period frequency of Other, by default, the application generates the period names, year, and quarter number. You specify the start and end dates. You must manually enter the period information. For example, select the period frequency of Other and enter 52 as the number of periods when you want to define a weekly calendar. For manually entered calendars, when you click the **Add Year** button, the application creates a blank year. Then, you must manually enter the periods for the new year. The online validation helps prevent erroneous entries.

If the year has been defined and validated, use the **Add Year** button to add the next year quickly. Accept or change the new rows as required. For example, with the Other frequency type calendar, dates may differ from what the application generates.

Note

In Oracle Fusion applications a calendar can only have one period frequency and period type. Therefore, if you have an existing calendar with more than one period type associated with it, during the upgrade from Oracle E-Business Suite, separate calendars are created based on each calendar name and period type combination.

Adjusting Period Frequency

Use the adjusting period frequency to control when the application creates adjusting periods. For example, some of the frequencies you select add one

adjusting period at year end, two at year end, or one at the end of each quarter. The default is None which adds no adjusting periods. If you select the frequency of Other, the **Number of Adjusting Periods** field is displayed. Enter the number of desired adjusting periods and then, manually define them.

Period Name Format Region

The **User-Defined Prefix** field in the Period Name Format region is an optional feature that allows you to enter your own prefix. For example, define a weekly calendar and then enter a prefix of Week, - as the separator, and the period name format of Period numberYY fiscal year. The application creates the names of Week1-11, Week2-11, through Week52-11. The options for the **Format** field are predefined values. The list of values is filtered based on the selected separator and only displays the options that match the selected separator.

The year displayed in the period names is based on the selected period name format and the dates the period covers or if the period crosses years, on the year of the start date of the period. For example, April 10, 2010 to May 9, 2010 has the period name of Apr-10 and December 10, 2010 to January 9, 2011 has the name of Dec-10. If period frequency is Other, then the period format region is hidden. The application generates a temporary period name for calendars with period frequency of Other, using a fixed format of Period numberYY. You can override this format with your own customized period names.

Note

For an accounting calendar that is associated with a ledger, changing period names or adding a year updates the accounting period dimension in the balances cubes.

Calendar Validation: How It Works with the Accounting Calendar

Calendar validation is automatic and prevents serious problems when you begin using the calendar. Once you set a calendar period status to open or future enterable, you cannot edit the period.

Settings That Affect Calendar Validation

The calendar validation runs automatically when you save the calendar.

How the Calendar Is Validated

The following table lists the validation checks performed when the accounting calendar is saved.

Validation Performed	Example of Data
Unique period number	2 assigned for two periods
Unique period name	Jan-11 entered twice
Period number beyond the maximum number of periods per year	13 for a 12 period calendar with no adjusting periods
Entered period name contains spaces	Jan 11
Single or double quotes in the period name	Jan '11

Nonadjusting periods with overlapping dates	01-Jan-2011 to 31-Jan-2011 and 30-Jan-2011 to 28-Feb-2011
Period date gaps	01-Jan-2011 to 28-Jan-2011 and 31-Jan-2011 to 28-Feb-2011
Missing period numbers	Periods 1 through 6 defined for a twelve month calendar
Period number gaps	1, 3, 5
Period numbers not in sequential order by date	Period 1 covers 01-Jan-2011 to 31-Jan-2011 and period 2 covers 01-Mar-2011 to 31-Mar-2011, and period 3 covers 01-Feb-2011 to 28-Feb-2011.
Quarter number gaps	1, 3, 4
Quarters not in sequential order by period	1, 3, 2, 4
Period start or end dates more than one year before or after the fiscal year	July 1, 2010 in a 2012 calendar

FAQs for Manage Accounting Calendars

How can I identify errors in my accounting calendar?

Oracle Fusion General Ledger identifies erroneous entries online as you enter a new calendar or change data on an existing calendar. The application also automatically validates the data when you save the calendar.

What's the difference between calendar and fiscal period naming?

The period naming format determines the year that is appended to the prefix for each period in the calendar. For the example, your accounting year has a set of twelve accounting period with a start date of September 1, 2011 and the end date is August 31, 2012, with each period's date range following the natural calendar month date range.

Calendar period naming format: Select the calendar period format to append the period's start date's year to the prefix. For the period covering September 1, 2011 to December 31, 2011, then 2011 or just 11, depending on the period format selected, is appended to each period's name. For the remaining periods covering January 1, 2012 to August 31, 2012, then 2012 or just 12, is appended to each period's name.

Fiscal period naming format: Select the fiscal period format to always append the period's year assignment to the prefix. If the accounting periods in the set of twelve are all assigned the year of 2012, then 2012 or just 12, depending on the period format selected, is appended to the period name of all 12 periods.

When do I update an existing calendar?

Update an existing calendar before the new periods are needed as future periods, based on the future period setting in your accounting configuration. If a complete year has been defined and validated, use the **Add Year** button

to add the next year quickly. Accept or change the new rows as required. For example, with the Other frequency type calendar, dates may differ from what the application generates.

What happens if I upgrade my calendar from Oracle E-Business Suite Release 12?

The migration script assigns a period frequency that most closely matches your Oracle E-Business Suite Release 12 calendar. When you use the Oracle Fusion applications Add Year functionality for the first time, you have an opportunity to review and change the period frequency. The Calendar Options page opens only for calendars upgraded from Release 12 to allow one time modification.

Make your changes to the period frequency, adjusting period frequency, and period name format, including the prefix and separator, as needed. Changes can not conflict with the existing upgraded calendar definition. Update the calendar name and description in the calendar header, as needed, for all calendars. Period details for a new year will be generated automatically based on the latest calendar options. You can also manually update the calendar. The modified calendar options affect future years only.

Define Accounting Configurations of Enterprise Structures for Project Financial Management

Manage Primary Ledgers

Accounting Configuration Offerings: Overview

The Setup and Maintenance work area in the Oracle Fusion Applications is used to manage the configuration of legal entities, ledgers, and reporting currencies that comprise your accounting configuration. To create a new legal entity or ledger, your implementation consultant or system administrator must create an implementation project. This implementation project can be populated by either adding a financials related offering or one or more task lists.

Note

Setup tasks that are not related to the ledger or legal entity specific setup tasks can be invoked from either an implementation project or launched directly from the Setup and Maintenance work area.

There are two offerings predefined for financial implementations.

- The Oracle Fusion Accounting Hub offering is used to add the Oracle Fusion General Ledger and Oracle Fusion Subledger Accounting application features to an existing enterprise resource planning (ERP) system to enhance the current reporting and analysis.
- The Oracle Fusion Financials offering, which includes the Oracle Fusion General Ledger and Oracle Fusion Subledger Accounting application features, as well as at least one of the subledger financial applications.

When adding an offering to an implementation project, implementation consultants can customize the tasks displayed by adding additional tasks to the implementation project.

Ledgers and Subledgers: Explained

Oracle Fusion Applications reflect the traditional segregation between the general ledger and associated subledgers. Detailed transactional information is captured in the subledgers and periodically imported and posted in summary or detail to the ledger.

A ledger determines the currency, chart of accounts, accounting calendar, ledger processing options, and accounting method for its associated subledgers. Each accounting setup requires a primary ledger and optionally, one or more secondary ledgers and reporting currencies. Reporting currencies are associated with either a primary or secondary ledger.

The number of ledgers and subledgers is unlimited and determined by your business structure and reporting requirements.

Single Ledger

If your subsidiaries all share the same ledger with the parent company or they share the same chart of accounts and calendar, and all reside on the same applications instance, you can consolidate financial results in Oracle Fusion General Ledger in a single ledger. Use Oracle Fusion Financial Reporting functionality to produce individual entity reports by balancing segments. General Ledger has three balancing segments that can be combined to provide detailed reporting for each legal entity and then rolled up to provide consolidated financial statements.

Multiple Ledgers

Accounting operations using multiple ledgers can include single or multiple applications instances. You need multiple ledgers if one of the following is true:

- You have companies that require different account structures to record information about transactions and balances. For example, one company may require a six-segment account, while another needs only a three-segment account structure.
- You have companies that use different accounting calendars. For example, although companies may share fiscal year calendars, your retail operations require a weekly calendar, and a monthly calendar is required for your corporate headquarters.
- You have companies that require different functional currencies. Consider the business activities and reporting requirements of each company. If you must present financial statements in another country and currency, consider the accounting principles to which you must adhere.

Subledgers

Oracle Fusion Subledgers capture detailed transactional information, such as supplier invoices, customer payments, and asset acquisitions. Oracle

Fusion Subledger Accounting is an open and flexible application that defines the accounting rules, generates detailed journal entries for these subledger transactions, and posts these entries to the general ledger with flexible summarization options to provide a clear audit trail.

Ledgers: Points to Consider

Companies account for themselves in primary ledgers, and, if necessary, secondary ledgers and reporting currencies. Your transactions from your subledgers are posted to your primary ledgers and possibly, secondary ledgers or reporting currencies. Local and corporate compliance can be achieved through an optional secondary ledger, providing an alternate accounting method, or in some cases, a different chart of accounts. Your subsidiary's primary and secondary ledgers can both be maintained in your local currency, and you can convert your local currency to your parent's ledger currency to report your consolidated financial results using reporting currencies or translation.

Primary Ledgers

A primary ledger is the main record-keeping ledger. Like any other ledger, a primary ledger records transactional balances by using a chart of accounts with a consistent calendar and currency, and accounting rules implemented in an accounting method. The primary ledger is closely associated with the subledger transactions and provides context and accounting for them.

To determine the number of primary ledgers, your enterprise structure analysis must begin with your financial, legal, and management reporting requirements. For example, if your company has separate subsidiaries in several countries worldwide, enable reporting for each country's legal authorities by creating multiple primary ledgers that represent each country with the local currency, chart of accounts, calendar, and accounting method. Use reporting currencies linked to your country specific primary ledgers to report to your parent company from your foreign subsidiaries. Other considerations, such as corporate year end, ownership percentages, and local government regulations and taxation, also affect the number of primary ledgers required.

Secondary Ledgers

A secondary ledger is an optional ledger linked to a primary ledger for the purpose of tracking alternative accounting. A secondary ledger can differ from its primary ledger by using a different accounting method, chart of accounts, accounting calendar, currency, or processing options. All or some of the journal entries processed in the primary ledger are transferred to the secondary ledger, based on your configuration options. The transfers are completed based on the conversion level selected. There are four conversion levels:

- **Balance:** Only Oracle Fusion General Ledger balances are transferred to the secondary ledger.
- **Journal:** General Ledger journal posting process transfers the journal entries to the secondary ledger.
- **Subledger:** Oracle Fusion Subledger Accounting creates subledger journals to subledger level secondary ledgers as well as reporting currencies.

- **Adjustments Only:** Incomplete accounting representation that only holds adjustments. The adjustments can be manual or detailed adjustments from Subledger Accounting. This type of ledger must share the same chart of accounts, accounting calendar, and period type combination, and currency as the associated primary ledger.

Note

A full accounting representation of your primary ledger is maintained in any subledger level secondary ledger.

Secondary ledgers provide functional benefits, but produce large volumes of additional journal entry and balance data, resulting in additional performance and memory costs. When adding a secondary ledger, consider your needs for secondary ledgers or reporting currencies, and select the least costly data conversion level that meets your requirements. For secondary ledgers, the least costly level is the adjustment data conversion level because it produces the smallest amount of additional data. The balance data conversion level is also relatively inexpensive, depending upon how often the balances are transferred from the primary to the secondary ledger. The journal and subledger data conversion levels are much more expensive, requiring duplication of most general ledger and subledger journal entries, as well as general ledger balances.

For example, you maintain a secondary ledger for your International Financial Reporting Standards (IFRS) accounting requirements, while your primary ledger uses US Generally Accepted Accounting Principles (GAAP). You decided to select the subledger level for your IFRS secondary ledger. However, since most of the accounting is identical between US GAAP and IFRS, a better solution is to use the adjustment only level for your secondary ledger. The subledger level secondary ledger requires duplication of most subledger journal entries, general ledger journal entries, and general ledger balances. With the adjustment only level, your secondary ledger contains only the adjustment journal entries and balances necessary to convert your US GAAP accounting to the IFRS accounting, which uses a fraction of the resources that are required by full subledger level secondary ledger.

Following are scenarios that may require different combinations of primary and secondary ledgers:

- The primary and secondary ledgers use different charts of accounts to meet varying accounting standards or methods. A chart of accounts mapping is required to instruct the application how to propagate balances from the source (primary) chart of accounts to the target (secondary) chart of accounts.
- The primary and secondary ledgers use different accounting calendars to comply with separate industry and corporate standards.

Note

Use the same currency for primary and secondary ledgers to avoid difficult reconciliations, if you have the resources to support the extra posting time and data storage. Use reporting currencies or translations to generate the different currency views needed to comply with internal reporting needs and consolidations.

Reporting Currencies

Reporting currencies maintain and report accounting transactions in additional currencies. Each primary and secondary ledger is defined with a ledger currency that is used to record your business transactions and accounting data for that ledger. It is advisable to maintain the ledger in the currency in which the majority of its transactions are denominated. For example, create, record, and close a transaction in the same currency to save processing and reconciliation time. Compliance, such as paying local transaction taxes, is also easier using a local currency. Many countries require that your accounting records be kept in their national currency.

If you need to maintain and report accounting records in different currencies, you do this by defining one or more reporting currencies for the ledger. There are three conversion levels for reporting currencies:

- **Balance:** Only General Ledger balances are converted into the reporting currency using translation.
- **Journal:** General Ledger journal entries are converted to the reporting currency during posting.
- **Subledger:** Subledger Accounting creates subledger reporting currency journals along with primary ledger journals.

Note

A full accounting representation of your primary ledger is maintained in any subledger level reporting currency. Secondary ledgers cannot use subledger level reporting currencies.

Of the three data conversion levels available, the balance data conversion level is typically the least expensive, requiring duplication of only the balance level information. The journal and subledger data conversion levels are more expensive, requiring duplication of most general ledger and subledger journal entries, as well as general ledger balances.

Do not use journal or subledger level reporting currencies if your organization has only an infrequent need to translate your financial statements to your parent company's currency for consolidation purposes. Standard translation functionality meets this need. Consider using journal or subledger level reporting currencies when any of the following conditions exist.

- You operate in a country whose unstable currency makes it unsuitable for managing your business. As a consequence, you need to manage your business in a more stable currency while retaining the ability to report in the unstable local currency.
- You operate in a country that is part of the European Economic and Monetary Union (EMU), and you choose to account and report in both the European Union currency and your National Currency Unit (NCU).

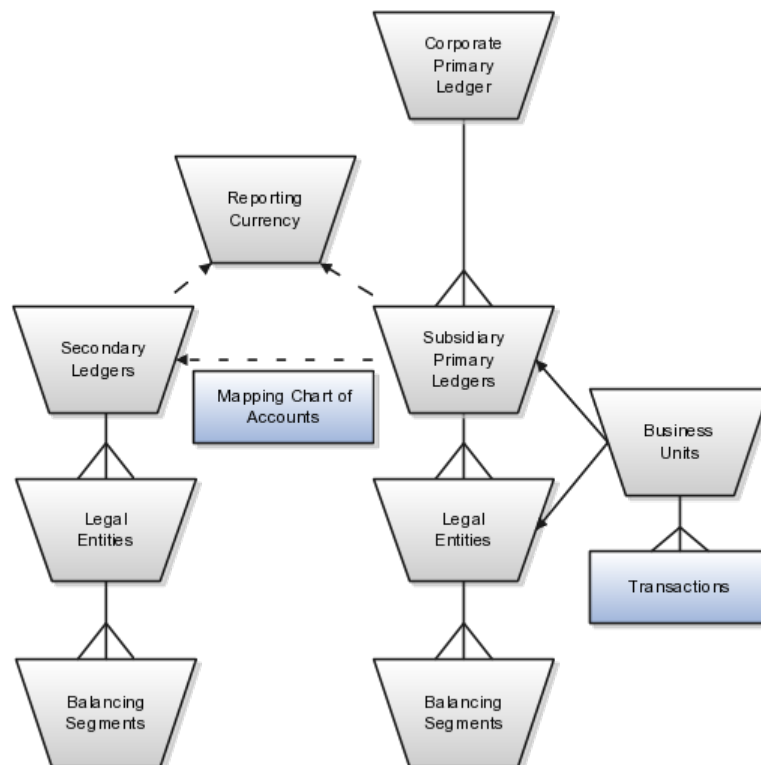
Note

The second option is rare since most companies have moved beyond the initial conversion to the EMU currency. However, future decisions could add other countries to the EMU, and then, this option would again be used during the conversion stage.

Financial Ledgers: How They Fit Together

Oracle Fusion Applications is an integrated suite of business applications that connects and automates the entire flow of the business process across both front and back office operations and addresses the needs of a global enterprise. The process of designing the enterprise structure, including the accounting configuration, is the starting point for an implementation. This process often includes determining financial, legal, and management reporting requirements, setting up primary and secondary ledgers, making currency choices, and examining consolidation considerations.

This figure shows the enterprise structure components and their relationships to each other. Primary ledgers are connected to reporting currencies and secondary ledgers to provide complete reporting options. Legal entities are assigned to ledgers, both primary and secondary, and balancing segments are assigned to legal entities. Business units must be connected to both a primary ledger and a default legal entity. Business units can record transactions across legal entities.



Primary Ledgers

A primary ledger is the main record-keeping ledger. Create a primary ledger by combining a chart of accounts, accounting calendar, ledger currency, and accounting method. To determine the number of primary ledgers, your enterprise structure analysis must begin with determining financial, legal, and management reporting requirements. For example, if your company has separate subsidiaries in several countries worldwide, create multiple primary ledgers representing each country with the local currency, chart of accounts, calendar, and accounting method to enable reporting to each country's legal authorities.

If your company just has sales in different countries, with all results being managed by the corporate headquarters, create one primary ledger with multiple balancing segment values to represent each legal entity. Use secondary ledgers or reporting currencies to meet your local reporting requirements, as needed. Limiting the number of primary ledgers simplifies reporting because consolidation is not required. Other consideration such as corporate year end, ownership considerations, and local government regulations, also affect the number of primary ledgers required.

Secondary Ledgers

A secondary ledger is an optional ledger linked to a primary ledger. A secondary ledger can differ from its related primary ledger in chart of accounts, accounting calendar, currency, accounting method, or ledger processing options. Reporting requirements, for example, that require a different accounting representation to comply with international or country-specific regulations, create the need for a secondary ledger.

Below are scenarios and required action for different components in primary and secondary ledgers:

- If the primary and secondary ledgers use different charts of accounts, the chart of accounts mapping is required to instruct the system how to propagate journals from the source chart of accounts to the target chart of accounts.
- If the primary and secondary ledgers use different accounting calendars, the accounting date and the general ledger date mapping table will be used to determine the corresponding non-adjusting period in the secondary ledger. The date mapping table also provides the correlation between dates and non-adjusting periods for each accounting calendar.
- If the primary ledger and secondary ledger use different ledger currencies, currency conversion rules are required to instruct the system on how to convert the transactions, journals, or balances from the source representation to the secondary ledger.

Note: Journal conversion rules, based on the journal source and category, are required to provide instructions on how to propagate journals and types of journals from the source ledger to the secondary ledger.

Reporting Currencies

Reporting currencies are the currency you use for financial, legal, and management reporting. If your reporting currency is not the same as your ledger currency, you can use the foreign currency translation process or reporting currencies functionality to convert your ledger account balances in your reporting currency. Currency conversion rules are required to instruct the system on how to convert the transactions, journals, or balances from the source representation to the reporting currency.

Legal Entities

Legal entities are discrete business units characterized by the legal environment in which they operate. The legal environment dictates how the legal entity should perform its financial, legal, and management reporting. Legal entities generally have the right to own property and the obligation to comply with labor laws for their country. They also have the responsibility to account for

themselves and present financial statements and reports to company regulators, taxation authorities, and other stakeholders according to rules specified in the relevant legislation and applicable accounting standards. During setup, legal entities are assigned to the accounting configuration, which includes all ledgers, primary and secondary.

Balancing Segments

You assign primary balancing segment values to all legal entities before assigning values to the ledger. Then, assign specific primary balancing segment values to the primary and secondary ledgers to represent nonlegal entity related transactions such as adjustments. You can assign any primary balancing segment value that has not already been assigned to a legal entity. You are allowed to assign the same primary balancing segment values to more than one ledger. The assignment of primary balancing segment values to legal entities and ledgers is performed within the context of a single accounting setup. The Balancing Segment Value Assignments report is available to show all primary balancing segment values assigned to legal entities and ledgers across accounting setups to ensure the completeness and accuracy of their assignments. This report allows you to quickly identify these errors and view any unassigned values.

Business Units

A business unit is a unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy. When a business function produces financial transactions, a business unit must be assigned a primary ledger, and a default legal entity. Each business unit can post transactions to a single primary ledger, but it can process transactions for many legal entities. Normally, it will have a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss. You define business units as separate task generally done after the accounting setups steps.

The business unit model:

- Allows for flexible implementation
- Provides a consistent entity for controlling and reporting on transactions
- Enables sharing of sets of reference data across applications

For example, if your company requires business unit managers to be responsible for managing all aspects of their part of the business, then consider using two balancing segments, company and business unit to enable the production of business unit level balance sheets and income statements.

Transactions are exclusive to business units. In other words, you can use business unit as a securing mechanism for transactions. For example, if you have an export business that you run differently from your domestic business, use business units to secure members of the export business from seeing the transactions of the domestic business.

Creating Primary Ledgers: Example

Create a primary ledger as your main record-keeping ledger. Like any other ledger, a primary ledger records transactional balances by using a chart of accounts with a calendar, currency, and accounting rules implemented in an accounting method. The primary ledger is closely associated with the subledger transactions and provides context and accounting for them.

Scenario

Your company, InFusion Corporation is implementing Oracle Fusion Applications. You have been assigned the task of creating a primary ledger for your InFusion America entity.

1. Navigate to the **Define Accounting Configurations** task list and open **Manage Primary Ledgers** from within your implementation project. Click the **Go to Task**.
2. Click the **Create** icon.
3. Enter the following values:

Field	Value
Name	InFusion America
Description	InFusion America primary ledger for recording transactions.
Chart of Accounts	InFusion America Chart of Accounts
Accounting Calendar	Standard Monthly
Currency	USD
Accounting Method	Standard Accrual

4. Click **Save and Edit Task List** to navigate back to the accounting configuration task list.

Note

You cannot change the chart of accounts, accounting calendar, or currency for your ledger after you save your ledger.

Specify Ledger Options

Specifying Ledger Options: Worked Example

This example demonstrates specifying the ledger options for your primary ledger. Your company, InFusion Corporation, is a multinational conglomerate that operates in the United States (US) and the United Kingdom (UK). InFusion has purchased an Oracle Fusion enterprise resource planning (ERP) solution including Oracle Fusion General Ledger and all of the Oracle Fusion subledgers.

After completing your InFusion America Primary Ledger, select **Specify Ledger Options** under the Define Accounting Configuration task list on the Functional Setup Manager page.

Note

Both primary and secondary ledgers are created in the same way and use the same user interface to enable their specific ledger options.

Reviewing General Region Options

1. Accept the **Name** and **Description** defaults for the ledger selected.
2. Review the **Currency** and **Chart of Accounts** for the specified ledger, which are automatically populated.

Setting Accounting Calendar Region Options

1. Review the **Accounting Calendar** that defaults from your ledger.
2. Select Jan-2011 as the **First Open Period** for your ledger.

Important: Select a period after the first defined period in the ledger calendar to enable running translation. You cannot run translation in the first defined period of a ledger calendar. In this example, your calendar began with Jan-2010.

3. Enter 3 for the **Number of Future Enterable Periods**.

Any value between 0 and 999 periods can be specified to permit entering journals but not posting them in future periods. Minimize the number of open and future periods to prevent entry in the wrong period.

Selecting the Subledger Accounting Region Options

1. Accept the default **Accounting Method** from your ledger.
2. Select US American English as your **Journal Language**.

Completing the Period Close Region Options

1. Enter your **Retained Earnings Account**:
101-00-31330000-0000-000-0000-0000.

This account is required for the General Ledger to perform the movement of revenue and expense account balances to this account at the end of the accounting year.

2. Enter your **Cumulative Translation Adjustment Account**:
101-00-31350000-0000-000-0000-0000.

Note: The Cumulative Translation Adjustment (CTA) account is required for ledgers running translation.

3. Do not enter a **Default Period End Rate Type** or **Default Period Average Rate Type**.

The values entered here are used as the default for balance level reporting currency processing. InFusion America Primary Ledger is using the subledger level reporting currency processing.

Specifying the Journal Processing Region Options

1. Specify the Balance options as outlined in the following table.

Option	Setting
Enable Suspense	General Ledger
Default Expense Account	101-00-98199999-0000-000-0000-0000

Rounding Account	101-10-98189999-0000-000-0000-0000
Entered Currency Balancing Account	101-10-98179999-0000-000-0000-0000
Balancing Threshold Percent	10

- Click all the following Entry options listed in the table.

Option	Description
Enable journal approval	Click to enable journal approval functionality. Approval rules must be created in the Oracle Fusion Approvals Management (AMX).
Notify when prior period journal	Notify the user when a prior period date is selected on a journal entry.
Allow mixed and statistical journals	Enter both monetary and statistical amounts on the same line in a journal entry.
Validate reference date	Requires a reference date in an open or future enterable period.

- Click the **Separate journals by accounting date during journal import** for the Import option to create individual journal entries for each accounting date.
- For the Reversal options, select InFusion America Accrual Set from the list of values in the **Journal Reversal Criteria Set** field and click the **Launch AutoReverse after open period** to reverse accrual journal entries automatically when a new period is opened.
- Click the **Enable intercompany accounting** for the Intercompany option to enable automatic balancing by the application for primary, second, and third balancing segments (if implemented) on intercompany journal entries and transactions.

Note: To complete the intercompany accounting functionality, you must define intercompany rules.

Assigning Legal Entities and Balancing Segments: Examples

Optionally, assign legal entities and balancing segments to your accounting configuration.

Assign Legal Entities

Assign one or more legal entities to your configuration by following these steps:

- Navigate to the **Assign Legal Entities** task. Click the **Go to Task**.
- Click the **Select and Add** icon.
- Click **Search**. Select your legal entities.
- Click **Apply**. Click **Done**.
- Click **Save and Close**.

Assign Balancing Segments to Legal Entities

Assign balancing segment values to your legal entities by following these steps:

1. Navigate to the **Assign Balancing Segment Values to Legal Entities** task. Click the **Go to Task**.
2. Click the **Create** icon.
3. Select the balancing segment value. Optionally, add a Start Date.
4. Click **Save and Close** to close the create page.
5. Click **Save and Close**.

Assign Balancing Segments to Ledgers

Assign balancing segment values directly to your ledger by following these steps:

1. Navigate to the **Assign Balancing Segment Value to Ledger** task. Click the **Go to Task**.
2. Select the balancing segment value.
3. Optionally enter a start date.
4. Click **Save and Close**.

Note

The balancing segment values that are assigned to the ledger represent nonlegal entity transactions, such as adjustments. If you use legal entities, you must assign balancing segment values to all legal entities before assigning values to the ledger. The only available balancing segment values that can be assigned to ledgers are those not assigned to legal entities.

Define Business Units for Project Financial Management

Manage Business Unit

Business Units: Explained

A business unit is a unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy. A business unit can process transactions on behalf of many legal entities. Normally, it will have a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss. Roll business units up into divisions if you structure your chart of accounts with this type of hierarchy. In Oracle Fusion Applications, you assign your business units to one primary ledger. For example, if a business unit is processing payables invoices they will need to post to a particular ledger. This assignment is mandatory for your business units with business functions that produce financial transactions.

In Oracle Fusion Applications, use business unit as a securing mechanism for transactions. For example, if you run your export business separately from your

domestic sales business, secure the export business data to prevent access by the domestic sales employees. To accomplish this security, set up the export business and domestic sales business as two separate business units.

The Oracle Fusion Applications business unit model:

- Allows for flexible implementation
- Provides a consistent entity for controlling and reporting on transactions
- Anchors the sharing of sets of reference data across applications

Business units process transactions using reference data sets that reflect your business rules and policies and can differ from country to country. With Oracle Fusion Application functionality, you can choose to share reference data, such as payment terms and transaction types, across business units, or you can choose to have each business unit manage its own set depending on the level at which you wish to enforce common policies.

In countries where gapless and chronological sequencing of documents is required for subledger transactions, define your business units in alignment with your ledger definition, because the uniqueness of sequencing is only ensured within a ledger. In these cases, define a single ledger and assign one legal entity and business unit.

In summary, use business units in the following ways:

- Management reporting
- Processing of transactions
- Security of transactional data
- Reference data definition and sharing

Brief Overview of Business Unit Security

Business units are used by a number of Oracle Fusion Applications to implement data security. You assign data roles to your users to give them access to data in business units and permit them to perform specific functions on this data. When a business function is enabled for a business unit, the application can trigger the creation of data roles for this business unit based on the business function's related job roles.

For example, if a payables invoicing business function is enabled, then it is clear that there are employees in this business unit that perform the function of payables invoicing, and need access to the payables invoicing functionality. Therefore, based on the correspondence between the business function and the job roles, appropriate data roles are generated automatically. Use Human Capital Management (HCM) security profiles to administer security for employees in business units.

Assign Business Unit Business Function

Business Functions: Explained

A business unit can perform many business functions in Oracle Fusion Applications. Prior to Oracle Fusion Applications, operating units in Oracle E-Business Suite were assumed to perform all business functions, while in Oracle PeopleSoft, each business unit had one specific business function. Oracle Fusion

Applications blends these two models and allows defining business units with one or many business functions.

Business Functions

A business function represents a business process, or an activity that can be performed by people working within a business unit and describes how a business unit is used. The following business functions exist in Oracle Fusion applications:

- Billing and revenue management
- Collections management
- Customer contract management
- Customer payments
- Expense management
- Incentive compensation
- Marketing
- Materials management
- Inventory management
- Order fulfillment orchestration
- Payables invoicing
- Payables payments
- Procurement
- Procurement contract management
- Project accounting
- Receiving
- Requisitioning
- Sales

Although there is no relationship implemented in Oracle Fusion Applications, a business function logically indicates a presence of a department in the business unit with people performing tasks associated with these business functions. A business unit can have many departments performing various business functions. Optionally, you can define a hierarchy of divisions, business units, and departments as a tree over HCM organization units to represent your enterprise structure.

Note

This hierarchy definition is not required in the setup of your applications, but is a recommended best practice.

Your enterprise procedures can require a manager of a business unit to have responsibility for their profit and loss statement. However, there will be cases where a business unit is performing only general and administrative functions, in which case your manager's financial goals are limited to cost containment or recovering of service costs. For example, if a shared service center at the corporate office provides services for more commercially-oriented business units, it does not show a profit and therefore, only tracks its costs.

In other cases, where your managers have a responsibility for the assets of the business unit, a balance sheet can be produced. The recommended best practice

to produce a balance sheet, is to setup the business unit as a balancing segment in the chart of accounts. The business unit balancing segment can roll up to divisions or other entities to represent your enterprise structure.

When a business function produces financial transactions, a business unit must be assigned to a primary ledger, and a default legal entity. Each business unit can post transactions to a single primary ledger, but it can process transactions for many legal entities.

The following business functions generate financial transactions and will require a primary ledger and a default legal entity:

- Billing and revenue management
- Collections management
- Customer payments
- Expense management
- Materials management
- Payables invoicing
- Project accounting
- Receiving
- Requisitioning

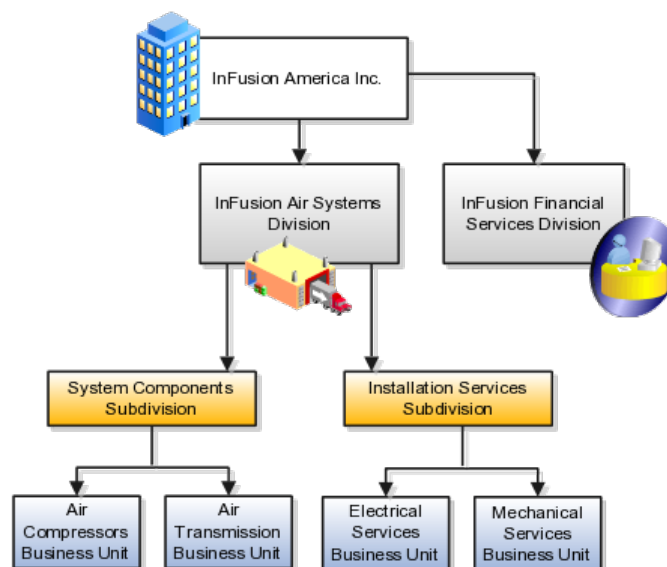
Business Unit Hierarchy: Example

For example, your InFusion America Company provides:

- Air quality monitoring systems through your division InFusion Air Systems
- Customer financing through your division InFusion Financial Services

The InFusion Air Systems division further segments your business into the System Components and Installation Services subdivisions. Your subdivisions are divided by business units:

- System Components by products: Air Compressors and Air Transmission
- Installation Services by services: Electrical and Mechanical



Oracle Fusion applications facilitates independent balance sheet rollups for legal and management reporting by offering up to three balancing segments. Hierarchies created using the management segment can provide the divisional results. For example, it is possible to define management segment values to correspond to business units, and arrange them in a hierarchy where the higher nodes correspond to divisions and subdivisions, as in the Infusion US Division example above.

Specify Customer Contract Management Business Function Properties

Customer Contracts Business Unit Setup: Explained

Using the **Specify Customer Contract Management Business Function Properties** task, available by navigating to Setup and Maintenance work area and searching on the task name, you can specify a wide variety of business function settings for customer contracts in a specific business unit. The selections you make for these business functions impact how Oracle Fusion Enterprise Contracts behaves during contract authoring.

Using the **Specify Customer Contract Management Business Function Properties** task, manage these business function properties:

- Enable related accounts
- Set currency conversion details
- Manage project billing options
- Set up clause numbering
- Set up the Contract Terms Library

The setup options available for the Contract Terms Library are applicable to both customer and supplier contracts, and are described in the business unit setup topic for the Contract Terms Library. That topic is available as a related link to this topic.

Enabling Related Customer Accounts

Contract authors can specify bill-to, ship-to, and other accounts for the parties in a contract. Enable the related customer accounts option if you want accounts previously specified as related to the contract party to be available for selection.

Managing Currency Conversion Options

If your organization plans to transact project-related business in multiple currencies, then select the multicurrency option. This allows a contract author to override a contract's currency, which defaults from the ledger currency of the business unit. It also enables the contract author to specify currency conversion attributes to use when converting from the bill transaction currency to the contract currency and from the invoice currency to the ledger currency.

In the Bill Transaction Currency to Contract Currency region, enter currency conversion details that will normally be used, by all contracts owned by this business unit, to convert transaction amounts in the bill transaction currency

to the contract currency. Newly created contracts contain the default currency conversion values, but you can override the values on any contract, if needed.

In the Invoice Currency to Ledger Currency region:

- Enter invoice transaction conversion details if the invoice and ledger currencies can be different.
- Enter revenue transaction conversion details if the revenue and ledger currencies can be different for as-incurred and rate-based revenue.

Managing Project Billing Options

The options available for selection in the Project Billing region control the behavior of project invoicing and revenue recognition for contracts with project-based work.

Project billing can behave differently for external contracts (customer billing) or intercompany and interproject contracts (internal billing).

Set these options, which apply to all contracts:

- Select the **Transfer Revenue to General Ledger** option if you want to create revenue accounting events and entries, and transfer revenue journals to the general ledger. If this option is not selected, then revenue can still be generated, but will not be transferred to the general ledger.
- Indicate if a reason is required for credit memos that are applied to invoices.

There are two sets of the following options, one for customer billing and a second for internal billing:

- Select an invoice numbering method, either **Manual** or **Automatic**. The invoice numbering method is the method that Oracle Fusion Receivables uses to number its invoices, upon release of draft invoices from Project Billing.
- If the invoice numbering method is **Manual**, then select an invoice number type, which sets the type of Receivables invoice numbers that are allowed. Valid values are **Alphanumeric** and **Numeric**.
- If the invoice numbering method is **Automatic**, then enter the next invoice number to use when generating Receivables invoice numbers.
- Select the Receivables batch source to use when transferring invoices to Receivables.

Set this option only for customer billing:

- Indicate if you want contract authors to manually enter the Receivables transaction type on the customer contracts they create.

Managing Clause Numbering

You can choose to number clauses manually or automatically.

If you choose the automatic numbering method, you must select a determinant level for the numbering. You must then select the appropriate clause sequence category from document sequences that you set up for this numbering level.

Contract Terms Library Business Unit Setup: Explained

You can specify a wide variety of Contract Terms Library settings for either customer or supplier contracts within each business unit, by using either the **Specify Customer Contract Management Business Function Properties** or the **Specify Supplier Contract Management Business Function Properties** tasks. These tasks are available by navigating to the **Setup and Maintenance** work area and searching on the task name.

For the Contract Terms Library in each business unit, you can:

- Enable clause and template adoption.
- Set the clause numbering method.
- Set the clause numbering level for automatic clause numbering of contracts.
- For a contract with no assigned ledger or legal entity, set the document sequence to Global or Business Unit level.
- Enable the Contract Expert feature.
- Specify the layout for printed clauses and contract deviation reports.

Enabling Clause Adoption

If you plan to use clause adoption in your implementation, then set up the following:

- Specify a global business unit

You must designate one of the business units in your organization as the global business unit by selecting the **Global Business Unit** option. This makes it possible for the other local business units to adopt and use approved content from that global business unit. If the **Global Business Unit** option is not available for the business unit you are setting up, this means that you already designated another business unit as global.

- Enable automatic adoption

If you are implementing the adoption feature, then you can have all the global clauses in the global business unit automatically approved and available for use in the local business by selecting the **Autoadopt Global Clauses** option. If you do not select this option, the employee designated as the Contract Terms Library Administrator must approve all global clauses before they can be adopted and used in the local business unit. This option is available only for local business units.

- Specify the administrator who approves clauses available for adoption

You must designate an employee as the Contract Terms Library administrator if you are using adoption. If you do not enable automatic adoption, then the administrator must adopt individual clauses or localize them for use in the local business unit. The administrator can also copy over any contract terms templates created in the global business unit. The clauses and contract terms templates available for adoption are listed in the administrator's Terms Library work area.

Setting Clause Numbering Options

You can set up automatic clause numbering for the clauses in the business unit by selecting **Automatic** in the **Clause Numbering** field and setting the clause numbering level. Then select the appropriate clause sequence category for the specified numbering level. You must have previously set up document sequences for the document sequence categories of global, ledger, and business unit. If clause numbering is manual, contract terms library administrators must enter unique clause numbers each time they create a clause.

You can choose to display the clause number in front of the clause title in contracts by selecting the **Display Clause Number in Clause Title** option.

Enabling Contract Expert

You must select the **Enable Contract Expert** option to be able to use the Contract Expert feature in a business unit. This setting takes precedence over enabling Contract Expert for individual contract terms templates.

Specifying the Printed Clause and Deviations Report Layouts

For each business unit, you can specify the Oracle BI Publisher RTF file that serves as the layout for:

- The printed contract terms

Enter the RTF file you want used for formatting the printed clauses in the **Clause Layout Template** field.

- The contract deviations report

The RTF file you select as the **Deviations Layout Template** determines the appearance of the contract deviations report PDF. This PDF is attached to the approval notification sent to contract approvers.

Define Workforce Structures for Project Financial Management

Manage Divisions

Division: Explained

Managing multiple businesses requires that you segregate them by their strategic objectives and measure their results. Responsibility to reach objectives can be delegated along the management structure. Although related to your legal structure, the business organizational hierarchies do not need to reflect directly the legal structure of the enterprise. The management entities and structure can include divisions and subdivisions, lines of business, and other strategic business units, and include their own revenue and cost centers. These organizations can be included in many alternative hierarchies and used for reporting, as long as they have representation in the chart of accounts.

Divisions

A division refers to a business oriented subdivision within an enterprise, in which each division organizes itself differently to deliver products and services or address different markets. A division can operate in one or more countries, and can be comprised of many companies or parts of different companies that are represented by business units.

A division is a profit center or grouping of profit and cost centers, where the division manager is responsible for attaining business goals including profit goals. A division can be responsible for a share of the company's existing product lines or for a separate business. Managers of divisions may also have return on investment goals requiring tracking of the assets and liabilities of the division. The division manager reports to a top corporate executive.

By definition a division can be represented in the chart of accounts. Companies may choose to represent product lines, brands, or geographies as their divisions: their choice represents the primary organizing principle of the enterprise. This may coincide with the management segment used in segment reporting.

Oracle Fusion Applications supports a qualified management segment and recommends that you use this segment to represent your hierarchy of business units and divisions. If managers of divisions have return on investment goals, make the management segment a balancing segment. Oracle Fusion applications allows up to three balancing segments. The values of the management segment can be comprised of business units that roll up in a hierarchy to report by division.

Historically, divisions were implemented as a node in a hierarchy of segment values. For example, Oracle E-Business Suite has only one balancing segment, and often the division and legal entity are combined into a single segment where each value stands for both division and legal entity.

Use of Divisions in Oracle Fusion Human Capital Management (HCM)

Divisions are used in HCM to define the management organization hierarchy, using the generic organization hierarchy. This hierarchy can be used to create organization based security profiles.

Adding a New Division After Acquiring a Company: Example

This example shows how to restructure your enterprise after acquiring a new division.

Scenario

You are part of a senior management team at InFusion Corporation. InFusion is a global company with organizations in the United States (US), the United Kingdom (UK), France, China, Saudi Arabia, and the United Arab Emirates (UAE). Its main area of business is in the high tech industry, and it has just acquired a new company. You must analyze their current enterprise structure and determine what new organizations you need to create to accommodate the new company.

Details of the Acquired Company

The acquired company is a financial services business based in Germany. Because the financial services business differs significantly from the high tech

business, you want to keep the financial services company as a separate business with all the costs and reporting rolling up to the financial services division.

Analysis

The following table summarizes the key decisions that you must consider when determining what new organizations to set up and how to structure the enterprise.

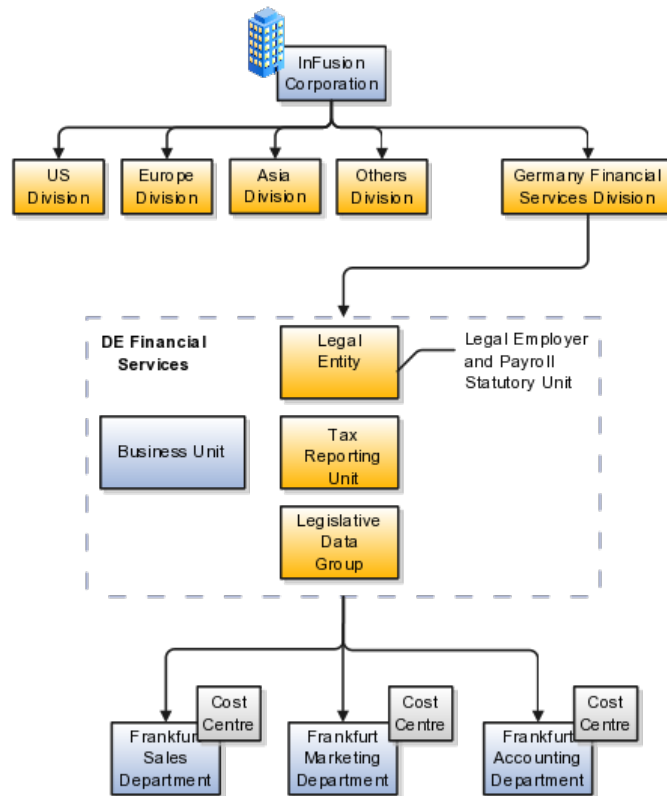
Decision to Consider	In This Example
Create location?	The financial services company is based in Frankfurt as are the departments, so you need to create only one location.
Create separate division?	Yes. Although the new division will exist within the current enterprise structure, you want to keep the financial services company as a separate line of business. Creating a separate division means you can manage the costs and reporting separately from the InFusion Corporation. It also means you do not have to modify any existing organizations in the enterprise setup.
Create business unit?	Yes. The financial services business requires you to create several jobs that do not exist in your high tech business. You can segregate the jobs that are specific to financial services in a new business unit.
How many departments?	The financial services company currently has three departments for sales, accounting, and marketing. As you have no plans to downsize or change the company, you can create three departments to reflect this structure.
How many cost centers?	Although you can have more than one cost center tracking the costs of a department, you decide to create one cost center for each department to track costs.
How many legal entities?	Define a legal entity for each registered company or other entity recognized in law for which you want to record assets, liabilities, and income, pay transaction taxes, or perform intercompany trading. In this case, you need only one legal entity. You must define the legal entity as a legal employer and payroll statutory unit. As the new division operates in Germany only, you can configure the legal entity to suit Germany legal and statutory requirements. Note When you identify the legal entity as a payroll statutory unit, the application transfers the legal reporting unit that is associated with that legal entity to Oracle Fusion HCM as a tax reporting unit.
Create legislative data group?	Yes. Because you currently do not employ or pay people in Germany, you must create one legislative data group to run payroll for the workers in Germany.

Resulting InFusion Enterprise Structure

Based on the analysis, you must create the following:

- One new division
- One new location
- Three new departments
- Three new cost centers
- One new legal entity
- One new legislative data group

The following figure illustrates the structure of InFusion Corporation after adding the new division and the other organizations.



Manage Departments

Cost Centers and Departments: Explained

A cost center represents the smallest segment of an organization for which costs are collected and reported. A department is an organization with one or more operational objectives or responsibilities that exist independently of its manager and has one or more workers assigned to it.

The following two components need to be considered in designing your enterprise structure:

- Cost centers
- Departments

Cost Centers

A cost center also represents the destination or function of an expense as opposed to the nature of the expense which is represented by the natural account. For example, a sales cost center indicates that the expense goes to the sales department.

A cost center is generally attached to a single legal entity. To identify the cost centers within a chart of accounts structure use one of these two methods:

- Assign a cost center value in the value set for each cost center. For example, assign cost center values of PL04 and G3J1 to your manufacturing teams in the US and India. These unique cost center values allow easy aggregation of cost centers in hierarchies (trees) even if the cost centers are in different ledgers. However, this approach will require defining more cost center values.
- Assign a balancing segment value with a standardized cost center value to create a combination of segment values to represent the cost center. For example, assign the balancing segment values of 001 and 013 with cost center PL04 to represent your manufacturing teams in the US and India. This creates 001-PL04 and 013-PL04 as the cost center reporting values.

The cost center value of PL04 has a consistent meaning. This method requires fewer cost center values to be defined. However, it prevents construction of cost center hierarchies using trees where only cost center values are used to report results for a single legal entity. You must specify a balancing segment value in combination with the cost center values to report on a single legal entity.

Departments

A department is an organization with one or more operational objectives or responsibilities that exist independently of its manager. For example, although the manager may change, the objectives do not change. Departments have one or more workers assigned to them.

A manager of a department is typically responsible for:

- Controlling costs within their budget
- Tracking assets used by their department
- Managing employees, their assignments, and compensation

Note

The manager of a sales department may also be responsible for meeting the revenue targets.

The financial performance of departments is generally tracked through one or more cost centers. In Oracle Fusion Applications, departments are defined and classified as Department organizations. Oracle Fusion Human Capital Management (HCM) assigns workers to departments, and tracks the headcount at the departmental level.

The granularity of cost centers and their relationship to departments varies across implementations. Cost center and department configuration may be unrelated, identical, or consist of many cost centers tracking the costs of one department.

Department Classifications: Points to Consider

A department can be classified as a project organization, sales and marketing organization, or cost organization.

Oracle Fusion Human Capital Management (HCM) uses trees to model organization hierarchies. It provides seeded tree structures for department and other organizational hierarchies that can include organizations with any classification.

Project Organization

Classify departments as a project owning organization to enable associating them with projects or tasks. The project association is one of the key drivers for project access security.

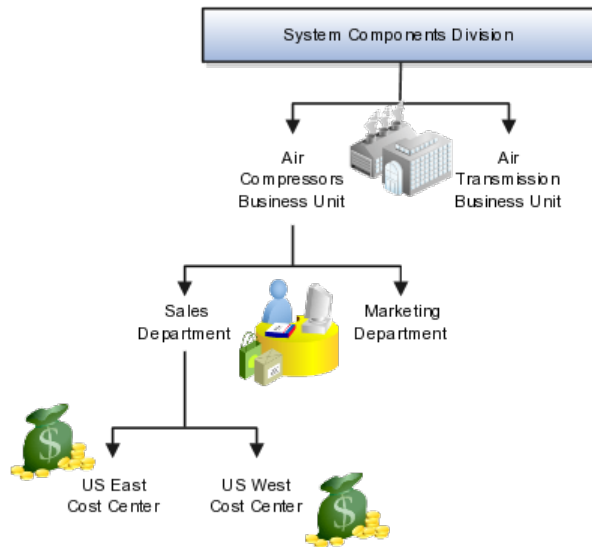
In addition, you must classify departments as project expenditure organizations to enable associating them to project expenditure items. Both project owning organizations and project expenditure organizations can be used by Oracle Fusion Subledger Accounting to derive accounts for posting Oracle Fusion Projects accounting entries to Oracle Fusion General Ledger.

Sales and Marketing Organization

In Oracle Sales Cloud, you can define sales and marketing organizations. Sales organization hierarchies are used to report and forecast sales results. Sales people are defined as resources assigned to these organizations.

In some enterprises, the HCM departments and hierarchies correspond to sales organizations and hierarchies. It is important to examine the decision on how to model sales hierarchies in relationship to department hierarchies when implementing customer relationship management to eliminate any possible redundancy in the definition of the organizations.

The following figure illustrates a management hierarchy, in which the System Components Division tracks its expenses in two cost centers, Air Compressors and Air Transmission. At the department level, two organizations with a classifications of Department are defined, the Marketing Department and Sales Department. These two departments can be also identified as a Resource Organizations, which will allow assigning resources, such as sales people, and other Oracle Sales Cloud specific information to them. Each department is represented in the chart of accounts by more than one cost center, allowing for granular as well as hierarchical reporting.



Cost Organization

Oracle Fusion Costing uses a cost organization to represent a single physical inventory facility or group of inventory storage centers, for example, inventory organizations. This cost organization can roll up to a manager with responsibility for the cost center in the financial reports.

A cost organization can represent a costing department. Consider this relationship when determining the setup of departments in HCM. There are no system dependencies requiring these two entities, cost organization and costing department, be set up in the same way.

Manage Department and Organization Trees

Trees: Overview

Use the tree management feature in Oracle Fusion applications to organize data into hierarchies. A hierarchy contains organized data and enables the creation of groups and rollups of information that exist within an organization. Trees are hierarchical structures that enable several data management functions such as better access control, application of business rules at various levels of hierarchies, improved query performance, and so on.

For example, XYZ Corporation has two departments: Marketing and Finance. The Finance department has two functional divisions: Receivables and Payables. Defining a tree for the XYZ Corporation establishes a hierarchy between the organization and its departments, and between the departments and their respective functional divisions. Such a hierarchical modeling of organizational data could be used for executing several data management functions within that organization.

You can create one or more versions of trees, and they can be labeled for better accessibility and information retrieval. You can create trees for multiple data sources, which allow the trees to be shared across Oracle Fusion applications.

Tree Structures

A tree structure is a representation of the data hierarchy, and guides the creation of a tree. A tree is an instance of the hierarchy as defined in the tree structure. Tree structures enable you to enforce business rules to which the data must adhere.

The root node is the topmost node of a tree. Child nodes report to the root node. Child nodes at the same level, which report to a common parent node, are called siblings. Leaves are details branching off from a node but not extending further down the tree hierarchy.

Tree Versions

A tree is created having only one version. However, users can create more than one tree version depending on the need, and they can make changes to those versions. Depending on varying requirements, users can create one or more tree versions and publish all of them or some of them by making the versions active at the same time. Similar to any other version control system, versions of trees are maintained to keep track of all the changes that a tree undergoes in its life cycle.

Tree Labels

Tree labels are short names associated with trees and tree structures and point directly to the data source. Tree labels are automatically assigned to the tree nodes. You can store labels in any table and register the label data source with the tree structure.

Tree Structures: Explained

A tree structure defines the hierarchy for creating trees and prescribes rules based on which trees are created, versioned, and accessed. You can associate multiple data sources with a tree structure. A tree is an instance of this hierarchy. Every tree structure can contain one or more trees.

You can create tree structures specific to an application but you can share tree structures across applications. If you apply version control to the tree structure, it is carried over to the trees that are based on the tree structure. Each tree version contains at least one root node. Occasionally, a tree version may have more than one root node.

An administrator controls the access to tree structures through a set of rules that are periodically audited for validity.

Tree Structure Definition: Points to Consider

Defining a tree structure involves specifying several important pieces of information on the **Create Tree Structure: Specify Definition** page.

Tree Node Selection

The **Tree Node** table displays data in nodes that exist in the data hierarchy. You must select the correct and most appropriate tree node table to be able to define the tree structure, based on the tree hierarchy you want to establish. This selection also affects the level of security that is set on a tree node and its child entities.

Tree Sharing Mode

The following options are used to determine the mode of sharing a tree structure across the applications.

- Open: Indicates that the tree is associated with all reference data sets.
- Set ID: Indicates that the tree will be associated with a specific reference data set.

Creation Mode

Indicates the source where the tree structure is being defined. For predefined tree structures select Oracle and for custom structures, select Customers.

Customization

You can customize the predefined tree structures as well as the ones that you created. However, customizing the predefined tree structures involves certain level of access restrictions, and will be limited to specific tree nodes and downwards in hierarchy.

Multiple Tree Versions

One or more trees and tree versions can be based on a tree structure. A tree structure can have one or more trees and tree versions based on it. Usually, only one active version is permitted at any given point of time. However, depending on the requirement, you can allow two or more tree versions to be in the active state for the same date range. This flexibility allows you to choose the tree version that you want to implement.

Managing Tree Structures: Points to Consider

You can create, edit, and delete tree structures depending upon the requirement. You can also audit and change the status a tree structure.

Creating and Editing Tree Structures

You can create trees on the basis of a tree structure. When you edit an active tree structure, the status of the tree structure and all associated trees and their versions change to draft. To reuse a tree structure, you can create a copy of it without copying the associated trees and tree versions. If you delete a tree structure, all the associated trees and tree versions are automatically deleted.

Note

For specific information on working with the predefined tree structures that exist in an Oracle Fusion application, refer to the specific product documentation.

Setting Status

If you change the status of a tree structure, the status of the trees and tree versions associated with that tree structure also changes.

The following table lists the different statuses of a tree structure.

Status	Meaning
Draft	Yet to be published or is in a modified state.
Active	In use and based on which one or more trees or tree versions are created.
Inactive	Not in use.

Tree Structure Audit Results: Explained

Use the tree structure audit results to verify the tree structure's correctness and data integrity. The audit results include the following details:

- The name of the validator, which is a specific validation check
- The result of the validation, including a detailed message
- Corrective actions to take if there are any validation errors

Running an Audit

Setting the status of a tree structure to active automatically triggers an audit of that tree structure. You can also manually trigger an audit on the manage Tree Structures page, using **Actions - Audit**. The Tree Structure Audit Result table shows a list of validations that ran against the selected tree structure.

Validation Details

The following table lists the validators used in the audit process and describes what each validator checks for. It also lists possible causes for validation errors and suggests corrective actions.

Validator	Description (what is checked)	Possible Cause for Validation Failure	Suggested Corrective Action
Restrict By Set ID	On the Manage Tree Structures: Specify Data Sources page, if the Set ID check box is selected to enable the Restrict Tree Node List of Values Based on option for a tree structure, each of its data source view objects must have a reference data set attribute. This validation does not take place when the check box is not selected.	Even when the check box is selected, one or more of its data source view objects does not contain a reference data set attribute.	If reference data set restriction is required for this tree structure, include a reference data set attribute on all data sources. Otherwise, deselect the check box.
Row Flattened Table Name	On the Manage Tree Structures: Specify Performance Options page, a valid row flattened table must be specified for the tree structure. It can either be the standard row flattened table <code>FND_TREE_NODE_RF</code> or a custom table.	• The specified table does not exist in the database. • The specified table does not contain the same columns as the <code>FND_TREE_NODE_RF</code> table.	Correct the row flattened table definition.

Available Label Data Sources	On the Manage Tree Structures: Specify Data Sources page, if a labeling scheme is specified for the tree structure by selecting a list item from the Labeling Scheme list box, the label data source view object specified for each data source must be accessible, and the primary keys must be valid. This restriction does not apply when you select None from the Labeling Scheme list box.	- Any of the specified label data source view objects do not exist. - Any of the specified label data source view objects do not have primary keys. - When a label data source view object is initially defined, the database registers the primary keys for the view object. If the view object is later modified such that its primary keys no longer match the primary keys that were registered earlier, this validation fails.	- Correct the specified label data source view object. - Correct the primary keys of the specified label data source view object. - Either correct the primary keys in the label data source view object to match the primary keys that were earlier registered in <code>FND_TS_DATA_SOURCE</code>, or correct the primary keys registered in that table to match the new view object definition.

Available Data Sources	Each data source view object specified for the tree structure must be accessible, and all its primary key attributes must be valid.	- Any of the specified data source view objects do not exist. - When a data source view object is initially defined, the database automatically registers the primary keys for the view object if the Use non-defined primary key columns check box on the Data Source dialog box is not selected. If the check box is selected, the database registers the primary keys specified explicitly by the user on the Add Data Source dialog box. If the registered primary keys contain any duplicates, this validation fails. - The Use non defined primary key columns check box is selected in a data source, but the list of specified primary key columns does not match the primary keys defined in the corresponding data source view object. - Any common attribute that exists in both the data source view object and the tree node view object is not of the same data type in both view objects.	- Correct the specified data source view object. - Correct the duplicate column in the registered primary keys. - Correct the primary keys of the specified data source view object. - Correct any mismatch in data types.

Column Flattened Table Name	On the Manage Tree Structures: Specify Performance Options page, a valid column flattened table must be specified for the tree structure. It can either be the standard row flattened table <code>FND_TREE_NODE_CF</code> or a custom table.	- The specified table does not exist in the database. - The specified table does not contain the same columns as the <code>FND_TREE_NODE_CF</code> table.	Correct the column flattened table definition.
Restrict by Date	On the Manage Tree Structures: Specify Data Sources page, if the Date Range check box is selected to enable the Restrict Tree Node List of Values Based on option for a tree structure, each of its data source view objects must have effective start date and effective end date attributes. This validation does not take place when the check box is not selected.	Even when the check box is selected, one or more of its data source view objects does not contain effective start date and effective end date attributes.	If the date restriction is required for this tree structure, include the effective start date and effective end date attributes on all data sources. Otherwise, deselect the check box.
Tree Node Table Name	On the Manage Tree Structures: Specify Definition page, a valid tree node table must be specified for the tree structure. It can either be the standard row flattened table <code>FND_TREE_NODE</code> or a custom table.	- No table is specified in the Tree Node Table field. - The specified table does not exist in the database. - The specified table does not contain the same columns as the <code>FND_TREE_NODE</code> table.	Correct the tree node table definition.
Allow Node Level Security	If the Allow Node Level Security option is set to No for the tree structure, the same option cannot be set to Yes on any of its data sources. This is a database setting that is not visible on the Manage Tree Structures page.	The option is set to No for the tree structure but one or more associated data sources have that option set to Yes.	Correct the option setting in the tree structure and their data sources.

Specifying Data Sources for Tree Structures: Points to Consider

The data sources provide the items for establishing hierarchy in a tree structure. In the tree management infrastructure, these data sources are Oracle Application

Development Framework (ADF) business components view objects, which are defined by application development.

Labeling Schemes

Selecting a labeling scheme determines how the tree nodes are labeled. You may select a labeling scheme to assign at the data source level, at the parent node level, or keep it open for customer assignment. You may also choose not to have any labeling scheme. However, if you decide to use any of the labeling schemes, you may need to select the following additional options, to restrict the list of values that appear under the selected tree node.

- **Allow Ragged Nodes:** To include nodes that have no child nodes, and are shorter than the remaining nodes in the entire hierarchy.
- **Allow Skip Level Nodes:** To include nodes that are at the same level but have parent nodes at different levels.

Restriction of Tree Node Values

You can decide the depth of the tree structure by selecting an appropriate value from the list. Keeping the depth limit open renders an infinite list of values.

Using the following options, you can restrict the list of values that appear for selection under a specific tree node.

- **Date Range:** Specifies whether a selection of nodes should be restricted to the same date range as the tree version.
- **Allow Multiple Root Nodes:** Allows you to add multiple root nodes when creating a tree version.
- **Reference Data Set:** Specifies whether a selection of nodes should be restricted to the same set as the tree.

Data Source Values and Parameters

Tree data sources have optional data source parameters with defined view criteria and associated bind variables. You can specify view criteria as a data source parameter when creating a tree structure, and edit the parameters when creating a tree. Multiple data sources can be associated with a tree structure and can have well-defined relationships among them.

Note

Parameter values customized at the tree level override the default values specified at the tree-structure level.

The data source parameters are applied to any tree version belonging to that data source, when performing node operations on the tree nodes. Data source parameters also provide an additional level of filtering for different tree structures. The tree structure definition supports three data source parameter types.

- **Bound Value:** Captures any fixed value, which is used as part of the view criteria condition.

- **Variable:** Captures and binds a dynamic value that is being used by the data source view object. This value is used by the WHERE condition of the data flow.
- **View Criteria:** Captures the view criteria name, which is applied to the data source view object.

You can also specify which of the data source parameters are mandatory while creating or editing the tree structure.

View objects from the ADF business components are used as data sources. To associate the view object with the tree structure, you can pick the code from ADF business component view objects and provide the fully qualified name of the view object, for example, `oracle.apps.fnd.applcore.trees.model.view.FndLabelVO`.

Specifying Performance Options for a Tree Structure: Points to Consider

Tree structures are heavily loaded with data. As a tree management guideline, use the following settings to improve performance of data rendering and retrieval.

- Row Flattening
- Column Flattening
- Column Flattened Entity Objects
- ADF Business Component View Objects

Row Flattening

Row flattening optimizes parent-child information for run-time performance by storing additional rows in a table for instantly finding all descendants of a parent without initiating a CONNECT BY query. Row flattening eliminates recursive queries, which allows operations to perform across an entire subtree more efficiently.

To store row flattened data for the specific tree structure, users can either use the central `FND_TREE_NODE_RF` table or they can register their own row flattened table. For example, in a table, if Corporation is the parent of Sales Division (Corporation-Sales Division), and Sales Division is the parent of Region (Sales Division-Region), a row-flattened table contains an additional row with Corporation directly being the parent of Region (Corporation-Region).

Column Flattening

Column flattening optimizes parent-child information for run-time performance by storing an additional column in a table for all parents of a child.

To store column flattened data for the specific tree structure, users can either use the central `FND_TREE_NODE_CF` table or they can register their own column flattened table. For example, in a table, if Corporation is the parent of Sales Division (Corporation-Sales Division), and Sales Division is the parent of Region (Sales Division-Region), a flattened table in addition to these columns, contains three new columns: Region, Sales Division, and Corporation. Although positioned next to each other, the column Region functions at the lower level and Corporation at the higher level, retaining the data hierarchy.

Column Flattened Entity Objects

In the absence of a column-flattened table, if you need to generate the business component view objects for your tree structure for the flattened table, use the tree management infrastructure to correctly provide the fully qualified name of the entity object for the column flattened table.

ADF Business Component View Objects

View objects from the ADF business components can also be used as data sources, eliminating the need to create new types of data sources. This field is to store the fully qualified name for the business component view object generated by the tree management for business intelligence reporting and usage. The business component view object is a combination of the tree data source and column flattened entity. Using this option prevents data redundancy and promotes greater reuse of existing data, thereby improving the performance of the tree structure.

Manage Job

Jobs: Explained

As part of your initial implementation, you specify whether to use jobs and positions, or only jobs. Jobs are typically used without positions by service industries where flexibility and organizational change are key features.

Basic Details

Basic details for a job include an effective start date, a job set, a name, and a code.

A job code must be unique within a set. Therefore, you can create a job with the code DEV01 in the US set and another job with the same code in the UK set. However, if you create a job with the code DEV01 in the Common set, then you cannot create a job with the same code in any other set.

Benchmark Information

You can identify a job as being a benchmark job. A benchmark job represents other jobs in reports and salary surveys. You can also select the benchmark for jobs. Benchmark details are for informational purposes only. A progression job is the next job in a career ladder.

Progression Information

Progression jobs enable you to create a hierarchy of jobs and are used to provide the list of values for the Job field in the Promote Worker and Transfer Worker tasks. The list of values includes the next three jobs in the progression job hierarchy. For example, assume that you create a job called Junior Developer and select Developer as the progression job. In the Developer job, you select Senior Developer as the progression job. When you promote a junior developer, the list of values for the new job will include Developer and Senior Developer. You can select one of these values, or select another one.

Jobs and Grades

You can assign grades that are valid for each job. If you are using positions, then the grades that you specify for the job become the default grades for the position.

Evaluation Criteria

You can define evaluation criteria for a job, including the evaluation system, a date, and the unit of measure for the system. One predefined evaluation system is available, and that is the Hay system. An additional value of Custom is included in the list of values for the Evaluation System field, but you must add your own criteria and values for this system.

Uploading Jobs Using a Spreadsheet

If you have a list of jobs already defined for your enterprise, you can upload them from a spreadsheet. To use this option, you first download a spreadsheet template, then add your job information to the spreadsheet, and then upload directly to your enterprise configuration. You can upload the spreadsheet multiple times to accommodate revisions.

Jobs: Example

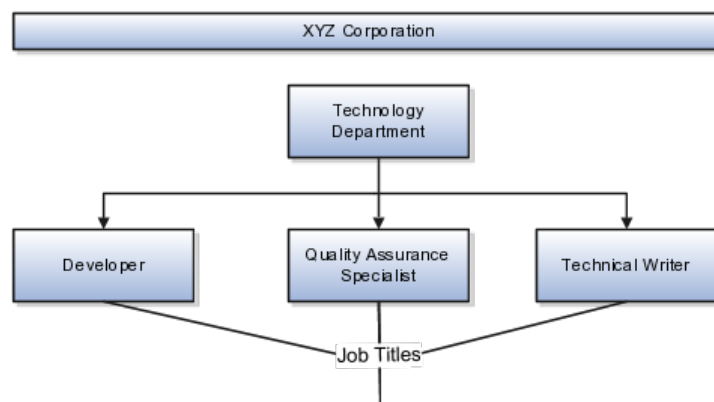
Jobs are typically used without positions by service industries where flexibility and organizational change are key features.

Software Industry

For example, XYZ Corporation has a director over the departments for developers, quality assurance, and technical writers. Recently, three developers have left the company. The director decides to redirect the head count to other areas. Instead of hiring all three back into development, one person is hired to each department, quality assurance, and technical writing.

In software industries, the organization is fluid. Using jobs gives an enterprise the flexibility to determine where to use head count, because the job only exists through the person performing it. In this example, when the three developers leave XYZ Corporation, their jobs no longer exist, therefore the corporation has the flexibility to move the headcount to other areas.

This figure illustrates the software industry job setup.



Common Applications Configuration: Define Project Organizations

Define Project Units and Organizations

Setting Up Organizations for Oracle Fusion Project Portfolio Management: Worked Example

This example describes the creation of three organizations for use in Oracle Fusion Project Portfolio Management. One organization is the project unit, the second organization can own projects and tasks, and the third organization can incur project expenditures. This example also describes the selection of the organization hierarchy type that controls the hierarchies that can be assigned to business units, and the association of project units and organizations to business units.

The following table summarizes key decisions for this scenario.

Decisions to Consider	In This Example
What organizations do I want to classify as project units?	Project Operations
What organization hierarchy type will be used by Oracle Fusion Project Portfolio Management?	HCM Organization Hierarchy Tree Structure
What organizations will own projects or tasks?	Fusion Operations
What organizations will incur project expenses?	Fusion Corporation
What project units will be associated with business units?	Project Operations Project Manufacturing Project Services

To set up organizations for projects, complete the following tasks:

- Classify organizations as project units

- Classify organizations to own projects and tasks or incur costs on a project
- Select the organization hierarchy type for Oracle Fusion Project Portfolio Management
- Select organization classifications that are relevant to projects
- Select organization hierarchies for the business unit
- Associate project units with business units

Prerequisites

Verify that the implementation team completed the following prerequisite steps.

1. Set up organization hierarchies, organization classifications, and organizations.
2. Enable the Project Accounting business unit function for all project business units.

Classifying Organizations as Project Units

To create a project unit organization, either enable an existing organization as a project unit or create a new organization as a project unit. After the project unit is enabled for an organization, the project unit appears in searches on the Manage Project Units page.

1. Click **Create** on the Manage Project Unit Organizations page.
2. On the Manage Project Unit Organizations page, complete the fields, as shown in this table.

Field	Value
Create new	Selected
Code	PROJECT_OPS
Name	Project Operations

3. Click **Save and Close**.

Classifying Organizations to Own Projects and Tasks or Incur Costs on a Project

Specify which organizations can own projects and tasks, and incur project expenses. If an organization can be a project and task owning organization, you also specify whether the organization allows indirect, capital, and contract projects, and associate the organization with a default project unit that is used during the project definition flow to control the list of organizations that can own the project.

1. In the Search: Organization region of the Manage Project Organization Classifications page, enter the name Fusion Operations and click **Search**.
2. In the Search Results: Organization region, select the Fusion Operations row and click **Edit**.

3. In the Change All Selected region of the Edit Project Organization Classifications page, complete the fields, as shown in this table.

Field	Value
Classify as Project Task Owning Organization	Selected
Allow indirect projects	Selected
Note The Allow indirect projects option allows the organization to own projects that are used to collect and track costs for overhead activities.	
Allow projects enabled for capitalization	Selected
Allow projects enabled for billing	Selected
Project Unit	Project Operations

For organizations that can own capital contract projects, select the options to allow projects enabled for capitalization and enabled for billing options.

4. Select **Save and Close**, then proceed to the next step to specify a project expenditure organization.
5. In the Search: Organization region of the Manage Project Organization Classifications page, enter the name Fusion Corporation and click **Search**.
6. In the Search Results: Organization region, select the Fusion Corporation row and click **Edit**.
7. In the Change All Selected region of the Edit Project Organization Classifications page, complete the field, as shown in this table.

Field	Value
Classify as Project Expenditure Organization	Selected

8. Select **Save and Close**.

Selecting the Organization Hierarchy Type for Oracle Fusion Project Portfolio Management

Select the organization hierarchy type for use in Oracle Fusion Project Portfolio Management, which enables you to assign organization hierarchies, such as the project and task owning organization hierarchy and project expenditure organization hierarchy, to project business units.

1. In Oracle Fusion Project Portfolio Management on the Manage Organization Hierarchies and Classifications page, go to the Organization Hierarchy Types region.

2. Select HCM Organization Hierarchy Tree Structure as the organization hierarchy type for Oracle Fusion Project Portfolio Management.

Important

A hierarchy must be set up in Oracle Fusion Human Capital Management for the selected hierarchy type.

Selecting Organization Classifications that are Relevant to Projects

Oracle Fusion applications support many organization classifications, although some of the organization classifications may not be relevant to a project. Only organizations with the classifications that you select in this task are available in choice lists in areas of the application where a specific organization classification is not required, such as during set up of capitalized interest rate schedules.

1. In Oracle Fusion Project Portfolio Management on the Manage Organization Hierarchies and Classifications page, go to the Organization Classifications region.
2. In the **Available** column, select the organizations that are relevant to projects, as shown in this table.

Field	Value
Available	Asset Organization
	Business Unit
	Partner Organization
	Project Expenditure Organization
	Project Manufacturing Organization
	Project Task Owning Organization
	Project Unit Classification

3. Click the right arrow to move the selected items to the **Selected** column.

To select multiple organizations, hold down the control key as you select the desired organizations, then click the right arrow.

Selecting Organization Hierarchies for the Business Unit

Associate project and task owning organizations to the business unit to restrict the project owning organizations in the project creation flow. Associate project expenditure organizations to the business unit to restrict which organizations can incur costs on the project. Specify an entire organization hierarchy to associate with the business unit by selecting the top node on the tree, rather than individually associating organizations with the business unit. Specify part of an organization hierarchy by selecting an organization at any level of the hierarchy as the starting node on the tree. Oracle Fusion Project Portfolio Management associates all organizations in the hierarchy from the starting node down with the business unit.

Note

The following conditions are required for an organization to be eligible to be a project and task owning organization:

- You must assign the Project and Task Owning Organization classification to the organization.
- The organization must belong to the hierarchy that you specify in the project implementation options for the business unit.

The following conditions are required for an organization to be eligible to be a project expenditure organization:

- You must assign the Project Expenditure Organization classification to the organization.
- The organization must belong to the hierarchy that you specify in the project implementation options for the business unit.

-
1. Go to the Configure Project Accounting Business Function setup page for the Vision Corporation Enterprise business unit.
 2. On the Project Setup tab, Project Task Owning Organization region, complete the fields, as shown in this table.

Field	Value
Tree Name	Corporate Tree Structure
Tree Version Name	Corporate Tree Structure Version 1
Organization	Project Operations

3. Select the **Expenditures** tab.
4. In the Project Expenditure Organization region, complete the fields, as shown in this table.

Field	Value
Tree Name	Corporate Tree Structure
Tree Version Name	Corporate Tree Structure Version 1
Organization	Corporate Operations

5. Click **Save and Close**.

Associating Project Units with Business Units

1. Go to the Configure Project Accounting Business Function setup page for the Vision Corporation Enterprise business unit.
2. On the Configure Project Accounting Business Function page, select the **Project Units** tab.
3. In the **Available Project Units** column, select the project units to associate with this business unit, as shown in this table.

Field	Value
Available Project Units	Project Services
	Project Manufacturing
	Project Operations

4. Click the right arrow to move the selected items to the **Selected Project Units** column.
5. Click **Save and Close**.

Creating a Project Unit: Worked Example

This example demonstrates how to complete the following tasks:

- Define project unit general properties
- Define project unit related business units
- Define project unit summarization options
- Define project unit performance reporting options
- Define project unit analytic reporting options

The following table summarizes key decisions for this scenario.

Decisions to Consider	In This Example
What is the default reference set for projects in this project unit?	Enterprise set Note By default, the set for each reference data object comes from the default set specified in the project unit general properties. Use the Manage Project Unit Set Assignments flow to assign sets to project units to determine how reference data is shared across different lines of business in a company.
Should I relate business units to this project unit?	Yes Note Identify the business units that are accountable for financial transactions for projects in this project unit. Business units that are not associated with any project unit are valid for all project units.
What transactions should I include in project performance data summarization?	Cost, commitment, and budget and forecast transactions Requisitions, purchase orders, and budget and forecast commitment types
What currency and calendar types should be summarized and displayed on project performance reports?	Project currency and project ledger currency Project accounting calendar and accounting calendar
Should I track key performance indicators?	Yes

Should I track missing time cards from employees?	Yes Note Missing transactions such as time cards may affect project performance results, which may result in misleading key performance indicators for the project.

For each project unit, you configure project management settings such as the default set assignment, project numbering series, full-time equivalent hours, related business units, and reporting options.

Prerequisites

This example is based on the assumption that the following prerequisite setup tasks are complete:

1. Set up organization hierarchies, organization classifications, and organizations.
2. Enable the Project Accounting business unit function for all project business units.
3. Classify organizations as project units.

Defining Project Unit General Properties

1. On the Manage Project Units page, Search Results region, select the Project Operations project unit, and click **Edit**.
2. On the Manage Project Units: General Properties page, complete the fields, as shown in this table.

Field	Value
Default Set	ENTERPRISE
Project Numbering - Method	Manual
Project Numbering - Type	Alphanumeric
Full-Time Equivalent Hours - Daily	8
Full-Time Equivalent Hours - Weekly	40

Defining Project Unit Related Business Units

1. Click **Next** on the Manage Project Units: General Properties page.
2. On the Manage Project Units: Related Business Units page, Available Project Units column, select the business units to associate with this project unit, as shown in this table.

Field	Value
Available Business Units	Corporate Enterprise Corporate Manufacturing Internal Systems and Support

3. Click the right arrow to move the selected business units to the Selected column.

To select multiple items, press the control key while you select the desired business units, then click the right arrow.

Defining Project Unit Summarization Options

Specify which transaction amounts are summarized for display on project performance reports and whether to automatically summarize the data when a transaction is created. Specify which commitment types and statuses are summarized for display on project performance reports. Select the currency and calendar types to summarize and display financial information on project performance reports.

1. Click **Next** on the Manage Project Units: Related Business Units page.
2. On the Summarization Options tab, Data Sources region, complete the fields, as shown in this table.

Field	Include in Summarization Value
Cost	Selected
Commitments	Selected
Budgets and Forecasts	Selected

3. In the Commitment Types region, complete the fields, as shown in this table.

Field	Include in Summarization Value	Status Value
Requisitions	Selected	All
Purchase Orders	Selected	All
Budgets and Forecasts	Selected	All
Other Commitments	Not selected	Not applicable

4. In the Currency Types region, complete the fields, as shown in this table.

Field	Value
Project currency	Selected
Transaction currency	Not selected
Project ledger currency	Selected

5. In the Calendar Types region, complete the fields, as shown in this table.

Field	Value
Project accounting calendar	Selected
Accounting calendar	Selected

6. In the Planning Amount Allocation region, complete the field, as shown in this table.

Field	Value
Basis	Period start date

Defining Project Unit Performance Reporting Options

Select the reporting options that determine the default display on project performance reports.

1. Click the **Performance Reporting Options** tab on the Manage Project Units: Reporting Setup page.
2. In the Performance Reporting Options tab, Reporting Options region, complete the fields, as shown in this table.

Field	Value
Currency Type	Project currency
Calendar Type	Accounting
Effort Unit of Measure	Hours
Project Accounting Period	Current period
Accounting Period	Current period
Amount Scale	1

3. In the Key Performance Indicators region, complete the fields, as shown in this table.

Field	Value
Track key performance indicators	Selected
Generate key performance indicators	Not selected
Summarize project data	Selected

Defining Project Unit Analytic Reporting Options

1. Click the **Analytic Reporting Options** tab on the Manage Project Units: Reporting Setup page.
2. In the Analytic Reporting Options tab, Missing Time region, complete the fields, as shown in this table.

Field	Value
Track missing time	Selected
Number of Prior Weeks	3
Include current week	Selected
Comparison Period in Days	35

3. In the Missing Time Sources region, complete the field, as shown in this table.

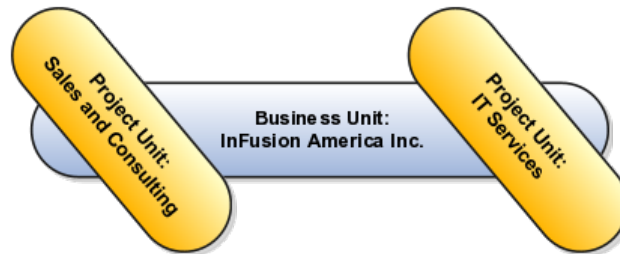
Field	Source Value	Document Value
Missing Time Sources	Time Entry System	Time Card

4. In the Current Exception Reporting region, enter a value of 35 for the **Comparison Period in Days** field.
5. Click **Save and Close**.

Project Unit Components: How They Work Together

Project units are operational subsets of an enterprise that conduct business operations using projects and need to enforce consistent project planning, management, analysis, and reporting. Project units often represent lines of business, such as Consulting Services, Sales, and Research and Development. You must set up at least one project unit to use in Oracle Fusion Projects.

You can maintain independent setup data for each project unit while sharing a single approach to financial management across all project units. The following diagram shows two project units that share a common approach to financial management and data. Each project unit maintains separate reference data for managing projects.



General Properties

General property options include the default reference data set to be used for any new reference data object associated with the project unit. You can override the default set for each reference data object. The method of project number creation, either manual or automatic, and daily or weekly full time equivalent hours for reporting purposes, are also included in general properties.

Set Assignments

You assign sets to project units to determine how reference data is shared across different lines of business in a company. A project unit is a set determinant for the following objects.

- Project definition, which includes set-enabled reference data for the project definition such as class code, financial plan type, project role, and project status.

- Project transaction types, which includes set-enabled reference data for project transactions such as project expenditure type and project work type.

Set assignment configuration includes the following options for each project unit.

- Reference set value. By default, the set for each reference data object is from the default set specified for the project unit.
- Reference data objects for the project definition and project transaction types.

Related Business Units

You associate business units with a project unit to identify the business units that are accountable for financial transactions of projects in each project unit. You can change the project unit and business unit association if the combination has not been used on a project or project template. If a business unit is not associated with any project unit, then the business unit is valid for all project units.

Reporting Setup

Project performance reporting configuration includes the following options for each project unit.

- Summarization data sources, commitments to include in summarization, currency types, calendar types, and the planning amount allocation basis for summarization.
- Default reporting options that determine how data appears in the Project Performance Reporting dashboard and reports. You can override these settings.
- Key performance indicators tracking option.
- Analytic reporting options to track missing time transactions.
- Time sources that are available for the project unit.
- Number of days prior to current date to include in current reporting data.

Associating Sets with Financial Plan Types: Example

You associate sets with financial or project plan types so that project managers can use them to create financial plans (budget or forecast versions) or project plans for projects or project templates. Financial or project plan types are available for selection only when projects or project templates are created for project units linked to selected sets.

The following example illustrates the relationship between financial plan types, sets, and project units. Project plan types share an identical relationship with sets and project units.

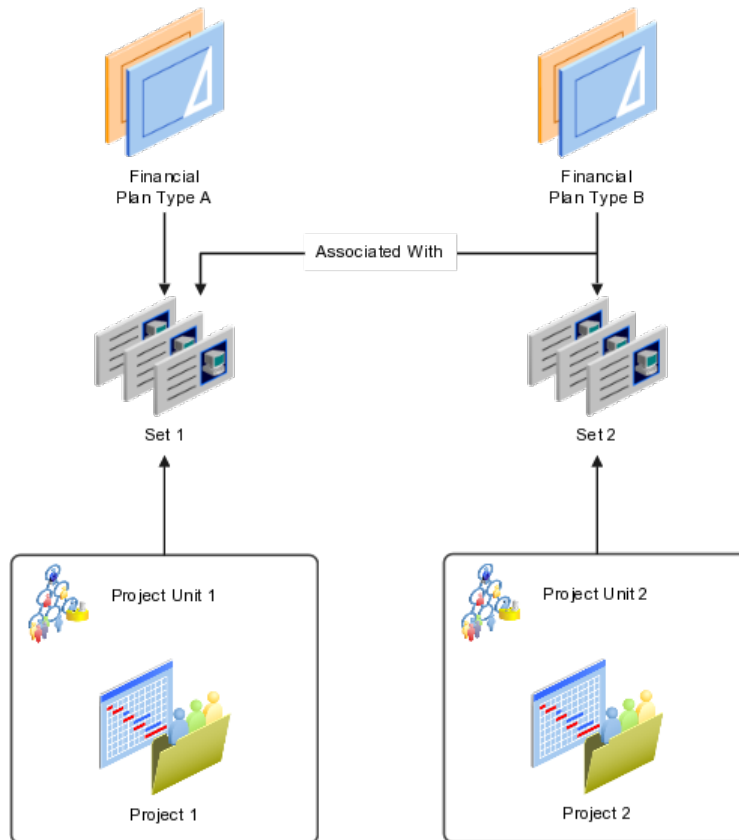
Scenario

An organization has two designated project units for project creation: Project Unit 1 and Project Unit 2. Project Unit 1 is associated with Set 1 and Project Unit 2 is associated with Set 2.

During implementation, two financial plan types were created: Financial Plan Type A and Financial Plan Type B. Financial Plan Type A is associated with Set 1. However, Financial Plan Type B is associated with both Set 1 and Set 2.

In such a case, project managers working on projects for Project Unit 1 can use only Financial Plan Type A to create financial plan versions. Project managers working on projects for Project Unit 2 can use both Financial Plan Type A and Financial Plan Type B.

The following diagram further illustrates the relationship between financial plan types, sets, and projects. Project plan types share the same relationship with sets.



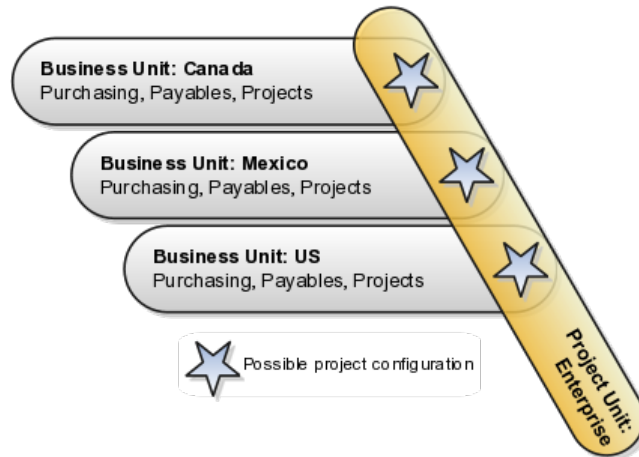
Using Multiple Project and Business Units: Examples

A project unit defines a set of rules and options for creating and managing the nonfinancial aspects of projects, such as project definition, scheduling, and reporting. You can define one or more project units based on how granular you want to separate processing options, reference data, security, and other controls. The list of project units can be different and independent from the list of business units that perform your enterprise financials functions, such as payables and receivables.

Following are two examples of associating project units and business units.

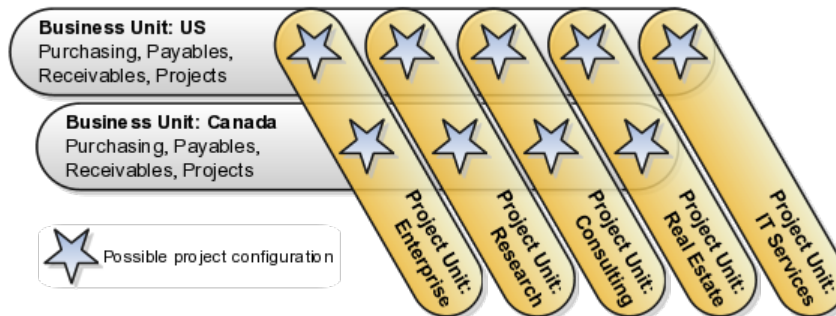
Single Project Unit with Multiple Business Units

A consulting company has offices in the US, Canada, and Mexico. Each location uses local purchasing and payables practices. The company uses projects to track time and expenses for billing through contracts.



Multiple Project Units with Multiple Business Units

A products and services company has main offices in the US and a warehouse and sales office in Canada. Due to operations in two different countries, the company partitions financial data by using two business units. The research processes are the same in both countries, so a single project unit facilitates common project management practices. The company has an information technology (IT) services project unit that is associated with US business unit, and a sales and consulting project unit that is associated with both the US and Canadian business units. The consulting line of business uses projects to manage consulting engagements and provide billing details to contracts. The internal real estate line of business uses projects to manage the US and Canada facilities, including new construction and repairs.



Performance Data Summarization: How It Is Calculated

Summarization is a systematic organization of information for purposes of project analysis and tracking. You use summarized data to analyze the health of projects and drill down to the causes of any deviation from set thresholds. You can complete the following tasks using summarized data:

- Analyzing project performance data
- Reviewing project performance
- Analyzing KPI categories and KPIs

- Tracking project progress
- Viewing revenue and invoice summaries

After you run summarization, the KPI related information is rendered out of date with respect to the latest summarized information. Therefore, it is important that you generate KPI values once the summarization process is completed. You can avoid generating KPI values manually, by enabling automatic generation of KPI values in the summarization options.

Settings That Affect Performance Data Summarization

You summarize data for a project unit or a business unit. You can also summarize performance data for a range of projects or projects owned by a project manager. Besides this, you must specify the following parameters each time you want to run the summarization process manually:

- Select the appropriate summarization method:
 - Incremental, for general purpose summarization.
 - Bulk, for summarizing large amounts of data all at once.
 - Delete and resummarize, for correcting summary data when the source system data is changed outside the regular transaction flow.
 - Resource breakdown structure, for migrating all summary data from one resource breakdown structure version to the next. If you select this option you must also specify the resource breakdown structure header.
- Specify whether to summarize budget and forecast, commitment, actual cost, revenue and invoice, and client extension transactions.

How Performance Data Summarization Is Calculated

Performance data summarization collects data from various sources and assigns amounts to relevant tasks and resources in the project. After data is summarized, you can view how much is being spent on, incurred by, or received by a task or resource. Also, data is grouped according to periods so that it can be tracked across different time lines.

You can run the summarization process for different situations, such as:

- Your data is out of date and you want to update it.
- Your data is corrupt and you want to delete the existing data and resummarize.
- You have a large volume of data that is not yet summarized and want to summarize the entire bulk of data in one run.

After you select the parameters for summarization and submit a request, the application performs the following steps to generate the data that you view in the application:

- Scope summarization by determining the list of projects, contracts, and batches of transaction data for which to run summarization.
- Extract data to be summarized from data sources, group it by periods, and ensure the data is prepared for resource mapping.

- Populate summary data into designated tables before resource breakdown structure mapping.
- Populate business unit, project unit, and other lookup information.
- Populate performance reporting dimension data including time, task breakdown structure, and resource breakdown structure.
- Look up resource breakdown structure mappings, scenario dimension members, period IDs, and prepare data for Essbase load.
- Load data into Essbase and merge data into summary tables.

You can track the progress of summarization on the process monitor. If the process fails to complete, it continues from the point of failure when you resubmit it.

Set Assignments and Project Data: How They Work Together

Reference data set assignments determine how you share enterprise information, including project data, across organizational units. In other words, you can decide which data is global, which data can be shared by certain organizations, and which data must remain organization-specific. Reference data sharing enables enterprises to balance autonomy and control for organizations.

Oracle Fusion Projects employs two set determinants: business unit and project unit.

Business Unit as Set Determinant

Business units enable you to control and report on financial transactions, usually for specific geographical entities within the enterprise. For project management purposes, assign the Project Accounting business function to the business unit.

Business unit is a set determinant for the following project-related reference data objects.

Reference Data Object	Entities
Project Accounting Definition	Project types
Project Rates	Project rate schedules

You assign a default set to each business unit. You can optionally override the default set for the **Project Accounting Definition** and **Project Rates** reference data objects. To enable a project type or rate schedule for use within the business unit, you must assign the same reference data set to that entity.

Note

If you assign a common set to a rate schedule, then that rate schedule is available for use across business units.

Project Unit as Set Determinant

Use project units to enforce consistent project management practices across your enterprise. Project unit is a set determinant for the following reference data objects.

Reference Data Object	Entities
Project Definition	Class codes, financial plan types and project plan types, project roles, and project statuses
Project Transaction Types	Expenditure types and work types

When specifying project unit implementation options, you select a default set. You can optionally override the default set for the **Project Definition** and **Project Transaction Types** reference data objects. To enable an entity like a financial plan type for use on projects owned by a project unit, assign the set associated with the Project Definition reference data object to the financial plan type.

Similarly, to enable expenditure types and work types for use on projects owned by a project unit, assign the set associated with the Project Transaction Types reference data object to those entities.

Partitioning Project Data Using Set Determinants: Examples

Use business units and project units to independently manage access to financial and project management data based on the unique requirements of your enterprise.

This topic illustrates the following scenarios.

1. Maintaining separate project management methodologies and data across units within an enterprise while centralizing financial management of data
2. Enforcing a single project management methodology across units within an enterprise while partitioning financial data

Note

These examples are only illustrative. Any combination of business units and project units can exist.

Using Multiple Project Units with One Business Unit

Assume that Vision Corporation is a services company with facilities across the United States. Its business is based on research and development activities and consulting practice. Projects are used by each line of business as follows:

- Consulting uses projects to manage consulting engagements and provide billing details to contracts.
- Research and Development uses projects to manage design project schedules.
- Real Estate uses projects to manage facilities, including new construction and repairs.

Vision Corporation implemented project units and business units as follows:

- Project Units
 - Consulting

- Real Estate
- Research and Development
- Business Unit: Vision Corporation

Set assignments for reference data objects, where project unit is the set determinant, are as follows:

Project Unit	Default Set
Consulting	Consulting Set
Real Estate	Real Estate Set
Research and Development	Research and Development Set

Note

The default set is used as the reference data set for both the Project Definition and Project Transaction Types reference data objects.

Vision Corporation can maintain independent setup data for each project unit, while sharing a single approach to financial management across all project units. For example, Vision Corporation uses different expenditure types across project units, as described in the table below.

Expenditure Type	Sets
Labor	Consulting Set Real Estate Set Research and Development Set
Airfare	Consulting Set
Hotel	Consulting Set
Equipment	Real Estate Set

The Labor expenditure type can be used for projects belonging to any project unit. However, expenditure types for airfare and hotel accommodation are used only on consulting projects.

Using Multiple Business Units with One Project Unit

Assume that InFusion Corporation is a services and product development company with research and development facilities across the globe, including in the United States and Canada. Due to its international operations, financial data must be partitioned using separate business units. However, basic research and development activities, based on projects, are the same across the enterprise. Therefore, a single project unit is created.

The enterprise structure and set assignments are described below.

- Project Unit: Research and Development
- Business Units
 - InFusion United States

- InFusion Canada

Default set assignments for the business units are as follows:

Business Unit	Default Set
InFusion United States	US Set
InFusion Canada	Canada Set

InFusion Corporation maintains independent financial data for each business unit, while employing a unified approach to project management that includes common financial and project plan types, project roles, and project statuses. As the enterprise must use different resource rates in each country, rate schedule setup is as follows.

Rate Schedule Name	Project Rates Set
Enterprise Project Rates: United States	US Set
Enterprise Project Rates: Canada	Canada Set
Common Enterprise Project Rates	Common Set

These set assignments govern how planned and actual amounts are calculated for projects.

For example, when InFusion Corporation defines organization costing rules for the InFusion United States business unit, they can select only the Enterprise Project Rates: United States or the Common Enterprise Project Rates rate schedules. Later, the application uses the selected rate schedule to calculate actual costs when project accountants import uncoded time cards for the InFusion United States business unit.

FAQs for Define Project Units and Organizations

How can I associate a business unit with a project unit?

You can associate a business unit with a project unit during the Related Business Units step of the Manage Project Units setup task if the business unit is already configured using the Configure Project Accounting Business Function setup task.

If the business unit is not configured, then you can associate a project unit with the business unit on the Project Units tab of the Configure Project Accounting Business Function page.

What happens if I change the organization hierarchy type that is available for project applications?

Changing the organization hierarchy type impacts existing transactions that use the hierarchy. Hierarchies that are specified for the business unit are invalidated, which invalidates the values selected for the project and task owning organization and project expenditure organization for the business unit.

The action also affects cross-charge transactions and capitalization transactions because the available hierarchies in these areas are based on the hierarchies specified for the business unit.

Important

The organization hierarchy type used in Oracle Fusion Projects must be the same organization hierarchy type that is set up in Oracle Fusion Global Human Resources for Oracle Fusion applications.

What happens if I remove organization classifications from the list of selected classifications that are available for project applications?

The organization classifications no longer appear in the list of organization values that are available for selection in the application.

Selected organization classifications on the Manage Organization Hierarchies and Classifications page are available for selection in areas of the application where a specific organization classification is not required, such as setting up capitalized interest rate schedules, burden schedules, and transfer price schedules.

What happens to project and task owning organizations and project expenditure organizations if human resource organizations are reorganized?

The business unit implementation options for project and task owning organizations and project expenditure organizations may become invalid. A project and task owning organization must belong to the organization hierarchy that is assigned to the business unit, be classified as a project and task owning organization, and be active on the system date. Similar criteria apply to project expenditure organizations.

If any of these conditions change as a result of the reorganization, then you may need to modify the organization hierarchy used for Oracle Fusion Projects, project organization classifications, and project business unit options. Depending on the new structure, you may also need to run the Change Project and Task Organizations process and Denormalize Organization Hierarchies process.

What's a project expenditure organization?

A project expenditure organization is one that can incur expenditures and hold financial plans for projects. For an organization to be eligible to be a project expenditure organization you must assign the organization the Project Expenditure Organization classification, and the organization must be assigned to the hierarchy that you specify in the project implementation options for the business unit.

What's a project and task owning organization?

Every project is owned by an organization that is used for reporting, security, and accounting. An organization can own specific types of projects, such as

indirect projects, capital projects, billable projects, and capital contract projects. On a contract project, the project owning organization can also be used in the accounting rules to determine which general ledger cost center will receive credit for the revenue. Assign project and task owning organizations to project units to specify which organizations are available to own the project.

What's the difference between organizations and organization hierarchies?

Organizations are departments, sections, divisions, companies, or other organizational units in your enterprise. You can gather collections of organizations into organization hierarchies.

Organization hierarchies help you manage expenditure and reporting data, and coordinate the project-owning organizations in your enterprise.

During implementation, you select the organization hierarchy type for use in Oracle Fusion Projects, either the department hierarchy tree structure or the generic organization hierarchy tree structure. Then you assign hierarchies to the project implementation options for each business unit used in Oracle Fusion Projects.

Important

The organization hierarchy type used in Oracle Fusion Projects must be the same organization hierarchy type that is set up in Oracle Fusion Global Human Resources for Oracle Fusion applications.

What's the difference between manual and automatic methods of numbering projects?

The manual method of project numbering requires you to enter a unique alphanumeric project number each time you create a project.

The automatic method of project numbering requires that you set up the first project number during project unit configuration, and then the application automatically assigns an incremental project number at project creation.

What's the difference between the project unit organization code and name?

Typically the project unit name is logical, descriptive, and easily recognizable.

The code is a unique short name that is used internally.

Both the project unit organization code and name are used to identify the project unit.

Can I specify the budgets and forecasts to include in summarization?

Certain financial plan types are included in summarization by default, while you must manually select others. Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

What happens when I select a planning amount allocation basis for the project unit?

The **Period Start Date** option allocates amounts based on the period start date. The **Period End Date** option allocates amounts based on the period end date. The **Daily Proration** option spreads plan amounts evenly across the plan duration.

Define Project Business Unit Options

Business Units: Explained

A business unit is a unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy. A business unit can process transactions on behalf of many legal entities. Normally, it will have a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss. Roll business units up into divisions if you structure your chart of accounts with this type of hierarchy. In Oracle Fusion Applications, you assign your business units to one primary ledger. For example, if a business unit is processing payables invoices they will need to post to a particular ledger. This assignment is mandatory for your business units with business functions that produce financial transactions.

In Oracle Fusion Applications, use business unit as a securing mechanism for transactions. For example, if you run your export business separately from your domestic sales business, secure the export business data to prevent access by the domestic sales employees. To accomplish this security, set up the export business and domestic sales business as two separate business units.

The Oracle Fusion Applications business unit model:

- Allows for flexible implementation
- Provides a consistent entity for controlling and reporting on transactions

- Anchors the sharing of sets of reference data across applications

Business units process transactions using reference data sets that reflect your business rules and policies and can differ from country to country. With Oracle Fusion Application functionality, you can choose to share reference data, such as payment terms and transaction types, across business units, or you can choose to have each business unit manage its own set depending on the level at which you wish to enforce common policies.

In countries where gapless and chronological sequencing of documents is required for subledger transactions, define your business units in alignment with your ledger definition, because the uniqueness of sequencing is only ensured within a ledger. In these cases, define a single ledger and assign one legal entity and business unit.

In summary, use business units in the following ways:

- Management reporting
- Processing of transactions
- Security of transactional data
- Reference data definition and sharing

Brief Overview of Business Unit Security

Business units are used by a number of Oracle Fusion Applications to implement data security. You assign data roles to your users to give them access to data in business units and permit them to perform specific functions on this data. When a business function is enabled for a business unit, the application can trigger the creation of data roles for this business unit based on the business function's related job roles.

For example, if a payables invoicing business function is enabled, then it is clear that there are employees in this business unit that perform the function of payables invoicing, and need access to the payables invoicing functionality. Therefore, based on the correspondence between the business function and the job roles, appropriate data roles are generated automatically. Use Human Capital Management (HCM) security profiles to administer security for employees in business units.

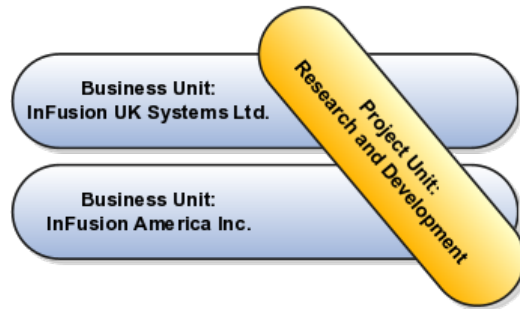
Business Units: How They Work with Projects

Business units are subsets of an enterprise that perform one or more business functions and can be consolidated in both a managerial and legal hierarchy. Project accounting is an example of a business function that is set up by business unit. Other examples are billing and revenue management, customer contract management, and payables invoicing.

Business units are defined centrally. During implementation, you must enable the Project Accounting business unit for use with Oracle Fusion Projects.

You can partition financial data using business units while sharing a single approach to project management across all business units. The following diagram shows two business units, one from the United Kingdom (UK) and one

from the United States (US). These business units have the same research and development processes, so a single project unit is used by both business units to facilitate common project management practices.



Project Setup

Following are project setup options for each business unit that you enable for use with Oracle Fusion Projects.

- Project and task owning organization name, tree name, and tree version name.

Note

To own projects or tasks, an organization must be classified as project and task owning organization, belong to the hierarchy associated with the business unit, and be active on the system date. The project type class must be permitted to use the organization to create projects.

-
- Project and task owning organizations are associated with the business unit to restrict these organizations in project creation flow. The project initiator specifies the business unit for the project, then can select from only those project and task owning organizations that are associated with the selected business unit.

Note

A project can be associated with only one business unit.

Project Expenditure

Following are business unit project expenditure implementation options.

- Day of the week when the expenditure cycle begins.
- Project expenditure organizations to associate with the business unit to restrict which organizations can incur costs on the project.

Project Costing

Following are business unit project costing implementation options.

- Project accounting calendar, either the default project accounting calendar from primary ledger calendar, or a different calendar to assign to the

business unit. You can change this calendar until you copy the project accounting periods.

- Default asset book for assets in the business unit. The asset initiator can select a different asset book for the asset.
- Option to use either common accounting and project accounting periods, or unique project accounting periods.
- Overtime calculations option.
- Asset retirement processing option to capture and record the cost of removal and the proceeds of sale amounts for retiring an asset.
- Separation of duties option for entering and releasing expenditure batches to ensure accuracy and accountability of project costs.
- Conversion rate type to use when converting the amount on cost transactions in this business unit from the transaction currency to the ledger currency.

Project Units

Project units are associated with business units to restrict the business units that can handle project transactions. When a project unit is not associated with a business unit, any business unit in your enterprise can process project transactions.

Cross-Charge Transactions

Following are business unit cross-charge transaction implementation options.

- Transfer price currency conversion rate date type and rate type for the business unit.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions between different organizations in the same business unit and legal entity.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions between different business units in the same legal entity.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions for a specific receiver business unit.

Customer Contract Management

You can configure customer contract management business function properties, such as currency conversion, cross-charge transaction, and billing options, for each contract business unit.

Reference Data Sharing

Assign sets to business units to determine how reference data is shared across applications. A business unit is a set determinant for the following objects:

- Project accounting definition, including set-enabled reference data such as project type.
- Project and contract billing, including set-enabled reference data such as invoice format.

- Project rates, including set-enabled reference data such as rate schedules.

Maintaining Accounting Periods and Project Accounting Periods: Critical Choices

During business unit implementation you determine whether to maintain common accounting and project accounting periods, or define project accounting periods that have a different frequency than the accounting periods.

Accounting periods are used by Oracle Fusion Projects to assign accounting periods and dates to transactions. Accounting periods are maintained by ledger and use the same calendar as the general ledger periods. Project accounting periods are used by Oracle Fusion Projects for project planning, costing, billing, budgeting, forecasting, and performance reporting. Project accounting periods are maintained by business unit and typically do not use the same calendar as the accounting and general ledger periods.

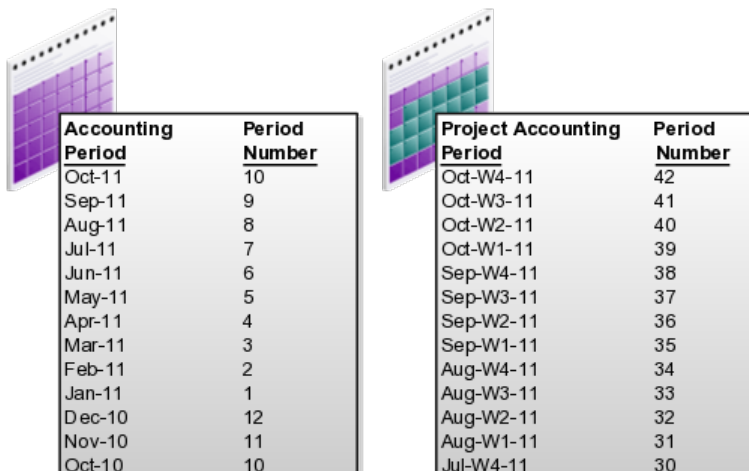
Maintaining Common Accounting and Project Accounting Periods

If you want to report project information with the same frequency as the accounting periods, you can use the accounting period as both the accounting and project accounting period.

When you maintain common accounting and project accounting periods, period maintenance is simplified, calendar periods are not copied to Oracle Fusion Projects, and period information is maintained in one physical location. Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods.

Defining Project Accounting Periods that are Different from Accounting Periods

If you want to account for project transactions and report project information more frequently than the accounting periods allow, you can define project accounting periods that are shorter than the accounting periods. For example, you can define weekly project accounting periods and monthly accounting periods, as shown in the following diagram.



Accounting Period	Period Number
Oct-11	10
Sep-11	9
Aug-11	8
Jul-11	7
Jun-11	6
May-11	5
Apr-11	4
Mar-11	3
Feb-11	2
Jan-11	1
Dec-10	12
Nov-10	11
Oct-10	10

Project Accounting Period	Period Number
Oct-W4-11	42
Oct-W3-11	41
Oct-W2-11	40
Oct-W1-11	39
Sep-W4-11	38
Sep-W3-11	37
Sep-W2-11	36
Sep-W1-11	35
Aug-W4-11	34
Aug-W3-11	33
Aug-W2-11	32
Aug-W1-11	31
Jul-W4-11	30

Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods, and Oracle Fusion Projects to maintain project accounting period statuses and run the processes to open and close project accounting periods.

FAQs for Define Project Business Unit Options

How can I set up common accounting and project accounting periods?

Complete these tasks to set up common accounting periods and project accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, set the project accounting calendar to the accounting calendar and select the option to maintain common accounting and project accounting periods.

How can I set up project accounting periods that are different from accounting periods?

Complete these tasks to set up project accounting periods that are different from accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, specify the project accounting calendar for each business unit.
 - Verify that the option to maintain common accounting and project accounting periods is not selected.
- Copy the accounting calendar into the project accounting period table, which copies the period start and end dates.
- Manage the period statuses for project accounting periods.

What's the difference between a project accounting period, an accounting period, and a general ledger period?

Project accounting periods are used to track budgets and forecasts, summarize project amounts for reporting, and track project status. Project accounting periods are maintained by business unit. You can set up project accounting periods to track project periods on a more frequent basis than accounting periods. For example, you can define weekly project accounting periods and monthly accounting periods. If you use the same calendar as your accounting periods, the project accounting periods and accounting periods will be the same, although the statuses are maintained independently.

Accounting periods, which are used to derive accounting dates, are maintained by ledger and use the same calendar as the general ledger periods. Period statuses for the accounting period and general ledger period are maintained independently.

Note

You can select an option on the business unit definition to maintain common accounting and project accounting periods. This option allows the accounting period to be used as the project accounting period so you need to maintain only one period status.

What happens if I close an accounting or project accounting period permanently?

You cannot enter any transactions in the period you have closed and you can adjust transactions in subsequent periods.

How can I associate a business unit with a project unit?

You can associate a business unit with a project unit during the Related Business Units step of the Manage Project Units setup task if the business unit is already configured using the Configure Project Accounting Business Function setup task.

If the business unit is not configured, then you can associate a project unit with the business unit on the Project Units tab of the Configure Project Accounting Business Function page.

Common Applications Configuration: Define Security for Project Financial Management

Security Tasks: Highlights

Security tasks include the following.

- Security setup
- Security implementation and administration

Note

Security setup and administration tasks typically use integrated user interface pages that are provided by the following products.

- Oracle Identity Manager (OIM)
- Oracle Authorization Policy Manager (APM)
- Oracle Fusion Human Capital Management (HCM) products
- Oracle Application Access Control Governor (AACG) in Oracle Enterprise Governance, Risk and Compliance (GRC)

Security setup and administrative tasks performed by product administrators and implementation consultants, such as managing HCM security profiles, are presented in the documentation for those products.

Set Up the IT Security Manager Job Role

Provision the IT Security Manager job role with roles for user and role management.

- Using the OIM Administrator user name and password, sign in to Oracle Identity Manager (OIM). Refer to the Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management.
See: Creating Users and Groups
- Open the IT Security Manager job role's attributes and use the Hierarchy tab to add the User Identity Administrators role and the Role Administrators role in the OIM Roles category using the Add action. Use the Delegated Administration menu to search for the Xellerate Users organization and assign it to the IT Security Manager role. Refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: User Management Tasks

Prerequisite Tasks for Security Administration

Sign into Oracle Fusion Applications for the first time with the Installation Super User account to synchronize LDAP users with HCM user management and create an IT security manager user account and provision it with the IT Security Manager role. For environments that are not in Oracle Cloud, use the super user account that was created during installation to sign in for the first time.

- Installation establishes the super user account. Refer to the Oracle Fusion Applications Installation Guide.

See: Identity Management Configuration

- Oracle provides an initial user for accessing your services in Oracle Cloud. For more information, refer to "Oracle Cloud Application Services Security: Explained" in Oracle Cloud documentation.
- Synchronize LDAP users with HCM user management by performing the Run User and Roles Synchronization Process task. Monitor completion of the predefined Enterprise Scheduler process called Retrieve Latest LDAP Changes.
- Refer to information about creating person records in Oracle Fusion Applications Workforce Development Implementation Guide, or refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: Managing Users

- As a security guideline, provision a dedicated security professional with the IT Security Manager role as soon as possible after initial security setup and revoke that role from users provisioned with the Application Implementation Consultant role. If entitled to do so, see Security Tasks and Oracle Fusion Applications: How They Fit Together for details about provisioning the IT security manager.

Required Security Administration Tasks

Establish at least one implementation user and provision that user with sufficient access to set up the enterprise for all integrated Oracle Fusion Middleware and all application pillars or partitions.

- Perform the initial security tasks. If entitled to do so, see Initial Security Administration: Critical Choices.
- Sign in to Oracle Fusion Applications using the IT security manager's or administrator's user name and password, and create and provision users who manage your implementation projects and set up enterprise structures by performing the Create Implementation Users task. Refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: User Management Tasks

- Create a data role for implementation users who will set up HCM that grants access to data in secured objects required for performing HCM setup steps. Provision the implementation user with this View All data role. See "Creating an HCM Data Role: Worked Example."

- For an overview of security tasks from the perspective of an applications administrator, refer to the Oracle Fusion Applications Administrator's Guide

See: Securing Oracle Fusion Applications

Optional Security Administration Tasks

Once initial security administration is complete and your enterprise is set up with structures such as business units, additional security administration tasks are optional and based on modifying and expanding the predefined security reference implementation to fit your enterprise. See points to consider for defining security, data security and trading partner security after enterprise setup.

- Create users. Refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: Creating Users

- Provision users with roles. Refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: Adding and Removing Roles

- You manage users and job roles, including data and abstract roles, in Oracle Identity Management user interface pages. Refer to the Oracle Fusion Middleware User's Guide for Oracle Identity Manager.

See: User Interfaces

- You manage duties, security policies, and data role templates in the Authorization Policy Manager. Refer to the Oracle Fusion Middleware Authorization Policy Manager Administrator's Guide.

See: Managing Oracle Fusion Applications Data Security Policies

- You manage role provisioning rules in Human Capital Management (HCM). Refer to the Role Mappings: Explained topic in the Oracle Fusion Applications Workforce Development Implementation Guide.

See: Common Applications Configuration: Define Security for Human Capital Management

- For a complete description of the Oracle Fusion Applications security reference implementation, see the Oracle Fusion Applications Security Reference Manuals for each offering.

See: Oracle Fusion Applications Common Security Reference Manual

- For a detailed functional explanation of the Oracle Fusion Applications security approach, refer to the following guides.

See: Oracle Fusion Applications Security Guide

See: Oracle Fusion Applications Security Hardening Guide

- Since security in Oracle Fusion Applications is based on integrations with Oracle Identity Management in Fusion Middleware, security features in the database, and Oracle Enterprise Governance, Risk and

Compliance (GRC), additional resources in support of performing security tasks include the following.

- Authorization Policy Manager (APM) is available in Oracle Fusion Applications through integration with Oracle Identity Management (OIM). Authorization policy management involves managing duty roles, data role templates, and data security policies. Refer to the Oracle Fusion Middleware Authorization Policy Manager Administrator's Guide.
See: Getting Started With Oracle Authorization Policy Manager
- Oracle Identity Management (OIM) is available in Oracle Fusion Applications through integration with Oracle Fusion Middleware. Identity management in Oracle Fusion Application involves creating and managing user identities, creating and linking user accounts, managing user access control through user role assignment, managing enterprise roles, and managing workflow approvals and delegated administration.
See: Oracle Fusion Middleware User's Guide for Oracle Identity Manager
- Oracle Fusion Applications is certified to integrate with Applications Access Controls Governor (AACG) in the Oracle Enterprise Governance, Risk and Compliance (GRC) suite to ensure effective segregation of duties (SOD).
See: Oracle Application Access Controls Governor Users Guide
See: Oracle Application Access Controls Governor Implementation Guide
- Configure and manage auditing. Refer to the Oracle Fusion Middleware Application Security Guide.
See: Configuring and Managing Auditing

Defining Security After Enterprise Setup: Points to Consider

After the implementation user has set up the enterprise, further security administration depends on the requirements of your enterprise.

The Define Security activity within the Information Technology (IT) Management business process includes the following tasks.

- Import Worker Users
- Import Partner Users
- Manage Job Roles
- Manage Duties
- Manage Application Access Controls

If no legacy users, user accounts, roles, and role memberships are available in the Lightweight Directory Access Protocol (LDAP) store, and no legacy workers are available in Human Resources (HR), the implementation user sets up new users and user accounts and provisions them with roles available in the Oracle Fusion Applications reference implementation.

If no legacy identities (workers, suppliers, customers) exist to represent people in your enterprise, implementation users can create new identities in Human

Capital Management (HCM), Supplier Portal, and Oracle Sales Cloud Self Service, respectively, and associate them with users.

Before Importing Users

Oracle Identity Management (OIM) handles importing users.

If legacy employees, contingent workers, and their assignments exist, the HCM Application Administrator imports these definitions by performing the Initiate HCM Spreadsheet Load task. If user and role provisioning rules have been defined, the Initiate HCM Spreadsheet Load process automatically creates user and role provisioning requests as the workers are created.

Once the enterprise is set up, performing the Initiate HCM Spreadsheet Load task populates the enterprise with HR workers in records linked by global user ID (GUID) to corresponding user accounts in the LDAP store. If no user accounts exist in the LDAP store, the Initiate HCM Spreadsheet Load task results in new user accounts being created. Worker email addresses as an alternate input for the Initiate HCM Spreadsheet Load task triggers a search of the LDAP for user GUIDs, which may perform more slowly than entering user names.

In the security reference implementation, the HCM Application Administrator job role hierarchy includes the HCM Batch Data Loading Duty role, which is entitled to import worker identities. This entitlement provides the access necessary to perform the Initiate HCM Spreadsheet Load task in HCM.

Note

The Import Person and Organization task in the Define Trading Community Import activity imports the following resources, creates users, and links the resources to users for use in Oracle Sales Cloud.

- Internal employees
- Contingent workers
- External partner contacts
- Partner companies
- Legal entities
- Customers
- Consumers

If role provisioning rules have been defined, the Import Person and Organization task automatically provisions role requests as the users are created.

Import Users

If legacy users (identities) and user accounts exist outside the LDAP store that is being used by the Oracle Fusion Applications installation, the IT security manager has the option to import these definitions to the LDAP store by performing the Import Worker Users and Import Partner Users tasks.

If no legacy users or user accounts can be imported or exist in an LDAP repository accessible to Oracle Identity Management (OIM), the IT security manager creates users manually in OIM or uses the Initiate HCM Spreadsheet Load task to create users from imported HR workers.

Once users exist, their access to Oracle Fusion Applications is dependent on the roles provisioned to them in OIM or Human Capital Management. Use the Manage HCM Role Provisioning Rules task to define rules that determine what roles are provisioned to users.

Importing user identities from other applications, including other Oracle Applications product lines, is either a data migration or manual task. Migrating

data from other Oracle Applications includes user data. For more information about importing users, see the Oracle Fusion Middleware Developer's Guide for Oracle Identity Manager.

In the security reference implementation, the IT Security Manager job role hierarchy includes the HCM Batch Data Loading Duty and the Partner Account Administration Duty. These duty roles provide entitlement to import or create users. The entitlement Load Batch Data provides the access necessary to perform the Import Worker Users task in OIM. The entitlement Import Partner entitlement provides the access necessary to perform the Import Partner Users task in OIM.

Manage Job Roles

Job and abstract roles are managed in OIM. This task includes creating and modifying job and abstract roles, but not managing role hierarchies of duties for the jobs.

Note

Manage Job Roles does not include provisioning job roles to users. Provisioning users is done in OIM, HCM, Oracle Sales Cloud, or Oracle Fusion Supplier Portal.

Roles control access to application functions and data. Various types of roles identify the functions performed by users.

The Oracle Fusion Applications security reference implementation provides predefined job and abstract roles. In some cases, the jobs defined in your enterprise may differ from the predefined job roles in the security reference implementation. The predefined roles and role hierarchies in Oracle Fusion may require changes or your enterprise may require you to create new roles. For example, you need a job role for a petty cash administrator, in addition to an accounts payable manager. The security reference implementation includes a predefined Accounts Payable Manager, and you can create a petty cash administrator role to extend the reference implementation.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Enterprise Role Management Duty role, which is entitled to manage job and abstract roles (the entitlement is Manage Enterprise Role). This entitlement provides the access necessary to perform the Manage Job Roles task in OIM.

Manage Duties

A person with a job role must be able to perform certain duties. In the Oracle Fusion Applications security reference implementation, enterprise roles inherit duties through a role hierarchy. Each duty corresponds to a duty role. Duty roles specify the duties performed within applications and define the function and data access granted to the enterprise roles that inherit the duty roles.

Managing duties includes assigning duties to job and abstract roles in a role hierarchy using Authorization Policy Manager (APM). If your enterprise needs users to perform some actions in applications coexistent with Oracle Fusion applications, you may wish to remove the duty roles that enable those actions. For details about which duty roles are specific to the products in an offering, see the Oracle Fusion Applications Security Reference Manual for each offering.

OIM stores the role hierarchy and the spanning of roles across multiple pillars or logical partitions of applications.

In cases where your enterprise needs to provide access to custom functions, it may be necessary to create or modify the duty roles of the reference implementation.

Tip

As a security guideline, use only the predefined duty roles, unless you have added new applications functions. The predefined duty roles fully represent the functions and data that must be accessed by application users and contain all appropriate entitlement. The predefined duty roles are inherently without segregation of duty violations of the constraints used by the Application Access Controls Governor.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Application Role Management Duty role, which is entitled to manage duty roles (the entitlement is Manage Application Role). This entitlement provides the access necessary to perform the Manage Duties task in APM.

Note

Product family administrators are not entitled to create role hierarchies or manage duty roles and must work with the IT security manager to make changes such as localizing a duty role to change a role hierarchy. Setup for localizations is documented in HCM documentation.

Manage Application Access Controls

Prevent or limit the business activities that a single person may initiate or validate by managing segregation of duties policies in the Application Access Controls Governor (AACG) .

Note

In AACG, segregation of duties policies are called access controls or segregation of duties controls.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Segregation of Duties Policy Management Duty role, which is entitled to manage segregation of duties policies (the entitlement is Manage Segregation of Duties Policy). This entitlement provides the access necessary to perform the Manage Application Access Controls task in AACG.

Security Tasks and Oracle Fusion Applications: How They Fit Together

The major security tasks and their order within the context of an overall Oracle Fusion Applications implementation extend from security setup through production deployment audits.

The Oracle Fusion business process model (BPM) provides a sequence of security implementation tasks that includes the following.

- Security setup (Define Common Applications Configuration activity)
 - Define Implementation Users task group (optional)
 - Create Implementation Users task
 - Create Data Role for Implementation Users task
 - Provision Roles to Implementation Users task

- Define security - tasks vary depending on deployed Oracle Fusion product family
 - Revoke Data Role from Implementation Users task
 - Import Worker Users task
 - Import Partner Users task
 - Manage Duties task
 - Manage Job Roles task
 - Manage Application Access Controls task
- Define Automated Governance, Risk, and Performance Controls activity
 - Manage Application Access Controls task (AACG settings)
 - Manage Application Preventive Controls task
 - Manage Application Transaction Controls task
 - Manage Application Configuration Controls task
- User and role provisioning tasks
 - Implement Role Request and Provisioning Controls activity
 - Import Worker Users task
 - Import Partner Users task
 - Self Request User Roles task
 - Approve User and Role Provisioning Requests task
 - Assign User Roles task
 - Manage Supplier User Roles and User Role Usages task
 - Map and Synchronize User Account Details task
 - Tasks for viewing account details for self or others
 - Tasks for applying and managing various role provisioning rules
 - Tasks for running synchronization processes
- Security implementation and ongoing maintenance after setup (Manage IT Security activity)
 - Implement Function Security Controls
 - Create Job Role task
 - Import Worker Users task

- Import Partner Users task
 - Manage Duties task
 - Manage Job Roles task
 - Manage Users task
 - Implement Data Security Controls
 - Manage Data Security Policies task
 - Manage Role Templates task
 - Manage Segment Security task
 - Manage Data Access Sets task
 - Define Security Profiles task group
 - Auditing tasks
 - Manage Security Audit, Compliance and Reporting activity
 - Manage Application Access Controls task
-

Note

Go live deployment does not require lockdown or specific security tasks because security is enforced across the test to production information life cycle.

Required Roles

The following enterprise roles are provisioned to a single super user that is set up by the Oracle Fusion Applications installation process, and to the initial user set up by Oracle for Oracle Cloud Application Services:

- Application Implementation Consultant
- IT Security Manager
- Application Administrators for the provisioned products

Initial security administration also includes provisioning the IT Security Manager role with Oracle Identity Management (OIM) roles for user and role management.

- Identity User Administrator
- Role Administrator

Additionally, the Xellorate Users organization must be assigned to the IT Security Manager role.

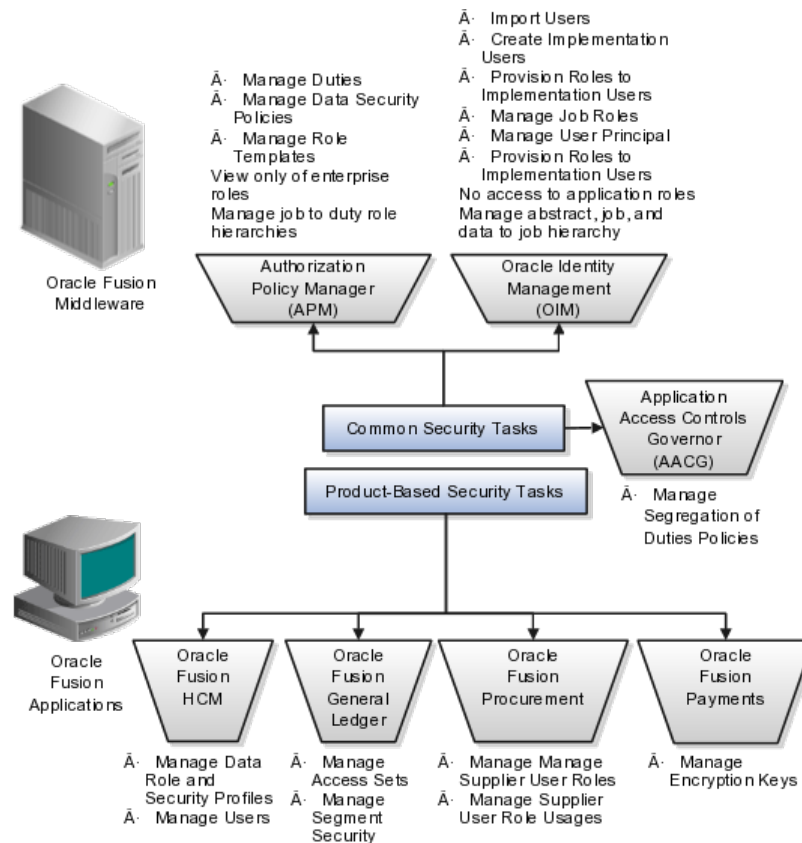
Important

As a security guideline, provision a dedicated security professional with the IT Security Manager role at the beginning of an implementation, and revoke that role from users provisioned with the Application Implementation Consultant role.

Tools Used to Perform Security Tasks

Security tasks are supported by tools within both Oracle Fusion Applications and Oracle Fusion Middleware.

The figure lists the tasks associated with each of the integrated products and pillars of an Oracle Fusion Applications deployment.



Security Tasks: Overview

Security tasks span multiple business processes and are performed by various roles using numerous integrated tools.

The following table shows the business process model (BPM) tasks and tools used to support securing Oracle Fusion Applications.

Example Task	Oracle BPM Task	Supporting Tools	Details
View duty roles inherited by a job role	Manage Duties	Authorization Policy Manager (APM)	Each logical partition or pillar contains a collection of application roles, and function and data security policies.
View entitlement or policies carried by a job role	Manage Duties	APM	In LDAP, the policy store stores application roles and the identity store stores enterprise roles.
Add a job role to a role hierarchy	Manage Job Roles	Oracle Identity Management (OIM)	The identity store in LDAP stores enterprise roles.
Add a duty role to a role hierarchy	Manage Duties	APM	LDAP stores the role hierarchy and the spanning of roles across multiple pillars or logical partitions.

Create a hierarchy of enterprise (abstract, job, data) roles	Manage Job Roles	OIM	
Create a hierarchy of (application) duty roles	Manage Duties	APM	
Create a new job role	Manage Job Roles	OIM	The identity store in LDAP stores enterprise roles.
Change duty roles inherited by a job or abstract role	Manage Duties	APM	The policy store stores duty roles. The identity store stores enterprise roles. Some duty roles may enable actions and their associated users interface features that your enterprise does not want users to perform in Oracle Fusion applications.
Create a new duty role	Manage Duties	APM	All functions and actions in Oracle Fusion Applications that need to be secured are covered by the reference implementation. In some cases, especially with function customizations, a new duty role may be needed.
View Segregation of Duties (SOD) policies respected by a duty role	Manage Application Access Controls	Application Access Controls Governor (AACG) in Oracle Enterprise Governance, Risk and Compliance (GRC)	The Security Reference Manuals (SRM) document the segregation of duties (SOD) policies respected within each job role
View SOD policy violations carried by the duty roles inherited by a job role	Manage Application Access Controls	AACG in GRC	The Security Reference Manuals (SRM) document the SOD policies respected within each job role
View SOD policy violations	Manage Segregation of Duties Policies	AACG in GRC	The SRM documents the SOD conflicts for each job role
View the data security policies carried by a job, abstract, and data roles	Manage Data Security Policies	APM	Oracle Fusion Data Security stores data security policies in the policy store. Data security can also be defined in application pages provided by Oracle Middleware Extensions for Applications (FND)

Create and update HCM security profiles	Manage Data Role and Security Profiles	Oracle Fusion HCM	This task does not include assigning data roles to the users, which is supported by user provisioning tasks.
Create (generate) a data role	1. Manage Role Templates 2. Manage Data Roles and Security Profiles	- APM - Oracle Fusion HCM	Data roles are generated automatically based on data role templates and enterprise setup. Changes to data role templates generate new or changed data roles. Create data roles in HCM using the Manage Data Roles and Security Profiles task.
Create a new data security policy (not through generated data roles based on data role templates or HCM security profiles)	Manage Data Security Policies	APM	Data security can also be defined in application pages provided by Oracle Middleware Extensions for Applications (FND)
View data role templates defined by a product	Manage Role Templates	APM	
Create or edit an existing data role template	Manage Role Templates	APM	
Secure common objects such as attachment categories or profile options	Manage Data Security Policies	APM	Data security can also be defined in application pages provided by Oracle Middleware Extensions for Applications (FND)
View, create, update Data Access Sets used to secure Ledgers and Ledger Sets	Manage Data Access Sets	Oracle Fusion General Ledger	
View, create, update accounting flexfield segment security rules	Manage Security Segments	Oracle Fusion General Ledger	
View or update the set of job roles that can be provisioned to supplier users	Manage Supplier User Role	- Supplier Portal - Sourcing	These tools are in the Oracle Fusion Procurement product family
Determine the supplier job roles that the supplier self service administrator can provision to supplier users	Manage Supplier User Role Usages	- Supplier Portal - Sourcing	These tools are in the Oracle Fusion Procurement product family
Set default supplier job roles based on the set of supplier roles that are defined by performing the Manage Supplier User Roles task	Manage Supplier User Role Usages	- Supplier Portal - Sourcing	These tools are in the Oracle Fusion Procurement product family

Create a new implementation user	Create Implementation Users	• OIM	
Import legacy users	• Import Worker Users • Import Partner Users	• OIM	
Create a new user	Manage Users	• HCM	HCM creates a new user and identity when a new worker is created. The Hire Employee and Add Contingent Worker tasks also result in new user creation requests. Creating a new user automatically triggers role provisioning requests based on role provisioning rules.
Provision roles to a user	1. Provision Roles to Implementation Users 2. Manage Users	• OIM • Oracle Fusion HCM • Oracle Sales Cloud • Oracle Fusion Suppliers	Implementation users are provisioned through OIM since HCM is not setup at the start of the implementation. The Provision Roles to Implementation Users is not needed once implementation is complete. Once HCM is setup, HCM is used to provision roles to non-implementation users by performing the Manage Users task. Human Resources (HR) transaction flows such as Hire and Promote also provision roles. Once supplier users are setup, Supplier Model can be used by internal users to maintain supplier user accounts or supplier users can maintain their accounts in Supplier Portal.

View the job, abstract, and data roles provisioned to a user	1. Manage Users 2. Manage User Principal 3. Provision Roles to Implementation Users	• Human Capital Management (HCM) • OIM	LDAP stores users, roles and provisioning information. The Manage User Principal and Provision Roles to Implementation Users tasks are not needed once implementation is complete.
Revoke role from user.	Manage Users	• HCM	You can revoke roles from various Human Resources task flows, the HCM Manage Users task and OIM. User termination includes role revocation.
Approve role provisioning or user account request.	Approve User and Role Provisioning Requests	• OIM	
View audit logs	Not applicable	• Oracle Enterprise Manager	Viewing audit logs is a Oracle Fusion Middleware function and not represented by an Oracle Fusion Applications BPM task.

For more information about provisioning identities and configuring audit policies, see the Oracle Fusion Applications Administrator's Guide.

There may be more than one navigation path to the graphical user interface in which the task is performed. You can access most security tasks by starting in the Setup and Maintenance Overview page and searching for security tasks and task lists.

Define Data Security for Project Financial Management

Defining Data Security After Enterprise Setup: Points to Consider

After the implementation user has set up the enterprise, further security administration depends on the requirements of your enterprise.

The Define Data Security activity within the Information Technology (IT) Management business process includes the following tasks.

- Manage Data Access Sets
- Manage Segment Security
- Manage Role Templates

- Manage Data Security Policies

These tasks address data security administration. For information on using the user interface pages for setting up and managing data security, see the Oracle Fusion Middleware Administrator's Guide for Authorization Policy Manager.

Note

The Manage Data Role and Security Profiles task, and all other HCM security profile setup tasks are documented in Human Capital Management (HCM) documentation.

Manage Data Access Sets

Data access sets define a set of access privileges to one or more ledgers or ledger sets.

The information on ledgers that are attached to data access sets are secured by function security. Users must have access to the segment values associated with the data access sets to access the corresponding GL account.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Data Access Administration Duty role, which is entitled to manage data access sets (the entitlement is Define General Ledger Data Access Set). This entitlement provides the access necessary to perform the Manage Data Access Sets task in General Ledger.

Manage Segment Security

Balancing or management segment values can secure data within a ledger.

Segment values are stored in GL_ACCESS_SET_ASSIGNMENTS and secured by restrictions, such as Exclude, on parameters that control the set of values that a user can use during data entry.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Application Key Flexfield Administration Duty role, which is entitled to manage application key flexfields (the entitlement is Manage Application Key Flexfield). This entitlement provides the access necessary to perform the Manage Segment Security task in General Ledger.

Manage Role Templates

Data role templates automatically create or update data roles based on dimensions such as business unit. As an enterprise expands, data role templates trigger replication of roles for added dimensions. For example, when creating a new business unit, a data role template generates a new Accounts Payables Manager data role based on the Financials Common Module Template for Business Unit Security data role template.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Application Role Management Duty role, which is entitled to manage data role templates (the entitlement is Manage Role Template). This entitlement provides the access necessary to perform the Manage Role Templates task in APM.

Manage Data Security Policies

Data security grants provisioned to roles are data security policies. The security reference implementation provides a comprehensive set of predefined data security policies and predetermined data security policies based on data role templates.

Data security policies are available for review in Authorization Policy Manager (APM). Data security policies are implemented by grants stored in Oracle Fusion Data Security (FND_GRANTS).

Data security policies secure the database resources of an enterprise. Database resources are predefined applications data objects and should not be changed. However, for cases where custom database resources must be secured objects, the IT security manager is entitled to manage database resources and create new data security policies.

Warning

Review but do not modify HCM data security policies in APM except as a custom implementation. Use the HCM Manage Data Role And Security Profiles task to generate the necessary data security policies and data roles.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Application Role Management Duty role, which is entitled to manage data security policies (the entitlement is Manage Data Security Policy). This entitlement provides the access necessary to perform the Manage Data Security Policies task in APM.

Data Security in the Security Reference Implementation: Explained

The reference implementation contains a set of data security policies that can be inspected and confirmed to be suitable or a basis for further implementation using the Authorization Policy Manager (APM).

The security implementation of an enterprise is likely a subset of the reference implementation, with the enterprise specifics of duty roles, data security policies, and HCM security profiles provided by the enterprise.

The business objects registered as secure in the reference implementation are database tables and views.

Granting or revoking object entitlement to a particular user or group of users on an object instance or set of instances extends the base Oracle Fusion Applications security reference implementation without requiring customization of the applications that access the data.

Data Security Policies in the Security Reference Implementation

The data security policies in the reference implementation entitle the grantee (a role) to access instance sets of data based on SQL predicates in a WHERE clause.

Tip

When extending the reference implementation with additional data security policies, identify instance sets of data representing the business objects that need to be secured, rather than specific instances or all instances of the business objects.

Predefined data security policies are stored in the data security policy store, managed in the Authorization Policy Manager (APM), and described in the Oracle Fusion Applications Security Reference Manual for each offering. A data security policy for a duty role describes an entitlement granted to any job role that includes that duty role.

Warning

Review but do not modify HCM data security policies in APM except as a custom implementation. Use the HCM Manage Data Role And Security Profiles task to generate the necessary data security policies and data roles.

The reference implementation only enforces a portion of the data security policies in business intelligence that is considered most critical to risk management without negatively affecting performance. For performance reasons it is not practical to secure every level in every dimension. Your enterprise may have a different risk tolerance than assumed by the security reference implementation.

HCM Security Profiles in the Security Reference Implementation

The security reference implementation includes some predefined HCM security profiles for initial usability. For example, a predefined HCM security profile allows line managers to see the people that report to them.

The IT security manager uses HCM security profiles to define the sets of HCM data that can be accessed by the roles that are provisioned to users

Data Roles

The security reference implementation includes no predefined data roles to ensure a fully secured initial Oracle Fusion Applications environment.

The security reference implementation includes data role templates that you can use to generate a set of data roles with entitlement to perform predefined business functions within data dimensions such as business unit. Oracle Fusion Payables invoicing and expense management are examples of predefined business functions. Accounts Payable Manager - US is a data role you might generate from a predefined data role template for payables invoicing if you set up a business unit called US.

HCM provides a mechanism for generating HCM related data roles.

Data Security: Explained

By default, users are denied access to all data.

Data security makes data available to users by the following means.

- Policies that define grants available through provisioned roles
- Policies defined in application code

You secure data by provisioning roles that provide the necessary access. Enterprise roles provide access to data through data security policies defined for the inherited application roles.

When setting up the enterprise with structures such as business units, data roles are automatically generated that inherit job roles based on data role templates. Data roles also can be generated based on HCM security profiles. Data role templates and HCM security profiles enable defining the instance sets specified in data security policies.

When you provision a job role to a user, the job role implicitly limits data access based on the data security policies of the inherited duty roles. When you provision a data role to a user, the data role explicitly limits the data access of the inherited job role to a dimension of data.

Data security consists of privileges conditionally granted to a role and used to control access to the data. A privilege is a single, real world action on a single business object. A data security policy is a grant of a set of privileges to a principal on an object or attribute group for a given condition. A grant authorizes a role, the grantee, to actions on a set of database resources. A database resource is an object, object instance, or object instance set. An entitlement is one or more allowable actions applied to a set of database resources.

Data is secured by the following means.

Data security feature	Does what?
Data security policy	Grants access to roles by means of entitlement
Role	Applies data security policies with conditions to users through role provisioning.
Data role template	Defines the data roles generated based on enterprise setup of data dimensions such as business unit.
HCM security profile	Defines data security conditions on instances of object types such as person records, positions, and document types without requiring users to enter SQL code
Masking	Hides private data on non-production database instances
Encryption	Scrambles data to prevent users without decryption authorization from reading secured data

The sets of data that a user can access via roles are defined in Oracle Fusion Data Security. Oracle Fusion Data Security integrates with Oracle Platform Security Services (OPSS) to entitle users or roles (which are stored externally) with access to data. Users are granted access through the entitlement assigned to the roles or role hierarchy with which the user is provisioned. Conditions are WHERE clauses that specify access within a particular dimension, such as by business unit to which the user is authorized.

Data Security Policies

Data security policies articulate the security requirement "Who can do What on Which set of data," where 'Which set of data' is an entire object or an object instance or object instance set and 'What' is the object entitlement.

For example, accounts payable managers can view AP disbursements for their business unit.

Who	can do	what	on which set of data
Accounts payable managers	view	AP disbursements	for their business unit

A data security policy is a statement in a natural language, such as English, that typically defines the grant by which a role secures business objects. The grant records the following.

- Table or view
- Entitlement (actions expressed by privileges)
- Instance set (data identified by the condition)

For example, disbursement is a business object that an accounts payable manager can manage by payment function for any employee expenses in the payment process.

Note

Some data security policies are not defined as grants but directly in applications code. The security reference manuals for Oracle Fusion Applications offerings differentiate between data security policies that define a grant and data security policies defined in Oracle Fusion applications code.

A business object participating in a data security policy is the database resource of the policy.

Data security policies that use job or duty roles refer to data security entitlement.

For example, the data security policy for the Accounts Payable Manager job role refers to the view action on AP disbursements as the data security entitlement.

Important

The duty roles inherited by the job role can be moved and job roles reassembled without having to modify the data security.

As a security guideline, data security policies based on user session context should entitle a duty role. This keeps both function and data security policies at the duty role level, thus reducing errors.

For example, a Sales Party Management Duty can update Sales Party where the provisioned user is a member of the territory associated with the sales account. Or the Sales Party Management Duty can update Sales Party where the provisioned user is in the management chain of a resource who is on the sales account team with edit access. Or the Participant Interaction Management

Duty can view an Interaction where the provisioned user is a participant of the Interaction.

For example, the Disbursement Process Management Duty role includes entitlement to build documents payable into payments. The Accounts Payable Manager job role inherits the Disbursement Process Management Duty role. Data security policies for the Disbursement Process Management Duty role authorize access to data associated with business objects such as AP disbursements within a business unit. As a result, the user provisioned with the Accounts Payable Manager job role is authorized to view AP disbursements within their business unit.

A data security policy identifies the entitlement (the actions that can be made on logical business objects or dashboards), the roles that can perform those actions, and the conditions that limit access. Conditions are readable WHERE clauses. The WHERE clause is defined in the data as an instance set and this is then referenced on a grant that also records the table name and required entitlement.

Data Roles

Data roles are implemented as job roles for a defined set of data.

A data role defines a dimension of data within which a job is performed. The data role inherits the job role that describes the job. For example, a data role entitles a user to perform a job in a business unit.

The data role inherits abstract or job roles and is granted data security privileges. Data roles carry the function security privileges inherited from job roles and also the data security privilege granted on database objects and table rows.

For example, an accounts payables specialist in the US Business Unit may be assigned the data role Accounts Payables Specialist - US Business Unit. This data role inherits the job role Accounts Payables Specialist and grants access to transactions in the US Business Unit.

A data role may be granted entitlement over a set people.

For example, a Benefits Administrator A-E is allowed to administer benefits for all people that have a surname that begins with A-E.

Data roles are created using data role templates. You create and maintain data roles in the Authorization Policy Manager (APM). Use the Manage Data Roles and Security Profiles task to create and maintain HCM data roles in Oracle Fusion HCM.

HCM Security Profiles

HCM security profiles are used to secure HCM data, such as people and departments. You use HCM security profiles to generate grants for an enterprise role. The resulting data role with its role hierarchy and grants operates in the same way as any other data role.

For example, an HCM security profile identifies all employees in the Finance division.

Applications outside of HCM can use the HCM Data Roles UI pages to give their roles access to HR people.

Masking and Encryption

Oracle Fusion Applications uses masking to protect sensitive data from view by unauthorized users. Encryption APIs mask sensitive fields in applications user interfaces. Additionally, Oracle Data Masking is available for masking data in non-production instances and Oracle Transparent Data Encryption is available for protecting data in transit or in backups independent of managing encryption keys.

Securing Data Access: Points to Consider

Oracle Fusion Applications supports securing data through role-based access control (RBAC) by the following methods.

Method of securing data	Reason	Example
Data roles apply explicit data security policies on job and abstract roles	Appropriate for job and abstract roles that should only access a subset of data, as defined by the data role template that generates the data role or by HCM security profiles.	Accounts Payable Manager - US data role to provide an accounts payable manager in the US business unit with access to invoices in the US business unit.
Data security policies	Define data access for application roles and provide inheriting job and abstract roles with implicit data security	Projects

If a user has access to the same function through different roles that access different data sets, then the user has access to a union of those data sets.

When a runtime session is created, Oracle Platform Security Services (OPSS) propagates only the necessary user to role mapping based on Oracle Fusion Data Security grants. A grant can specify entitlement to the following.

- Specific rows of data (data object) identified by primary key
- Groups of data (instance set) based on a predicate that names a particular parameter
- Data objects or instance sets based on runtime user session variables

Data is either identified by the primary key value of the row in the table where the data is stored. Or data is identified by a rule (SQL predicate) applied to the WHERE clause of a query against the table where the data is stored.

Grants

Oracle Fusion Data Security can be used to restrict the following.

- Rows that are returned by a given query based on the intended business operation
- Actions that are available for a given row

Grants control which data a user can access.

Note

Attribute level security using grants requires a data security policy to secure the attribute and the entitlement check enforces that policy.

A grant logically joins a user or role and an entitlement with a static or parameterized object instance set. For example, `REGION='WEST'` is a static object instance set and `REGION=&GRANT_ALIAS.PARAMETER1` is a parameterized object instance set. In the context of a specific object instance, grants specify the allowable actions on the set of accessible object instances. In the database, grants are stored in `FND_GRANTS` and object instance sets are stored in `FND_OBJECT_INSTANCE_SETS`. Object access can be tested using the privilege check application programming interface (API).

Securing a Business Object

A business object is a logical entity that is typically implemented as a table or view, and corresponds to a physical database resource. The data security policies of the security reference implementation secure predefined database resources. Use the Manage Data Security Policies task to define and register other database resources.

Data security policies identify sets of data on the registered business object and the actions that may be performed on the business object by a role. The grant can be made by data instance, instance set or at a global level..

Note

Use parameterized object instance sets whenever feasible to reduce the number of predicates the database parses and the number of administrative intervention required as static object instances sets become obsolete. In HCM, security profiles generate the instance sets.

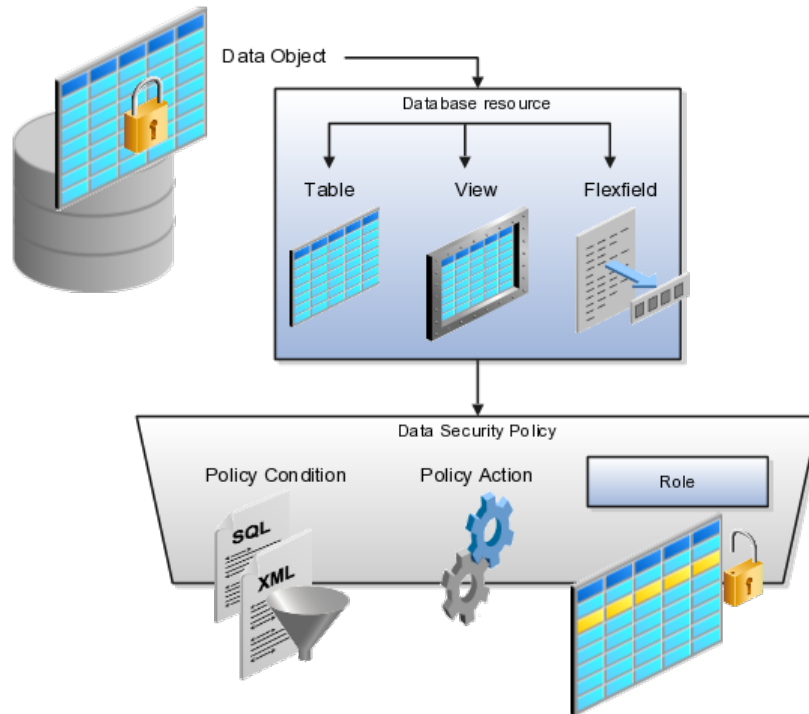
Manage Data Security Policies

Database Resources and Data Security Policies: How They Work Together

A data security policy applies a condition and allowable actions to a database resource for a role. When that role is provisioned to a user, the user has access to data defined by the policy. In the case of the predefined security reference implementation, this role is always a duty role. Data roles generated to inherit the job role based on data role templates limit access to database resources in a particular dimension, such as the US business unit.

The database resource defines an instance of a data object. The data object is a table, view, or flexfield.

The following figure shows the database resource definition as the means by which a data security policy secures a data object. The database resource names the data object. The data security policy grants to a role access to that database resource based on the policy's action and condition.



Database Resources

A database resource specifies access to a table, view, or flexfield that is secured by a data security policy.

- Name providing a means of identifying the database resource
- Data object to which the database resource points

Data Security Policies

Data security policies consist of actions and conditions for accessing all, some, or a single row of a database resource.

- Condition identifying the instance set of values in the data object
- Action specifying the type of access allowed on the available values

Note

If the data security policy needs to be less restrictive than any available database resource for a data object, define a new data security policy.

Actions

Actions correspond to privileges that entitle kinds of access to objects, such as view, edit, or delete. The actions allowed by a data security policy include all or a subset of the actions that exist for the database resource.

Conditions

A condition is either a SQL predicate or an XML filter. A condition expresses the values in the data object by a search operator or a relationship in a tree hierarchy. A SQL predicate, unlike an XML filter, is entered in a text field in the

data security user interface pages and supports more complex filtering than an XML filter, such as nesting of conditions or sub queries. An XML filter, unlike a SQL predicate, is assembled from choices in the UI pages as an AND statement.

Tip

An XML filter can be effective in downstream processes such as business intelligence metrics. A SQL predicate cannot be used in downstream metrics.

Manage Role Templates

Data Role Templates: Explained

You use data role templates to generate data roles. You generate such data roles, and create and maintain data role templates in the Authorization Policy Manager (APM).

Note

HCM data roles are generated using the Manage Data Roles and Security Profiles task, which uses HCM security profiles, not data role templates, to define the data security condition.

The following attributes define a data role template.

- Template name
- Template description
- Template group ID
- Base roles
- Data dimension
- Data role naming rule
- Data security policies

The data role template specifies which base roles to combine with which dimension values for a set of data security policies. The base roles are the parent job or abstract roles of the data roles.

Note

Abstract, job, and data roles are enterprise roles in Oracle Fusion Applications. Oracle Fusion Middleware products such as Oracle Identity Manager (OIM) and Authorization Policy Manager (APM) refer to enterprise roles as external roles. Duty roles are implemented as application roles in APM and scoped to individual Oracle Fusion Applications.

The dimension expresses stripes of data, such as territorial or geographic information you use to partition enterprise data. For example, business units are a type of dimension, and the values picked up for that dimension by the data role template as it creates data roles are the business units defined for your enterprise. The data role template constrains the generated data roles with grants of entitlement to access specific data resources with particular actions. The data

role provides provisioned users with access to a dimensional subset of the data granted by a data security policy.

An example of a dimension is a business unit. An example of a dimension value is a specific business unit defined in your enterprise, such as US. An example of a data security policy is a grant to access a business object such as an invoice with a view entitlement.

When you generate data roles, the template applies the values of the dimension and participant data security policies to the group of base roles.

The template generates the data roles using a naming convention specified by the template's naming rule. The generated data roles are stored in the Lightweight Directory Access Protocol (LDAP) store. Once a data role is generated, you provision it to users. A user provisioned with a data role is granted permission to access the data defined by the dimension and data security grant policies of the data role template.

For example, a data role template contains an Accounts Payable Specialist role and an Accounts Payable Manager role as its base roles, and region as its dimension, with the dimension values US and UK. The naming convention is [base-role-name]:[DIMENSION-CODE-NAME]. This data role template generates four data roles.

- Accounts Payable Specialist - US (business unit)
- Accounts Payable Specialist - UK (business unit)
- Accounts Payable Manager - US (business unit)
- Accounts Payable Manager - UK (business unit)

Making Changes To Data Role Templates

If you add a base role to an existing data role template, you can generate a new set of data roles. If the naming rule is unchanged, existing data roles are overwritten.

If you remove a base role from a data role template and regenerate data roles, a resulting invalid role list gives you the option to delete or disable the data roles that would be changed by that removal.

Making Changes to Dimension Values

If you add a dimension value to your enterprise that is used by a data role template, you must regenerate roles from that data role template to create a data role for the new dimension. For example if you add a business unit to your enterprise, you must regenerate data roles from the data role templates that include business unit as a dimension.

If you add or remove a dimension value from your enterprise that is used to generate data roles, regenerating the set of data roles adds or removes the data roles for those dimension values. If your enterprise has scheduled regeneration as an Oracle Enterprise Scheduler Services process, the changes are made automatically.

For information on working with data role templates, see the Oracle Fusion Middleware Administrator's Guide for Authorization Policy Manager.

Manage Data Role and Security Profiles

HCM Data Roles: Explained

HCM data roles, like all Oracle Fusion Applications data roles, define data security policies: they enable users to perform a set of tasks, using identified menus, menu items, and pages in application user interfaces, on a specified set of data within those user interfaces. Because data roles are specific to the enterprise, no predefined HCM data roles exist.

How HCM Data Roles Differ from Other Data Roles

HCM data roles differ from other data roles in the following ways:

- You create and maintain HCM data roles outside Oracle Identity Management (OIM) and the Oracle Fusion Middleware Authorization Policy Manager (APM), and they are not based on data role templates.

Although HCM data roles are visible in the Oracle Fusion Middleware APM, they must not be maintained there.

- A single HCM data role can enable access to data of multiple types.

You identify the data that users can access in HCM security profiles. You can create security profiles for the person, organization, position, country, legislative data group (LDG), document type, payroll, and payroll flow objects.

Selecting the Job Role

Each HCM data role is associated with a single job role, which you select from the list of enterprise roles. The HCM securing objects that the selected role needs to access are identified automatically, and the appropriate types of security profile are displayed. For example, if you select the job role human resource analyst, users with that job role need to access managed person, public person, organization, position, LDG, and document type data; therefore, security profiles for those object types must be included in the HCM data role. The security profile types that appear in the HCM data role vary according to the data requirements of the selected job role.

If you select a job role that requires no access to HCM data secured by security profiles, you cannot create an HCM data role.

Note

If you create custom job roles in OIM, you must add them to a locally defined role category that ends with "Job Roles"; otherwise, they do not appear in the list of job roles when you create an HCM data role. Do not add custom job roles to the predefined role category HCM - Job Roles.

Creating or Selecting the Security Profiles

You can either create new security profiles or use existing security profiles. For each object type, you can include only one security profile in an HCM data role.

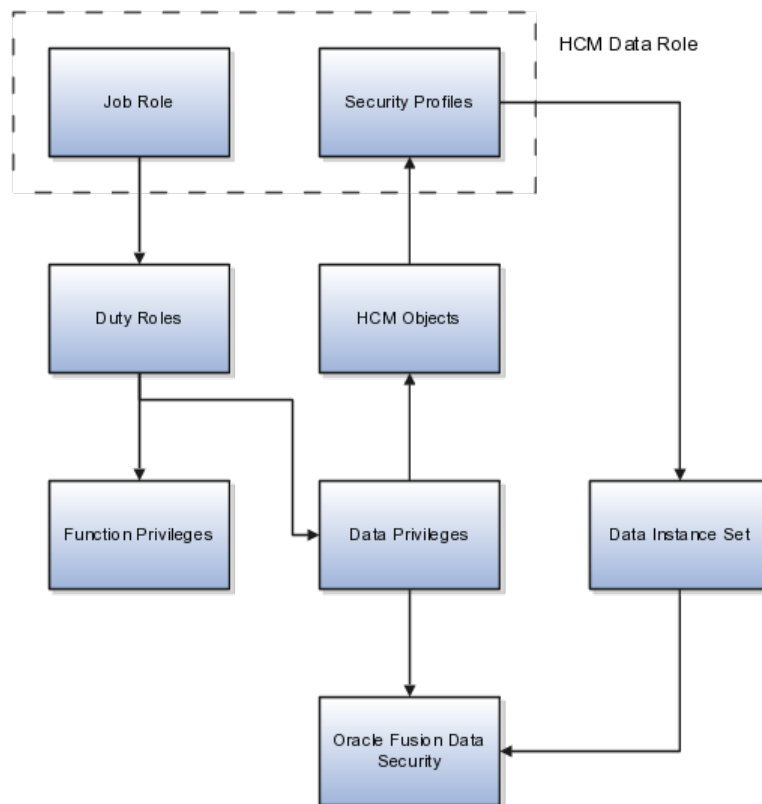
Users with Multiple HCM Data Roles

When users have multiple HCM data roles, the data security policies arising from each role remain separate. For example, being able to promote or terminate workers in the purchasing department in one HCM data role and view contact details of all workers in the sales department in another HCM data role does not enable a user to promote or terminate workers in the sales department.

Components of the HCM Data Role

The following figure summarizes how the components of the HCM data role contribute to Oracle Fusion Data Security for the data role. Oracle Fusion Data Security comprises the data security policies for data roles that are generated automatically when data roles are created.

The job role that you select in the HCM data role inherits multiple duty roles. Each duty role has one or more function privileges and related data privileges, from which the relevant HCM objects are identified. The specific instances of the objects required by this HCM data role are identified in security profiles and stored in a data instance set. Data security policy data is created automatically in Oracle Fusion Data Security when you create the data role.



For example, the human resource specialist job role inherits the employee hire and worker promotion duty roles, among many others. The inherited duty roles provide both function privileges, such as Hire Employee, Rehire Employee, and Promote Workers, and data privileges to HCM objects, such as person and assignment. The specific instances of those objects required by this HCM data role, such as people with assignments in a specified legal employer and department, are identified in security profiles.

HCM Security Profiles: Explained

A security profile defines the criteria that identify instances of a human capital management (HCM) object. For example, a person security profile defines the criteria that identify one or more person records, and a position security profile defines the criteria that identify one or more positions. When you include a security profile in an HCM data role and provision the data role to a user, that user can access the data instances identified in the security profile. The type of access available to the user (for example whether the user can edit or simply view the data) depends on the job role identified in the HCM data role.

HCM Object Types

You can create security profiles for the following HCM object types:

- Person
 - Managed person
 - Public person
- Organization
- Position
- Legislative data group (LDG)
- Country
- Document type
- Payroll
- Payroll flow

All security profile definitions for these HCM objects are eventually visible in the Oracle Fusion Middleware Authorization Policy Manager (APM). The name of the security profile's data instance set in the Oracle Fusion Middleware APM is derived from the name of the security profile and the relevant object type. For example, if the security profile name is Manager Hierarchy, then the data instance set for the object PER_ALL_PEOPLE_F is HCM:PER:PER_ALL_PEOPLE_F:Manager Hierarchy.

You must use the Oracle Fusion Human Capital Management interfaces, which are designed for ease of use and access, to create and maintain security profiles; do not use the Oracle Fusion Middleware APM to maintain security profiles for these HCM objects.

Security Criteria in HCM Security Profiles

In any HCM security profile, you specify the criteria that identify data instances of the relevant type. For example, in an organization security profile, you can identify organizations by organization hierarchy, by organization classification, or by listing organizations to include in or exclude from the security profile. All of the criteria in an HCM security profile apply when the data instance set is defined; for example, if you identify organizations by both organization hierarchy and organization classification, then both sets of criteria apply, and only those organizations that satisfy all criteria belong to the data instance set.

Predefined HCM Security Profiles

The following HCM security profiles are predefined:

Security Profile Name	HCM Security Profile Type	Description
View All People	Person	Identifies all person records in the enterprise
View Own Record	Person	Identifies the signed-on user's own person record and the person records of that user's contacts
View Manager Hierarchy	Person	Identifies the signed-on user's line manager hierarchy
View All Workers	Person	Identifies the person records of all people who have a work relationship in the enterprise
View All Organizations	Organization	Identifies all organizations in the enterprise
View All Positions	Position	Identifies all positions in the enterprise
View All Legislative Data Groups	LDG	Identifies all LDGs in the enterprise
View All Countries	Country	Identifies all countries in the FND_TERRITORIES table
View All Document Types	Document Type	Identifies all document types in the enterprise
View All Payrolls	Payroll	Identifies all payrolls in the enterprise
View All Flows	Payroll Flow	Identifies all payroll flows in the enterprise

You can include the predefined security profiles in any HCM data role, but you cannot edit them. Note also that the **View all** option is disabled in any security profile that you create; this restriction exists because predefined security profiles exist for this requirement.

Creating Security Profiles

You can create security profiles either individually or as part of the process of creating an HCM data role. If you have standard requirements, it may be more efficient to create the security profiles individually and include them in appropriate HCM data roles.

Reusability and Inheritance of Security Profiles

Regardless of how you create them, all security profiles are reusable; they do not belong to particular HCM data roles, and you can include them in any HCM data role for which they define an appropriate data instance set.

You can include security profiles in other security profiles. For example, you can include an organization security profile:

- In a person security profile, to secure person records by department, business unit, or legal employer
- In a position security profile, to secure positions by department or business unit

Therefore, one security profile can inherit the data instance set defined by another.

Assigning Security Profiles to Abstract Roles: Explained

Abstract roles define a worker's role in the enterprise independently of the job that the worker is hired to do.

These abstract roles are predefined in Oracle Fusion Human Capital Management:

- Line manager
- Employee
- Contingent worker

Enabling Data Access for Abstract Roles

Typically, you create role mappings during implementation to provision abstract roles automatically to eligible workers. Although users with these roles may be able to sign in to Oracle Fusion Applications and navigate to tasks of interest, they have no automatic access to data. For example, employees can navigate to the Person Gallery but cannot view portraits or see lists of person names in product interfaces, and line managers can navigate to the Manager Resources Dashboard but can see no data for their organizations. To enable users with abstract roles to access relevant HCM data, you must assign security profiles to those abstract roles.

Predefined Security Profiles to Assign to Abstract Roles

To enable users with abstract roles to access relevant data, you assign the following predefined security profiles directly to the employee, contingent worker, and line manager abstract roles.

Security Profile Type	Employee	Contingent Worker	Line Manager
Person	View Own Record	View Own Record	View Manager Hierarchy
Public person	View All Workers	View All Workers	View All Workers
Organization	View All Organizations	View All Organizations	View All Organizations
Position	View All Positions	View All Positions	View All Positions
Legislative data group	View All Legislative Data Groups	View All Legislative Data Groups	View All Legislative Data Groups
Country	View All Countries	View All Countries	View All Countries
Document type	View All Document Types	View All Document Types	View All Document Types
Payroll Flow	Not applicable	Not applicable	View All Flows

After implementation, you may want to change aspects of this data access. For example, you may want to create your own security profiles and assign those directly to abstract roles; however, you must remember that such changes apply to all users who have the abstract role.

HCM Data Roles

Users who have abstract roles are likely to gain additional data access by means of HCM data roles that you define for their job roles. For example, you may create an HCM data role for human resource specialists to enable them to access

the person records of all workers in a legal employer. Such data access is in addition to any data access provided by abstract roles.

Assigning Security Profiles to Abstract Roles: Worked Example

This example shows how to assign predefined security profiles to the employee, contingent worker, and line manager abstract roles.

Searching for the Employee Abstract Role

1. On the All Tasks tab of the Overview page of the Setup and Maintenance work area, search for the task Manage Data Role and Security Profiles.
2. In the Search Results region, click **Go to Task**.
3. On the Manage Data Roles and Security Profiles page, enter the abstract-role name Employee in the **Role** field. Click **Search**.
4. In the Search Results region, highlight the entry for the predefined Employee role and click **Assign**.

Assigning Security Profiles to the Employee Abstract Role

1. On the Assign Data Role: Security Criteria page, select the security-profile values shown in the following table. These are the security profiles that are typically assigned to the employee role. You may see a subset of these security profiles, depending on the combination of product offerings that you are implementing.

Field	Value
Organization Security Profile	View All Organizations
Position Security Profile	View All Positions
Country Security Profile	View All Countries
LDG Security Profile	View All Legislative Data Groups
Person Security Profile (Person section)	View Own Record
Person Security Profile (Public Person section)	View All Workers
Document Type Security Profile	View All Document Types

2. Click **Review**.
3. On the Assign Data Role: Review page, click **Submit**.
4. On the Manage Data Roles and Security Profiles page, search again for the predefined Employee role.
5. In the Search Results region, confirm that a green check mark appears in the **Security Profiles** column for the Employee role. The check mark confirms that security profiles are assigned to the role.

Repeat the steps in Searching for the Employee Abstract Role and Assigning Security Profiles to the Employee Abstract Role for the predefined Contingent Worker role.

Searching for the Line Manager Abstract Role

1. On the Manage Data Roles and Security Profiles page, enter the abstract-role name Line Manager in the **Role** field. Click **Search**.
2. In the Search Results region, highlight the entry for the predefined Line Manager role and click **Assign**.

Assigning Security Profiles to the Line Manager Abstract Role

1. On the Assign Data Role: Security Criteria page, select the security-profile values shown in the following table. These are the security profiles that are typically assigned to the line manager role. You may see a subset of these security profiles, depending on the combination of product offerings that you are implementing.

Field	Value
Organization Security Profile	View All Organizations
Position Security Profile	View All Positions
LDG Security Profile	View All Legislative Data Groups
Person Security Profile (Person section)	View Manager Hierarchy
Person Security Profile (Public Person section)	View All Workers
Document Type Security Profile	View All Document Types
Payroll Flow	View All Flows

2. Click **Review**.
3. On the Assign Data Role: Review page, click **Submit**
4. On the Manage Data Roles and Security Profiles page, search again for the predefined Line Manager role.
5. In the search results, confirm that a green check mark appears in the **Security Profiles** column for the Line Manager role. The check mark confirms that security profiles are assigned to the role.

Define Users for Project Financial Management

Securing Identities and Users: Points To Consider

Identity covers all aspects of an entity's existence within the contexts in which it is used. The identity of an enterprise user consists of HR attributes, roles, resources, and relationships.

HR attributes include identifying information about a user that is relatively static and well understood, such as first and last name, title, and job function.

Roles are part of a user's identity and define the user's purpose and responsibilities.

Within identity management, resources define what a user can and does do. In an enterprise, this typically translates into what resources a user has access to, what privileges they have on that resource, and what they have been doing on that resource. Resources can be application accounts or physical devices such as laptops or access cards. The enterprise owns the resources, secures them, and manages access to the resources by managing the user's identity and access.

Relationships establish the portion of user identities that involve organizational transactions such as approvals.

An Oracle Fusion Applications user and corresponding identity are usually created in a single transaction, such as when a worker is created in Human Resources (HR). That transaction automatically triggers provisioning requests for the user based on role provisioning rules.

User accounts for some identities that are not employees, such as partner contacts, may be created in a later transaction using an identity that is already created in the identity store. Supplier contacts are created in the Supplier Model, not HR.

Stores

Various locations store identity and user data.

Identity data consists of the following.

- HR person records
- Oracle Fusion Trading Community Model party records

In Oracle Fusion Applications, identities and users correspond one to one, but not all identities correspond to a user, and not all users are provisioned with an identity. Some identities stored in HR and Trading Community Model may not be provisioned to user accounts and therefore are not synchronized with Oracle Identity Management (OIM). For example, a contact for a prospective customer is an identity in Trading Community Model but may not be provisioned with a user account in OIM. Some users stored in the Lightweight Directory Access Protocol (LDAP) store may not be provisioned with identities. For example, system user accounts used to run Web services to integrate third party services with Oracle Fusion Applications are not associated with a person record in HR or Trading Community Model. Some identifying credentials such as name, department, e-mail address, manager, and location are stored with user data in the LDAP store.

Importing Users

You can import users or user attributes in bulk from existing legacy identity and user stores.

Your tasks may include the following.

- Create users in bulk

- Update specific attributes for all users, such as postal code
- Link users to HR or Trading Community Model persons
- Monitor progress of the import process
- Correct errors & re-import
- Export users in bulk
- Import and export users using a standard plain text data interchange format like Lightweight Data Interchange Format (LDIF)

You can reserve a specific user name not currently in use for use in the future, or release a reserved username from the reservation list and make it available for use. Between a user registration request and approved registration, Oracle Fusion Applications holds the requested user name on the reservation list, and releases the name if an error occurs in the self-registration process or the request is rejected. Self-registration processes check the reservation list for user name availability and suggest alternative names.

Provisioning Events

New identities, such as new hires, trigger user and role provisioning events. In addition to user creation tasks, other tasks, such as Promote Worker or Transfer Worker, result in role provisioning and recalculation based on role provisioning rules.

When an identity's attributes change, you may need to provision the user with different roles. Role assignments may be based on job codes, and a promotion triggers role provisioning changes. Even if the change in the identities attributes requires no role assignment change, such as with a name change, OIM synchronizes the corresponding user information in the LDAP store.

Deactivating or terminating an identity triggers revocation of some roles to end all assignments, but may provision new roles needed for activities, such as a pay stub review. If the corresponding user for the identity was provisioned with a buyer role, terminating the identity causes the user's buyer record in Procurement to be disabled, just as the record was created when the user was first provisioned with the buyer role.

Notifications and Audits

Oracle Fusion Applications provides mechanisms for notifying and auditing requests or changes affecting identities and users.

Oracle Fusion Applications notifies requestors, approvers, and beneficiaries when a user account or role is provisioned. For example, when an anonymous user registers as a business-to-customer (B2C) user, the B2C user must be notified of the registration activation steps, user account, password and so on once the approver (if applicable) has approved the request and the user is registered in the system.

User ID and GUID attributes are available in Oracle Fusion Applications session information for retrieving authenticated user and identity data.

End user auditing data is stored in database WHO columns and used for the following activities.

- Setting up sign-in audit
- Using the application monitor
- Notifying of unsuccessful sign ins
- Sign-in audit reports

You can conduct real time audits that instantiate a runtime session and impersonate the target user (with the proxy feature) to test what a user has access to under various conditions such as inside or outside firewall and authentication level.

For information on configuring audit policies and the audit store, see the Oracle Fusion Applications Administrator's Guide.

Delegated Administration

You can designate local administrators as delegated administrators to manage a subset of users and roles.

Delegated administrators can be internal or external persons who are provisioned with a role that authorizes them to handle provisioning events for a subset of users and roles.

For example, internal delegated administrators could be designated to manage users and roles at the division or department level. External delegated administrators could be designated to manage users and roles in an external organization such as a primary supplier contact managing secondary users within that supplier organization.

You can also define delegated administration policies based on roles. You authorize users provisioned with specific roles named in the policy to request a subset of roles for themselves if needed, such as authorizing a subset of roles for a subset of people. For example, the policy permits a manager of an Accounts Payables department to approve a check run administrator role for one of their subordinates, but prohibits the delegated administrator from provisioning a budget approver role to the subordinate.

Credentials

You activate or change credentials on users by managing them in Oracle Identity Management (OIM)

Applications themselves must be credentialed to access one another.

Oracle Fusion Applications distinguishes between user identities and application identities (APPID). Predefined application identities serve to authorize jobs and transactions that require higher privileges than users.

For example, a payroll manager may submit a payroll run. The payroll application may need access to the employee's taxpayer ID to print the payslip.

However, the payroll manager is not authorized to view taxpayer IDs in the user interface as they are considered personally identifiable information (PII).

Calling applications use application identities (APPID) to enable the flow of transaction control as it moves across trust boundaries. For example, a user in the Distributed Order Orchestration product may release an order for shipping. The code that runs the Pick Notes is in a different policy store than the code that releases the product for shipment. When the pick note printing program is invoked it is the Oracle Fusion Distributed Order Orchestration Application Development Framework (ADF) that is invoking the program and not the end user.

Manage HCM Role Provisioning Rules

Role Provisioning and Deprovisioning: Explained

A user's access to data and functions depends on the user's roles: users have one or more roles that enable them to perform the tasks required by their jobs or positions. Roles must be provisioned to users; otherwise, users have no access to data or functions.

Role Provisioning Methods

Roles can be provisioned to users:

- Automatically
- Manually, using delegated administration:
 - Users such as line managers and human resource specialists can provision roles manually to other users.
 - Users can request roles for themselves.

For both automatic and manual role provisioning, you create a role mapping to identify when a user becomes eligible for a role.

Oracle Identity Management (OIM) can be configured to notify users when their roles change; notifications are not issued by default.

Role Types

Data roles, abstract roles, and job roles can be provisioned to users. Roles available for provisioning include predefined roles, HCM data roles, and roles created using OIM.

Automatic Role Provisioning

A role is provisioned to a user automatically when at least one of the user's assignments satisfies the conditions specified in the relevant role-mapping

definition. The provisioning occurs when the assignment is either created or updated. For example, when a person is promoted to a management position, the line manager role is provisioned automatically to the person if an appropriate role mapping exists. Any change to a person's assignment causes the person's automatically provisioned roles to be reviewed and updated as necessary.

Role Deprovisioning

Automatically provisioned roles are deprovisioned automatically as soon as a user no longer satisfies the role-mapping conditions. For example, a line manager role that is provisioned to a user automatically is deprovisioned automatically when the user ceases to be a line manager.

Automatically provisioned roles can be deprovisioned manually at any time.

Manually provisioned roles are deprovisioned automatically only when all of the user's work relationships are terminated; in all other circumstances, users retain manually provisioned roles until they are deprovisioned manually.

Changes to Assignment Managers

When a person's line manager is changed, the roles of both new and previous line managers are updated as necessary. For example, if the person's new line manager now satisfies the conditions in the role mapping for the line manager role, and the role is one that is eligible for autoprovisioning, then that role is provisioned automatically to the new line manager. Similarly, if the previous line manager no longer satisfies the conditions for the line manager role, then that role is deprovisioned automatically.

Roles at Termination

When a work relationship is terminated, all automatically provisioned roles for which the user does not qualify in other work relationships are deprovisioned automatically. Manually provisioned roles are deprovisioned automatically only if the user has no other work relationships; otherwise, the user retains all manually provisioned roles until they are deprovisioned manually.

Automatic deprovisioning can occur either as soon as the termination is submitted or approved or on the day after the termination date. The user who is terminating the work relationship selects the appropriate deprovisioning date.

Role mappings can provision roles to users automatically at termination. For example, the locally defined roles Retiree and Beneficiary could be provisioned to users at termination based on assignment status and person type values.

If a termination is later reversed, roles that were deprovisioned automatically at termination are reinstated and post-termination roles are deprovisioned automatically.

Date-Effective Changes to Assignments

Automatic role provisioning and deprovisioning are based on current data. For a future-dated transaction, such as a future promotion, role changes are identified and role provisioning occurs on the day the changes take effect, not when the change is entered. The process Send Pending LDAP Requests identifies future-

dated transactions and manages role provisioning and deprovisioning at the appropriate time. Note that such role-provisioning changes are effective as of the system date; therefore, a delay of up to 24 hours may occur before users in other time zones acquire the access for which they now qualify.

Role Mappings: Explained

User access to data and functions is determined by abstract, job, and data roles, which are provisioned to users either automatically or manually. To enable a role to be provisioned to users, you define a relationship, known as a mapping, between the role and a set of conditions, typically assignment attributes such as department, job, and system person type. In a role mapping, you can select any role stored in the Lightweight Directory Access Protocol (LDAP) directory, including Oracle Fusion Applications predefined roles, roles created in Oracle Identity Management (OIM), and HCM data roles.

The role mapping can support:

- Automatic provisioning of roles to users
- Manual provisioning of roles to users
- Role requests from users
- Immediate provisioning of roles

Automatic Provisioning of Roles to Users

A role is provisioned to a user automatically if:

- At least one of the user's assignments satisfies all conditions associated with the role in the role mapping.
- You select the **Autoprovision** option for the role in the role mapping.

For example, for the HCM data role Sales Manager Finance Department, you could select the **Autoprovision** option and specify the following conditions.

Attribute	Value
Department	Finance Department
Job	Sales Manager
Assignment Status	Active

The HCM data role Sales Manager Finance Department is provisioned automatically to users with at least one assignment that satisfies all of these conditions.

Automatic role provisioning occurs as soon as the user is confirmed to satisfy the role-mapping conditions, which can be when the user's assignment is either created or updated. The provisioning process also removes automatically provisioned roles from users who no longer satisfy the role-mapping conditions.

Note

The automatic provisioning of roles to users is effectively a request to OIM to provision the role. OIM may reject the request if it violates segregation-of-duties rules or fails a custom OIM approval process.

Manual Provisioning of Roles to Users

Users such as human resource (HR) specialists and line managers can provision roles manually to other users; you create a role mapping to identify roles that can be provisioned in this way.

Users can provision a role to other users if:

- At least one of the assignments of the user who is provisioning the role (for example, the line manager) satisfies all conditions associated with the role mapping.
- You select the **Requestable** option for the role in the role mapping.

For example, for the HCM data role Quality Assurance Team Leader, you could select the **Requestable** option and specify the following conditions.

Attribute	Value
Manager with Reports	Yes
Assignment Status	Active

Any user with at least one assignment that satisfies both of these conditions can provision the role Quality Assurance Team Leader manually to other users, who are typically direct and indirect reports.

If the user's assignment subsequently changes, there is no automatic effect on roles provisioned by this user to others; they retain manually provisioned roles until either all of their work relationships are terminated or the roles are manually deprovisioned.

Role Requests from Users

Users can request roles when reviewing their own account information; you create a role mapping to identify roles that users can request for themselves.

Users can request a role if:

- At least one of their own assignments satisfies all conditions associated with the role mapping.
- You select the **Self-requestable** option for the role in the role mapping.

For example, for the Expenses Reporting role you could select the **Self-requestable** option and specify the following conditions.

Attribute	Value
Department	ABC Department
System Person Type	Employee
Assignment Status	Active

Any user with at least one assignment that satisfies all of these conditions can request the role. The user acquires the role either immediately or, if approval is required, once the request is approved. Self-requested roles are classified as manually provisioned.

If the user's assignment subsequently changes, there is no automatic effect on self-requested roles. Users retain manually provisioned roles until either all of their work relationships are terminated or the roles are manually deprovisioned.

Immediate Provisioning of Roles

When you create a role mapping, you can apply autoprovisioning from the role mapping itself.

In this case, all assignments and role mappings in the enterprise are reviewed. Roles are:

- Provisioned immediately to all users who do not currently have roles for which they are eligible
- Deprovisioned immediately from users who are no longer eligible for roles that they currently have

Immediate autoprovisioning from the role mapping enables bulk automatic provisioning of roles to a group of users who are identified by the role-mapping conditions. For example, if you create a new department after a merger, you can provision relevant roles to all users in the new department by applying autoprovisioning immediately.

To provision roles immediately to a single user, the user's line manager or an HR specialist can autoprovision roles from that user's account.

Role-Mapping Names

The names of role mappings must be unique in the enterprise. You are recommended to devise a naming scheme that reveals the scope of each role mapping. For example:

Name	Description
Autoprovisioned Roles Sales Department	Mapping includes all roles provisioned automatically to anyone in the sales department
Benefits Specialist Autoprovisioned	Mapping defines the conditions for autoprovisioning the Benefits Specialist role
Line Manager Requestable Roles	Mapping includes all roles that a line manager can provision manually to direct and indirect reports

Role Mappings: Examples

Roles must be provisioned to users explicitly, either automatically or manually; no role is provisioned to a user by default. This topic provides some examples of typical role mappings to support automatic and manual role provisioning.

Creating a Role Mapping for Employees

You want all employees in your enterprise to have the Employee role automatically when they are hired. In addition, employees must be able to request the Expenses Reporting role when they need to claim expenses. Few employees will need this role, so you decide not to provision it automatically to all employees.

You create a role mapping called All Employees and enter the following conditions.

Attribute	Value
System Person Type	Employee
Assignment Status	Active

In the role mapping you include the:

- Employee role, and select the **Autoprovision** option
- Expenses Reporting role, and select the **Self-requestable** option

You could create a similar role mapping for contingent workers called All Contingent Workers, where you would set the system person type to contingent worker.

Note

If the Employee and Contingent Worker roles are provisioned automatically, pending workers acquire them when their periods of employment or placements start. If they need roles before then, you create a separate role mapping for the pending worker system person type.

Creating a Role Mapping for Line Managers

Any type of worker can be a line manager in the sales business unit. You create a role mapping called Line Manager Sales BU and enter the following conditions.

Attribute	Value
Business Unit	Sales
Assignment Status	Active
Manager with Reports	Yes

You include the Line Manager role and select the **Autoprovision** option. This role mapping ensures that the Line Manager role is provisioned automatically to any worker with at least one assignment that matches the role-mapping conditions.

In the same role mapping, you could include roles that line managers in this business unit can provision manually to other users by selecting the roles and marking them as requestable. Similarly, if line managers can request roles for

themselves, you could include those in the same role mapping and mark them as self-requestable.

Creating a Role Mapping for Retirees

Retirees in your enterprise need a limited amount of system access to manage their retirement accounts. You create a role mapping called All Retirees and enter the following conditions.

Attribute	Value
System Person Type	Retiree
Assignment Status	Inactive

You include the locally defined role Retiree in the role mapping and select the **Autoprovision** option. When at least one of a worker's assignments satisfies the role-mapping conditions, the Retiree role is provisioned to that worker automatically.

Creating a Role Mapping for Sales Managers

Grade 6 sales managers in the sales department need the Sales Manager role. In addition, sales managers need to be able to provision the Sales Associate role to other workers. You create a role mapping called Sales Managers Sales Department and enter the following conditions.

Attribute	Value
Department	Sales
Job	Sales manager
Grade	6
Assignment Status	Active

In the role mapping, you include the:

- Sales Manager role, and select the **Autoprovision** option
- Sales Associate role, and select the **Requestable** option

Import Worker Users

Defining Security After Enterprise Setup: Points to Consider

After the implementation user has set up the enterprise, further security administration depends on the requirements of your enterprise.

The Define Security activity within the Information Technology (IT) Management business process includes the following tasks.

- Import Worker Users

- Import Partner Users
- Manage Job Roles
- Manage Duties
- Manage Application Access Controls

If no legacy users, user accounts, roles, and role memberships are available in the Lightweight Directory Access Protocol (LDAP) store, and no legacy workers are available in Human Resources (HR), the implementation user sets up new users and user accounts and provisions them with roles available in the Oracle Fusion Applications reference implementation.

If no legacy identities (workers, suppliers, customers) exist to represent people in your enterprise, implementation users can create new identities in Human Capital Management (HCM), Supplier Portal, and Oracle Sales Cloud Self Service, respectively, and associate them with users.

Before Importing Users

Oracle Identity Management (OIM) handles importing users.

If legacy employees, contingent workers, and their assignments exist, the HCM Application Administrator imports these definitions by performing the Initiate HCM Spreadsheet Load task. If user and role provisioning rules have been defined, the Initiate HCM Spreadsheet Load process automatically creates user and role provisioning requests as the workers are created.

Once the enterprise is set up, performing the Initiate HCM Spreadsheet Load task populates the enterprise with HR workers in records linked by global user ID (GUID) to corresponding user accounts in the LDAP store. If no user accounts exist in the LDAP store, the Initiate HCM Spreadsheet Load task results in new user accounts being created. Worker email addresses as an alternate input for the Initiate HCM Spreadsheet Load task triggers a search of the LDAP for user GUIDs, which may perform more slowly than entering user names.

In the security reference implementation, the HCM Application Administrator job role hierarchy includes the HCM Batch Data Loading Duty role, which is entitled to import worker identities. This entitlement provides the access necessary to perform the Initiate HCM Spreadsheet Load task in HCM.

Note

The Import Person and Organization task in the Define Trading Community Import activity imports the following resources, creates users, and links the resources to users for use in Oracle Sales Cloud.

- Internal employees
- Contingent workers
- External partner contacts
- Partner companies

- Legal entities
 - Customers
 - Consumers
-

If role provisioning rules have been defined, the Import Person and Organization task automatically provisions role requests as the users are created.

Import Users

If legacy users (identities) and user accounts exist outside the LDAP store that is being used by the Oracle Fusion Applications installation, the IT security manager has the option to import these definitions to the LDAP store by performing the Import Worker Users and Import Partner Users tasks.

If no legacy users or user accounts can be imported or exist in an LDAP repository accessible to Oracle Identity Management (OIM), the IT security manager creates users manually in OIM or uses the Initiate HCM Spreadsheet Load task to create users from imported HR workers.

Once users exist, their access to Oracle Fusion Applications is dependent on the roles provisioned to them in OIM or Human Capital Management. Use the Manage HCM Role Provisioning Rules task to define rules that determine what roles are provisioned to users.

Importing user identities from other applications, including other Oracle Applications product lines, is either a data migration or manual task. Migrating data from other Oracle Applications includes user data. For more information about importing users, see the Oracle Fusion Middleware Developer's Guide for Oracle Identity Manager.

In the security reference implementation, the IT Security Manager job role hierarchy includes the HCM Batch Data Loading Duty and the Partner Account Administration Duty. These duty roles provide entitlement to import or create users. The entitlement Load Batch Data provides the access necessary to perform the Import Worker Users task in OIM. The entitlement Import Partner entitlement provides the access necessary to perform the Import Partner Users task in OIM.

Manage Job Roles

Job and abstract roles are managed in OIM. This task includes creating and modifying job and abstract roles, but not managing role hierarchies of duties for the jobs.

Note

Manage Job Roles does not include provisioning job roles to users. Provisioning users is done in OIM, HCM, Oracle Sales Cloud, or Oracle Fusion Supplier Portal.

Roles control access to application functions and data. Various types of roles identify the functions performed by users.

The Oracle Fusion Applications security reference implementation provides predefined job and abstract roles. In some cases, the jobs defined in your enterprise may differ from the predefined job roles in the security reference implementation. The predefined roles and role hierarchies in Oracle Fusion may require changes or your enterprise may require you to create new roles. For example, you need a job role for a petty cash administrator, in addition to an accounts payable manager. The security reference implementation includes a predefined Accounts Payable Manager, and you can create a petty cash administrator role to extend the reference implementation.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Enterprise Role Management Duty role, which is entitled to manage job and abstract roles (the entitlement is Manage Enterprise Role). This entitlement provides the access necessary to perform the Manage Job Roles task in OIM.

Manage Duties

A person with a job role must be able to perform certain duties. In the Oracle Fusion Applications security reference implementation, enterprise roles inherit duties through a role hierarchy. Each duty corresponds to a duty role. Duty roles specify the duties performed within applications and define the function and data access granted to the enterprise roles that inherit the duty roles.

Managing duties includes assigning duties to job and abstract roles in a role hierarchy using Authorization Policy Manager (APM). If your enterprise needs users to perform some actions in applications coexistent with Oracle Fusion applications, you may wish to remove the duty roles that enable those actions. For details about which duty roles are specific to the products in an offering, see the Oracle Fusion Applications Security Reference Manual for each offering.

OIM stores the role hierarchy and the spanning of roles across multiple pillars or logical partitions of applications.

In cases where your enterprise needs to provide access to custom functions, it may be necessary to create or modify the duty roles of the reference implementation.

Tip

As a security guideline, use only the predefined duty roles, unless you have added new applications functions. The predefined duty roles fully represent the functions and data that must be accessed by application users and contain all appropriate entitlement. The predefined duty roles are inherently without segregation of duty violations of the constraints used by the Application Access Controls Governor.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Application Role Management Duty role, which is entitled to manage duty roles (the entitlement is Manage Application Role). This entitlement provides the access necessary to perform the Manage Duties task in APM.

Note

Product family administrators are not entitled to create role hierarchies or manage duty roles and must work with the IT security manager to make changes such as localizing a duty role to change a role hierarchy. Setup for localizations is documented in HCM documentation.

Manage Application Access Controls

Prevent or limit the business activities that a single person may initiate or validate by managing segregation of duties policies in the Application Access Controls Governor (AACG) .

Note

In AACG, segregation of duties policies are called access controls or segregation of duties controls.

In the security reference implementation, the IT Security Manager job role hierarchy includes the Segregation of Duties Policy Management Duty role, which is entitled to manage segregation of duties policies (the entitlement is Manage Segregation of Duties Policy). This entitlement provides the access necessary to perform the Manage Application Access Controls task in AACG.

Importing Worker Users: Explained

You can import workers from legacy applications to Oracle Fusion Applications using the Import Worker Users task. By enabling you to bulk-load existing data, this task is an efficient way of creating and enabling users of Oracle Fusion Applications.

The Import Worker Users Process

Importing worker users is a two-stage process:

1. When you perform the Import Worker Users task, the Initiate Spreadsheet Load page opens. On the Initiate Spreadsheet Load page, you generate and complete the Create Worker spreadsheet. You must map your data to the spreadsheet columns and provide all required attributes. Once the spreadsheet is complete, you click **Upload** in the spreadsheet to import the data to the Load Batch Data stage tables.
2. As valid data rows are imported to the Load Batch Data stage tables, the Load Batch Data process runs automatically. Load Batch Data is a generic utility for loading data to Oracle Fusion Human Capital Management from external sources. This process loads data from the Load Batch Data stage tables to the Oracle Fusion application tables.

User-Account Creation

Oracle Fusion user accounts are created automatically for imported workers in Oracle Identity Management (OIM), unless automatic account creation is disabled.

By default, user account names and passwords are sent automatically to users when their accounts are created. This default action may have been changed at enterprise level, as follows:

- User account names and passwords may be sent to an enterprise-wide e-mail rather than to users themselves.
- Automatic sending of user account names and passwords may be disabled for the enterprise. In this case, you can notify users at an appropriate time.

Role Provisioning

Once user accounts exist, roles are provisioned to users automatically in accordance with current role-provisioning rules. For example, current rules could provision the employee abstract role to every worker. Role provisioning occurs automatically unless it is disabled for the enterprise.

Importing Worker Users: Worked Example

This example shows how to import worker users from legacy applications to Oracle Fusion Applications.

The following table summarizes key decisions for this task.

Decisions to Consider	In This Example
What is my spreadsheet name? You can define your own naming convention. In this example, the name is selected to make identifying the spreadsheet contents easy.	WorkersMMDDYYBatchnn.xlsx For example, Workers042713Batch01.xlsx.
What is my batch name? You can define your own batch name, which must be unique. In this example, the batch name is the same as the spreadsheet name.	Workers042713Batchnn

Summary of the Tasks

Import worker users by:

1. Selecting the Import Worker Users task
2. Creating the spreadsheet
3. Entering worker data in the spreadsheet
4. Importing worker data and correcting import errors
5. Reviewing and correcting load errors

Prerequisites

Before you can complete this task, you must have:

1. Installed the desktop client Oracle ADF Desktop Integration Add-in for Excel
2. Enabled the Trust Center setting **Trust access to the VBA project object model** in Microsoft Excel

Selecting the Import Worker Users Task

1. On the Overview page of the Setup and Maintenance work area, click the All Tasks tab.
2. In the Search region, complete the fields as shown in this table.

Field	Name
Search	Task
Name	Import Worker Users

3. Click **Search**.
4. In the search results, click **Go to Task** for the task Import Worker Users.

The Initiate Spreadsheet Load page opens.

Alternatively, you can select the Import Worker Users task from an implementation project.

Creating the Spreadsheet

1. On the Initiate Spreadsheet Load page, find the entry for Create Worker in the list of business objects.

Create Worker appears after other business objects such as departments, locations, and jobs. Those business objects must be created before worker users, regardless of how you create them.

2. Click **Create Spreadsheet** for the Create Worker entry.
3. When prompted, save the spreadsheet locally using the name Workers042713Batch01.xlsx.
4. When prompted, sign in to Oracle Fusion Applications using your Oracle Fusion user name and password.

Entering Worker Data in the Spreadsheet

1. In the **Batch Name** field of the spreadsheet Workers042713Batch01.xlsx, replace the default batch name with the batch name Workers042713Batch01.
2. If your data includes flexfields, click **Configure Flexfield** to configure flexfield data. Otherwise, go to step 5 of this task.
3. In the **Configure Flexfield** window, select an attributes value and click **OK**.

4. See the Flexfields Reference tab for information about the configured flexfield.
5. Enter worker data in the spreadsheet.
Ensure that you provide any required values and follow instructions in the spreadsheet for creating rows.

Importing Worker Data and Correcting Import Errors

Use the default values except where indicated.

1. In the workers spreadsheet, click **Upload**.
2. In the **Upload Options** window, click **OK**.
As each row of data is uploaded to the Load Batch Data stage tables, its status is updated.
3. When uploading completes, identify any spreadsheet rows with the status **Insert Failed**, which indicates that the row was not imported to the stage tables.
4. For any row that failed, double-click the status value to display a description of the error.
5. Correct any import errors and click **Upload** again to import the remaining rows to the same batch.
As rows are imported successfully to the stage tables, the data is loaded automatically to the application tables.

Reviewing and Correcting Load Errors

1. In the spreadsheet, click **Refresh** to display latest load status.
Any errors that occur during the load process are reported in the spreadsheet.
2. Correct any load errors in the spreadsheet.
3. Repeat this process from Importing Worker Data and Correcting Import Errors until all spreadsheet rows are both imported and loaded successfully.
4. Close the spreadsheet.
To load a second batch of worker users on the same date, increment the batch number in the spreadsheet and batch names (for example, Workers042713Batch02).

Manage Users

Creating Users: Worked Example

You can create users by entering basic person and employment data. A user account is created automatically for a person when you create the user record.

You can assign the users Oracle Fusion Human Capital Management (HCM) and non-HCM data roles, each providing access to specific functions and data. This example demonstrates how to create a user and assign roles to the user.

Note

This user management functionality is available for HCM Foundation and Oracle Fusion Workforce Directory Management (WDM) users only.

Decisions to Consider	In this Example
For whom are you creating the user record?	Gail Williams
What is the user account name?	Same as the e-mail ID, gail.williams@vision.com
Where is Gail employed?	Gail is an employee of Vision Corporation, and works in the Human Resources (HR) department in the Canada office.
What roles must be provisioned to Gail?	Autoprovision the employee role. Gail is responsible for processing workers' expense claims so provision the role Expense Claims Administrator manually to Gail.

Prerequisites

1. Create a role mapping called All Employees and enter the following conditions.

Attribute	Value
System Person Type	Employee
Assignment Status	Active

In the role mapping you include the:

- Employee role, and select the **Autoprovision** option
- Expense Claims Administrator role, and select the **Self-requestable** option

Creating a User

1. On the Search Person page, click the **Create** icon to open the Create User page.
2. Complete the fields, as shown in this table:

Field	Value
Last Name	Williams
First Name	Gail
E-Mail	gail.williams@vision.com
Hire Date	4/12/11

3. In the User Details region, leave the User Name field blank. The user name defaults to the user's e-mail ID.
4. In the Employment Information region, select the person type **Employee** and complete the fields as shown in the table:

Field	Value
Legal Employer	Vision Corporation
Business Unit	Vision Canada
Department	Human Resources

Assigning Roles to the User

1. Click **Autoprovision Roles** to provision the employee role to the user.
2. Click **Add Role**.
3. Search for and select the **Expense Claims Administrator** role.
4. Click **Save and Close**. The user account is created and the roles are assigned to the user immediately.

Changing User Names: Explained

You can change user names for both new and existing users.

Changing User Names When Creating Users

When you create a user using the Create User interface, the **User Name** field may be blank. If you leave it blank, then the user name is generated in the enterprise default format when you save the user.

Alternatively, you can enter a user name on the Create User page, regardless of whether the field is blank. Any name that you enter replaces the default user name.

The user is notified of the user name only if user notifications are enabled and the user has not yet been notified of any user name and password.

Changing Existing User Names

You can change an existing user name on the Manage User Account and Edit User pages. The new name is sent automatically to Oracle Identity Management. However, it becomes visible in Oracle Fusion Applications only after the user signs in for the first time using the new name.

When you change an existing user name:

- The password is unchanged.
- Roles provisioned to the user are unchanged.
- The user is not notified automatically of the new name.

You are recommended to send details of the new user name to the user.

User Details System Extract Report

The Oracle BI Publisher User Details System Extract Report includes details of some or all Oracle Fusion Applications user accounts.

To run this report, you must have an HCM data role that provides view-all access to person records for the Human Capital Management Application Administrator job role.

To run the report:

1. Navigate to **Tools - Reports and Analytics**.
2. In the Contents pane of the Reports and Analytics work area, navigate to **Shared Folders - Human Capital Management - Workforce Management - Human Resources Dashboard**.
3. Select the User Details System Extract report.
4. In the report window, click **More**.
5. On the Oracle Business Intelligence page for the report, select **Open** to run the report immediately or **Schedule** to schedule the report.

Parameters

User Population

Enter one of the following values to identify the group of user accounts to include in the report.

Value	Description
HCM	User accounts with an associated HCM person record.
TCA	User accounts with an associated TCA party account.
OIM	Accounts for users in the PER_USERS table who do not have an associated person number or party ID. OIM users are also referred to as implementation users.
ALL	HCM, TCA, and OIM users accounts.

From Date

Accounts for HCM and OIM users created on or after this date are included in the report. If you specify no **From Date** value, then accounts with any creation date are included, subject only to any **To Date** value that you specify.

From and to dates do not apply to the TCA user population; the report includes all TCA users if you include them in the report's user population.

To Date

Accounts for HCM and OIM users created on or before this date are included in the report. If you specify no **To Date** value, then accounts with any creation date are included, subject only to any **From Date** value that you specify.

From and to dates do not apply to the TCA user population; the report includes all TCA users if you include them in the report's user population.

User Active Status

Enter one of the following values to identify the user-account status.

Value	Description
A	Include active accounts, which belong to users with current roles.
I	Include inactive accounts, which belong to users with no current roles.
All	Include both active and inactive user accounts.

Report Results

The output is an XML-formatted file where user accounts are grouped by type, as follows:

- Group 1 (G_1) includes HCM user accounts.
- Group 2 (G_2) includes TCA party user accounts.
- Group 3 (G_3) includes OIM user accounts.

The information provided in the extract varies with the account type.

HCM User Accounts

Business Unit Name

The business unit from the primary work relationship.

Composite Last Update Date

The date when any one of a number of values, including assignment managers, location, job, and person type, was last updated.

Department

The department from the primary assignment.

Worker Type

The worker type from the user's primary work relationship.

Generation Qualifier

The user's name suffix (for example, Jr., Sr., or III).

Hire Date

The enterprise hire date.

Role Name

A list of roles currently provisioned to workers whose work relationships are all terminated. This value appears for active user accounts only.

Title

The job title from the user's primary assignment.

TCA User Accounts**Organizations**

A resource group.

Roles

A list of job, abstract, and data roles provisioned to the user.

Managers

The manager of a resource group.

OIM User Accounts**Start Date**

The date from when the account existed.

Created By

The user name of the user who created the account.

FAQs for Manage Users

What happens if I send the user name and password?

An e-mail containing the user name and password is sent to the user's primary work e-mail address. If the user has no primary work-email address, then the user name and password are sent to the primary work e-mail address of the user's line manager, if available; otherwise, no notification is sent.

You can select **Send user name and password** only if these details have not already been sent for this user: the user name and password can be sent once only for any user. If this option is available for selection but you do not select it, then you can run the process Send User Name and Password E-Mail Notifications later to notify users of their user names and passwords.

What happens when I autoprovision roles?

When you autoprovision roles to a user, the user's assignments are reviewed automatically against all current role mappings.

Roles for which the **Autoprovision** option is selected are:

- Provisioned to the user immediately, if the user is eligible for the role and does not currently have it
- Deprovisioned from the user immediately, if the user is no longer eligible for the role but currently has it

You are recommended to autoprovision roles to individual users if you know that new or changed role mappings exist for which those users are eligible. Otherwise, roles are not provisioned or deprovisioned automatically until the user's assignments are next updated.

Where do default user names come from?

By default, user names are defined by Oracle Identity Management (OIM). The user name is typically the user's first and last names, but this format can be changed in OIM.

The default format of user names can be specified for the enterprise in Oracle Fusion HCM. This setting overrides the OIM default format. Your enterprise may have selected one of the following values:

- Person number
- Party number
- Primary work e-mail

If the default user-name format for the enterprise is the person number, then primary e-mail is used instead for party users who have no person number.

Default user names may not appear for new users until the relevant value (for example, the person number) is available. The user-account request is not submitted to OIM until the value exists.

What happens when I link a user account?

The current person or party record is linked to the selected Oracle Identity Management (OIM) user account. When you click **Save**, the request is submitted to OIM and the account status is **Requested**. Once the account status is **Active**, the user can sign in using the account.

Any roles currently provisioned to the linked account do not appear in the Roles section of the page until the account status is **Active**. However, you can add roles before clicking **Save**.

The **Link User Account** action appears only for persons or party users whose records are not already linked to a user account. When you link a user account, the person or party is not notified automatically. You are recommended to notify the user when the account is linked.

Can I extract details of all Oracle Fusion Applications users?

Yes. The Oracle BI Publisher User Details System Extract report includes details of all user accounts or a specified subset. For example, you can produce a report

showing inactive user accounts, accounts created between specified dates, or accounts associated with TCA parties only.

To run the report, you must have an HCM data role that provides view-all access to person records for the Human Capital Management Application Administrator job role.

Common Applications Configuration: Define Automated Governance, Risk, and Performance Controls

Segregation of Duties: Explained

Segregation of duties (SOD) separates activities such as approving, recording, processing, and reconciling results so an enterprise can more easily prevent or detect unintentional errors and willful fraud. SOD policies, called access control policies in Application Access Controls Governor (AACG), exert both preventive and detective effects.

SOD policies constrain duties across roles so that unethical, illegal, or damaging activities are less likely. SOD policies express constraints among roles. Duty role definitions respect segregation of duties policies.

Application Access Controls Governor

You manage, remediate, and enforce access controls to ensure effective SOD using the Application Access Controls Governor (AACG) product in the Oracle Enterprise Governance, Risk and Compliance (GRC) suite.

AACG applies the SOD policies of the Oracle Fusion Applications security reference implementation using the AACG Oracle Fusion Adapter.

AACG is integrated with Oracle Identity Management (OIM) in Oracle Fusion Applications to prevent SOD control violations before they occur by ensuring SOD compliant user access provisioning. SOD constraints respect provisioning workflows. For example, when provisioning a Payables role to a user, the SOD policy that ensures no user is entitled to create both an invoice and a payment prevents the conflicting roles from being provisioned. AACG validates the request to provision a user with roles against SOD policies and provides a remediating response such as approval or rejections if a violation is raised.

Use AACG to for the following.

- Define SOD controls at any level of access such as in the definition of an entitlement or role.

- Simulate what-if SOD scenarios to understand the effect of proposed SOD control changes.
- Use the library of built-in SOD controls provided as a security guideline.

Managing Segregation of Duties

SOD policies express incompatible entitlement or incompatible access points into an application. In GRC, an access point is the lowest level access for a particular application. In GRC, entitlement is a grouping of access points. As a security guideline, group the lowest level access points or define the SOD policy at the access level causing the least amount of change. Business activities are enabled at access points. In Oracle Fusion Applications, the hierarchy of access points in descending levels is users, roles, and entitlement.

Note

AACG entitlements are logical groupings of security objects that represent Oracle Fusion Application access points such as roles or entitlement.

Note

In AACG, segregation of duties policies are called access controls.

Oracle Fusion Applications does not predefine business logic for dealing with SOD conflicts. Oracle Fusion Applications does define a set of states where role requests are suspended pending resolution of SOD violations the role request introduces. In most cases, Oracle Fusion Applications invokes OIM to handle role requests. Enterprises define SOD resolution rules when defining SOD policy.

Remediating Segregation of Duties Policy Violations

The risk tolerance of your enterprise determines what duties must be segregated and how to address violations.

AACG assists in remediation of violations with a guided simulation that identifies corrective action. You determine the exact effects of role and entitlement changes prior to putting them into production, and adjust controls as needed.

For information on managing segregation of duties, see the Oracle Application Access Controls Governor Implementation Guide and Oracle Application Access Controls Governor User's Guide.

Segregation of Duties in the Security Reference Implementation: Explained

Segregation of duties (SOD) is a special case of function security enforcement. A segregation of duties conflict occurs when a single user is provisioned with a

role or role hierarchy that authorizes transactions or operations resulting in the possibility of intentional or inadvertent fraud.

The predefined SOD policies result in duty separation with no inherent violations. For example, an SOD policy prevents a user from entitlement to create both payables invoices and payables payments.

However, the most common duties associated with some job and abstract roles could conflict with the predefined segregation of duties. A predefined role hierarchy or job or abstract role may include such common duties that are incompatible according to a segregation of duties policy. For example, the predefined Accounts Payable Supervisor job role includes the incompatible duties: Payables Invoice Creation Duty and Payables Payment Creation Duty.

Every single predefined duty role is free from an inherent segregation of duties violation. For example, no duty role violates the SOD policy that prevents a user from entitlement to both create payables invoices and payables payments.

Jobs in the reference implementation may contain violations against the implemented policies and require intervention depending on your risk tolerance, even if you define no additional jobs or SOD policies.

Provisioning enforces segregation of duties policies. For example, provisioning a role to a user that inherits a duty role with entitlement to create payables invoices enforces the segregation of duties policy applied to that duty role and ensures the user is not also entitled to create a payables payment. When a role inherits several duty rules that together introduce a conflict, the role is provisioned with a violation being raised in the Application Access Controls Governor (AACG). If two roles are provisioned to a user and introduce a segregation of duties violation, the violation is raised in AACG.

Note

SOD policies are not enforced at the time of role definition.

Aspects of segregation of duties policies in the security reference implementation involve the following.

- Application Access Controls Governor (AACG)
- Conflicts defined in segregation of duties policies
- Violations of the conflicts defined in segregation of duties policies

Application Access Controls Governor (AACG)

AACG is a component of the Oracle Enterprise Governance, Risk and Compliance (GRC) suite of products where segregation of duties policies are defined.

- Define SOD controls at any level of access such as in the definition of an entitlement or role.
- Simulate what-if SOD scenarios to understand the effect of proposed SOD control changes.

- Use the library of built-in SOD controls provided as a security guideline.

Your risk tolerance determines how many duties to segregate. The greater the segregation, the greater the cost to the enterprise in complexity at implementation and during maintenance. Balance the cost of segregation with the reduction of risk based on your business needs.

Conflicts

An intra-role conflict occurs when a segregation of duties policy expresses constraints within the construct of a single role (entitlement and duties) that creates violations.

Tip

As a security guideline, use only the predefined duty roles, unless you have added new applications functions. The predefined duty roles fully represent the functions and data that must be accessed by application users and contain all appropriate entitlement. The predefined duty roles are inherently without segregation of duty violations of the constraints used by the Application Access Controls Governor.

Violations

A segregation of duties violation occurs when a policy is defined that allows a segregation of duties conflict to occur.

Notifications report conflicts to the requester of the transaction that raised the violation. Oracle Identity Management (OIM) shows the status of role requests indicating if a segregation of duties violation has occurred.

For information on configuring audit policies, see the Oracle Fusion Applications Administrator's Guide.

For more information on managing segregation of duties, see the Oracle Application Access Controls Governor Implementation Guide and Oracle Application Access Controls Governor User's Guide.

Defining Segregation of Duties Policies: Points To Consider

Segregation of duties (SOD) policies express incompatibilities enforced to control access in defined contexts.

In Oracle Fusion Applications, SOD policies protect against the following incompatibilities.

- Privilege X is incompatible with privilege Y

- Role A is incompatible with role B
- Any privileges in role A are incompatible with any privileges in role B.
- Privilege X is incompatible with any privileges in role B.

The following examples of SOD policies illustrate incompatible entitlement.

- No user should have access to Bank Account Management and Supplier Payments duties.
- No user should have access to Update Supplier Bank Account and Approve Supplier Invoice entitlement.

Data Contexts

You can extend SOD policies to control access to specific data contexts.

For example, no single individual must be able to source a supplier in a business unit and approve a supplier invoice in the same business unit.

Exclusion and Inclusion Conditions

SOD policies may include exclusion conditions to narrow the SOD scope and reduce false positive violations, or inclusion conditions to broaden the scope.

Conditions apply to access points globally, to policies, or to access paths defined by policies. Access path conditions can exclude a user from a role, an Oracle Fusion Applications entitlement from a role, or a permission from an Oracle Fusion Applications entitlement.

The following global exclusion conditions are predefined in Oracle Fusion Applications and available when creating SOD policies.

- User Status
- User Name
- Enterprise Role
- Action
- Business Unit
- Within Same Business Unit

Enforcement

Oracle Fusion Applications enforces SOD policies under the following circumstances.

- When granting entitlement to a role
- When provisioning a role to a user

For information on managing segregation of duties, see Oracle Application Access Controls Governor Implementation Guide and Oracle Application Access Controls Governor User's Guide.

Note

SOD policies are not enforced at the time of role definition.

Aspects of segregation of duties policies in the security reference implementation involve the following.

- Application Access Controls Governor (AACG)
- Conflicts defined in segregation of duties policies
- Violations of the conflicts defined in segregation of duties policies

A single SOD policy can include entitlement from multiple instances of a single enterprise resource planning environment. For example, one SOD policy is enforced in implementation, test, and production instances of Oracle Fusion Applications.

Managing Segregation of Duties Risks and Violations: Critical Choices

You assess and balance the cost of duty segregation against reduction of risk based on the requirements of your enterprise.

The types of people who resolve SOD conflicts include the following.

- Administrator of an external program such as the Procurement Administrator for the supplier portal or the Partner Manager for the PRM Program
- Senior executive spanning multiple organizations in an enterprise with opposing interests
- Risk management professional implementing an Oracle Enterprise Governance, Risk and Compliance (GRC) initiative
 - Predefines a set of conditions and informs access provisioning staff to approve requests and prove the exception based on certain conditions
 - Allows defining rules to route SOD violations for approval

You view and respond to risks and violations in the Application Access Controls Governor (AACG).

You may wish to override an SOD violation. For example, the Accounts Payable Supervisor includes incompatible duties to create both invoices and payments.

When you provision this job role to a user, you may waive the violation in the AACG. You may waive the violation for the currently provisioned user, for the SOD policy that raised the violation, or for the SOD policy within a particular data set, such as a business unit.

The risk tolerance of your enterprise guides how you respond to conflicts. For example, a user may be provisioned with both the role of Order Manager and Shipping Agent. The Order Manger role entitles the user to enter orders, which could result in exploitation when filling shipping quotas. You can remove the entitlement to enter orders that the Order Manger job role inherits from the Orchestration Order Scheduling Duty role. Or you could segregate the shipping and order entry duties by defining an SOD policy that allows a user to have either job role but not both.

False Positives

False positives can be SOD policy violations that are not actually violations, or are violations within your risk tolerance and therefore do not require corrective action.

You can reduce false positives by the following methods.

- Define exclusion conditions that can be applied to individual or groups of policies.
- Define logically complex SOD policies that enforce more exacting specifications.
- Determine whether conflicts should be prevented, monitored, or subjected to approval during provisioning.

Path Level Detection

Conflict analysis detects a user's multiple paths to one or more conflicting access points.

For example, a user may be able to reach a single access point through one or more roles, or by one entitlement leading to another through submenus to a function that represents a risk. The resulting conflict path shows if the conflict is generated by inappropriate role provisioning or configuration of applications. The audit shows the paths from any number of users to any number of access points involved in conflicts, which lets you visualize the root cause and remediate effectively.

AACG assigns one or more users to review all paths involved in a given conflict so that the entire conflict can be addressed in a coherent way.

Waiving or Accepting Violations

AACG lets you accept or waive a violation. Your reasons may include that you accept the risk or will define compensating controls.

A waiver may apply to the current user, constraint, or constraint within a dimension such as the business unit.

Resolving Conflicts

The risk tolerance of the enterprise determines whether a segregation of duties conflict must be removed from the security reference implementation.

The following approaches resolve conflicts.

- Change the segregation of duties policy.
- Ensure a job role does not contain incompatible duties.
- Define data security policies that restrict authorized access by incompatible duties.

Changing a segregation of duties policy may not be possible in most cases. For example, a policy that segregates creation of payables invoice from making payables payments should be preserved, even if the Accounts Payables Manager job role includes a duty role for each activity. To prevent an accounts payables manager from being authorized to perform both duties, or from being authorized to make payables payments to self and direct reports, the Accounts Payables Manager job role must be changed. The security implementation can be changed to include two job roles that segregate the incompatible duties. Added data security policy grants can restrict the access to at risk data.

For information on managing segregation of duties, see the Oracle Application Access Controls Governor Implementation Guide and Oracle Application Access Controls Governor User's Guide.

Role Provisioning and Segregation of Duties: How They Work Together

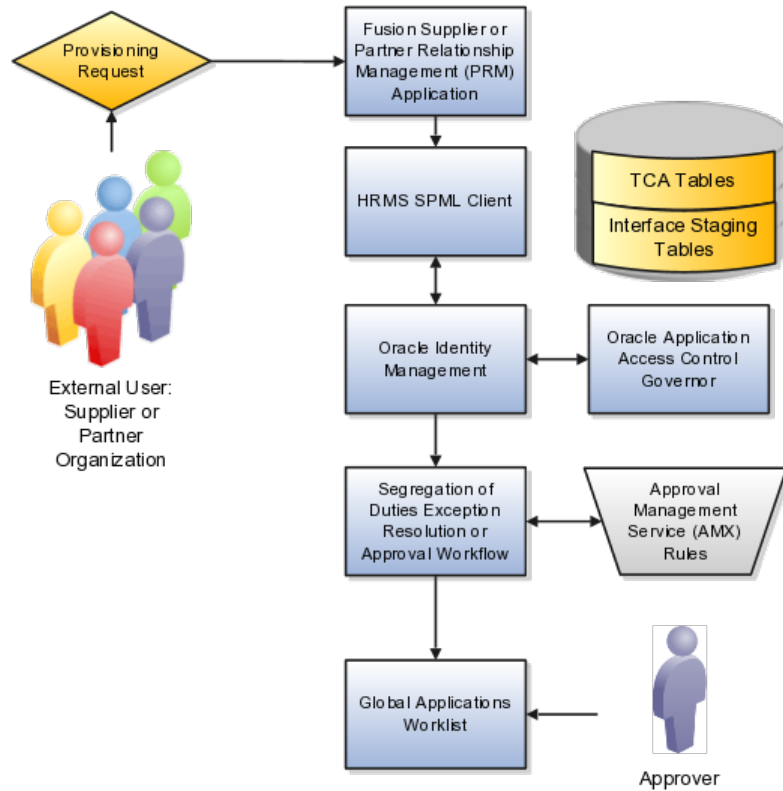
Segregation of duties (SOD) checks occur when roles are assigned to users. The checks are based on Oracle Application Access Controls Governor (AACG) policies in Oracle Enterprise Governance, Risk and Compliance (GRC). The Oracle Identity Management (OIM) integration includes predefined routing rules for remediation in the Manage IT Security business process.

External users such as suppliers or partners need to be provisioned with roles to facilitate access to parent company interfaces and data. The process by which such provisioning requests are approved in Oracle Fusion Applications helps explain the request flows and possible outcomes.

Note

In Oracle Identity Management (OIM), external users means users who are not specific to applications, such as enterprise roles or the absence of entitlement to access an application.

The figure shows the role provisioning request flow. OIM uses AACG to check segregation of duties violations.



Tables

A supplier or partner requests admission to a program using an implementation of the Supplier Portal Submission. The submission is captured in one or both of the following tables in advance of approving or rejecting the supplier or partner.

- Oracle Fusion Trading Community Model
- Interface Staging

Oracle Fusion Applications collects the employee names for the supplier or partner company at the time the company submits its request to join the program so that all employees accessing Oracle Fusion Applications on behalf of the supplier or partner are provisioned.

AACG in the Oracle Enterprise Governance, Risk and Compliance (GRC) suite is certified to synchronize with the policy and identity stores for all pillars or partitions of Oracle Fusion Applications and integrated with the Oracle Fusion Applications security approach to roll up entitlements (by means of duty roles) to the roles that are provisioned to internal users. SOD policies can be defined and enforced at any level of authorization. For external users, SOD policies use attribute information stored in the Trading Community Model tables.

OIM and the SPML Client

Enterprise business logic may qualify the requester and initiate a role provisioning request by invoking the Services Provisioning Markup Language

(SPML) client module, as may occur during onboarding of internal users with Human Capital Management (HCM), in which case the SPML client submits an asynchronous SPML call to OIM. Or OIM handles the role request by presenting roles for selection based on associated policies.

OIM recognizes the role provisioning request and initiates a call to AACG.

OIM apprises the SPML client of the current state of the role provisioning request as SOD_CHECK_IN_PROGRESS.

OIM stores the SOD check result as part of OIM audit data.

OIM apprises SPML client of the current state of the SPML request. The provisioning is either still in progress with segregation of duties being checked, or conflicts were found. If conflicts exist, AACG rejects the request and notifies the application.

Status	Conflicts	Current State
SOD_CHECK_IN_PROGRESS	Unknown	Request sent to AACG and waiting for response
SOD_REMEDIATION_IN_PROGRESS	Conflict found	AACG detected violations and remediation is in progress
SOD_CHECK_APPROVED	No conflict found	No SOD violations found
SOD_CHECK_REJECTED	Conflict found	AACG detected violations that cannot be remediated
SOD_REMEDIATION_APPROVED	Conflict found	AACG detected violations that are approved
SOD_REMEDIATION_REJECTED	Conflict found	AACG detected violations that are rejected by approver

In the absence of an SOD exception, OIM provisions all relevant users.

Note

When a partner user is provisioned, all employees of the partner enterprise are provisioned. SOD checks occur when an external user requests to join a program, because SOD policies operate across Oracle Fusion Applications, not at the individual level. Supplier or partner company user requests are not approved if there is an SOD conflict against the supplier company.

OIM provides AACG with the details of SOD exception approval workflow. AACG audits the outcome for use in future detective controls and audit processes.

Oracle Application Access Controls Governor

AACG may respond with the following.

- Roles may be provisioned to the external user or its employees because no SOD conflict is found
- SOD conflict is found and request is denied because the relevant SOD policy is to be strictly enforced and no exception approval should be allowed

- SOD conflict is found and the exception to the policy is allowed, so the request goes through additional processing, such as an approval process.

Supplier or Partner Relationship Management responds to an SOD exception by updating Trading Community Model tables with the current state. An enterprise may elect to implement a landing pad that offers external users a means of addressing the SOD problem by providing more information or withdrawing the request.

SOD violation checking occurs during role implementation and provisioning, and can be turned on or off if AACG is provisioned and enabled as part of the Oracle Fusion Applications deployment.

Segregation of Duties Exception Resolution or Approval Workflow

Depending upon status, OIM kicks off an auditable SOD exception resolution workflow. Resolution can be conditional based on approval or requirements such as contracts being met.

If one of the paths for exception resolution is to get an approval, then the SOD exception resolution drives the approval using AMX. Standard AMX rules, not business rules, resolve the approval for the SOD exception, including the following.

- Organizational hierarchies
- Multiple mandatory and optional approvers
- Rerouting and approval delegation

The approver resolution uses AMX Rules Designer to access various user attributes and organizational hierarchies managed in Oracle Fusion Applications repositories. This information is typically not available in OIM or the LDAP identity store repository. Enterprises can define additional approval rules using AMX Thin Client.

The SOD Exception Approver gets a notification through supported channels that a new request is awaiting approval. The approver signs in to the global SOA federated worklist application that aggregates all pending worklist items for the user from all Oracle Fusion applications and logical partitions or pillars of applications. The SOD exception approval tasks show up in the same list.

The SOD exception approval task shows the details of the SPML request and SOD Provisioning results in a page rendered by OIM. The approver may take one of the following actions.

- Approve the request as it is
- Reject the request

If the approver approves the request, OIM sends an SOD_REMEDIATION_APPROVED status to the SPML client.

If the approver rejects the request, OIM sends an SOD_REMEDIATION_REJECTED status to the SPML client. The provisioning request is considered completed with a failure outcome and the external users is notified. Oracle Fusion Applications updates the Trading Community Model tables with the rejected status

Remediation Task Assignments

The SOD remediation tasks are assigned based on the role being requested.

1. If the role requested is Chief Financial Officer, the SOD remediation task is assigned to the IT Security Manager role.
2. If the SOD violation results from a policy where the SOD control tag is the Information Technology Management business process and the control priority is 1, the SOD remediation task is assigned to Application Administrator role.
3. In all other scenarios, the SOD remediation task is assigned to the Controller role.

For more information about configuring audit policies, see the Oracle Fusion Applications Administrator's Guide.

For information on managing segregation of duties, see the Oracle Application Access Controls Governor Implementation Guide and Oracle Application Access Controls Governor User's Guide.

Common Applications Configuration: Define Approval Management

Approval Management: Highlights

Use approval management to determine the policies that apply to approval workflows for particular business objects such as expense reports. For example, you can specify levels of approval for expense reports over a particular amount, to reflect your own corporate policies. You also determine the groups of users who act on these workflow tasks, for example, the chain of approvers for expense reports.

Approval management is fully described in the Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management. Though the concepts described there apply also to Oracle Fusion Applications, the only setup relevant to Oracle Fusion Applications involves approval groups and task configuration. Customization of approval workflows themselves is described in the Oracle Fusion Applications Extensibility Guide for Developers.

Overview

- Approval management is an extension of the human workflow services of Oracle SOA Suite. Refer to the Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management.

See: Introduction to Approval Management

See: Understanding Approval Management Concepts

Approval Groups and Task Configuration

- An approval group consists of a name and a predefined set of users configured to act on a task in a certain pattern. Refer to the Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management.

See: Administering Approval Groups

- Task configuration involves managing policies that control approval flows. Refer to the Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management.

See: Using Task Configuration

- To configure a predefined approval policy, select the predefined rule set and click the Edit task icon button.
- To disable a predefined rule set, select the Ignore this participant check box for that rule set.
- To edit the rules within a predefined rule set, you can insert, update, or delete from the seeded rules as needed while in edit mode.
- You can configure a specific rule to automatically approve without being sent to any approver. Modify the routing for that rule so that it is sent to the initiator (which means the requestor is the approver), set the Auto Action Enabled option to True, and enter APPROVE in the Auto Action field.

Customization

- You can optionally customize predefined approval workflows, for example add post-approval activities or additional stages. Refer to the Oracle Fusion Applications Extensibility Guide for Developers.

See: Customizing and Extending SOA Components

Common Applications Configuration: Define Help Configuration

Define Help Configuration: Overview

The Define Help Configuration task list contains tasks that let you set up and maintain Oracle Fusion Applications Help for all users. Use the Set Help Options task to determine if certain aspects of Oracle Fusion Applications Help are available to users and to control how aspects of the help site work. Use the Assign Help Text Administration Duty and Manage Help Security Groups tasks to set up customization of help content.

After performing the help configuration tasks, you can review the predefined help and consider whether to add or customize any content. Help that is embedded in the application, for example hints, can also be customized.

Use the Setup and Maintenance work area to access the tasks in the Define Help Configuration task list.

Set Help Options

Help Feature Choices and Help Options: Points to Consider

Help feature choices on the Configure Offerings page in the Setup and Maintenance work area control the look and behavior of Oracle Fusion Applications Help, and also determine which help options are available. Help options are setup options on the Set Help Options page.

Local Installation of Help

Select the Local Installation of Help feature choice so that the Define Help Configuration task list appears in your implementation project, and you can select two additional features (Access to Internet-Based Help Features and Help Customization) to control the fields available on the Set Help Options page.

Access to Internet-Based Help Features

Select this feature choice to provide users access to features that involve navigation to sites on the Web. If you select this feature choice, then the Web Sites Available from Help Site section is available on the Set Help Options page. For Oracle Cloud, always leave this feature choice selected so that your users can access the Cloud Learning Center.

Important

For non-Cloud implementations only: Some help includes links to guides outside the help system. If you select this feature, then these links open guides on the Oracle Technology Network Web site. If you do not select this feature, then your system administrator must download the guides (http://download.oracle.com/docs/cds/E39540_01.zip) and put all the content from within the extracted E39540_01 folder directly into the appmgr/APPLTOP/fusionapps/applications/ahc/afh/reference/TechLib folder.

Help Customization

Select the Help Customization feature choice if you intend to customize predefined help or add your own files to help. For example, you can add internal policies or procedures as help, and Oracle User Productivity Kit content, if any. Only users with job roles containing the Application Help Text Administration duty role have access to customize help.

If you select this feature choice, then the Custom Help Security feature choice is available, as well as all these sections on the Set Help Options page:

- Custom Help
- User Productivity Kit
- Privacy Statement

Custom Help Security

Select this feature choice if you want certain help files to be available only to a restricted set of users. You can define the user groups allowed to view corresponding help files. Do not select this feature choice if you do not have this requirement, because the feature can have an impact on performance.

If you select the Custom Help Security feature choice, then the Manage Help Security Groups task is available in the Define Help Configuration task list in your implementation project. There are no help options associated with this feature choice.

Administering Collaboration Features and Announcements in Help: Points to Consider

Announcements and collaboration features (discussions, ratings and comments) allow users to share information regarding help and the subjects that particular

help files cover. The collaboration features are also used elsewhere in Oracle Fusion Applications. Discussions may not be available in Oracle Cloud implementations.

Use the Set Help Options page in the Setup and Maintenance work area to enable the announcements and discussions features and to set options about ratings. When administering these features, consider the purpose of each feature and points that are specific to Oracle Fusion Applications Help.

Announcements

Use announcements to broadcast information to all users of your help site. You can provide information about help, for example new custom help that was recently added, or about anything that users should take note of, for example a change in company policy. Announcements can appear on any of the tabs on the home page of Oracle Fusion Applications Help. You can target specific user groups by posting announcements to specific tabs, for example, posting information related to implementation to the Functional Setup tab.

Only users with the Application Help Text Administration duty role have access to the Manage Announcements icon button in the Announcements sections. They can create, edit, and delete announcements for the tab that they are on, and set the date range for when each announcement is to be displayed.

Note

Use the full URL, for example <http://www.oracle.com>, when creating links.

Discussions

Users can use discussions to post questions or comments about subjects covered in specific help files. For example, after reading help on expense reports, users might have questions or comments about company policies or processes for expenses. Other users who later access this help file would benefit from the information in the discussion.

You can set a help option to enable discussions. Each help file would contain a **Discuss** link that all users can use to read discussions about that file. They can also start a discussion topic or post to existing topics. These discussions are visible only to users in your enterprise.

Important

Do not enable discussions until servers for discussions are up and running.

Ratings and Comments

Users can rate any help file on a five star system and provide feedback about the content. This information is helpful to other users in deciding which help file to open. Help files with a higher average rating are listed first in help windows, and in the help listings you see as you browse using the help navigators.

The scope of ratings and reviews is limited to your enterprise.

FAQs for Set Help Options

When do I link to the Oracle User Productivity Kit library from the help site?

Provide a link to your Oracle User Productivity Kit (UPK) library if you have UPK licensed and custom UPK content to share with your users. You give them access to a library of custom UPK content in addition to any custom UPK demos that you added to the help site itself. UPK demos that you add as custom help are available only in the See It mode, so the library can include the same demo in other modes. If you have UPK versions earlier than 3.6.1, then you cannot add UPK demos as custom help, so the link is the only way for users to access custom UPK content from the help site.

How can I find the URL to the Oracle User Productivity Kit library?

The URL to enter on the Set Help Options page should be the full path from the Web server where you are hosting your Oracle User Productivity Kit (UPK) content to the index.html file that opens the table of contents for the library, for example, `http://<your domain>.com/UPKcontent/PlayerPackage/index.html`. In this example, you or your UPK administrator would publish one UPK player package that contains all the content to be linked to from Oracle Fusion Applications Help, as well as the index.html file, and place the PlayerPackage folder in a manually created folder called UPKcontent on the Web server.

FAQs for Assign Help Text Administration Duty

Who can add and manage custom help?

Users with the Application Help Text Administration duty role have access to customize help in Oracle Fusion Applications Help. This duty is assigned by default to various job roles, in particular the administrators for product families.

You can assign the duty role to other users who need access to customize help. Use the Manage Duties task in the Setup and Maintenance work area to search for the Application Help Text Administration duty role on the Role Catalog page, and map additional job roles to this duty role.

Manage Help Security Groups

Creating Help Security Groups: Worked Example

This example demonstrates how to create a help security group to define a set of job roles that have access to help. The help security group can then be assigned

to particular help files so that only users with any of the defined roles have access to the help.

The following table summarizes key decisions for this scenario.

Decisions to Consider	In This Example
What type of users do you need to limit help access to?	Human resources (HR) specialists
Is there a specific time period for which this access is needed?	No, the help files should always be viewed only by the HR specialists
Where do you want this group to appear in the list of values for help security groups?	First

Define a help security group and assign a duty role to the group.

1. From the Setup and Maintenance work area, find the Manage Help Security Groups task and click **Go to Task**.
2. On the Manage Help Security Groups page, add a new row.
3. Complete the fields, as shown in this table. Leave the start and end dates blank.

Field	Value
Help Security Group	HR
Meaning	HR Only
Description	Viewing by HR specialists only
Display Sequence	1

4. Click **Save**.
5. With your new help security group selected, go to the Associated Roles section and add a new row.
6. Select **PER_HUMAN_RESOURCE_SPECIALIST** as the role name.
7. Click **Save and Close**.

You have created a new lookup code for the Help Security Groups lookup type, which is a standard lookup. The lookup code has the name, meaning, and description that you defined for the help security group.

You have also created a data security policy for the help database resource, specifying that the Human Resource Specialist role can view help that is defined with the HR security group. If you go to the Manage Database Resources and Policies page and find the database resource, or object, ATK_KR_TOPICS, then you can see the policy for the Human Resource Specialist role, with the condition that the column name, SECURITY_CODE, is equal to the value HR.

Common Applications Configuration: Define Application Toolkit Configuration

Define Application Toolkit Configuration: Overview

Oracle Fusion Application Toolkit (ATK) is an application that provides various core components of Oracle Fusion Applications, including the Welcome dashboard, Oracle Fusion Applications Help, the Reports and Analytics pane, and the Watchlist feature. Use the Define Application Toolkit Configuration task list to set up and maintain some of these components for all users, and the Define Help Configuration task list for Oracle Fusion Applications Help.

Note

The Define Application Toolkit Configuration task list is available in implementation projects only if the Application Toolkit Component Maintenance feature choice is selected.

Use the Setup and Maintenance work area to access the tasks in the Define Application Toolkit Configuration task list.

Map Reports to Work Areas

Additional Report Setup in the Context of the Reports and Analytics Pane: Highlights

Aside from determining which work areas a specific report is mapped to, you can perform additional setup for reports in the context of the Reports and Analytics pane. You can set up report permissions, and enable Oracle Business Intelligence (BI) Publisher reports for scheduled submission.

This additional setup is described in the Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition and the Oracle Fusion Applications Extensibility Guide for Business Analysts.

Report Permissions

- You can restrict access to specific reports for specific users, and this security is not limited to the Reports and Analytics pane. Refer to the Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition.

See: Assigning Permissions

Oracle Business Intelligence Publisher Reports Submission

- Oracle BI Publisher reports must be registered as processes with Oracle Enterprise Scheduler to be enabled for scheduling. This registration also enables a Schedule link for the report in the Reports and Analytics Pane. Refer to the Oracle Fusion Applications Extensibility Guide for Business Analysts, and perform the following steps in the specified order.
 - Create an Oracle Enterprise Scheduler job definition for the report.
 - Specify the job definition details in the report's properties.

FAQs for Map Reports to Work Areas

How can I set up the Reports and Analytics pane for all users?

You can remove any currently mapped report from the Reports and Analytics pane, or add mappings to reports from the Oracle Business Intelligence (BI) Presentation catalog. To access the setup, click **Edit Settings** in the Reports and Analytics pane, or use the Map Reports to Work Areas task in the Setup and Maintenance work area. If you do the former, then you can set up only the Reports and Analytics pane on the work area that you are in.

If you do the latter, then you can select a work area to set up. If you do not see the desired work area, most likely you do not have access to it due to security. You can request to be granted a role that has access to the work area, or another administrator or business user with access to the work area can be granted the Reports and Analytics Region Administration Duty to be able to map reports to the work area.

Tip

On the Map Reports to Work Areas page only, you can also use the Synchronize button to remove mappings to reports that are no longer in the catalog, for all work areas at once.

Any changes you make in either UI apply to all users with access to the mapped work area.

Why can't I see reports when mapping reports to work areas for the Reports and Analytics pane?

It is possible that there are no reports currently mapped to the work area that you select in the Map Reports to Work Areas page. Alternatively, reports are mapped, but you do not see them due to security.

Similarly, in the list of all available reports from the catalog, you can see only the reports that you have access to. You can request to be granted a role that has access to the reports that you want to map, or another administrator or business user with access to those reports can be granted the Reports and Analytics Region Administration Duty to be able to map reports to work areas.

Why can't I see reports when I edit settings for the Reports and Analytics pane?

In the Edit Settings window, you may not be able to see a currently mapped report because you do not have access to it due to security.

Similarly, in the list of all available reports from the catalog, you can see only the reports that you have access to. You can request to be granted a role that has access to the reports that you want to map, or another administrator or business user with access to those reports can be granted the Reports and Analytics Region Administration Duty to be able to map reports to work areas.

Set Watchlist Options

Watchlist Setup: Points to Consider

For all users across the site, you can disable or enable predefined Watchlist categories and items, edit their names, and determine how often item counts refresh. You cannot delete predefined Watchlist categories and items, nor create any for the site. Users can create their own Watchlist items through saved searches.

Access the Set Watchlist Options page by starting in the Setup and Maintenance Overview page and searching for the Set Watchlist Options task.

Disabling Predefined Categories and Items

Use the Set Watchlist Options page to enable or disable predefined Watchlist categories and items. Disabling any category or item also disables associated processes involved in calculating the Watchlist item counts for all users. These processes include creating data caches, performing security checks, invoking services across domains, running queries, and so on.

An item with the **Predefined** type represents the actual predefined Watchlist item that appears in the Watchlist. If you disable this type of Watchlist item, then:

- The item is not available for users to display in their watchlist
- The item is removed from any watchlist where it is currently displayed

A Watchlist item with the **User-created saved search** type does not appear in the Watchlist; it controls the display of the **Manage Watchlist** button or menu item in pages with saved searches. If you disable this type of Watchlist item, then:

- The **Manage Watchlist** option is not available to users in the corresponding work area, so users cannot use their own saved searches as

Watchlist items. A message is displayed to users when they try to use this option.

- Any user-defined saved searches from that work area already used as Watchlist items are no longer available in the users' watchlist. The user-defined saved searches are still available to be used for searching, but not for the Watchlist.

If you disable a Watchlist category, then the category is not available for users to include in their watchlist, and all Watchlist items within the category are also disabled.

Ultimately, the Watchlist for any user contains the subset of categories and items that are enabled in the Set Watchlist Options page:

- Plus any items based on user-defined saved searches
- Minus any categories or items that the user chooses to hide using Watchlist preferences
- Minus any items with no results found, if the user chooses to hide such items using Watchlist preferences

Specifying Refresh Intervals

All Watchlist items have a predefined refresh interval, which controls how often the query that calculates the count for a Watchlist item can be run. Use the Set Watchlist Options page to edit the interval values. What you specify as the refresh interval for a Watchlist item of type User-created Saved Search applies to all Watchlist items based on saved searches created by users on the corresponding search page.

When the user is in the Welcome dashboard with the Watchlist open for at least two and a half minutes, the query automatically runs for all Watchlist items if no refresh already ran in this user session. To subsequently run the query again, users can manually refresh the Watchlist region. The **Refresh** icon is enabled after five minutes since the last refresh.

Note

During a refresh, the query runs for an individual Watchlist item only if the time since the last query for this item is equal to or greater than the specified refresh interval. Since the manual refresh of the entire Watchlist is not available until five minutes after the last refresh, you should not set a Watchlist item refresh interval that is less than five minutes.

When users open Watchlist from the global area, a refresh automatically runs if five minutes have passed since the last refresh. During this refresh, the query runs for an individual Watchlist item only if the time since the last query for this item is equal to or greater than the specified refresh interval.

For example, you set the interval to eight minutes for a particular Watchlist item. When the user signs in and goes to the Welcome dashboard, with the Watchlist open, the query automatically runs for this Watchlist item after two and a half

minutes. Every two and a half minutes after, a check is performed for stale counts and new cached counts are displayed.

Five minutes after the query ran, the **Refresh** icon is enabled and the user performs a manual refresh. However, the query does not run for this Watchlist item, because the refresh interval is eight minutes. The user navigates away from the Welcome dashboard and opens the Watchlist from the global area six minutes later. A refresh automatically runs because more than five minutes have passed since the last refresh. This time, the query runs for this Watchlist item because it has been more than eight minutes since the query last ran for this item.

Editing Predefined Category and Item Names

Predefined Watchlist category and item names are stored as meanings of standard lookups. Lookup types for predefined categories end with WATCHLIST, for example EXM_EXPENSES_WATCHLIST. Edit the lookup type meaning to change the category name. To change item names, edit lookup code meanings for that lookup type.

Common Applications Configuration: Maintain Common Reference Objects

Maintain Common Reference Objects: Overview

The Maintain Common Reference Objects task list contains Oracle Middleware Extensions for Applications (Applications Core) tasks that support implementation of common behaviors, such as data security or reference data sets.

Use this task list to manage common reference objects that are defined centrally and shared across applications, in addition to those that are specific to Applications Core functionality. You can access this task list by starting in the Setup and Maintenance Overview page and searching for common reference object task lists.

For more information on configuring custom objects, see the Oracle Sales Extensibility Guide.

To make the Maintain Common Reference Objects task list available in your implementation project, go to **Setup and Maintenance Overview - Configure Offerings**, and for a specific offering, select the Maintain Common Reference Objects feature choice.

Define Application Taxonomy

Application Taxonomy: Highlights

Application taxonomy is the organization of Oracle application components and functions in a hierarchical structure, from product lines to logical business areas. This hierarchy represents a breakdown of products into units based on how applications are installed and supported. Maintain this hierarchy on the Manage Taxonomy Hierarchy page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Taxonomy Hierarchy task.

A detailed introduction to application taxonomy is provided in the Oracle Fusion Applications Developer's Guide.

Hierarchy

- The application taxonomy hierarchy contains various levels and types of nodes, or modules.

See: Characteristics of the Level Categories

See: Benefits of a Logical Hierarchy

Usage

- Use application taxonomy to understand relationships among applications and between an application and its files. This information is helpful in managing various phases of the product lifecycle.

See: How to Manage the Lifecycle

Modules in Application Taxonomy: Explained

A module is any node in the application taxonomy hierarchy. The top level of the hierarchy is product line, followed by product family, application, and logical business area. There can be multiple levels of logical business areas, with one or more nested within a parent logical business area.

Product Line

A product line is a collection of products under a single brand name, for example, Oracle Fusion.

Product Family

A product family is a collection of products associated with a functional area that may or may not be licensed together as a single unit, for example Financials.

Application

An application is a single product within a product family, containing closely related features for a specific business solution, for example General Ledger.

Logical Business Area

A logical business area is a collection of business object definitions organized into a logical grouping. It contains the model objects, services, and UI components for those business objects. Logical business areas have their own hierarchy levels and in some cases can be two or three levels deep. Each leaf node has at least one business object and service, up to a maximum of four business objects and associated services. A logical business area with more than four business objects are further refined with child logical business area levels. Each of these parent-child levels is represented by a directory in the physical package hierarchy.

Managing Modules in Application Taxonomy: Points to Consider

Manage modules on the Create Child Module or Edit Module page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Taxonomy Hierarchy task. When you create a module, it is a child of the currently selected node in the application taxonomy hierarchy. This determines which values are available, for example for module type. Once created, you cannot delete the module or move it elsewhere in the hierarchy. As you create or edit modules, consider the following points regarding specific fields.

Identifiers

Module ID is the unique primary key for nodes in the taxonomy table. When you create a module, an ID is automatically generated. Once the module is created, you cannot update the ID.

Module key and alternative ID are additional identifiers of the module, presented in a way that is easier to read than the module ID. The module key is a string identifier, for example AP for the Oracle Fusion Payables application. The alternative ID is a numeric identifier, for example 1 for the Oracle Fusion product line. These IDs are provided for the product line, product family, and application modules, but you can optionally add them for logical business areas and new custom modules.

Note

Do not change the module key or alternative ID for predefined modules.

The product code is relevant only to application and logical business area modules. You can leave the field blank for other module types. The product code for applications is the short name that can be displayed in lists of application values, for example FND for Oracle Middleware Extensions for Applications.

Names

Module name is the logical name for the module and is always available. The name must be unique among nodes in the same hierarchy level with the same parent, but try to make it as unique in the whole hierarchy as possible.

The user name and description can appear to users in other parts of Oracle Fusion Applications, so make sure that the values are something that users know to represent the module.

Usage Types

Though you can update the usage type to reflect the current state of the module, just doing so does not affect the actual state. For example, setting a module as installed does not mean it is actually installed if the installation itself has not taken place. Installation refers to operations related to laying down all the components needed to create an Oracle Fusion Applications environment, while

deployment is the process that starts the managed servers and clusters and facilitates the actual use of product offerings. A licensed module is available for installation and deployment, and a deployed module is considered actively used when actually used by users.

Seed Data

If seed data is allowed, then seed data such as flexfields and lookups can be extracted for the module using seed data loaders. By default, extract is allowed for all predefined modules of type application and logical business area.

Associations

You can associate a logical domain to modules of type product family, as well as one or more enterprise applications to modules of type application. This association represents the relationship between the taxonomy modules and the corresponding domain and enterprise applications stored in the Oracle Fusion Applications Functional Core (ASK) tables.

Define Reference Data Sharing

Reference Data Sharing: Explained

Reference data sharing facilitates sharing of configuration data such as jobs and payment terms, across organizational divisions or business units. You define reference data sets and determine how the data is shared or partitioned. Use reference data sets to reduce duplication and maintenance by sharing common data across business entities where appropriate. Depending on the requirement (specific or common), each business unit can maintain its data at a central location, using a set of values either specific to it or shared by other business units.

You can share reference data after it is filtered on the basis of sets. A common reference data set is available as the default set, which can be assigned to several business units sharing the same reference data. For commonly used data such as currencies, you can use the common reference data set and assign it to multiple business units in various countries that use the same currency. In cases where the default set cannot be assigned to an entity, you can create specific sets. The data set visible on the transactional page depends on the sharing method used to share reference data.

For example, XYZ Corporation uses the same grades throughout the entire organization. Instead of managers in different business units setting up the same grades, XYZ Corporation decides to create a set called Grades and assign the grades reference data group for all business units in the organization to the Grades set, so that the grades can be shared.

Note

For specific information on configuring reference data sharing for a particular object or product, refer to its product documentation.

Reference Data Sets: Explained

Reference data sets are logical groups of reference data that can be accessed by various transactional entities depending on the business context. Oracle Fusion Applications contains a common reference data set as well as an enterprise set that may be used as a default set. Depending on your business requirement you can create and maintain additional reference data sets, while continuing to use the common reference data set.

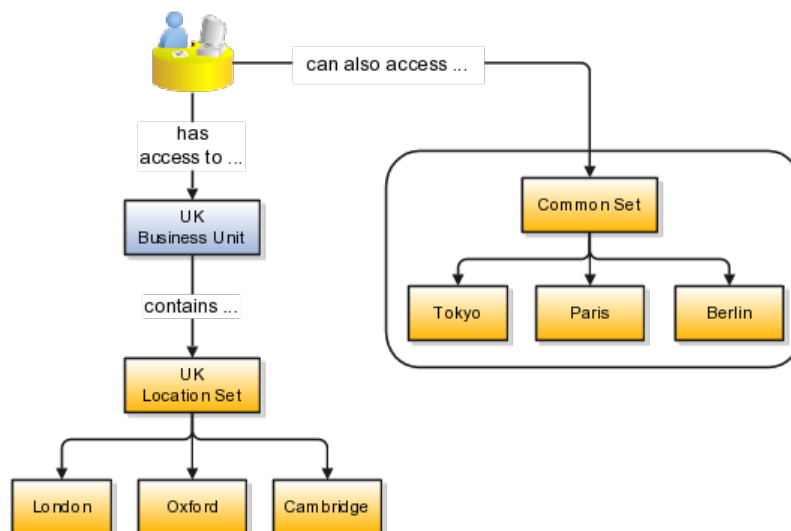
Consider the following scenario.

Your enterprise can decide that some aspects of corporate policy should affect all business units and leave other aspects to the discretion of the business unit manager. This allows your enterprise to balance autonomy and control for each business unit. For example, if your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level, you can let managers define their own sales methods, but define payment terms centrally. In this case, each business unit would have its own reference data set for sales methods, and there would be one central reference data set for payment terms assigned to all business units.

Partitioning

The partitioning of reference data and creation of data sets enable you to create reference entities across tables or lookup types, and share modular information and data processing options among business units. With the help of partitioning, you can choose to create separate sets and subsets for each business unit depending upon its business requirement, or create common sets or subsets to enable sharing reference data between several business units, without the need for duplicating the reference data. Partitioning provides you the flexibility to handle the reference data in a way appropriate to your business needs.

The following figure illustrates the reference data sharing method (assignment to one set only, with common values) where the user can access the data assigned to a specific set in a particular business unit, as well as access the data assigned to the common set.



Reference Data Sets and Sharing Methods: Explained

Oracle Fusion Applications reference data sharing feature is also known as SetID. The reference data sharing functionality supports operations in multiple ledgers, business units, and warehouses, thereby reducing the administrative burden and decreasing the time needed to implement new business units. For example, you can share sales methods, transaction types, or payment terms across business units or selected other data across asset books, cost organizations, or project units.

The reference data sharing features use reference data sets to which reference data is assigned. The reference data sets group assigned reference data. The sets can be understood as buckets of reference data assigned to multiple business units or other application components.

Reference Data Sets

You begin this part of your implementation by creating and assigning reference data to sets. Make changes carefully as changes to a particular set will affect all business units or application components using that set. You can assign a separate set to each business unit for the type of object that is being shared. For example, assign separate sets for payment terms, transaction types, and sales methods to your business units.

Your enterprise can decide that some aspects of corporate policy should affect all business units and leave other aspects to the discretion of the business unit manager. This allows your enterprise to balance autonomy and control for each business unit. For example, if your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level, you can let managers define their own sales methods, but define payment terms centrally. In this case, each business unit would have its own reference data set for sales methods, and there would be one central reference data set for payment terms assigned to all business units.

The reference data sharing is especially valuable for lowering the cost of setting up new business units. For example, your enterprise operates in the hospitality industry. You are adding a new business unit to track your new spa services. The hospitality divisional reference data set can be assigned to the new business unit to quickly setup data for this entity component. You can establish other business unit reference data in a business unit specific reference data set as needed

Reference Data Sharing Methods

There are variations in the methods used to share data in reference data sets across different types of objects. The following list identifies the methods:

- Assignment to one set only, no common values allowed. The simplest form of sharing reference data that allows assigning a reference data object instance to one and only one set. For example, Asset Prorate Conventions are defined and assigned to only one reference data set. This set can be shared across multiple asset books, but all the values are contained only in this one set.
- Assignment to one set only, with common values. The most commonly used method of sharing reference data that allows defining reference data

object instance across all sets. For example, Receivables Transaction Types are assigned to a common set that is available to all the business units without the need to be explicitly assigned the transaction types to each business unit. In addition, you can assign a business unit specific set of transaction types. At transaction entry, the list of values for transaction types includes transaction types from the set assigned to the business unit, as well as transaction types assigned to the common set that is shared across all business units.

- Assignment to multiple sets, no common values allowed. The method of sharing reference data that allows a reference data object instance to be assigned to multiple sets. For instance, Payables Payment Terms use this method. It means that each payment term can be assigned to one or more than one set. For example, you assign the payment term Net 30 to several sets, but the payment term Net 15 is assigned to only your corporate business unit specific set. At transaction entry, the list of values for payment terms consists of only one set of data; the set that is assigned to the transaction's business unit.

Note: Oracle Fusion Applications contains a reference data set called Enterprise. Define any reference data that affects your entire enterprise in this set.

Assigning Reference Data Sets to Reference Objects: Points to Consider

You can assign the reference data sets to reference objects on the Manage Reference Data Set Assignments page. For multiple assignments, you can classify different types of reference data sets into groups and assign them to reference entity objects. The assignment takes into consideration the determinant type, determinant, and reference group, if any.

Determinant Types

The partitioned reference data is shared based on a business context setting called the determinant type. It is the point of reference used in the data assignment process. The following table lists the determinant types used in the reference data assignment.

Type	Description
Asset Book	Information about the acquisition, depreciation, and retirement of an asset that belongs to a ledger or a business unit.
Business Unit	The departments or organizations within an enterprise.
Cost Organization	The organization used for cost accounting and reporting on various inventory and cost centers within an enterprise.
Project Unit	A logical organization within an enterprise that is responsible for enforcing consistent project management practices.
Reference Data Set	References to other shared reference data sets.

Determinant

The determinant or determinant value is the value that corresponds to the selected determinant type. The determinant is one of the criteria for selecting the appropriate reference data set. For example, when managing set assignments for the set determinant type, Reference Data Set is the determinant type, and you would enter the corresponding set code value as the corresponding determinant value.

Reference Groups

A transactional entity may have multiple reference entities (generally considered to be setup data) that are treated in the same manner because of commonness in implementing business policies and legal rules. Such reference entities in your application are grouped into logical units called reference groups, based on the functional area and the partitioning requirements that they have in common. For example, all tables and views that define Sales Order Type details might be part of the same reference group.

Note

The reference groups are predefined in the reference groups table and are available for selection and assignment.

Define ISO Reference Data

Defining Currencies: Points to Consider

When creating or editing currencies, consider these points relevant to entering the currency code, date range, or symbol for the currency.

Currency Codes

You cannot change a currency code after you enable the currency, even if you later disable that currency.

Date Ranges

Users can enter transactions denominated in the currency only for the dates within the specified range. If you do not enter a start date, then the currency is valid immediately. If you do not enter an end date, then the currency is valid indefinitely.

Symbols

Even if you enter a symbol for a currency, the symbol is not always displayed when an amount is displayed in this currency. Some applications use currency

symbols when displaying amounts. Others, like Oracle Fusion General Ledger, do not.

Euro Currency Derivation: Explained

Use the Derivation Type, Derivation Factor, and Derivation Effective Date fields to define the relationship between the official currency (Euro) of the European Monetary Union (EMU) and the national currencies of EMU member states. For each EMU currency, you define its Euro-to-EMU fixed conversion rate and the effective starting date.

Note

If you need to use a different currency code for Euro, you can disable the predefined Euro currency and create a new one.

Derivation Type

The **Euro currency** derivation type is used only for the Euro, and the **Euro derived** derivation type identifies national currencies of EMU member states. All other currencies do not have derivation types.

Derivation Factor

The derivation factor is the fixed conversion rate by which you multiply one Euro to derive the equivalent EMU currency amount. The Euro currency itself should not have a derivation factor.

Derivation Effective Date

The derivation effective date is the date on which the relationship between the EMU currency and the Euro begins.

Natural Languages: Points to Consider

Natural languages are all the languages that humans use, written and spoken. If a language is enabled, then users can associate it with entities, for example as languages spoken by sales representatives. When managing natural languages, consider tasks to perform and best practices for entering particular values.

Tasks

Once you add a language, it cannot be deleted, just disabled. You can optionally associate natural languages with International Organization for Standardization (ISO) languages and territories, just for reference.

Values

When you create a natural language, use the alpha-2 ISO code as the language code, or, if not available, then alpha-3. If the language is not an ISO language, then use **x-** as a prefix for the code, for example **x-ja** for a Japanese dialect. Use the **sgn** code of ISO-639-2 for sign languages, followed by territory code, for example **sgn-US** for American Sign Language. You can also use Internet Assigned Numbers Authority (IANA) language tags.

The natural language description should be the language name with territory name in parenthesis where needed, for example **English (Australia)** and **English (Canada)**.

FAQs for Define ISO Reference Data

When do I create or edit territories?

Edit territory descriptions to determine how they are displayed in lists of country values throughout Oracle Fusion Applications. The predefined territories are all countries from the International Organization for Standardization (ISO) 3166 standard. You usually would not edit territory names or codes.

Do not edit National Language Support (NLS) territory codes, which are identifiers used in the system, unless you need to change the association between ISO and system territory. You usually would not edit the default currency, which is the value that defaults in the **Currency** field in Oracle Fusion Applications user preferences after the user first selects a territory.

Create territories if new countries emerge and the system has not yet been patched with the latest ISO country values.

When do I create or edit industries?

Edit industry descriptions to determine how they are displayed in Oracle Fusion Applications. You usually would not edit industry names, which are from the North American Industry Classification System (NAICS). Enabled industries are mainly used in the context of customization, though these values can also appear in any application.

Create industries if you have particular ones you need, for example for customization, that are not included in the NAICS standard.

When do I associate industries with territories?

Optionally associate industries with territories to provide an industry in territory value, used for customization. For example, administrators can customize a page in one way for users within an industry in one country, and another way for users within the same industry in another country. The administrator would select the appropriate industry in territory value to set the customization context.

When do I create or enable currencies?

Create currencies to use, for example for reporting purposes, if they are not already provided. All currencies from the International Organization for Standardization (ISO) 4217 standard are provided.

Enable any currency other than USD for use in Oracle Fusion Applications, for example for displaying monetary amounts, assigning to ledgers, entering transactions, and recording balances. Only USD is enabled by default.

What's the difference between precision, extended precision, and minimum accountable unit for a currency?

Precision is the number of digits to the right of the decimal point used in regular currency transactions. Extended precision is the number of digits to the right of the decimal point used in calculations for this currency, and it must be greater than or equal to the standard precision. For example, USD would have 2 for precision because amounts are transacted as such, for example \$1.00. For calculations, for example adding USD amounts, you might want the application to be more precise than two decimal digits, and would enter an extended precision accordingly.

Note

Some applications use extended precision. Others, such as Oracle Fusion General Ledger, do not.

Minimum accountable unit is the smallest denomination for the currency. For example, for USD that would be .01 for the cent. This unit does not necessarily correspond to the precision for all currencies.

What's a statistical unit currency type?

The statistical unit currency type is used only for the Statistical (STAT) currency. The Statistical currency is used to record statistics such as the number of items bought and sold. Statistical balances can be used directly in financial reports, allocation formulas, and other calculations.

When do I create or edit ISO languages?

You can edit the names and descriptions of International Organization for Standardization (ISO) languages to determine how they are displayed in lists of ISO language values in Oracle Fusion Applications. The ISO languages are from the ISO 639 standard. If there were changes to the ISO standard and the system has not yet been patched with the latest ISO values, you can update the ISO alpha-2 code or add languages as needed.

When do I edit languages?

Installed languages automatically appear on the Manage Languages page, so you do not manually enter newly installed languages. This page contains

all languages available for installation and translation in Oracle Fusion Applications. Each dialect is treated as a separate language. The language codes and names are values used by the system.

You generally would not edit any of the detailed fields unless you really need to and know what they are.

When do I create or edit time zones?

Though all standard time zones are provided, optionally enable only a subset for use in lists of time zone values in Oracle Fusion Applications. You can add time zones if new zones became standard and the system has not yet been patched with the latest values.

Manage Data Security Policies

Data Security in the Security Reference Implementation: Explained

The reference implementation contains a set of data security policies that can be inspected and confirmed to be suitable or a basis for further implementation using the Authorization Policy Manager (APM).

The security implementation of an enterprise is likely a subset of the reference implementation, with the enterprise specifics of duty roles, data security policies, and HCM security profiles provided by the enterprise.

The business objects registered as secure in the reference implementation are database tables and views.

Granting or revoking object entitlement to a particular user or group of users on an object instance or set of instances extends the base Oracle Fusion Applications security reference implementation without requiring customization of the applications that access the data.

Data Security Policies in the Security Reference Implementation

The data security policies in the reference implementation entitle the grantee (a role) to access instance sets of data based on SQL predicates in a WHERE clause.

Tip

When extending the reference implementation with additional data security policies, identify instance sets of data representing the business objects that need to be secured, rather than specific instances or all instances of the business objects.

Predefined data security policies are stored in the data security policy store, managed in the Authorization Policy Manager (APM), and described in the Oracle Fusion Applications Security Reference Manual for each offering. A data

security policy for a duty role describes an entitlement granted to any job role that includes that duty role.

Warning

Review but do not modify HCM data security policies in APM except as a custom implementation. Use the HCM Manage Data Role And Security Profiles task to generate the necessary data security policies and data roles.

The reference implementation only enforces a portion of the data security policies in business intelligence that is considered most critical to risk management without negatively affecting performance. For performance reasons it is not practical to secure every level in every dimension. Your enterprise may have a different risk tolerance than assumed by the security reference implementation.

HCM Security Profiles in the Security Reference Implementation

The security reference implementation includes some predefined HCM security profiles for initial usability. For example, a predefined HCM security profile allows line managers to see the people that report to them.

The IT security manager uses HCM security profiles to define the sets of HCM data that can be accessed by the roles that are provisioned to users

Data Roles

The security reference implementation includes no predefined data roles to ensure a fully secured initial Oracle Fusion Applications environment.

The security reference implementation includes data role templates that you can use to generate a set of data roles with entitlement to perform predefined business functions within data dimensions such as business unit. Oracle Fusion Payables invoicing and expense management are examples of predefined business functions. Accounts Payable Manager - US is a data role you might generate from a predefined data role template for payables invoicing if you set up a business unit called US.

HCM provides a mechanism for generating HCM related data roles.

Data Security: Explained

By default, users are denied access to all data.

Data security makes data available to users by the following means.

- Policies that define grants available through provisioned roles
- Policies defined in application code

You secure data by provisioning roles that provide the necessary access. Enterprise roles provide access to data through data security policies defined for the inherited application roles.

When setting up the enterprise with structures such as business units, data roles are automatically generated that inherit job roles based on data role templates. Data roles also can be generated based on HCM security profiles. Data role templates and HCM security profiles enable defining the instance sets specified in data security policies.

When you provision a job role to a user, the job role implicitly limits data access based on the data security policies of the inherited duty roles. When you provision a data role to a user, the data role explicitly limits the data access of the inherited job role to a dimension of data.

Data security consists of privileges conditionally granted to a role and used to control access to the data. A privilege is a single, real world action on a single business object. A data security policy is a grant of a set of privileges to a principal on an object or attribute group for a given condition. A grant authorizes a role, the grantee, to actions on a set of database resources. A database resource is an object, object instance, or object instance set. An entitlement is one or more allowable actions applied to a set of database resources.

Data is secured by the following means.

Data security feature	Does what?
Data security policy	Grants access to roles by means of entitlement
Role	Applies data security policies with conditions to users through role provisioning.
Data role template	Defines the data roles generated based on enterprise setup of data dimensions such as business unit.
HCM security profile	Defines data security conditions on instances of object types such as person records, positions, and document types without requiring users to enter SQL code
Masking	Hides private data on non-production database instances
Encryption	Scrambles data to prevent users without decryption authorization from reading secured data

The sets of data that a user can access via roles are defined in Oracle Fusion Data Security. Oracle Fusion Data Security integrates with Oracle Platform Security Services (OPSS) to entitle users or roles (which are stored externally) with access to data. Users are granted access through the entitlement assigned to the roles or role hierarchy with which the user is provisioned. Conditions are WHERE clauses that specify access within a particular dimension, such as by business unit to which the user is authorized.

Data Security Policies

Data security policies articulate the security requirement "Who can do What on Which set of data," where "Which set of data" is an entire object or an object instance or object instance set and "What" is the object entitlement.

For example, accounts payable managers can view AP disbursements for their business unit.

Who	can do	what	on which set of data
Accounts payable managers	view	AP disbursements	for their business unit

A data security policy is a statement in a natural language, such as English, that typically defines the grant by which a role secures business objects. The grant records the following.

- Table or view
- Entitlement (actions expressed by privileges)
- Instance set (data identified by the condition)

For example, disbursement is a business object that an accounts payable manager can manage by payment function for any employee expenses in the payment process.

Note

Some data security policies are not defined as grants but directly in applications code. The security reference manuals for Oracle Fusion Applications offerings differentiate between data security policies that define a grant and data security policies defined in Oracle Fusion applications code.

A business object participating in a data security policy is the database resource of the policy.

Data security policies that use job or duty roles refer to data security entitlement.

For example, the data security policy for the Accounts Payable Manager job role refers to the view action on AP disbursements as the data security entitlement.

Important

The duty roles inherited by the job role can be moved and job roles reassembled without having to modify the data security.

As a security guideline, data security policies based on user session context should entitle a duty role. This keeps both function and data security policies at the duty role level, thus reducing errors.

For example, a Sales Party Management Duty can update Sales Party where the provisioned user is a member of the territory associated with the sales account. Or the Sales Party Management Duty can update Sales Party where the provisioned user is in the management chain of a resource who is on the sales account team with edit access. Or the Participant Interaction Management Duty can view an Interaction where the provisioned user is a participant of the Interaction.

For example, the Disbursement Process Management Duty role includes entitlement to build documents payable into payments. The Accounts Payable Manager job role inherits the Disbursement Process Management Duty role. Data security policies for the Disbursement Process Management Duty role authorize access to data associated with business objects such as AP disbursements within

a business unit. As a result, the user provisioned with the Accounts Payable Manager job role is authorized to view AP disbursements within their business unit.

A data security policy identifies the entitlement (the actions that can be made on logical business objects or dashboards), the roles that can perform those actions, and the conditions that limit access. Conditions are readable WHERE clauses. The WHERE clause is defined in the data as an instance set and this is then referenced on a grant that also records the table name and required entitlement.

Data Roles

Data roles are implemented as job roles for a defined set of data.

A data role defines a dimension of data within which a job is performed. The data role inherits the job role that describes the job. For example, a data role entitles a user to perform a job in a business unit.

The data role inherits abstract or job roles and is granted data security privileges. Data roles carry the function security privileges inherited from job roles and also the data security privilege granted on database objects and table rows.

For example, an accounts payables specialist in the US Business Unit may be assigned the data role Accounts Payables Specialist - US Business Unit. This data role inherits the job role Accounts Payables Specialist and grants access to transactions in the US Business Unit.

A data role may be granted entitlement over a set people.

For example, a Benefits Administrator A-E is allowed to administer benefits for all people that have a surname that begins with A-E.

Data roles are created using data role templates. You create and maintain data roles in the Authorization Policy Manager (APM). Use the Manage Data Roles and Security Profiles task to create and maintain HCM data roles in Oracle Fusion HCM.

HCM Security Profiles

HCM security profiles are used to secure HCM data, such as people and departments. You use HCM security profiles to generate grants for an enterprise role. The resulting data role with its role hierarchy and grants operates in the same way as any other data role.

For example, an HCM security profile identifies all employees in the Finance division.

Applications outside of HCM can use the HCM Data Roles UI pages to give their roles access to HR people.

Masking and Encryption

Oracle Fusion Applications uses masking to protect sensitive data from view by unauthorized users. Encryption APIs mask sensitive fields in applications user interfaces. Additionally, Oracle Data Masking is available for masking data in non-production instances and Oracle Transparent Data Encryption is available

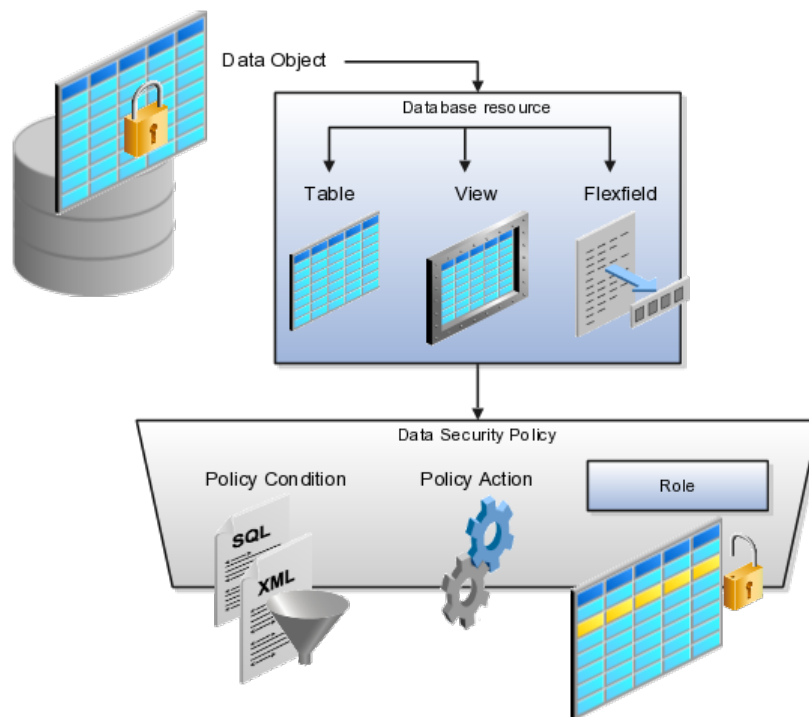
for protecting data in transit or in backups independent of managing encryption keys.

Database Resources and Data Security Policies: How They Work Together

A data security policy applies a condition and allowable actions to a database resource for a role. When that role is provisioned to a user, the user has access to data defined by the policy. In the case of the predefined security reference implementation, this role is always a duty role. Data roles generated to inherit the job role based on data role templates limit access to database resources in a particular dimension, such as the US business unit.

The database resource defines an instance of a data object. The data object is a table, view, or flexfield.

The following figure shows the database resource definition as the means by which a data security policy secures a data object. The database resource names the data object. The data security policy grants to a role access to that database resource based on the policy's action and condition.



Database Resources

A database resource specifies access to a table, view, or flexfield that is secured by a data security policy.

- Name providing a means of identifying the database resource
- Data object to which the database resource points

Data Security Policies

Data security policies consist of actions and conditions for accessing all, some, or a single row of a database resource.

- Condition identifying the instance set of values in the data object
- Action specifying the type of access allowed on the available values

Note

If the data security policy needs to be less restrictive than any available database resource for a data object, define a new data security policy.

Actions

Actions correspond to privileges that entitle kinds of access to objects, such as view, edit, or delete. The actions allowed by a data security policy include all or a subset of the actions that exist for the database resource.

Conditions

A condition is either a SQL predicate or an XML filter. A condition expresses the values in the data object by a search operator or a relationship in a tree hierarchy. A SQL predicate, unlike an XML filter, is entered in a text field in the data security user interface pages and supports more complex filtering than an XML filter, such as nesting of conditions or sub queries. An XML filter, unlike a SQL predicate, is assembled from choices in the UI pages as an AND statement.

Tip

An XML filter can be effective in downstream processes such as business intelligence metrics. A SQL predicate cannot be used in downstream metrics.

Securing Data Access: Points to Consider

Oracle Fusion Applications supports securing data through role-based access control (RBAC) by the following methods.

Method of securing data	Reason	Example
Data roles apply explicit data security policies on job and abstract roles	Appropriate for job and abstract roles that should only access a subset of data, as defined by the data role template that generates the data role or by HCM security profiles.	Accounts Payable Manager - US data role to provide an accounts payable manager in the US business unit with access to invoices in the US business unit.
Data security policies	Define data access for application roles and provide inheriting job and abstract roles with implicit data security	Projects

If a user has access to the same function through different roles that access different data sets, then the user has access to a union of those data sets.

When a runtime session is created, Oracle Platform Security Services (OPSS) propagates only the necessary user to role mapping based on Oracle Fusion Data Security grants. A grant can specify entitlement to the following.

- Specific rows of data (data object) identified by primary key
- Groups of data (instance set) based on a predicate that names a particular parameter
- Data objects or instance sets based on runtime user session variables

Data is either identified by the primary key value of the row in the table where the data is stored. Or data is identified by a rule (SQL predicate) applied to the WHERE clause of a query against the table where the data is stored.

Grants

Oracle Fusion Data Security can be used to restrict the following.

- Rows that are returned by a given query based on the intended business operation
- Actions that are available for a given row

Grants control which data a user can access.

Note

Attribute level security using grants requires a data security policy to secure the attribute and the entitlement check enforces that policy.

A grant logically joins a user or role and an entitlement with a static or parameterized object instance set. For example, `REGION='WEST'` is a static object instance set and `REGION=&GRANT_ALIAS.PARAMETER1` is a parameterized object instance set. In the context of a specific object instance, grants specify the allowable actions on the set of accessible object instances. In the database, grants are stored in `FND_GRANTS` and object instance sets are stored in `FND_OBJECT_INSTANCE_SETS`. Object access can be tested using the privilege check application programming interface (API).

Securing a Business Object

A business object is a logical entity that is typically implemented as a table or view, and corresponds to a physical database resource. The data security policies of the security reference implementation secure predefined database resources. Use the Manage Data Security Policies task to define and register other database resources.

Data security policies identify sets of data on the registered business object and the actions that may be performed on the business object by a role. The grant can be made by data instance, instance set or at a global level..

Note

Use parameterized object instance sets whenever feasible to reduce the number of predicates the database parses and the number of administrative intervention required as static object instances sets become obsolete. In HCM, security profiles generate the instance sets.

Data Role Templates: Explained

You use data role templates to generate data roles. You generate such data roles, and create and maintain data role templates in the Authorization Policy Manager (APM).

Note

HCM data roles are generated using the Manage Data Roles and Security Profiles task, which uses HCM security profiles, not data role templates, to define the data security condition.

The following attributes define a data role template.

- Template name
- Template description
- Template group ID
- Base roles
- Data dimension
- Data role naming rule
- Data security policies

The data role template specifies which base roles to combine with which dimension values for a set of data security policies. The base roles are the parent job or abstract roles of the data roles.

Note

Abstract, job, and data roles are enterprise roles in Oracle Fusion Applications. Oracle Fusion Middleware products such as Oracle Identity Manager (OIM) and Authorization Policy Manager (APM) refer to enterprise roles as external roles. Duty roles are implemented as application roles in APM and scoped to individual Oracle Fusion Applications.

The dimension expresses stripes of data, such as territorial or geographic information you use to partition enterprise data. For example, business units are a type of dimension, and the values picked up for that dimension by the data role template as it creates data roles are the business units defined for your enterprise. The data role template constrains the generated data roles with grants of entitlement to access specific data resources with particular actions. The data

role provides provisioned users with access to a dimensional subset of the data granted by a data security policy.

An example of a dimension is a business unit. An example of a dimension value is a specific business unit defined in your enterprise, such as US. An example of a data security policy is a grant to access a business object such as an invoice with a view entitlement.

When you generate data roles, the template applies the values of the dimension and participant data security policies to the group of base roles.

The template generates the data roles using a naming convention specified by the template's naming rule. The generated data roles are stored in the Lightweight Directory Access Protocol (LDAP) store. Once a data role is generated, you provision it to users. A user provisioned with a data role is granted permission to access the data defined by the dimension and data security grant policies of the data role template.

For example, a data role template contains an Accounts Payable Specialist role and an Accounts Payable Manager role as its base roles, and region as its dimension, with the dimension values US and UK. The naming convention is [base-role-name]:[DIMENSION-CODE-NAME]. This data role template generates four data roles.

- Accounts Payable Specialist - US (business unit)
- Accounts Payable Specialist - UK (business unit)
- Accounts Payable Manager - US (business unit)
- Accounts Payable Manager - UK (business unit)

Making Changes To Data Role Templates

If you add a base role to an existing data role template, you can generate a new set of data roles. If the naming rule is unchanged, existing data roles are overwritten.

If you remove a base role from a data role template and regenerate data roles, a resulting invalid role list gives you the option to delete or disable the data roles that would be changed by that removal.

Making Changes to Dimension Values

If you add a dimension value to your enterprise that is used by a data role template, you must regenerate roles from that data role template to create a data role for the new dimension. For example if you add a business unit to your enterprise, you must regenerate data roles from the data role templates that include business unit as a dimension.

If you add or remove a dimension value from your enterprise that is used to generate data roles, regenerating the set of data roles adds or removes the data roles for those dimension values. If your enterprise has scheduled regeneration as an Oracle Enterprise Scheduler Services process, the changes are made automatically.

For information on working with data role templates, see the Oracle Fusion Middleware Administrator's Guide for Authorization Policy Manager.

Set Activity Stream Options

Setting Activity Stream Preferences: Procedures

Activity Stream is a region on the Oracle Fusion Applications Welcome dashboard and other pages in various applications. Users track the activities and transactions of other users in this region.

You can set options that affect all activity stream regions for all users across your site. Individual users can still override your settings through Activity Stream preferences.

Setting Preferences

Using the activity stream preferences you can specify who can view your activity stream, for which users, services, and spaces to track activities, and the activities to show in an activity stream task flow.

Perform the following steps to set the preferences.

1. In the **Setup and Maintenance** work area, search for the Set Activity Stream Options task and open it.
2. On the preferences page, click **People** and select one of the following options:

Tip

This setting relates only to the activities that stream from the people connections service. Such activities include making connections, posting feedback and messages, adjusting your profile, and so on.

- Only Me - to display your own activities in your view of the activity stream.
 - Me and My Connections - to display your activities and the activities of your connections in your view of the activity stream.
 - No Personal - to hide any user activity in your view of the activity stream, including your own.
3. Click **Spaces** and select one of the following options:
 - All Spaces - to stream activities from all available spaces.
 - My Spaces - to stream activities from the spaces of which you are a member.

- No Spaces - to avoid streaming any activities from spaces other than the home space.
4. Click **Service Categories** and select the services for which you want to track and display the activities.

Tip

If you select No Spaces under Spaces (in the earlier step), the services do not publish any activity to your view of the activity stream, even if you select the services here.

5. Click **Privacy** and select one of the following options:
 - Everyone - all users, whether they are signed in or not, can see your view of the activity stream.
 - Authenticated Users - all users who are signed in can see your view of the activity stream.
 - My Connections - everyone connected to you can see your view of the activity stream.
 - Myself - only you can see your view of the activity stream.
6. Click **Comments and Likes** and select the required options.
7. Click **Save**.

Manage Menu Customizations

Menu Customization: Explained

You use the Manage Menu Customizations task to customize the navigator and home page menus. This task is available from the Setup and Maintenance work area, which is accessible from the Administration menu in the Oracle Fusion Applications global area. Select either **Customize - Navigator** or **Customize - Homepage** to proceed with the customization activity.

Note

To perform menu customization at run time, it is important that you have the required privileges.

You customize the menus at the site level and your changes affect all users (or all users of a tenant if in a multi-tenant environment).

Tip

If you are making minor changes, such as adding or editing one or two nodes, then you can hide the changes until you have completed your customizations. However, if you are making more than minor changes, such as rearranging

several nodes, you might want to instead create a sandbox before customizing menus.

Navigator Menu Configuration

The navigator menu is the global menu that is accessible from the Oracle Fusion Applications global area. It allows users to navigate directly to the pages inside Oracle Fusion Applications as well as to outside web pages. The menu is composed of links (items) that are organized in a hierarchy of groups.

You can customize the navigator menu to address needs that are specific to your organization. For example, you might want to add specialized groupings for cross-functional teams or add links to web pages or external applications. You can add groups and links to the navigator menu, as well as hide and show them.

The Manage Menu Customizations task displays the menu groups as expandable nodes, with which you can traverse the menu hierarchy.

Note

Not all Oracle Fusion Applications pages appear in the navigator menu, because some pages are accessible from a work area or from other links in the global area such as the **Home** link.

The following table lists the Navigator menu customization tasks that you can perform at run time as well as the tasks that you cannot perform.

Permitted Tasks	Restricted Tasks
• Add and delete custom groups. • Edit any group. • Add and delete custom items. • Edit any item. • Specify navigation for an item: • Specify navigation to a UI Shell page in an Oracle Fusion application. • Specify navigation to an external web page. • Hide or show groups and items.	• You cannot add menu items (links) as top-level nodes. You can add nodes to only the groups in the top level and subgroups. • You cannot delete nodes that are delivered with the product. Instead, you can hide them. • You cannot move nodes. Instead, you must duplicate the node and hide the original node.

Home Page Menu Configuration

The home page menu is the set of tabs that are displayed in the Oracle Fusion Applications global area. The home page menu displays tabs for all the items in the menu for which the end user has access privileges. You can add tabs to the home page menu, as well as hide and show them.

The following table lists the Home page menu customization tasks that you can perform at run time as well as the tasks that you cannot perform.

Permitted Tasks	Restricted Tasks
• Add and delete custom items. • Edit any item. • Specify navigation to a UI Shell page in an Oracle Fusion application. • Hide or show items.	• You cannot add menu items (links) as sub-nodes. All nodes are top-level nodes. • You cannot delete nodes that are delivered with the product. Instead, you can hide them. • You cannot move nodes. Instead, you must duplicate the node and hide the original node.

Adding Navigator Menu Group: Points to Consider

You arrange the navigator menu by building a hierarchy of nested groups.

Use the View menu to expand or collapse a group of nodes. You can also right-click a node and access similar actions to facilitate tree navigation.

Adding Groups

To add a group, you can insert a group above or below a peer group or insert a child group. You edit a group by defining a label and specifying whether the group should be rendered. You typically hide the group until all changes have been completed.

Adding Menu Items: Points to Consider

The home page menu items are URL links to home pages in Oracle Fusion applications. The Navigator menu items can either be links to UI Shell pages or links to external applications and web sites.

In the menu hierarchy, the home page menu items are always top-level items. Whereas, you can add Navigator menu items to top-level groups and to their subgroups but you cannot add navigator menu items as top-level nodes.

Adding a Home Page Menu Item

To add a home page menu item, navigate to the place where you want the item to appear and insert it above or below the existing item. You can also duplicate an existing menu item and position it at the required location. You must provide a label for the menu and link the menu item to a UI Shell page.

Adding a Navigator Menu Item

To add a Navigator menu item, you navigate to the item's group and insert the item above or below another item.

You can also duplicate an existing item. You must provide a label for the menu and either link the menu item to a UI Shell page or link it to an external web site or application.

You can link a Navigator menu item to the following:

- A UI Shell page in an Oracle Fusion application.
- A dynamic URL of a page outside of Oracle Fusion Applications where the host, port, or context root might change.
- A Static URL of a page outside of Oracle Fusion Applications where the host, port, or context root does not change.

Linking to a UI Shell Page

If the new item points to a UI Shell page in an application, then you must provide the name of the web application and the view ID of the target page. The web application name and view ID can be obtained from an existing menu item that links to the same UI Shell page.

In a non-Cloud implementation, you also can obtain the web application name from the context root for the application, and you can obtain the view ID from the `id` attribute for the page's `<view>` tag in the product's `public_html/WEB-INF/adfc-config.xml` file.

If you want secure access to the target UI Shell page from the menu item, then you must provide the name of the secured resource and the name of the policy store's application stripe. When an end user clicks the link, the Oracle Fusion Applications checks the secured resource and the Lightweight Directory Access Protocol (LDAP) policy store to determine whether the user has the privilege to view the page.

If there is another menu item that points to the same page, then you can get the secured resource name and application stripe from that item. In a non-Cloud implementation, you also can obtain the application stripe from the `jps.policystore.applicationid` parameter in the application's `weblogic-application.xml` file. Examples of application stripes are `crm`, `fscm`, and `hcm`.

For non-Cloud applications, you can determine the secured resource name by obtaining the name of the web page's page definition file. By default, the page definition files are located in the `view.PageDefs` package in the Application Sources directory of the view project. If the corresponding JavaServer Faces (JSF) page is saved to a directory other than the default (`public_html`), or to a subdirectory of the default, then the page definition will also be saved to a package of the same name. An example of a secured resource name is `oracle.apps.view.pageDefs.CaseList_Form_Attach_UIShellPagePageDef`.

A UI Shell page might take parameters and display or act differently based on the parameters that are passed in. For example, if accessing a page from one group in the menu hierarchy, the parameter might be set to `status=Open` and if accessing the page from a different group, the parameter might be set to `status=Closed`. If the page takes parameters, you can use the Page Parameters List text box to provide a semicolon-delimited string of name-value pairs, such as `org=m1;context=s1`. You can use expression language (EL) to specify the parameters. If the EL evaluates to an Object, the `toString` value of that Object is passed as the value of the parameter.

Linking to the Dynamic URL of an External Web Site or Application

Linking a menu item to a dynamic URL is beneficial in cases where the host, port, or context root to which you point frequently changes. Instead of updating

the link to each application, you can update the details of the web application in the topology registration, and that change affects all menu items that contain dynamic links pointing to that web application. For example, you would need a dynamic URL to link to a test version of an application and you will need to change the host and port when you move the application from a test environment to a production environment.

To link to a page outside of Oracle Fusion Applications where the host, port, or context root might change, you must first register the web application in the topology using the Register Enterprise Applications task.

While creating a new menu item on the Create Item Node dialog box, select the Dynamic URL option and provide the details of the web application as per the following example.

When the complete URL to be linked is: `http://example:9011/myApp/faces/Page1`,

- The name of the web application added to topology would be: myApp (the value that would eventually appear in the Web Application list) and the protocol host, port, and context root values of the URL would be: `http://example:9011/myApp`
- The value to be provided in the Destination for Web Application field would be: `/faces/Page1`

Once the menu item is linked to the dynamic URL, the target page appears in a new browser window or tab when you click the menu item.

Linking to a Static URL of an External Web Site or Application

This option is used when you link a menu item to a page outside Oracle Fusion Applications where the host, port, or context root remains constant. For example, you can use a static URL to link to `http://www.oracle.com`.

Hiding or Displaying Menu Nodes: Points to Consider

While you are creating or working with a menu group or a menu item, you might want to prevent end users from accessing the node. You can hide the menu group or menu item while you are working with it, and then show the node when you have completed the task.

Working with Nodes

The Manage Menu Customizations page shows all nodes. The Rendered check box is selected by default for all nodes that are added and are visible.

To hide a node, clear the Rendered check box. You can edit the node anytime to either display or hide it.

If you want a menu group or a menu item to appear only if certain conditions are met, you can use an expression language (EL) command to make the node to appear. For example, `#{securityContext.userInRole['ADMIN']}`.

A node that appears in italics either contains an EL command or the Rendered check box beside it was cleared, and therefore is hidden from end users.

Tip

For major changes that need to be tested and approved, you might want to use the sandbox manager instead of hiding and showing nodes.

Design Time Menu Customizations: Highlights

The menu customization feature provides several options to add, modify, and organize the Navigator and home page menus during design time. You must have developer rights to perform these customizations.

Note

Design time menu customizations are not applicable to Oracle Cloud implementations.

An overview of customizing the Navigator menu and home page is provided in the Oracle Fusion Applications Extensibility Guide.

Customizations

- Use Oracle JDeveloper to customize the Navigator and home page menus at design time.

See: Customizing Menus

- Define translations for your customizations in the locales you support.

See: Translating Menu Customizations

- Customize the page template to display the Navigator menu groups as separate menus, each of them displaying their list of menu items. Refer to the Oracle Fusion Applications Developer's Guide.

See: Rendering the Navigator Menu as Dropdown Buttons

Troubleshooting Navigator Menu: Highlights

If the Navigator menu does not display customizations as expected, use the following troubleshooting tips to verify the changes.

Issues and Resolutions

- If an expected menu item does not appear in the Navigator menu, verify whether the menu item has been hidden from view.
- If a custom menu item was added and the browser does not display the page indicated by the URL, open the Manage Menu Customizations task and verify whether the web application name is the same as the context root for the application, and that the view ID is the id attribute for the page's <view> tag in the product's public_html/WEB-INF/adfc-config.xml file. The URL should not contain the .JSPX suffix.

- If you see a "webApp value not define" error message when you choose an item in the Navigator menu, verify whether the application is in the topology tables. Refer to the Oracle Fusion Applications Administrator's Guide.

See: Viewing the Routing Topology of an Oracle Fusion Applications Instance, Product Family, or Product

Manage Audit Policies

Managing Audit Policies: Explained

Auditing is used to monitor user activity and all configuration, security, and data changes that have been made to an application. Auditing involves recording and retrieving information pertaining to the creation, modification, and removal of business objects. All actions performed on the business objects and the modified values are also recorded. The audit information is stored without any intervention of the user or any explicit user action.

Use audit policies to select specific business objects and attributes to be audited. The decision to create policies usually depends on the type of information to be audited and to the level of detail that is required to be reported.

Enabling Audit Functionality

To enable audit, ensure that you have administrative privileges. For Oracle Fusion Applications, you must configure the business objects and select the attributes before enabling audit. If you enable audit without configuring the business objects, auditing remains inactive. By default, auditing is disabled for all applications.

To enable auditing for Oracle Fusion Middleware products, select one of the levels at which auditing is required for that product. The audit levels are predefined and contain the metadata and events to be audited. For more information, refer to the Oracle Fusion Middleware documentation and also the Oracle Enterprise Repository for Oracle Fusion Applications at <http://fusionappsoer.oracle.com>.

If you do not want an application to be audited, you can stop the audit process by setting the Audit Level option to **None**. While viewing the audit report for that application, you can specify the period during which auditing remained enabled.

Configuring Audit Business Object Attributes: Points to Consider

Audit allows you to track the change history of particular attributes of a business object. However, those objects and their attributes must be selected for audit and auditing must be enabled for that application. Your configuration settings determine which attributes to audit for a given object, and when the audit starts

and ends. Auditing takes into account all the create or insert, update, and delete operations performed on an object and its attributes.

To configure audit business object attributes, navigate to the Manage Audit Policies page in the Setup and Maintenance work area.

Selecting an Application

To set up auditing, you must select a web application that contains the required business objects that can be audited. From the list of business objects, select those business object that you want to audit. Selecting a business object also displays its attributes that are enabled for auditing.

Selecting Attributes

For each selected business object to be audited, select the corresponding attributes to include in the audit. All attributes that belong to that object are by default selected for audit and appear on the user interface. However, you can add or remove attributes from the list. When you remove an attribute from the list, you stop auditing it even when the parent object is selected for audit. So, if you want an attribute to be audited, you must add it to the list.

Note

If the object selected in an audit hierarchy is also a part of several other audit hierarchies, the attribute configuration for that object is applicable to all the hierarchies in that application.

Starting and Stopping Audit

The business object is ready for audit after you select its attributes and save the configuration changes. However, to start auditing, the audit level for Oracle Fusion Applications must be set to **Auditing** on the Manage Audit Policies page.

To stop auditing an object, you can deselect the entire object and save the configuration. As a result, all its selected attributes are automatically deselected and are not audited. To continue to audit the business object with select attributes, deselect those attributes that are not to be audited.

When end-users view the audit history for an application, they can specify the period for which they want the results. Therefore, it is important to note when you start and stop auditing an application. For example, today if end-users intend to view the audit history of an object for the previous week, but auditing for that object was stopped last month, they would not get any audit results for that week because during the entire month that object was not audited. Even if you enable audit for that object today, end-users cannot get the wanted results because audit data until today is not available.

Configuring Audit: Highlights

You can set up auditing for Oracle Fusion Applications using the Manage Audit Policies page in the Setup and Maintenance work area of Oracle Fusion Applications.

To set up auditing for Oracle Fusion Middleware products, you must select the level of auditing that maps to a predefined set of metadata and events that have to be audited. Information on configuring audit for Oracle Fusion Middleware products is provided in Oracle Fusion Middleware guides.

You can also create a configuration file and deploy it to audit a specific Oracle Fusion Middleware product. The configuration details for Oracle Fusion Middleware products are available in the form of audit-specific assets that can be used to create the configuration file (config.xml). For more information, see the Oracle Enterprise Repository for Oracle Fusion Applications at <http://fusionappsoer.oracle.com>, and search with Audit as the Asset Type to get the list of audit-specific assets.

Oracle Fusion Middleware Products

- Configure business objects to enable auditing in Oracle Fusion Middleware products. Refer to the Oracle Fusion Middleware Security and Administrator's Guide for Web Services.

See: Auditing Web Services

Oracle Fusion Security Products

- Configure business objects to enable auditing in Oracle Fusion security products. Refer to Oracle Fusion Middleware Application Security Guide.

See: Oracle Fusion Middleware Audit Framework Reference

Manage Oracle Social Network Objects

Managing Oracle Social Network Objects: Explained

Use the **Manage Oracle Social Network Objects** task for managing the Oracle Social Network Objects. The integration of Oracle Social Network Cloud Service with applications and business processes brings key attributes from the applications to share, socialize, and update information. This helps in making better business decisions based on additional information that you obtain and analyze within your social network environment.

Use the **Manage Oracle Social Network Objects** page to set up and define:

- The business objects and attributes to enable
- The enablement method for social network integration with Oracle Fusion Applications

You can access the **Manage Oracle Social Network Objects** page by starting in the **Setup and Maintenance Overview** page and searching for the task named **Manage Oracle Social Network Objects**.

Use social network to:

- Discuss projects and plans in public forums

- Maintain:
 - Membership groups
 - Activity feeds of the people you choose
- Facilitate:
 - One-on-one Conversations
 - Reviews
 - Document sharing

Note

Oracle Social Network Cloud Service is currently available in Cloud implementations only.

An important aspect of managing Oracle Social Network objects is enabling business objects for integration.

Enabling Business Objects for Integration

A business object can't be shared within social network until a functional administrator or implementor:

- Accesses the **Manage Oracle Social Network Objects** page in Oracle Fusion Applications
- Enables the business object for social network integration

Options for Enabling Oracle Social Network Objects: Explained

To enable business objects and apply attributes for Oracle Social Network Cloud Service integration with Oracle Fusion Applications, use the **Manage Oracle Social Network Objects** task.

In the **Manage Oracle Social Network Objects** page, you can:

- Enable an object
- Disable an object
- Enable all objects
- Enable business object attributes

To access the **Manage Oracle Social Network Objects** page:

1. Search for the **Manage Oracle Social Network Objects** task in the Setup and Maintenance work area.
2. In the Search Results section, click the **Go to Task** icon to open the **Manage Oracle Social Network Objects** page.

Note

Custom objects and attributes created in Application Composer in the mainline are also displayed on the **Manage Oracle Social Network Objects** page. You can enable these objects and attributes for social network integration.

Enable Object

To enable a business object:

1. Access the **Manage Oracle Social Network Objects** page.
2. In the **Business Objects** section, select a business object, click **Enable Object**, and select one of the enablement options. The business objects are grouped by modules. The available enablement options are:
 - **Manual:** (Recommended) Empowers the user to decide whether to share each instance of the object with social network.

Note

Once shared, all updates to the enabled attributes of the object instance, and deletes, are sent to social network. Updates to attributes that are not enabled are not sent.

- **Automatic:** Automatically sends the newly enabled object instances and updates to social network.

Note

All object instances are automatically shared with social network upon creation, and all subsequent updates to the enabled attributes of the object instances, and deletes, are automatically sent to social network.

- **No:** Does not send any information on object instance to social network. This is the default option.

3. Click **OK**.

This enables the selected business object, and empowers the user to decide whether to share each instance of the object with social network.

Note

After you enable an object, you must enable one or more attributes in the **Attributes** section of the **Manage Oracle Social Network Objects** page. Updates to enabled attributes are sent to social network.

Disable Object

To disable a business object:

1. Access the **Manage Oracle Social Network Objects** page.

2. In the **Business Objects** section, select a business object, and click **Disable Object**.
3. Save your changes.

This disables the selected business object by updating the enablement option as **No**.

Enable All

To enable all business objects:

1. Access the **Manage Oracle Social Network Objects** page.
2. In the **Business Objects** section, click **Enable All**.
3. Save your changes.

This enables all business objects in bulk, and updates the enablement option of all business objects as **Manual**.

Note

- After you enable business objects, you must enable one or more attributes in the **Attributes** section of the **Manage Oracle Social Network Objects** page. Updates to the enabled attributes are sent to social network.
 - If you enable a business object, but don't configure any attributes for the enabled business object, no attributes are sent to social network during create and update. The only exception is that some internal bookkeeping information are sent. Deletes are sent as usual.
-

Status Column

The Status column in the **Business Objects** table visually indicates:

- Whether a business object is enabled
- Which enabled business objects don't yet have an enabled attribute assigned

The status indicators include:

- A check mark, which indicates that you have configured attributes for an enabled business object
- A warning sign, which indicates that you have not configured any attributes for an enabled business object

Enable Business Object Attributes

To enable business object attributes:

1. In the **Attributes** section, click **Add** to display the **Select Attributes** dialog where you can select attributes to add to the table.
2. Select an attribute name in the table, and select the **Enabled** check box to enable the attribute.
3. Click **OK**.

4. Save your changes.

In the **Attributes** table, you can also:

- Click **View** to view a list of all attributes that are enabled.
- Click **Remove** to remove attributes from the table.
- Hover over the **Attribute Information** icon displayed next to descriptive flexfield attributes to view information about the attributes.

Update Translations: Explained

The Update Translations process sends attribute labels and business object names to Oracle Social Network Cloud Service for use in the user interface.

In social network, the attribute or business object labels appear in the language of your locale. If you change the locale in social network, then the attribute or business object labels appear in the updated language. However, the data appears in the language in which it was originally sent to social network. If you have previously sent an instance of the business object to social network, then the instance data isn't updated. Clicking the **Update Translations** button on the **Manage Oracle Social Network Objects** page sends translations for business objects with the enablement option as **Manual** or **Automatic**.

Synchronize Business Objects: Explained

Use the **Synchronize** button on the **Manage Oracle Social Network Objects** page to synchronize business objects. This re-sends the definitions of business objects having the enablement option as **Manual** or **Automatic** to Oracle Social Network Cloud Service.

Use the Synchronize button at the:

- **Business Objects table level:** To re-send the definitions of a selected business object to social network. This button is enabled only when you select a row for a business object with the enablement option as **Manual** or **Automatic**.
- **Manage Oracle Social Network Objects page level:** To re-send the definitions of all business objects with the enablement option as **Manual** or **Automatic** to social network.

Note

If you had modified any business object enabled for social network and not saved your changes, then on clicking the **Synchronize** button, a warning message appears. This message informs you that you have not saved your changes, and you can select one of the following options:

- **Save and Synchronize:** To save the modified business objects, and synchronize the unmodified business objects.

- **Synchronize:** To ignore any unsaved business objects, and only synchronize the unmodified business objects.
 - **Cancel:** To cancel the synchronization task.
-

FAQs for Manage Oracle Social Network Objects

What happens if I update translations?

When you update translations, you send translations for business objects with the enablement option as **Manual** or **Automatic** to Oracle Social Network Cloud Service.

On updating translations, you also:

- Synchronize the newly translated text from Oracle Fusion Applications so that it can be used within social network. This means you can:
 - Install and enable a new language.
 - Take a language patch at any time.
- Send attribute labels and business object names to social network for use in its user interface.

How can I update translations?

Use the **Update Translations** button on the **Manage Oracle Social Network Objects** page for subsequent updates to labels and attributes.

Use the **Update Translations** button at the:

- **Business Objects table level:** To send translations for a selected business object to Oracle Social Network Cloud Service. This button is enabled only when you select a row for a business object with the enablement option as Manual or Automatic.
- **Manage Oracle Social Network Objects page level:** To send translations for all business objects with the enablement option as **Manual** or **Automatic** to social network.

Note

When you save the enablement of a business object to social network, it sends the translations as well. Hence, you need not click the **Update Translations** button after saving the enablement.

When do I update translations?

Run the **Update Translations** process only after you install a new language pack of Oracle Fusion Applications.

Updating translations synchronizes the newly translated text to Oracle Social Network Cloud Service for integration with Oracle Fusion Applications.

Note

When you save the enablement of a business object to social network, it sends the translations as well. Hence, you need not click the **Update Translations** button after saving the enablement.

What happens if I synchronize business objects?

When you synchronize business objects, you re-send the definitions of business objects having the enablement option as **Manual** or **Automatic** to Oracle Social Network Cloud Service.

When do I synchronize business objects?

Run the Synchronize process after you use customization sets to import the setup from the **Manage Oracle Social Network Objects** page in another environment.

You can also run the process any time you want to synchronize the settings of business objects with Oracle Social Network Cloud Service without making any changes in the **Manage Oracle Social Network objects** page.

Manage Applications Core Common Reference Objects

Define Applications Core Configuration: Overview

The Define Applications Core Configurations task list contains the Oracle Middleware Extensions for Applications (Applications Core) tasks that support implementation of common functionality such as lookups, profile options, document sequences, and so on.

Use this task list to manage configuration objects that are defined centrally and shared across applications, in addition to those that are classified under the Maintain Common Reference Objects task list. You can search for this task list in the Setup and Maintenance work area.

Manage Applications Core Messages

Messages: Highlights

The message dictionary contains messages that tell users about business rule errors, such as missing or incorrect data, and how to resolve them, to warn users about the consequences of intended actions, and provide information in log files. These messages are defined for specific applications and modules, but a few are

common messages that can be used in any application. All applications also use messages stored outside of the message dictionary.

The message dictionary is described in the Oracle Fusion Applications Developer's Guide.

Managing Messages

- Use the Manage Messages page to create and edit custom messages in the message dictionary, as well as edit predefined messages. Do not delete predefined messages unless you are sure that they are not used anywhere. Refer to the Oracle Fusion Applications Developer's Guide.

See: Introduction to Message Dictionary Messages

- Messages outside of the message dictionary, such as confirmations and field validations, are managed either in the Oracle Application Development Framework or through message resource bundles used for translation.

Creating and Editing Messages: Highlights

Each message in the message dictionary has many attributes and components, including message properties, text, and tokens, that you define when creating or editing the message. To create or edit a message, navigate to the Manage Messages page in the Setup and Maintenance work area.

Details about these messages are described in the Oracle Fusion Applications Developer's Guide.

Message Properties

- The message type identifies the type of information that the message contains.

See: Understanding Message Types

- The message name and number are identifiers for the message. There are specific message number ranges for predefined messages in each application, and you should not edit numbers assigned to predefined messages. When creating custom messages, use only message numbers within the 10,000,000 to 10,999,999 range.

See: About Message Names

See: About Message Numbers

- The translation notes for predefined messages might contain internal content that you can disregard.

See: About Translation Notes

- The message category, severity, and logging enabled option are related to the incident and logging process.

See: About Grouping Messages by Category and Severity

See: Understanding Incidents and Diagnostic Logs with Message Dictionary

Message Text and Tokens

- The message text comprises various components, some of which are displayed only to select users. To determine which component of the message text is displayed to a particular user, set the Message Mode profile option (FND_MESSAGE_MODE) at the user level for that user. The message component short text is visible to all users and therefore, the profile option does not apply to this component. Also, the profile option applies only to messages in the message dictionary.

See: About Message Components

- Tokens are variables that represent values to be displayed in the message text.

See: About Tokens

Common Messages: Points to Consider

Common messages, which have message names that begin with FND_CMN and message numbers between 0 and 999, are used throughout Oracle Fusion Applications. Each common message can appear in multiple places in any product family. For example, the FND_CMN_NEW_SRCH message can be used for any search to indicate that no results were found. Common messages that are of type error or warning are part of the message dictionary.

Editing Common Messages

Because a common message can be used in any application, consider the ramifications if you edit any aspect of the message, including incident and logging settings. Changes would be reflected in all instances where the message is used. For example, if you change the message text, make sure that the text would make sense to all users across Oracle Fusion Applications who might see it.

Creating Common Messages

You can create custom common messages for use in multiple places within a single product. Do not begin the message name with FND_CMN, but use another suitable convention. The message number should be within the range that is designated for the product.

Manage Applications Core Standard Lookups

Lookups: Explained

Lookups are lists of values in applications. You define a list of values as a lookup type consisting of a set of lookup codes, each code's translated meaning, and optionally a tag. End users see the list of translated meanings as the available values for an object.

Lookups provide a means of validation and lists of values where valid values appear on a list with no duplicate values. For example, an application might store the values Y and N in a column in a table, but when displaying those values in the user interface, Yes or No (or their translated equivalents) should be available for end users to select. For example, the two lookup codes Y and N are defined in the REQUIRED_INDICATOR lookup type.

In another example, a lookup type for marital status has lookup codes for users to specify married, single, or available legal partnerships.

Lookup Type	Lookup Code	Meaning	Tag
MAR_STATUS	M	Married	
	S	Single	
	R	Registered Partner	+NL
	DP	Domestic Partner	-FR, AU

In this case, tags are used for localizing the codes. All legislations list Married and Single. Only the Dutch legislation lists Registered Partner. And all legislations except France and Australia also list Domestic Partner.

When managing lookups, you need to understand the following.

- Using lookups in applications
- Customization levels
- Accessing lookups
- Enabling lookups
- The three kinds of lookups: standard, common, and set enabled

Using Lookups in Applications

Use lookups to provide validation or a list of values for a user input field in a user interface.

An example of a lookup used for validation is a flexfield segment using a table-validated value set with values from a lookup type. An example of a lookup in a list of values is a profile option's available values from which users select one to set the profile option. Invoice Approval Status gives the option of including payables invoices of different approval statuses in a report. The lookup code values include All so that users can report by all statuses: Approved, Resubmitted for approval, Pending or rejected, and Rejected.

Customization Level

The customization level of a lookup type determines whether the lookups in that lookup type can be edited. This applies data security to lookups.

Some lookup types are locked so no new codes and other changes can be added during implementation or later, as needed. Depending on the customization level of a lookup type, you may be able to change the codes or their meanings.

Some lookups are designated as extensible, so new lookup codes can be created during implementation, but the meanings of predefined lookup codes cannot be modified. Some predefined lookup codes can be changed during implementation or later, as needed.

The customization levels are user, extensible, and system. The following table shows which lookup management tasks are allowed at each customization level.

Allowed Task	User	Extensible	System
Deleting a lookup type	Yes	No	No
Inserting new codes	Yes	Yes	No
Updating start date, end date, and enabled fields	Yes	Yes, only if the code is not predefined data	No
Deleting codes	Yes	Yes, only if the code is not predefined data	No
Updating tags	Yes	No	No
Updating module	Yes	No	No

Predefined data means LAST_UPDATED_BY = SEED_DATA_FROM_APPLICATION.

If a product depends on a lookup, the customization level should be system or extensible to prevent deletion.

Once the customization level is set for a lookup type, it cannot be modified. The customization level for lookup types created using the Define Lookups page is by default set at the User level.

Standard, Common, and Set-Enabled Lookups

The available kinds of lookups are as follows.

Lookup	Description
Standard	Lists the available codes and translated meanings
Set enabled	Additionally associates a reference data set with the lookup codes
Common	Legacy lookups

Standard lookups are the simplest form of lookup types consisting only of codes and their translated meaning. They differ from common lookups only in being defined in the standard lookup view.

Common lookups exist for reasons of backward compatibility and differ from standard lookups only in being defined in the common lookup view.

Set enabled lookup types store lookup codes that are enabled for reference data sharing. At runtime, a set-enabled lookup code is visible because the value of the determinant identifies a reference data set in which the lookup code is present.

Accessing Lookups

Standard, set-enabled, and common lookups are defined in the Standard, Set-enabled, and Common views, respectively. Applications development may define lookups in an application view to restrict the UI pages where they may appear.

In lookups management tasks, lookups may be associated with a module in the application taxonomy to provide a criteria for narrowing a search or limiting the number of lookups accessed by a product specific task such as Manage Purchasing Lookups.

Enabling Lookups

A lookup type is reusable for attributes stored in multiple tables.

Enable lookups based on the following.

- Selecting an **Enabled** check box
- Specifying an enabled start date, end date, or both
- Specifying a reference data set determinant

If you make changes to a lookup, users must sign out and back in before the changes take effect. When defining a list of values for display rather than validation, limit the number of enabled lookup codes to a usable length.

For more information on the predefined lookups and lookup codes, see assets with the Lookup type in the Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

Managing a Standard Lookup: Example

Creating a new standard lookup involves creating or selecting a lookup type to which the lookup code belongs, and determining appropriate values for the lookup codes and their meanings.

Note

You can only create or edit the lookup codes for a particular lookup type if its customization level supports it.

Creating a Lookup Type Called COLORS

Your enterprise needs a list of values for status to be used on various objects such as processes or users. The lookups are colors, so the lookup type you create is COLORS.

Lookup type parameters	Value
Lookup type name	COLORS

Meaning	Status
Description	Status by color
Module	Oracle Middleware Extensions for Applications

The lookup codes you define for the COLORS lookup type are, BLUE, RED, GREEN, and YELLOW.

Lookup Code	Meaning	Enabled	Display Sequence
BLUE	Urgent	No	4
RED	Stop	Yes	1
GREEN	Go	Yes	3
YELLOW	Caution	Yes	2

Understanding the Resulting Data Entry List of Values

Users need to respond to a process question by indicating whether to stop it, use caution, go ahead, or complete it urgently.

The list of values for the COLORS lookup type includes the meanings for the enabled codes.

Displayed Value	Hidden ID
Stop	RED
Caution	YELLOW
Go	GREEN

Analysis

The BLUE lookup code was not enabled and does not appear in the list of values. The display sequence of values in the list of values is alphabetical unless you enter a number manually to determine the order of appearance. Number 1 indicates the value listed first in the list of values.

Note

Only lookups that are enabled and active, meaning between start and end dates, are visible.

Understanding the Transaction Table

When users enter one of the values from the list of values for the lookup type COLORS, the transaction table records the lookup code. In this example, the code is stored in the Status column

Transaction number	User name	Status
1	Jane	RED
2	Bob	YELLOW

3	Alice	BLUE

The status for one user is BLUE because at the time they entered a value, BLUE was enabled. Disabling a lookup code does not affect transaction records in which that code is stored. Data querying and reporting have access to disabled lookup codes in transaction tables.

Managing Set-Enabled Lookups: Examples

Creating a new set-enabled lookup is similar to creating a standard lookup with the addition of specifying a reference data set determinant for the lookup codes.

Note

You can only create or edit the lookup codes for a particular lookup type if its customization level supports it.

The reference data set for a set-enabled lookup code is part of its foreign key. This is unlike other set-enabled entities.

Selecting a Reference Group for a Set-Enabled Lookup Type

By specifying a reference group for a set-enabled lookup type you indicate which reference data set assignments are available for its lookup codes. For example a COLORS lookup type might be set enabled for a Countries reference group that includes the US and EU reference data set assignments.

Selecting a Reference Data Set for a Set-Enabled Lookup

The reference data set determines which lookup code is included in the list of values. If a COLORS lookup type contains a RED, YELLOW, ORANGE, and GREEN lookup code, you can enable one RED lookup as coming from the US reference data set and another RED lookup as coming from the EU reference data set with divergent meanings.

Reference Data Set	Lookup Code	Lookup Meaning
US	RED	Red
US	YELLOW	Yellow
US	GREEN	Green
EU	RED	Rouge
EU	ORANGE	Orange

In addition to divergent meanings for lookup codes based on associated reference data set, some lookup codes may be unique to one or another reference data set as the ORANGE lookup is to the EU reference data set in this example.

In another example, a lookup type called HOLD_REASON provides a list of reasons for applying a hold to a contract renewal. Reference data sets determine which codes are included in the hold reason list of values.

Reference Data Set	Lookup Code	Lookup Meaning
US	SEC	SEC Compliance Review
US	DIR	Needs Director's Approval
US	VP	Needs Vice President's Approval
CHINA	CSRC	Pending China Securities Regulatory Commission Review
CHINA	PR	Needs President's Approval
COMMON	REQUESTED	Customer Request

Using the Manage Set Assignments task, you have defined assignments that designate the China business unit to refer to the CHINA and the US business unit to refer to the US and all business units to refer to the COMMON set. When end users place a contract hold in the US business unit, only the three reason codes in US_SET are available. When placing a contract hold in the China business, only the two codes in China_SET are available.

FAQs for Manage Applications Core Standard Lookups

How can I edit lookups?

You can edit the existing lookup codes of a lookup type or add new lookup codes on the Define Lookups pages, which you can access by starting in the Setup and Maintenance work area and searching for lookup tasks. You can edit the existing lookup codes of a lookup type, or add new lookup codes to a lookup type, if the customization level for the lookup type supports editing.

Why can't I see my lookup types?

Lookups are listed by lookup type. Typically lookup types are managed using tasks that handle a group of related lookups, such as Manage Geography Lookups. Each task gives you access only to certain lookup types. The generic tasks provide access to all lookups types of a kind, such as all common lookups using the Manage Common Lookups task.

If existing lookups are not available to the tasks of the Define Lookups activity, they may be validated for use in a lookup view that is not central to all applications or whose owning application has not been specified in a lookup view.

Lookups can only be managed in the Define Lookups tasks if the lookup's view application is the standard lookups view, common lookups view, or set-enabled lookups view. Lookups defined in an application view can only be managed by following instructions provided by the owning application.

Note

A lookup type and its codes can only be defined in one lookup view.

What's the difference between a lookup type and a value set?

A lookup type consists of lookup codes that are the values in a static list of values. Lookup code validation is a one to one match.

A table-validated value set can consist of values that are validated through a SQL statement, which allows the list of values to be dynamic.

Tip

A table validated value set can be defined based on any table, including the lookups table. This allows a lookup type to be made into a table-validated value set that can be used in flexfields.

Area of Difference	Lookup Type	Value Set
List of values	Static	Dynamic if Table validation type
Validation of values	One to one match of meaning to code included in a lookup view, or through the determinant of a reference data set	By format or inclusion in a table
Format type of values	char	varchar2, number, and so on
Length of value	Text string up to 30 characters	Any type of variable length from 1 to 4000
Duplication of values	Never. Values are unique.	Duplicate values allowed
Management	Managed by both administrators and end-users, except system lookups or predefined lookups at the system customization level, which cannot be modified.	Maintained by administrators, except some product flexfield codes, such as GL for Oracle Fusion General Ledger, which are maintained by end users

A lookup type cannot make use of a value from a value set.

Value sets can make use of standard, common, or set-enabled lookups.

Both lookup types and value sets are used to create lists of values from which users select values.

What's a lookup tag used for?

Tags on lookup codes allow you to add a label to your lookup codes.

Lookup tags are unvalidated and uninterpreted by lookups. A tag can be used to categorize lookups based on facilitating searches or guiding how a lookup should be used.

Document what the tag on a lookup represents and how to use it.

Manage Applications Core Profile Options

Profile Options: Explained

Profile options manage configuration data centrally and influence the behavior of applications. Profile options serve as permanent user preferences and application configuration parameters. You configure profile options with settings for specific contexts or groups of users. Users customize how their user interfaces look and behave by changing the values of available profile options.

Profile options store the following kinds of information.

Type of Information	Profile Option Example
User preferences	Settings to provide access to social networking features
Installation information	Setting to identify the location of a portal
Configuration choices	Settings to change user interface skins and behaviors
Processing options	Settings to affect how much information to log either for an entire site or a specific user

You can add and configure new profile options in addition to configuring predefined profile options that are implemented as updateable.

Profile Option Definition and Configuration

Application developers add new profile options and configure ones that are not to be updated by other users. Application administrators and implementation consultants configure profile options with profile option values that are implemented as updatable.

Profile option definitions consist of the following.

- Profile option name
- Application and module in the application taxonomy
- Profile option values
- Profile options categories
- Profile option levels
- Profile option level hierarchy

Profile options can appear on any user interface page without indication that a profile option is what is being set.

Profile Option Values

Some profile options have predefined profile option values.

The Manage Profile Option Values task flow allows an administrator to set updatable profile option values at the available levels, including the user level. You can access the Manage Profile Option Values task starting in the Setup and Maintenance Overview page and searching for profile option tasks.

You can set profile option values at different levels: site, product, and user. The following table provides examples.

Profile Option Level	Value of the Profile Option Level	Profile Option Value	Effect
User	Manager1	UK pound sterling	Access to site and all products shows UK pounds sterling in effect
User	Manager2	US dollar	Access to site and all products shows US dollars in effect
Product	Financials for EMEA	Euro	Unless superseded by a user level value, Euros in effect for Financials for EMEA applications
Site	Site	UK pound sterling	UK pounds sterling in effect for all other users and products

Context such as user session or accessed product determines which profile option value is associated with the profile option name. In the example, if manager1 does not set a profile option value for this profile option, access to Financials for EMEA shows currency in Euros; and access to other products shows currency in UK pounds sterling.

Profile Option Categories

Categories group profile options based on their functional area. Profile option categories facilitate searching and defining data security.

For example, in Oracle Fusion Receivables, the Transactions profile option category groups profile options related to setting how Receivables transactions are to be processed, such as Require Adjustment Reason.

A profile option can be in more than one category.

Profile Option Hierarchies and Levels

Application developers specify at which hierarchy level a profile option is enabled. The predefined profile option hierarchy levels are site, product, and user.

The hierarchy levels specified in the profile option definition determine the context in which a profile option value may be set. If the profile option value at a particular level is updatable, an administrator can update the profile option value for that context.

Note

Profile options should only be enabled for context levels that are appropriate for that profile option. For example, a profile option indicating a global configuration setting should not be enabled at the user level, if users cannot choose a different value for that setting.

For security, one level in the hierarchy is designated as a user level. A profile option may be enabled at any or all hierarchy levels. When enabled at all levels, the predefined ordering of profile option hierarchy levels gives precedence to the values that are set at the user level over values set at the product and site levels, and precedence to values set at the product level to values set at the site level. If there is no value for the current user, then the product value applies. If there is no value for the user or product, then the site value applies.

The table shows the predefined profile option hierarchy and ordering.

Hierarchy Level	Priority When Multiple Levels Set	Effect on Applications	Example
Site	Lowest	Affect all applications for a given implementation	Currency for the site is set to Euros.
Product	Supersedes Site	Affect all applications of a product family such as Financials	Currency for the Financials products set to UK pound sterling.
User	Highest, supersedes Product	Affect only the experience of the current user	Currency for the user of Financials applications set to US dollars.

You can configure updatable values for profile options at one or more levels depending on which levels are enabled in the profile option definition. When a profile is set at more than one level, higher levels of specificity override lower levels of specificity.

In the example, if the currency setting for the site is UK pounds sterling, but the Financials division works in the Netherlands using the Euro, a manager in the US can override that product level setting at the user level to use US dollars when accessing Financials applications.

In another example, if a profile option called Printer is set only at the site and product levels. When a user logs on, the Printer profile option assumes the value set at the product level, since it is the highest level setting for the profile.

Tip

Set site-level profile option values before specifying values at any other level. The profile option values specified at the site-level work as defaults until profile option values are specified at the other levels.

For more information on the predefined profile options, see assets with the Profile Option type in the Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

Planning Profile Options: Points to Consider

Plan profile options before defining and configuring them.

The following aspects assist you in better planning how to manage profile options.

- Profile option tasks
- Before creating a profile option
- Profile options data model

Profile Option Tasks

Users may be able to set their own profile options, depending on settings in the profile option definition. However, not all profile options are visible to end users, and some profile options, while visible, may not be updated by end users.

The following table lists tasks and considerations relevant to planning profile options.

Tasks	Role	Considerations
Planning, creating, and editing a new profile option	Applications developer	Since profile options are for permanent settings, do not use profiles options to cache temporary session attributes. Add capacity for user preferences and system configuration. Customize profile options with values, value behaviors, validation, category values, and security. Define the levels at which the profile option is enabled.
Configure values in an existing profile option	Applications developer, application administrator, and implementation consultant	Manage the values for existing profile options.
Create and edit profile option categories	Applications developer, application administrator, and implementation consultant	Manage categories for organizing existing profile options.

Note

Since a profile option enables a behavior in an application user interface or across applications, a value change made by an end user is reflected in the UI page for managing profile option values.

Before Creating a Profile Option

Profile options are best defined for managing configuration data centrally and influencing the behavior of applications.

If the purpose of a profile option setting is specific to a piece of data (typically setup data), it is best implemented as an attribute of that data.

Do not use profile options for behavior that is not configurable.

Profile options exist independent of role.

Do not use profile options to implement function security. For example, an application should not check for a profile option value set to yes to provide access to a page. Do not use profile options to implement data security, such as a profile option value that must be set to a specific value to provide view access to an entity.

Do not use profile options to capture a dynamic system states, such as data stored in a temporary table. Use Global Variables for temporary states instead.

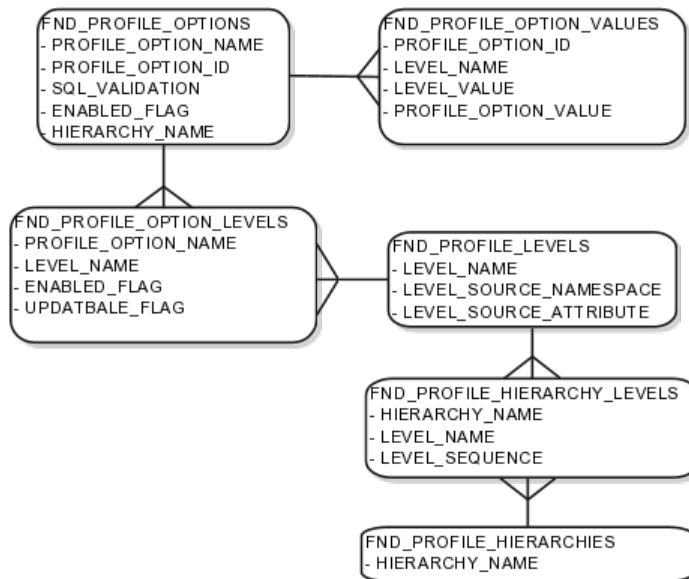
Evaluate if there is a genuine need before creating a profile option. Do not force users to make a decision about an aspect of their application use that is of no concern.

Evaluating need includes looking for duplicate or similar profile options, even in other products, before creating a new one. For example, you do not need multiple profile options to choose a preferred currency.

Profile Options Data Model

The profile option data model illustrates the relationships among profile option elements.

The figure shows the data model of profile option entities.



For more information about planning profile options, see the Oracle Fusion Applications Developer's Guide.

Managing Profile Options: Points to Consider

A profile option definition consists of a name for the profile option and valid values. It is defined within a module of the application taxonomy. Application developers manage profile options to create new profile options or modify existing profile option definitions, which includes specifying the levels at which a profile option is enabled and defining values. Implementation consultants and application administrators configure existing profile options by managing

the profile option's updatable values, and creating categories that group profile options.

Configuring a Profile Option

A profile option definition includes information about the owning application and module in the application taxonomy. A start or end date, or both may limit when a profile option is active. The profile option definition may include an SQL validation statement that determines which values are valid, and the hierarchy levels at which the profile option is enabled and updatable.

To be visible to users, a profile option must be user enabled. You can also allow user updates of the profile option, which means users can make changes to the validation and the profile option level information.

Profile option levels specify at which context level profile values may be enabled or updated

Profile options should only be enabled for context levels that are appropriate for that profile option. For example, a profile option indicating a global configuration setting should not be enabled at the user level, if users cannot choose a different value for that setting.

SQL Validation

The SQL validation of the profile option definition determines what valid profile option values are available. In the absence of validation, any value is valid.

For example, SQL validation provides a means of defining a list of values for the valid values of the profile option. The SQL validation can use lookups to provide the valid values for profile options, such as the lookup codes of the YES_NO lookup type.

With a profile option called DEFAULT_LANGUAGE, you can configure the following validation.

```
SELECT DESCRIPTION Language, NLS_LANGUAGE
FROM FND_LANGUAGES_VL
WHERE INSTALLED_FLAG IN ('B','I')
ORDER BY DESCRIPTION
```

This results in the following list of values based on data in FND_LANUGUAGE_VL.

Display Value	Hidden Value
American English	US
French	F
Spanish	E

Hidden values must be varchar2(2000).

Profile options generally provide configuration values within a particular context. Though you can create a profile option to be global, think of global values as default values to avoid storing inappropriate configuration information as profile option values. Create global profile options that have corresponding contextual levels.

Managing Profile Option Categories: Points to Consider

Use profile option categories to group profile options.

Organizing Profile Options in Categories

As a guideline, group profile options in a single category if the profile options affect the same feature, or if an administrator would likely want to see the profile options in the results of a single search.

Application developers are responsible for the initial groupings and then administrators can make changes based on their specific needs. Administrators can categorize profile options and then easily search on profile options by category.

Tip

Define profile option categories first and assign new profile options to existing categories rather than defining profile options first and then defining categories to categorize them.

Adding New Profile Option Categories

You can add new categories or add profiles to an existing category.

You can create a profile option category by duplicating an existing category and editing it for a new grouping of profile options. You can add multiple profile options to a category. A profile option can exist in multiple categories.

Profile Option Order in a Category

Specify a profile option sequence to determine the order of profile options when queried by profile option category.

Viewing and Editing Profile Option Values: Points to Consider

A profile option value consists of the value and the context or level where the value is set. You specify the context with a pairing of the profile option value's level and level value, such as the product level and the level value GL for Oracle Fusion General Ledger. Adding or modifying profile option values can include deciding which valid values are enabled or updatable at which level.

The SQL validation of the profile option definition determines what valid profile option values are available. In the absence of validation, any value is valid.

Profile Option Levels and User Session Context

Site level profile option values affect the way all applications run for a given implementation. Product level profile option values affect the way applications

owned by a particular product code behave. For example, a product may use profile options set at the product level to determine how regions provided by a common module such as those available from Oracle Fusion Trading Community Model or Customer Relationship Management (CRM) display in a particular work area or dashboard. User level profile option values affect the way applications run for a specific application user

Whichever profile option value is most specific to a user session, that is the value at which the profile option is set for the user session.

For example, the predefined FND_LANGUAGE profile option sets the default language. In addition to a site level value, you can define a value for various product or user levels.

Level Name	Level Value	Profile Option Value
Site	InFusion	American English
Product	Customer Center	French
Product	CRM Application Composer	American English
User	Application Administrator	American English
User	Hima	Hindi

Values at the site level take effect for any user unless overridden by a different value set at the more specific levels of product and user. Product level profile option values affect the way applications owned by a particular product code behave. In addition to user level profile option values in applications, selections may be available in the user preferences workspace.

The following table demonstrates the FND_LANGUAGE profile option settings that would apply to specific users, based on the example above. For example, the user Hima is using the CRM Application Composer product, in the InFusion site. The example above shows that this profile option is set to Hindi at the user level for Hima. Because user is the highest applicable level for Hima, the applicable profile option value is Hindi for Hima.

Site	Product	User	Highest Available Level	Active Profile Option Value
InFusion	CRM Application Composer	Hima	User	Hindi
Acme	Payables	Application Administrator	User	American English
InFusion	Customer Center	Guillaume	Product	French
InFusion	Payables	Implementation Consultant	Site	American English
Acme	Payables	Implementation Consultant	none	no value

Note

More than one site level value is relevant in an enterprise with multiple tenants using a single instance of Oracle Fusion Applications.

Effect of Changes to Profile Option Values

Any change you make to a user level profile option has an immediate effect on the way applications run for that session. When you sign in again, changes made to your user level profile options in a previous session are still in effect. When you change profile option value at the product level and no user level values are set, you see the update immediately, but other users may not see the changed value until signing out and back in. When you change a profile option value and the new value affects other users, the change takes effect only when users sign in the next time.

Changes to site level profile options take effect for any user session that is started after the setting has been changed. Changes to site or user level profile options do not affect any user sessions that are already in progress when the change is made.

Changes to site or user level profile options take effect for any C or PL/SQL processes, such as scheduled jobs, that are launched after the setting has been changed. Profile option changes do not affect C or PL/SQL processes that are already running.

Manage Applications Core Administrator Profile Values

Creating and Editing Messages: Highlights

Each message in the message dictionary has many attributes and components, including message properties, text, and tokens, that you define when creating or editing the message. To create or edit a message, navigate to the Manage Messages page in the Setup and Maintenance work area.

Details about these messages are described in the Oracle Fusion Applications Developer's Guide.

Message Properties

- The message type identifies the type of information that the message contains.

See: Understanding Message Types

- The message name and number are identifiers for the message. There are specific message number ranges for predefined messages in each application, and you should not edit numbers assigned to predefined messages. When creating custom messages, use only message numbers within the 10,000,000 to 10,999,999 range.

See: About Message Names

See: About Message Numbers

- The translation notes for predefined messages might contain internal content that you can disregard.

See: About Translation Notes

- The message category, severity, and logging enabled option are related to the incident and logging process.

See: About Grouping Messages by Category and Severity

See: Understanding Incidents and Diagnostic Logs with Message Dictionary

Message Text and Tokens

- The message text comprises various components, some of which are displayed only to select users. To determine which component of the message text is displayed to a particular user, set the Message Mode profile option (FND_MESSAGE_MODE) at the user level for that user. The message component short text is visible to all users and therefore, the profile option does not apply to this component. Also, the profile option applies only to messages in the message dictionary.

See: About Message Components

- Tokens are variables that represent values to be displayed in the message text.

See: About Tokens

Profile Options and Related General Preferences: How They Work Together

Some Oracle Middleware Extensions for Applications profile options are related to general preferences in the global area.

Preferences

The related general preferences are Default Application Language, Territory, Date Format, Time Format, Currency, and Time Zone. When the user changes any of these preferences, the stored values in LDAP are updated accordingly.

Profile Options

The corresponding profile options are Default Language, Default Territory, Default Date Format, Default Time Format, Default Currency, and Default User Time Zone. No matter what you set for these profile options at any level, the preferences settings, or LDAP values, take precedence. The profile option value is used only if the LDAP value is not available. Updating the profile option value does not automatically update the value in LDAP or preferences.

FAQs for Manage Applications Core Administrator Profile Values

How can I enable the privacy statement?

Use the Privacy Statement URL profile option to enable the Privacy Statement menu item in the global area. This menu item in the Settings and Actions menu is disabled by default.

Open the Setup and Maintenance work area, and use the Manage Applications Core Administrator Profile Values task to find the Privacy Statement URL profile option. In the Profile Value column, enter the full URL of the web page that contains the privacy content you want the menu item to link to.

Manage Applications Core Value Sets

Value Sets: Explained

A value set is a group of valid values that you assign to a flexfield segment to control the values that are stored for business object attributes..

An end user enters a value for an attribute of a business object while using the application. The flexfield validates the value against the set of valid values that you configured as a value set and assigned to the segment.

For example, you can define a required format, such as a five digit number, or a list of valid values, such as green, red, and blue.

Flexfield segments are usually validated, and typically each segment in a given flexfield uses a different value set. You can assign a single value set to more than one segment, and you can share value sets among different flexfields.

Caution

Be sure that changes to a shared value set are compatible with all flexfields segments using the value set.

The following aspects are important in understanding value sets:

- Managing value sets
- Validation
- Security
- Precision and scale
- Usage and deployment

Managing Value Sets

To access the Manage Value Sets page, use the Manage Value Sets task, or use the Manage Descriptive Flexfields and Manage Extensible Flexfields tasks for configuring a segment, including its value set. To access the Manage Values page, select the value set from the Manage Value Sets page, and click **Manage Values**. Alternatively, click **Manage Values** from the Edit Value Set page.

Validation

The following types of validation are available for value sets:

- Format only, where end users enter data rather than selecting values from a list

- Independent, a list of values consisting of valid values you specify
- Dependent, a list of values where a valid value derives from the independent value of another segment
- Subset, where the list of values is a subset of the values in an existing independent value set
- Table, where the values derive from a column in an application table and the list of values is limited by a WHERE clause

A segment that uses a format only value set doesn't present a list of valid values to users.

Note

Adding table validated value sets to the list of available value sets available for configuration is considered a custom task.

Security

Value set security only works in conjunction with usage within flexfield segments.

You can specify that data security be applied to the values in flexfield segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment end users can view or modify.

Value set security applies at the value set level. The value set is the resource secured by data security policies. If a value set is secured, every usage of it in any flexfield is secured. It isn't possible to disable security for individual usages of the same value set.

Value set security applies to independent, dependent, or table-validated value sets.

Value set security applies mainly when data is being created or updated, and to key flexfield combinations tables for query purposes. Value set security doesn't determine which descriptive flexfield data is shown upon querying.

Security conditions defined on value sets always use table aliases. When filters are used, table aliases are always used by default. When predicates are defined for data security conditions, make sure that the predicates also use table aliases.

For key flexfields, the attributes in the view object that correspond to the code combination ID (CCID), structure instance number (SIN), and data set number (DSN) cannot be transient. They must exist in the database table. For key flexfields, the SIN segment is the discriminator attribute, and the CCID segment is the common attribute.

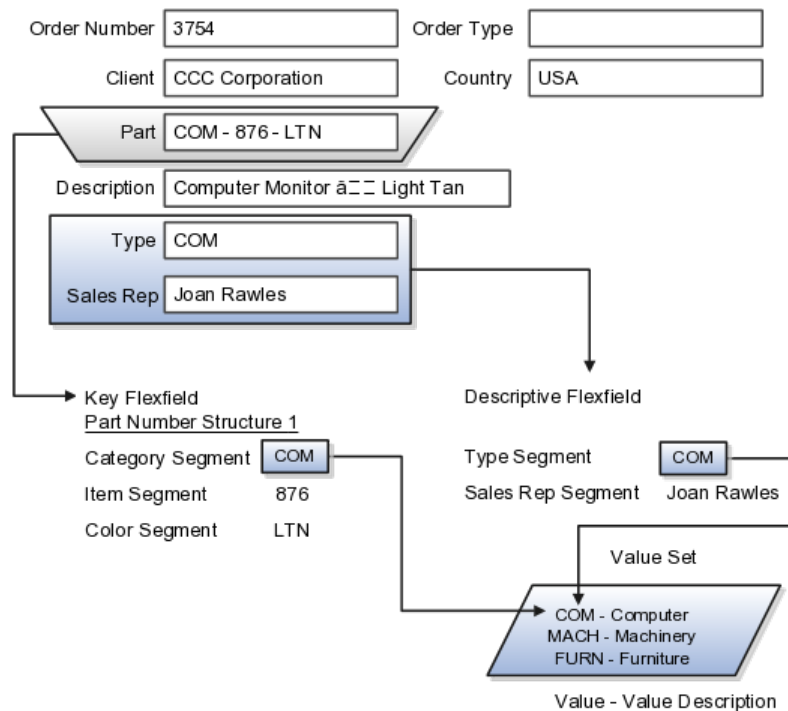
Precision and Scale

If the data type of a value set is Number, you can specify the precision (maximum number of digits user can enter) or scale (maximum number of digits following the decimal point).

Usage and Deployment

The usage of a value set is the flexfields where that value set is used. The deployment status of flexfields in which the value set is used indicates the deployment status of the value set instance.

The figure shows a value set used by a segment in a key flexfield and the context segment of a descriptive flexfield.



For most value sets, when you enter values into a flexfield segment, you can enter only values that already exist in the value set assigned to that segment.

Global and context-sensitive segment require a value set. You can assign a value set to a descriptive flexfield context segment. If you specify only context values, not value sets for contexts, the set of valid values is equal to the set of context values.

Defining Value Sets: Critical Choices

Validation and usage of value sets determine where and how end users access valid values for attributes represented by flexfield segments.

Tip

As a flexfield guideline, define value sets before configuring the flexfield, because you can assign value sets to each segment as you configure a flexfield. With descriptive and extensible flexfield segments, you can create value sets when adding or editing a segment on the run time page where the flexfield appears.

The following aspects are important in defining value sets:

- Value sets for context segments
- Format-only validation
- Interdependent value sets
- Table validation
- Range
- Security
- Testing and maintenance

Value Sets for Context Segments

When assigning a value set to a context segment, you can only use table-validated or independent value sets.

You can use only table and independent value sets to validate context values. The data type must be character and the maximum length of the values being stored must not be larger than the context's column length. If you use a table value set, the value set cannot reference flexfield segments in the value set's WHERE clause other than the flexfield segment to which the value set is assigned.

Format Only Validation

The format only validation type enables end users to enter any value, as long as it meets your specified formatting rules. That is, the value must not exceed the maximum length you define for your value set, and it must meet any format requirements for that value set.

For example, if the value set allows only numeric characters, users can enter the value 456 (for a value set with maximum length of three or more), but can't enter the value ABC. A format only value set doesn't otherwise restrict the range of different values that users can enter. For numeric values, you can also specify if a numeric value should be zero filled or how many digits should follow the radix separator.

Interdependent Value Sets

Use an independent value set to validate input against a list that isn't stored in an application table, and not dependent on a subset of another independent value set.

You cannot specify a dependent value set for a given segment without having first defined an independent value set that you apply to another segment in the same flexfield. Use a dependent value set to limit the list of values for a given segment based on the value that the end user has chosen for a related independent segment. The available values in a dependent list and the meaning of a given value depend on which value was selected for the independently validated segment.

For example, you could define an independent value set of U.S. states with values such as CA, NY, and so on. Then you define a dependent value set of U.S. cities, with values such as San Francisco and Los Angeles that are valid for the independent value CA, and New York City and Albany that are valid for the independent value NY. In the UI, only the valid cities can be selected for a given state.

Because you define a subset value set from an existing independent value set, you must define the independent value set first. End users don't need to choose a value for another segment first to have access to the subset value set.

Independent, dependent, and subset value sets require a customized list of valid values. Use the Manage Values page to create and manage a value set's valid values and the order in which they appear.

Tip

You can customize the Manage Value Sets page to capture additional attributes for each valid value by adding context-sensitive segments in a new context for FND_VS_VALUES_B descriptive field.

Table Validation

Typically, you use a table-validated set when the values you want to use are already maintained in an application table, such as a table of vendor names. Specify the table column that contains the valid value. You can optionally specify the description and ID columns, a WHERE clause to limit the values to use for your set, and an ORDER BY clause.

If you specify an ID column, then the flexfield saves the ID value, instead of the value from the value column, in the associated flexfield segment. If the underlying table supports translations, you can enable the display of translated text by basing the value set's value column on a translated attribute of the underlying table. You should also define an ID column that is based on an attribute that isn't language-dependent so that the value's invariant ID (an ID that doesn't change) is saved in the transaction table. This allows the run time to display the corresponding translated text from the value column for the run time session's locale.

Table validation lets you enable a segment to depend upon multiple prior segments in the same context structure. You cannot reference other flexfield segments in the table-validated value set's WHERE clause. That is, the WHERE clause cannot reference SEGMENT.segment_code or VALUESET.value_set_code.

Table-validated value sets have unique values across the table, irrespective of bind variables. The WHERE clause fragment of the value set is considered if it doesn't have bind variables. If it has bind variables, the assumption is that the values are unique in the value set.

Range

In the case of format, independent, or dependent value sets, you can specify a range to further limit which values are valid. You can specify a range of values

that are valid within a value set. You can also specify a range validated pair of segments where one segment represents the low end of the range and another segment represents the high end of the range.

For example, you might specify a range for a format-only value set with format type Number where the user can enter only values between 0 and 100.

Security

In the case of independent and dependent values, you can specify that data security be applied to the values in segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment end users can view or modify.

To enable security on a value set, specify a database resource, typically the code value for the value set. Using the Manage Database Security Policies task, specify conditions, such as filters or SQL predicates, and policies that associate roles with conditions. You can use a filter for simple conditions. For more complex conditions, use a SQL predicate.

Value set data security policies and conditions differ from data security conditions and policies for business objects in the following ways:

- You can grant only read access to end users. You cannot specify any other action.
- When defining a condition that is based on a SQL predicate, use `VALUE`, `VALUE_NUMBER`, `VALUE_DATE`, `VALUE_TIMESTAMP`, or `VALUE_ID` to reference the value from a dependent, independent, or subset value set. For table value sets, use a table alias to define the table, such as `&TABLE_ALIAS category=70`.

When you enable security on table-validated value sets, the security rule that is defined is absolute and not contingent upon the bind variables (if any) that may be used by the `WHERE` clause of the value set. For example, suppose a table-validated value set has a bind variable to further filter the value list to `x`, `y` and `z` from a list of `x`, `y`, `z`, `xx`, `yy`, `zz`. The data security rule or filter written against the value set shouldn't assume anything about the bind variables; it must assume that the whole list of values is available and write the rule, for example, to allow `x`, or to allow `y` and `z`. By default in data security, all values are denied and show only rows to which access has been provided.

Testing and Maintenance

There is no need to define or maintain values for a table-validated value set, as the values are managed as part of the referenced table or independent value set, respectively.

You cannot manage value sets in a sandbox.

When you change an existing value set, the deployment status for all affected flexfields changes to Edited. You must redeploy all flexfields that use that value set to make the flexfields reflect the changes. In the UI pages for managing value sets, the value set's usages show which flexfields are affected by the value set changes.

If your application has more than one language installed, or there is any possibility that you might install one or more additional languages for your application in the future, select **Translatable**. This doesn't require you to provide translated values now, but you cannot change this option if you decide to provide them later.

Manage Applications Core Descriptive Flexfields

Flexfields: Overview

A flexfield is an extensible set of placeholder fields in application pages that are associated with a business object. Each segment of the flexfield corresponds to a single application field, such as a segment of a key identifying a particular purchase, or the components of a student's contact information, or the features of a product in inventory.

Using descriptive and extensible flexfields, you can extend business objects to capture data that wouldn't otherwise be tracked by the application. If you need to add custom fields to a business object to meet your enterprise-specific requirements, configure the flexfield to have one segment for each needed field.

Using key flexfields, you can configure intelligent key codes comprised of meaningful parts according to your business practices. You configure the key flexfield to have one segment for each part that makes up your key code.

Flexfields let you meet enterprise requirements without changing the data model. Different data can be captured on the same database table. Each segment captures a single atomic value, has a name, and maps to a pre-reserved column in the application database.

You can use a flexfield to extend a business object if it has been registered for use on that object. Application developers create a flexfield and register it so that it is available for configuration. Administrators and implementation consultants set up or configure segments and other properties of the available flexfields. End users see flexfield segments as fields or attributes of information displayed in the application user interface. They enter a value for the attribute. The value may be selected from a list of valid values or entered as free-form text that complies with formatting rules.

The following aspects provide an overview of flexfields:

- Accessing flexfields and flexfield management tasks
- Types of flexfields
- Flexfield segments
- Value sets
- Structure and context
- Deployment
- Run time appearance

Accessing Flexfields and Flexfield Management Tasks

You can view flexfields on a page where they occur using the Highlight Flexfields feature. You can access flexfield management tasks directly from a highlighted flexfield, through product-specific flexfield management tasks, or by starting in the Setup and Maintenance Overview page which is available from the Navigator or the Administration menu.

For lists of flexfields, see assets with the Flexfield: Descriptive, Flexfield: Extensible, or Flexfield: Key type in Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

Types of Flexfields

The following three types of flexfields are available in Oracle Fusion Applications and provide a means to customize applications features without programming.

- Key
- Descriptive
- Extensible

For example, in Oracle Fusion Financials, key flexfields represent objects such as accounting codes and asset categories. Generally, correct operations of a product depend on key flexfield setup. In Oracle Fusion Payables, a descriptive flexfield lets you collect custom invoice details fields on an invoices page. You can implement these fields, which are descriptive flexfield segments, as context-sensitive so they appear only when needed on a row-by-row basis when specific contextual information is met. Extensible flexfields are similar to descriptive flexfields, but provide additional advanced features. Generally, setup of descriptive and extensible flexfields is optional because their segments capture custom fields needed beyond the predefined fields.

Segments

Each field that you configure using flexfields is a flexfield segment. Segments represent attributes of information. They can appear globally wherever the flexfield is implemented, or based on a structure or context.

You define the appearance and meaning of individual segments when configuring a flexfield.

A key flexfield segment commonly describes a characteristic of the entity identified by the flexfield, such as a part number structured to include information about the type, color, and size of an item. A descriptive flexfield segment represents an attribute of information that describes a characteristic of the entity identified on the application page, such as details about a device containing components, some of which are globally present on the page while others are contextually dependent on the category of the device.

Value Sets

A value set is a named group of values that can be used to validate the content of a flexfield segment.

You configure a flexfield segment with a value set that establishes the valid values that an end user can enter for the segment. You define the values in a value set, including such characteristics as the length and format of the values. You can specify formatting rules, or specify values from an application table or predefined list. Multiple segments within a flexfield, or multiple flexfields, can share a single value set.

Structure and Context

Key flexfields have structure. Descriptive flexfields and extensible flexfields have context.

Each key flexfield structure is a specific configuration of segments. Adding or removing segments, or rearranging their order, produces a different structure. The database columns on which segments in different structures are based can be reused in as many structures as desired.

Descriptive flexfield segments can be context-sensitive, which means available to an application based on a context value rather than globally available wherever the flexfield appears. A descriptive flexfield context is a set of context-sensitive segments that store information related to the same context value. You define contexts as part of configuring a descriptive flexfield. End users see global segments, as well as any context-sensitive segments that apply to the selected context value.

Extensible flexfield segments are made available to an application based upon a category value. An extensible flexfield context serves as a container for related segments, used to organize the various segments that are applicable to a category value. You define contexts with context-sensitive segments and associate them to categories as part of configuring an extensible flexfield. End users see the segments displayed in subregions, one for each context associated to the selected category value.

In descriptive flexfields and extensible flexfields, the database columns on which context-sensitive segments are based can be reused in as many contexts as desired.

Deployment

A flexfield must be deployed to display its current definition in a run time application user interface. For example, if the deployment status is Edited, the flexfield segments may appear in the UI based on the flexfield definition at the time of last deployment, rather than the current definition.

Run time Appearance

In an application user interface, descriptive flexfield segments appear as label and field pairs or as a table of fields where the column headers correspond to the labels. The fields represent the flexfield segments and accept entered input or a selection from a list of choices that correspond to the segment's assigned value set. Extensible flexfield segments appear grouped within labeled regions, where each grouping is a context and the region labels are the context names.

Use the **Highlight Flexfields** command in the Administration menu of the Setup and Maintenance work area to identify the location of the flexfields on the run time page. Flexfields in highlight mode display an **Information** icon button to

access details about the flexfield, an **Edit** icon button to manage the flexfield, and an **Add Segment** icon button to add flexfield segments.

All segments of a single flexfield are grouped together by default. The layout and positions of the flexfield segments depend on where the application developer places the flexfield on the page. Flexfields may also be presented in a separate section of the page, in a table, or on their own page or subwindow.

You can use Oracle Composer to edit the layout, position, or other display features of the flexfield segments.

Configuring Flexfields: Overview

Configuring a flexfield ranges from identifying the need for extending a business object with custom attributes to integrating the custom attributes into the deployment. In the case of key flexfields, configuring the flexfield involves identifying value set assignments and determining segment structures.

Overall Process for Configuring Custom Attributes

For descriptive and extensible flexfields, the overall configuration process involves the following:

1. Use the Highlight Flexfields feature from the Administration menu to find flexfields on pages associated with business objects.
2. Plan the flexfield configuration.
3. Plan flexfield validation.
4. Define the attributes by configuring the flexfield segments.
 - a. Use the Manage Extensible Flexfields or Manage Descriptive Flexfields tasks, or use the **Configure** icon button directly on the page where the flexfield is highlighted. For simple configurations, use the **Add Segment**, **Add Context Value**, and **Edit Segment** icon buttons directly on the page where the flexfield is highlighted.
 - b. Optionally, validate the flexfield configuration.
 - c. Optionally, deploy the flexfield to a sandbox for initial testing.
5. Deploy the flexfield to the mainline to display the custom attributes on the application pages and to make them available for integration with other tools such as Oracle Business Intelligence.
6. Perform the necessary steps to integrate the custom attributes into the technology stack.

A simple configuration is limited to such actions as adding a format-only field or adding a field with a basic list of values.

Overall Process for Configuring Custom Keys

Using key flexfields, you can configure intelligent key codes comprised of meaningful parts according to your business practices. You configure the key flexfield to have one segment for each part that makes up your key code.

For key flexfields, the overall configuration process involves the following:

1. Use the Highlight Flexfields feature from the Administration menu to find flexfields on pages associated with business objects.
2. Plan the flexfield configuration.
3. Plan the flexfield validation.
4. Define the value sets before configuring the key flexfield segments by going to the Manage Value Sets task.
5. Define the key flexfield structures and their segments, and define structure instances for each structure.
 - a. Use the Manage Key Flexfields task or the **Configure** icon button directly on the page where the flexfield is highlighted.
 - b. Optionally, validate the flexfield configuration.
 - c. Optionally, deploy the flexfield to a sandbox for initial testing.
6. Deploy the flexfield to the mainline to display it on the application pages and to make it available for integration with other tools such as Oracle Business Intelligence.
7. Perform the necessary steps to integrate the flexfield into the technology stack.

Flexfields at Run Time: Explained

Many business objects in Oracle Fusion applications have an associated descriptive or extensible flexfield with which you can create custom attributes for the business object. Some business objects have an associated key flexfield for configuring flexible multiple part keys.

The following aspects are important in understanding flexfields at run time:

- Finding flexfields on a page
- Why no flexfields are on a page

Finding Flexfields on a Page

At run time, the custom attributes you define as extensible and descriptive flexfield segments appear in the application page just like any other attribute. Key flexfields typically appear in the application page as a field with a key flexfield icon, where the field's value is actually a collection of segments. In some pages, one or more key flexfield segments may be displayed in the page like any other attribute. Thus, when viewing the page in standard mode, in many cases you may not be able to discern which fields are flexfield segments, or whether flexfields are available to configure on the page.

Use the Highlight Flexfields feature to render the page in a special mode that lets you view:

- Where, if any, flexfields are available on your page
- Which, if any, of the fields on your page are flexfield segments rather than out-of-the-box fields

To obtain information about the flexfields on a page, open the page and choose **Highlight Flexfields** from the **Administration** menu. Hover over the **Information** icon button next to the highlighted fields to display information about the flexfield. Choose **Unhighlight Flexfields** from the **Administration** menu when you no longer want to see the highlighted flexfields.

When you click the **Configure Flexfield** icon button for a highlighted flexfield, the applicable **Manage Flexfields** task is displayed for that flexfield. For simple configurations, you can click the **Add Context Value** icon button to add a context value, or click the **Add Segment** or **Edit Segment** icon buttons to add or edit a global segment or a context-sensitive segment that doesn't require advanced configuration.

Note

Not all flexfields are available for creating custom attributes. Consult the product-specific documentation in *Oracle Fusion Applications Help* to verify whether there are any restrictions on using the flexfield.

Why No Flexfields Are on a Page

For a flexfield to be available in the page, it must be registered by developers. If a flexfield is available, you may configure segments. The segments appear on the page only after you have successfully deployed the flexfield. For information about registering flexfields, see the *Oracle Fusion Applications Developer's Guide*. Some business objects haven't been designed to support flexfields. For information about how to enable business objects with flexfield capability, see *Getting Started with Flexfields* in the *Oracle Fusion Applications Developer's Guide*.

Note

The following Oracle Sales Cloud applications don't support flexfields:

- Sales
 - Marketing
 - Customer Center
 - Trading Community Architecture
 - Order Capture
-

To add custom attributes to these applications, use **Application Composer**. For more information, see the "Editing an Object: Explained" section in *Oracle Sales Cloud: Extending Sales*.

Customizing Flexfields Using Page Composer: Explained

Using **Page Composer**, you can create customizations to flexfields that are specific to a page.

In **Page Composer**, to customize:

- Extensible flexfields, open the page in **Source view**, and look for a region that is bound to an `EffContextsPageContainer` task flow. This is the

container for the extensible flexfield attributes and contexts. To view the flexfield code and identifying information, open the properties panel for the region. To customize any component within the region, select the desired tag and click Edit.

- Descriptive flexfields, open the page in Source view, and look for `<descriptiveFlexfield>` elements. Open the properties panel for the element to view the flexfield code and identifying information. Within the properties panel, you may customize properties for the global and context-sensitive segments or re-order the segments on the page.

Accessing Flexfield Management Tasks: Procedures

You can configure and manage flexfields by highlighting them on an application page and using the available on-screen configuration tools. Alternatively, you can access product-specific flexfield tasks or global flexfield management tasks.

Accessing Flexfield Management Tasks through the Run time Page

You can identify flexfields on the run time application page where they are implemented.

1. Navigate to an application page.
2. Choose **Highlight Flexfields** from the **Administration** menu in the global area of Oracle Fusion Applications.
3. View the available flexfields highlighted on the page. If any of the fields on the page are custom fields configured as part of a flexfield, they also appear highlighted.
4. To edit a flexfield, use the:
 - **Configure Flexfield** icon button to access the flexfield management task pages for extensive configuration to the flexfield and its segments.
 - **Add Segment** icon button to access the subwindow for adding segments with limited configuration to descriptive flexfields.
 - **Edit Segment** icon button to access the subwindow for limited configuration changes to descriptive flexfield segments.

Accessing Flexfield Management Tasks through Setup and Maintenance

Manage flexfields using tasks you access by starting in the Setup and Maintenance Overview page which is available from the Navigator or the Administration menu.

To access tasks for configuring flexfields and value sets, you must be provisioned with roles that entitle you to access the Define Flexfields task list or tasks for managing product-specific flexfields. Contact your security administrator for details. For information about product-specific flexfield tasks, such as Manage Purchasing Descriptive Flexfields, consult the product-specific documentation in Oracle Fusion Applications Help

To access the flexfield management tasks and search for existing flexfields, perform the following steps:

1. Choose **Setup and Maintenance** from the **Administration** menu in the global area of Oracle Fusion Applications.
2. Search for Define Flexfields in the All Tasks tab.

Tip

- Use the Business Object parameter to search:
 - Application Key Flexfields, Application Descriptive Flexfields, and Application Extensible Flexfields to find all tasks related to flexfields.
 - Application Flexfield Value Set to find all tasks related to value sets.
- To manage any:
 - Flexfield across all Oracle Fusion Applications products, search for the Define Flexfields task list and access the Manage Descriptive Flexfields, Manage Extensible Flexfields, and Manage Key Flexfields tasks.
 - Value set across all Oracle Fusion Applications products, search for the Define Flexfields task list and access the Manage Value Sets task.

Restriction

If you are configuring key flexfields, search for and access the Manage Value Sets task to set up value sets before accessing the Manage Key Flexfields task.

-
3. Expand the task list to view the included tasks.
 4. Click the **Task** icon button to open the manage flexfield pages.
 5. Search for all or specific flexfields.
 6. In the search results, select the flexfield.
 7. Use the Edit action to open pages for viewing and configuring the flexfield. Access to managing value sets is available within the tasks for managing descriptive and extensible flexfields.

Note

Access to managing value sets is:

- Available within the tasks for managing descriptive and extensible flexfields.
- Not available within the tasks for managing key flexfields. Therefore, configure value sets prior to configuring your key flexfield.

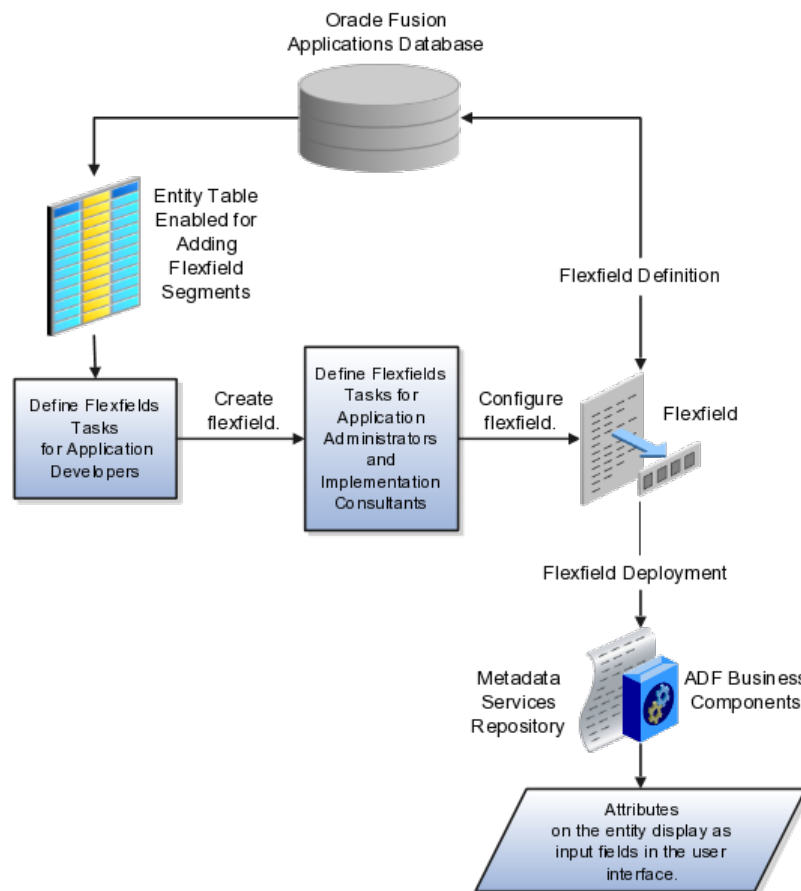
Flexfields and Oracle Fusion Application Architecture: How They Work Together

Administrators configure flexfield segments to capture data that represents the values of attributes. Flexfield segments represent attributes of entities (business

objects). Most business objects are enabled for descriptive flexfields. Some business objects are enabled for extensible flexfields.

For example, an airline manufacturer might require very specific attributes for their orders that aren't provided by the out-of-the-box implementation of an order. Because a flexfield exists for the order business object, you can use it to create and configure the desired attribute.

The figure shows the layers of a flexfield: the business entity table and metadata in the database, business components that are Application Development Framework (ADF) objects or ADF business component (ADFbc) objects derived from the metadata and stored in the Metadata Services Repository (MDS), and the user interface where the input fields defined by the flexfield segments are rendered. The flexfield definition consists of all the metadata defined during configuration and stored in the database.



Application developers create a flexfield and register it so that it is available for configuration. Administrators and implementation consultants configure segments and other properties of the available flexfields. This information is stored as additional flexfield metadata in the database. Deploying the flexfield generates ADF business components based on the flexfield metadata in the database.

The following aspects are important in understanding how flexfields and Oracle Fusion Applications architecture work together:

- Integration

- Deployment
- Import and Export
- Run time
- Patching

Integration

The attributes that you add by configuring flexfields are available throughout the Oracle Fusion Middleware technology stack, allowing the flexfields to be used in user interface pages, incorporated into the service-oriented architecture (SOA) infrastructure, and integrated with Oracle Business Intelligence. You identify flexfield segments for integration by the segment's Application Programming Interface (API) name.

A flexfield affects the Web Services Description Language (WSDL) schemas exposed by ADF services and used by SOA composites. The Web services that expose base entity data also expose flexfield segment data.

Attributes incorporate into SOA infrastructure (BPEL, Rules) and integrate with business intelligence (Oracle Business Intelligence, Extended Spread Sheet Database (ESSbase)).

Flexfield configurations are preserved across Oracle Fusion Applications updates.

Deployment

The metadata for the flexfield is stored in the application database as soon as you save your configuration changes. Deploying the flexfield generates the ADF business components so that the run time user interface reflects the latest definition of the flexfield in the metadata.

Importing and Exporting

You can export and import flexfields with a deployment status of Deployed or Deployed to Sandbox across instances of Oracle Fusion Applications using the Setup and Maintenance Overview page. Ensure a flexfield is eligible for migration (by verifying that it has successfully deployed) prior to attempting the migration.

Run time

For a flexfield to reflect the latest flexfield definition at run time it must be deployed. The user interface accesses a business object and the deployed flexfield definition indicates which business object attributes the flexfield captures values for. If you add display customizations for a flexfield using Oracle Composer, these are customizations on the page so that the same flexfield segments can appear differently on various different pages.

Values entered for segments are validated using value sets.

Patching

Flexfield configurations are preserved during patching and upgrading.

Flexfields and Value Sets: Highlights

Before you use flexfields to create custom attributes, you should be familiar with the Oracle Fusion application architecture that enables customization, customization layers, and the customization lifecycle.

In addition to the extensive information in the Oracle Fusion Applications Help about configuring flexfields that are already available for configuration, consider the resources below for adding flexfields to business components and alternatives to flexfields where flexfields cannot be enabled.

To assess the flexfields available in a deployment of Oracle Fusion Applications, see assets of type: flexfield in the Oracle Enterprise Repository at <http://fusionappsoer.oracle.com>.

For customization not available through the tasks and user interface pages available in Oracle Fusion Applications, contact My Oracle Support at <http://www.oracle.com/pls/topic/lookup?ctx=acc=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc=trs> if you are hearing impaired.

Restriction

Don't use Oracle JDeveloper to customize flexfields.

Before Configuring Flexfields

You can add custom attributes to a business object using a flexfield, if a flexfield has been registered for that object by developers.

- For information about registering flexfields to business objects, refer to the Oracle Fusion Applications Developer's Guide.

See: Getting Started with Flexfields

- The user interface page for a business object that a developer extends to support a flexfield must be enabled to display the custom attributes defined by the flexfield.

See: Adding Descriptive Flexfield UI Components to a Page

See: Employing an Extensible Flexfield on a User Interface Page

- For Sales, Marketing, Customer Center, Trading Community Architecture, and Order Capture applications, use Application Composer to add custom attributes instead of using descriptive and extensible flexfields. For more information, refer to Oracle Sales Cloud: Extending Sales.

See: Application Composer: Introduction

- For information about displaying translated values of a table-validated value set from the value column for the run time session's locale, refer to the Oracle Fusion Applications Developer's Guide.

See: Using Multi-Language Support Features

Security

- For an understanding of data security when considering the consequences of applying data security to value sets, refer to the Oracle Fusion Applications Security Guide.

See: Data Security

Deploying Flexfields

- To examine the artifacts of a deployed flexfield configuration that you exported using the exportMetadata WLST command, refer to the Oracle Fusion Applications Extensibility Guide.

See: Exporting Customizations

- For information about synchronizing the updated XML schema definition (XSD) files in the metadata services (MDS) repositories for each service-oriented architecture (SOA) application, refer to the Oracle Fusion Applications Extensibility Guide.

See: Customizing SOA Composite Applications

- For information about incorporating a deployed flexfield into the technology stack, such as customizing the pages, integrating with Oracle Business Intelligence, or integrating into Web Services and service-oriented architecture SOA infrastructure, refer to the Oracle Fusion Applications Concepts Guide.

See: Oracle Fusion Middleware Components

- Oracle ADF services used by SOA composites expose the Web Services Description Language (WSDL) schemas where deployed flexfields are stored.

See: Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite

Oracle Business Intelligence

- For more information about importing and propagating your flexfield changes, refer to the Oracle Fusion Applications Extensibility Guide.

See: Customizing the Oracle BI Repository (RPD)

- For information about importing business intelligence-enabled flexfield changes into the Oracle Business Intelligence repository, refer to the Oracle Transactional Business Intelligence Administrator's Guide.

Manage Applications Core Descriptive Flexfields: Manage Flexfields

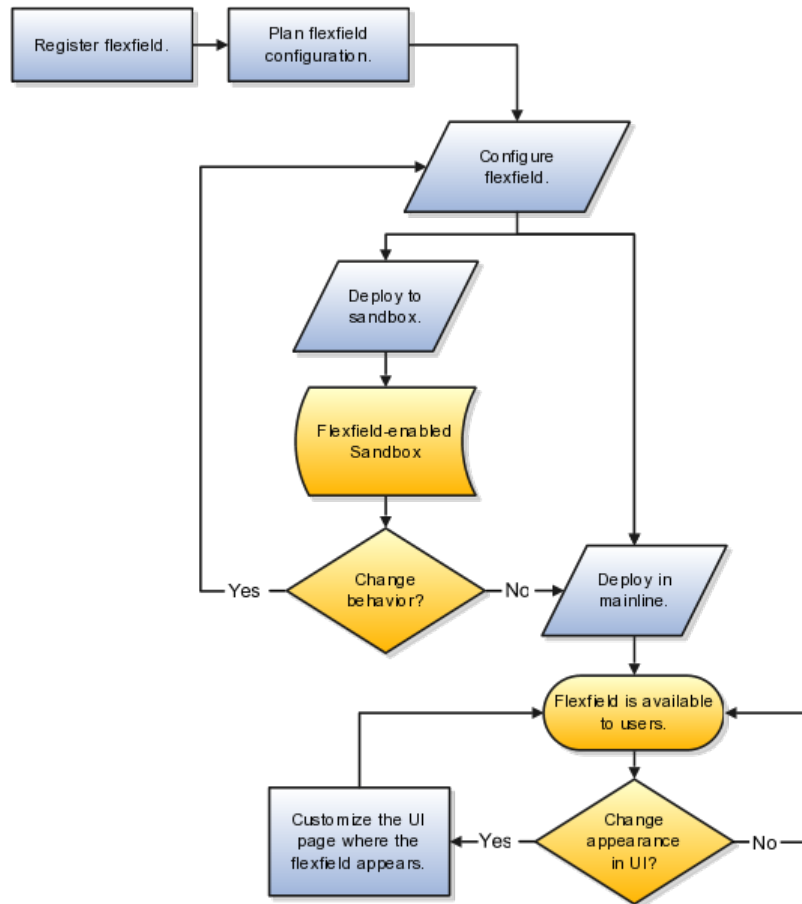
Managing Flexfields: Points to Consider

Managing flexfields involves registering, planning, and configuring flexfields.

You plan and configure the registered flexfields provided in your applications by applications developers. How you configure flexfield segments determines how the flexfield segments appear to end users. Optionally, you can customize the UI page to change how the flexfield segments appear to end users on that page.

The figure shows the processes involved in making flexfields available to end users. The tasks in the Define Flexfields activity let administrators configure and

deploy flexfields. If you deploy a flexfield to a sandbox and decide to apply the configuration to the mainline, select the flexfield in the Manage Flexfields tasks of the Define Flexfields activity and deploy the flexfield in the mainline so that it is available to users.



Consider the following aspects of managing flexfields:

- Registering flexfields
- Planning flexfields
- Configuring flexfields
- Enabling a flexfields segment for business intelligence
- Deploying flexfields
- Optionally changing a flexfield segment's appearance in a user interface page
- Identifying flexfields on a run time page and troubleshooting

Registering Flexfields

Application development registers flexfields so they are available to administrators and implementation consultants for configuration.

As part of registering a flexfield, application development reserves columns of entity tables for use in flexfields so an enterprise can capture segments to

meet their business needs. Many flexfields are registered in Oracle Fusion Applications.

A flexfield must be registered before it can be configured.

For more information on registering flexfields, see Oracle Fusion Applications Developer's Guide.

Planning Flexfields

Before you begin planning flexfields, determine what type is appropriate to your needs, and which business objects are available for customizing flexfields.

All flexfields consist of segments which represent attributes of an entity. The values an end user inputs for an attribute are stored in a column of the entity table.

Carefully plan flexfields before configuring them. Before configuring new segments for your flexfields, be sure to plan their implementation carefully.

If you have determined that a business object supports flexfields, and those flexfields have been registered, you can begin planning how to configure the flexfield for your needs. Note the code name of the flexfield you intend to configure so you can find it easily in the Define Flexfield activity.

In some cases you can customize how the flexfield appears on the page.

See Oracle Fusion Applications Help for specific products to determine any restrictions on using product-specific flexfields.

Configuring Flexfields

Administrators or implementers configure flexfields so they meet the needs of the enterprise. Some flexfields require configuration to make an application operate correctly.

You can configure flexfields using the following methods:

- Go to the manage flexfield tasks in the Setup and Maintenance work area.
- Use the Highlight Flexfields command in the Administration menu while viewing a run time page.
 - Use the **Configure Flexfield** icon button to manage a flexfield, such as change a segment's sequence number, or configure a flexfield segment's business intelligence label.
 - Use the **Add Segment** icon button to add descriptive flexfield segments and context values, or extensible flexfield segments.

Configuring a flexfield includes the following:

- Defining value sets against which the values entered by end users are validated
- Defining the structure or context of the segments in the flexfield
- Specifying the identifying information for each segment

- Specifying the display properties such as prompt, length and data type of each flexfield segment
- Specifying valid values for each segment, and the meaning of each value within the application

Tip

You can create value sets while creating descriptive and extensible flexfield segments. However, define value sets before configuring key flexfield segments that use them, because you assign existing value sets while configuring key flexfield segments.

When creating table-validated, independent, dependent, or subset value sets while creating descriptive and extensible flexfield segments, you can optionally specify to display the description of the selected value to the right of the segment at run time.

You can assign sequence order numbers to global segments and to context-sensitive segments in each context. Segment display is always in a fixed order based on the segments' sequence numbers. You cannot enter a number for one segment that is already in use for a different segment.

Tip

Consider numbering the segments in multiples, such as 4, 5, or 10, to make it easy to insert new attributes.

A flexfield column is assigned to a new segment automatically, but you can change the assignment before saving the segment. If you need to set a specific column assignment for a segment, create that segment first to ensure that the intended column isn't automatically assigned to a different segment.

Enabling a Flexfield Segment for Business Intelligence

You can enable flexfield segments for business intelligence if the flexfield is registered in the database as an Oracle Business Intelligence-enabled flexfield. For more information on enabling segments for business intelligence, see points to consider when enabling key and descriptive flexfield segments for business intelligence.

For extensible flexfield segments, you can't assign labels and use equalization to prevent duplication.

Deploying Flexfields

Once you have configured a flexfield,, you must deploy it to make the latest definition available to run time users.

In the Define Flexfields tasks, you can deploy a flexfield using either of the following commands:

- The Deploy Flexfield command to deploy a flexfield to mainline. This is for general use in a test or production environment.
- The Deploy to Sandbox command to deploy a flexfield to sandbox. This is to confirm that the flexfield is correctly configured before deploying it to the mainline.

When using the **Add Segment** and **Edit Segment** tools for descriptive flexfields in Highlight Flexfields mode, you can use the Save and Deploy command to save your changes and deploy the flexfield to mainline.

Once deployed, the deployment status indicates the state of the currently configured flexfield relative to the last deployed definition.

Optionally Changing a Flexfield Segment Appearance

The flexfield attributes that you define integrate with the user interface pages where users access the attributes' business object. Application development determines the UI pages where business objects appear and the display patterns used by default to render flexfield segments.

After a flexfield has been deployed to a mainline metadata services (MDS) repository so that it appears on application pages, you can customize it on a per-page basis using Page Composer. For example, you can hide a segment, change its prompt or other properties, or reorder the custom global attributes so that they are interspersed with the core attributes in the same parent layout.

You can only customize the appearance of descriptive and extensible flexfield segments in the UI page using Page Composer once the flexfield is deployed to the mainline.

If the Oracle Fusion applications are running in different locales, you can provide different translations for translatable text, such as prompts and descriptions. Enter translations by signing in using the locale that requires the translated text. You do this by selecting **Settings and Actions - Personalization - Set Preferences** in the global area and changing the text to the translated text for that locale.

Identifying Flexfields on a Run time Page and Troubleshooting

The **Highlight Flexfields** command in the Administration menu of the Setup and Maintenance work area identifies the location of flexfields on the run time page by displaying an **Information** icon button for accessing details about each flexfield.

Even if a descriptive or extensible flexfield hasn't yet been deployed and no segments appear on the run time page in normal view, the flexfield appears in the Highlight Flexfield view for that page. In the case of descriptive flexfields, the segments as of the last deployment appear. **Highlight Flexfields** accesses the current flexfield metadata definition.

Use the highlighted flexfield's **Edit** icon button to manage flexfields directly. Alternatively, note a highlighted flexfield's name to search for it in the tasks for managing flexfields.

To examine a flexfield's configuration, export the deployed artifacts using the `exportMetadata WLST..`

For more information on creating flexfields and adding them to a UI page, see the Oracle Fusion Applications Developer's Guide.

For more information about customizing flexfield segment appearance with Oracle Composer, see guidance on customizing existing pages in the Oracle Fusion Applications Extensibility Guide.

Flexfield Segment Properties: Explained

Independent of the value set assigned to a segment, segments may have properties that affect how they are displayed and how they behave.

The following aspects are important in understanding

- Display properties
- Properties related to segment values
- Properties related to search
- Range validation segments
- Rule validation of segment values
- Naming conventions

Display Properties

The following table summarizes display properties.

Property	Description
Enabled	Whether the segment can be used.
Sequence	The order the segment appears in relation to the other configured segments.
Prompt	The string to be used for the segment's label in the user interface.
Display type	The type of field in which to display the segment.
Checked and unchecked values	If the display type is check box, the actual values to save. For example, Y and N or 0 and 1.
Display size	The character width of the field.
Display height	The height of the field as measured in visible number of lines when the display type is a text area.
Read only	Whether the field should display as read-only, not editable text.
Description help text	The field-level description help text to display for the field. Use description help text to display a field-level description that expands on or clarifies the prompt provided for the field. If description help text is specified, a Help icon button is displayed next to the field in the run time application. The description help text is displayed when the user hovers over the Help icon button.
Instruction help text	The field-level instruction help text to display for the field. Use instruction help text to provide directions on using the field. If instruction help text is specified, it is displayed in an in-field help note window that appears when users give focus to or hover over the field.

Properties Related to Search

Extensible flexfield segments can be marked as selectively required in search using the indexed property. The indexed property requires end users to enter a value before conducting a search on the attribute represented by the indexed segment. A database administrator must create an index on the segment column representing the indexed attribute.

Range Validation of Segments

Range validation enables you to enforce an arithmetic inequality between two segments of a flexfield. For example, a product must be ordered before it can be shipped. Therefore, the order date must be on or before the ship date, and consequently the order date segment value must be less than or equal to the ship date segment value. You can use range validation to ensure this relationship.

The conditions for range validation are as follows:

- Segments must be configured for range validation in pairs, one with the low value and one with the high value.
- Both segments must be of the same data type.
- Both segments must be parts of the same structure in a key flexfield or parts of the same context in a descriptive flexfield or extensible flexfield.
- The low value segment must have a lower sequence number than the high value segment.
- Non-range validated segments can exist between a range validated pair, but range validated pairs cannot overlap or be nested.

You can configure as many range validated pairs as you want within the same flexfield. Your application automatically detects and applies range validation to the segment pairs that you define, in sequence order. It must encounter a low value segment first, and the next range validated segment that it encounters must be a high value segment. These two segments are assumed to be a matching pair. The low value and the high value can be equal.

Rule Validation of Segment Values

Validation rules on descriptive and extensible flexfield segments determine how an attribute is validated. The value entered for an attribute on a business object may need to match a specified format or be restricted to a list of values. Use a value set to specify the validation rules.

Value set validation is required for global segments and context-sensitive segments, and optional for context segments. In the case of context segments, the application may validate an input value instead of the value set validating the input value against the context segment. However the application input values must match exactly the valid context segment values. If the context segment values are a superset or subset of the input values, you must assign a table-validated value set or independent value set to validate context values.

When you configure a descriptive flexfield segment, you can specify a constant to use for setting the initial value. The initial value can be an available parameter. For every planned segment, list the constant value or parameter, if any, to use for the initial value.

Naming Conventions

Enter a unique code, name, and description for the segment. These properties are for internal use and not displayed to end users. You can't change the code after the segment is created.

The Application Programming Interface (API) name is a name for the segment that isn't exposed to end users. The API name is used to identify the segment in various integration points including web services, rules, and business intelligence. Use alphanumeric characters only with a leading character. For example, enter a code consisting of the characters A-Z, a-z, 0-9 with a non-numeric leading character. The use of spaces, underscores, multi-byte characters, and leading numeric characters isn't permitted. You can't change the API name after the segment has been created.

Flexfields Segments: How They Are Rendered

Flexfield segments appear on pages as attributes of business objects.

Settings That Affect Flexfield Segment Display

When you configure flexfield segments, the value you enter for the segment's display type determines how the segment appears on the run time page.

How Display Type Values Appear

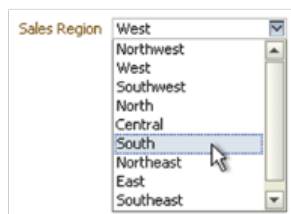
The figure shows how display types appear at run time.

In the following figure, identify the display type by letter when referring to the table of descriptions for check box, drop-down list, list of values, pop-up list of values, and radio button group.

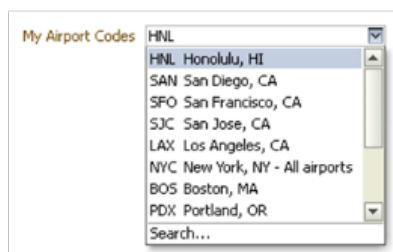
A. Check Box

A check box control with a green checkmark icon and the text "Display next notification after my response".

B. Drop-down List

A drop-down list control with the label "Sales Region". The list is open, showing options: West, Northwest, West, Southwest, North, Central, South (highlighted), Northeast, East, and Southeast.

C. List of Values

A list of values control with the label "My Airport Codes". The list is open, showing options: HNL, HNL Honolulu, HI, SAN San Diego, CA, SFO San Francisco, CA, SJC San Jose, CA, LAX Los Angeles, CA, NYC New York, NY - All airports, BOS Boston, MA, PDX Portland, OR, and a Search... field.

D. Pop-up List of Values

A pop-up list of values control with the label "Location". It consists of a text box and a magnifying glass icon.

In the following figure, identify the display type by letter when referring to the table of descriptions for radio button group, text area, text box, and date/time.

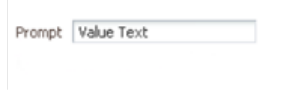
E. Radio Button Group



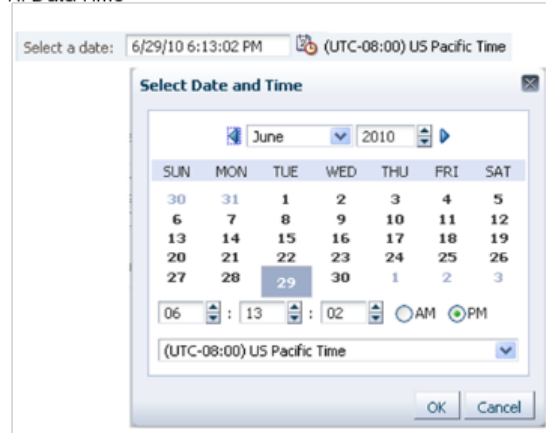
F. Text Area



G. Text Box



H. Date/Time



The table describes each display type. The Example column refers to the figures above.

Display Type	Example	Description
Check Box	A	The field is displayed as a check box. If the end user selects the checkbox, the checked value is used. Otherwise, the unchecked value is used.
Drop-down List	B	The field displays a dropdown list of values from which the end user can select a value.
List of Values	C	The field displays a dropdown list of values from which the end user can select a value. The user can also click Search to find more values.
Pop-up List of Values	D	The field displays as a text field with a Search icon button. The end users can type a value in the text field or they can click the Search icon button to open a subwindow for searching.
Radio Button Group	E	The field is displayed as a set of radio buttons. The end user can select one button. Selecting a button deselects any previously selected button in the set.

Text Area	F	The field is displayed as a text area in which the end user can type multiple lines of text. The display width and height specify the visible width and number of lines in the text area, respectively.
Text Box	G	The field is displayed as a text field in which the end user can type a single line of text. The display width controls the width of the text box.
Date/Time	H	The field enables the end user to enter a date if the data type is Date, or a date and time if the data type is Date Time. The user can select the date from a calendar. If the data type is Date Time, the field also displays fields for specifying the hour, minutes, seconds, AM or PM, and time zone.
Hidden		The field isn't displayed.

Flexfields and Value Sets: How They Work Together

Value sets are specific to your enterprise. When gathering information using flexfields, your enterprise's value sets validate the values that your users enter based on how you defined the value set.

You can assign a value set to any number of flexfield segments in the same or different flexfields. Value set usage information indicates which flexfields use the value set.

The following aspects are important in understanding how flexfields and value sets work together:

- Defining value sets
- Shared value sets
- Deployment

Defining Value Sets

As a key flexfield guideline, define value sets before configuring the flexfield, because you assign value sets to each segment as you configure a flexfield. With descriptive and extensible flexfields, you can define value sets when adding or editing a segment.

Caution

Be sure that changes to a shared value set are compatible with all flexfield segments that use the value set.

Shared Value Sets

When you change a value in a shared value set, the change affects the value set for all flexfields that use that value set. The advantage of a shared value set is

that a single change propagates to all usages. The drawback is that the change shared across usages may not be appropriate in every case.

Value Set Values

To configure custom attributes to be captured on the value set values screen in the Manage Value Sets task, configure the Value Set Values descriptive flexfield. The object's code is FND_VS_VALUES_B. This flexfield expects the context code to correspond to the value set code. For each value set, you can define a context whose code is the value set code, and whose context-sensitive segments will be shown for the values of that value set. By default the context segment is hidden since it defaults to the value set code and is not expected to be changed.

You can also define global segments that will be shown for all value sets. However, this would be quite unusual since it would mean that you want to capture that attribute for all values for all value sets.

Deployment

When you deploy a flexfield, the value sets assigned to the segments of the flexfield provide end users with the valid values for the attributes represented by the segments.

Defaulting and Deriving Segment Values: Explained

To populate a flexfield segment with a default value when a row is created, specify a default type of constant or parameter and a default value.

To synchronize a segment's value with another field's value whenever it changes, specify the derivation value to be the flexfield parameter from which to derive the attribute's value. Whenever the parameter value changes, the attribute's value is changed to match. If you derive an attribute from a parameter, consider making the attribute read-only, as values entered by users are lost whenever the parameter value changes.

When defaulting or deriving a default value from a parameter, only those attributes designated by development as parameters are available to be chosen.

Different combinations of making the segments read only or editable in combination with the default or derivation value or both, have different effects.

Initial run time behavior corresponds to the row for the attribute value being created in the entity table. If the default value is read only, it cannot subsequently be changed through the user interface. If the default value isn't read only, users can modify it. However, if the segment value is a derived value, a user-modified segment value is overwritten when the derivation value changes.

Default Type	Default value specified?	Derivation value specified?	Initial run time behavior	Run time behavior after parameter changes
None	No	Yes	No initial segment value	The changed parameter derivation value updates segment value

Constant	Yes	No	Default segment value	N/A
Constant	Yes	Yes	Default segment value	The changed parameter derivation value updates segment value
Parameter	Yes	No	The default segment value is the parameter's default value	N/A
Parameter	Yes	Yes, and same as default value	The default segment value is the parameter's default and derivation value	The changed parameter derivation value updates segment value
Parameter	Yes	Yes, and different from default value	The default segment value is the parameter's default value	The changed parameter default value doesn't update segment value. Only the changed derivation value updates the segment value.

Flexfield Usages: Explained

Usage affects various aspects of flexfields. The usage of the flexfield is set when the flexfield is registered and specifies the application and table with which the flexfield is associated.

Entity usage indicates the table containing the segments of a flexfield.

A flexfield can have multiple usages. The first table registered for a flexfield is the master usage. Segments are based on the master usage, and other usages of the same table for the same flexfield use the same segment setup, though the column names optionally may have a differentiating prefix.

Extensible Flexfields

You can configure different behavior for extensible flexfield contexts at the usage level. The usage of an extensible flexfield context determines in which scenarios or user interfaces the segments of a context appear to end users. For example, if a Supplier page displays an extensible flexfield's supplier usage and a buyer page displays that same extensible flexfield's buyer usage, a context that is associated to the supplier usage but not the buyer usage displays only on the supplier page and not the buyer page.

Value Sets

The usage of value sets specifies the flexfields having segments where the value set is assigned.

FAQs for Manage Applications Core Descriptive Flexfields: Manage Flexfields

Why did my flexfield changes not appear in the run time UI?

The ADF business components or artifacts of a flexfield, which are generated into an metadata services (MDS) repository when the flexfield is deployed, are cached within a user session. You must sign out and sign back in again to view flexfield definition changes reflected in the run time application user interface page.

A flexfield's deployment status indicates whether the flexfield segments as currently defined in the metadata are available to end users. The flexfield segments seen by end users in the run time correspond to the flexfield definition that was last deployed successfully.

How can I enable flexfield segments for Oracle Social Network Cloud Service?

Descriptive flexfield segments can be enabled for integration with Oracle Social Network Cloud Service. When you manage Oracle Social Network Objects during setup and maintenance, search for the business object that includes descriptive flexfields, and select the business object attributes that are defined as flexfield segments.

Manage Applications Core Descriptive Flexfields: Deploy Flexfields

Flexfield Deployment: Explained

Deployment generates or refreshes the Application Development Framework (ADF) business component objects that render the flexfield in a user interface. The deployment process adds the custom attributes to the Web Services Description Language (WSDL) schemas that are exposed by Oracle ADF services and that are used by SOA composites. Flexfields are deployed for the first time during the application provisioning process. After you configure or change a flexfield, you must deploy it to make the latest definition available to end users.

If a descriptive flexfield is enabled for business intelligence, the deployment process redeploys the flexfield's business intelligence artifacts.

You can deploy a flexfield to a sandbox for testing or to the mainline for use in a test or production run time environment. You can deploy extensible flexfields as a background process.

After deployment, the custom attributes are available for incorporating into the SOA infrastructure, such as business process and business rule integration. For example, you can now write business rules that depend on the custom attributes. You must sign out and sign back in to Oracle Fusion Applications to see the changes you deployed in the run time.

The following aspects are important in understanding flexfield deployment:

- Deployment Status
- Initial Deployment Status
- Metadata Validations
- Metadata Synchronization
- Deployment as a Background Process

Deployment Status

Every flexfield has a deployment status.

A flexfield can have the following deployment statuses.

Deployment Status	Meaning
Edited	The flexfield metadata definition hasn't been deployed yet. Updates of the metadata definition aren't applied in the run time environment yet.
Patched	The flexfield metadata definition has been modified through a patch or through a data migration action, but the flexfield hasn't yet been deployed so the updated definition isn't reflected in the run time environment.
Deployed to Sandbox	The current metadata for the flexfield is deployed in ADF artifacts and available as a flexfield-enabled sandbox. The status of the sandbox is managed by the Manage Sandboxes task available to the Administrator menu of the Setup and Maintenance work area.
Deployed	The current metadata for the flexfield is deployed in ADF artifacts and available to end users. There haven't been any changes to the flexfield since it was last deployed in the mainline.
Error	The deployment attempt in the mainline failed.

Note

Whenever a value set definition changes, the deployment status of a flexfield that uses that value set changes to edited. If the change results from a patch, the deployment status of the flexfield changes to patched.

Initial Deployment Status of Flexfields

The Oracle Fusion Applications installation loads flexfield metadata into the database. This initial load sets the flexfield status to Edited. The application provisioning process during installation deploys the flexfields of the provisioned applications, which sets their status to Deployed if no errors are encountered.

When accessing a provisioned application, deployed flexfields are ready to use. In some cases, flexfield availability at run time requires setup, such as defining key flexfields.

Metadata Validation

Use the Validate Metadata command to view possible metadata errors before attempting to deploy the flexfield. Metadata validation is the initial phase of all flexfield deployment commands. By successfully validating metadata before running the deployment commands, you can avoid failures in the metadata validation phase of a deployment attempt. The deployment process aborts if it encounters an error during the metadata validation phase. Metadata validation results don't affect the deployment status of a flexfield.

Metadata Synchronization

When an extensible or descriptive flexfield is deployed, the deployment process regenerates the XML schema definition (XSD), which makes the custom attributes available to web services and the SOA infrastructure.

After deploying a flexfield configuration, you must synchronize the updated XML schema definition (XSD) files in the MDS repositories for each SOA application.

Note

To synchronize the updated XSD files in the MDS repositories in Oracle Cloud implementations, log a service request using My Oracle Support at <http://support.com/>

Deployment as a Background Process

You can deploy extensible flexfields or incremental changes made to extensible flexfields as a background process. You must use this action to deploy extensible flexfields that have more than 30 categories. You can also use this action if you want to deploy several extensible flexfields, or if you want to continue working in your session without having to wait for a deployment to complete.

Flexfield Deployment Status: How It Is Calculated

Flexfield deployment status indicates how the flexfield metadata definition in the Oracle Fusion Applications database relates to the Application Development Framework (ADF) business components generated into a Metadata Services (MDS) repository.

The following aspects are important in understanding how flexfield deployment status is calculated:

- Settings that affect flexfield deployment status
- How deployment status is calculated

Settings That Affect Flexfield Deployment Status

If you have made a change to a flexfield and expect a changed deployment status, be sure you have saved your changes. No settings affect flexfield deployment status.

How Deployment Status Is Calculated

If the flexfield definition has been edited through the Define Flexfields activity task flows, the status is Edited. The latest flexfield metadata definition in the Oracle Fusion application diverges from the latest deployed flexfield definition. Any change, including if a value set used in a flexfield changes, changes the deployment status to Edited. If a flexfield has never been deployed, its status is Edited.

Note

When an application is provisioned, the provisioning framework attempts to deploy all flexfields in that application.

If you deploy the flexfield to a sandbox successfully, the status is Deployed to Sandbox. The latest flexfield metadata definition in the Oracle Fusion application matches the metadata definition that generated ADF business components in a sandbox MDS repository. Whether the sandbox is active or not doesn't affect the deployment status. If the flexfield was deployed to a sandbox and hasn't been edited or redeployed to the mainline since then, the status remains Deployed to Sandbox independent of whether the sandbox is active, or who is viewing the status.

If you deploy the flexfield successfully to the mainline, the status is Deployed. The latest flexfield metadata definition in the Oracle Fusion application matches the metadata definition that generated ADF business components in a mainline MDS repository. Change notifications are sent when a flexfield is deployed successfully to the mainline.

If either type of deployment fails so that the current flexfield definition isn't deployed, the status is Error. The deployment error message gives details about the error. The latest flexfield metadata definition in the Oracle Fusion application likely diverges from the latest successfully deployed flexfield definition.

If the flexfield definition has been modified by a patch, the status is Patched. The latest flexfield metadata definition in the Oracle Fusion application diverges from the latest deployed flexfield definition. If the flexfield definition was Deployed before the patch and then a patch was applied, the status changes to Patched. If the flexfield definition was Edited before the patch and then a patch was applied, the status will remain at Edited to reflect that there are still changes (outside of the patch) that aren't yet in effect.

When a deployment attempt fails, you can access the Deployment Error Message for details.

Deploying a Flexfield-Enabled Sandbox: How It Works With Mainline Metadata

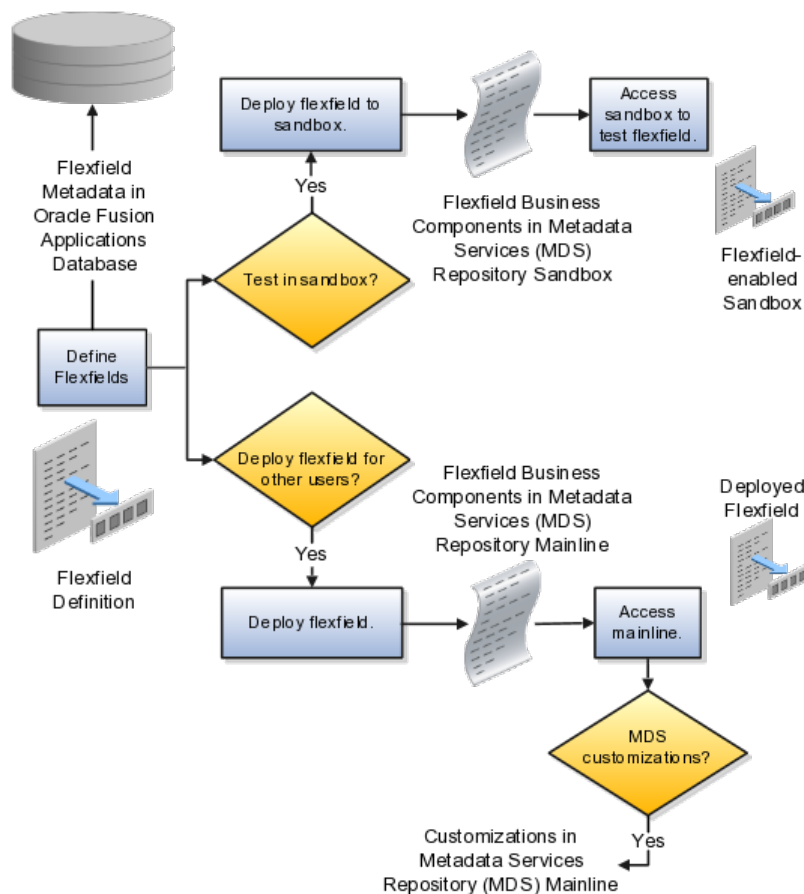
The flexfield definition in a sandbox corresponds to the flexfield metadata definition in the Oracle Fusion Applications database at the time the flexfield

was deployed to the sandbox. When the flexfield is ready for end users, the flexfield must be deployed to the mainline.

A flexfield-enabled sandbox uses the following components.

- Flexfield metadata in the Oracle Fusion Applications database
- Flexfield business components in a sandbox Metadata Services (MDS) repository
- User interface customizations for the flexfield in the mainline MDS repository

The figure shows the two types of deployment available in the Manage Flexfield tasks of the Define Flexfields activity. Deploying a flexfield to a sandbox creates a sandbox MDS repository for the sole purpose of testing flexfield behavior. The sandbox is only accessible to the administrator who activates and accesses it, not to users generally. Deploying a flexfield to the mainline applies the flexfield definition to the mainline MDS repository where it is available to end users. After deploying the flexfield to the mainline, customize the page where the flexfield segments appear. Customization of the page in the sandbox MDS repository cannot be published to the mainline MDS repository.



Sandbox Metadata Services Repository Data

Deploying the flexfield to a sandbox generates the Application Development Framework (ADF) business components of a flexfield in a sandbox MDS repository for testing in isolation.

Warning

Don't customize flexfield segment display properties using Page Composer in a flexfield-enabled sandbox as these changes will be lost when deploying the flexfield to the mainline.

Mainline Metadata Services Repository Data

The Oracle Fusion Applications database stores the single source of truth about a flexfield. When the flexfield is deployed, the ADF business component objects that implement the flexfield in the run time user interface are generated in the mainline MDS repository from this source.

Deploying a Flexfield to a Sandbox: Points to Consider

Deploying a flexfield to a sandbox creates a flexfield-enabled sandbox. Each flexfield-enabled sandbox contains only one flexfield.

You can test the run time behavior of a flexfield in the flexfield-enabled sandbox. If changes are needed, you return to the Define Flexfield tasks to change the flexfield definition.

When you deploy a flexfield to sandbox, the process reads the metadata about the segments from the database, generates flexfield Application Development Framework (ADF) business component artifacts based on that definition, and stores in the sandbox only the generated artifacts derived from the definition.

When you deploy a flexfield sandbox, the process generates the name of the flexfield sandbox, and that flexfield sandbox is set as your current active sandbox. When you next sign in to the application, you can see the updated flexfield configurations. The Oracle Fusion Applications global area displays your current session sandbox.

Note

Unlike a standalone sandbox created using the Manage Sandboxes tool, the sandbox deployed for a flexfield contains only the single flexfield. You can manage flexfield sandboxes, such as setting an existing flexfield sandbox as active or deleting it, using the Manage Sandboxes tool.

When you deploy a flexfield to the mainline after having deployed it to the sandbox, the sandbox-enabled flexfield is automatically deleted.

Sandbox MDS Repository Data

The sandbox data lets you test the flexfield in isolation without first deploying it in the mainline where it could be accessed by users.

Warning

Don't customize flexfield segment display properties using Page Composer in a flexfield-enabled sandbox as these changes will be lost when deploying the flexfield to the mainline.

Managing a Flexfield-Enabled Sandbox

When you deploy a flexfield as a sandbox, that flexfield-enabled sandbox automatically gets activated in your user session. When you sign back in to see the changes, the sandbox is active in your session.

You can only deploy a flexfield to a sandbox using the Define Flexfields task flow pages.

You also can use the Manage Sandboxes feature in the Administration menu of the Setup and Maintenance work area to activate and access a flexfield-enabled sandbox.

Note

Whether you use the Define Flexfields or Manage Sandboxes task flows to access a flexfield-enabled sandbox, you must sign out and sign back in before you can see the changes you deployed in the run time.

You cannot publish the flexfield from the sandbox to the mainline. You must use the Define Flexfields task flow pages to deploy the flexfield for access by users of the mainline because the flexfield configuration in the mainline is the single source of truth.

Deploying Flexfields Using the Command Line: Explained

You can use the Manage Key Flexfields, Manage Descriptive Flexfields, and Manage Extensible Flexfields tasks to deploy flexfields. You can also use WebLogic Server Tool (WLST) commands for priming the Metadata Services (MDS) repository with predefined flexfield artifacts and for deploying flexfields.

The table describes the available commands.

WebLogic Server Tool Command	Description
<code>deployFlexForApp</code>	Deploys all flexfields for the specified enterprise application. Only flexfields whose status is other than deployed are affected by this command unless the option is enabled to force all flexfields to be deployed regardless of deployment status. Initial application provisioning runs this command to prime the MDS repository with flexfield artifacts.
<code>deployFlex</code>	Deploy a single flexfield regardless of deployment status
<code>deployPatchedFlex</code>	Deploys flexfield changes that have been delivered using a flexfield Seed Data Framework (SDF) patch. Deploys flexfields that have a Patched deployment status.
<code>deleteFlexPatchingLabels</code>	Displays MDS label of flexfield changes for viewing and deleting patching labels.
<code>validateFlexDeploymentStatus</code>	Displays list containing flexfields that aren't deployed or failed deployment.

Executing these commands outputs a report at the command line. The report provides the following information for every flexfield that is processed.

- Application identity (APPID)
- Flexfield code
- Deployment result, such as success or error

In case of errors, the report lists the usages for which the errors were encountered. If a run time exception occurs, the output displays the traceback information. For each WLST flexfield command, adding the `reportFormat='xml'` argument returns the report as an XML string.

Consider the following aspects of command line deployment.

- Preparing to use the WLST flexfield commands
- Using the `deployFlexForApp` command
- Using the `deployFlex` command
- Using the `deployPatchedFlex` command
- Using the `deleteFlexPatchingLabels` command
- Using the `validateFlexDeploymentStatus` command
- Exiting the WLST and checking the results

Preparing To Use the WLST Flexfield Commands

You can only execute the WLST flexfield commands on a WebLogic Administration Server for a domain that has a running instance of the Oracle Fusion Middleware Extensions for Applications (Applications Core) Setup application.

For more information on deploying the Applications Core Setup application, see the Oracle Fusion Applications Developer's Guide.

Ensure that the AppMasterDB data source is registered as a JDBC data source with the WebLogic Administration Server and points to the same database as the ApplicationDB data source.

Start the WebLogic Server Tool (WLST) if it isn't currently running.

UNIX:

```
sh $JDEV_HOME/oracle_common/common/bin/wlst.sh
```

Windows:

```
wlst.cmd
```

Connect to the server, replacing the user name and password arguments with your WebLogic Server user name and password.

```
connect('wls_username', 'wls_password', 'wls_uri')
```

The values must be wrapped in single-quotes. The `wls_uri` value is typically `T3://localhost:7101`.

For more information on the WLST scripting tool, see the Oracle Fusion Middleware Oracle WebLogic Scripting Tool.

Using the `deployFlexForApp` Command

The `deployFlexForApp` command translates the product application's predefined flexfield metadata into artifacts in the MDS repository.

Important

This command is run automatically when you provision applications. However, after custom applications development, you must run the `deployFlexForApp` command after you configure your application to read the flexfield artifacts from the MDS repository and before you log into the application for the first time, even if there is no predefined flexfield metadata.

This command doesn't deploy flexfields that have a status of Deployed unless the force parameter is set to `'true'` (the default setting is `'false'`).

For more information on priming the MDS partition with configured flexfield artifacts, see the Oracle Fusion Applications Developer's Guide.

From the WLST tool, execute the following commands to deploy the artifacts to the MDS partition, replacing `product_application_shortcode` with the application's short name wrapped in single-quotes.

```
deployFlexForApp('product_application_shortcode'[, 'enterprise_id']  
[, 'force'])
```

In a multi-tenant environment, replace `enterprise_id` with the Enterprise ID to which the flexfield is mapped. Otherwise, replace with `'None'` or don't provide a second argument.

To deploy all flexfields regardless of their deployment status, set force to `'true'` (the default setting is `'false'`). If you want to deploy all flexfields in a single-tenant environment, you either can set `enterprise_id` to `'None'`, or you can use the following signature:

```
deployFlexForApp(applicationShortName='product_application_shortcode', force='true')
```

Tip

The application's short name is the same as the application's module name.

For more information about working with application taxonomy, see the Oracle Fusion Applications Developer's Guide.

Using the deployFlex Command

From the WLST tool, execute the following command to deploy a flexfield, replacing `flex_code` with the code that identifies the flexfield, and replacing `flex_type` with the flexfield's type, which is either DFF, KFF, or EFF. The values must be wrapped in single-quotes.

```
deployFlex('flex_code', 'flex_type')
```

Optionally, execute the following command if the flexfield is an extensible flexfield, and you want to deploy all the flexfield's configurations.

Note

By default, extensible flexfields are partially deployed. That is, only the pages, contexts, or categories that had recent changes, are deployed.

```
deployFlex('flex_code', 'flex_type', ['force_Complete_EFF_Deployment'])  
where, forceCompleteEFFDeployment=None
```

Using the deployPatchedFlex Command

Use the `deployPatchedFlex` command for situations where the patching framework doesn't invoke the command, such as when an application has been patched offline.

If the installation is multi-tenant enabled, the command deploys all patched flexfields for all enterprises. This command isn't intended to be invoked manually.

Check with your provisioning or patching team, or the task flows for managing flexfields, to verify that the flexfield has a Patched deployment status.

From the WLST tool, execute the following command to deploy the artifacts to the MDS partition.

```
deployPatchedFlex()
```

Execute the following command to deploy all flexfields that have either a READY status or an ERROR status.

```
deployPatchedFlex(mode='RETRY')
```

Using the deleteFlexPatchingLabels Command

Whenever you deploy flexfield changes to MDS using the `deployPatchedFlex()` WLST command, an MDS label is created in the format `FlexPatchingWatermarkdate+time`. Use the `deleteFlexPatchingLabels` command to inquire about and delete these labels.

From the WLST tool, execute the `deleteFlexPatchingLabels()` command with no arguments to delete the flexfield patching labels.

To output a list of flexfield patching labels, execute the command with the `infoOnly` argument, as follows:

```
deleteFlexPatchingLabels(infoOnly='true')
```

Using the validateFlexDeploymentStatus Command

The `validateFlexDeploymentStatus()` WLST command checks the deployment status of all flexfields in an Oracle Fusion Applications deployment.

```
validateFlexDeploymentStatus()
```

Use this command to verify that all flexfields in the current instance of provisioned Java EE applications are deployed.

Exiting the WLST and Checking the Results

To exit the tool, execute the following command.

```
disconnect()
```

Optionally, sign into the application, access user interface pages that contain flexfields, and confirm the presence of flexfields for which configuration exists, such as value sets, segments, context, or structures.

Manage Applications Core Descriptive Flexfields: Manage Descriptive Flexfields

Descriptive Flexfields: Explained

Descriptive flexfields provide a way to add custom attributes to entities, and define validation and display properties for them. These attributes are generally standalone. They don't necessarily have anything to do with each other and aren't treated together as a combination.

All Oracle Fusion Applications business entities that you can access are enabled for descriptive flexfields. Descriptive flexfields are optional. You can choose whether or not to configure and expose segments for the descriptive flexfield defined and registered in your database. For lists of descriptive flexfields, see assets with the Flexfield: Descriptive type in Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

A descriptive flexfield provides a set amount of segments for an entity. You make the segments of a descriptive flexfield available to end users as individual fields in the application user interface.

Context

A descriptive flexfield can have only one context segment to provide context sensitivity.

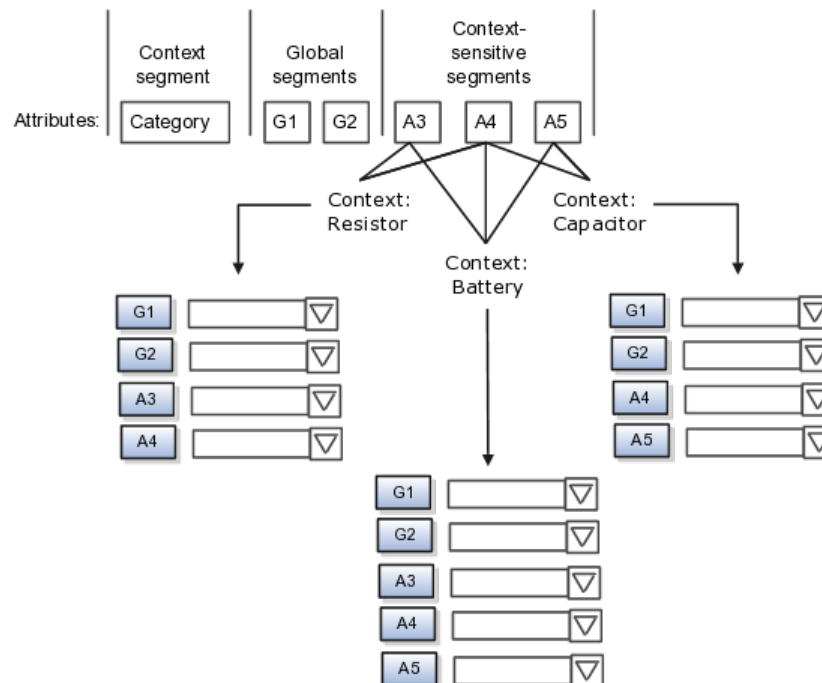
The same underlying column can be used by different segments in different contexts. For example, you can define a Dimensions context that uses the ATTRIBUTE1 column for height, the ATTRIBUTE2 column for width, and the ATTRIBUTE3 column for depth. You can also define a Measurements context that uses the same columns for other attributes: the ATTRIBUTE1 column for weight, the ATTRIBUTE2 column for volume, and the ATTRIBUTE3 column for density.

Segments and Contexts

Descriptive flexfield segments are of the following types.

Segment Type	Run Time Behavior
Global segment	Always available
Context segment	Determines which context-sensitive segments are displayed
Context-sensitive segment	Displayed depending on the value of the context segment

In the figure, a descriptive flexfield has one context segment called Category for which there are three values: Resistor, Battery, and Capacitor. In addition, the descriptive flexfield consists of two global segments that appear in each of the contexts, and three context-sensitive segments that only appear in the context in which they are configured.



Application development determines the number of segments available for configuring. During implementation, you configure the flexfield by determining the following:

- Which attributes to add using the available segments
- The context values
- The combination of attributes in each context

A segment can be used for different attributes, such as Height in Context1 and Color in Context2. Each segment of a descriptive flexfield that you make available to end users is exposed in the user interface as an individual field.

Value Sets

For each global and context-sensitive segment, you configure the values allowed for the segment and how the values that end users enter are validated, including interdependent validation among the segments.

Planning Descriptive Flexfields: Points to Consider

Once you have identified a flexfield to configure, plan the configuration in advance. Compile a list of the UI pages and other artifacts in your deployment that are affected by the configuration. Verify that you are provisioned with the roles needed to view and configure the flexfield. View the flexfield using the Highlight Flexfields command in the Administration menu while viewing the run time page where the flexfield appears. Plan how you will deploy the flexfield for test and production users. Review the tools and tasks available for managing flexfields, such as the Define Flexfields task list, Manage Sandboxes, and Highlight Flexfields for adding and editing flexfield segments.

Planning a descriptive flexfield can involve the following tasks:

1. Identify existing parameters.
2. Identify existing context values and whether the context value is derived.
3. Identify custom attributes and plan the descriptive flexfield segments, segment properties, and structure.
4. Plan validation rules.
5. Plan initial values.
6. Plan attribute mapping to Oracle Business Intelligence objects.

Identify Existing Descriptive Flexfield Parameters

Some descriptive flexfields provide parameters that can be used to specify the initial value of a descriptive flexfield segment. The parameter is external reference data, such as a column value or a session variable. For example, if a flexfield has a user email parameter, you can configure the initial value for a customer email attribute to be derived from that parameter.

Review the list of available parameters in the **Derivation Value** field in the Create Segment page for a descriptive flexfield. If you decide to use one of the parameters to set an initial value, select that parameter from the **Derivation Value** drop-down list when you add the descriptive flexfield segment.

Evaluate Whether the Context Value Is Derived

The context value for a descriptive flexfield might have been preconfigured to be derived from an external reference. For example, if the context is Marriage Status, then the value might be derived from an attribute in the employee business object. When the context value is derived, you might need to take the derived values and their source into consideration in your plan.

To determine whether the context value is derived, access the Edit Descriptive Flexfield task to view the list of configured context values for the flexfield. The Derivation Value field in the Context Segment region displays a list of available parameters.

If context values have been preconfigured, see Oracle Fusion Applications Help for product-specific information about the use of those values.

Plan the Segments, Segment Properties, and Structure

Identify the custom attributes you need for a business object to determine the segments of the descriptive flexfield. Determine the segment properties such as the prompt, display type, or initial value.

The structure of the descriptive flexfield is determined by its global, context, and context-sensitive segments. Plan a global segment that captures an attribute for every instance of the business object. Plan a context for segments that depend on a condition of situation applying to a particular instance of the business object. Plan context-sensitive segments to capture attributes that are relevant in the context.

There is only one context segment available for descriptive flexfields. If you have more than one group of custom attributes where you could use the context segment, you will have to pick one group over the others, based on your company's needs and priorities, and add the other custom attributes as global segments.

Plan Validation Rules

Define each segment's validation rules and check if value sets exist for those rules or you must create new ones. If you must create a value set, you can create it either before configuring the flexfield or while creating or editing a segment.

When determining a segment's validation rules, consider the following questions:

- What is the data type - character, date, date and time, or number?
- Does the segment require any validation beyond data type and maximum length?
- Should a character type value be restricted to digits, or are alphabetic characters allowed?
- Should alphabetic characters automatically be changed to uppercase?
- Should numeric values be zero-filled?
- How many digits can follow the radix separator of a numeric value? In base ten numerical systems the radix separator is decimal point.
- Does the value need to fall within a range?
- Should the value be selected from a list of valid values? If so, consider the following questions:

- Can you use an existing application table from which to obtain the list of valid values, or do you need to create a custom list?
- If you are using an existing table, do you need to limit the list of values using a WHERE clause?
- Does the list of valid values depend on the value in another flexfield segment?
- Is the list of valid values a subset of another flexfield segment's list of values?

Plan Initial Values

For every segment, list the constant value or SQL statement, if any, to use for the initial value of the custom attribute.

Plan How Segments Map to Oracle Business Intelligence Objects

If a descriptive flexfield has been enabled for Oracle Business Intelligence, you can make it available for use in Oracle Business Intelligence applications. You can use segment labels to map segments to logical objects. Plan to map segments to logical objects before deploying the flexfield as a way to streamline the import into Oracle Business Intelligence.

Use the Manage Segment Labels page to view preconfigured segment labels. If a segment label doesn't exist for the logical object, then decide on a code, name, and description in preparation for adding that label. Choose a code, name, and description that will help end users select the correct label.

The mapping equalizes similar context-sensitive attributes that are from different contexts but are mapped to a single logical object. For information about objects in the logical model, see the "Working with Logical Tables, Joins, and Columns" chapter in the Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition (Oracle Fusion Applications Edition).

Managing Descriptive Flexfields: Points to Consider

Configuring descriptive flexfields involves managing the available flexfields registered with your Oracle Fusion Applications database and configuring their flexfield-level properties, defining and managing descriptive flexfield contexts, and configuring global and context-sensitive segments.

Every descriptive flexfield is registered to include a context segment, which you may choose to use or not.

In general, configuring descriptive flexfields involves:

1. Creating segment labels for business intelligence enabled flexfields.
2. Configuring global segments by providing identity information, the initial default value, and the display properties.

3. Configuring the context segment by specifying the prompt, whether the context segment should be displayed, and whether a value is required.
4. Configuring contexts by specifying a context code, description, and name for each context value, and adding its context-sensitive segments, each of which is configured to include identifying information, the column assignment, the initial default value, and the display properties.

The following aspects are important in understanding descriptive flexfield management:

- Segments
- Adding Segments to a Highlighted Flexfield
- Usages
- Parameters
- Delimiters
- Initial Values
- Business Intelligence

Segments

You can assign sequence order numbers to global segments and to context-sensitive segments in each context. Segment display is always in a fixed order. You cannot enter a number for one segment that is already in use for a different segment.

Value sets are optional for context segments. The value set that you specify for a context segment consists of a set of context codes, each of which corresponds to a context that is appropriate for the descriptive flexfield. The value set must be independent or table-validated. If table-validated, the WHERE clause must not use the VALUESET.value_set_code or SEGMENT.segment_code bind variables. The value set must be of data type Character with the maximum length of values being stored no larger than the context's column length.

If you don't specify a value set for a context segment, the valid values for that context segment are derived from the context codes. The definition of each context segment specifies the set of context-sensitive segments that can be presented when that context code is selected by the end user.

For reasons of data integrity, you cannot delete an existing context. Instead, you can disable the associated context value in its own value set by setting its end date to a date in the past.

You can configure the individual global segments and context-sensitive segments in a descriptive flexfield. These segment types are differentiated by their usage, but they are configured on application pages that use most of the same properties.

Adding Segments to a Highlighted Flexfield

When you highlight flexfields on a run time page and use an **Add Segment** icon button to create a segment, the segment code, name, description, table column,

and sequence number are set automatically. If you use an **Add Segment** icon button to configure descriptive flexfield segments, you cannot use an existing value set. Value sets are created automatically when you add the segments. You can enter the valid values, their descriptions, and the default value or specify the formatting constraints for the value set, such as minimum and maximum values.

Depending on display type, the value set you create with the **Add Segment** icon button is either an independent value set or a format-only value set. The table shows which type of value set is created depending on the segment display component you select.

Display Component	Value Set Created with Add Segment
Check box	Independent
Drop-down list	Independent
List of Values	Independent
Radio Button Group	Independent
Text Field With Search	Independent
Text box	Format Only
Text area	Format Only
Date/Time	Format Only

Tip

After you add a context value, refresh the page to see the new value.

Usages

Descriptive flexfield usages allow for the same definition to be applied to multiple entities or application tables, such as a USER table and a USER_HISTORY table. Descriptive flexfield tables define the placeholder entity where the flexfield segment values are stored once you have configured the descriptive flexfield. When you configure a flexfield, the configuration applies to all its usages.

Parameters

Some descriptive flexfields provide parameters, which are attributes of the same or related entity objects. Parameters are public arguments to a descriptive flexfield. Parameters provide outside values in descriptive flexfield validation. You use parameters to set the initial value or derivation value of an attribute from external reference data, such as a column value or a session variable, rather than from user input. Parameters can be referenced by the logic that derives the default segment value, and by table-validated value set WHERE clauses.

Delimiters

A segment delimiter or separator visually separates segment values when the flexfield is displayed as a string of concatenated segments.

Initial Values

The SQL statement defining an initial value must be a valid statement that returns only one row and a value of the correct type.

You can use two types of SQL statements:

- SQL statement with no binding. For example, select MIN(SALARY) from EMPLOYEES.
- SQL statement with bind variables. You can use the following bind variables in the WHERE clause of the SQL statement.
 - `: {SEGMENT.<segment_code>}`: Identifies a segment in the same context.
 - `: {CONTEXT.<context_code>; SEGMENT.<segment_code>}`: Identifies a segment in a different context. The context must be in the same category or in an ancestor category, and it cannot be a multiple-row context.
 - `: {VALUESET.<value_set_code>}`: Identifies the closest prior segment in the same context that is assigned to the specified value set.
 - `: {FLEXFIELD.<internal_code>}`: Identifies a flexfield.

For more information about using bind variables, see the help for value sets.

Business Intelligence

Selecting a global, context, or context-sensitive segment's BI Enabled checkbox specifies that the segment is available for use in Oracle Business Intelligence.

When the flexfield is imported into Oracle Business Intelligence, the label you selected from the BI Label dropdown list equalizes the segment with segments in other contexts, and maps the segment to the logical object represented by the label.

Enabling Descriptive Flexfield Segments for Business Intelligence: Points to Consider

A descriptive flexfield that is registered in the database as enabled for Oracle Business Intelligence (BI) includes a BI Enabled setting for each of its segments. When a global, context, or context-sensitive segment is BI-enabled, it is available for use in Oracle Business Intelligence.

The following aspects are important in understanding BI-enabled flexfield segments:

- Flattening business components to use BI-enabled segments in Oracle BI
- Equalizing segments to prevent duplication and complexity in the flattened component

- Mapping attributes of flattened business components to logical objects in Oracle BI
- Managing the labels that map segments to logical objects in Oracle BI

After you deploy a business intelligence-enabled flexfield, use the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process to import the flexfield changes into the Oracle Business Intelligence repository. Users can make use of the newly-generated attributes in business intelligence applications. For example, a user can generate a report that includes attributes added by the descriptive flexfield. For additional information about logical objects and import, refer to the Oracle Transactional Business Intelligence Administrator's Guide.

Flattening

When you deploy a business intelligence-enabled descriptive flexfield, the deployment process generates an additional set of flattened Application Development Framework (ADF) business components in addition to the usual ADF business components and ADF faces run time artifacts that are generated during deployment. The flattened business components include attributes for business intelligence-enabled segments only. Flattening means each custom column in each context shows up as an attribute in an Oracle Business Intelligence folder.

Flattened components include one attribute for the BI-enabled context-segment, and one attribute for each business intelligence-enabled global segment. For BI-enabled context-sensitive segments, consider the following:

- If you assigned a label to the segment, the flattened components include an additional single attribute representing segments with that label.
- If you didn't assign a label, the flattened components include a discrete attribute for each BI-enabled context-sensitive segment in each context.

Mapping to Logical Objects in Business Intelligence

You can simplify reporting by representing similar segments as a single logical object in Business Intelligence.

If you assign a label to any set of context-sensitive segments that serve the same purpose in different contexts, you can consolidate or equalize the segments into a single attribute. This prevents duplication and the extra workload and complexity that result from the flattening process. For example, a United States context might have a Passport segment and a Canada context might have Visa segment. If you assign the NationalID segment label to both the Passport and Visa segments, they are equalized into the same NationalID attribute in the flattened business component.

Non-labeled context-sensitive segments aren't equalized across context values, so the flattened components include a separate attribute for each context-sensitive segment for each context value.

Note

It may not be possible to equalize similarly labeled segments if they have incompatible data types or value set types.

Assign a label to a global segment, context segment, or context-sensitive segment to map the corresponding attribute in the flattened components to a logical object in Oracle Business Intelligence. Using labels to map segments to BI logical objects minimizes the steps for importing the flexfield into Oracle Business Intelligence.

Note

Assigning a label to a context-sensitive segment serves to equalize the attribute across contexts, as well as map the equalized attribute to business intelligence.

Managing Labels

You may assign a predefined label (if available) to segments or create new labels for assignment, as needed. Specify a code, name, and description to identify each label. In the BI Object Name field, enter the name of the logical object in Oracle Business Intelligence to which the segment label should map during import. Specifying the BI logical object minimizes the steps for importing the flexfield into Oracle Business Intelligence and helps to equalize context-sensitive segments across contexts.

If no labels are assigned to a BI-enabled segment, or the BI Object Name on the assigned label doesn't exist in business intelligence, you must manually map the segment to the desired logical object when importing into Oracle Business Intelligence.

In addition, context-sensitive segments without labels cannot be equalized across context values. The flattened components include a separate attribute for each non-labeled context-sensitive segment in each context.

Importing to Oracle Business Intelligence Repository

After you deploy a business intelligence-enabled flexfield, import the flexfield changes into the Oracle Business Intelligence repository to make use of the newly flattened business components in business intelligence and then propagate the flexfield object changes. When you import the metadata into the Oracle Business Intelligence repository, you must do so as the FUSION_APPS_BI_APPID user.

Note

To import flexfield changes into the Oracle Business Intelligence repository in Oracle Cloud implementations, run the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process. For additional information about import, refer to the Oracle Transactional Business Intelligence Administrator's Guide.

Tip

When you import a flexfield into the Oracle Business Intelligence repository, you see both <name>_ and <name>_c attributes for each segment, along with some other optional attributes. The <name> attribute contains the value. The <name>_c attribute contains the code of the value set that the value comes from, and is used for linking to the value dimension. You must import both attributes.

FAQs for Manage Applications Core Descriptive Flexfields

Can I display the context segment in the project Cost Collection flexfield?

No. The context segment is predetermined for each page. Displaying it and changing the value may result in capture of data that is not applicable for the current transaction.

Manage Applications Core Attachment Entities and Categories

Attachments: Explained

Attachments are pieces of supplementary information that users can associate with specific business objects such as expense reports or purchase orders. Attachments can be URLs, desktop files, text, or in cases where available, repository folders. For any given business object, a user may be able to only view attachments, or also create, delete, or edit attachments, depending on security. For more information on an introduction to attachments, see the Oracle Fusion Applications Developer's Guide.

Repository

Attachments are stored in a content management repository provided by Oracle WebCenter Content Server. Users managing attachments have no real interaction with the repository unless the repository mode is enabled for attachments on specific business objects. In that case, users can share attachments among objects, update attachments by checking them out of and back into the repository, and perform other tasks. Access to attachment files is controlled by a digital signing mechanism. Depending on security, users might have direct access to the repository.

Security

Data security that applies to a specific business object also applies to attachments for that object, as determined by the attachment entity defined for the object. For example, if a user has no access to a specific expense report, then the same user cannot access attachments for the expense report. You can also use attachment categories to control access and actions on attachments, based on roles associated with the category. For more information on securing attachments, see the Oracle Fusion Applications Developer's Guide.

Attachment Entities: Explained

An attachment entity is usually a database entity, for example a table or view, that represents a business object attachments can be associated with. Each attachment UI must be defined with a corresponding attachment entity, which

not only identifies the business object to attach to, but also controls what users can do. Attachment entities are used only in the context of attachments and exist separately from the database entities that they are based on.

Edit and create attachment entities on the Manage Attachment Entities page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Attachment Entities task. Though you would generally use predefined attachment entities with attachment UIs, you might need to create new entities, for example when developing custom UIs.

Entity Names

An attachment entity name should match the name of the table or view that represents the business object to attach to. The name is also used in the repository folder that is automatically created to store attachments for the entity. The attachment entity display name should be something that users know to represent the business object.

Database Resource

The data security policies associated with the database resource defined for the attachment entity would apply to attachments for that entity. For example, based on the database resource for the expense reports attachment entity, the same policies apply to attachments for expense reports. The database resource value must match the value in the OBJ_NAME column in the FND_OBJECTS table for the business object that the entity represents.

Enabling Security

Security based on the database resource associated with the attachment entity is always in effect. What you can enable or disable is security based on attachment categories. If any of the attachment categories associated with the attachment entity has data security defined, then that security applies to this entity only if enabled.

Attachment Entities and Attachment Categories: How They Work Together

The association between attachment entities and categories determines which categories can be used for an entity. For example, categories associated with the expense report attachment entity are available to be implemented in attachment UIs for expense reports. You can define these associations when managing either entities or categories. Any association changes in either the Manage Attachment Entities or Manage Attachment Categories page are reflected on the other page. You can access either page by starting in the Setup and Maintenance Overview page and searching for attachment tasks.

Managing Entities

You determine which attachment categories are relevant to a particular entity on the Manage Attachment Entities page, and each entity must have at least one category. Depending on configuration, any or all of the available categories for

that entity are used. For example, you assign three categories to the expense reports attachment entity. For a particular expense report page with attachments functionality, you can customize the attachments component to specify which of the three categories are used. Based on your selection, the data security defined for each category, if any, is applied to attachments on that page if the attachment entity has category-based security enabled.

Managing Categories

If you create an attachment category and need to assign it to multiple attachment entities, use the Manage Attachment Categories page. The association means the same as the association on the Manage Attachment Entities page.

Attachments Troubleshooting: Explained

Attachments UIs for users to add and manage attachments are fully functional as is, and users usually would not encounter issues. If you customize attachments in any way, for example by creating additional attachment categories and implementing data security on them, then some issues might arise.

Issue: Unable to View, Add, Update, or Delete Attachments

Users encounter issues when trying to view attachments or perform actions such as adding attachments.

- Users can no longer see specific attachments that they were previously able to see.
- Likewise, they can no longer update or delete attachments.
- Users get an error stating that they do not have permission to add attachments.

Resolution

Use the Manage Attachment Entities page to ensure that attachment categories are associated to the relevant attachment entity. For example, if users can no longer see attachments for an expense report, then search for the expense report attachment entity and assign all necessary categories to it. You might need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or what categories to assign.

If data security is implemented on the categories for the attachment entity, then verify that the Enable Security check box is selected in the Manage Attachment Entities page for that entity. Make sure that users have a role with the privileges shown in the following table, to view, add, update, or delete attachments with a specific attachment category.

Action	Privilege
View	Read Application Attachment (FND_READ_APPLICATION_ATTACHMENT_DATA)
Add or Update	Update Application Attachment (FND_UPDATE_APPLICATION_ATTACHMENT_DATA)

Delete	Delete Application Attachment (FND_DELETE_APPLICATION_ATTACHMENT_DATA)

For example, if users have the Read Application Attachment privilege for all categories associated with the expense report attachment entity, except the Receipts attachment category, then they can view all expense report attachments except those created with the Receipts category. Likewise, if users do not have the Update Application Attachment privilege for any attachment categories tied to the expense report attachment entity, then they cannot create any attachments at all for expense reports.

For more information on attachment category data security, see the Oracle Fusion Applications Developer's Guide.

Finally, certain attachments UI for users have predefined restrictions on categories in place. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

Issue: Missing Attachment Category

Users can see existing attachments, but the attachments no longer have an attachment category value.

Resolution

When the attachment was added, at least one category existed for the corresponding attachment entity, as otherwise the attachment could not have been added. Since then, the entity was edited so that it no longer has any assigned categories, so the user cannot see the category associated with that attachment.

Use the Manage Attachment Entities page to reassign attachment categories to the relevant attachment entity. For example, if users can no longer see the Receipts attachment category for an attachment to an expense report, then search for the expense report attachment entity and assign to it the Receipts category. You might need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or what additional categories to assign.

Finally, certain attachments UI for users have predefined restrictions on categories in place. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

FAQs for Manage Applications Core Attachment Entities and Categories

What's an attachment category?

An attachment category is used to classify and secure attachments. Each attachment user interface must be defined with at least one category for users

to be able to add attachments. If there are multiple categories, users can view them and select one when adding attachments. For example, attachments for an expense report can be categorized as receipts, scanned invoice images, and so on.

You can also associate roles with categories to determine user access and actions for attachments, based on the categories assigned to the attachment entity. For example, security for expense report attachments can be based in part on the categories assigned to the expense report attachment entity. You can define multiple categories per module, and add and manage custom categories for your own purposes. For more information on attachment category data security, see the Oracle Fusion Applications Developer's Guide.

Use the Manage Attachment Categories page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Attachment Categories task.

Common Applications Configuration: Define WebLogic Communication Services Configuration

Oracle Sales Cloud Computer Telephony Integration: Explained

You can use Oracle Sales Cloud' Computer Telephony Integration (CTI) to place a call to a contact from a hyperlink on the phone number or phone icon.

Here are a few topics that are important to know when using CTI:

- Normal call flow
- Interaction Records and Notes
- Operational Notes

Note

CTI must be enabled to make calls using the various contact information pages and pop-up UIs. When enabled, phone numbers appear as hyperlinks. Interaction logging is available if that feature is enabled. If interaction logging is available, a note indicating that fact will be displayed.

Normal Call Flow

CTI uses a call-the-caller-then-call-the-callee procedure for completing a phone call. That format and the normal flow of this procedure are described below.

- **You initiate a call**

If you see a small orange square next to a contact or customer name, click the square to display further details, including phone numbers. To place a call, place your mouse over the phone number hyperlink and click.

Note

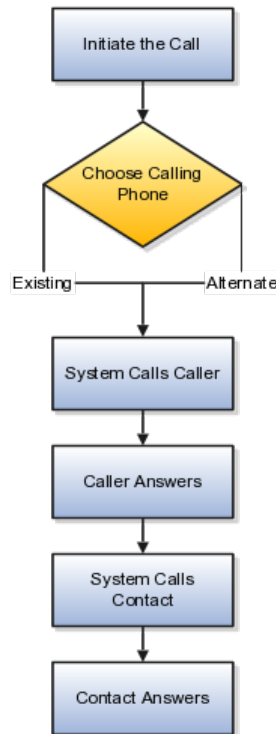
CTI does not work on phone numbers that are marked with a Do Not Call icon.

-
- **Select a Calling Phone**

Choose the calling phone number. Usually the calling phone is a number from your profile information. Alternately, if you need to use a phone not in your profile, you can specify a different number to originate your call.

- **Call Flow**

After you select the calling phone number, the system calls you back on that number, waits for you to answer, and then calls the person for whom the call is intended.



Interaction Records and Notes

CTI automatically creates an interaction record of the call, when that feature is enabled. The details window that provides the phone number may also show an Interaction icon that you can click to display a list of interaction records to edit, for example to provide a description of the call. The window may also provide a notes feature that you can use to record notes during the call.

Interaction Logging

The interaction record is logged as soon as the call is either successfully set up or known to have failed.

The interaction log records the customer, call participants, a timestamp noting the start time of the call, the direction of the communication, in or outbound, and

the resolution code. The description is automatically updated with these three items:

- Call ID from OWLCS
- Your chosen phone number
- Contact phone number

The call resolution code is determined from OWLCS and recorded in the interaction:

OWLCS Call Status	Resolution Code in Interaction
CallConnected	CALL ANSWERED
CallAborted	FAILED
CallHangUp	FAILED
CalledPartyBusy	NOT AVAILABLE
CalledPartyNoAnswer	NOT AVAILABLE
CalledPartyNotReachable	NOT AVAILABLE
CallingPartyBusy	FAILED
CallingPartyNoAnswer	FAILED
CallingPartyNotReachable	FAILED

Editing interactions

Once the call is established, if Interactions is available, you can use the Interactions icon on the UI to launch the interaction record list view. Select the current interaction record to edit it.

Operational Notes

Because of the call-the-caller-then-call-the-callee format, there are some conditions that may occur due to several calling situations. Some of these conditions are described below:

- Why don't I hear a ring-back tone? As soon as you answer the system call-back, the system immediately dials the contact. You won't hear a ring-back tone as in a normal outbound phone call. However, you can tell that the call attempt is progressing because:
 - The phone indicates that the connection is active. If the call to the contact reaches a busy tone or the call attempt times out, the connection is dropped.
 - The dialing window stays on the screen while the call attempt is progressing. It disappears when the connection is either successfully established or fails.
- What if your phone is busy and the call-back goes directly to voice mail? Normally this would not happen because you would not initiate a new call when you are already busy on another call. However, this situation could occur due to a race condition, that is where another incoming call reaches your phone before the CTI call-back. When this happens, two different scenarios could occur:

- If your phone is configured for busy-forward-all-to-voice-mail, the CTI call would be forwarded to your voice mail, and the system thinks that the caller has answered the call and will proceed to call the contact. On answering, the contact hears your voice-mail greeting.
- If your phone is capable of presenting a second call to the user, as is supported by many office phones and mobile phones, then you can still answer the CTI call and there is no issue.
- What if you wait too long to answer the call-back? In other words, you wait longer than the ring-no-answer-forward-to-voice-mail timer on the phone system and the call goes to voice mail. Normally, this would not happen because you are expecting the inbound call after you started the call, and would answer promptly. However, if for some reason you do not answer and allow the call to ring-no-answer-forward to voice mail, then the system would think that you have answered the call and will proceed to call the contact. On answering, the contact hears your voice-mail greeting.
- What if the contact does not answer in 30 seconds and the system abandons the call attempt? If the contact's voice mail is configured to answer after 30 seconds, you will not be able to leave a message.

Oracle Sales Cloud CTI: Top Tasks

Oracle Sales Cloud Computer Telephony Integration (CTI) is a feature of the customer contact process. Phone communication to customers and employees is initiated with a click of the mouse, leveraging your customer contact information and the application context. The CTI feature uses Oracle WebLogic Communication Services, OWLCS, to enable communications. Applications that provide the CTI functionality do so primarily through contextual actions.

Additionally, CTI utilizes Oracle Sales Cloud interactions as an optional transaction logging feature that will track information about the call such as the customer, call participants, a timestamp noting the start time of the call, the direction of the communication, in or outbound, and the resolution code.

CTI integrates with your telephony environment and must be manually enabled in your deployment. This topic highlights what is required to set up the CTI feature and to implement logging of the calls made using the CTI feature.

Terms used in setting up these communications

- PSTN: Public switched telephone network is the network of the world's public circuit-switched telephone networks.
- SIP: Session initiation protocol, an open signaling protocol standard that is used to set up phone calls
- TPCC: Third Party Call Control enables an application to control the telephony network to set up calls automatically.
- OWLCS: Oracle WebLogic Communication Services. Offers the TPCC service to Oracle applications and sets up the calls via SIP integration with the telephony network.

The set up task list Define WebLogic Communication Services Configuration delineates four tasks required for the correct configuration and implementation of CTI. There is an optional task, separate from the set up task list, required for implementing Interaction logging.

Information about implementing CTI can be found in the Oracle Sales Cloud Administrator's Guide. Detailed information about configuring and maintaining WebLogic Communication Services is found in the Oracle WebLogic Communication Services Administrator's Guide

Configure and Deploy WebLogic Server

- Deploy WebLogic Communication Services: After the Oracle WebLogic communication server is deployed, this manual task activates the server.

See: Oracle WebLogic Communication Services Administrator's Guide

Integrate Communications Services

- Integrate WebLogic Communication Services with Telephony Network: This manual task integrates communications within the telephony environment. OWLCS must be configured to interface with the specific characteristics of the telephony network.

See: Managing Oracle WebLogic Communication Services for CTI Functionality

Specify the Domain and Address

- Register a URL for the telephony gateway or soft switch for SIP domain: This task defines the Server protocol, defaulted to http, the external server host address and external server port address. The Associated Modules section is not required for setup. You can also perform this as a manual task using Topology Manager to configure the address of the SIP Public Switched Telephone Network (PSTN) gateway or SIP soft switch serving the users within that domain. This address is needed by CTI to correctly form the SIP addresses required by WebLogic Communication Services. See the link to Configuring PSTN Gateway Address Using Topology Manager: Worked Example.

Enable Click-to-Dial

- After configuring the server and defining the SIP domain, perform the Enable Click-to-Dial task. This task sets the value of the profile option Enable Click-to-Dial to 'Yes.'

Call Logging via Interactions

- To initiate the Interaction based logging for CTI, set the profile option Call Interaction Logging Enabled to 'YES.'

Configuring PSTN Gateway Address Using Topology Manager: Worked Example

This example demonstrates how, during the implementation of the **Register URL for the telephony gateway or soft switch for SIP domain** task,

you must manually configure the PSTN gateway address by registering HzCTDPstnGatewayApp to a given environment using Oracle Fusion Topology Registration

These steps configure the address of the SIP Public Switched Telephone Network (PSTN) gateway or SIP soft switch serving the users within that domain. This address is needed by Click-to-Dial to correctly form the SIP addresses required by WebLogic Communication Services.

For example: SIP:+1650-555-1212@pstn_gateway.oracle.com;user=phone where pstn_gateway.oracle.com is the SIP domain. The SIP domain can also be expressed in the format 10.1.1.1 (IP address).

Configuring PSTN using the Topology Manager

1. Sign in to Oracle Fusion Applications as a user that has **application implementation consultant** and **WebLogic Services administration** roles
2. In Fusion Applications Setup and Maintenance, click Register Enterprise Applications from the regional area under **Topology Registration**
3. On the Register Enterprise Applications page, click the plus icon to add an enterprise application. An Add Enterprise Application popup appears
4. Enter the new application information: Click Search in the Enterprise Application list field. Enter **HzCTDPstnGatewayApp** in the name field and click Search. Click OK.
5. Enter the other fields in the Add Enterprise Application popup

Field	Value
Name	HzCTDPstnGatewayApp
Server Protocol	SIP This field is ignored by click-to-dial. Oracle WebLogic Communication Service (OWLCS) always uses the SIP protocol.
External Server Host	10.143.167.91 (Used as an example) A host name can be used instead of an IP address.
External Server Port	0 (Used as an example) This field is ignored by Click-to-Dial.

6. Click Save and Close

Common Project Configuration: Define Subledger Accounting Rules

Define Common Project Configuration: Overview

In the Define Common Project Configuration activity, you perform the steps to configure components from other product offerings that are used by the Project Financial Management applications in Oracle Fusion Project Portfolio Management.

Setup tasks in the Define Common Project Configuration activity are grouped into the following task lists and tasks:

Task List	Description
Define Subledger Accounting Rules	Configure subledger accounting and set up subledger accounting rules.
Define Project Notes	Define project note types, mappings, and descriptive flexfields.
Manage Employees and Contingent Workers	Manage internal employees and contingent workers in Oracle Fusion Global Human Resources.
Manage Trading Community Parties	Enter customer, supplier, and partner organizations and contacts that will be associated with projects.
Define Common Project Billing Configuration	Configure common billing features and behavior such as tax calculations, intercompany rules, and general contract management.

Creating Accounting Method: Explained

Accounting methods group subledger journal entry rule sets together to define a consistent accounting treatment for each of the accounting event classes and accounting event types for all subledger applications. The grouping allows a set of subledger journal entry rule sets to be assigned collectively to a ledger.

For example, a subledger accounting method entitled US GAAP can be defined to group subledger journal entry rule sets that adhere to and comply with US Generally Accepted Accounting Principles (GAAP) criteria.

By assigning a different subledger accounting method to each related ledger, you can create multiple accounting representations of transactions.

Accounting rules can be defined with either a top down, or a bottom up approach. When defining subledger accounting rules from the top down, you will initially define the accounting method followed by components of each rule, which must be assigned to it. When defining subledger accounting rules from the bottom up, you will initially define components for each rule and then assign them as required.

The Create Accounting process uses the accounting method definition with active journal entry rule set assignments to create subledger journal entries.

When an accounting method is initially defined, or after modifying a component of any accounting rule associated to the assigned journal entry rule set, its status changes to Incomplete.

The accounting method must be completed, by activating its journal entry rule set assignments, so that it can be used to create accounting.

The following definitions are used to define the journal entries, and are applied as updates to the accounting method:

- Updates to the predefined accounting method
- Assignment of journal entry rule sets for an accounting event class and accounting event type from the accounting methods page
- Assignment of accounting methods to ledgers
- Activation of subledger journal entry rule set assignments

Updates on Predefined Accounting Method

You may update a predefined accounting method by end dating the existing assignment and creating an assignment with an effective start date.

Assignment of Journal Entry Rule Set for Accounting Event Class and Accounting Event Type

You create the assignment of a journal entry rule set for an accounting event class and accounting event type using the accounting method page.

The following should be considered for assigning rule sets:

- If the accounting method has an assigned chart of accounts, you can select journal entry rule sets that use that same chart of accounts, or that are not associated with any chart of accounts.
- Select an option to assign existing journal entry rule sets or create one.

Assignment of Accounting Methods to Ledgers

If the accounting method has an assigned chart of accounts, it may only be used by ledgers that use the same chart of accounts.

If the accounting method does not have an assigned chart of accounts, the accounting method can be assigned to any ledger.

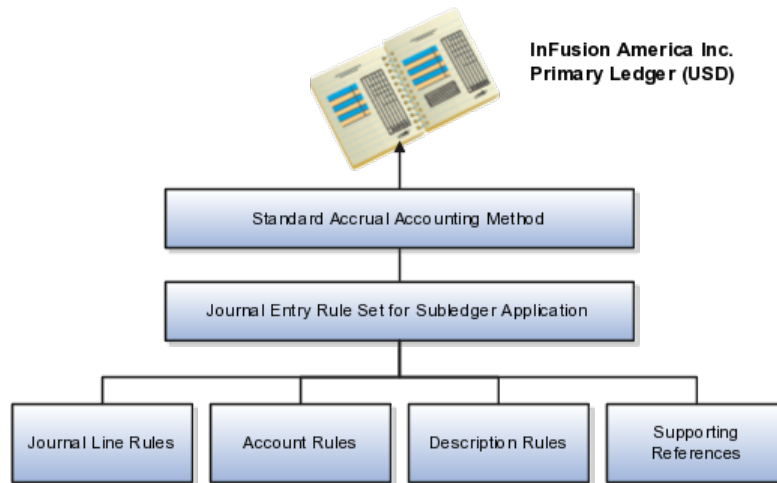
Activation of Subledger Journal Entry Rule Set Assignments

You can activate the subledger journal entry rule set assignments from the Accounting Method page. You can also submit the Activate Subledger Journal

Entry Rule Set Assignments process to validate and activate your accounting set ups.

Fusion Setup Flow

The figure below shows the relationship of components making up an accounting method as described in the above text.



Creating Subledger Journal Entry Rule Sets: Explained

Subledger journal entry rule sets provide the definition for generating a complete journal entry for an accounting event.

Select the option to define the subledger journal entry rule set for a particular accounting event class or accounting event type.

If you are using multiple ledgers to meet divergent and mutually exclusive accounting requirements, you can vary journal entry rule sets by ledger. Each of the subledger journal entry rule sets can meet a specific type of accounting requirements.

For example, use US Generally Accepted Accounting Principles (GAAP) oriented subledger journal entry rule sets for a ledger dedicated to US GAAP reporting, and French statutory accounting conventions for a ledger dedicated to French statutory reporting. These two sets of definitions have differences based on the setup of the various components that make up their subledger journal entry rule sets.

Predefined subledger journal entry rule sets are provided for all Oracle subledgers. If specific requirements are not met by predefined subledger journal entry rule sets, users can create a copy of the predefined definitions and then rename and modify the copied definitions and their assignments.

Subledger journal entry rule set assignments can be made at two levels, header and line. The following are the subcomponents of a subledger journal entry rule set:

- Description rules

- Journal line rules
- Account rules

Assignment at Header Level

Header assignments define subledger journal header information and line assignments define journal line accounting treatment.

A header assignment includes the following:

- Accounting date (required)
- Accrual reversal accounting date (optional)
- Description rule (optional)

Assignment at Line Level

You can define multiple subledger journal entry rule sets for an accounting event class or accounting event type. A single journal entry is generated per accounting event per ledger using the line assignments from the journal entry rule set assigned to the accounting event class or accounting event type.

The following can be assigned to a journal entry line:

- Journal line description rule
- Journal line rule
- Account rule
- Supporting references

Assignment of Description Rules

If a description rule is defined with sources, the sources must also be assigned to the accounting event class that is assigned to the journal entry rule set. The description rule may be assigned at either the header or line level of the journal entry or to both levels.

Assignment of Journal Line Rules

When assigning the journal line rule, you must identify the line type: Gain, Loss, Gain or Loss, Credit, or Debit. The journal line rule must be assigned to the same accounting event class as the one assigned to the subledger journal entry rule set.

When assigning a journal line rule that is enabled for accounting for a business flow, the account combination and certain accounting attribute values are copied from its related journal line having the same business flow class as the current line. Optionally, copy the description rule into the current line instead of assigning a separate description rule.

When assigning a journal line rule that is enabled to copy from the corresponding line within the same journal entry, you have the option to copy the account combination, the segment value, or the line description from the corresponding line into the current line.

Assignment of Account Rules

The account rule assignment will define which accounts will be used for the subledger journal line. If the account rule is setup with a chart of accounts, it

must have the same chart of accounts as the one assigned to the journal entry rule set. When account rules are defined with sources, the sources must also be assigned to the accounting event class that is assigned the journal entry rule set.

There are two types of account rules:

- Account Combination Rule: Assign an account combination rule to derive the account combination.
- Segment Rule: Assign a segment rule to derive a specific segment of an account. For example, a cost center or a natural account segment.

Assignment of Supporting References

Supporting references may be used to capture transaction values on journal entry lines. A supporting reference can be used on a journal entry rule set only if it is assigned a source from the event class of the journal entry rule set.

Creating Conditions: Examples

The following illustrates an example of defining an account rule with a condition.

Example 1: Custom Real Estate Application Account Rule Condition Example

This is an example to define an account rule for assignment for a loan journal line. The account rule has two priorities, a mapping set and a constant.

- The first priority will create an output for an account based on the mapping set rule definition.
- A condition is created on the first priority rule. This rule will only be used if the condition below is met.
 - The condition is **Credit Status** must not be null.
 - The accounts derived from the mapping set rule will be used if the Credit Status has a valid value. Otherwise, the accounts derived from the entered constants value from the second priority will be used.

The following table describes the setup of the condition on the first priority:

(	Source	Operator	Value	)
(	"Credit Status"	is not null		)

The second priority will create an output from a constant value (0.9100030.50034206331.0.0.0). There is no condition associated with the second priority.

Example 2: Oracle Fusion Assets Account Rule Condition Example

This is an example of a rule for a capital purchase. The rule is to be applied only if the distribution account cost center is the same as the liability account cost center and the asset tracking option is Yes. This condition can be expressed as:

- Where Distribution Cost Center = Liability Cost Center and Asset Tracking option = Yes

The following tables describe the setup of the condition:

(	Source	De-limiter	Segment	Operator	Value	De-limiter	Segment	)	And Or
(	"Dis-tribution Account"	.	"Cost Center"	=	"Liability Account"	.	"Cost Center"	)	'AND'
(	"Asset Flag"			=	Yes			)	

The following two rows of data are used in the accounting event, to which the account rule and condition applies.

Account Rule Condition Example: Accounting Event Data

Account	Invoice 1	Invoice 2	Asset Flag
Distribution Account	02-640-2210-1234	01-780-6120-0000	Yes
Liability Account	01-640-2210-0000	02-782-2210-0000	Yes

In the Accounting Event Data table above, assume the cost center segment is the second segment. When the account rule with this condition is used to derive the account for the transaction, the account rule is applied to derive the account of Invoice 1 only. For Invoice 2, even though the assets tracking option is set to Yes, the cost center for the Distribution account and Liability account are not the same. Both conditions must be met in order for the rule to apply.

Note

When an account source is selected or entered, you must also select or enter a specific segment. If an entire account is required to be used in the condition instead of a specific segment, then select or enter All as the segment for the account.

The condition uses the account source, Distribution Account, and a segment must be provided. In this example, the Cost Center segment is provided.

Journal Line Rules: Explained

Journal line rules are defined within the context of accounting event classes. A journal line rule can be used in a subledger journal entry rule set that has the same event class. You may also assign conditions to the journal line rule.

Journal Line Rules

Journal line rules are assigned to journal entry rule sets.

To create a journal line rule, select values for options such as:

- Side (Debit, Credit, Gain or Loss)

For example, when an Oracle Fusion Payables invoice is generated, the liability account should normally be credited. The journal line rule must therefore specify the Side option as Credit. On the other hand, the payment of the Payables invoice must be accounted with a debit to the liability account. A separate journal line rule must be defined to create this debit line.

- **Merge Matching Lines:** To summarize subledger journal entry lines within each subledger entry. Journal entry lines with matching criteria are merged.
- **Accounting Class**
 - Select an accounting class to classify journal entry lines.
 - For example, when a validated Payables invoice is accounted, the Item Expense and Liability journal lines are created. In this case, the journal line rules used in the accounting rules are assigned Item Expense and Liability accounting classes respectively.
- **Conditions:** To restrict the use of a journal line rule by controlling when a particular journal line rule is used by the Create Accounting process.
- **Accounting Attributes:** When creating a journal line rule, accounting attribute assignments are automatically established based on the default accounting attribute assignments for that journal line rule's accounting event class. You can override this default mapping of standard sources to accounting attributes. The list of values for the source override includes all sources assigned to the accounting attribute for the event class associated with the journal line rule.
- **Advanced Options**
 - **The Subledger Gain or Less Option:** Applies only to amount calculations for the primary ledger. Gain or loss amounts are not converted to reporting currency or non-valuation method secondary ledgers. If the option is selected, the journal line holds the gain or loss amounts calculated by the subledger.

The gain or loss amount is calculated as the difference in applied amounts due to fluctuations in conversion rates based upon conversion to the ledger currency. Foreign exchange gain or loss amounts occur when two related transactions, such as an invoice and its payment, are entered in a currency other than the ledger currency, and the conversion rate fluctuates between the times that the two are accounted.
 - **The Rounding Class Option:** Along with the transaction rounding reference group journal lines together and calculates transaction rounding. Subledger transaction rounding differences can occur when a transaction has multiple related applied-to transactions, such as when a Receivables invoice has multiple associated receipts.
 - **The Link Journal Lines Option:** Determines whether the journal line rule is set up to establish a link between the accounting of transactions that are related both within the same application, and across applications. The alternatives are described in this table:

Link Journal Lines Option	Description
None	No link is established.
Copy from corresponding line	Build account for a journal line using segments from the offsetting entry of the current journal line. For example, when the business process requires that a cost center incurring an expense must also bear the invoice liability and cash outlay.
Business flow	Link logically related business transactions. For example, when recording the closing of a loan, you can link to the account that was used to book the loan origination. Journal line rules that are linked must also be assigned the same business flow class.

Defining Conditions for Journal Line Rules

You may set conditions to specify whether the journal line rule will be used to create a subledger journal entry line. If the conditions are true, the line rule is used to create a subledger journal entry line. Use sources to create these conditions.

For example, you can set up a condition that will create a journal line to record tax, only if there is tax for an invoice. The line type and account class mentioned here are examples of sources.

- The condition for a Payables invoice tax journal line rule could be:
 - Where Line Type = Tax
 - When this condition is true, there is tax for a payables invoice line. A journal entry line is created to record the accounting impact of the tax.
- Similarly, the condition for a Oracle Fusion Receivables invoice tax journal line rule could be:
 - Where Account Class = Tax
 - In this case, if there is an account class of Tax, the journal line is used to record the accounting impact of the tax.

Another example is a condition that creates a journal line for freight when there are freight charges on an invoice.

Journal line rule conditions determine whether a journal line rule and its associated account rules and description rules, are used to create the subledger journal entry line.

Note

Constant values that are used in any Conditions region must not contain the following characters:

- "
- ,
- &
- |
- (

-)
- '.

For example, in the condition "Project Type" = ABC (123), the constant value following the equal sign, ABC (123), contains restricted characters () that enclose 123 and is invalid.

Account Rules: Explained

Account rules are used to determine the accounts for subledger journal entry lines. In addition, you can specify the conditions under which these rules apply. Using these capabilities, you can develop complex rules for defining accounts under different circumstances to meet your specific requirements. You can define account rules for an account, segment, or value set.

Account Rules by Account

Define account rules by account to determine the entire account combination. For example, an account rule defined by account can be used to determine the complete supplier liability account in Oracle Fusion Payables.

Account Rules by Segment

Define segment rules to derive a specific segment of the general ledger account. For example, a particular segment like the company segment can be determined from the distribution account. Another segment can be determined with the use of a constant value. Creating the account one segment at a time offers greater flexibility, but also requires more setup.

Use both segment based and account based rules to derive a single account. Segment specific rules are used, where they are defined, and take the remaining values from an account based rule. For example, you can select an account rule which is for all segments and also separately select a rule which is for one particular segment. Segment specific rules take precedence over the all segments account based rule.

Combine account rules with segment rules. In this case, the segment value is derived from the segment rule to override the corresponding segment of the account. However, if the segment rule has conditions associated with the priorities and none of the conditions are met, no override occurs and therefore, the segment value is derived from the account rule.

Note

If the returned account is end dated with a date that is the same or before the subledger journal entry accounting date and an alternate account is defined in Oracle Fusion General Ledger, an alternate account is used. The original account is stored on the journal line for audit purposes.

If the alternate account is invalid, and the **Post Invalid Accounts to Suspense Account** option is selected in the Create Accounting process, then a suspense account is used. An error message is displayed if a valid suspense account is not available.

Account Rules by Value Sets

In the absence of a chart of accounts, you may define account rules based upon value sets. This enables you to share the same rule between more than one chart of accounts if the segments in these charts of accounts share the same value set.

Sharing Account Rules across Applications

You may share account rules across applications in the following ways.

- Assign an account rule from the same or a different application to a journal line rule in the subledger journal entry rule set. For example, to derive an expense account for journal line rule Expense, assign the Projects Cost Account rule owned by Oracle Fusion Projects to the Payables journal line rule Expense.
- Create an account rule based on an account rule from another application and assign it to a journal line rule. For example, you may create an account rule Invoice Expense Account referencing Project Cost Account assigned in the Priorities region. You may attach the Invoice Expense Account rule to the journal line rule Expense in the journal entry rule set.

Note

To share an account rule across applications, all sources used by the account rule must be available for the event class.

If the sources are available, an account rule is assigned to a journal line rule in the journal entry rule set, and verification occurs to confirm that all sources used by the account rule are available for the journal line rule accounting event class. Journal line rules are only available if the sources are shared; such as reference objects.

Account Rules and Mapping Sets

Mapping sets can be used to associate a specific output value for an account or segment. You can use mapping sets in account rules to build the account.

Account Rules Conditions

In the account rules you may specify conditions for each rule detail line. Priorities determine the order in which account rule conditions are examined. When the condition is met, the rule associated with that priority is used. Depending on which of the defined conditions is met, a different account rule detail is employed to create the account.

The Create Accounting process evaluates conditions based on the priority of the rule detail. When the condition is met, the rule detail is applied.

Creating Account Rules: Points to Consider

You can define an account rule using the following rule types:

- Account combination
- Segment

- Value set

Account Combination Rules

Set up account combination rules based upon the following value types:

1. Source Value Type: Derive the account combination by specifying a source. Sources that have been set up as accounts can be assigned to an account combination rule. Oracle Fusion Subledger Accounting then obtains the account combination identifier from the source.
2. Constant Value Type: Establish the account as a constant value.

For example, the constant could be a completed account combination from the chart of accounts specified. An example is the account combination, 01.000.2210.0000.000. This is the simplest way to derive an account.

3. Mapping Set Value Type: Derive the account combination by referencing a mapping set. Set up a mapping set to determine the complete account combination from the chart of accounts specified.
4. Account Rule Value Type: Derive the account by referencing another account rule.

The chart of accounts is optional when defining this type of rule. If the account rule has a chart of accounts assigned, then all the related account rules must use the same or no chart of accounts.

Note

A chart of accounts must be specified for rules using constants.

Segment Rules

Set up segment rules as follows:

- When a chart of accounts is specified, create a rule to derive the value for a specific segment from the chart of accounts.
- If the chart of accounts is not specified, create a rule to derive the value for an account segment with a specific qualifier.

Set up segment rules using the same methods discussed in the preceding Account Combination Rules section. By specifying different value types, users can select the way in which the segment value is derived.

Note

A chart of accounts must be specified for rules using constants.

Value Set Rules

Value set based rules can be created when a chart of accounts is not specified. This enables you to share the same rule between more than one chart of accounts if the segments in these charts of accounts share the same value set.

Set up value set based rules using the same methods discussed in the preceding Account Combination Rules section.

Creating Description Rules: Explained

Use descriptions rules to define the elements of a description that appears on the subledger journal entry at the header and/or the line. The definition determines both the content and sequence in which the elements of the description appear. You can assign a condition to a description rule to determine that the description is selected for display if the condition is satisfied.

Description Rule Definition

A description rule can be defined with combinations of source and literal values. If sources are used in the rule, the accounting event class associated with the sources determines in which subledger journal entry rule set the description rule can be selected and used.

Build descriptions using the available sources for the application.

The following is the description details that have been entered, using a literal and a source:

- Loan Origination Date = Origination Date
 - Literal = Loan Origination Date
 - Source = Origination Date

Assuming that the source value of the Origination Date is 11/01/11, then a journal entry that has the above description rule attached will have the description, Loan Origination Date 11/01/11.

Creating Supporting References: Explained

Supporting references can be used to store additional transaction information on a subledger journal entry line.

Sources are assigned to supporting reference segments to indicate which transaction values should be captured on subledger journal entries.

Optionally, you can maintain balances for supporting references by setting the Maintain Balances option to **Yes**.

Examples of how you may want to use supporting reference balances are:

- Reconciliation back to the source systems
- Profit and loss balances by dimensions not captured in the chart of accounts

Supporting Reference Assignment

If the information requirement is purely informational, and not needed for reconciliation or balances, you may consider using description rules to store the source values.

There are key points to consider when assigning supporting references:

- Select the balances option in the definition of the supporting reference, to have balances only maintained when the supporting reference is assigned.
- If balances are maintained for a supporting reference, they will be carried forward into the next fiscal year based on the type of the account.

As an example, you can create two supporting references to track loan information:

- Credit status
- Loan contract number

Sources will be assigned to each of these segments and the source values for each of these segments will be used to create separate balances.

Define Subledger Application and Sources

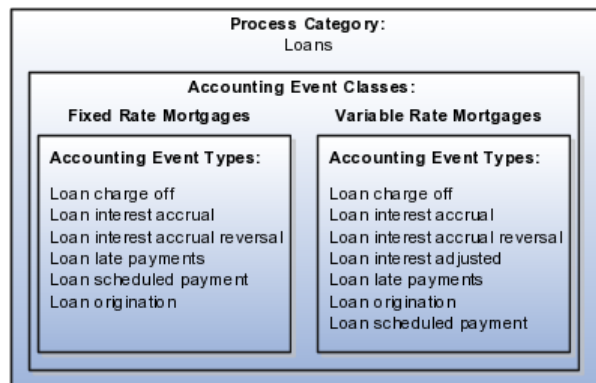
Accounting Event Model: Explained

Accounting events represent transactions that may have financial significance, for example, issuing a loan and disposing of an asset. Financial accounting information can be recorded for these events and accounted by the Create Accounting process. When you define accounting events, determine from a business perspective which activities or transactions that occur in your source system may create a financial impact.

Events with significantly different fiscal or operational implications are classified into different accounting event types. Event types are categorized into accounting event classes. Accounting definitions in the Oracle Fusion Accounting Hub are based on event types. An event type must be unique within an application, process category, and event class.

Events are captured when transactions are committed in the subledgers, or they may be captured during end-of-day or period-end processing. For example, a loan is originated, possibly adjusted, interest is accrued, and then the loan is paid or canceled. The accounting events representing these activities can create one or more subledger journal entries, and subsequently link the originating transaction to its corresponding journal entries.

The following is an example of an accounting event model for a loan application:



Process Categories

A process category consists of specific event classes and the event types within those classes. To restrict the events selected for accounting, users can select a process category when they submit the Create Accounting process.

Event Classes

You can assign a transaction view, system transaction identifiers, and optionally user transaction identifiers and processing predecessors for an event class in the Edit Event Class section. The transaction view should include all columns that have been mapped to system transaction identifiers for the accounting event class as well as the user transaction identifiers.

System Transaction Identifiers

System transaction identifiers provide a link between an accounting event and its associated transaction or document. An identifier is the primary key of the underlying subledger transaction, usually the name of the surrogate key column on the transaction (header) associated with the accounting event. At least one system transaction identifier must be defined for the accounting event class.

When an accounting event is captured, system transaction identifiers, along with other required event data, are validated for completeness.

User Transaction Identifiers

User transaction identifiers constitute the user-oriented key of the underlying subledger transaction, and are typically drawn from one or more database tables. These identifiers are primarily used in accounting events inquiry and on accounting event reports, to uniquely identify transactions. You can specify up to ten columns from the transaction views that are available for inquiry and reports.

The transaction data that identifies the transaction varies by accounting event class. Accounting event reports and inquiries display the transaction identifiers and their labels appropriate for the corresponding event class. The user transaction identifiers can be displayed for an event regardless of its status. This includes the case where the accounting event has not been used to create subledger journal entries due to an error or the cases where it has not been processed. The user transaction identifier values are displayed at the time that the accounting event reports and inquiries are run. If a transaction identifier value has changed after the accounting event was captured, the accounting event reports and inquiries reflect the change.

Processing Predecessors

The processing predecessor establishes an order in which the Create Accounting process processes events selected for accounting.

Event Types

For accounting event types, specify whether their accounting events have accounting or tax impact. When the Create Accounting process is submitted, it only accounts business events that are enabled for accounting.

Register Source Systems: Critical Choices

Subledger applications can support third-party control account type and calculate reporting currency amounts.

Calculate Reporting Currency Amount

If the subledger application is configured to calculate reporting currency amount, there is no need to provide reporting currency information in the transaction objects.

Additional Considerations

The following are additional considerations when creating a subledger application:

1. Determine the subledgers requirement. For example, how many subledgers are to be created? This may depend on what security your company wants to have over its accounting rules.
 - Using the same subledger allows you to share subledger accounting rules, and lets you report across all data easily.
 - Using separate subledgers provides more security across applications and less data in each process run providing better performance. Specific benefits are:
 - If you run two Create Accounting requests at the same time for different applications, they are much less likely to contend for database resources. The requests will perform better, as the indexes are tuned for running with different applications instead of running for different process categories within the same application.
 - It allows you to efficiently process different sets of data (different applications) at different times during the day instead of running it as one process.
2. Determine the transaction objects requirements. These requirements determine what source data is required to successfully create subledger journal entries from transactions that are captured in transaction objects and shared in reference objects.
3. Analyze accounting events to determine what events to capture for the subledger application.

Create programs to capture accounting events using APIs (application programming interfaces) that are provided as follows:

- Get Event Information APIs to get event information related to a document or a specific event.
- Create Event APIs to create accounting events, individually or in bulk.

- Update Event APIs to update events and keep them consistent with related transaction data.
 - Delete Event APIs to delete events.
4. Determine how often to capture accounting events, populate transaction objects, and run the Create Accounting process. This may depend on the immediacy and volumes of accounting requirements in your company.

Transaction Objects: Points to Consider

You may assign transaction and reference objects for each accounting event class in the subledger application. Sources are generated based on the transaction objects and are assigned to the corresponding accounting event classes.

Sources are used to create accounting rules. Subledgers pass information to the application by populating transaction object tables. The columns in these tables are named after the source codes. Transaction and reference objects hold transaction information that is useful when creating journal entry rules for accounting. The transaction and reference objects are defined for an accounting event class so that source assignments to accounting event class can be generated using these objects.

Transaction Objects

Transaction objects refer to the tables or views from which the Create Accounting process takes the source values to create subledger journal entries. Source values, along with accounting event identifiers, are stored in the transaction objects. The Create Accounting process uses this information to create subledger journal entries.

You have several options. You can:

- Create new tables as the transaction objects and create a program to populate them.
- Use views of your transaction data as the transaction objects.
- Use your transaction data tables as the transaction objects.

The transaction objects and or views must be accessible to the Create Accounting process. Typically, an ETL (extract, transformation, and load) program is used to take values from the source system and load them into the database used by the Create Accounting process. The ETL process is done outside of the Create Accounting process.

The following are transaction object types:

- Header transaction objects
 - Implementers need to provide at least one header transaction object for each accounting event class. Header transaction objects store one row with untranslated header source values for each accounting event. The primary key of a header transaction object is the event identifier.

Transaction details that are not translated, and whose values do not vary by transaction line or distribution, should normally be stored in header transaction objects. Examples of sources normally stored in header transaction objects include the Loan Number for a loan or the Contract Number for a contract.

- Line transaction objects
 - Line transaction objects are relevant when there are details for the accounting event that vary based upon transaction attributes. For example, a mortgage transaction for loan origination may have multiple amounts, each related to different components of the loan. There may be a loan origination amount, closing cost amounts, and escrow amounts. Each of these amounts could be captured as separate lines, along with an indication of the amount type

Line transaction objects store untranslated line level source values. There should be one row per distribution, identified by a unique line number. The primary key of a line transaction object is the event identifier and transaction object line number. Transaction details that are not translated and whose values vary by transaction line or distribution are normally stored in line transaction objects columns. Examples include the Loan Number for a loan payment.

- Multi-Language Support (MLS) transaction objects
 - MLS transaction objects are relevant to applications that support the MLS feature. MLS transaction objects store translated source values. There should be one row per accounting event and language. The primary key of a header MLS transaction object is the event identifier and language. The primary key of a line MLS transaction object is the event identifier, transaction object line number, and language.

Transaction details that are translated, and whose values do not vary by transaction line or distribution, are normally stored in header MLS transaction object columns. Examples include Loan Terms for a commercial loan. Implementers can avoid having to store source values in header MLS transaction objects by using value sets and lookup types.

Transaction details that are translated, and whose values vary by transaction line or distribution, should normally be stored in the transaction object in columns defined in a line MLS transaction object.

Reference Objects

Reference objects are useful for storing information that is used for creating subledger journal entries. This information may not be directly from the source system or may be used for many entries, thus making it redundant. Use reference objects to share sources information across applications.

For example, store customer attributes, such as the customer class or credit rating in a reference object, and then, use it to account for different journal entries in a loan cycle, such as loan origination or interest accrual. Store information, such as

bond ratings and terms, and use it to account for entries across the life of bonds, such as interest accruals or bond retirement.

Reference objects can either have a direct relationship to transaction objects (primary reference object), or be related to other reference objects (secondary).

Managing Accounting Sources: Critical Choices

Sources are a key component for setting up accounting rules. Sources represent transaction and reference information from source systems. Contextual and reference data of transactions that are set up as sources can be used in accounting rules definitions.

When determining what sources should be available, it is helpful to begin the analysis by considering which information from your systems is accounting in nature. Examples of sources that are accounting in nature include general ledger accounts that are entered on transactions, the currency of a transaction, and transaction amounts. Sources that are not always required for accounting rules include items that are related to the transaction for other purposes than accounting. Examples of information that may not be specifically for accounting, but which may be useful for creating subledger journal entries, are transaction identification number (loan number, customer number, or billing account number), counter party information, and transaction dates.

Provide a rich library of sources from your source systems for maximum flexibility when creating definitions for subledger journal entries.

Sources are assigned to accounting event classes by submitting the Create and Assign Sources process.

There is a distinct difference between sources and source values. Sources represent the transaction attributes used to create accounting rules. Source values are used by the Create Accounting process to create subledger journal entries based upon source assignments to accounting rules.

Sources

Sources must be created prior to creating accounting rules. This is a predefined step which must be undertaken before the application can be used to create subledger journal entries.

To set up appropriate subledger journal entry rule sets, users and those implementing need to understand the origins, meaning, and context of sources. Use business oriented names for sources to allow accountants and analysts to effectively create accounting rules.

- Enables users to easily identify a source.
- Ensures consistency in nomenclature.

Source Values

Source values are stored in transaction objects. They are the actual transaction attribute values from the source system and are used in creation of the journal entries.

Accounting Attribute Assignments: Points to Consider

The Create Accounting process uses the values of sources assigned to accounting attributes plus accounting rules to create subledger journal entries. Almost all accounting attributes have sources assigned at the accounting event class level. Depending on the accounting attribute, the accounting attribute assignment defaulted from the accounting event class can be overridden on journal line rules or subledger journal entry rule sets.

Once sources are assigned to accounting event classes, they are eligible for assignment to accounting attributes for the same accounting event classes.

The Create Accounting process uses these assignments to copy values from transaction objects to subledger journal entries. For example, you may map the invoice entered currency to the subledger journal entry entered currency.

Each accounting attribute is associated with a level:

1. Header: To be used when creating subledger journal entry headers.
2. Line: To be used when creating subledger journal entry lines.

The types of accounting attributes values are as follows:

Values that are Subject to Special Processing

You may have values that are subject to special processing or values that are stored in named columns in journal entry headers and lines.

Examples of accounting attributes are Entered Currency Code and Entered Amount.

Values that Control the Behavior of the Create Accounting Process

You may have values that control the behavior of the Create Accounting process when processing a specific accounting event or transaction object line.

An example of accounting attributes of this type is Accounting Reversal Indicator.

Minimum Required Accounting Attribute Assignments

In order to create a valid journal entry you must, at a minimum, set up the following accounting attribute assignments.

- Accounting Date
- Distribution Type
- Entered Amount
- Entered Currency Code
- First Distribution Identifier

The details and descriptions of these attributes are included in the Accounting Attributes section.

Accounting Attributes

Accounting attribute groups are represented in the tables below:

Accounted Amount Overwrite

- The accounted amount overwrite accounting attribute indicates whether the accounted amount calculated by the Create Accounting process should be overwritten by the value of the accounted amount accounting attribute. If the source value mapped to Accounted Amount Overwrite is 'Y', then an accounted amount must be provided.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Accounted Amount Overwrite Indicator	Alphanumeric	Line	Event Class and Journal Line Rule	No	Y - Overwrite accounted amount N - Not overwrite accounted amount

Accounting Date

- The accounting date attribute is relevant to all applications. The Create Accounting process uses it to derive the accounting date of journal entries. Typically, the event date system source is assigned to the accounting date attribute.
- The Accrual Reversal GL Date accounting attribute is relevant to applications using the accrual reversal feature. Users can assign system and standard date sources to the Accrual Reversal GL Date in the Accounting Attribute Assignments page. When the Accrual Reversal GL Date accounting attribute returns a value, the Create Accounting process generates an entry that reverses the accrual entry.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Accounting Date	Date	Header	Event Class and Journal Entry Rule Set	Yes	Should be in open general ledger period
Accrual Reversal GL Date	Date	Header	Event Class and Journal Entry Rule Set	No	Should be later than the accounting date

Accounting Reversal

- Accounting reversal accounting attributes are relevant to applications that wish to take advantage of the accounting reversal feature. The Create Accounting process uses them to identify transaction (distributions) whose accounting impact should be reversed. For the Create Accounting process to successfully create a line accounting reversal, the accounting reversal indicator, distribution type, and first distribution identifier should always be assigned to sources. The definition of the accounting reversal distribution type and distribution identifiers mirrors the definition of the distribution identifiers.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Accounting Reversal Distribution Type	Alphanumeric	Line	Event Class	Yes, if another accounting reversal accounting attribute is assigned.	
Accounting Reversal First Distribution Identifier	Alphanumeric	Line	Event Class	Yes, if another accounting reversal accounting attribute is assigned.	
Accounting Reversal Second Distribution Identifier	Alphanumeric	Line	Event Class	No	
Accounting Reversal Third Distribution Identifier	Alphanumeric	Line	Event Class	No	
Accounting Reversal Fourth Distribution Identifier	Alphanumeric	Line	Event Class	No	
Accounting Reversal Fifth Distribution Identifier	Alphanumeric	Line	Event Class	No	
Accounting Reversal Indicator	Alphanumeric	Line	Event Class	Yes, if another accounting reversal accounting attribute is assigned.	Y - Reverse without creating a replacement line B - Reverse and create a new line as replacement N or Null - Not a reversal
Transaction Accounting Reversal Indicator	Alphanumeric	Header	Event Class	No	Y - Reversal transaction object header N or null - Standard transaction object header

Business Flow

- The business flow accounting attributes are referred to as 'applied to' accounting attributes. If a transaction is applied to a prior transaction in the business flow, the transaction object must populate sources assigned

to 'applied to' accounting attributes with sufficient information to allow the Create Accounting process to uniquely identify a transaction object line for a prior event in the business flow. When deriving accounting data from a previous event in the business flow, the Create Accounting process searches for a journal entry line for the prior event using a combination of the 'applied to' accounting attributes and the business flow class of both journal entries.

The Applied to Amount accounting attribute is used to calculate the accounted amount and gain or loss in cross-currency applications when business flows are implemented. This attribute value is used to calculate the accounted amount when a source is mapped to the Applied to Amount attribute on a journal line type and the entered currency is different than the original currency entered.

Note

When enabling business flow to link journal lines in the Journal Line Rule page, certain accounting attribute values are unavailable for source assignment in the Accounting Attributes Assignments window of the same page because they will be copied from the related prior journal entry.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Applied to Amount	Number	Line	Event Class and Journal Line Rule	No	
Applied to First System Transaction Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	
Applied to Second System Transaction Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Third System Transaction Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Fourth System Transaction Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Distribution Type	Alphanumeric	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	
Applied to First Distribution Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	

Applied to Second Distribution Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Third Distribution Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Fourth Distribution Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Fifth Distribution Identifier	Alphanumeric	Line	Event Class and Journal Line Rule	No	
Applied to Application ID	Number	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	Must be a valid application ID
Applied to Entity Code	Alphanumeric	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	Must be a valid Entity for the application selected in Applied to Application ID

Distribution Identifier

- Distribution identifiers accounting attributes are relevant to all applications. The distribution identifier information links subledger transaction distributions to their corresponding journal entry lines. In addition, many of the Oracle Fusion Subledger Accounting features, including accounting reversals, rely on the correct definition and storing of distribution identifiers in the line transaction objects. The distribution type and first distribution identifiers are always assigned to sources. If a transaction distribution is identified by a composite primary key, additional distribution identifiers are assigned to standard sources, as appropriate. Values for the distribution type and distribution identifiers are always stored in accounting transaction objects. The combinations of the values of the system transaction identifiers with the values of the distribution identifiers uniquely identify a subledger transaction distribution line.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Distribution Type	Alphanumeric	Line	Event Class	Yes	
First Distribution Identifier	Alphanumeric	Line	Event Class	Yes	
Second Distribution Identifier	Alphanumeric	Line	Event Class	No	

Third Distribution Identifier	Alphanumeric	Line	Event Class	No	
Fourth Distribution Identifier	Alphanumeric	Line	Event Class	No	
Fifth Distribution Identifier	Alphanumeric	Line	Event Class	No	

Document Sequence

- The document sequence accounting attributes are relevant to applications that use the document sequencing feature to assign sequence numbers to subledger transactions. The Create Accounting process uses them to provide a user link between subledger transactions and their corresponding subledger journal entries. Assign all document sequence accounting attributes to sources or do not assign any. In addition, the Document Sequence Category Code is made available as an Accounting Sequence Numbering control attribute.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Subledger Document Sequence Category	Alphanumeric	Header	Event Class	Yes, if another accounting attribute in the same group has assignment.	
Subledger Document Sequence Identifier	Number	Header	Event Class	Yes, if another accounting attribute in the same group has assignment.	
Subledger Document Sequence Value	Number	Header	Event Class	Yes, if another accounting attribute in the same group has assignment.	

Entered Currency

- Entered currency accounting attributes are relevant to all applications. The Create Accounting process uses them to populate the journal entry line entered currency code and amounts. The entered currency accounting attributes must always be assigned to sources. The sources assigned to the entered currency accounting attributes must always contain a value. For event classes that support cross currency transactions and therefore, more than one entered currency and entered currency amount, multiple event class accounting attribute assignments are created.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Entered Currency Code	Alphanumeric	Line	Event Class and Journal Line Rule	Yes	A valid currency code

Entered Amount	Number	Line	Event Class and Journal Line Rule	Yes	

Ledger Currency

- Ledger currency accounting attributes are relevant to all applications that use the Create Accounting process. The Create Accounting process uses them to populate journal entry accounted amounts. If a transaction's entered currency is different from the ledger currency, the Create Accounting process copies the conversion date, conversion rate, and conversion rate type to the corresponding journal entry lines. If the entered currency is the same as the ledger currency, the Create Accounting process ignores the conversion type and conversion rate. For event classes that support foreign currency transactions and therefore more than one exchange rate and reporting currency amount, multiple event class accounting attribute assignments are created.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Accounted Amount	Number	Line	Event Class and Journal Line Rule	No	
Conversion Date	Date	Line	Event Class and Journal Line Rule	No	
Conversion Rate	Number	Line	Event Class and Journal Line Rule	No	
Conversion Rate Type	Alphanumeric	Line	Event Class and Journal Line Rule	No	A valid general ledger conversion rate type or User

Tax

- The tax accounting attributes are relevant to applications that uptake the tax initiative. The tax team uses the tax accounting attributes to link subledger transaction tax distributions to their corresponding journal entry lines. Oracle Fusion Tax specifies which tax reference values are mandatory in transaction objects and are assigned to standard sources.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Detail Tax Distribution Reference	Number	Line	Event Class	No	
Detail Tax Line Reference	Number	Line	Event Class	No	
Summary Tax Line Reference	Number	Line	Event Class	No	

Third Party

- Third-party accounting attributes are relevant to subledger applications that use third-party control accounts. The third-party accounting attributes link suppliers and customers to their corresponding subledger journal entry lines in the supplier and customer subledgers. For all subledger transactions that represent financial transactions with third parties, all third-party accounting attributes have sources assigned. If a transaction line is associated with a customer or supplier, the transaction objects need to include values for all sources mapped to third-party accounting attributes for the event class.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Party Identifier	Number	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	If party type C - Should be a valid customer account If party type is S - Should be a valid supplier identifier
Party Site Identifier	Number	Line	Event Class and Journal Line Rule	Yes, if another accounting attribute in the same group has assignment.	If party type C - Should be a valid customer account If party type is S - Should be a valid supplier identifier
Party Type	Alphanumeric	Line	Event Class	Yes, if another accounting attribute in the same group has assignment.	C for Customer S for Supplier

Exchange Gain Account, Exchange Loss Account

- The Create Accounting process determines whether there is an exchange gain or loss and derives the account combination based on whether the journal line rule is defined. If the gain or loss journal line rule is defined, the account rule assigned to the journal line rule is used to determine the gain or loss account to use. If the gain or loss journal line rule is not defined, the gain or loss account assigned to the Exchange Gain Account and Exchange Loss Account accounting attributes is used.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Exchange Gain Account	Number	Header	Event Class	No	
Exchange Loss Account	Number	Header	Event Class	No	

Gain or Loss Reference

- The Gain or Loss Reference accounting attribute groups entry lines together when calculating exchange gain or loss. The accounted debit and accounted credit amounts for lines with the same gain or loss reference are combined. The total of accounted debit and total of accounted credit are compared to calculate the exchange gain or loss.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Gain or Loss Reference	Alphanumeric	Line	Event Class	No	

Transfer to GL Indicator

- The Transfer to GL accounting attribute is relevant to applications which create subledger journal entries that will never be transferred to the general ledger. The Transfer to GL process uses this accounting attribute to determine whether to transfer subledger journal entries to the general ledger.

If the Transfer to GL accounting attribute is not assigned to a source, the Transfer to GL process transfers journal entries for the event class to the General Ledger.

If the Transfer to GL accounting attribute is assigned to a source and the source is not populated, the Transfer to GL process transfers journal entries for the event class to the General Ledger.

Accounting Attributes	Data Type	Journal Entry Level	Assignment to Rules	Assignment Required?	Validation Rules
Transfer to GL Indicator	Alphanumeric	Header	Event Class	No	Should be Y or N

Common Project Configuration: Define Common Project Billing Configuration

Define and Maintain Intercompany Processing Rules

Define Invoicing Options

Invoice Options: Critical Choices

Invoice options are settings and default values that control how Oracle Fusion Payables processes invoices for a business unit. You can specify options for the following invoice areas on the Manage Invoice Options page:

- Invoice entry and matching
- Discounts
- Prepayments
- Approvals
- Interest
- Payment requests
- Self-service invoices

Invoice Entry and Matching

This table lists the options you can set for invoice entry and matching.

Option	Description
Require invoice grouping	Requires that you enter the name of a group when creating an invoice.
Allow document category override	Allows override of the document category that is automatically assigned to an invoice if the Sequential Numbering Enforced profile is set to Partially Used or Always Used . If the profile is set to Not Used , the application does not assign a document category to an invoice, and you cannot set this option or enter a document category for an invoice.

Allow adjustments to paid invoices	Lets you cancel or add lines to paid invoices. In addition, you can unmatched an invoice from a purchase order that is not finally matched, and match the invoice to a different purchase order. You cannot modify distributions because it would affect the accounting.
Recalculate invoice installments	Recalculates installments during the invoice validation process.
Hold unmatched invoices	Applies a Matching required hold during invoice validation on invoices that are not matched to a purchase order or receipt. This option can be set on a supplier to one of the following values: Yes , No , or Default from Payables Options . The invoice option is used only when the setting on a supplier site is Default from Payables Options .
Receipt acceptance days	Specifies the number of days added to the Goods Received date when recalculating installments.
Accounting date basis	Provides the basis for the default accounting date. If you select Goods received or invoice date , and the invoice does not have a date for goods received, then the application uses the invoice date as the default accounting date. If you select Goods received or system date , and the invoice does not have a date for goods received, then the application uses the system date as the default accounting date.
Allow final matching	Lets you perform a final match when you match an invoice to a purchase order, or when you adjust a matched invoice distribution. You cannot perform a final match when matching invoices to receipts.
Allow matching distribution override	Allows override of the invoice distribution created from matching an invoice to a purchase order. You cannot override the distribution for a matched invoice if you accrue at receipt. In addition, you cannot override the distribution if the purchase order is projects-related, and the item destination for the purchase order distribution is inventory.
Transfer PO distribution additional information	Transfers descriptive flexfield information from the purchase order distribution to the invoice distribution when you match an invoice to a purchase order. If you enable this option, make sure that the flexfield structure is the same for the purchase order distributions and the invoice distributions.

In addition to the options previously listed, you can specify default values for the following attributes on both the Manage Invoice Options page and on the supplier setup. Payables uses the default values from the Manage Invoice Options page, unless you specify a different value for the supplier.

- Currency
- Pay group
- Payment priority
- Payment terms

- Terms date basis
- Pay date basis
- Quantity tolerances
- Amount tolerances

Discounts

This table lists the options you can set for discounts. You can also set these options on the supplier setup, except for **Discount Allocation Method**. The values for these options on the supplier setup are: **Yes, No, Default from Payables Options**.

Option	Description
Exclude tax from calculation	Subtracts the tax amount from the invoice amount during invoice entry, when calculating the discountable amount for an installment. If you enable this option, you cannot select a Discount Allocation Method of Tax lines and single distribution .
Exclude freight from calculation	Subtracts the freight amount from the invoice amount during invoice entry, when calculating the discountable amount for an installment.
Discount allocation method	Allocates discounts across distributions.
Always take discount	Takes the available discount for a supplier, regardless of when you pay the invoice.

Prepayments

This table lists the options you can set for prepayments.

Option	Description
Payment terms	Represents default payment terms. For example, you may want to have immediate payment terms for all prepayment type invoices.
Settlement days	Specifies the number of days to add to the system date to calculate the default settlement date for a prepayment. You cannot apply a prepayment to an invoice until on or after the settlement date. You can also set this option on the supplier setup. The value for the supplier setup determines if this option is used.
Use distribution from purchase order	Builds the distribution combination for the matched invoice distribution by taking the purchase order distribution combination and overriding the natural account segment with the one from the supplier site prepayment distribution or, if not defined, from the common options prepayment distribution.
Show available prepayments during invoice entry	Displays the number and amount of available prepayments during invoice entry.

Approvals

You can use the invoice approval workflow to automate your invoice approval process. The workflow determines if an invoice requires approval, and if so, automatically routes the invoice to the applicable approvers who then approve or reject the invoice.

This table lists the options you can set for the invoice approval process.

Option	Description
Enable invoice approval	Processes invoices through the approval workflow. The approval workflow is automatically initiated for payment requests and self-service invoices that are created in Oracle Fusion Supplier Portal and not matched to a purchase order.
Require validation before approval	Processes only invoices that are validated. Enable this option if you need the invoice validation process to create tax distributions for an invoice before approvers review it. Payment requests and self-service invoices created in Supplier Portal that are not matched to a purchase order always require approval before validation, regardless of the option selected.
Require accounting before approval	Processes invoices that are accounted.
Allow force approval	Allows managers to override the workflow and manually approve invoices. For example, you might want to force approval of an invoice if the invoice approval workflow does not complete, or if you have authority to pay an invoice without using the workflow process.

Interest

This table lists the options you can set for interest on overdue invoices.

Option	Description
Create interest invoices	Calculates interest on overdue invoices and creates interest invoices. You can also set this option on the supplier setup. The values for this option on the supplier setup are: Yes, No, Default from Payables Options.
Minimum interest amount	Minimum amount of calculated interest below which an interest invoice is not created.
Interest allocation method	Allocates interest across distributions.
Interest expense distribution	Distribution combination used if allocating interest expense to a single distribution.

Payment Requests

You can specify the following default values for a payment request:

- Payment terms
- Pay group
- Payment priority

Self-Service Invoices

This table lists the options you can set for invoices created in Supplier Portal.

Option	Description
Limit invoice to single purchase order	Limits an invoice to the schedules belonging to a single purchase order.
Allow invoice backdating	Allows a supplier to enter an invoice for a date in the past.
Allow unit price change for quantity-based matches	Allows a supplier to enter a unit price on the invoice that is different from the unit price on the purchase order.

Invoice Installments: How They Are Recalculated

During invoice entry, Oracle Fusion Payables creates installments automatically using the payment terms and terms date. You can optionally have Payables recalculate invoice installments during the invoice validation process.

Settings That Affect Installment Recalculation

Payables recalculates installments during invoice validation when you set the **Recalculate invoice installments** option on the Manage Invoice Options page.

Restriction

Installments are recalculated unless you have manually updated any of the invoice installments or split the installment.

Installments are also recalculated if you set the **Exclude tax from discount calculation** option on the Manage Common Options for Payables and Procurement page and you manually change the tax amount. This re-creation of invoice installments is not based on the **Recalculate invoice installments** setting.

How Invoice Installments Are Recalculated

Payables uses the most recent of the available start date options and the most favorable of the available payment terms. Payables determines which payment terms are more favorable by comparing the ranks assigned to the terms.

This table shows the start dates and payment terms that installment recalculation uses for matched and unmatched invoices.

Matched to a PO	Start Date	Payment Terms
No	Most recent of the following: • Invoice date • Terms date • Goods received date plus receipt acceptance days	Invoice payment terms

Yes	Most recent of the following: • Invoice date • Terms date • Goods received date plus receipt acceptance days	More favorable of the following: • Invoice payment terms • PO payment terms

Discount Allocation Methods: Critical Choices

Determine the method to use for distributing the discounts you take when making payments. Select one of the following options:

- All invoice lines
- Tax lines and single distribution
- Single distribution

All Invoice Lines

Oracle Fusion Payables automatically prorates any discounts across all invoice lines. Payables assigns the discount to the charge account unless the invoice is matched to a purchase order with **Accrue at receipt** enabled, in which case the discount is assigned to the price variance account.

Note

If you exclude tax from the discount calculation and select this method , Payables allocates discounts only to expense lines and not to the tax lines.

Tax Lines and Single Distribution

Payables automatically prorates a percentage of the discount across the tax lines. The percentage of discount prorated is equal to the percentage of the tax lines. Payables credits the remaining discount amount to the **Discount Taken** distribution on the Manage Common Options for Payables and Procurement page. For example, if your tax distributions are 10 percent of the total invoice amount, Payables prorates 10 percent of the discount amount across the tax distributions and credits the remaining 90 percent of the discount amount to the **Discount Taken** distribution.

You cannot select this method if you exclude tax from discount calculation.

Single Distribution

Payables credits all discounts to the **Discount Taken** distribution on the Manage Common Options for Payables and Procurement page. If you enable automatic offsets, and want to distribute discount taken amounts across balancing segments, select the **Single distribution** method.

Interest Invoices: Explained

Oracle Fusion Payables automatically creates invoices to pay interest for overdue invoices if you enable automatic interest calculation for a supplier, and if you

pay an overdue invoice in a payment process request or with a Quick payment. The interest invoice is automatically paid along with the overdue invoice.

To use automatic interest rate calculation, define the interest rates and enable the **Allow interest invoices** option on the Manage Invoice Options page and the **Allow interest invoices** option for the supplier. You can add, change, or delete a rate at any time. If a rate is not defined, a zero rate is used.

Note

Payables does not create interest invoices when you pay overdue invoices with a Manual payment.

Interest invoices have the following components:

- Number
- Terms
- Amount
- Currency

Number

The interest invoice number is the same as the overdue invoice number, but with the suffix -INTx, where x is the count of interest invoices that were created for the overdue invoice. For example, the third interest invoice created for an overdue invoice has the suffix -INT3.

Terms

The payment terms on an interest invoice are **Immediate**. If you do not have **Immediate** terms defined, the interest invoice payment terms are the same as the overdue invoice.

Amount

The amount of the interest invoice is the interest amount owed. Payables calculates interest based on the rate you enter on the Manage Interest Rates page in accordance with the United States Prompt Payment Act. The formula used compounds monthly, up to a maximum of 365 days interest.

Currency

Interest invoices have the same invoice currency and payment currency as the overdue invoice.

Interest Allocation Methods: Critical Choices

Oracle Fusion Payables creates and accounts for interest invoices based on one of the following options:

- Single distribution
- All invoice lines

Single Distribution

Payables creates interest invoices with a single distribution using the **Interest Expense** distribution on the Manage Invoice Options page.

All Invoice Lines

Payables uses the natural account segment from the **Interest Expense** distribution on the Manage Invoice Options page when it builds expense distributions for an interest invoice.

Payment Requests: Explained

Oracle Fusion Receivables and Oracle Fusion Expenses can submit requests to Oracle Fusion Payables to disburse funds to a payee who is not defined as a supplier. Payables records these requests as payment requests. You can disburse the funds and manage the payment process using the payment management functionality that is available in Payables.

Create a payment request from Receivables for a customer refund or from Expenses for an expense report. Expenses submits payment requests to request reimbursement of employee expenses to the employee or directly to the corporate credit card provider. Once the Expense Report Auditor has completed their review and determined the expense report is ready for reimbursement, they will submit the Process Expense Reimbursement program to create the payment request real time in Payables. Any exceptions to this process are managed in Expenses.

Note

You can only submit a payment request from other applications; you cannot enter a payment request for a payee directly in Payables.

Setting Up Payment Requests

There are no specific setup steps required to use payment requests however, the following setups do affect the payment request process. Review these setups if you plan to use payment requests.

- Invoice options. Set the default options to be considered for payment requests such as payment terms, pay group, and payment priority.
- Payment request document category. Comply with document sequencing policies using the predefined payment request category or override the document category, if allowed. If the **Sequence Numbering Enforced** profile is set to **Partially Used** or **Always Used**, ensure that you have assigned a sequence to the payment request document category.

You can use the following Oracle Fusion Payments setups to manage payment requests separately from other payments:

- Payment method controls
- Payment method defaulting rules
- Payment file and report formats
- Payment attribute validations

Reporting on Payment Requests

Track progress of the payment request in the originating application. Once the payment request is approved, you can report on and audit the payment request in Payables using the following reports:

- Payables Invoice Aging
- Payables Invoice Audit by Voucher Number Listing
- Payables Open Items Revaluation
- Payables Cash Requirement

Manage Intercompany Balancing Rules and Ledger Balancing Options

Intercompany Balancing Rules: Explained

Intercompany balancing rules are used to generate the accounts needed to balance journals that are out of balance by legal entity or primary balancing segment values.

You specify the intercompany receivables and intercompany payables accounts you want to use. The intercompany balancing feature then uses these rules to generate the accounts of the balancing lines it creates.

Defining Intercompany Balancing Rules

You can define intercompany balancing rules at the following rule levels:

1. Primary balancing segment
2. Legal entity
3. Ledger
4. Chart of accounts

The rules are evaluated in the order shown above. For example, you can define a Primary Balancing Segment rule and a Legal Entity level rule. If both rules are used to balance a particular journal, the Primary Balancing Segment rule is used, as it has a higher precedence.

You have flexibility in defining your intercompany balancing rules. You can have a simple setup in which you define one rule for your chart of accounts. This rule is used for all intercompany balancing for all ledgers that use this chart of accounts. Alternatively, you can have a more granular set of rules. For example, you can define a different rule for each legal entity and one chart of accounts rule to cover any gaps in your rule definitions. You can gain even more

granularity by defining rules for specific journal and/or category combinations or intercompany transaction types.

Intercompany Balancing Rules: Examples

This topic provides examples of intercompany balancing rules and the intercompany balancing lines generated. These rules are used to generate the accounts needed to balance journals that are out of balance by legal entity or primary balancing segment values.

Simple Chart of Accounts

In this scenario you have one chart of accounts for all ledgers. The chart of accounts has an intercompany segment. You are using this intercompany segment and the company segment to identify the intercompany trading partners for each transaction. You do not have a need to track their intercompany activity at a granular level such as by journal source and journal category or by intercompany transaction type.

Setup

- InFusion USA Chart of Accounts

Segment Qualifier	Primary Balancing Segment	Second Balancing Segment	Third Balancing Segment	Account	Intercompany Segment
Segment Name	Company (CO)	Cost Center (CC)	Product (PROD)	Account (ACCT)	Intercompany (IC)

- Ledger, Legal Entity, Primary Balancing Segment Value Assignments

Ledger	Legal Entity	Primary Balancing Segment Value
InFusion USA	InFusion Farms	3100, 3200, 3300, 3400, 3500
InFusion USA	InFusion Textiles	4000
InFusion USA	InFusion Products (East)	5000
InFusion USA	InFusion Products (West)	6000
InFusion USA		1000, 9000

- Chart of Accounts Rule

Rule Number	Chart of Accounts	AR Account	AP Account	Source	Category	Transaction Type
1	InFusion USA Chart of Accounts	1000 - 000 - 0000 - 13010 - 0000	1000 - 000 - 0000 - 21010 - 0000	Other	Other	None

- Journal Balancing
 - Journal before Balancing

Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
2	Liability	InFusion Textiles	4000	500	1300	40118	0000		150

- Journal Balancing
- Journal after Balancing

Uses Rule	Line	Line Type	Legal Entity	Compan	Cost Center	Product	Account	Intercom	Debit	Credit
	1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
	2	Liability	InFusion Textiles	4000	500	1300	40118	0000		150
1	3	IC AP	InFusion Farms	3100	100	1200	21010	4000		150
1	4	IC AR	InFusion Textiles	4000	500	1300	13010	3100	150	

Legal Entity and Chart of Accounts Rules

In this example the legal Entity InFusion Textiles intercompany manufacturing activities are tracked separately from its non-manufacturing activities. In order to achieve this legal entity level rules are defined specifically between the legal entity InFusion Textiles and the two manufacturing legal entities, InFusion Products (East) and InFusion Products (West). A chart of accounts rule is created to cover all other intercompany activities.

Setup

- InFusion USA Chart of Accounts

Segment Qualifier	Primary Balancing Segment	Second Balancing Segment	Third Balancing Segment	Account	Intercompany Segment
Segment Name	Company	Cost Center	Product	Account	Intercompany

- Ledger, Legal Entity, Primary Balancing Segment Value Assignments

Ledger	Legal Entity	Primary Balancing Segment Value
InFusion USA	InFusion Farms	3100, 3200, 3300, 3400, 3500
InFusion USA	InFusion Textiles	4000
InFusion USA	InFusion Products (East)	5000
InFusion USA	InFusion Products (West)	6000
InFusion USA		1000, 9000

- Chart of Accounts Rule

Rule Number	Chart of Accounts	AR Account	AP Account	Source	Category	Transaction Type
2	InFusion USA Chart of Accounts	1000 - 000 - 0000 - 13050 - 0000	1000 - 000 - 0000 - 21050 - 0000	Other	Other	None

- Legal Entity Level Rule

Rule No.	From Legal Entity	To Legal Entity	AR Account	AP Account	Source	Category	Transaction Type
3	InFusion Textiles	InFusion Products (West)	1000 - 000 - 0000 - 13020 - 0000	1000 - 000 - 0000 - 21020 - 0000	Other	Other	None
4	InFusion Textiles	InFusion Products (East)	1000 - 000 - 0000 - 13030 - 0000	1000 - 000 - 0000 - 21030 - 0000	Other	Other	None

- Journal Balancing

- Journal before Balancing

Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
2	Expense	InFusion Products (East)	5000	100	1200	52340	0000	200	
3	Expense	InFusion Products (West)	6000	200	1300	52345	0000	300	
4	Liability	InFusion Textiles	4000	500	1300	40118	0000		650

- Journal Balancing

- Journal after Balancing

Uses Rule	Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
	1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
	2	Expense	InFusion (East)	5000	100	1200	52340	0000	200	
	3	Expense	InFusion (West)	6000	200	1300	52345	0000	300	

	4	Liability	InFusion Textiles	4000	500	1300	40118	0000		650
2	5	IC AR	InFusion Textiles	4000	500	1300	13050	3100	150	
2	6	IC AP	InFusion Farms	3100	100	1200	21050	4000		150
4	7	IC AR	InFusion Textiles	4000	500	1300	13030	5000	200	
2	8	IC AP	InFusion	5000	100	1200	21050	4000		200
3	9	IC AR	InFusion Textiles	4000	500	1300	13020	6000	300	
2	10	IC AP	InFusion (West)	6000	200	1300	21050	4000		300

Defining Ledger Balancing Options: Explained

Ledger balancing options are defined for the ledger to balance the second balancing segment and/or the third balancing segment, when a transaction is unbalanced by one of these segments.

Ledger balancing options include the following settings:

- Oracle Fusion Receivables and Oracle Fusion Payables accounts used for ledger balancing
- Summarization options
- Clearing company options

Receivables and Payables Accounts used for Ledger Balancing

You can choose to specify the receivables and payables accounts to be used, if your chart of accounts has the second balancing segment and/or the third balancing segment enabled. These accounts are used for the balancing lines generated when a journal is balanced by its primary balancing segment values but is not balanced by its second balancing segment and/or third balancing segment.

Summarization Options

You can choose to summarize balancing lines generated for a primary balancing segment out of balance scenario, where all the primary balancing segment values are assigned to the same legal entity, by specifying the Summarization option of Summary Net or Detail. You can choose to summarize by primary balancing segment value or alternatively have individual balancing lines (that have not been summarized) generated. Note that summarization always applies to balancing lines generated in a cross legal entity scenario.

Clearing Company Options

You can choose to set clearing company options to balance a journal with different primary balancing segment values that all belong to a single legal entity. Set the following options to handle your clearing company balancing.

- Clearing Company Condition

- Choose to balance using a clearing company value for all journals or for journals with many legal entities on the debit side and many legal entities on the credit side.
- The default value for this option is to error Many-to-Many journals.
- Clearing Company Source
 - Choose how the clearing company value is derived for your balancing lines, from the following options:
 - Default clearing balancing segment value.
 - Choose this option if you want a single specific primary balancing segment value for your clearing company.
 - Default Rule.
 - Choose this option if you want to allow the system to derive the clearing company value from a default intercompany balancing rule.
 - Manually entered clearing balancing segment value.
 - Choose this option if you want to enter the clearing company value when you create a journal.
- Clearing Company Value
 - If you chose the default clearing balancing segment value as your clearing company source, you can enter your chosen primary balancing segment value in this field.

Defining Ledger Balancing Options: Examples

This topic provides examples of ledger balancing options, the setup required, and the journal before and after balancing.

Simple Ledger Balancing with no Clearing Company Options

In this scenario the enterprise has the second balancing segment and the third balancing segment enabled for its chart of accounts. The journal is balanced by primary balancing segment but is out of balance by the second balancing segment and the third balancing segment.

Setup

- InFusion USA Chart of Accounts

Segment Qualifier	Primary Balancing Segment	Second Balancing Segment	Third Balancing Segment	Account	Intercompany Segment
Segment Name	Company (CO)	Cost Center (CC)	Product (PROD)	Account (ACCT)	Intercompany (IC)

- Ledger, Legal Entity, Primary Balancing Segment Value Assignments

Ledger	Legal Entity	Primary Balancing Segment Value
InFusion USA	InFusion Farms	3100, 3200, 3300, 3400, 3500
InFusion USA	InFusion Textiles	4000
InFusion USA	InFusion Products (East)	5000
InFusion USA	InFusion Products (West)	6000
InFusion USA		1000, 9000

- Ledger Balancing Options

Rule Number	Ledger	Source	Category	Transaction Type	AR Account	AP Account
1	InFusion USA	Other	Other	None	1000 - 000 - 0000 - 13010 - 0000	1000 - 000 - 0000 - 21010 - 0000

- Journal Balancing
- Journal Before Balancing

Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
2	Liability	InFusion Farms	3100	500	1300	40118	0000		150

- Journal Balancing
- Journal after Balancing

Uses Rule	Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
	1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
	2	Liability	InFusion Farms	3100	500	1300	40118	0000		150
1	3	AP	InFusion Farms	3100	100	1200	21010	0000		150
1	4	AR	InFusion Farms	3100	500	1300	13010	0000	150	

Ledger Balancing Options with Detail Summarization and Clearing Company Options Set

In this scenario the enterprise has the second balancing segment and the third balancing segment enabled for its chart of accounts. Management has decided to use a clearing company for balancing Many-to-Many journals only. Since the primary balancing segment values in the journal are out of balance

intercompany balancing is required. Additionally, since clearing company options have been specified they will be used to balance the journal. Note that if the primary balancing segment values were balanced and only the second balancing segment and the third balancing segment were out of balance, the clearing company options would not be used.

Setup

- InFusion 1000, USA Chart of Accounts

Segment Qualifier	Primary Balancing Segment	Second Balancing Segment	Third Balancing Segment		Intercompany Segment
Segment Name	Company	Cost Center	Product	Account	Intercompany

- Ledger, Legal Entity, Primary Balancing Segment Value Assignments

Ledger	Legal Entity	Primary Balancing Segment Value
InFusion USA	InFusion Farms	3100, 3200, 3300, 3400, 3500
InFusion USA	InFusion Textiles	4000
InFusion USA	InFusion Products (East)	5000
InFusion USA	InFusion Products (West)	6000
InFusion USA		1000, 9000

- Chart of Accounts Rule

Rule Number	Chart of Accounts	AR Account	AP Account	Source	Category	Transaction Type
1	InFusion USA Chart of Accounts	1000 - 000 - 0000 - 13050 - 0000	1000 - 000 - 0000 - 21050 - 0000	Other	Other	None

- Ledger Balancing Options

Rule Number	Ledger	Source	Category	Transaction Type	AR Account	AP Account
2	InFusion USA	Other	Other	None	1000 - 000 - 0000 - 13010 - 0000	1000 - 000 - 0000 - 21010 - 0000

- Clearing Company Options

Rule Number	Ledger	Source	Category	Transaction Type	Condition	Source	Value
2	InFusion USA	Other	Other	None	Use for many-to-many journals only	Default clearing balancing segment value	9000

Note

The Ledger Balancing Options and Clearing Company Options appear as one line on the page.

- Journal Balancing
- Journal before Balancing

Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
2	Expense	InFusion Farms	3100	300	1200	52340	0000	200	
3	Expense	InFusion Farms	3300	200	1300	52345	0000	300	
4	Liability	InFusion Farms	3400	500	1300	40118	0000		320
5	Liability	InFusion Farms	3500	600	1400	40112	0000		330

- Journal Balancing
- Journal after Balancing

Uses Rule	Line	Line Type	Legal Entity	CO	CC	PROD	ACCT	IC	Debit	Credit
	1	Expense	InFusion Farms	3100	100	1200	52330	0000	150	
	2	Expense	InFusion Farms	3100	300	1200	52340	0000	200	
	3	Expense	InFusion Farms	3300	200	1300	52345	0000	300	
	4	Liability	InFusion Farms	3400	500	1300	40118	0000		320
	5	Liability	InFusion Farms	3500	600	1400	40112	0000		330
1	6	IC AR		9000	000	0000	13050	3100	150	
1	7	IC AP		3100	100	1200	21050	9000		150
1	8	IC AR		9000	000	0000	13050	3100	200	
1	9	IC AP		3100	300	1200	21050	9000		200
1	10	IC AR		9000	000	0000	13050	3300	300	
1	11	IC AP		3300	200	1300	21050	9000		300
1	12	IC AR		3400	200	1300	13050	9000	320	
1	13	IC AP		9000	000	000	21050	3400		320
1	14	IC AR		3500	600	1400	13050	9000	330	

1	15	IC AP		9000	000	000	21050	3500		330

Define Customer Billing Configuration

FAQs for Manage Transaction Types

How can I arrange the creation of transaction types?

Define your transaction types in the following order:

- Credit memo transaction types
- Invoice transaction types
- Debit memo transaction types
- Chargeback transaction types

If applicable, define the transaction types that you want to add to your transaction sources before defining transaction sources.

If you are using late charges, define a transaction type with a class of Debit Memo for debit memos, and a transaction type with a class of Invoice for interest invoices. Specify the receivable and revenue accounts for these transaction types. Oracle Fusion Receivables uses these accounts instead of AutoAccounting when generating late charges.

How can I use transaction types to review and update customer balances?

You can use the **Open Receivable** option on the transaction type to implement an approval cycle for any temporary or preliminary transactions.

For example, if you have particularly sensitive debit memos, credit memos, on-account credits, chargebacks, and invoices that you want to review after creation, you can define a transaction type called Preliminary with **Open Receivable** set to No and assign it to the applicable transactions. This transaction type does not update your customer balances.

When you review and approve the transaction, you can define a transaction type called Final with **Open Receivable** set to Yes and assign it to the same transactions. This will now update your customer balances on these transactions.

Manage Transaction Sources

Managing Transaction Numbering: Points to Consider

Use the various options on the transaction source assigned to a transaction to manage your transaction numbering requirements.

There are these points to consider when defining transaction numbering for transactions assigned to specific transaction sources:

- Defining Document Sequences
- Using Automatic Transaction Numbering
- Copying Document Numbers to Transaction Numbers
- Allowing Duplicate Transaction Numbers
- Using the Credit Memo Transaction Source

Defining Document Sequences

If necessary, define document sequences to assign unique numbers to each transaction, in addition to the transaction number automatically assigned by Oracle Fusion Receivables.

Using Automatic Transaction Numbering

To automatically number new transactions you create using a transaction source, enable the **Automatic transaction numbering** option and enter a number in the **Last Number** field.

For example, to start numbering transactions with 1000, enter a last number of 999. Receivables automatically updates the **Last Number** fields on transaction sources, so you can review the transaction source later to see the last transaction number that was generated.

Note

The last transaction number on the transaction source is an approximation only, due to caching.

You can use automatic transaction numbering with both Imported and Manual transaction sources.

Copying Document Number to Transaction Number

If you are using document sequences and you want to use the same value for both the document number and the transaction number for transactions assigned to a transaction source, enable the **Copy document number to transaction number** option.

If you are using Gapless document sequences, you should enable this option if you require gapless transaction numbering. This ensures that transaction numbers are generated sequentially and that there are no missing numbers.

Allowing Duplicate Transaction Numbers

Enable the **Allow duplicate transaction numbers** option to allow duplicate transaction numbers within a transaction source.

You cannot use this option with automatic transaction numbering.

Using the Credit Memo Transaction Source

Assign a credit memo transaction source to an invoice transaction source, if you want to number credit memos differently from the invoices that they credit.

Sales Credits on Imported Transactions: Explained

During AutoInvoice processing, whether you must provide sales credit information on imported transaction lines depends on the settings of the **Allow sales credits** option on the transaction source and the **Require salesperson** system option.

Requirements for Sales Credit Information

These are the requirements for passing sales credit information on imported transaction lines:

- If the **Require salesperson** system option and the **Allow sales credits** option on the transaction source are both enabled, you must provide sales credit information.
- If the **Require salesperson** system option is not enabled and the **Allow sales credits** option on the transaction source is enabled, you can provide sales credit information, but it is not required.
- If the **Require salesperson** system option is enabled and the **Allow sales credits** option on the transaction source is not enabled, you must provide sales credit information.
- If neither the **Require salesperson** system option nor the **Allow sales credits** option on the transaction source are enabled, you cannot provide sales credit information. AutoInvoice ignores any values that you pass.

Validating Imported Transactions: How It Works

Use the AutoInvoice Options and Import Information regions of an Imported transaction source to define how AutoInvoice validates imported transaction lines assigned a particular transaction source.

You do not have to pass values for all of the fields that are referenced in the transaction source. If you do not want AutoInvoice to pass certain data, then where available you can set the related option to None.

Note

Even if you set a transaction source data option to None in order not to import this information into the interface tables, AutoInvoice can still validate and reject transaction lines with invalid data.

Settings That Affect the Validation of Imported Transactions

These settings affect the validation of imported transactions:

- **Invalid Line** field: Indicate how AutoInvoice handles imported transactions with invalid lines by selecting either Reject Invoice or Create Invoice.
 - If you select Reject Invoice, AutoInvoice does not import this transaction or any of its lines into the interface tables.
 - If you select Create Invoice, AutoInvoice creates a transaction with valid lines only. For example, you import an invoice with three invoice lines and one of the lines is invalid. AutoInvoice creates the invoice with only the two valid lines and rejects the invalid line. You can use the Edit Transaction page to add the rejected line.
- **Accounting Date in a Closed Period** field: Indicate how AutoInvoice handles imported transactions that have lines in the interface lines table that are in a closed period.
 - Select Adjust to have AutoInvoice automatically adjust the accounting dates to the first accounting date of the next open or future enterable period.
 - Select Reject to reject these transaction lines.
- In the Import Information subregions, where applicable select Number, Value, Segment or ID for each option to indicate how AutoInvoice validates information.
 - Select Number to import a record into the interface tables using its assigned number.
 - Select Value to import a record into the interface tables using its actual name.

Note

Use Value if you intend to use the transaction source to import data from a non-Oracle system.

- Select Segment to use the flexfield segment.
- Select ID to use the internal identifier of the record.
- Select Amount or Percent to indicate how AutoInvoice validates Sales Credits and Revenue Account Allocations on transaction lines.

How Imported Transactions Are Validated

AutoInvoice validates imported data based on the settings of the applicable Imported transaction source. Transactions that fail validation appear in the Import AutoInvoice Validation report.

AutoInvoice ensures that certain column values agree with each other. These values can be within an interface table or multiple interface tables. For example, if the transaction source indicates not to use a revenue scheduling rule, AutoInvoice ignores any values passed for invoicing rule, revenue scheduling rule, and revenue scheduling rule duration.

AutoInvoice performs these validations on transaction lines with revenue scheduling rules:

- Requires that these transactions also include an invoicing rule, if you import transactions that use revenue scheduling rules.
- Rejects lines, if the revenue scheduling rule has overlapping periods.
- Rejects lines, if all of the accounting periods do not exist for the duration of the revenue scheduling rule.

FAQs for Manage Transaction Sources

What do I create before creating transaction sources?

You may want to create certain records before creating your transaction sources.

You can optionally create these objects for all transaction sources:

- Transaction types: Define the transaction types that you want to appear by default on transactions assigned to your transaction sources.
- Invoice transaction flexfield: Define the reference information that you want to capture in the invoice transaction flexfield and display on imported transactions, such as a purchase order number.
- Credit memo transaction source: Define a transaction source for credit memos before you define a transaction source for invoices. Use this transaction source to number the credit memos created against invoices differently from the invoices they are crediting.

You can optionally create these objects for Imported transaction sources:

- AutoInvoice grouping rule: Define the grouping rule to appear by default on imported transaction lines.
- AutoInvoice clearing account: Define an AutoInvoice clearing account, if you intend to enable the **Create clearing** option. AutoInvoice puts any difference between the revenue amount and the selling price times the quantity for a transaction into this account.

How can I manage credit memos with transaction sources?

Special conditions may apply to the creation of transaction sources for credit memos.

Review these considerations for transaction sources assigned to credit memos:

- Define Manual transaction sources for credit memos created by the credit memo request approval process.
- Enable the **Copy transaction information flexfield to credit memo** option on Manual transaction sources used for credit memos, to copy the invoice transaction flexfield reference information to the credit memo that is crediting the invoice.

- Define and assign transaction sources for credit memos to transaction sources for invoices, if you want to number the credit memos created against invoices differently from the invoices they are crediting.

What happens if I don't enter an AutoInvoice grouping rule?

Assign the AutoInvoice grouping rule to Imported transaction sources that AutoInvoice uses to group imported transaction lines.

If you do not assign a grouping rule to an Imported transaction source, AutoInvoice uses the following hierarchy to determine which rule to use:

1. Grouping rule assigned to the transaction source of the transaction line.
2. Grouping rule assigned to the bill-to customer site profile of the transaction line.
3. Grouping rule assigned to the bill-to customer profile of the transaction line.
4. Grouping rule assigned to system options.

What happens if I don't create a clearing account?

If you do not use an AutoInvoice clearing account and enable the **Create clearing** option on the transaction source, AutoInvoice requires that the revenue amount be equal to the selling price times the quantity for all of the transactions it processes. AutoInvoice rejects any transaction line that does not meet this requirement.

Define Contracts Configuration for Project Billing

Define Document Sequences

Document Sequences: Explained

In Oracle Fusion Applications, each business document or business event is uniquely identified by a document sequence number that you assign to it. However, the document sequencing feature must be turned on (enabled) on the business document or event to allow the assignment. For example, if document sequencing is enabled, you can assign a document sequence number to an invoice that gets generated in response to a purchase order. You can use document sequences as a proof to track successfully executed transactions as well as failed transactions. Additionally, a document sequence helps in generating an audit trail, which can be used to identify how a particular transaction passed through various applications.

Document sequencing can be managed automatically, manually, and gaplessly.

Note

Plan your document sequencing carefully before you use the options available in the application to apply sequence numbers. Avoid changes to the options after you saved your work on the Manage Document Sequences and Manage Document Sequence Categories pages.

Automatic Sequencing

Automatic document sequencing assigns a unique number to each document as it is generated, and this unique number is stored in the database. The numbering is sequential by date and time of creation. If you define a sequence to automatically number documents, you can provide an initial value to begin the sequence. In absence of a custom value, the default value 1 is used.

Manual Sequencing

Manual sequencing requires you to assign a unique number to each document before it is generated. In manual sequencing, the numerical ordering and completeness of a transaction is not enforced. Users can skip or omit numbers when entering the sequence value. However, each time that a number is assigned, the application validates its uniqueness.

Gapless Sequencing

Gapless sequencing is similar to automatic sequencing. It automatically generates a unique number for each document, but does that only for successfully generated documents. As a result, the sequence is maintained for all the documents that are generated, and no sequence numbers are lost due to incomplete or failed document generation.

Important

Use this type of sequencing only if necessary because it may affect the performance of the system and slow down transaction processing.

Document Sequence Categories: Explained

A document sequence category is a set of documents that share similar characteristics and that are formed into a logical group. Document sequence categories simplify the task of assigning number sequences to specific documents. Instead of assigning a number to each document, you assign a document sequence to one or more document sequence categories. The document sequence category automatically takes care of numbering the documents.

A document sequence category identifies the database table that stores documents resulting from transactions that your users enter. When you assign a sequence to a category, the sequence numbers the documents that are stored in a particular table. You must create document sequence categories to be able to manage the task of assigning document sequences.

Restriction

Once a document sequence category is created, you cannot change the application, the category code, or the table name. Therefore, carefully consider

these details and plan your document sequencing requirement before you begin working with the application.

Once you create a document sequence category, it is available for use under the **Document Sequences: Assignments** section on the Manage Document Sequences page. The **Category** field contains the name of the document sequence category. After you create a document sequence, you can assign it to a document sequence category.

Document Sequences: Points to Consider

Sequencing documents is an important business and legal requirement. Certain aspects of the defining process are permanent and cannot be modified later. Therefore, it is important that you first decide the appropriate document sequence to use for a set of documents. You must also decide beforehand the type of document sequencing, because you are not allowed to switch to other types once a sequence is assigned to a document sequence category. Make a note of the details such as the document sequence and document sequence category so that you can refer to them at a later point in time. Also note if there are any restrictions or configuration prerequisites before you define document sequencing.

Note

Products that implement document sequencing have specifications about its usage. Refer to the corresponding product documentation for specific details and also to determine if there are any restrictions or configuration prerequisites.

Creating and Editing Document Sequences

You can create document sequences that are automatic, manual, or gapless, depending on the business or legal requirement. By default, the current date is considered as the start date. If the end date is left blank, it means that the sequence definition never expires. Among the several options used in creating and editing document sequences, the following options are functionally more important and therefore need to be carefully determined:

- **Determinant Type:** Select to limit the document sequencing activity to certain documents that belong to a specific business entity, such as Ledger, Tax Registration, and so on.
- **Initial Value:** Enter a value for the first document in your sequence. This field applies only to sequences with automatic or gapless numbering types. Sequence numbers should not be greater than eight digits. If you leave this field blank, the first document is automatically assigned a value of 1. Once a document sequence is defined, you cannot change this initial value.

Creating and Editing Document Sequence Categories

Document sequence categories are defined to make it easy to assign document sequence definitions to a group of documents instead of to individual

documents. Each document sequence category is mapped to a specific table, where the documents belonging to that category are stored. The table must already be enabled for document sequencing. When specifying the table, you must consider the following points:

- When the sequential numbering feature checks for completeness or generates a report, it locates the category's documents in the table.
- You can select only tables belonging to the application associated with the category.
- Once a category is defined, you cannot change the choice of table.

Assigning Document Sequences

Identify the documents to be numbered before assigning them a document sequence. For each document sequence, there can be only one active assignment to a document sequence category, a method code, and a determinant value (if applicable). As part of the assignment, specify whether the document is created automatically (for example, due to a batch process, or manually through a form). If you do not specify an end date, the assignment continues to remain active throughout the process cycle. If a determinant type was specified for the document sequence, then enter a specific determinant value related to the selected determinant type.

At runtime, when users create documents, the document sequence to be assigned is determined by finding the active assignment that matches the correct combination of category, numbering method, and the date range containing the transaction date.

Auditing Document Sequences

You can audit document sequences, if required, to provide an audit trail of the document sequences used in a specific product. However, before enabling the audit functionality for a document sequence, you must have created an audit table for the specific document sequence, using appropriate details. Enabling the audit functionality is permitted only for newly created document sequences. You cannot audit document sequences that are already in use by a specific product.

For more information about defining a document sequence audit table, see the Oracle Fusion Applications Developer's Guide.

Common Project Configuration: Define Tax Configuration

Define Transaction Taxes: Overview

Oracle Fusion Tax provides a single-point solution for managing your transaction-based tax requirements. In the Define Transaction Taxes activity, set up your entire tax configuration.

Oracle Fusion Tax:

- Uniformly delivers tax services to all Oracle Fusion application business flows through one application interface
- Provides a single integration point for third-party tax products and services
- Is configurable and scalable for adding and maintaining country-specific tax content

With Oracle Fusion Tax, you can model your taxes according to the needs of the following local and international tax requirements:

- Both simple and complex country-specific tax legislation
- Cross-border transactions, including exports and Intra-European Community transactions
- Intercompany transactions
- Local compliance requirements for recording and reporting
- Continual changes to tax legislation, such as new taxes, local law changes, special tax rates, and special exceptions for products and customers

You can manage the entire configuration and maintenance of tax content from the one Oracle Fusion Tax application. Using one application ensures a uniform tax setup across applications, with a centrally managed system of automated tax services and control over manual intervention and update.

Task Lists

The Define Transaction Taxes activity is logically defined with prerequisite tasks, core tax configuration tasks, optional setup tasks, and validate configuration tasks. The activity categories include:

- **Define Tax Geographies:** Configure tax geographies to define geographical regions that share the same tax requirement. These prerequisite tasks are required for core tax configuration but they might not have been defined in the previous steps of the Financials offering.
- **Define Tax Regimes:** Configure tax regimes for the taxes in each country and geographic region where a separate tax applies. These tasks are

most commonly used by all the implementations. You should be able to calculate taxes on the transactions based on this configuration.

- **Define First Party Tax Profiles:** Configure tax profile details that control the transaction tax activities for your first party legal entities, legal reporting units, and business units.
- **Define Third Party Tax Profiles:** Configure tax profile details that control the transaction tax activities for your third party customer, customer sites, supplier, and supplier sites.
- **Define Occasional Implementation Setups:** Configure initial tax setup that impacts tax calculation and reporting. These tasks either are predefined and you do not have to configure them unless the predefined data needs to be extended or these are tasks required only for certain implementations.
- **Verify Tax Configuration:** Verify the transaction tax configuration by simulating transaction data and reviewing tax calculation results.

Defining Transaction Taxes: Critical Choices

With Oracle Fusion Tax, you can model your tax requirements according to the needs of local and international tax requirements. These requirements include:

- Both simple and complex country-specific tax legislation
- Cross-border transactions
- Local compliance requirements for recording and reporting
- Continual changes to tax legislation, such as new taxes, local law changes, special tax rates, and special exceptions for products and customers

In order to determine how to set up your tax configuration, you must first analyze your tax requirements.

Analyzing Your Tax Requirements

The following table represents key decisions that you must make when you analyze your tax requirements and use Oracle Fusion Tax and other Oracle Fusion applications to implement a solution

Question	Consideration	Impact to Tax Configuration
Who am I?	You must first answer questions about yourself and your relationship to the legal and regulatory agencies that enable you to operate in one or more counties.	
Where do I have operations and businesses?	Identify the countries in which you operate. You will need to identify the country where you are legally registered and the countries where you have subsidiary companies that are legally registered or have a legal presence.	Use Oracle Fusion Legal Entity Configurator to capture information about your legal entities and legal registration.
What taxes am I subject to?	Analyze your tax environment for each of the countries in which you operate.	Set up your tax regimes, taxes, and tax jurisdictions according to the tax requirements for each country.

What are the operations and businesses that I have?	Consider the types of operations and businesses in which you are engaged and the countries where you have legal entities or reporting units. The type of industries that you work under (for example, mining, telecommunications, and pharmaceuticals), the kind of operations in which you engage (for example, trading, manufacturing, and services), and the scale of your operations (for example, your turnover, company size, and growth) may all impact your taxability.	Use the classifications feature to categorize or classify your first parties under various classification schemes. In analyzing your operations, you can associate the three main classifications of a transaction to: • What you do: Use transaction fiscal classifications. • What products you buy or sell: Use product fiscal classifications. • Who your customers and suppliers are: Use party fiscal classifications.
What do I do?	Identify and classify the transactions that you enter into. For example, do you primarily sell physical goods? If you do, do you manufacture them, or do you buy and sell them without additional manufacturing? Do you sell these goods in another state or province? Do you export these goods? Do you provide or use services?	Use Oracle Fusion Tax to create fiscal classifications to classify and categorize your transactions in a common manner across your organization. Use these fiscal classifications in tax rules to obtain the appropriate tax result.
What products do I buy or sell?	Determine the products that you buy and sell as they impact the taxes to which you are subject. For example, you must register for, and therefore collect and remit, service taxes only if you provide taxable services. If you manufacture goods for export, you may not be subject to taxes on the purchases that go into the manufacture of such goods.	Where Oracle Fusion Inventory is installed use the Inventory Catalog feature with Oracle Fusion Tax product fiscal classifications and intended use functionality to classify the taxable nature and intended use of the items. You can then define tax rules using these classifications to obtain the appropriate tax result. Define product category and noninventory-based intended use fiscal classifications to address classification needs for transactions that do not use inventory items.

Who are my customers and suppliers?	Determine the types of customers and suppliers with whom you do business, as they can impact the taxes to which you are subject or the tax status or tax rate that applies. For example, let's say that you are a company in the UK that supplies physical goods to another country that is also a member of the European Union. The transaction rate for UK VAT is dependant on whether the customer is registered for VAT in the country to which the supply is made.	Use the party classifications feature to categorize or classify your customers and suppliers. You can use these classifications in your tax rules to derive the appropriate tax result. You create a party fiscal classification by assigning an Oracle Fusion Trading Community Model class category to a party fiscal classification type code that you define. The Trading Community Model class codes defined under the class category become fiscal classification codes belonging to the party fiscal classification type. You can create a hierarchy of party fiscal classification types to reflect the levels of codes and subcodes within the Trading Community Model classification.

Scope Values for Define Transaction Taxes Task List: Explained

The purpose of scope is to define the parameters of your implementation project by setting the context of a task list during initial configuration.

The foundation tax setup is an incremental setup where each step of the foundation configuration builds on the previous step. The task list is organized sequentially to ensure that you perform setup tasks in the order required. You can define scope values at incremental steps in the implementation project to pass to subsequent tasks to ensure:

- Continuity
- Ease of setup

When exporting setup data based on setup migration services, the scope values serve as parameters to control the data selected for export to the respective configuration package. Scope is a valuable tool when implementing, but tax scope values are not a required element of the implementation and you do not need to define them.

Defining Scope

When implementing transaction tax, you can define scope values for taxes, tax jurisdictions, tax statuses, tax rates, and tax recovery rates in the foundation setup. To set scope, you can:

- Select and add multiple values
- Create a new value

When you select the scope value, that value defines the context of that setup. For example, if you select a tax regime to use as a scope value for a tax, that value is automatically populated in the search attributes on the Manage Tax page. That tax regime's attributes are also populated in the Create Tax page. The same logic applies to the next step in the foundation setup.

Scope Values

The following table identifies where you define the scope value in the Define Transaction Taxes task list:

Where Scope is Defined	Scope Values
Manage Taxes	Tax regime
Manage Tax Jurisdictions	• Tax regime • Tax
Manage Tax Statuses	• Tax regime • Tax
Manage Tax Rates	• Tax regime • Tax • Tax status
Manage Tax Recovery Rates	• Tax regime • Tax
• Manage Tax Rate Determination Rules • Manage Direct Rate Determination Rules • Manage Account-Based Direct Tax Rate Determination Rules • Manage Tax Classification-Based Direct Tax Rate Determination Rules • Manage Tax Applicability Rules • Manage Place of Supply Rules • Manage Tax Registration Determination Rules • Manage Tax Status Determination Rules • Manage Taxable Basis Formulas • Manage Taxable Basis Determination Rules • Manage Tax Calculation Formulas • Manage Tax Calculation Rules	• Tax regime • Tax

Foundation Tax Configuration: Points to Consider

Use Oracle Fusion Tax to set up and maintain your transaction tax requirements in all geographic locations where you do business. Foundation tax configuration refers to a set of tax setup components that you will use to satisfy your tax requirements. At transaction time, Oracle Fusion Tax uses your tax configuration to determine the taxes that apply to each transaction and to calculate the tax amounts.

Foundation tax configuration components consist of:

- Tax regimes
- Taxes
- Tax jurisdictions
- Tax statuses
- Tax rates

Foundation Tax Configuration

Complete the setup tasks to create a basic tax configuration for each of your tax regimes. A foundation tax configuration contains the data applicable to the taxes belonging to a tax regime. The following table describes the appropriate levels of specifying setup options for foundation tax components and provides a Canada Goods and Services Tax (GST) and Harmonized Sales Tax (HST) example for each component.

Component	Appropriate Level to:	Typically, Not Appropriate Level to:	Canada GST and HST Example
Tax Regime	• Share tax content among legal entities and business units. • Enable partner integration. • Associate fiscal classifications. • Define tax reporting types and codes. • Define features to influence setup task list.	• Define configuration owner tax options. • Define application tax options. • Define party tax profiles.	CA GST & HST
Tax	• Enable controls to influence tax behavior. • Specify defaults that are commonly applicable. • Define applicability tax rules. • Define customer exemptions. • Specify party registrations.	• Share tax content. • Define integration with partners.	• CA GST • CA HST
Tax Jurisdictions	• Define location-based tax rates. • Define customer exemptions and rate exceptions.	Specify tax rule defaults.	• CA Alberta GST • CA BC HST

Tax Status	• Define common rules for tax rates. • Drive reporting needs. • Allow manual override to tax rates.	• Specify tax rule defaults. • Define customer exemptions. • Specify party registrations.	• GST Standard • HST Standard • HST Reduced
Tax Rates	• Define tax rates by effective periods. • Specify tax account variations. • Define tax rate exceptions. • Define tax recovery rates.	• Define customer exemptions. • Define applicability tax rules. • Define taxable calculation formulas. • Share tax content.	• CA GST Standard • CA GST Reduced • CA GST Exempt • CA HST Standard

Advanced Tax Configuration: Points to Consider

Create a simple tax model using tax rule defaults that you define in setting up your foundation tax configuration. You can also create tax rules for your complex tax requirements that consider each tax requirement related to a transaction before making the final tax calculation. When running the tax determination process, Oracle Fusion Tax evaluates, in order of priority, the tax rules that you have defined against the foundation tax configuration setup and the details on the transactions. If the first rule is successfully evaluated, the result associated with the rule is used. If that tax rule is not successful, the next rule is evaluated until either a successful evaluation or a default value is found.

Advanced tax configuration consists of tax rules to define exceptions to the default results.

Advanced Tax Configuration

The complexity of tax rule setup falls into three general categories: no tax rules required, simple tax rule regimes, and complex tax regimes. This table presents the scenarios and actions associated with each of these categories.

Category	Scenario	Action
No tax rules required	The tax authority levies tax on all sales and purchase transactions at the same rate. Neither tax applicability nor the tax rates and recovery rates vary by the parties to the transaction, the products or services in the transaction, or the business processes involved in the transaction.	For the tax, define tax rule defaults for the tax status, tax rate, and tax recovery rate. The tax determination process uses the tax rule defaults to determine the tax.

Simple tax rule regimes	The tax authority levies tax on your transactions at the same rate, with a simple set of identifiable exceptions. The exceptions either apply to one part of the transaction only, such as to certain parties, or to a combination of parties, products, and transaction processes that you can summarize in a simple way.	Create a simple set of rules, for example, to identify place of supply and tax registration, and use the tax rule default values for the other processes. The tax determination process uses the tax rules and the tax rule defaults to determine the tax.
Complex tax regimes	Tax regimes in certain countries require a complex logic to determine the applicable taxes and rates on a transaction. Both tax applicability and tax rates can vary, for example, by place of origin and place of destination, party registration, tax status, service, or a combination of factors. In some cases, the taxable amount of one tax may depend upon the amount of another tax on the same transaction. And in rare cases, the tax amount itself may depend on the tax amount of another tax.	Set up tax rule to define the logic necessary to identify each step of the tax determination process. The tax determination process uses the tax rules to determine the tax.

Define Exception to Default Results

Set a tax rule default value to the most commonly used value for tax determination. In the case of tax registration the default or most commonly used value for registration party is ship-from party. However, you can set up a rule to provide additional logic to use the registration of the bill-to party if the registration status is **Not Registered** for the ship-from party for purchase transactions. Create a determining factor set with the registration status and transaction business category determining factors along with condition sets to provide values for the respective determining factors.

For this example, the following setup exists for the Determine Tax Registration tax rule:

- Tax rule default: The default for tax registration is ship-from party.
- Tax rule: If the supplier is not registered, then you should consider the tax registration of the bill-to party.

When the following conditions are true, then the tax registration is the same as that defined for the bill-to party:

Tax Determining Factor Class	Tax Class Qualifier	Tax Determining Factor	Operator	Value
Registration	Ship-from party	Registration status	Equal to	Not registered
Transaction Generic Classification	Level 1	Transaction business category	Equal to	Purchase transaction

The tax determination process determines the tax registration by first considering the Determine Tax Registration tax rule and then the default

party registration. As a result of this rule, the tax determination process determines that for a purchase transaction, if the supplier is not registered, the tax registration of the bill-to party is considered.

Tax Account Configuration: Explained

Set up default tax accounts for the taxes in a tax regime to post the tax amounts derived from your transactions. The tax accounts you define for tax serve as default accounting information for tax rates and tax jurisdictions. You can override the defaulted accounts. Configure the tax recoverable or liability account for the tax recovery rate. Accounts assigned to the tax rate and recovery rate are used when the taxes are applicable to the transaction.

Set up tax accounts for a primary ledger or in combination with a business unit. The calculated tax amounts are posted to the accounts specified for a business unit. If those accounts are not available, tax accounts defined for the primary ledger are used. These are default accounts and the actual accounts that are used for accounting depend on the subledger accounting configuration.

For a tax, either assign new tax accounts or use accounts from an existing tax. This depends on the option selected in the **Tax Accounts Creation Method** attribute for the tax. If you choose to use accounts from an existing tax, specify another tax as the source tax. All the tax account details that you set up at the source tax level are copied into the Tax Accounts region as read only values. You cannot edit the details or create new records.

Tax Accounts

Define tax accounts for a tax, tax rate, and tax jurisdiction. Tax accounts are:

- **Tax Expense:** A Payables tax account that records tax amounts from invoice distributions; or a Receivables tax account that record net changes generated by adjustments, earned and unearned discounts, and finance charges. Receivables activities such as discounts and adjustments reduce the receivable amount, and are therefore considered an expense. This occurs only if the adjustment type has tax handling.
- **Tax Recoverable or Liability:** An account that records tax recovery amounts or relieves tax liability amounts. If you set up recovery rates for a tax that you also intend to self-assess, then define a tax recovery account for the associated recovery rates and a tax liability account for the associated tax rates.

Note

If you intend to use different accounts for tax recovery and liability then set up the recovery account for the tax recovery rate. This account is used to debit the recoverable tax amount while the account on the tax rate is used to account for tax liability.

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- **Interim Tax:** An account that records interim tax recovery or liability before the actual recovery or liability arises on a payment of an invoice. You must set up an interim tax account for taxes and tax rates that have a deferred recovery settlement.
 - Accounts for Receivables activities:

- **Finance Charge Tax Liability:** An account that records tax amounts on finance charges that are used as a deduction against overall tax liability.
- **Nonrecoverable Tax Accounts:** Accounts that record tax amounts on earned and unearned discounts and adjustments that you cannot claim as a deduction against tax liability.
- **Expense and Revenue Accounts:** Accounts that record net changes generated by adjustments, earned and unearned discounts, and finance charges. Receivables activities such as discounts and adjustments reduce the receivable amount, and are therefore considered an expense.

Manage Tax Regimes

Features at the Tax Regime Level: Critical Choices

Streamline your implementation by selecting the features that are applicable to the tax regime in scope. Features are used in rendering the task lists and tasks in the context of the features applicable to the tax regime in scope.

Features

The following table displays each feature and the impact of not selecting that feature.

Warning

Once you select a feature for a tax regime, you cannot disable it. You can enable the feature later if you do not enable it initially for a tax regime.

Feature	Description	Impact of Not Selecting Feature
Multiple Tax Jurisdictions	Create tax jurisdictions for a particular tax in more than one geographic region.	The Allow multiple jurisdictions option is not available to taxes within this tax regime.
Offset Taxes	Create offset taxes for tax calculation and recording of third party payables tax liabilities for reverse charges, self-assessments, and in the United States, Consumer's Use tax.	The Set as offset tax option is not available to taxes within this tax regime.
Tax Exemptions	Create tax exemptions to apply to a specific customer or to a combination of customer and specific product.	The Allow tax exemptions option is not available to taxes within this tax regime.
Tax Rate Exceptions	Create tax exceptions to apply a special tax rate to products.	The Allow tax exceptions option is not available to taxes within this tax regime.
Tax Recovery	Create tax recovery rates for full or partial recovery of taxes paid on purchases.	The Allow tax recovery option is not available to taxes within this tax regime.

Tax Registration Statuses	Manage tax registration statuses to be used as determining factors in tax rules.	The Tax Registration Status field is not available for party tax profiles. You cannot use the tax registration status of Agent , Registered , or Not Registered in tax rules.
Party Fiscal Classifications	Manage tax classifications used by a tax authority to categorize a party and which are applicable in the tax determination process.	The Classifications tab is not available for party tax profiles. You cannot use party fiscal classifications in tax rules.
Legal Fiscal Classifications	Manage classifications associated with a legal entity that represents its legal status within a country and which also guide the tax determination process.	The Legal Classification pages and Associated Legal Classifications region are not available for party tax profiles. You cannot use legal classifications in tax rules.
Product Category Classifications	Manage tax classifications for a noninventory-based product category that is used for tax determination or tax reporting purposes.	The Manage Product Category Fiscal Classification Codes page is not available. You cannot use product category classification codes in tax rules.
Product Fiscal Classifications	Manage tax classifications used by a tax authority to categorize a product for a tax and which are applicable in the tax determination process.	The Product Fiscal Classification pages are not available. You cannot use product fiscal classifications in tax rules.
Transaction Business Categories	Manage tax classifications to identify and categorize an external transaction into an Oracle Fusion Tax transaction and which are applicable in the tax determination process.	The Manage Transaction Business Category Codes page is not available. You cannot use transaction business category codes in tax rules.
Transaction Fiscal Classifications	Manage tax classifications used by a tax authority to categorize a transaction for a tax and which are applicable in the tax determination and tax reporting processes.	The Transaction Fiscal Classification pages are not available. You cannot use transaction fiscal classifications in tax rules.
Document Fiscal Classifications	Manage tax classifications used by a tax authority to categorize a document associated with a transaction for a tax and which are applicable in the tax determination and tax reporting processes.	The Manage Document Fiscal Classification Codes page is not available. You cannot use document fiscal classification codes in tax rules.
Intended Use Fiscal Classifications	Manage tax classifications based on the purpose for which a product is used and which are applicable in the tax determination process.	The Intended Use Fiscal Classification pages are not available. You cannot use intended use fiscal classifications in tax rules.
User-Defined Fiscal Classifications	Manage tax classifications for any tax requirement that you cannot define using the existing fiscal classification types.	The User-Defined Fiscal Classification pages are not available. You cannot use user-defined fiscal classifications in tax rules.

Regimes to Rates: Explained

Regime to rate setup contains the details of a tax regime, including all taxes, tax jurisdictions, tax statuses, and tax rates. You can update existing records or create new records at any point in the tax regime hierarchy.

Regime to rate setup tasks include:

- Tax regimes
- Taxes
- Tax jurisdictions
- Tax statuses
- Tax rates

Tax Regimes

Set up tax regimes in each country and geographical region where you do business and where a separate tax applies. A tax regime associates a common set of default information, regulations, fiscal classifications, and optionally, registrations, to one or more taxes. For example, in the United States create a Sales and Use Tax tax regime to group taxes levied at the state, county, and district levels.

The tax regime provides these functions:

- Groups similar taxes together
- Designates the geography within which taxes apply
- Applies as defaults the settings and values that you define for each tax in the tax regime
- Defines for which taxes the configuration options apply and a specific subscription option applies
- Provides a single registration for all taxes associated with the tax regime
- Defines the use of fiscal classifications as follows:
 - Transaction fiscal classifications
 - Product fiscal classifications
 - Party fiscal classifications

The common tax regime setup is one tax regime per country per tax type, with the tax requirements administered by a government tax authority for the entire country. There are also cases where tax regimes are defined for standard geographical types or subdivisions within a country, such as a state, province, country, or city. In these cases, you base the tax regime on the Oracle Fusion Trading Community Model standard geography.

There are more rare cases where a tax regime is based on disparate parts of a country or more than one country. In these cases, you can create one or more tax zones and set up tax regimes for these tax zones. You can also set up a tax regime as a parent tax regime to group related tax regimes together for reporting purposes.

You must set up a tax regime before you set up the taxes in the tax regime. Some tax regime values appear as defaults on the taxes that belong to the tax regime in order to help minimize tax setup.

You must associate a tax regime with all of the first party legal entities and business units that are subject to the tax regulations of the tax regime. You can set up tax configuration options when you create or edit a tax regime or when you create or edit a first party legal entity tax profile. Both setup flows appear and maintain the same party and tax regime configuration options.

Taxes

Set up details for the taxes of a tax regime. Each separate tax in a tax regimes includes records for the tax statuses, tax rates, and tax rules that are used to calculate and report on the tax. Oracle Fusion Tax applies as defaults tax information from the tax regime to each tax that you create under a tax regime. You can modify this information at the tax level according to your needs, as well as add additional defaults and overrides. For tax rule defaults, specify values that apply to the majority of your transactions. Use tax rules to configure exceptions to the tax rule defaults.

Identify what taxes you must define. Each tax appears as a single tax line on a transaction. If you need to show or report more than one tax line per transaction line on a transaction, then you should set up more than one tax. For example, for US Sales and Use Tax you would define a tax for each state, county, and city.

You can create a new tax, or create a tax that is based on an existing tax within the tax regime. You do this to minimize setup by sharing tax jurisdictions and tax registrations. When you create a new tax based on an existing tax, the attributes that remain constant for all taxes derived from the source tax are not available for update. Attributes that are copied and are display only include:

- Tax regime
- Tax
- Geography information
- Tax jurisdiction settings

Note

The enable tax settings are not selected, in the same way that they are not selected when you access the Create Tax page.

You can enable a tax for simulation or for transactions only after you have completed all of the required setup.

Tax Jurisdictions

Set up tax jurisdictions for geographic regions or tax zones where a specific tax authority levies a tax. A tax jurisdiction specifies the association between a tax and a geographic location. At transaction time, Oracle Fusion Tax derives the jurisdiction or jurisdictions that apply to a transaction line based on the place of supply. You must set up at least one tax jurisdiction for a tax before you can make the tax available on transactions.

You also use tax jurisdictions to define jurisdiction-based tax rates. A tax jurisdiction tax rate is a rate that is distinct to a specific geographic region or tax zone for a specific tax. You can also create multiple jurisdictions at once using

the mass create functionality for taxes that relate to specific Trading Community Model geographic hierarchies. For example, create a county jurisdiction for every county in the parent geography type of State and in the parent geography name of California.

The tax within a tax jurisdiction can have different rates for the parent and child geographies. For example, a city sales tax rate can override a county rate for the same tax. In this case, you can set up an override geography type for the city and apply a precedence level to the city and county tax jurisdictions to indicate which tax jurisdiction takes precedence.

In addition, in some cities a different city rate applies to the incorporated area of the city, called the inner city. In these cases, you can set up an inner city tax jurisdiction with its own tax rate for the applicable customers and receivables tax. Inner city tax jurisdictions are often based on postal code groupings.

Tax Statuses

Set up the tax statuses that you need for each tax that you create for a combination of tax regime, tax, and configuration owner. A tax status is the taxable nature of a product in the context of a transaction and specific tax on the transaction. You define a tax status to group one or more tax rates that are the same or similar in nature.

For example, one tax can have separate tax statuses for standard, zero, exemptions, and reduced rates. A zero rate tax status may have multiple zero rates associated with it, such as Intra-EU, zero-rated products, or zero-rated exports.

You define a tax status under a tax and a configuration owner, and define all applicable tax rates and their effective periods under the tax status. The tax status controls the defaulting of values to its tax rates.

Tax Rates

Set up tax rates for your tax statuses and tax jurisdictions. For tax statuses, set up a tax rate record for each applicable tax rate that a tax status identifies. For tax jurisdictions, set up tax rate records to identify the tax rate variations for a specific tax within different tax jurisdictions. For example, a city sales tax for a state or province may contain separate city tax jurisdictions, each with a specific tax rate for the same tax.

You can also define tax recovery rates to claim full or partial recovery of taxes paid.

You can define tax jurisdiction and tax status rates as a percentage or as a value per unit of measure. For example, a city may charge sales tax at a rate of 8 percent on most goods, but may levy a duty tax with a special rate of 0.55 USD per US gallon on fuel. Values per unit of measure are in the tax currency defined for the tax.

You define tax rate codes and rate detail information per rate period. Rate periods account for changes in tax rates over time. A tax rate code can also identify a corresponding General Ledger taxable journal entry.

Tax Recovery Rates

Set up tax recovery rate codes for the recovery types identified on the taxes within a tax regime. A tax recovery rate code identifies the percentage of

recovery designated by the tax authority for a specific transaction. In Canada, where more than one type of recovery is possible for a given tax, you must set up the applicable tax recovery rate codes for both the primary and secondary recovery types that can apply to a transaction.

If you set the **Allow tax recovery** option for a tax within a tax regime, then you must set up at least one recovery rate for the tax in order to make the tax available on transactions. If the recovery rate can vary based on one or more factors, including the parties, locations, product or product purpose, then set up tax rules to determine the appropriate recovery rate to use on specific transactions. At transaction time, Oracle Fusion Tax uses the recovery rate derived from the recovery tax rules, or uses instead the default recovery rate that you define, if no recovery rate rules are defined or if no existing recovery rate rule applies to the transaction.

Minimum Tax Configuration: Explained

Oracle Fusion Tax provides you with a single interface for defining and maintaining the taxes that are applicable in each country where you do business.

The minimum tax configuration path to meet the basic tax requirements of transactions in a given regime is a 2-step configuration process:

1. Define tax regime: This step includes the tax regime definition as well as the subscription by the appropriate legal entity or business unit.
2. Define transaction taxes: This step includes the basic tax definition, controls and defaults, direct and indirect tax rule defaults, and tax accounts.

The following prerequisite setups must be completed for minimum tax configuration:

- First parties, such as legal entities and business units
- Tax geographies and zones
- Ledger and accounts
- Currency codes and exchange rates

A legal entity tax profile is automatically created when a legal entity is defined in the implementation. Similarly, a business unit tax profile is automatically created when a business unit is defined. For the business unit, you need to indicate whether it will use the subscription of the legal entity instead of creating its own.

In addition, there are predefined event class mappings that describe the mapping between an application event class and the corresponding tax event class. For example, the tax determination process for a sales debit memo and sales invoice are essentially the same. These two application event classes correspond to the same tax event class namely, a sales transaction. Although you cannot update the event class mappings, you can set up configuration specific event class mappings.

Define Tax Regime

The first step includes the tax regime definition and subscription by an appropriate legal entity or business unit. While creating your tax regime, you

can minimize configuration and maintenance costs by creating content that can be shared by more than one entity. For example, legal entities can subscribe to the shared reference data instead of creating separate and repetitive data. If the subscribing legal entities have some variations in their setup, you can create override data to meet the specific exceptions that are applicable to these organizations.

Use Oracle Fusion Tax features to enable only those features that are relevant to taxes in the tax regime. Based on the features you select, the subsequent setup pages and task lists for the tax regime are rendered or hidden.

Define Transaction Taxes

The second step includes basic tax definition, such as geographic information, controls and defaults, direct and indirect tax rule defaults, and tax accounts.

The basic tax definition includes controls that you can set to provide the override capability at transaction time. For example, if you want to allow users to make manual updates on transaction tax lines, select the **Allow override for calculated tax lines** and the **Allow entry of manual tax lines** options. However, if you want to enforce automatic tax calculation on transaction tax lines, do not enable these options.

Use the direct and indirect tax rule defaults to specify the values that apply to the majority of your transactions. Create tax rules to address the exceptions or variations to the defaults. For example, for the Goods and Services Tax (GST) that applies to the supply of most goods and services in Canada, set the Tax Applicability direct tax rule default to **Applicable**. A luxury tax, on the other hand, is a tax on luxury goods or products not considered essential. As it would not apply to most goods and services, set the Tax Applicability direct tax rule default to **Not Applicable**, and create a tax rule to make the tax applicable when the product in the transaction satisfies the luxury requirement.

Assign your default tax accounts for the taxes in a tax regime to post the tax amounts derived from your transactions. The tax accounts you associate serve as default accounting information for taxes, tax rates, tax jurisdictions, and tax recovery rates. The tax accounts you define at the tax level, default to either the tax rate accounts or tax jurisdiction accounts for the same tax and operating unit, depending upon the tax accounts precedence level of the tax regime. You can update these default tax accounts in the tax rate or tax jurisdiction setup.

Minimum Tax Configuration: Points to Consider

The minimum tax configuration setup must be designed to handle the majority of tax requirements. As part of defining transaction taxes, decide the direct and indirect tax rule defaults for the tax and set up the associated tax accounts.

For complex tax requirements, create tax rules that consider each tax requirement related to a transaction before making the final tax calculation. During the execution of the tax determination process, Oracle Fusion Tax evaluates, in order of priority, the tax rules that are defined against the foundation tax configuration setup and the details on the transactions. If the first rule is successfully evaluated, the result associated with the rule is used. If not, the next rule is evaluated until either a successful evaluation or default value is found.

Setting Up Direct Tax Rule Defaults

The direct tax rule defaults are the default values for the direct tax rule types, which include:

- Place of supply
- Tax applicability
- Tax registration
- Tax calculation formula
- Taxable basis formula

Place of Supply

Use the Place of Supply direct tax rule default to indicate the specific tax jurisdiction where the supply of goods or services is deemed to have taken place. For example, in Canada, the place of supply for GST is typically the ship-to location. To handle the majority of Goods and Services Tax (GST) transactions, select **Ship to** as your default place of supply.

Note

The corresponding place of supply differs based on the type of transaction. For example, a place of supply of **Ship to** corresponds to the location of your first party legal entity for Payables transactions. For Receivables transactions, **Ship to** corresponds to the location of your customer site. For exceptions to this default, create Determine Place of Supply rules.

Tax Applicability

Use the Tax Applicability direct tax rule default to indicate whether the tax is typically applicable or not applicable on transactions. For example, the GST in Canada is a tax that applies to the supply of most property and services in Canada. When you create the GST tax, select **Applicable** as your default tax applicability. For exceptions to this default, create Determine Tax Applicability rules.

Tax Registration

Use the Tax Registration direct tax rule default to determine the party whose tax registration status is considered for an applicable tax on the transaction. For example, with a direct default of bill-to party, Oracle Fusion Tax considers the tax registration of the bill-to party and stamps their tax registration number onto the transaction, along with the tax registration number of the first party legal reporting unit. For exceptions to this default, create Determine Tax Registration rules.

Tax Calculation Formula

Use the Tax Calculation Formula direct tax rule default to select the formula that represents the typical calculation of tax for a transaction line. A common formula, **STANDARD_TC**, is predefined, where the tax amount is equal to the tax rate multiplied by the taxable basis. For exceptions to this default, create Calculate Tax Amounts rules.

Taxable Basis Formula

Use the Taxable Basis Formula direct tax rule default to select the formula that represents the amount on which the tax rate is applied. The following common formulas are predefined:

- **STANDARD_TB**: The taxable basis is equal to the line amount of the transaction line.
- **STANDARD_QUANTITY**: The taxable basis is equal to the quantity of the transaction line.
- **STANDARD_TB_DISCOUNT**: The taxable basis is the line amount of the transaction line less the cash discount.

For exceptions to this default, create Determine Taxable Basis rules.

Setting Up Indirect Tax Rule Defaults

The indirect tax rule defaults for a tax include:

- Tax jurisdiction
- Tax status
- Tax recovery rate
- Tax rate

Tax Jurisdiction

Use the Tax Jurisdiction indirect tax rule default to indicate the most common geographic area where a tax is levied by a specific tax authority. For example, value-added tax (VAT) is applicable to the supply of most goods and services in Portugal. For the tax PT VAT, create the default tax jurisdiction as the country of Portugal. To address specific tax regions such as Azores and Madeira, which have lower VAT rates than Portugal, define jurisdiction rates with different VAT rates.

Tax Status

Use the Tax Status indirect tax rule default to indicate the taxable nature of the majority of your transactions. For example, if your operations primarily include zero-rated transactions, select the default tax status as **Zero** instead of **Standard**. This setting facilitates tax determination when multiple zero rates are defined to handle different reporting requirements for zero rate usage, such as intra-EU, zero-rated products, or zero-rated exports. For exceptions to this default, create Determine Tax Status rules.

Tax Recovery

Use the Tax Recovery rate indirect tax rule default to indicate the recovery rate to apply to each recovery type for each applicable tax on a purchase transaction. For example, in Canada, both federal and provincial components of Harmonized Sales Tax (HST) are 100% recoverable on goods bought for resale. In this case, with two recovery types, you can set up two recovery rate defaults for the HST tax. For exceptions to this default, such as when the recovery rate determination is based on one or more transaction factors, create Determine Recovery Rate rules.

Tax Rate

Use the Tax Rate indirect tax rule default to specify the default tax rate that is applicable to the majority of your transactions associated with this tax. You can create additional tax setup, such as jurisdiction rates, or create tax rules to set alternate values as required. For example, HST in Canada is applied at a 13% rate in most provinces that have adopted HST, except for British Columbia where the rate is 12% and Nova Scotia where the rate is 15%. To satisfy this requirement a single rate of 13% can be defined with no jurisdiction and then a 12% rate can be defined and associated with the British Columbia jurisdiction (15% rate assigned to Nova Scotia). This minimizes the setup required by creating an exception based setup. For exceptions to this default, create Determine Tax Rate rules.

Setting Up Tax Accounts

Set up tax accounts at the tax level. The application automatically copies the tax account combination to the tax rates that you subsequently create for the tax for the same ledger and optionally, the same business unit.

Define tax accounts at any of the following levels. The defaulting option is only available at the tax level.

- Tax
- Tax jurisdiction
- Tax rate
- Tax recovery rate

Note

This is a one-time defaulting opportunity. Any subsequent changes at the account level are not copied to the tax rate level nor are they used during the AutoAccounting process. Changes at the tax level do impact tax account defaulting when you create new tax rates.

Setting up tax accounts comprise of specifying the following:

- **Ledger and Business Unit:** The ledger and business unit for which you are creating the tax accounts.
- **Interim Tax:** An account that records tax recovery or liability until the event prescribed by the statute is complete. Generally, the payment of the invoice is the event that triggers the generation of the tax recovery or liability. You must set up an interim tax account for taxes and tax rates that have a deferred recovery settlement. Once you set up an interim tax account for this tax rate, you cannot change the recovery settlement to **Immediate**.
- **Tax Recoverable or Liability Account:** An account that records tax recovery amounts or relieves tax liability amounts. If you set up recovery rates for a tax that you also intend to self-assess, then define a tax recovery account for the associated recovery rates and a tax liability account for the associated tax rates.
- **Finance Charge Tax Liability:** An account that records the tax liability associated with finance charges that is used as a deduction against overall tax liability.

- **Nonrecoverable Tax Accounts:** Accounts that record tax amounts on earned and unearned discounts and adjustments that you cannot claim as a deduction against tax liability.
- **Expense and Revenue Accounts.** Accounts that record net changes generated by adjustments, earned and unearned discounts, and finance charges. Receivables activities such as discounts and adjustments reduce the receivable amount, and are therefore considered an expense.

Minimum Tax Configuration: Worked Example

The following example illustrates the minimum tax configuration setup to meet the basic requirements in Canada for the Goods and Services Tax (GST). You set up a tax regime for both GST and Harmonized Sales Tax (HST). One recovery type is created for the fully recoverable status of the transaction.

In Canada, GST is a tax that applies to the supply of most property and services in Canada. The provinces of British Columbia, Ontario, New Brunswick, Nova Scotia, and Newfoundland and Labrador, referred to as the participating provinces, combine their provincial sales tax with GST to create HST. Generally, HST applies to the same base of property and services as the GST. Every province in Canada except Alberta has implemented either provincial sales tax or the HST. In countries like Canada, some or all taxes on business transactions for registered companies are recoverable taxes.

ABC Corporation is a business with a chain of bookstores across Canada. It intends to implement the Oracle Fusion Tax solution at its store in the province of Alberta. The GST rate of 5% is applicable for sales in Alberta. Input Tax Credit is available for GST included in purchases. ABC Corporation's primary ledger is CA Ledger, and the business unit is CA Operations. The tax account 0001-1500-1100-1000 is reserved for the **Tax Recoverable or Liability** account.

The tax implications in this scenario are:

- Five percent (5%) GST is applicable on the sale of goods in Alberta
- Neither the HST nor provincial sales tax applies in Alberta
- Place of supply for GST tax is generally based on the place of delivery or ship-to location.

To determine the GST tax in Alberta, perform the following steps:

1. Define tax regime
2. Define transaction taxes
3. Create the direct tax rule defaults
4. Create the indirect tax rule defaults
5. Enable tax

Define Tax Regime

1. On the Create Tax Regime page, enter the tax regime code for GST and HST in Canada.

Note

Use a coding convention to indicate both the country and the type of tax that belongs to this regime. For example, CA GST and HST.

2. Select the regime level to define the geographic area of the tax treatment. The option selected must depict the need for the tax regime. It should be set to **Country** for all federal taxes.
 3. Specify **Canada** as the country for which this tax regime is being defined.
 4. Enter a start date that will appear as a default to all related tax setup within the tax regime.
-

Note

Consider your tax planning carefully before entering the start date. This date must accommodate the oldest transaction that you want to process within this tax regime. After you create the tax regime, you can only update this date with an earlier date. If you enter an end date, you cannot update this date after you save the record.

5. Enter tax currency. Enter **CAD**, which is the three-letter ISO code for the Canadian dollar.

Tax currency is the currency required by the tax authority. Use the tax currency to pay the tax authority and to report on all tax transactions.
6. Select the **Allow cross regime compounding** option to set taxes within the tax regime to be based on the calculation of, or compounded on, taxes in another tax regime.

For example, in Quebec, the provincial sales tax is applied to both the selling price and GST. Enter a value as the compounding precedence to indicate the order of cross regime compounding. A lower number indicates that the tax regime will be processed first. Allowing gaps between numbers provide flexibility in the event that another higher priority tax regime is introduced in the future.
7. On the Configuration Options tab, select the party name that identifies either the legal entity or the business unit or both for which you will define the configuration options.
8. For the Configuration of Taxes and Rules, select the subscription that defines the configuration owner setup that will be used for transactions of the specific legal entity and business unit for this tax regime.

This selection also defines whether any shared content can be overridden by the subscribing party to allow unique, separate setup for certain tax content.
9. Enter the effective start date for this configuration option. Enter a date range that is within the date range of both the party tax profile and the tax regime.

Define Transaction Taxes

1. On the Create Tax page, enter the name of the tax regime that you created in the Define Tax Regime step, such as CA GST and HST.

2. Select the configuration owner for this tax. To minimize configuration and maintenance costs, select **Global Configuration Owner** as the configuration owner.
3. Enter the name of the tax you are defining, such as CA GST.
4. Select **Province** as the geography type.
5. To minimize setup and maintenance costs, specify the highest-level parent geography type (Country), unless the tax is only applicable to a specific geography. Select **Country** from the list of values. For the parent geography name, enter **Canada**.
6. Enter a value as the compounding precedence to reflect the order of tax compounding. A lower number indicates that a tax is processed first. Allowing gaps between numbers provide flexibility in the event that another higher priority tax is introduced in the future.
7. Enable the **Allow override of calculated tax lines** option to allow users to override the automatic tax calculation on invoice tax lines.
8. Enable the **Allow multiple jurisdictions** option to define tax jurisdictions for this tax in more than one geographic region.
9. Enable the **Allow mass create of jurisdictions** option to enable mass creation of tax jurisdictions for this tax, which allows you to create multiple jurisdictions at the same time.
10. Enable the **Allow tax recovery** option.
11. Enable the **Allow tax recovery rate override** option if you want to allow user override of the calculated tax recovery rate on transaction lines.
12. Select **Standard** as the primary recovery type.

Assign Tax Accounts

1. Navigate to the Tax Accounts tab.
2. Select CA Ledger as the primary ledger to use for tax accounts and CA Operations as the business unit.
3. Enter 0001-1500-1100-1000 as the Tax Recoverable or Liability account.

Create Direct Tax Rule Defaults

1. Navigate to the Tax Rule Defaults tab.
2. Select **Ship to** from the Place of Supply list of values, to specify the default.
3. Select **Applicable** from the **Tax Applicability** list of values to specify the Tax Applicability default.
4. Select **Ship-from party** to specify the Tax Registration default.
5. Select **STANDARD_TC** as the Tax Calculation Formula default.
6. Select **STANDARD_TB** as the Taxable Basis Formula default.

Create Indirect Tax Rule Defaults

1. Select **Tax Jurisdiction** as your rule type and create the rule type default. In the **Tax Jurisdiction Code** field, enter a tax jurisdiction code for the province of Alberta, such as CA Alberta. Select **Province** as the

geography type. For the geography name, enter AB for Alberta. Set this tax jurisdiction as your default, and specify your default start and end dates.

2. Select **Tax Status** as your rule type and create the rule type default. Enter a tax status code for GST, such as CA GST STD. Set this tax status as your default, and specify your default start and end dates.
3. Select **Tax Recovery Rate** as your rule type and create the rule type default. Enter a tax recovery rate code for GST, such as CA GST STD REC RATE. For the recovery type, select **Standard**. Enter a rate percentage of 100 for a fully recoverable tax. Set this tax recovery rate as your default, and specify your default start and end dates.
4. Select **Tax Rate** as your rule type and create the rule type default. In the **Tax Status Code** field, enter the name of the tax status that you just created, CA GST STD. Enter a tax rate code for GST, such as CA GST STD RATE. Enter a rate percentage of 5 for the current GST rate as of January 1, 2008, and specify your default start and end dates.

Enable Tax

1. Click the **Enable tax for simulation** option. This allows you to verify the tax configuration using the Tax Simulator.
2. Once you have verified your tax configuration with simulated transactions, click the **Enable tax for transactions** option. This allows you to use this tax in transaction processing.
3. Click **Save and Close**.

For ABC's transactions in the province of Alberta, the following is determined by default:

- GST tax is applicable and will be calculated at a percentage rate of 5%.
- 100% of the GST can be recovered.

Associated Taxes Setup for a Tax Regime: Explained

When you create a tax regime, you specify the options and defaults available to the taxes associated with the tax regime. You also enable the features that are applicable to the tax regime and its taxes.

The options appearing in the Associated Taxes Setup Information region on the Edit Tax Regime page are a result of the features enabled and the options you selected at the tax level. These options include:

- **Allow multiple jurisdictions**
- **Allow tax recovery**
- **Allow tax exceptions**
- **Allow tax exemptions**

The preceding options always appear as read-only check boxes in the Associated Taxes Setup Information region. The option appears as selected if you selected

the option in one of the taxes within this tax regime. If you did not select the option in one of the taxes, then the option appears as not selected.

For example, suppose you have a California county sales tax that applies to all counties, so you need a tax with multiple jurisdictions. In this case, you must enable the **Multiple Jurisdictions** feature at the tax regime level and then select the **Allow multiple jurisdictions** option at the tax level. When you access the Edit Tax Regime page, Associated Taxes Setup Information region for this tax regime, the **Allow multiple jurisdictions** option appears as selected.

Manage Controls and Defaults

Tax Regime Controls and Defaults: Points to Consider

A tax regime associates a common set of default information, regulations, fiscal classifications, and optionally, registrations, to one or more taxes. Set up tax regimes in each country and geographical region where you do business and where a separate tax applies.

The tax regime setup details include:

- Designating the geography to which taxes within a tax regime apply
- Defining the controls and defaults that apply to taxes and associated lower level information
- Specifying configuration options and service subscriptions

Designating the Geography

The common tax regime setup is one tax regime per country per tax type, but you can also have tax regimes based on parts of a country or more than one country. Select the regime level as:

- **Country:** The tax regime is applicable to a specific country.
- **Tax zone:** The tax regime is applicable to parts of a country or more than one country. Enter the tax geography type and tax geography name associate with the group of countries or the tax zone that you want. The tax geography type and tax geography name correspond to the tax zone type and tax zone respectively.

If applicable, designate the tax regime as a parent regime or indicate the parent regime name if the tax regime belongs to a parent regime. Use a tax regime defined as a parent tax regime to group other nonparent tax regimes for reporting purposes.

Defining Controls and Defaults

Set tax-level controls to enable the options that you want to make available to the taxes in this tax regime. If necessary, you can disable the options that you enable here for individual taxes within the tax regime. Enter default values for the taxes in this tax regime. You can update the default values at the tax level.

If you disable a controlled option at the tax regime level it is not available as an option at the tax level.

The following table describes the defaults and controls available at the tax regime level.

Defaults Region

Field	Description	Default Derived from	Default Appears on	Controls
Tax Currency	The default currency of the taxes within this tax regime	None	Tax	None
Minimal Accountable Unit	The minimal unit of currency that is reported to the tax authority, for example, 0.05 GBP indicates that 5 pence is the minimal unit	None	Tax	None
Tax Precision	A one digit whole number to indicate the decimal place for tax rounding	None	Tax	None
Tax Inclusion Method	A method that describes whether the line amount includes tax or excludes tax	None	Tax	None
Conversion Rate Type	The specific exchange rate table that is used to convert one currency into another, for example, the Association of British Travel Agents exchange rate used in the travel industry	None	Tax	None
Rounding Rule	The rule that defines how rounding is performed on a value, for example, up to the next highest value, down to the next lower value, or to the nearest value	None	Tax	None
Allow tax rounding override	Allow the override of the rounding defined on the tax registration records	None	Tax	None

Reporting Tax Authority	The default tax authority to whom the tax reports are sent	None	• Tax • Tax registration	None
Collecting Tax Authority	The default tax authority to whom the tax is remitted	None	• Tax • Tax registration	None
Default Settlement Option	A lookup code to indicate whether an input tax is recovered when an invoice is recorded or only when the invoice is paid and whether an output tax is due for settlement when the invoice is issued or only when the payment is received against it	None	Tax	None
Use legal registration number	Option that controls whether the tax registration number is the same as the legal registration number of the party	None	Tax	None

General Controls Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow override and entry of inclusive tax lines	Option that controls whether you can override and enter inclusive or exclusive line amounts	None	Tax	None
Use tax reporting configuration	Option that controls whether the tax reporting details are available on the first party tax registration record for this tax regime	None	None	Controls whether you can enter tax reporting configuration details on the tax registration for this tax regime for your first parties

Compounding Level Controls Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow cross regime compounding	Option that controls whether cross regime compounding is needed for this tax regime	None	None	Controls whether this tax regime is compounded based on the tax calculated from another tax regime
Compounding Precedence	Defines the order in which taxes within the compound tax regimes need to be calculated. A tax within a tax regime with a lower value is calculated first.	None	None	Controls the order in which taxes within tax regimes are calculated

Important

Oracle Fusion Tax provides features at the tax regime level to streamline your implementation by selecting the features that are applicable to the tax regime in scope. You must enable the features to use that functionality for the tax regime and related taxes.

Specifying Configuration Options and Service Subscriptions

Set up configuration options to associate tax regimes with the parties in your company that have a tax requirement under these tax regimes. You can set up tax configuration options when you create a tax regime or when you create a party tax profile for a first party legal entity or business unit. Both tax regime and party tax profile setup flows appear and maintain the same party and tax regime association. Configuration options only apply to tax regimes directly linked to taxes and not to tax regimes that are used to group other tax regimes.

Oracle Fusion Tax lets you use the tax services of external service providers for tax calculation of US Sales and Use Tax on receivables transactions. The setup for provider services is called a service subscription. A service subscription applies to the transactions of one configuration option setup for a combination of tax regime and legal entity or business unit.

Note

The level of detail of tax rounding definitions for the taxes in the tax regime must equal or exceed the level of detail of the service provider tax rounding definitions.

Tax Controls and Defaults: Points to Consider

Set up details for the taxes of a tax regime. Each separate tax in a tax regime includes records for the statuses, rate, and rules that are used to calculate and report on the tax. Oracle Fusion Tax derives defaults tax information from the tax regime to each tax that you create under a regime. You can modify this information at the tax level according to your needs, as well as add additional defaults and overrides.

Defining Controls and Defaults

The following table describes the defaults and controls available at the tax level.

Header Region

Field	Description	Default Derived from	Default Appears on	Controls
Enable tax for simulation	Controls whether this tax is available for computation within the Tax Simulator functionality	None	None	If selected then this tax is available for calculation in the Tax Simulator if the evaluate taxes is enabled for simulation.
Enable tax for transactions	Controls whether this tax is available for transactions and selecting this option triggers integrity checks to validate that the setup for this tax is accurate and complete	None	None	If selected then this tax is used by transactions if applicable. If not selected then this tax is not processed as an applicable tax at transaction time.

Tax Information Region

Field	Description	Default Derived from	Default Appears on	Controls
Tax Currency	The default currency of the taxes within a tax regime	Tax regime	None	Defines the tax currency for calculation and reporting purposes
Minimal Accountable Unit	The minimal unit of currency that is reported to the tax authority, for example, 0.05 GBP indicates that 5 pence is the minimal unit	Tax regime	None	Defines the minimal accountable unit at transaction time
Tax Precision	A one digit whole number to indicate the decimal place for tax rounding	Tax regime	None	Defines the tax precision during tax calculation

Conversion Rate Type	The specific exchange rate table that is used to convert one currency into another, for example, the Association of British Travel Agents exchange rate used in the travel industry	Tax regime	None	Defines the exchange rate that is used as necessary at transaction time
Rounding Rule	The rule that defines how rounding is performed on a value, for example, up to the next highest value, down to the next lower value, or to the nearest value	Tax regime	None	Can control rounding at transaction time
Compounding Precedence	Defines the order in which this tax is calculated compared to other taxes that are compounded on or compounded by this tax. The tax with the lowest precedence value is calculated first.	None	None	Controls the order in which applicable taxes are calculated at transaction time
Reporting Tax Authority	The default tax authority to whom the tax reports are sent	Tax regime	Tax registration	None
Collecting Tax Authority	The default tax authority to whom the tax is remitted	Tax regime	Tax registration	None
Applied Amount Handling	Controls whether tax is recalculated or prorated on prepayment, with the default being Recalculated	None	None	Controls Oracle Fusion Payables functionality and how payments trigger recalculation or prorating of tax amounts
Set as offset tax	Defines this tax as an offset tax	None	None	Selecting this option disables the Controls region and Tax Exceptions and Exemptions Controls region and clears any values that were entered in these regions

Set tax for reporting purposes only	Defines whether this tax is set up for reporting purposes only	None	None	Controls whether this tax is used for reporting only and does not create any tax account entries

Controls and Defaults Tab, Controls Region

Field	Description	Default Derived from	Default Appears on	Controls
Default Settlement Option	Lookup code to indicate whether an input tax is recovered when an invoice is recorded or only when the invoice is paid and whether an output tax is due for settlement when the invoice is issued or only when the payment is received against it	Tax regime	Tax status	None

Tax Inclusion Method	Defines whether the tax is: • Standard noninclusive handling: This option calculates the taxes as exclusive of the given transaction line amount • Standard inclusive handling: This option calculates the taxes as inclusive of the given transaction line amount • Special inclusive handling: This option calculates the taxes as inclusive of the given transaction line amount, but the calculation methodology differs from the standard inclusive process	None	None	Use this option in conjunction with other setup on tax, party tax profile, tax registration, and transaction details to control the inclusiveness of a line amount at transaction time
Allow override and entry of inclusive tax lines	Controls whether you can override and enter inclusive or exclusive line amounts	Tax regime	Tax rate	None
Allow tax rounding override	Allows the override of the rounding defined on the tax registration records	Tax regime	None	When selected allows you to override tax rounding setup on the tax registration records for registrations for this tax

Allow override of calculated tax lines	Allows you to override the calculated tax lines at transaction time when the Transaction Tax Line Override profile option is also set	None	None	Use this option in conjunction with the Transaction Tax Line Override profile option and the Allow override of calculated tax lines option for the configuration owner tax options to allow you to update calculated tax lines at transaction time. If any of these options are not set then update of calculated tax lines is not allowed at transaction time.
Allow entry of manual tax lines	Allows you to enter manual tax lines at transaction time	None	None	Use this option in conjunction with Allow entry of manual tax lines option for the configuration owner tax options. When both fields are set you can enter manual tax lines at transaction time.
Use legal registration number	Controls whether the tax registration number is the same as the legal registration number of the party	None	None	If this option is selected you can choose an existing legal entity registration number as the transaction tax registration number
Allow duplicate registration numbers	Controls whether you can enter duplicate tax registration numbers for different parties	None	None	If this option is selected you can enter duplicate tax registrations for different parties
Allow multiple jurisdictions	Controls whether you can enter multiple concurrent tax jurisdictions for this tax	None	None	If this option is selected you can create multiple concurrent tax jurisdictions for this tax

Allow mass creation of jurisdictions	Controls whether mass creation of jurisdictions functionality is allowed using the parent geography and geography setup for this tax	None	None	If this option is selected you can use the mass creation jurisdictions functionality for this tax

Tax Account Controls Region

Field	Description	Default Derived from	Default Appears on	Controls
Tax Accounts Creation Method	Controls whether the tax accounts used for this tax are derived from setup associated with this tax or copied from another tax defined by the Tax Accounts Source field	None	None	When the value is: • Create tax accounts: Create tax accounts for this tax • Use tax accounts from an existing tax: Enter the tax account source to be used at transaction time
Tax Accounts Source	Defines the tax to use to derive the tax accounts to use at transaction time	None	None	Use when the value in the Tax Accounts Creation Method field is Use tax accounts from an existing tax

Tax Exceptions and Exemptions Controls and Defaults Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow tax exceptions	Controls whether tax exceptions are allowed for this tax	None	Tax status	None
Allow tax exemptions	Controls whether tax exemptions are allowed for this tax	None	Tax status	None

Use tax exemptions from an existing tax	Controls whether tax exemptions are derived from this tax or derived from another tax as specified by the value in the Tax Exemptions Source field for the same transaction	None	None	Controls whether you can define tax exemptions for this tax or if they are derived from those defined against another tax related to the same tax line at transaction time
Tax Exemptions Source	Defines the tax to use as the source when the Use Tax Exemption from an existing tax option is selected	None	None	Used in conjunction with the Use tax exemptions from an existing tax option and uses tax exemptions already created for customers for this tax

Tax Recovery Controls and Defaults Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow tax recovery	Controls whether this tax handles tax recovery	None	None	If this option is selected you can set up tax recovery for this tax

Tax Settings and Rules: How They Apply to Tax Line Operations

Enter and update detail and summary tax lines according to the requirements of your transactions. Depending on your security settings and options specified during tax setup, you can:

- Enter manual tax lines
- Enter tax only tax lines
- Change existing tax line information
- Cancel tax lines

Note

The Summary Tax Lines component is applicable only to Oracle Fusion Payables.

Entering Manual Tax Lines

These requirements apply to entering a manual detail or summary tax line:

1. Enable the **Allow entry of manual tax lines** option for the:
 - Configuration owner and application event class
 - Tax
2. Ensure that the **Manual Tax Line Entry** profile option is enabled. It is enabled by default.

3. Enter a unique combination for a tax regime and tax. You cannot enter a manual tax line for a tax that already exists for the transaction line.
4. Enter a tax status to enter a tax rate.
5. Enter a tax regime, tax, tax status, and tax rate to enter a tax amount.

The tax calculation on a manual tax line is a standard formula of Tax Amount = Taxable Basis * Tax Rate. The tax determination process does not evaluate tax rules defined for the tax of any tax rule type.

Entering Tax Only Tax Lines

You can enter a tax-only invoice in Payables to record tax lines that are not linked to a transaction. A tax-only invoice is used, for example, to record tax lines on purchases that are assessed and invoiced separately or to enter tax-only invoices from tax authorities or import agents that record import taxes.

These requirements apply to entering a tax only tax line:

1. Enable the **Allow manual tax only lines** option for the configuration owner and application event class.
2. Select a tax regime from the tax regimes belonging to the configuration option of the applicable legal entity or business unit.
3. Select a tax, tax status, and tax rate and enter a tax amount.

Note

When you select or deselect the Tax Only Line option on a tax line for the first time, the update does not take effect. You must select the specific tax line, click the row header or a noneditable area, and then select the Tax Only Line option.

Editing Tax Line Information

These requirements apply to changing an existing detail or summary tax line:

1. Enable the **Allow override for calculated tax lines** option for the:
 - Configuration owner and application event class
 - Tax
2. Ensure that the **Manual Tax Line Entry** profile option is enabled. It is enabled by default.
3. Optionally, enable the following options for the configuration owner and application event class:
 - **Allow recalculation for manual tax lines** option. The tax determination process recalculates the manual tax lines when there is an update to automatically calculated tax lines.
 - **Tax line override impacts other tax lines** option. The tax determination process recalculates the taxes on all other tax lines on the same transaction when there is an override of automatically calculated tax lines on transactions.
4. Save any changes to summary tax lines before you enter or change Payables summary tax lines.
5. Change the tax status if necessary. These requirements apply to changing tax statuses:

- You cannot update the tax status if the tax on the detail tax line is enforced from the natural account.
 - If you edit a tax only tax line and change the tax status, you must re-enter the tax rate code.
6. Change the tax rate if necessary. These requirements apply to changing tax rates:
 - The **Allow tax rate override** option is enabled for the applicable tax status.
 - The **Allow ad hoc rate** option is enabled for the applicable tax rate.
 - You may need to change the tax status to change to the appropriate tax rate.
 - You can change the calculated tax rate derived from the tax status by selecting another tax rate defined for the same tax regime, tax, and tax status.
 7. Change the tax rate percentage or quantity rate if necessary. These requirements apply to changing tax rate percentages or quantity rates:
 - You cannot update the tax rate code and rate fields if the tax on the detail tax line is enforced from the natural account.
 - You can only update the tax rate percentage if the tax rate code has the **Allow ad hoc rate** option enabled.
 8. Change the tax amount if necessary. These requirements apply to changing tax amounts:
 - When you change the tax amount the setting for the **Adjustment for ad hoc amounts** option of the tax rate determines which value is adjusted, the taxable amount or the tax rate.
 - You can only edit the tax amount if a detail tax line belongs to an historic transaction.
 - You can change the tax amount independent of the tax inclusive and compound tax settings.
 - If you defined tax tolerances for Payables transactions, then if you edit the tax amount and it exceeds the specified tolerance, Oracle Fusion Tax places the invoice on hold.
 - You can only enter 0 as the tax amount if the tax rate is 0.
 9. Update the **Inclusive** option setting if necessary. The tax determination process recalculates the taxable amount and transaction amount.

For tax calculation, a limited evaluation of tax rules on certain updates to a tax line is performed.

Canceling Tax Lines

These requirements apply to canceling an existing detail or summary tax line:

1. Cancel tax lines on Payables transactions only.
2. Enter a new manual tax line to reverse a canceled tax line if necessary.

Note

On canceling the invoice or invoice lines, tax lines are automatically canceled.

When you cancel a tax line both the associated tax line and any distributions that were previously accounted are reversed. If the distributions were not accounted, then the amounts are set to zero.

Note

When you select or deselect the Cancel option on a tax line for the first time, the update does not take effect. You must select the specific tax line, click the row header or a noneditable area, and then select the Cancel option.

Inclusive Taxes: Explained

Calculating tax on a transaction as inclusive of the line amount is generally a business decision. This decision is based on the relationship between the transacting parties and the items or taxes involved.

Taxes applicable on a transaction are made inclusive of the item line amount either:

- Manually
- Automatically

Manual Approach

In the manual approach, you access the calculated tax lines on a transaction and select the **Inclusive** option. This action includes the calculated tax amount with the item value.

However, this option is controlled through two factors:

- Privileges are assigned to the users for accessing and editing the calculated tax lines.
- Setup restrictions are applied to edit the **Inclusive** option on the calculated tax lines.

Automatic Approach

In the automatic approach, you can configure the tax setup and calculate the tax on a transaction as inclusive of the item line amount. Since this requirement is primarily driven by the tax legislation and the business relationship between the transacting parties, the option for configuring the inclusiveness is made available on the tax and tax rate definition and the third party and legal reporting unit tax profiles on the tax registration and general data tabs. The tax determination process uses a hierarchy approach to evaluate the defined setup and applies the inclusiveness option on the transaction.

In tax setup there are options to choose for applying the inclusiveness on a transaction. They are:

- **Standard noninclusive handling:** This option calculates the taxes as exclusive of the given transaction line amount.
- **Standard inclusive handling:** This option calculates the taxes as inclusive of the given transaction line amount.
- **Special inclusive handling:** This option calculates the taxes as inclusive of the given transaction line amount, but the calculation methodology differs from the standard inclusive process.

The following table illustrates the calculation methodology used with each of these options when a transaction line amount is 1000 USD and the applicable tax rate is 10% of the taxable basis amount, for example, line amount:

Method	Calculation	Taxable Basis Amount	Tax Amount	Transaction Line Amount
Standard Noninclusive	1000 USD * 10/100	1000 USD	100 USD	1100 USD
Standard Inclusive	1000 USD * 10/110	909.09 USD	90.91 USD	1000 USD
Special Inclusive	1000 USD * 10/100	900 USD	100 USD	1000 USD

Configuring Inclusive Taxes: Points to Consider

The requirement for calculating the taxes as inclusive of the item line amount is primarily driven by the tax legislation and the business relationship between the transacting parties. Configure your tax setup accordingly to capture the inclusiveness as per the taxes and the parties involved within a transaction.

The following table provides some of the key inclusiveness requirements and the corresponding setup that can honor them:

Inclusiveness Requirement	Setup Based on the Tax Inclusiveness Processing Hierarchy
Always apply to specific tax rates regardless of the party setup	• Tax rate: Select Standard inclusive handling or Special inclusive handling for the tax inclusion method - Process complete • Tax registration party: Not applicable • Party site registration: Not applicable • Party registration: Not applicable • Party site tax profile: Not applicable • Party tax profile: Not applicable • Legal reporting unit registration: Not applicable • Legal reporting unit tax profile: Not applicable • Tax: Not applicable

Apply to specific taxes and all associated tax rates originating from certain tax jurisdictions for certain transacting third party sites	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Registration record at tax jurisdiction level, for example, for tax regime, tax, and tax jurisdiction, with the option for inclusiveness set to Yes Process complete • Party registration: Not applicable • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable
Apply to specific taxes and all associated tax rates regardless of the tax jurisdiction for certain transacting third party sites	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Registration record at tax level, for example, for tax regime and tax, with the option for inclusiveness set to Yes Process complete • Party registration: Not applicable • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable
Apply to all taxes defined for a tax regime for certain transacting third party sites	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Registration record at tax regime level with the option for inclusiveness set to Yes Process complete • Party registration: Not applicable • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable

Apply to all taxes and all tax regimes for certain transacting third party sites	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Set the inclusiveness option to Blank or no record • Party registration: Set the inclusiveness option to Blank or no record • Party site tax profile: Set the inclusiveness option to Yes Process complete • Party tax profile: Not applicable • Tax: Not applicable
Apply to specific taxes and all associated tax rates originating from certain tax jurisdictions for all transacting third party sites defined for a party	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Set the inclusiveness option to Blank or no record • Party registration: Registration record at tax jurisdiction level, for example, for tax regime, tax, and tax jurisdiction, with the option for inclusiveness set to Yes Process complete • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable
Apply to specific taxes and all associated tax rates regardless of the tax jurisdiction for all transacting third party sites defined for a party	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Set the inclusiveness option to Blank or no record • Party registration: Registration record at tax level, for example, for tax regime and tax, with the option for inclusiveness set to Yes Process complete • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable

Apply to all taxes defined for a tax regime for all transacting third party sites defined for a party	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Set the inclusiveness option to Blank or no record • Party registration: Registration record at tax regime level with the option for inclusiveness set to Yes Process complete • Party site tax profile: Not applicable • Party tax profile: Not applicable • Tax: Not applicable
Apply to all taxes and all tax regimes for all transacting third party sites defined for a party	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: Third party • Party site registration: Set the inclusiveness option to Blank or no record • Party registration: No record • Party site tax profile: Set the inclusive option to Blank • Party tax profile: Set the inclusiveness option to Yes Process complete • Tax: Not applicable
Apply to certain taxes originating from certain tax jurisdictions for all transacting third parties originating from a specific business unit or legal entity	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: First party • Legal reporting unit registration: Registration record at tax jurisdiction level, for example, for tax regime, tax, and tax jurisdiction, with the option for inclusiveness set to Yes Process complete • Legal reporting unit tax profile: Not applicable • Tax: Not applicable

Apply to certain taxes regardless of the tax jurisdiction for all transacting third parties originating from a specific business unit or legal entity	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: First party • Legal reporting unit registration: Registration record at tax level, for example, for tax regime and tax, with the option for inclusiveness set to Yes Process complete • Legal reporting unit tax profile: Not applicable • Tax: Not applicable
Apply to all taxes defined for a tax regime for all transacting third parties originating from a specific business unit or legal entity	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: First party • Legal reporting unit registration: Registration record at tax regime level with the option for inclusiveness set to Yes Process complete • Legal reporting unit tax profile: Not applicable • Tax: Not applicable
Apply to all taxes and all tax regimes for all transacting third parties originating from a specific business unit or legal entity	• Tax rate: Select Blank for the tax inclusion method • Tax registration party: First party • Legal reporting unit registration: No record • Legal reporting unit tax profile: Set the inclusiveness option to Yes Process complete • Tax: Not applicable

Apply to certain taxes for all transacting third parties originating from any business unit or legal entity	• Tax rate: Select Standard inclusive handling or Special inclusive handling for the tax inclusion method • Tax registration party: Third party or first party • Party site registration: No record • Party registration: No record • Party site tax profile: Set the inclusiveness option to Blank • Party tax profile: Set the inclusiveness option to Blank • Legal reporting unit registration: No record • Legal reporting unit tax profile: Set the inclusiveness option to Blank • Tax: Select Standard inclusive handling or Special inclusive handling for the tax inclusion method Process complete

Tax Inclusiveness Hierarchy: How It Is Determined

Configure your tax setup to include the calculated tax amount with the item line amount. The option for configuring the inclusiveness is available on the tax and tax rate definition and the third party and legal reporting unit tax profiles on the tax registration and general data tabs.

Settings That Affect Tax Inclusiveness

Set up the inclusive options in the following pages:

- Create or Edit Tax page: Specify the tax inclusion method on the Default and Controls tab. The handling of this field is dependent on the value of the **Allow override and entry of inclusive tax lines** option at the tax regime level. If the option is not selected at the tax regime level, the **Tax Inclusion Method** field is display-only. The value displayed is set at the tax regime level.
- Create or Edit Tax Rate page: Specify the tax inclusion method on the Main Details tab. The handling of this field is dependent on the value of the **Allow override and entry of inclusive tax lines** option at the tax level. If the option is not selected at the tax level, the **Tax Inclusion Method** field is display-only. The value displayed is set at the tax level.
- Create or Edit Tax Registration page: Select **Set Invoice Values as Tax Inclusive** option for the third party, third party site, and legal reporting unit tax profiles.
- Create or Edit Third Party Tax Profile and Create or Edit Third Party Site Tax Profile pages: Select **Set Invoice Values as Tax Inclusive** option on the General tab for the third party or third party site.
- Create or Edit Legal Reporting Unit page: Select **Set Invoice Values as Tax Inclusive** option on the General tab for the legal reporting unit.

How Tax Inclusiveness Hierarchy Is Determined

The tax determination process uses a hierarchy approach to evaluate the options selected in your tax configuration and applies it on the taxes calculated on a transaction.

The hierarchy sequence for processing the inclusiveness for a tax is:

1. If the transaction involved is a Receivable transaction then check for the value in the **Tax Amount Included** field within the invoice line details. The available values are:
 - **No:** All the taxes calculated on the invoice line are treated as exclusive of the item line amount.
 - **Yes:** All the taxes calculated on the invoice line are treated as inclusive of the item line amount.
 - **Use tax rate code:** The tax setup defined is considered for analyzing the inclusiveness.
2. If the transaction involved is not a Receivable transaction or if the Receivable transaction uses the **Use tax rate code** option then check for the value specified in the **Tax Inclusion Method** field for the processed tax rate code. The available values are:
 - **Standard noninclusive handling:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Standard inclusive handling:** The referred tax gets calculated as inclusive of the transaction line amount.
 - **Special inclusive handling:** The referred tax gets calculated as inclusive of the transaction line amount. However, the line amount is considered the taxable basis rather than the adjusted line amount, which is considered for the **Standard inclusive handling** value.
 - Blank: Process next step.
3. Check the value specified in the **Set Invoice Values as Tax Inclusive** field on the tax registration record of the third party site tax profile for the processed registration party. The available values are:
 - **No:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Yes:** The referred tax gets calculated as inclusive of the transaction line amount.
 - Blank: Process next step.

If the processed registration party is the first party, the registration record for the tax available within the legal reporting unit tax profile is considered. If the value is set to blank then step 7 is processed.
4. Check the value specified in the **Set Invoice Values as Tax Inclusive** field on the tax registration record of the third party tax profile for the processed registration party. The available values are:

- **No:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Yes:** The referred tax gets calculated as inclusive of the transaction line amount.
 - Blank: Process next step.
5. Check the value specified in the **Set Invoice Values as Tax Inclusive** field on the General tab of the third party site tax profile. The available values are:
- **No:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Yes:** The referred tax gets calculated as inclusive of the transaction line amount.
 - Blank: Process next step.
6. Check the value specified in the **Set Invoice Values as Tax Inclusive** field on the General tab of the third party tax profile. The available values are:
- **No:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Yes:** The referred tax gets calculated as inclusive of the transaction line amount.
 - Blank: Process next step.
7. Check for the value specified in the **Tax Inclusion Method** field of the tax. The available values are:
- **Standard noninclusive handling:** The referred tax gets calculated as exclusive of the transaction line amount.
 - **Standard inclusive handling:** The referred tax gets calculated as inclusive of the transaction line amount.
 - **Special inclusive handling:** The referred tax gets calculated as inclusive of the transaction line amount. However, the line amount is considered the taxable basis rather than the adjusted line amount, which is considered for the **Standard inclusive handling** value.

Tax Amount Rounding: Explained

Taxes applicable on a transaction are generally calculated as the taxable basis multiplied by the tax rate equals the tax amount. This calculated amount can result in an odd value or with a large number of decimal place. You can configure the tax setup to adjust or round the tax calculation according to the specific requirements of the transacting parties and tax authority or to the accepted currency denominations.

Key parameters that influence the rounding of calculated tax amount are:

- **Tax precision:** The number of decimal places to which to calculate the tax amount.

- **Minimum accountable unit:** The smallest currency unit that a tax amount can have.
- **Rounding level:** The transaction level at which the rounding is to be performed. The available options are **Header** and **Line**.
- **Rounding rule:** The method that is used to round off the calculated taxes to the minimum accountable unit. The available options are **Up**, **Down**, and **Nearest**.

Define the key parameters at various places within Oracle Fusion Tax. The rounding process derives the tax precision and minimum accountable unit details from the tax setup. The rounding process derives the rounding rule and rounding level details through the predefined processing hierarchy involving:

- Configuration owner tax options defined for the configuration owner and event class
- Event class options for the event class
- Party tax profiles of the parties or party sites as given in the rounding precedence of the configuration owner tax options or in the derived registration party
- Tax

Note

If you plan to use a third party service provider then you must define tax rounding information that is at least as detailed as the rounding information of the service provider.

Setting Up Rounding Rules: Choices to Consider

Criteria for rounding the calculated tax amounts comes from various parties involved in a transaction. For example, for a purchase transaction, the rounding methodology is generally specified by the supplier. Specify rounding details in your tax setup to ensure that your entered invoice amount, including the calculated tax, is the same as the actual invoice amount. For a Receivables invoice, you can specify rounding details based on your organization's policy, but for most countries the rounding criterion is directed by tax legislation.

Rounding requirements can originate from:

- Third parties
- First parties
- Tax legislation

Rounding Requirements from Third Parties

If rounding is based on third party requirements, particularly for purchase transactions, you:

- Define the configuration owner tax options for the combination of business unit or legal entity for which the transaction is registered and the event class. In the **Rounding Precedence** field enter the reference of the third party or third party. For purchase transactions it is either the ship-from party or the bill-from party.
- Define the party tax profile for the third party and specify the rounding level and rounding rule on the General tab as preferred by the third party.

- If the rounding level is at the line level in the party tax profile, create registration details for each tax and specify the rounding rule. Also, define tax registration rules for each tax so that the tax determination process uses the third party registration.
- If a registration record is not defined for the tax registration party, select the **Allow tax rounding override** option on the Create or Edit Tax page. The application then looks at the party account site details and party tax profile details for deriving the rounding rule.

Rounding Requirements from First Parties

If rounding is based on business unit or legal entity requirements, particularly for sale transactions, and configuration owner tax options are defined, you:

- Define the configuration owner tax options for the combination of business unit or legal entity for which the transaction is registered and the event class. In the **Rounding Precedence** field enter the reference of the first party. For sale transactions it is either the ship-from party or the bill-from party.
- Ensure that the party tax profile details are available for the corresponding legal reporting unit. Specify the rounding level and rounding rule on the General tab per the first party requirement or your business policy.
- If the rounding level is at the line level in the party tax profile, create registration details for each tax and specify the rounding rule. Also, define tax registration rules for each tax so that the tax determination process uses the first party registration.
- If a registration record is not defined for the tax registration party, select the **Allow tax rounding override** option on the Create or Edit Tax page. The application then looks at the party tax profile details for deriving the rounding rule.

The rounding criteria applied if configuration owner tax options are not defined and the criteria in the predefined event class options are considered include:

- For a purchase transaction, the predefined event class options use the ship-from party site and ship-from party within the rounding precedence with the default rounding level as the header level. The supplier's rounding preferences are considered first on the transaction. If there are no specific supplier preferences, for example, the party tax profile record does not exist, then the default rounding level of **Header** is considered and the corresponding rounding rule from each tax setup detail is used.
- For a sale transaction, the predefined event class options do not include any rounding precedence details. However, the default rounding level is set to **Line** so the rounding level is always taken as **Line** and the corresponding registration record for the tax registration party is considered for the rounding rule. The tax registration party is identified through the Determine Tax Registration tax rule or tax rule defaults. If a registration record does not exist for the tax registration party, the rounding rule defined within each tax is considered.

Rounding Requirements from Tax Legislation

If rounding is based on tax legislation, the following occurs:

- If the configuration owner tax options are defined for the combination of business unit and legal entity for which the transaction is registered and for the event class, the default rounding level is used from the configuration owner tax options. Select **Blank** as the rounding precedence for the event class.
- If the rounding level is at the line level for the configuration tax options, ensure that the registration record defined for the tax registration party has the rounding rule based on the tax requirements. The tax registration party is identified through the Determine Tax Registration tax rule or tax rule defaults.

Rounding Precedence Hierarchy: How It Is Determined

During the rounding process, the tax precision and minimum accountable unit details are derived from the tax setup. The rounding process derives the rounding rule and rounding level details through the predefined processing hierarchy involving:

- Configuration owner tax options defined for the configuration owner and event class
- Event class options for the event class
- Party tax profiles of the parties or party sites as given in the rounding precedence of the configuration owner tax options or in the derived registration party
- Tax

Settings That Affect Tax Rounding

Key parameters that influence the rounding of calculated tax amount are:

- **Tax precision:** The number of decimal places to which to calculate the tax amount.
- **Minimum accountable unit:** The smallest currency unit that a tax amount can have.
- **Rounding level:** The transaction level at which the rounding is to be performed.
- **Rounding rule:** The method that is used to round off the calculated taxes to the minimum accountable unit.

Options available for the rounding level are:

- **Header:** Applies rounding to calculated tax amounts once for each tax rate per invoice.
- **Line:** Applies rounding to the calculated tax amount on each invoice line.

Options available for the rounding rule are:

- **Up:** the amount is rounded to the next highest minimum accountable unit.
- **Down:** The amount is rounded to the next lowest minimum accountable unit.
- **Nearest:** The amount is rounded to the nearest minimum accountable unit.

How Tax Rounding Is Determined

If you did not define configuration owner tax option settings for the combination of configuration owner and event class, the rounding process uses the default rounding level of the event class and the default rounding rule of the tax.

If you defined a rounding precedence hierarchy in the configuration owner tax option settings for the combination of configuration owner and event class, the rounding process looks for a rounding level and rounding rule in this way:

1. Looks for rounding details in the party tax profiles of the parties and party sites involved in the transaction, according to the rounding precedence hierarchy.
2. If an applicable tax profile is found then uses the rounding level and rounding rule of the tax profile.
3. If the rounding level is at the header level then uses these values to perform the rounding. The process ends.

If the rounding level is at the line level then goes to step 6.

4. If an applicable tax profile is not found then uses the rounding level setting of the configuration owner tax option.
5. If the configuration owner tax option rounding level is at the header level then uses the rounding rule that is set at the tax level for each tax of the transaction to perform the rounding. The process ends.

If the rounding level is at the line level then goes to step 6.

6. If the rounding level is at the line level then:
 - a. For each tax line, uses the rounding rule belonging to the tax registration of the party type derived from the Determine Tax Registration rule.
 - b. If a registration record does not exist for the registration party type and if you did not define configuration owner tax option settings for the combination of configuration owner and event class, then the rounding process uses the rounding rule that is set at the tax level to perform the rounding. The process ends.
 - c. If a registration record does not exist for the registration party type and if you defined a rounding precedence hierarchy in the configuration owner tax option settings for the combination of configuration owner and event class, then the rounding process looks for a rounding rule in this way:
 1. Refers to the party or party site of the first party type defined in the rounding precedence hierarchy.
 2. Uses the rounding rule of the party or party site tax registration, if defined.
 3. If a tax registration is not defined, uses the rounding rule of the party or party site account site details, if defined.
 4. If a rounding rule is not defined, uses the rounding rule of the party or party site tax profile, if defined.

5. If a tax profile is not defined, repeats the previous substeps for each rounding party in the rounding precedence hierarchy.
6. If a rounding rule is found, uses this rounding rule to perform the rounding. The process ends.
7. If a rounding rule is not found, then uses the rounding rule that is set at the tax level to perform the rounding. The process ends.

Tax Rounding: Examples

During the rounding process, the tax precision and minimum accountable unit details are derived from the tax setup. The rounding process derives the rounding rule and rounding level details through the predefined processing hierarchy involving configuration owner tax options, event classes, party tax profiles, and taxes. These examples illustrate how the rounding process works.

Scenario

The following examples represent how the rounding process determines the tax rounded amount based on transaction, tax setup, and rounding details.

The transaction and tax setup details for the two examples are:

- Invoice header amount: 5579 USD
- Invoice line 1 amount: 1333 USD
- Invoice line 2 amount: 1679 USD
- Invoice line 3 amount: 2567 USD
- Applicable taxes:
 - State tax, rate percentages of 12.5%, 6.75%, and 3.33%
 - City tax, rate percentages of 7.5%

The rounding details for the two examples are:

- Rounding level: Header
- Rounding Rule:
 - State tax: Up
 - City tax: Nearest
- Tax precision: 2
- Minimum accountable unit: 0.01

Example 1 represents the rounding details applied at the header level. Applying these factors, the rounding process calculates the invoice amounts, all in USD currency, as follows:

Document Level	Amount	Tax and Tax Rate	Tax Amount Not Rounded	Step 1: Line amounts truncated per tax precision and rounding	Step 2: Difference between the header amount and the sum of	Step 3: Apply the difference amount to the maximum tax line amount	Tax Amount Rounded

				criteria applied at the header level	the line amounts		
Header	5579	- State tax - City tax	395.80 418.42	395.81 418.43	0.01 0.02		395.81 418.43
Line 1	1333	- State tax: 12.5% - City tax: 7.5%	166.62 99.975	166.62 99.97			166.62 99.97
Line 2	1679	- State tax - City tax: 7.5%	55.910 125.92	55.91 125.92			55.91 125.92
Line 3	2567	- State tax - City tax: 7.5%	173.27 192.52	173.27 192.52		0.01 0.02	173.28 192.54

Example 2 represents the rounding details applied at the line level. Applying these factors, the rounding process calculates the invoice amounts, all in USD currency, as follows:

Document Level	Amount	Tax and Tax Rate	Tax Amount Not Rounded	Step 1: Rounding criteria is applied at the line level	Step 2: Line amounts are added to obtain revised header amounts	Tax Amount Rounded
Header	5579	- State tax - City tax	395.8082 418.425		395.82 418.44	395.82 418.44
Line 1	1333	- State tax: 12.5% - City tax: 7.5%	166.625 99.975	166.63 99.98		166.63 99.98
Line 2	1679	- State tax - City tax: 7.5%	55.9107 125.925	55.92 125.93		55.92 125.93

Line 3	2567	• State tax • City tax: 7.5%	• 173.2725 • 192.525	• 173.27 • 192.53		• 173.27 • 192.53

Self-Assessment of Taxes: Explained

Taxes for purchase transactions are usually calculated by the supplier and included in the invoice. The responsibility of collecting and remitting these taxes to the authority lies with the supplier. However, in certain cases the supplier does not have presence (nexus) or is not registered in the customer location. Taxes applicable in such cases, in the customer location, are self assessed by the purchasing organization. Unlike supplier assessed taxes that are paid to the supplier, self-assessed taxes are remitted by the purchasing organization directly to the tax authority.

The key here is that these taxes are to be calculated on the same invoice, but these should not impact the amount payable to the supplier, instead it should be accounted for as a tax liability.

The core requirements remain the same, however, the terminology used for self-assessed taxes vary by tax regime, such as reverse charges, use taxes, and offset taxes. Reverse charge is the terminology primarily used in the European Union, use taxes is the terminology used in the United States, and offset taxes is an alternate solution to handle self-assessment of taxes and is not used by any regime.

Oracle Fusion Tax provides the following options to configure and automate calculation of self-assessed taxes:

- Self-assessment
- Offset taxes
- Reporting-only taxes
- Use taxes

Self-Assessment

Taxes need to be self-assessed by the purchasing organization when the supplier is not registered in the ship-to or bill-to location of the transaction. This is the recommended approach for defining and calculating self-assessed taxes. This is driven based on the registration party used for the transaction.

Registration Party

In the context of a tax applicable to the transaction it is the party whose registration needs to be considered. The tax registration party type default is specified for the tax. As most of the taxes are assessed by the supplier, the default is set to the ship-from or the bill-from location.

Supplier Tax Registration

You can define tax registration for the supplier, the supplier site, and for a particular tax regime. If the tax registration varies by tax or tax jurisdiction, define the registration at a granular level. If the supplier does not have presence in a specific jurisdiction, there are two options for configuration. The first is to create a tax registration record with the registration status as not registered. The second option is not to define a registration record. If you follow the second

option, when you define the condition set, set the operator for the Registration determining factor class to **Is blank**.

Registration Party of the First Party

Similar to the supplier registration, you can define the tax registration records for a legal reporting unit tax profile. For the tax registration of the first party select the **Set as self-assessment (reverse charge)** option. This option triggers self-assessment of taxes when the registration party selected for the tax line is that of the first party. Self-assessment is only applicable for Payables transactions. The option on the first party registration does not impact Receivables transactions. Create a tax registration rule to conditionally use the first party registration when the supplier is not registered. The condition to use for this tax rule is as follows:

Tax Determining Factor Class	Class Qualifier	Tax Determining Factor Name	Operator	Condition Value
Registration	Bill-from party	Registration Status	Equal to	Not Registered

If the registration records are not created for the suppliers without registration, create the condition set as follows:

Determining Factor Type	Class Qualifier	Determining Factor Name	Operator	Condition Value
Registration	Bill-from party	Registration Status	Is blank	

Offset Taxes

Offset taxes is a backward compatible approach that is configured to self-assess taxes. Configure offset taxes in addition to your regular taxes. Offset taxes carry a negative rate and are calculated in the context of the regular tax. Where offset taxes are applicable, the application creates two tax lines with one positive and one negative amount. An offset tax record is a matching, duplicate record with negative amounts that reduces or completely offsets the tax liability recorded in the tax transaction. Use offset taxes when the tax requirement includes creating an offset general ledger posting.

Reporting-Only Taxes

You can identify taxes for reporting purposes only. When these taxes are applicable to the transactions, records are created in the tax repository entities. However, invoice distributions are not created for these taxes. Therefore, there is no impact to the payable amount, payment amount, and invoice accounting.

Use Taxes

Assigning use taxes to invoices, you create a record of the taxes you owe to tax authorities. Oracle Fusion Payables does not create invoice distributions for these taxes. Therefore, there is not any accounting impact due to these taxes. Payables provides a Use Tax Liability Report to review and report use taxes.

Use the Use Tax Liability Report to review, report, and remit use taxes. The report determines the use tax liability by each use tax code by taking the tax rate you defined for each tax code and applying it to the sum of each invoice line to which the tax applies. The report lists in summary or detail the total amount of tax you owe for each tax code on invoices you enter between two dates you

specify when you submit the report. Oracle Fusion Payables displays the amount of use tax you owe in the currency in which you entered an invoice.

Note

Use taxes are defined with the tax type of **Use tax**. The rest of the configuration is the same as the other taxes. This feature is only supported for migrated taxes. You cannot define a new tax with this tax type.

Self-Assessment of Taxes: How It Is Processed

You can let a first party self-assess the taxes calculated on the Payables invoices it receives. A self-assessed tax is a tax calculated and remitted for a transaction, where tax was not levied by the supplier but is deemed as due (and therefore needs to be paid by the purchaser). Taxes need to be self-assessed by the purchasing organization when the supplier is not registered in the ship-to or bill-to location of the transaction.

Settings That Affect Self-Assessment of Taxes

Configure your tax setup to automate self-assessment of regular taxes. The following is an overview of the configuration:

- Default registration party: Set the default values for the direct rule type of **Tax Registration**. For self-assessed taxes set the value to **Ship from** or **Bill from**.
- Supplier registration: The supplier can be registered or not registered. Configure your set up as follows:
 - If the supplier is registered the application creates a record with the registration status of registered. The registration of the supplier is considered and the taxes are assessed by supplier and included as a part of the invoice total.
 - If the supplier is not registered then either you can create a registration record for the tax regime, tax, or tax jurisdiction, with the registration status of not registered. Or skip the step of defining tax registration and define the tax condition set with the operator of **Is blank**.
- Selecting first party registration conditionally: Create a registration record for the first party legal reporting unit. For this registration record select the **Set as self-assessment (reverse charge)** option.

If the supplier is not registered then the registration of the first party legal reporting unit needs to be considered. To trigger this, you need to define a tax registration rule with the following conditions:

- If the ship-from or bill-from party registration status is not registered or is blank then the registration party is either the ship-to party or bill-to party. The following is the condition set for the Determine Tax Registration rule:

Determining Factor Type	Class Qualifier	Determining Factor Name	Operator	Condition Value
Registration	Bill-from party	Registration Status	Equal to	Not Registered

Transaction Input Factor		Line Class	Equal to	Standard Invoice

- If you choose the option of not defining a supplier registration then the condition set is as follows:

Determining Factor Type	Class Qualifier	Determining Factor Name	Operator	Condition Value
Registration	Bill-from party	Registration Status	Is blank	
Transaction Input Factor		Line Class	Equal to	Standard Invoice

Set the rule result to bill-to party so that the registration of the legal reporting unit is considered.

Tip

Instead of including the condition for the transaction input factor, you can specify the event class constraint at the tax rule header.

- Self-assessing tax: For the first party registration record you create for the tax regime, tax, and tax jurisdiction, check the **Set as self-assessment (reverse charge)** option. Once the application selects this registration record for the tax, the tax line is stamped as self-assessed.

How Self-Assessed Taxes Are Processed

Taxes created by the first party organization need to be calculated in the context of the transaction. The application creates both summary and detail tax lines for these taxes and the self-assessed option is enabled for these lines. Invoice lines are not created for taxes, therefore the payable to the supplier does not include these taxes. Invoice distributions are created to account for the tax expense or recovery and liability.

Self-assessed taxes are not included in the invoice totals. Instead, the total of self-assessed taxes for the invoice is displayed as a separate line in the tax charges region of the invoice.

Self-assessed taxes are created for imported payables invoices. This happens when imported transactions have tax lines along with transaction lines and if you enable the **Perform additional applicability for imported documents** option for the event class. For these transactions, additional taxes that are found applicable are treated as self-assessed taxes.

These taxes are accounted along with the rest of the invoice. The accounting treatment for expense and recovery remain the same as any supplier-assessed taxes. The only variation is be the liability account. The tax amount is credited to the tax liability account instead of the payables account.

Self-assessed taxes are a part of the standard tax reports. Apart from this, Oracle Fusion Subledger Accounting provides reports for accounting activity that can be used to track self-assessed tax liability. Use the Account Analysis Report and the Open Account Balance Listing report to track this liability.

You can override the self-assessed flag for the tax line. This impacts the invoice lines and distributions. If you update the summary tax line, all corresponding detail tax lines are updated to reflect this change. If the self-assessed option on some of the detail tax lines is updated then a new summary tax line is created to group the detail tax lines that are being self-assessed.

Note

When you select or deselect the Self-Assessed option on a tax line for the first time, the update does not take effect. You must select the specific tax line, click the row header or a noneditable area, and then select the Self-Assessed option.

Offset Taxes: How They Are Processed

Offset taxes are a backward compatible approach that you can configure to self-assess taxes. Configure offset taxes in addition to the regular taxes. Offset taxes carry a negative rate and are calculated in the context of the regular tax. Where offset taxes are applicable, two tax lines are created with one positive and one negative amount. An offset tax record is a matching, duplicate record with negative amounts that reduces or completely offsets the tax liability recorded in the tax transaction. Use offset taxes when the tax requirement includes creating an offset general ledger posting.

Settings That Affect Offset Taxes

For the offset tax calculation to take effect, do the following:

- Set up offset taxes
- Enable offset tax calculation

You must perform these tasks for setting up offset taxes:

- Set up the offset tax, tax status, and tax rate. Define at least one recovery type lookup to use with offset taxes.
- Create the offset tax and perform the following:
 - a. Use the tax currency of the original tax.
 - b. Select the **Set as offset tax** option.
 - c. Enter a primary recovery type that you defined for offset taxes.
- Set up the tax status for the offset tax. Do not select the **Allow tax rate override** option.
- Set up a 100% tax recovery rate for the offset tax using the recovery type that is defined for the offset tax.

You cannot update the recovery rate on an offset tax line. The recovery rate is always 100% in order to create credit entries that match the original tax amounts. When you create an offset tax, you enter a primary recovery type with a recoverable rate of 100% and a 100% recovery rate.

- Set up the offset tax rate and perform the following:
 - a. Enter a negative rate amount.
 - b. Assign the tax recovery rate that is defined for offset tax.
 - c. Do not select the **Allow ad hoc tax rate** option.

- Set up the original tax with the required configuration to enable the tax. For the tax rate of the original tax (nonoffset tax), assign the offset tax rate code in the **Offset Rate Code** field.

Complete the following configuration steps to enable calculation of offset taxes for a transaction:

- For the configuration owner tax options for the Payables event classes, enable offset tax calculation by selecting the **Allow offset tax calculation** option. Also, specify the offset tax basis.
- Select the **Allow offset taxes** option on the party tax profile if offset taxes are to be calculated for the transactions created for the party. Select this option for the party type chosen in the **Offset Tax Basis** field for the configuration owner tax options.

How Offset Taxes Are Processed

Offset taxes applicable to an invoice are created with two tax lines entries, one for the tax and one for the offset tax. The line for the offset tax has the offset option enabled. This line carries the reference to the original tax line. Two Invoice lines are created for these taxes, one for each tax.

The amount for the regular tax line is always debited to the tax expense or recovery account or both, depending on the recoverability of the tax. The credit is posted to a payables account which is offset by the negative amount credited to the payables account due to the offset tax line. The debit of the offset tax line is posted to the tax liability account and this indicates the liability that the first party organization has towards the tax authority for the self-assessed tax.

You cannot override offset tax lines. However, you can update the tax line calculated for the original tax. When you update the tax rate percentage or amount or when you cancel the tax line, the corresponding tax line for the offset taxes is updated.

Reporting-Only Taxes: How They Are Processed

You can identify taxes for reporting purposes only. When these taxes are applicable to the transactions, records are created in the tax repository entities. However, invoice distributions are not created for these taxes. Therefore, this does not impact the payable amount, payment amount, and invoice accounting.

Settings That Affect Reporting-Only Taxes

You set up reporting-only taxes by selecting the **Set tax for reporting purposes only** option for the tax.

How Reporting-Only Taxes Are Processed

Tax lines for reporting-only taxes have the **Reporting Only** option enabled. Tax distributions are not created for these tax lines.

For Oracle Fusion Payables invoices, these lines are not displayed on the invoice lines. The total of the reporting-only taxes are displayed in the tax totals region of the invoice.

For Oracle Fusion Receivables transactions, reporting-only taxes are handled as any other tax. These taxes are considered as a part of the invoice and are accounted for accordingly.

You cannot update the **Reporting Only** option on the detail tax lines.

Manage Configuration Options and Service Subscriptions

Configuration Options: Explained

Set up configuration options to associate tax regimes with the parties in your company that have a tax requirement under these tax regimes.

There are two fundamentally different approaches to tax configuration options namely:

- Using tax configuration setup defined within Oracle Fusion Tax.
- Using an external tax service provider.

Using Tax Configuration Setup Defined Within Oracle Fusion Tax

Use the tax configuration setup in Oracle Fusion Tax to calculate, record, and account for transaction taxes on transaction taxable transactions.

The following concepts control how this setup is managed, used, and shared:

- Tax configuration owner
- Tax content subscription
- Existing tax option

Tax Configuration Owner

The tax configuration owner is a business unit, legal entity, or the global configuration owner that owns the data. The global configuration owner is an abstract owner which is used to define the owner of content that can be shared by any business units and first party legal entities.

Identify a specific first party legal entity as a parent first party organization to allow the configuration to be owned by a specific first party and shared by other parties. You can then share this setup with another first party legal entity or business unit for their transactions. Use a parent first party organization tax configuration to share among a group of first party organizations but you still have the tax setup managed by a single first party organization.

In the case of global configuration owner, if you are assigned the Create Tax Regime privilege, you have update rights to all tax configuration data maintained by the global configuration owner.

Tax Content Subscription

Use tax content subscriptions to define which configuration owner's setup is used for transactions for a specific first party legal entity or business unit for a specific tax regime. Also, use tax content subscriptions to specify whether any shared content can be overridden by the subscribing party to allow unique, separate setup for certain tax content.

Party override is permitted for the following setup:

- Tax
- Tax status
- Tax rate
- Tax recovery rate
- Tax rules

Do this indirectly by adding higher priority rules specific to the subscribing first party legal entity or business unit.

The content subscription options are:

Tax Content Subscription	Description
Common configuration	For tax processing, the tax determination process uses the shared tax content defined and maintained by the global configuration owner.
Party-specific configuration	The specified first party organization defines and maintains its own tax content. For tax processing, the tax determination process uses only the tax content owned by the specific first party legal entity or business unit.
Common configuration with party overrides	This option is similar to the common configuration in that it allows you to use tax content owned by the global configuration owner. However, you can also maintain party-specific content which is used in preference to the common configuration content. In the absence of tax content owned by the specific first party organization, the tax determination process uses the tax content owned by the global configuration owner.
Parent first party organization with party overrides	This option is similar to the common configuration with party override subscription except instead of the tax content being owned by the global configuration owner it is owned by a specific first party legal entity. You can override the specific first party setup.

A similar concept is used to define where you use tax exceptions for a specific tax configuration. The tax subscription option available for product exceptions is dictated to some extent by the main tax content subscription as follows:

Options Defined for Tax Content Subscription	Content Subscription Options Available for Product Exceptions	Description
Common configuration	Common configuration	For tax processing, the tax determination process uses tax exceptions defined and maintained by the global configuration owner.
Party-specific configuration	Party-specific configuration	The specified first party organization defines and maintains its own tax exceptions. For tax processing, the tax determination process uses only the tax exceptions owned by the specific first party organization.
Common configuration with party overrides	Common configuration	For tax processing, the tax determination process uses tax exceptions defined and maintained by the global configuration owner.
Common configuration with party overrides	Party-specific configuration	The specified first party organization defines and maintains its own tax exceptions. For tax processing, the tax determination process uses only the tax exceptions owned by the specific first party organization.

Parent first party organization with party overrides	Party-specific configuration	The specified first party organization defines and maintains its own tax exceptions. For tax processing, the tax determination process uses only the tax exceptions owned by the specific first party organization.

Set up tax configuration options when you create a tax regime or when you create a party tax profile for a first party legal entity or business unit. Both setup flows display and maintain the same party or regime definitions. Specify effective start and end dates to identify which configuration should be used based on the transaction date. You can enable the business unit so that Oracle Fusion Tax automatically uses the configuration of the legal entity. Once you set this option the application records the date it occurred as the start date. This date is used and compared to the transaction dates to identify if the application uses the legal entity subscription in preference to the subscription of the business unit. The specific first party legal entity that is used is defined by the legal entity associated with the transaction.

Existing Tax Option

Copy a tax from an existing tax in the Manage Taxes page to share tax registrations and tax jurisdictions while maintaining two versions of the same tax, owned by two different tax configuration owners each with their own tax statuses, tax rates, and tax rules. For example, this is useful when you set up US sales and use tax that requires a significant number of tax registrations and tax jurisdictions.

Using External Tax Service Provider

Oracle Fusion Tax lets you use the tax services of external service providers for tax calculation of US Sales and Use Tax on Receivables transactions. Oracle Fusion Tax provides transparent integration between the external provide tax service and Oracle Fusion Receivables.

You can use the tax services of these external service providers:

- Taxware, LP: a First Data Company
- Vertex, Inc.

The setup for provider services is called a service subscription. A service subscription applies to the transactions of one configuration option setup for a combination of tax regime and legal entity or business unit. Set up service subscriptions when you create a tax regime or when you create a party tax profile for a first party legal entity or business unit. Specify effective start and end dates to identify which configuration should be used based on the transaction date.

Content Subscriptions: Critical Choices

Choose which of the following tax content subscription options to use to optimize your tax setup:

- Whether to use service subscriptions versus Oracle Fusion tax content.
- What type of tax configuration options to use.
- When to change from business unit to using tax configuration at the first party legal entity.

- When to use create from an existing tax option.

Using a Service Subscription Versus Oracle Fusion Tax Content

Use the tax services of external service providers where tax content is required for Receivables transactions for a significant number of tax jurisdictions. You should not use a service provider if their use is not needed to support US Sales and Use Tax regimes or you need to create and maintain tax regimes outside of the United States.

You can use the tax services of these external service providers:

- Taxware, LP: a First Data Company
- Vertex, Inc.

Using Tax Configuration Options

If you decide not to use an external service provider or you need to create tax content for tax regimes outside the US then create and maintain your tax content in Oracle Fusion Tax.

Once the decision is made to use Oracle Fusion Tax you need to choose the level of tax configuration options. Sharing tax content prevents the need for duplicate maintenance with its inefficiencies and potential inconsistencies. Consider these scenarios and options:

Scenario	Option
You have a single central corporate tax center responsible for maintenance of tax setup for all legal entities and business units.	Use the common configuration with party override option. This allows a single tax setup to be created and maintained by the corporate tax center.
You need to have strict control of who can maintain the tax content.	Use the common configuration option. By not allowing party override you restrict the access to the global configuration owner to an authorized user who can maintain all of the tax content.
You have regional centers responsible for tax content.	Use the parent first party configuration with party override option. This permits a regional setup with an actual or logical parent legal entity to be created and maintained by each regional center.

Even if there is no obvious need to share tax configuration, for example, there is only a single first party legal entity operating in each tax regime, significant business events such as takeovers or mergers may mean that there could be a future need to share content. In this case the original first party legal entity can act as the configuration owner and then any subsequent first party can subscribe to the first party's content using the parent first party configuration with party override. Alternatively, set up the original tax content using global configuration owner in preparation for any future business event that requires tax content to be shared.

Changing from Business Unit to Using Tax Configuration at the First Party Legal Entity

If you can standardize your tax setup across all business units for a given legal entity then consider moving to configuring and using tax setup at the legal entity

level. Set the **Use subscription of the legal entity** option on the business unit tax profile. Oracle Fusion Tax records the date this occurs and compares it to the transaction date to identify if the legal entity subscription should be used in preference to the subscription to the business unit.

Using Create from an Existing Tax Option

Create a tax from an existing tax when you have a need to share tax jurisdictions and tax registrations. You maintain the tax jurisdictions and tax registrations once for taxes with the same name within the same tax regime owned by different configuration owners.

Tax Configuration Options in the Tax Determination Process: How They Are Used

At transaction time the owner of the transaction derives the configuration options that are used. When you enter a transaction for a given first party organization, the tax data applied to that transaction is determined by the configurations defined for the combination of that first party organization (business unit or first party legal entity) and the tax regime derived from the addresses or from the tax classification codes used on the transaction.

Settings That Affect the Application of Tax Data on Transactions

Use tax content subscriptions to define which configuration owner's setup is used for transactions for a specific first party legal entity or business unit for a specific tax regime. Also, use tax content subscriptions to specify whether any shared content can be overridden by the subscribing party to allow unique, separate setup for certain tax content.

Tax content subscription options are:

- Common configuration
- Party-specific configuration
- Common configuration with party overrides
- Parent first party organization with party overrides

How Tax Data Is Determined

Based on the defaults and tax rules you have defined, tax data is applied to transactions as follows:

Configuration for Taxes and Rules Option	Tax Content Available
Common configuration	• The tax determination process uses only the tax content owned by the global configuration owner. • If you manually override tax information on the transaction only tax content owned by the global configuration owner is displayed in the list of valid values available.

Party-specific configuration	• The tax determination process uses only the tax content owned by the first party organization, business unit or first party legal entity, for whom the transaction is being entered. • If you manually override tax information on the transaction only tax content owned by the first party organization is displayed in the list of valid values available. Note For the first party organization it can be the business unit owning the tax content or the first party legal entity-owned setup depending on the specific subscription being used.
Common configuration with party overrides	• The tax determination process uses any tax content owned by the first party for whom the transaction is being entered. In the absence of tax content owned by that first party organization, the tax determination process uses tax content owned by the global configuration owner. • If you manually override tax information on the transaction both the override tax content owned by the specific first party and the tax content owned by the global configuration owner that you have not overridden are displayed in the list of valid values available.
Parent first party organization with party overrides	• The tax determination process uses any tax content owned by the first party for whom the transaction is being entered. In the absence of tax content owned by the first party organization, the tax determination process uses tax content owned by the parent first party organization. • If you manually override tax information on the transaction both the override tax content owned by the specific first party and the tax content owned by the designated parent first party organization that you have not overridden are displayed in the list of valid values available.

If you are using product exceptions, those exceptions are applied to the transactions as shown in the following table:

Configuration for Product Exceptions	Tax Exceptions Available
Common configuration	The tax determination process uses only the tax exceptions defined and maintained by the global configuration owner.
Party-specific configuration	The tax determination process uses only the tax exceptions owned by the specific first party organization

Setting Up Tax Configuration Options: Worked Example

This example demonstrates how you set up the appropriate tax configuration options for your company that has three regional centers. These centers are responsible for tax setup and maintenance among other corporate activities. Each of these regional corporate centers is associated with a first party legal entity and business unit.

Your company has their regional centers in:

- North America (NAM), based in Redwood City, California, US
- Asian and Pacific (APAC), based in Melbourne, Australia
- Europe, Middle East, and Africa (EMEA), based in London, UK

Each country has a single first party legal entity with a single business unit, except for:

- Countries which have the regional corporate centers have a first party legal entity and business unit for each corporate center.
- Sales, marketing, and manufacturing organization has a first party legal entity and business unit.

Create tax regimes for each country and the appropriate tax configuration options.

Prerequisites

To create the appropriate tax configurations, you must set up the following:

1. The legal entities for:

First Party Legal Entity	Country
EMEA LE	UK
GB LE	UK
FR LE	FR
DE LE	DE
APAC LE	AU
AU LE	AU
SI LE	SI
NZ LE	NZ
NAM LE	US
US LE	US
CA LE	CA

2. The sales, marketing, and manufacturing organization's business unit uses the tax configuration of the legal entity.

3. The relevant tax regimes for each country's tax include:

Region	Country	Tax Regime	Tax
EMEA	United Kingdom	GB VAT	GB VAT
EMEA	France	FR VAT	FR VAT
EMEA	Germany	DE VAT	DE VAT
APAC	Australia	AU GST	AU GST
APAC	Singapore	SI VAT	SI VAT
APAC	New Zealand	NZ VAT	NZ VAT
NAM	United States	US SALES TAX	• US STATE SALES TAX • US COUNTY SALES TAX • US CITY SALES TAX
NAM	Canada	CA HST & GST	• CA HST • CA GST

Setting Up Tax Configuration Options

1. On the **Create Legal Entity Tax Profile** page select EMEA LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	GB VAT
Configuration for Taxes and Rules	Party-specific configuration
Configuration for Product Exceptions	Party-specific configuration
Parent First Party Organization	Blank
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

2. Select GB LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	GB VAT
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	EMEA LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

3. Select FR LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	FR VAT
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	EMEA LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

4. Select DE LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	DE VAT
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	EMEA LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

5. Select APAC LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	AU GST
Configuration for Taxes and Rules	Party-specific configuration
Configuration for Product Exceptions	Party-specific configuration
Parent First Party Organization	Blank
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

6. Select AU LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	AU GST

Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	APAC LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

7. Select SI LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	SI VAT
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	APAC LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

8. Select NZ LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	NZ VAT
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	APAC LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

9. Select NAM LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	US SALES TAX
Configuration for Taxes and Rules	Party-specific configuration
Configuration for Product Exceptions	Party-specific configuration
Parent First Party Organization	Blank
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

10. Select US LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	US SALES TAX
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	NAM LE
Effective Start Date	01-Jan-01

Click **Save and Create Another**.

11. Select CA LE in the **Legal Entity** field. In the **Configuration Options** tab enter:

Field	Value
Tax Regime Code	CA GST & PST
Configuration for Taxes and Rules	Parent first party with party overrides
Configuration for Product Exceptions	Parent first party organization
Parent First Party Organization	NAM LE
Effective Start Date	01-Jan-01

Click **Save and Close**.

FAQs for Manage Tax Regimes

What's a service subscription?

A service subscription is the setup for provider services. It applies to the transactions of one configuration option setup for a combination of tax regime and legal entity or business unit. Oracle Fusion Tax lets you use the tax services of external service providers for tax calculation of US Sales and Use Tax on Oracle Fusion Receivables transactions.

You can use the tax services of these external service providers:

- Taxware, LP: a First Data Company
- Vertex, Inc.

If you integrate with a tax service provider, these actions are not required for Receivables transactions:

- Entering tax classification codes on transaction lines.
- Entering transaction line attributes in the Additional Tax Determining Factors region.

Tax service provider integration returns the calculated tax lines to Oracle Fusion Tax. The tax lines for Receivables transactions returned by tax service providers are stored in Oracle Fusion Tax similar to the way tax lines calculated by the application itself are stored.

Why are controls and defaults important?

Throughout Oracle Fusion Tax care is taken to minimize your effort in creating setup. One way of doing this is the extensive use of defaulting so that you can enter your data once and use the defaults that appear on the subordinate or child records where applicable. For example, many values you enter on the tax regime appear as defaults on each tax that is associated to that tax regime. Generally, you can override the data where necessary if the defaulted value is not correct.

Also, to ensure maximum flexibility, as well as to ensure that the accuracy and integrity of the data and transactions are maintained, Oracle Fusion Use Tax makes extensive use of data-driven controls that enable and control how tax functionality works. For example, you have the requirement to set up tax recovery for value-added tax (VAT) processing. Enable the **Allow tax recovery** option on the tax record so you can set up tax recovery rates for this type of tax.

Manage Tax Rates

Define Tax Rates: Overview

The tax determination process identifies the applicable tax rate when taxes are considered applicable to a transaction. Tax rates can apply to a specific location or jurisdiction, for example, you define state, county, and city jurisdiction-based rates for a US Sales and Use Tax regime. Tax rates can change over time, for example when a tax rate increase occurs, you end date one rate period definition and create a new rate period with an effective start date. There can be tax exceptions or exemptions to tax rates based on specific items, third parties, general ledger accounts, or other factors. You must set up tax rates for tax statuses and optionally for tax jurisdictions. For tax statuses, set up tax rate records for each applicable tax rate that a tax status identifies. For tax jurisdictions, set up tax rate records to identify the tax rate variations for a specified tax and tax status within different tax jurisdictions. Set up your tax rates in the Define Tax Rates activity.

The tax rate determination process can be viewed as a two step process:

- Tax rate determination, which includes:
 - A default tax rate associated to the tax
 - An effective rate period
 - Jurisdiction-based rates
 - Tax rules; direct rate rules, tax rate rules, and account-based direct rate rules
 - Migrated tax classification codes and tax classification-based direct rate rules
- Tax rate modification, which includes:
 - Item or product fiscal classification exceptions using special rates, discounts, or surcharges

- Third party and third party site tax exemptions using special rates and full or partial exemptions

Tax Rate Setup: Explained

Consider the applicable tax statuses and optionally tax jurisdictions when defining the tax rate setup to determine applicable tax rates on a transaction.

Tax Statuses

A tax status is the taxable nature of a product in the context of a transaction and a specific tax on the transaction. You define a tax status to group one or more tax rates that are of the same or similar nature. Each tax must have at least one status defined and one status assigned as a default. Create tax rules to set alternate values as required.

For example, one tax can have separate tax statuses for standard and manually entered tax rates.

Tax Jurisdictions

A tax jurisdiction is an incidence of a tax on a specific geographical area. A tax jurisdiction is limited by a geographical boundary that encloses a contiguous political or administrative area, most commonly the borders of a country. Often this is represented by a state, province, city, county, or even a tax zone. In Oracle Fusion Tax, a tax jurisdiction can use the geography setup from your Oracle Fusion Trading Community Model geography hierarchy to identify a tax rate. Taxes such as Canada's Harmonize Sales Tax (HST) and Provincial Sales Tax may require tax rates at the jurisdiction level.

For example, US Sales and Use Tax are applicable based upon the jurisdictions you generally define for state, county, and city geographies.

Tax Rates

You must set up at least one tax rate for each tax status. You may need to set up additional tax rates at the tax jurisdiction level if the tax rate applicable for the tax is unique for a particular tax jurisdiction.

For example, in Canada, HST is applied at a 13% rate in most provinces that have adopted HST except for British Columbia where the tax rate is 12% and Nova Scotia where the tax rate is 15%. To satisfy this requirement define a single tax rate of 13% with no tax jurisdiction associated and define 12% and 15% tax rates and associate them with the British Columbia and Nova Scotia jurisdictions respectively. This minimizes setup by creating an exception-based setup and a default option for the most commonly utilized tax rate percentage.

Tax Rate Types

You can express tax rates in terms of percentage or quantity. A quantity-based tax rate is based upon the number of items purchased or events that occur. For example, a taxing jurisdiction passes a law that each package of cigarettes sold is subject to a tax of 0.87 USD. This tax is considered a quantity-based tax as it is assessed based upon the number of packages purchased not the price of the product.

Tax Classification Code Set Assignments

When defining a tax rate select the tax classification code set assignments of **Order to cash**, **Procure to pay**, and **Expenses**. These assignments determine if the tax rate code you define is applicable within a specific product and set assignment at transaction time. In addition the set assignment of tax classification codes is derived based on the configuration owner that is part of the tax rate code definition.

When you create a tax rate code where the:

- Configuration owner is the global configuration owner: The tax classification code is assigned to all sets that have the determinant type of business unit and contain the determinant value of the business units that have the subscription of the legal entity. The tax classification code is also assigned to the business units that do not have the subscription of the legal entity but subscribe to the global configuration owner data for this tax regime.
- Configuration owner is the legal entity: The tax classification code is assigned to all sets that have the determinant type of business unit and contain the determinant value of the business units that use the subscription of legal entity. The tax classification code is also assigned to business units that subscribe to this specific legal entity as party first party organization.
- Configuration owner is the business unit: The tax classification code is assigned to all sets that have the determinant type of business unit and contain the determinant value of the business unit for which the content is created.

Note

The application does not assign the tax classification codes to the global set of COMMON for any of these scenarios.

You can use the tax classification codes created as determining factors when defining tax rules. When you use the regime determination method of standard tax classification code, the tax classification based direct rate rules can be defined with these codes as factors for direct rate determination. Maintain the tax classification codes using the associated lookup types of **Party Tax Profile Input Tax Classification**, **Party Tax Profile Output Tax Classification**, and **Party Tax Profile Web Expense Tax Classifications**.

Rate Periods

You can define one or more rate periods for a tax rate as long as the date ranges do not overlap. This allows for a change in tax rates over time without requiring a new tax rate code definition. You can define default effective periods for tax rate periods. This effectivity must be unique across tax regime, configuration owner, tax, and tax status. This allows flexibility if there is a requirement to define a new tax rate code and identify the new rate period as a default when existing rate periods exist on another tax rate code. Define tax rules as exceptions to default tax rates.

Tax Recovery

When the associated tax allows tax recovery you can define tax recovery or offset tax rates. Associate the offset tax or the default tax recovery rate and tax rule defined for tax recovery to the tax rate code. If the tax rule does not evaluate to true at transaction time then the default tax recovery rate is applicable. Ensure that the tax recovery rate and tax rate periods overlap or the application does not calculate tax recovery.

Tax Accounts

Define tax accounting for the tax rate code either as a default from the tax setup or an override of values at the tax rate level. Tax accounts are defined for the legal entity and optionally for the business unit. The accounts you define are tax expense accounts, tax revenue accounts, tax finance charge accounts, and accounts specific to tax recovery.

Setting Up Tax Rates: Choices to Consider

Set up tax rates for your tax statuses and tax jurisdictions. For tax statuses, set up a tax rate record for each applicable tax rate that a tax status identifies. For tax jurisdictions, set up tax rate records to identify the tax rate variations for a specific tax within different tax jurisdictions. For example, a city sales tax for a state or province may contain separate city tax jurisdictions, each with a specific rate for the same tax.

At transaction time, you can override tax rates on calculated tax lines depending on your setup.

Quantity-Based Tax Rates

You can define tax rates as a percentage or as a value per unit of measure. The **UOM** field is optional in the tax setup. However, if you do enter the UOM there is validation that must be passed in order for the tax rate to be applied. This includes:

- If the UOM exists on the tax rate, the transaction must have a matching UOM or a blank UOM.
- Only one active tax rate can exist for any given tax rate period. You cannot create one tax rate for each UOM that might be used within a single tax rate code.

You can define the quantity rate type for a tax rate code with the **UOM** field left as blank. At transaction time, the application multiplies the quantity by the tax rate and the UOM is not taken into account.

Override of Tax Rates on Tax Lines

Part of the configuration options is to allow you to override the calculated tax rate on a tax line. The following controls should be considered during setup:

- **Allow override of calculated tax lines:** This option exists on the Create Configuration Owner Tax Options page for the configuration owner and event class. In order for you to manually override tax lines this option must be selected for the combination of configuration owner and event class. If a configuration owner tax option does not exist the value on the predefined event class setting is used.
- **Allow override of calculated tax lines:** You must select this option on the associated tax record to be able to override values on a calculated tax line.
- **Allow tax rate override:** You must select this option on the associated tax status record to be able to override tax rates on a calculated tax line.
- **Allow ad hoc tax rate:** You must select this option on the tax rate record if you want to allow the flexibility of not being restricted to predefined tax rates and allow user entered rates on calculated tax lines.

If you allow ad hoc tax rates you must indicate if the adjustment to a tax amount updates the taxable basis or the tax rate.

Note

You can set the **Transaction Tax Line Override** profile option to control which users can make changes to the transaction line such as selecting a different tax status or tax rate.

Tax Rates Controls and Defaults: Points to Consider

Set up tax rates for your tax statuses and optionally for tax jurisdictions. For tax statuses, set up a tax rate record for each applicable tax rate that a tax status identifies. For tax jurisdictions, optionally set up tax rate records to identify the tax rate variations for a specific tax within different tax jurisdictions.

Defining Controls and Defaults for Tax Rates

The following table describes the defaults and controls available at the tax rate level.

Header Region

Field	Description	Default Derived from	Default Appears on	Controls
Tax Rate Type	Lookup code that controls the type of tax rate. Values are: • Percentage: The tax rate is a percentage based on the line value • Quantity: The tax rate is based on the currency per UOM such as USD per kilo	None	None	Defines whether the tax rate is either percentage or quantity based
Tax Classification Code Set Assignments • Order to cash • Procure to pay • Expenses	Controls where tax classification codes that are created in parallel to the creation of the tax rate are available for use	None	None	If selected then the tax classification code associated with this tax rate is available for use in order to cash, procure to pay, and expenses transactions

Rate Periods Region

Field	Description	Default Derived from	Default Appears on	Controls
Set as Default Rate	Controls whether this tax rate is the default rate for the defined tax status for the period specified	None	None	If selected then this tax rate is the default tax rate for the defined tax status for the period specified. Where there are no tax rate rules applicable at transaction time then the tax determination process selects this tax rate where the associated tax status is derived during the period specified.

Main Details Tab, Other Details Region

Field	Description	Default Derived from	Default Appears on	Controls
Tax Inclusion Method	Defines whether the tax is: • Standard noninclusive handling: This option calculates the taxes as exclusive of the given transaction line amount • Standard inclusive handling: This option calculates the taxes as inclusive of the given transaction line amount • Special inclusive handling: This option calculates the taxes as inclusive of the given transaction line amount, but the calculation methodology differs from the standard inclusive process	None	None	Use this option in conjunction with other setup on tax, party tax profile, tax registration, and transaction details to control the inclusiveness of a line amount at transaction time

Allow override and entry of inclusive tax lines	Controls whether you can override and enter inclusive or exclusive line amounts	Tax	None	Use this option in conjunction with the Transaction Tax Line Override profile option as well as Allow override of calculated tax lines and Allow override and entry of inclusive tax lines options for the configuration owner tax options to allow you to update the Inclusive option on tax line at transaction time
Allow tax exceptions	Controls whether tax exceptions are allowed for this tax	Tax status	None	If this option is selected tax exceptions can be processed at transaction time
Allow tax exemptions	Controls whether tax exemptions are allowed for this tax	Tax status	None	Use this option in conjunction with the Allow exemptions option on the configuration owner tax options and when both are selected allows tax exemptions to be processed at transaction time
Allow ad hoc tax rate	Controls whether you can enter ad hoc tax rates at transaction time	None	None	Use this option in conjunction with Transaction Tax Line Override profile option and the Allow override of calculated tax lines option for the configuration owner tax options. If all are selected allows you to enter tax rates.

Adjustment for Ad Hoc Tax Amounts	Lookup code that is used when you select the Allow ad hoc tax rate option	None	None	When the Allow ad hoc tax rate option is selected the lookup value in this field controls how the application controls the change in tax value, either as a change to the taxable basis or to the tax rate value used
Default Settlement Option	Lookup code to indicate whether an input tax is recovered when an invoice is recorded or only when the invoice is paid and whether an output tax is due for settlement when the invoice is issued or only when the payment is received against it	Tax status	None	Defines whether the settlement is immediate, for example, at invoice time, or deferred, for example, at payment time

Tax Rates for a Canadian Tax Regime: Examples

The following scenarios illustrate when you might want to use exceptions or tax rules to meet your Canadian tax requirements.

Scenario

The first scenario includes tax calculation for a Canadian tax regime. Purchases made in Ontario are generally taxed for Provincial Sales Tax (PST) at a tax rate of 8%. Accommodation purchases are generally taxed at 5% and food is generally exempt from tax.

EDC Corporation's Ontario store has been invoiced for employee accommodations, including hotel facilities and food for a conference they attended. The invoice is for a hotel room, use of hotel office facilities, and food.

Set up tax rates to meet PST requirements for the store in Ontario as follows:

- Define a jurisdiction-based tax rate of 8% which is applicable to the hotel facilities usage. This is the standard tax calculation for the jurisdiction of Ontario.
- Define a rate exception with a special rate of 5% for the hotel room. This exception can be driven by a product fiscal classification.
- Define a Determine Tax Status rule which points to the exempt status of 0% rate for food based on a product fiscal classification. Use the tax rule

over an exception since you can use a specific tax status and the default rate of 0% for that tax status.

Scenario

Another example of tax calculation for a Canadian tax regime is purchases of some items made on First Nation reserves have a First Nations Tax that is applicable at a tax rate of 5%. Since the requirements drive the applicability of the tax as well as the tax status and tax rate you can define a direct rate rule to handle both the applicability and the tax rate.

Manage Tax Recovery Rates

Tax Recovery: Explained

Tax recovery is the full or partial recovery of tax paid on purchases by a registered establishment to offset the tax collected from sales transactions. There are usually many regulations surrounding the details of tax recovery. For example, in most European countries, tax is fully recoverable on all purchases except for businesses that only sell nontaxable supplies, such as financial institutions. In cases in which businesses only sell nontaxable supplies, value-added tax (VAT) on their purchases is not recoverable. In certain countries like Canada, more than one type of recovery is possible. Tax authorities designate the tax recovery rates that indicate the extent of recovery for a specific tax.

Tax recovery information on a transaction may be viewed on the invoice distributions level, including any pertinent information for nonrecoverable and recoverable taxes where applicable.

If the recovery rate on a tax varies based on one or more transaction factors, set up recovery rate rules to determine the appropriate recovery rate on the transaction. For example, most VAT-type taxes allow full recovery of taxes paid on goods and services that relate to taxable business supplies. In cases where an organization makes purchases relating to both taxable and exempt supplies, the tax authority can designate a partial recovery rate to reflect the proportion that relates to the taxable supplies. For instance, in the UK, Her Majesty's Revenue and Customs (HMRC) have two methods to work out the tax recovery rate percentage:

- Standard method: Taxable supplies divided by the value of all supplies added together (both taxable and exempt). This formula is based on a previous period with an adjustment when the actual proportions are known.
- Special method: A custom formula approved by HMRC that reflect a business's unique circumstances that must produce a fair and reasonable result. Approval to use this special method is based on the business type, the types of supplies, and the business's cost structure.

The Determine Recovery Rate process evaluates tax recovery for applicable taxes. The Determine Recovery Rate process determines the recovery rate to apply to each recovery type for each applicable tax on the transaction.

Determine Recovery Rate

Tax rules use the tax configuration setup defined within Oracle Fusion Tax and the details on the transaction to determine which taxes apply to the transaction and how to calculate the tax amount for each tax that applies to the transaction.

Tax rules let you create a tax determination model to reflect the tax regulations of different tax regimes and the tax requirements of your business. You can create a simple tax model or a complex tax model. A simple tax model makes use of the default values without extensive processing while a complex tax model considers each tax requirement related to a transaction before making the final calculation.

The tax determination process evaluates, in order of priority, the tax rules that are defined and the details on the transaction. If the first rule is successfully evaluated, the result associated with the rule is used. If not, the next rule is evaluated until either a successful evaluation or default value is found.

The tax determination process is organized into rule types. Each rule type identifies a particular step in the determination and calculation of taxes on transactions. The rule type and related process used for tax recovery determination is Determine Recovery Rate. This is an optional setup that is applicable to taxes that have tax recovery enabled.

This process determines the recovery rate to apply to each recovery type for each applicable tax on the transaction that allows for full, partial, or no recovery of the tax amount. In many cases, the tax determination process uses either the recovery rate associated with the tax rate or the default recovery rate defined for the tax. However, if the tax recovery rate varies according to determining factors, such as intended use, then create a Determine Recovery Rate tax rule to derive the recovery rate.

You can only set up a Determine Recovery Rate tax rule for taxes that have the tax recovery option enabled. For countries with more than one type of recovery, use primary and secondary recovery types to address this requirement. After the recovery rate is determined for each recovery type, the tax determination process determines the recoverable amounts against each recovery type for each tax line. The remaining tax amount becomes the nonrecoverable tax amount for the tax line.

The following outlines the process that results in a recoverable tax amount for each recoverable tax distribution:

1. Allocate tax amount per item distributions. While taxes are determined at the transaction line level, tax recovery is determined at the transaction line distribution, or item distribution, level.
2. Determine recovery types. The tax determination process determines for each tax and item distribution, whether the primary and, if defined, secondary recovery types apply. The result of this process is a tax distribution for each recovery type for each tax and item distribution. If recovery types are not defined, go to step 5.
3. Determine recovery rates. For each tax distribution, the tax determination process determines the recovery rate based on the following:
 - a. Consider the Determine Recovery Rate tax rule for the first recoverable tax distribution.

- b. Use the tax recovery rate derived from the tax rule.
 - c. If the tax determination process cannot derive a tax rule based on the transaction values, use the tax recovery rate associated with the tax rate for the tax line.
 - d. If there is no tax recovery rate associated with the tax rate, use the default tax recovery rate for the recovery type and tax. If there is no default tax recovery rate for the recovery type and tax, use the default tax recovery rate defined for the tax.
 - e. Repeat the above steps for each recoverable tax distribution, if applicable.
4. Determine the recoverable amounts. The tax determination process applies the recovery rates to the apportioned tax amounts to determine the recoverable tax amounts. The result of this process is a recoverable tax amount for each recoverable tax distribution.
5. Determine the nonrecoverable amount. Oracle Fusion Tax calculates the difference between the apportioned tax amount of every tax line per item distribution and the sum of the recoverable tax distribution to arrive at the nonrecoverable tax amount, and then creates a nonrecoverable tax distribution for this amount. If a primary recovery type was not defined for a tax, the entire apportioned amount for the item distribution is designated as the nonrecoverable tax amount.

Tax Recovery: Points to Consider

The tax determination process uses your tax configuration setup and the details on the transaction to determine which taxes are recoverable.

You need to decide when to:

- Create Determine Recovery Rate rules
- Specify separate ledger accounts
- Manage tax distributions
- Specify settlement options

When to Create Determine Recovery Rate Rules

Use recovery rate rules to determine the applicable recovery rates when this determination is based on one or more transaction factors, including the parties, locations, product or product purpose.

At transaction time, the tax determination process uses the recovery rate derived from the recovery tax rules. If no recovery rate rules are defined or if no existing recovery rate rule applies to the transaction, the tax determination process uses the default recovery rate that you define.

Commonly used factors that are used in tax recovery rules include:

- Intended use, such as resale or manufacturing
- Party fiscal classification, such as reseller or charitable organization

- Location, such as British Columbia or New Brunswick

When to Specify Separate Ledger Accounts

Recovery details are primarily captured and tracked through invoice distributions. If there is a requirement to capture the recovery details into separate general ledger accounts for each tax, define the recovery account at the recovery rate level. If the recovery and liability can be combined at the account level, the common account for liability or recovery defined at the tax rate level can be used.

While generating the invoice distributions, the application first considers the recovery account defined at the recovery rate level. If it is null, the liability or recovery account defined at the tax rate level is used.

The nonrecoverable component of a tax gets registered into the expense account defined at the tax rate level. If no specific expense account is given, the item charge account available on the transaction is used. There may be a need to apportion the nonrecoverable component of the tax amount on the item cost. As such, you should consider all of the costing requirements while setting up an expense account.

When to Manage Tax Distributions

Use the Tax Distributions window to review and update the tax recovery rate on tax distributions. Oracle Fusion Tax creates recoverable distributions and calculates tax recovery rates when you save the line distribution, according to the Determine Recovery Rate tax rule process or the default recovery rate.

You can update the recovery rate code if the **Allow tax recovery rate override** option is enabled for the tax.

You can update the recovery rate if the **Allow ad hoc tax rate** option is enabled for the recovery rate. The update method differs according to the transaction application:

- Oracle Fusion Purchasing: You can either enter a new recovery rate or select another recovery rate that you previously defined from the list of values.
- Oracle Fusion Payables: You can only select another rate that you previously defined. If you update the recovery rate on a tax distribution, Oracle Fusion Tax also updates the related nonrecoverable rate and amount, and the distribution for the tax line.

If there are tax rules defined based on the Accounting determining factor class, then changing or creating a distribution may affect tax calculation.

When to Specify Settlement Options

Tax authorities allow tax recovery at different stages of a transaction life cycle. You can specify the settlement options to indicate when tax recovery is possible:

Settlement Option	Purpose
Immediate	Tax recovery is settled after invoice validation.

Deferred	Tax recovery is settled only after the invoice is paid.

If the recovery settlement is **Deferred**, you must set up an interim tax account for this tax to record the tax recoveries or liabilities that accrue prior to the payment. Though this is an interim account the balance in this account represents a contingent asset. As such, management and other reporting requirements need to be duly considered while setting up or changing this account.

Tax Recovery Rates Controls and Defaults: Points to Consider

Define tax recovery rates to claim full or partial recovery of taxes paid. Set up tax recovery rate codes for the recovery types identified on the taxes within a tax regime. A tax recovery rate code identifies the percentage of recovery designated by the tax authority for a specific transaction.

Defining Controls and Defaults for Tax Recovery Rates

The following table describes the defaults and controls available at the tax recovery rate level.

Recovery Rate Periods Region

Field	Description	Default Derived from	Default Appears on	Controls
Set as Default Rate	Controls whether this tax recovery rate is the default recovery rate for this tax at transaction time	None	None	If selected then this recovery tax rate is the default rate for the period specified. Where there are no tax recovery rate rules applicable at transaction time then the tax determination process selects this tax recovery rate.

Recoverable Taxes: Worked Example

The following example illustrates the tax setup and associated tax conditions that drive tax recovery. Set up tax rules to assign specific recovery rates instead of using the default recovery rates defined for the tax. Two recovery types are used to show the primary and secondary recovery type options for a tax.

In Canada, the Goods and Services Tax (GST) is a tax that applies to the supply of most property and services in Canada. The provinces of British Columbia, Ontario, New Brunswick, Nova Scotia, and Newfoundland and Labrador, referred to as the participating provinces, combined their provincial sales tax

with the GST to create the Harmonized Sales Tax (HST). Generally, HST applies to the same base of property and services as GST. In countries like Canada, some or all of the taxes on business transactions for registered companies are recoverable taxes.

ABC Corporation is a business located in the province of British Columbia. The sales invoice indicates that ABC purchases books for the purposes of resale. ABC has already created the following setup:

- CA GST and HST, a GST and HST based tax regime
- CA HST, an HST based tax
- CA HST STANDARD, the default HST based tax status for the CA HST tax
- CA HST ZERO FED REC RATE and CA HST ZERO PROV REC RATE, 0% recovery rates for HST, which are set as the default recovery rates for the CA HST tax
- CA HST STANDARD RATE, the default HST based tax rate for the CA HST tax

The percentage rate is 13% for most provinces, and 12% for British Columbia.

The following tax implications are applicable in this scenario:

- Both federal and provincial components of HST are 100% recoverable on books bought for resale.
- Zero recovery rates for federal and provincial components of HST are required, and are set as the default recovery rates for the HST tax.
- Recovery rates for most of the participating provinces are required to address the full recovery of the 13% HST rate.
- Recovery rates for British Columbia are required to address the 12% HST rate.
- Recovery rate rules are required to assign nondefault recovery rates for resale purchases.
- HST is not recoverable on consumable items, such as computers for use in ABC's store. Default zero recovery rates apply in this case.

Perform the following steps:

- Create tax recovery rates
- Create an intended use fiscal classification
- Create recovery rate rules

Create Tax Recovery Rates

For most participating provinces in Canada, the HST is 13%, out of which 5% is the federal component and 8% is the provincial component.

Create the tax recovery rates of 38.46% for the federal component of HST, and 61.54% for the provincial component of HST for these provinces.

1. On the Create Tax Recovery Rate page, enter the name of the tax regime, CA GST and HST.

2. Select the configuration owner for this tax recovery rate. To minimize configuration and maintenance costs, select Global Configuration Owner as the configuration owner.
3. Select the HST tax, CA HST.
4. Enter the name of the tax recovery rate you are defining, such as CA HST STD FED REC RATE.
5. Select PREC as the recovery type.
6. In the recovery rate periods table, enter 38.46 as the percentage recovery rate, and an effective start date.
7. Click **Save and Close**.
8. Repeat steps 1 to 7 to create the tax recovery rate CA HST STD PROV REC RATE, with a recovery type of SREC, and a percentage recovery rate of 61.54%.

For British Columbia, where the HST rate is 12%, you need one federal recovery rate to address the 5% federal component and one provincial recovery rate to address the 7% provincial component. Create a tax recovery rate of 41.67% for the federal component of HST, and a tax recovery rate of 58.33% for the provincial component of HST for British Columbia.

1. On the Create Tax Recovery Rate page, enter the name of the tax regime, CA GST and HST.
2. Select the configuration owner for this tax recovery rate. To minimize configuration and maintenance costs, select Global Configuration Owner as the configuration owner.
3. Select the HST tax, CA HST.
4. Enter the name of the tax recovery rate you are creating, such as CA HST BC FED REC RATE.
5. Select PREC as the recovery type.
6. In the recovery rate periods table, enter 41.67 as the percentage recovery rate, and an effective start date.
7. Click **Save and Close**.
8. Repeat steps 1 to 7 to create the tax recovery rate CA HST BC PROV REC RATE, with a recovery type of SREC, and a percentage recovery rate of 58.33%.

Create Intended Use Fiscal Classification

Create an intended use fiscal classification for Resale. An intended use fiscal classification is a tax classification based on the purpose for which the product is used.

1. In the Create Fiscal Classification Code window of the Manage Intended Use Classification page, enter a code for the classification, such as CA INTENDED USE RESALE.
2. Enter a name for this classification, such as CA Intended Use Resale.
3. Optionally, select Canada as the country and enter a start date, such as 1/01/2001.
4. Click **Save and Close**.

Create Recovery Rate Rules

Create the recovery rate rules that apply for most participating provinces when the conditions for HST recovery are met. Recall that by default, tax recovery on HST is 0% at the federal and provincial levels.

1. In the Create Determine Recovery Rate Rule page, select Global Configuration Owner as the configuration owner, CA GST and HST as the tax regime, and CA HST as the tax.
2. Enter the code and name of the tax recovery rate rule you are creating, such as CA HST FED RECOVERY RULE, the start date, and a recovery type code of PREC.
3. Create or select a tax determining factor set and an associated tax condition set whereby the intended use of the acquired product is the intended use fiscal classification you defined earlier, namely CA INTENDED USE RESALE.

When this condition is met, 100% recovery rate for the federal component is applicable.
4. For the tax condition set, assign the result of CA HST STD FED REC RATE.
5. Assign a rule order, such as 100.
6. Click **Save and Close**.
7. Repeat steps 1 to 6 to create CA HST PROV RECOVERY RULE for the standard provincial recovery rule, with a recovery type code of SREC, a result of CA HST STD PROV REC RATE, and a rule order of 110.

Create the recovery rate rules that apply for British Columbia when the conditions for HST recovery are met.

1. In the Create Determine Recovery Rate Rule page, select Global Configuration Owner as the configuration owner, CA GST and HST as the tax regime, and CA HST as the tax.
2. Enter the code and name of the tax recovery rate rule you are creating, such as CA HST BC FED RECOVERY RULE, the start date, and a recovery type code of PREC.
3. Create or select a tax determining factor set and an associated tax condition set whereby the ship-to location is British Columbia and the intended use of the acquired product is the intended use fiscal classification you defined earlier, CA INTENDED USE RESALE.

When this condition is met, 100% recovery rate for the federal component is applicable.
4. For the tax condition set, assign the result of CA HST BC FED REC RATE.
5. Assign a rule order, such as 50, that gives a higher priority to this rule than the 2 rules you created previously.
6. Click **Save and Close**.
7. Repeat steps 1 to 6 to create CA HST BC PROV RECOVERY RULE for British Columbia's provincial recovery rule, with a recovery type code of SREC, a result of CA HST BC PROV REC RATE, and a rule order of 55.

For ABC's transactions in Canada, the following is determined by the previous setup:

- HST tax is applicable and is calculated at a percentage rate of 13% for most participating provinces, and a percentage rate of 12% in British Columbia.
- The intended resale of these books makes these transactions eligible for 100% tax recovery.
- For most participating provinces, tax recovery is calculated at a federal percentage rate of 38.46% and a provincial rate of 61.54%.
- For British Columbia, tax recovery is calculated at a federal percentage rate of 41.67% and a provincial rate of 58.33%.

Tax Recovery Distributions: Explained

A recoverable tax is a tax that allows full or partial recovery of taxes paid on purchases, either as a recoverable payment or as a balance against taxes owed. A tax recovery rate identifies the percentage of recovery for a tax designated by the tax authority for a specific transaction line. You can review Oracle Fusion Payables tax distributions and, if applicable, update the tax recovery rate on a tax distribution depending on your tax setup and security access. The component in Oracle Fusion Purchasing is view-only.

Managing Tax Recovery Distributions

Oracle Fusion Tax creates recoverable distributions and calculates tax recovery rates when you save the line distribution, according to the Determine Recovery Rate tax rule process or the default recovery rate. If self-assessment is enabled for the applicable party, two distributions for each tax are created, one with a positive amount and the other with a negative amount.

One recoverable distribution for the primary recovery type and, if applicable, the secondary recovery type is created, for each tax line for each of the item distributions into which the item line or expense line is distributed. The tax distributions are displayed in this way:

- If the tax is nonrecoverable, one nonrecoverable tax distribution line for the tax is created, with the nonrecoverable amount equal to the tax amount. You cannot update a nonrecoverable tax distribution nor create a manual recoverable distribution.
- If the tax is recoverable, two or three distribution lines are displayed, one for the primary recoverable amount, one for the secondary recoverable amount, if applicable, and another for the nonrecoverable amount.

If the tax is fully recoverable, then the recoverable distribution amount is equal to the tax amount and the nonrecoverable distribution amount is equal to zero.

If the tax is recoverable and the recovery rate is zero, then the nonrecoverable distribution amount is equal to the tax amount and the recoverable distribution amount is equal to zero.

- If self-assessment is enabled for the applicable party, the application creates two distributions for each tax, one with a positive amount and the other with a negative amount.

If the tax applied on the transaction is self-assessed, then the corresponding recoverable and nonrecoverable tax distributions are not visible in the distributions window, but the application does generate them at the time of accounting for the invoice

- If the tax applied on the transaction is of the offset type, then the application creates two distributions for the recovery and nonrecovery portions of the tax. Since they are intended to offset each other, they are created for the same amount, but one with a positive value and the other with a negative value.

In a Payables transaction you can update the recovery rate code if the **Allow tax recovery rate override** option is enabled for the tax. You can update the recovery rate if the **Allow ad hoc tax rate** option is enabled for the recovery rate.

If you update the recovery rate on a tax distribution, Oracle Fusion Tax also updates the related nonrecoverable rate and amount, and the distribution for the tax line. If the distribution status is frozen, you cannot update the tax distribution. In order to change the distribution, you must reverse the tax distribution and enter a new distribution.

If applicable, accounting-related setups may affect tax calculation:

- If there are tax rules defined based on the Accounting determining factor class, then changing or creating a distribution may affect tax calculation.
- If the **Enforce tax from account** option is enabled for the configuration owner and event class, this may affect the tax calculation based on the distribution.

Tax Recovery Distributions: Example

Recoverable distributions are created and tax recovery rates are calculated when you save the line distribution, according to the Determine Recovery Rate tax rule process or the default recovery rate. You can review tax distributions and, if applicable, update the tax recovery rate on a tax distribution.

Note

The authorized user can update the tax recovery rate on the distribution in Oracle Fusion Payables. The component in Oracle Fusion Purchasing is view-only.

Scenario

Your company is located in a Canadian province that has combined the provincial sales tax with the federal goods and services tax (GST) into a harmonized sales tax (HST). They recently purchased books to sell in their stores. They also purchased some computers to use in kiosks within the stores for customers to use to locate books.

Transaction Details

The transaction details are as follows:

- Total cost of books is 10,000 CAD
The invoice indicates the intended use as Resale.
- Total cost of computers is 5,000 CAD
The computers will be expensed as they do not meet the capitalization threshold.
- Tax rate applicable to each item is 13%

Analysis

In most tax regimes, a tax that is paid by a registered establishment can claim back 100% of taxes due from the tax authority, except for specific designated purchases. Depending upon the details of a company's business purchases and tax authority regulations, a number of exception regulations may accompany the details of tax recovery. Tax implications are:

- The HST associated with the cost of books to be sold in stores is 100% recoverable. Therefore, 1,300 CAD is recoverable (10,000 CAD * 13%).
- The HST associated with the cost of the computers to be used in kiosks within the stores is not recoverable. Therefore, 650 CAD is nonrecoverable (5,000 CAD * 13%).

The HST tax configuration specifies that the recovery tax rate for zero 0% recoverable is used as a default. A tax rule is defined to apply a 100% recoverable rate for products with an intended use of Resale.

Tax Recovery Distributions

Based on the analysis, the following distributions are created for the transaction:

Accounting Class	Debit	Credit
Item Expense	10,000	
Item Expense	5,000	
Recoverable Tax	1,300	
Nonrecoverable Tax	650	
Liability		10,000
Liability		5,000
Liability		1,300
Liability		650

Manage Tax Exceptions

Tax Exception on a Transaction Line: How Tax Is Calculated

Set up tax exceptions to apply special tax rates to products. At transaction time, Oracle Fusion Tax determines whether the tax exception applies to the transaction line for the product, and if so, uses the applicable exception rate.

Settings That Affect Tax Exceptions

A tax exception must belong to a combination of tax regime, configuration owner, and tax. You can also assign tax exceptions to a tax status or tax rate belonging to the tax or to a tax jurisdiction.

You can define Oracle Fusion Inventory organization tax exceptions for items, or you can define tax exceptions for Inventory-based product fiscal classifications or noninventory-based product categories. If you are using Inventory-based product fiscal classifications then generally, the application classifies the transaction line based on the item. If you are using noninventory-based product category fiscal classifications you enter the appropriate product category on all applicable lines to influence the tax result.

Product categories and product fiscal classifications are defined in a hierarchical structure. It is important that you select the appropriate level where the tax exception is applicable. For product fiscal classifications to be used in item exceptions, you must indicate that it is used in item exceptions at the tax regime association to the product fiscal classification. You can set up only one product fiscal classification for any specific tax regime with the **Used in Item Exceptions** option selected.

When you set up configuration options for first party legal entities and business units, you can set a separate configuration option for the owning and sharing of product tax exceptions for a combination of party and tax regime.

The **Allow tax exceptions** option is set at the tax regime level and you can override it at the tax and tax status levels. However, the setup you define for the tax rate is what is evaluated during tax rate determination.

At transaction time, the tax exception is used if the details of the transaction and the tax match all of the entities assigned to the tax exception. Only one tax exception can apply to a transaction line for a specific tax.

Note

Tax exemptions are specific to the order-to-cash event class while tax exceptions are applicable across event classes.

How Tax Exceptions Are Calculated

The tax determination process determines tax applicability, tax status, and the tax rate for the transaction line. If tax exceptions are allowed, the application looks at the item entered on the transaction line to determine if an exception is defined at the tax, tax status, tax rate, tax jurisdiction, Inventory organization, or Inventory level and uses the exception at the most specific level.

If the application does not find any tax exception for the item, it looks for a product fiscal classification associated with the transaction line. If one exists, the application determines if an exception is defined at the tax, tax status, tax rate, tax jurisdiction, and product fiscal classification level and uses the exception at the most specific level with the highest precedence.

The tax rate is then based on the exception type and calculated as follows:

- **Discount:** A reduction of the base tax rate. For example, if the discount is 15% off the standard rate and the standard rate is 10%, then the discount rate is 85% of the original 10%, or 8.5%.

- **Surcharge:** An increase to the base tax rate. For example, if the surcharge is 10% and the standard rate is 10%, then the surcharge rate is 110% of the original 10%, or 11%.
- **Special Rate:** A rate that replaces the base tax rate. For example, if the special rate is 5% and the standard rate is 10%, the tax rate is the special rate of 5%.

Finally, the new tax rate is applied to the taxable basis and the tax amount is calculated.

For manual tax lines, no additional processing is performed and exceptions are not considered. A manual tax line suggests that you have specific business requirements for a particular transaction to apply a manual tax. No additional processing is performed for manual tax lines to avoid any applying conflicting or inconsistent values to the user-entered tax line. The tax calculation on a manual tax line is the standard formula of: tax amount is equal to the taxable basis multiplied by the tax rate.

Manage Party Tax Profiles

Party Tax Profiles: Explained

A tax profile is the body of information that relates to a party's transaction tax activities. A tax profile can include main and default information, tax registration, tax exemptions, party fiscal classifications, tax reporting codes, configuration options, and service subscriptions.

Set up tax profiles for the following parties involved in your transactions:

- **First parties:** All legal entities, legal reporting units, and business units in your organization that have a transaction tax requirement.
- **Third parties:** Your customers and suppliers and their locations and banks.
- **Tax authorities:** Parties that administer tax rules and regulations.

First Parties

Set up tax profiles for your first party legal entities, legal reporting units, and business units.

First party legal entities identify your organization to the relevant legal authorities, for example, a national or international headquarters. Legal entities let you more accurately model your external relationships to legal authorities. The relationships between first party legal entities and the relevant tax authorities normally control the setup of the transaction taxes required by your business. Under most circumstances the tax setup is used and maintained based on the configuration of the legal entity. Enter the default information, party fiscal classifications, tax reporting codes, and configuration options for your legal entities. You can also specify if you are using the tax services of an external service provider for tax calculation.

First party legal reporting units identify each office, service center, warehouse and any other location within the organization that has a tax requirement. A legal reporting unit tax profile is automatically created for the headquarter legal entity. Set up additional legal reporting unit tax profiles for those needed for tax purposes. For legal reporting units, enter the default information, tax registrations, party fiscal classifications, and tax reporting codes. Also, define tax reporting details for your VAT and global tax reporting needs for tax registrations of tax regimes that allow this setup.

Business units organize your company data according to your internal accounting, financial monitoring, and reporting requirements. To help you manage the tax needs of your business units, you can use the business unit tax profile in either of two ways:

- Indicate that business unit tax setup is used and maintained based on the configuration of the associated legal entity at transaction time. The tax setup of the associated legal entity setup is either specific to the legal entity or shared across legal entities using the Global Configuration Owner setup.
- Indicate that tax setup is used and maintained by a specific business unit. Create configuration options for the business unit to indicate that the subscribed tax content is used for the transactions created for the business unit.

For business units that maintain their own setup, enter the default information, tax reporting codes, configuration options, and service providers as required.

Third Parties

Set up third party tax profiles for parties with the usage of customer, supplier, and their sites. Enter the default information, tax registrations, party fiscal classifications, and reporting codes required for your third parties or third party sites. You can set up tax exemptions for your customers and customer sites.

Banks are also considered third parties. When a bank is created, the tax registration number specified on the bank record is added to the party tax profile record in Oracle Fusion Tax. You can not modify the party tax profile for a bank as it is view only. You can only modify the bank record itself.

Note

Setting up party tax profiles for third parties is not required. Taxes are still calculated on transactions for third parties that do not have tax profiles

Tax Authorities

Set up a tax authority party tax profile using the Legal Authorities set up task. The tax authority party tax profile identifies a tax authority party as a collecting authority or a reporting authority or both. A collecting tax authority manages the administration of tax remittances. A reporting tax authority receives and processes all company transaction tax reports.

The collecting and reporting tax authorities appear in the corresponding list of values on all applicable Oracle Fusion Tax pages. All tax authorities are available in the list of values as an issuing tax authority.

Specifying First Party Tax Profile Options: Points to Consider

Set up first party tax profiles for all legal entities, legal reporting units, and business units in your organization that have a transaction tax requirements. How you set up your first parties can impact the tax calculation on your transactions.

The first party tax profile consists of:

- Defaults and controls: Applicable to legal entities and legal reporting units. Business units that use their own tax setup do not have defaults and controls.
- Tax registrations: Applicable to legal reporting units.
- Party fiscal classifications: Applicable to legal entities and legal reporting units.
- Tax reporting codes: Applicable to legal entities, legal reporting units, and business units who do not use the tax setup of the legal entity.
- Configuration options: Applicable to legal entities and business units who do not use the tax setup of the legal entity.
- Service subscriptions: Applicable to legal entities and business units who do not use the tax setup of the legal entity.

Defaults and Controls

The following table describes the defaults and controls available at the first party tax profile level:

Option	Description
Set as self-assessment (reverse charge)	Automatically self-assess taxes on purchases.
Rounding Level	Perform rounding operations on the: • Header: Applies rounding to calculated tax amounts once for each tax rate per invoice. • Line: Applies rounding to the calculated tax amount on each invoice line.
Rounding Rule	The rule that defines how the rounding should be performed on a value involved in a taxable transaction. For example, up to the next highest value, down to the next lowest value, or nearest. Note If you defined a rounding precedence hierarchy in the configuration owner tax option settings for the combination of configuration owner and event class, Oracle Fusion Tax considers the rounding details in the applicable tax profile.

Set Invoice Values as Tax Inclusive	This first party intends to send or receive invoices with invoice line amount inclusive of the tax amount.
	Note This option overrides the tax inclusive handling setting at the tax level, but not at the tax rate level.

Tax Registrations

You must set up a separate tax registration to represent each distinct registration requirement for a first party legal reporting unit. Oracle Fusion Tax uses tax registrations in tax determination and tax reporting. If your first party has more than one tax registration under the same tax regime, then the application considers the tax registration in the order: tax jurisdiction; tax; tax regime.

You must enable the **Use tax reporting configuration** option on the first party tax regime to allow entry of global tax reporting configuration details during tax registration setup for legal reporting units for these tax regimes.

Party Fiscal Classifications

If applicable, associate first party fiscal classification codes with this party. The party fiscal classification codes you enter become part of tax determination for invoices associated with this party. Specify start and end dates to control when these fiscal classifications are applicable for this party and transaction.

For legal entities, you can view the associated legal classifications that were assigned to the tax regime defined for this first party. The legal classifications are used in the tax determination process, similarly to the party fiscal classifications.

Tax Reporting Codes

Set up tax reporting types to capture additional tax information on transactions for your tax reports for your first parties. Depending on the tax reporting type code, you either enter or select a tax reporting code for this party. Specify start and end dates to control when these tax reporting codes are applicable.

Configuration Options

The legal entities and business units in your organization are each subject to specific sets of tax regulations as designated by the tax authorities where you do business. Use configuration options to associate legal entities and business units with their applicable tax regimes. You can set up tax configuration options when you create a tax regime or when you create a party tax profile. Both setup flows display and maintain the same party and tax regime definitions.

Service Subscriptions

Oracle Fusion Tax lets you use the tax services of external service providers for tax calculation of US Sales and Use Tax on Receivables transactions. The setup for provider services is called a service subscription. A service subscription

applies to the transactions of one configuration option setup for a combination of tax regime and legal entity or business unit. Set up service subscriptions when you create a tax regime or when you create a party tax profile for a first party legal entity or business unit.

FAQs for Manage Party Tax Profiles

When does a party tax profile get created for a business unit?

The business unit party tax profile is automatically created when a business unit record is created. If a business unit party tax profile record is not created, for example, when a business unit is created through a back-end process, a business unit party tax profile is created upon saving a tax regime when a business unit is subscribed to or upon saving the configuration owner tax options when they are defined for the business unit. Otherwise, create a party tax profile using the Create Business Unit Tax Profile page. You can edit the tax profile that was automatically generated with the relevant tax information, but it is not required.

What happens if I use the subscription from the legal entity?

Under most circumstances your business unit uses the tax setup based on the configuration of the legal entity. When you first access the Create Business Unit Party Tax Profile page you can select the **Use legal entity tax subscription** option. If you select this option, you cannot update the business unit tax profile or maintain separate tax content for this business unit. If you do not select this option you enter the relevant tax information for the business unit. This is an irreversible setting.

When does a party tax profile get created for a legal entity?

The legal entity party tax profile is automatically created when a legal entity record is created. If a legal entity party tax profile record is not created, for example, when a legal entity is created through a back-end process, a legal entity party tax profile is created upon saving the tax regime when a legal entity is subscribed to or upon saving the configuration owner tax options when they are defined for the legal entity. Otherwise, create a party tax profile using the Create Legal Entity Tax Profile page. You can edit the tax profile that was automatically generated with the relevant tax information, but it is not required.

When does a party tax profile get created for a legal reporting unit?

The legal reporting unit party tax profile is automatically created when a legal reporting unit is created. Otherwise, create a party tax profile using the Create Legal Reporting Unit Tax Profile page. You can edit the tax profile that was automatically generated with the relevant tax information, but it is not required.

What's a service subscription?

A service subscription is the setup for provider services. It applies to the transactions of one configuration option setup for a combination of tax regime

and legal entity or business unit. Oracle Fusion Tax lets you use the tax services of external service providers for tax calculation of US Sales and Use Tax on Oracle Fusion Receivables transactions.

You can use the tax services of these external service providers:

- Taxware, LP: a First Data Company
- Vertex, Inc.

If you integrate with a tax service provider, these actions are not required for Receivables transactions:

- Entering tax classification codes on transaction lines.
- Entering transaction line attributes in the Additional Tax Determining Factors region.

Tax service provider integration returns the calculated tax lines to Oracle Fusion Tax. The tax lines for Receivables transactions returned by tax service providers are stored in Oracle Fusion Tax similar to the way tax lines calculated by the application itself are stored.

Manage Party Classifications

Party Information: Explained

Party classification defines the different types of party. Use party classifications to define party types for tax determination and tax reporting purposes.

Oracle Fusion Tax uses two types of tax party classifications:

- Party fiscal classifications
- Legal party classifications

Both are used to classify parties to provide determining factors or building blocks on which tax rules are defined. They are also used to classify parties so that they can be reported.

Party Fiscal Classifications

Use party classifications to classify your customers, suppliers, first party legal entities, and first party legal reporting units for tax determination and tax reporting.

Define the party classification categories and associated classification codes within the Oracle Fusion Trading Community Model party classification setup. Create the party fiscal classifications and associate the specific Trading Community Model party classification category to these party fiscal classifications, one for each level of the specific Trading Community Model party classification category. Associate tax regimes to these party classifications to ensure that these relationships are only visible and usable where needed. Oracle Fusion Tax uses this relationship to indicate which Trading Community Model party classification categories are used for tax purposes. By reusing the Trading

Community Model party classification category functionality Oracle Fusion Tax can leverage the common classification setup and where applicable, use that for tax purposes.

Within the party fiscal classifications functionality, define the Trading Community Model classification level to use within Oracle Fusion Tax. For example, if you have a three level Trading Community Model party fiscal classification category, define three levels, giving each a specific party fiscal classification code and name. By naming each level, you can use the specific level as a determining factor when defining tax rules. Use the same party fiscal classification flow to define the tax regimes with which the party fiscal classifications are associated.

Note

You can only amend the number of levels by increasing the number of levels. It is not possible to decrease the number of levels once the record has been stored.

Once you have defined your Trading Community Model party classification and associated it with a party fiscal classification and tax regime, you can use it to classify your parties and party sites. These parties and party sites are:

- Customers
- Customer sites
- Suppliers
- Supplier sites
- Legal entities
- Legal reporting units

In the case of supplier and customer parties and party sites, you can associate the specific party classification codes used for tax purposes using either:

- Party tax profile flows within Customer Maintenance and Supplier Maintenance.
- Dedicated flows in Oracle Fusion Tax.

Legal Party Classifications

Legal party classifications are similar to party fiscal classifications. Both use the Trading Community Model party classification setup and allows you to classify the party for tax determination and tax reporting purposes. However, the legal party classifications are predefined and are available when you implement the application.

The following legal classification codes are predefined:

Legal Party Type Code	Legal Party Type Name
LEGAL_ACTIVITY_CODE_CL	Legal activity code for Chile
LEGAL_ACTIVITY_CODE_PE	Legal activity code for Peru
LEGAL_ACTIVITY_CODE_VE	Legal activity code for Venezuela
LEGAL_ACTIVITY_CODE_CO	Legal activity code for Columbia

2003 SIC	Legal activity code for United Kingdom

Use legal party classifications to classify first party legal entities within the Legal Entity setup functionality. Use these classifications as determining factors within tax rules. Association between the legal party classification and specific legal parties is done within the Legal Entity Maintenance flow.

No specific setup is required as the legal party classifications are predefined and can be directly used in tax rule setup.

Party Fiscal Classifications: How They Work in Tax Rules and Tax Reporting

Party fiscal classification tax determination factors allow you to use party fiscal classifications in tax rules. A combination of determination factor class, class qualifier, and determining factor represent these determination factors. In the tax rules setup, define the actual party to be used to determine the relevant party fiscal classification by using a generic definition for class qualifier. You can also use party fiscal classifications for tax reporting.

Party Fiscal Classifications in Tax Rules

Depending on the type of transaction, the following generic class qualifiers are defined as class qualifiers when using the party fiscal classification as a tax determining factor:

- Supplier bill-from party
- Bill-to party
- Ship-to party
- Ship-from party
- Point-of-acceptance party
- Point-of-origin party

Oracle Fusion Tax translates the generic parties into specific transaction parties as defined in the following table:

Generic Party	Order-to-Cash Party	Procure-to-Pay Party
Bill-from party	First party legal entity	Supplier
Bill-to party	Customer	First party legal entity
Ship-to party	Customer (ship-to) party site	First party legal entity
Ship-from party	First party legal reporting unit	Supplier (ship-from) party site
Point-of-acceptance party	Customer point of acceptance party	Not applicable
Point-of-origin party	Customer point of origin party	Not applicable

Tip

Always use the highest applicable level to define the party classification. For example, if appropriate, define the party fiscal classification at the customer or

supplier level instead of defining the same classification on all the party sites for the customer and suppliers.

Tip

Because party fiscal classifications are automatically derived during transaction time, use them as determining factors instead of process-based determining factors, which require manual entry for every transaction.

Party Fiscal Classifications in Tax Reporting

Use party classifications to classify parties for tax reporting purposes if specific party classifications need to be reported. However, you should use tax reporting codes for tax reporting instead of party fiscal classifications as it offers a more flexible and less intrusive mechanism to support reporting without creating unnecessary complexity in setup and maintenance.

Classifying Parties: Example

The following example illustrates using party fiscal classifications in tax rules. It is based on the following scenario:

- A company Widget Inc., UK Ltd. produces widgets that are used by military forces who are part of the North Atlantic Treaty Organization (NATO).
- The widgets are sold to the Belgium Troops stationed in UK under a joint NATO exercise.
- The supply of widgets by Widget Inc., UK Ltd. is within the terms and conditions of supplies to NATO forces which allows a supplier to zero rate supplies to visiting NATO forces. See Visiting Forces - HMRC Reference: Notice 431 (November 2003).

This dispensation is given when deliveries are made to:

- NATO visiting forces in the UK, specifically those from: Belgium, Canada, Czech Republic, Denmark, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Turkey, and United States of America.
- The NATO International Military Headquarters at Northwood and High Wycombe.
- The American Battle Monuments Commission in respect of supplies of goods and services for the maintenance of the US military cemeteries at Brookwood and Madingley.

Creating Party Classifications and Tax Rules

To model this requirement, the company site that represents the Belgium troops working at the joint NATO exercise is associated with GB Special Tax Parties, a special party classification type and NATO Troops, a party fiscal classification code.

To do this:

1. Create an Oracle Fusion Trading Community Model party classification of GB Special Tax Parties with a level one code of Zero Rated Parties.
2. Create a level 2 code for this level 1 code of NATO.
3. Create party fiscal classifications of GB Special Tax Parties Level 1 and GB Special Tax Parties Level 2, which are linked to the Trading Community Model party classification.
4. Associate the party fiscal classifications with the GB VAT tax regime using a start date of the earliest transaction date of supplies to this or similar customer sites.
5. Associate the company site that represents the Belgium troops working at the joint NATO exercise to the GB Special Tax Parties Level 2 party fiscal classification using code of NATO.
6. Create the determining factor set and condition set that uses this classification code Zero Rated Parties of the level 1 party fiscal classification type. No specific Determine Tax Rate tax rule is needed as you can set up the zero tax rate as the default tax rate for this tax status.
7. Create a Determine Tax Status tax rule linked to a zero tax status by using the determining factor and condition set created above.

At transaction time the tax determination process considers this tax status rule and derives a zero tax status when the customer ship-to party is associated with the level 1 party fiscal classification of GB Special Tax Parties Level 1 and code of Zero Rated Parties.

Tip

Use the levels in the Trading Community Model party classification categories model and the party fiscal classification setup to group party classification categories together.

Tip

Define tax rules at the highest level possible thus minimizing the number of tax rules needed. In this example, the tax rule uses the level 1 party fiscal classification to determine the zero tax status.

FAQs for Manage Party Classifications

What's the difference between legal classifications and fiscal classifications?

Legal classifications are a unique classification associated with a legal entity that represents its legal status within a country and that also guides the tax determination process. They should be defined by Oracle Fusion Trading Community Model legal entity. In some countries these legal classifications are defined by:

- Business activity type

- Business activity code
- Business activity description

Party fiscal classifications also are defined using Trading Community Model. They determine, for example, when taxes apply to a party, how much tax applies, and what percentage of the tax is recoverable.

You can use legal classifications for fiscal classification purposes. In effect, a legal classification just becomes another party fiscal classification for tax purposes.

Manage Tax Rules

Tax Determination: Explained

Taxes are levied on transactions as per the legislations in a country or region. They are seldom uniformly applied on all transactions and tax legislation may seek differential levy, treatment, and administration of taxes based on various transaction attributes. Configure Oracle Fusion Tax to evaluate transactions based on transaction attributes to determine which taxes apply to a transaction and how to calculate tax amount for each tax that applies to the transaction.

The tax determination process evaluates transaction header and line information to derive tax lines for taxes applicable to the transactions. The evaluation process is subdivided into the following processes:

- Determine Applicable Tax Regimes and Candidate Taxes
- Determine Place of Supply and Tax Jurisdiction
- Determine Tax Applicability
- Determine Tax Registration
- Determine Tax Status
- Determine Tax Rate
- Determine Taxable Basis
- Determine Tax Calculation
- Determine Tax Recovery

The tax determination process utilizes the tax foundation configuration in conjunction with configuration options and tax rules to process transactions for tax applicability and calculation. Tax configuration ranges from simple models that make use of default values without extensive processing to complex models that consider each tax requirement related to a transaction before making the final calculation.

When setting up a tax examine the regulations that govern the determination of the tax amount, from identifying applicability drivers to how the tax is calculated. Organize the regulations into one or more rule types for each tax.

When the regulations indicate that more than one result is possible for a given rule type, then you need to define rules within that rule type. Otherwise you can defer to a default value for that rule type associated to the tax.

The complexity of setup can be classified as follows:

- No tax rules required: Oracle Fusion Tax uses the default tax status, tax rate, and tax recovery rate defined for the tax. Tax rules are not required but tax rates can vary by class of products set up using tax exceptions, location set up using tax jurisdictions, and party set up using exemption definitions. In addition, applicability can still be controlled without the use of tax rules such as through the party tax profile that you define for a supplier.
- Simple tax rule regimes: The tax authority levies tax on your transactions at the same rate, with a simple set of identifiable exceptions. The exceptions either apply to one part of the transaction only, such as to certain parties, or to a combination of parties, products, and transaction processes that you can summarize in a simple way. In such cases, use a simple set of tax rules, for example, to identify place of supply and tax registration, and use default values for other processes.
- Complex tax regimes: Tax regimes in certain countries require a complex logic to determine the applicable taxes and rates on a transaction. Both tax applicability and tax rates can vary, for example, by place of origin and place of destination, party registration, status, service, or a combination of factors. In some cases, the taxable amount of one tax may depend upon the amount of another tax on the same transaction. And in rare cases, the tax amount itself may depend on the tax amount of another tax. For all of these and similar situations, you set up tax rules to define the logic necessary to identify each step of the tax determination process.

Tax Determination Steps

The first step of the determination process is to identify the first party of the transaction. The tax determination process looks to the business unit on the transaction and identifies whether it is pointing to the configuration owner of the business unit or legal entity depending on the **Use subscription of the legal entity** option on the party tax profile definition of the business unit. The tax determination process checks to determine if there are configuration owner tax options associated to this party or if the predefined event class option should be used.

The Determine Applicable Tax Regimes process can be the predefined TAXREGIME, STCC (standard tax classification code), or another regime determination set that is user-defined. TAXREGIME or user-defined regime determination sets derive the applicable tax regimes or tax regime through country or zone of the location identified in the processing of the regime determination determining factor set location values. STCC determination is typically used for purposes of migrated data and has a different processing logic driven by tax classification code. A third option of determination is third party integration.

Determine Applicable Tax Regimes and Candidate Taxes

Tax regimes are considered based on geography and subscription. Either a country or zone associated to the tax regime definition must be the same as the

country or zone identified via the location that evaluates to true on the regime determination set of the first party of the transaction. In addition, the tax regime must have a subscription to the applicable configuration owner. Once the tax determination process identifies the tax regimes the list of candidate taxes can be evaluated based on the configuration option setting of the first party in the tax regime subscription definition:

- **Common Configuration:** Consider all taxes with the configuration owner of global configuration owner.
- **Party Specific Configuration:** Consider all taxes with the first party as configuration owner.
- **Common Configuration with Party Overrides:** Consider all taxes with the first party and the global configuration owner as configuration owner. If a tax is defined by both the first party and the global configuration owner, then the application only uses the tax defined by the first party.
- **Parent First Party Configuration with Party Overrides:** Consider all taxes with the first party and the parent first party as configuration owner. If a tax is defined by the first party and the parent first party then the application only uses the tax defined by the first party.

Determine Tax Applicability and Place of Supply and Tax Jurisdiction

This process determines the tax applicability of each candidate tax based on direct rate determination, place of supply, tax applicability, and tax jurisdiction. The first step in tax applicability is to process any direct rate rules defined for a tax regime, configuration owner, and candidate taxes. If a direct rate rule evaluates to true then place of supply is processed for this transaction tax. If successful the tax is applicable and the tax status and tax rate defined for the direct rate rule are used in the tax calculation. If a direct rate rule does not evaluate to true for this tax regime, configuration owner, and tax the tax applicability rules are processed next. After a tax is found applicable based on an applicability rule or a default value the process verifies the place of supply and associated tax jurisdiction. This is required except in the cases of migrated taxes.

The place of supply process identifies the applicable location type and associated tax jurisdiction where the supply of goods or services is deemed to have taken place for a specific tax. If the tax determination process cannot find a tax jurisdiction for the location that corresponds to the place of supply location type, then the tax does not apply and it is removed as a candidate tax for the transaction.

For example, the place of supply for UK value-added tax (VAT) on goods is generally the ship-from country. Thus, the place of supply of a sale or purchase within the UK is the UK itself. However, if a UK legal entity supplies goods from its French warehouse to a German customer, then the place of supply will not find a jurisdiction for UK VAT in France, and therefore UK VAT does not apply.

Determine Tax Registration

This process determines the party whose tax registration is used for each tax on the transaction, and, if available, derives the tax registration number.

Determine Tax Status

This process determines the tax status of each applicable tax on the transaction. If the process cannot find a tax status for an applicable tax, then Tax raises an error.

Determine Tax Rate

This process determines the tax rate code for each tax and tax status derived from the previous process. First the application looks for a rate based on rate code and tax jurisdiction. If this is not found then the application looks for a rate with no tax jurisdiction. If applicable, the tax rate is then modified by any exception rate or tax exemption that applies. The result of this process is a tax rate code and tax rate for each applicable tax.

Determine Taxable Basis

This process determines the taxable base for each tax rate code. Depending on the tax rate type the taxable basis is amount based or quantity based. The tax determination process typically determines the tax by applying the tax rate to the taxable base amount. In some cases, the taxable basis either can include another tax or is based on the tax amount of another tax. Define taxable basis formulas to manage these requirements.

Determine Tax Calculation

This process calculates the tax amount on the transaction. In most cases, the tax amount is computed by applying the derived tax rate to the derived taxable basis. In some exceptional cases, the tax amount is altered by adding or subtracting another tax. Define tax calculation formulas to manage these requirements.

Determine Tax Recovery

This process determines the recovery rate to use on procure-to-pay transactions when the tax allows for full or partial recovery of the tax amount. For example, for UK manufacturing companies VAT on normal purchases used for company business is 100% recoverable. However, if you are a financial institution which only makes VAT exempt on sales then you are not allowed to recover any taxes and your recovery rate is zero percent on all purchases. The recovery process impacts the distribution level, tax amounts, and inclusiveness of taxes. The resulting distribution amounts are adjusted as a result of the recovery process. The recovery type is defined on the tax and identifies whether there are one or two recovery types; primary and secondary. For each tax and recovery type the application determines the recovery rate based on a tax rule or default value defined on the tax.

Tax Rules: Explained

Tax determination can be configured as a simple process with all default values for the determination points and it can be enhanced with the definition of tax rules to identify and process any exceptions to the common treatment scenario.

The tax rules that are part of the tax determination process are organized into rule types. Each rule type identifies a particular step in the determination and calculation of taxes on transactions. The tax determination process evaluates, in order of priority, the tax rules that are defined against the tax configuration setup and the details on the transaction. The application processes tax rules in order of evaluation until one evaluates successfully, then the process stops. If none of the rules defined evaluate successfully the associated default value is used.

The tax line determination process uses the information of the transaction header and the transaction line and any information derived by the transaction attributes such as party fiscal classification to determine the tax lines. The rule types and related processes are used for tax line determination and tax calculation.

Tax rules have the following elements as part of the definition:

- Rule type and rule attributes:
 - Tax regime, configuration owner, tax and optionally, tax status and tax recovery type
 - Event class association
 - Geography association
 - Effective dates
- Determining factors and condition sets
- Rule order and status

A rule type associates a tax rule to a particular point in the determination process. The following are the possible tax rules you can define:

- Place of Supply Rules
- Tax Applicability Rules
- Tax Registration Determination Rules
- Tax Status Determination Rules
- Tax Rate Determination Rules
- Taxable Basis Rules
- Tax Calculation Rules
- Tax Recovery Rate Determination Rules
- Manage Direct Tax Rate Determination Rules
- Account Based Direct Tax Rate Determination Rules
- Tax Classification Based Direct Tax Rate Determination Rules

Define a tax rule in the context of a tax regime, configuration owner, tax. Define Tax Rate Determination Rules within the context of a tax regime, configuration owner, tax, and tax status. Define Tax Recovery Rate Determination Rules within the context of a tax regime, configuration owner, tax, and recovery type. When processing a transaction the transaction date must be within the effective date of the rule.

Associate a tax rule with an event class or tax event class on the tax rule header to identify the tax rule as only being applicable to a specific event class. The tax determination process evaluates event-specific rules and tax event-specific rules before nonevent-specific rules for the same rule type, tax regime, configuration owner, and tax. Set up more specific event classes to less specific tax event classes to generic tax rules applicable to all event classes. Include geography information on the tax rule header as well as within the determining factor or

condition set detail. Including geography detail does not change evaluation order but improves the performance of tax rule processing. Include reference information, such as tax law or other text, in the definition of the tax rule.

Tip

Always try to minimize tax rules and setup for tax regimes and taxes. Tax rules are specific to a tax regime and tax, thus by minimizing the number of tax regimes and taxes, the number and complexity of the tax rules can be minimized.

Tip

Move any complexity from the beginning to the end of the rule types and supporting setup. For example, it is better to use tax recovery rate rules in preference to setting up specific tax rates with individual defaults associated with tax recovery rates.

Tax reporting requirements adds some level of complexity to the pure tax setup needed to support the tax determination and calculation processes, make every effort to minimize this additional level of complexity. Write tax reports wherever possible to use tax reporting codes or use the determination factors that identify your reporting requirements. These reporting determination factors should replace the need to create specific taxes, tax statuses, and tax rates purely defined to allow tax reporting.

For extreme cases you may need to create a more complex tax setup to meet your tax reporting needs. For example, currently there are no determining factors that can easily identify asset purchases. In many countries it is a requirement to report the tax associated with asset purchases separately. In this case, create tax status and tax rate rules based on asset account segments to uniquely allocate a specific tax status and tax rate to these asset purchases. These asset purchases can then be reported by searching for the specific tax status and tax rate or specific tax reporting codes associated with the specific tax status or tax rate.

Direct Tax Rate Rules: Explained

Define tax rules on an exception basis to handle requirements that cannot be addressed by foundation tax setup. You can define tax status rules, tax rate rules, direct tax rate rules, account-based direct tax rate rules, or tax classification-based direct tax rate rules to derive the applicable tax rate.

The tax determination process uses direct tax rate rules to determine tax applicability, tax status, and tax rate. The tax determination process uses a tax rate rule to determine the tax rate once the tax status is determined. A direct tax rate determination rule is a good choice if there are specific requirements to drive a specific tax, tax status, and tax rate and no variation in tax status or tax rate is required.

Tip

If tax applicability is not impacted by a tax law but the tax rate is you can set up a tax status rule to point to a different tax status and utilize a default tax rate associated to that tax status. If the tax status does not need to be unique a tax

rate rule can drive a specific tax rate but keep the tax applicability and tax status based on existing rules.

Direct Tax Rate Determination

Use the Direct Tax Rate Determination rule type for situations where you do not need to create separate tax rules for tax applicability, tax status, and tax rate. The following must occur for a Direct Tax Rate Determination rule to be applicable:

- The Direct Tax Rate Determination rule must evaluate to true
- The tax rate code must be defined for the product family
- The place of supply must evaluate successfully except in the case of migrated taxes when **Allow multiple jurisdictions** is selected

If a Direct Tax Rate Determination rule is not evaluated successfully, then Determine Tax Applicability rules are processed to determine if tax is applicable. If the tax is not applicable then the determination process ends for tax.

Account-Based Direct Tax Rate Determination

Account-based rules are direct rate rules that are driven by the line account of the transaction. A matching account drives the applicability, tax status, and tax rate defined on the tax rule. These tax rules are only applicable when the regime determination method is **Determine applicable regimes** and the configuration owner tax option for the event class has the **Enforce from account** option selected. These tax rules are evaluated after standard applicability rules. If a standard applicability rule evaluated the tax to **Not applicable** then it cannot be applicable through an Account-Based Direct Tax Rate Determination rule.

Tax Classification-Based Direct Tax Rate Determination

Use the Tax Classification-Based Direct Tax Rate Determination rule when the regime determination for the configuration owner tax option is defined as **STCC** (standard tax classification code). This setup is primarily intended for migrated tax classification codes, specifically tax classification groups. The tax classification code populated on the transaction line drives the tax determination and tax rate directly. A default tax rate associated to a tax rate code is not applicable in this case. Tax classification codes are created automatically as user-extensible lookup codes when you save a tax rate definition. The Tax Classification-Based Direct Tax Rate Determination rule is an extension to an existing migrated configuration where the tax calculation was based on tax classification codes.

Tax Setup Components in the Tax Determination Process: How They Are Used

The tax determination process uses your tax configuration setup and the details on the transactions to determine which taxes apply to the transaction and how to calculate the tax amount.

How Tax Is Calculated Using Tax Setup Components

Each step of the tax determination and tax calculation processes requires the completion of a certain number of setup tasks. The number and complexity of

your setups depends upon the requirements of the tax authorities where you do business.

This table describes the order of tax determination processes that Oracle Fusion Tax uses to calculate taxes on transactions. Use this table to review the details of each process and to identify the setups that you need to complete for each step in the tax determination and tax calculation process.

Order	Process Name	Activities	Components Used and Rule Type (if Applicable)
1	Determine Applicable Tax Regimes and Candidate Taxes (preliminary step)	- Determine the first party of the transaction. - Identify location types to derive candidate tax regimes. - Identify tax regimes. - Identify taxes using subscriber configuration option.	- Party tax profile - Regime determination set - Configuration options
2	Determine Place of Supply and Tax Jurisdiction	- Identify location type. - Identify tax jurisdiction.	- Tax rule: Determine Place of Supply, or the default value for Place of Supply for the tax. - Tax jurisdictions
3	Determine Tax Applicability	- Consider candidate taxes from the previous process. - Eliminate taxes based on tax applicability rule for each tax.	Tax rule: Determine Tax Applicability and the default value for applicability for the tax.
4	Determine Tax Registration	Determine the party type to use to derive the tax registration for each applicable tax.	- Tax rule: Determine Tax Registration, or the default value for the tax. - Party tax profile - Tax registration
5	Determine Tax Status	- Consider tax statuses of applicable taxes. - Consider tax status rules or use default tax status.	Tax rule: Determine Tax Status, or the default value defined for the tax.

6	Determine Tax Rate	- Consider tax rates of each applicable tax status of each applicable tax. - Determine the tax rate code to use for the tax status, for each applicable tax. - Determine the tax rate percentage or per-unit tax amount for a quantity based tax. - If a tax exception applies, update the tax rate for each applicable tax. - If a tax exemption applies, update the tax rate.	- Tax rule: Determine Tax Rate, or the default value defined for the tax status derived in the previous process. - Tax rates - Product tax exceptions - Customer tax exemptions
7	Determine Taxable Basis	- Identify the taxable basis formula for each applicable tax. - Determine the taxable basis and compounding details based on the taxable basis formula. - Consider the tax inclusive settings of the applicable taxes.	- Tax rule: Determine Taxable Basis, or the default value for the tax. - Taxable basis formula - Tax inclusive settings at the tax rate level
8	Calculate Taxes	- Identify the tax calculation formula. - Calculate taxes using the tax calculation formula. - Perform applicable tax rounding.	- Tax rule: Calculate Tax Amounts - Calculate tax formula, if applicable - Tax rounding rule from tax registration, party tax profile, or tax - Configuration owner tax options

If tax recovery is applicable	Determine Recovery Rate	• Allocate tax amount per item distributions. • Determine tax recovery types. • Determine tax recovery rates. • Determine the tax recoverable amounts. • Determine the nonrecoverable amount.	• Tax rule: Determine Recovery Rate, or the default value defined for the tax. • Tax recovery rates

Tax Rule Qualifiers: Explained

Tax rules that have a rule qualifier are used only when the qualifier matches with the transaction line. Use the tax rule qualifiers to restrict or apply specific tax rules to an event or geography.

Event Qualifiers

The event qualifier is of two types: normal event and tax event.

Normal events comprise of the following events:

Event Name	Oracle Fusion Application Name
Credit Card Expenses	Expenses
Employee Expense Report	Expenses
Expense Report	Payables
Standard Invoices	Payables
Prepayment Invoices	Payables
Purchase Order and Agreement	Purchasing
Change Orders	Purchasing
Debit Memo	Receivables
Invoice	Receivables
Credit Memo	Receivables

The event class qualifiers have a direct affect on the evaluation order of tax rules. The following list summarizes the affect:

1. When a normal event-based qualifier is used then it is used in preference to tax rules qualified by tax event qualifiers or other nonevent-based qualified tax rules regardless of the rule priority.
2. When multiple normal event-based qualified tax rules are applicable, the application uses rule priority to define the rule processing order.

3. When a tax event based qualifier is used then it is used in preference to other nonevent-based qualified rules regardless of rule priority.
4. When multiple tax events-based qualified tax rules are applicable, the application uses rule priority to define the rule processing order.
5. When no event-based qualifier, normal event or tax event-based, is used, tax rule evaluation is used for rule priority order.
6. When a geography qualifier is used, it does not affect the tax rule evaluation order. That is, tax rules are evaluated based on the above points regardless of whether a geography qualifier is used or not.

The following table considers five tax rules, namely, A, B, C, D, and E with or without event qualifiers and rule order and the resulting evaluation sequence:

Tax Rule	Normal Event Qualified	Tax Event Qualified	Rule Order	Evaluation Sequence
A	Yes	No	100	2
B	Yes	No	50	1
C	No	No	10	5
D	No	Yes	20	3
E	No	Yes	30	4

Rule B is evaluated first because it is the highest priority rule with a normal event rule qualifier. Rule A is identified as second in evaluation sequence it is the only other tax rule with a normal event rule qualifier. Rule D is third in evaluation sequence as it is the highest priority rule with a tax event rule qualifier followed by rule E as the only other tax rule with a tax event rule qualifier. Finally, the application evaluates rule C as it does not have any event rule qualifiers.

The use of normal event or tax event rule qualifiers alters the way in which the tax determination process processes the tax rules. For an event class qualified tax rule, normal event or tax event-based, the tax rule is evaluated first in preference to tax rules qualified by tax event qualifiers or a nonevent class qualified tax rule of higher priority.

Consider that you have two rules: rule A and rule C with rule priority 100 and 10 respectively. The rules are associated with condition sets that match against the transaction line details. Rule A has a normal event class qualifier which is satisfied while rule C does not have an event class qualifier, rule A is processed and used first regardless of the rule priority order, even though rule A has a lower priority than rule C.

Tax rules qualified by tax event qualifiers are processed after normal event qualified tax rules but before tax rules with no event or tax event qualifiers. When there are two or more rules with normal event class qualifiers that match the transaction line details, the application uses rule priority to determine the order in which the tax rules are processed.

Note

Geography qualifiers do not function in this way. When a tax rule has a geography qualifier and no event class qualifier, the tax determination process

processes the tax rules based on the rule priority against other tax rules that do not have any tax event rule qualifiers.

Geography Qualifiers

Enable the **Set as geography specific rule** option to use the geography qualifier. Once you enable this option you can enter either a normal geography or a tax zone geography.

When you use a normal geography, select the parent geography type and parent geography to help restrict the list of geography type and subsequently, the geography name fields. For example, when you want to select counties for a specific state such as California, define the:

- Parent geography type as State
- Parent geography name as CA (California)
- Geography type as County

This limits the list of values for the geography name field to the counties that are in the state of California instead of listing all of the counties.

Tip

When selecting the normal geography qualifiers, use the parent geography to ensure that the correct geography element is selected, as there are many multiple geography elements with the same name across the world. For example, Richmond is a city in Canada's provinces of British Columbia, Ontario, and Quebec. Richmond is also a city in the state of Virginia in the United States.

Order of Processing Within a Rule Type: How Tax Rules Are Evaluated

During tax determination processing, Oracle Fusion Tax considers the tax rules belonging to each rule type in the order that you defined them.

How Tax Rules Are Evaluated

The sequence of tax rules evaluation is:

- Generally, you define tax rules for a configuration owner, tax regime, tax, and rule type. If a tax regime is subscribed to an entity as **Common configuration**, all the tax rules you defined for the **Global configuration owner** are considered for rule evaluation. If it is subscribed as **Party-specific configuration** or **Parent first party organization**, then only the tax rules you defined for that entity or the reference entity are considered. If it is **Common configuration with party overrides** then all the tax rules you defined for the entity as well as for the **Global configuration owner** are combined and evaluated in the order specified. If the effective dates of a tax rule does not cover the transaction date or if it is disabled, then the tax rule is ignored during rule evaluation.
- From the previous listed rules, if one or more tax rules belonging to a tax regime, tax, and rule type are defined for a normal event class or tax event class, then such rules are evaluated first by normal event class and then by tax event class regardless of the overall rule order. If more than one

event class rule is listed for a rule type, then such set of rules are further sequenced according to their corresponding rule orders

- Further to the previous sequencing, if one or more tax rules belonging to a tax regime, tax, and rule type are defined for a tax event class, then such rules are next sequenced for evaluation, regardless of the overall rule order. If more than one tax event class rule is listed for a rule type, then the set of rules are further sequenced according to their given rule order.
- Finally, the tax rules belonging to a tax regime, tax, and rule type are listed according to their defined rule order for evaluation.

While processing each tax rule in the evaluation sequence, the tax determination process evaluates the condition sets defined within a tax rule according to the defined condition set order sequence. If a condition set criteria does not match with the transaction details, the tax determination process evaluates the next condition set. If none of them match with the transaction details, the next rule within the ordered rule set is considered. If a condition set criteria matches with the transaction details, then the tax determination process considers the rule result defined against that condition set and the tax rule is marked as successfully evaluated. If none of the defined rule conditions match the transaction details, then the tax determination process considers the default result defined for that tax.

Example

The following is an example of a tax regime that is subscribed to by a business unit with common configuration treatment. To meet the tax law requirements to determine the tax rates, the following tax rate rules are defined against the global configuration owner. The details shown below are a summary of the rate rules including rule order, geography specific details, associated conditions sets, and the rate results associated to these condition sets:

Rule Order	Normal Event Class	Geography-Specific Rule	Condition Set	Condition Set Order	Result
10	Blank	Blank	• CS-1 • CS-2 • CS-3	• 10 • 20 • 30	• VAT10% • VAT12% • VAT15%
20	Purchase invoice	• Location type: Bill from • Geography name: California	CS-4	10	VAT12.5%
30	Purchase invoice	Blank	CS-5	10	VAT13%

Scenario 1

If a Payables invoice is involved and Texas is the bill-from party state, the tax rule processing sequence is as follows:

1. The tax rules are listed according to the sequencing logic. For example, the tax determination process evaluates tax rules involving normal event class qualifiers first regardless of having a lower rule order.

2. The tax determination process further evaluates condition sets listed within each tax rule.

The tax determination process is represented as follows:

Rule Order	Normal Event Class	Geography-Specific Rule	Condition Set	Condition Set Order	Result	Evaluation Status	Result
20	Purchase invoice	- Location type: Bill from - Geography name: California	CS-4	10	VAT12.5%	- Condition set: Not evaluated - Tax rule: Fail, because the bill-from party state is Texas	Move to next tax rule
30	Purchase invoice	Blank	CS-5	10	VAT13%	- Condition set: Evaluated and passed - Tax rule: Passed because the condition set values match with the transaction details	Condition set result considered and exit rule evaluation
10	Blank	Blank	- CS-1 - CS-2 - CS-3	10 20 30	- VAT10% - VAT12% - VAT15%		

Scenario 2

If a Receivables invoice is involved, the tax rule processing sequence is as follows:

1. The tax rules are listed according to the sequencing logic. For example, the tax determination process evaluates tax rules involving normal event class qualifiers first regardless of having a lower rule order.
2. The tax determination process further evaluates condition sets listed within each tax rule.

Rule Order	Normal Event Class	Geography-Specific Rule	Condition Set	Condition Set Order	Result	Evaluation Status	Result
20	Purchase invoice	- Location type: Bill from - Geography name: California	CS-4	10	VAT12.5%	- Condition set: Not evaluated - Tax rule: Fail, because the event class criteria does not match	Move to next tax rule
30	Purchase invoice	Blank	CS-5	10	VAT13%	- Condition set: Not evaluated - Tax rule: Fail, Passed because the event class criteria does not match	Move to next tax rule

10	Blank	Blank	• CS-1 • CS-2 • CS-3	• 10 • 20 • 30	• VAT10 • VAT12 • VAT15	For CS-1: • Condition set: Fail • Tax rule: In process because the condition set values do not match with transaction details For CS-2: • Condition set: Pass • Tax rule: Pass, because the condition set values match with transaction details	For CS-1: Move to next condition set For CS-2: Condition set result considered and exit rule evaluation

Setting Up Tax Rules: Points to Consider

The performance of the tax determination process is in inverse proportion to the number of tax rules and conditions that the process needs to evaluate in order to arrive at a specific result.

Creating Tax Rules

Use these guidelines and examples to help plan your tax rules implementation:

- If the tax condition results and rule results always equal the default values, then you do not need a tax rule. You only need to define a tax rule for a result that is different from the default value. For example, if more than one tax rate is possible for a given tax and tax status, then you need to create at least one tax rule.

These qualifications apply to tax rules and default values:

- If you require many different results other than the default value for a given tax and rule type, it probably means that the default value itself sometimes applies. In these cases, you should also define a tax rule for the default value. Otherwise the tax determination process must always process and eliminate the tax rules defined for all other values before arriving at the default.
- As an alternative to defining a tax rule for the default value, you can assign the least frequent result as the default value. The tax determination process processes the maximum number of tax rules on the minimum number of occasions. In this kind of an implementation, you must ensure that your tax rules and conditions cover all of the more common results in order to prevent the tax determination process from using an incorrect result as a default.
- If more than one tax rate is possible for a given tax this may be a consideration for a tax rule.
- If you define multiple tax rules to derive distinct results for a process, assign the least frequent result as the default value for the process. The most frequent value should be the first tax rule. There are occasions for the default to be the most frequent value so you may want to define tax rules for exceptions, such as by item. In general, define tax rules for exceptions, but if there are a lot of tax rules that you need to define, then you may want to define a tax rule for the most common scenario to avoid processing all of the exceptions.
- When you define tax rules consider the need to repeat tax conditions in multiple rule types if the condition is part of the applicability evaluation. For example, if you define a Determine Tax Applicability rule for UK VAT that only applies when ship to is equal to United Kingdom, then you do not need to repeat this condition in a tax rule for a subsequent tax determination process, such as a Determine Tax Status rule.
- Where possible, use the tax rule header information instead of creating tax conditions that arrive at the same result. For example, if tax rules apply to the Purchase business process, set the tax event class to **Purchase transaction** rather than defining a tax condition within the tax rule, such as tax event class is equal to Purchase transaction.
- When you order the tax condition sets within a tax rule, assign the higher priority to the set of conditions that occurs more frequently. Similarly, when you order the tax rules within a rule type and tax, assign the higher priority to the tax rule that gives the most frequently arrived at process result.
- Use product tax exceptions for special rates based on product fiscal classifications rather than defining a Determine Tax Rate rule based on product fiscal classifications. For example, if three out of five product fiscal classifications use a special rate, define three product tax exceptions based on the three product fiscal classifications that need a special rate, and set the standard rate as the default rate.
- Define the minimum number of tax conditions necessary for a tax rule. For example, if a special rate applies to goods shipped outside a state as opposed to within a state, define one tax condition as ship from state is not equal to ship to state, rather than defining two separate tax conditions

for each ship from and ship to location, such as ship from state is equal to Nevada and ship to state is not equal to Nevada.

- Consider the reusability of determining factor sets during the creation process. Any determining factor not set as required in the determining factor set definition can be set to ignore in the condition set so you do not have to define the condition and it is not evaluated. This allows flexibility in the condition set definition not requiring a unique determining factor set for every variation in condition set logic.
- For tax rules that involve the shipping to and from a tax zone, for example the European Union, define a tax condition for all ship to countries within the tax zone rather than separate tax conditions for each country, such as ship to is equal to Great Britain, ship to is equal to France, and so on.
- For tax rules that apply to a specific geographic area, define tax rules with the additional context of the geographic area rather than adding location-based equal to tax conditions. For example, if you have a tax rule that only applies if the ship to state is California, then define the tax rule such that it is only evaluated when the ship to state is California. You can do this by associating geography during the first step of the tax rule definition at the tax rule header level.
- Define tax rules that are common across all legal entities or business units under the global configuration owner, instead of creating the same tax rules for each legal entity or business unit. If all tax rules are not commonly applicable to all legal entities or business units, then:
 - Set the configuration option of the legal entities or business units that require additional rules to **Common configuration with party overrides**
 - Define supplementary party-specific rules under the applicable legal entities or business units. You can set priority values for party-specific rules that complement the tax rules of the global configuration owner, in accordance with the tax requirements.

Turning Tax Regulations into Tax Rules: Example

This example illustrates how to set up tax rules based on tax regulation in the Her Majesty's Revenue and Customs (HMRC) VAT guide. It provides the detailed business conditions under which goods can be reverse charge (self-assessment) as part of the Intra-EU Supply legislation.

Scenario

You are a UK business registered for VAT in the UK. You purchase goods from other European Union (EU) countries and therefore fall under the HMRC Tax Regulation Intra-EU Purchase of Goods legislation.

HMRC Tax Regulation

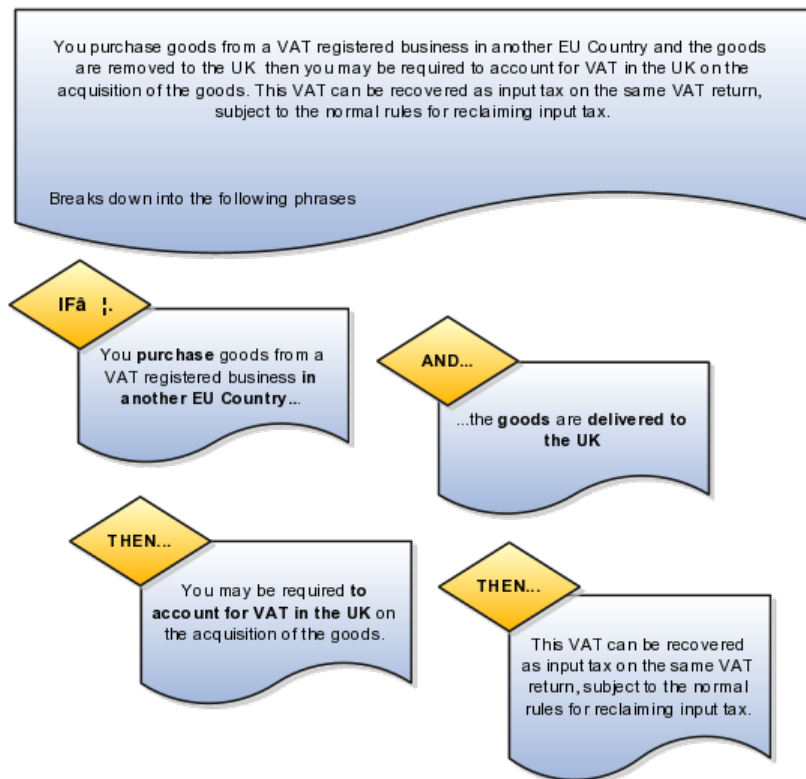
According to the HMRC VAT guide, if you purchase goods from a VAT-registered business in another EU country, and the goods are moved to the UK, then you may be required to account for VAT in the UK on the acquisition of goods. This VAT can be recovered as input tax on the same VAT return, subject to the normal rules for reclaiming input tax.

Analysis

Analyze the text of the legislation and identify the key phrases in the legislation.

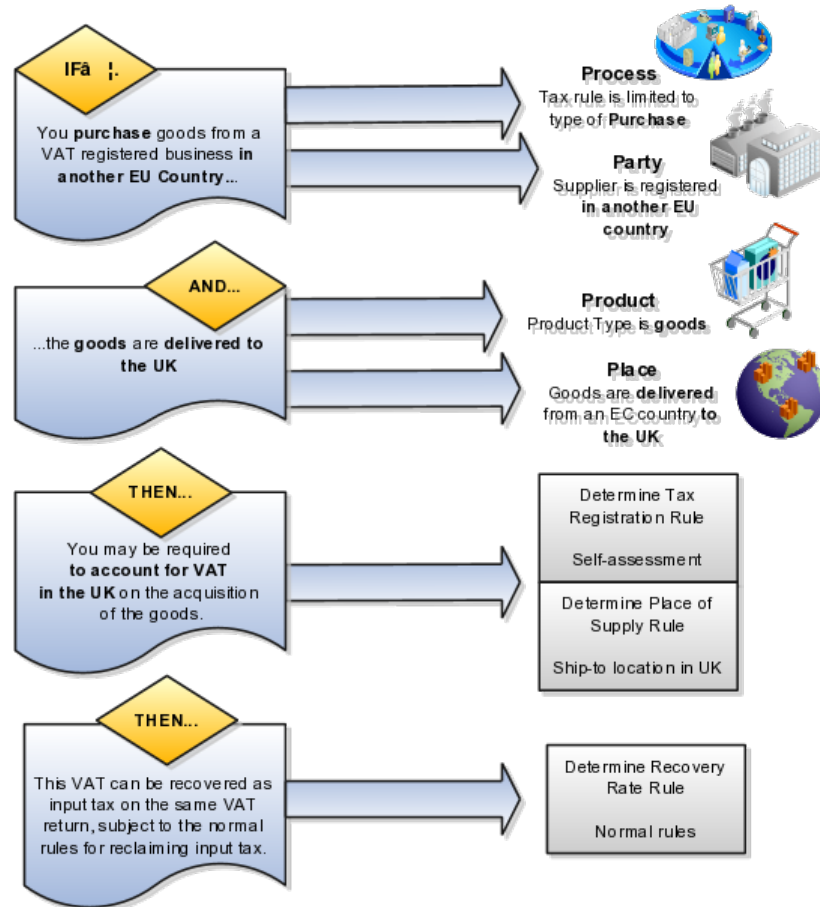
The following figure shows an extract of the UK HMRC VAT guide regarding the Intra-EU Supply legislation.

Extract of the UK Her Majesty Revenue and Customer VAT Guide web site information.



Break these phrases down into product, party, process, and place determining factors that describe under what conditions the legislation is applicable. Look at the legislation and identify what is the outcome when the legislation is applicable and determine which rule types are appropriate.

The following figure shows these determining factors and rule types in detail and how you can turn them into expressions that can be modeled in Oracle Fusion Tax.



This table describes the phrases identified in this tax legislation as represented in the previous figure:

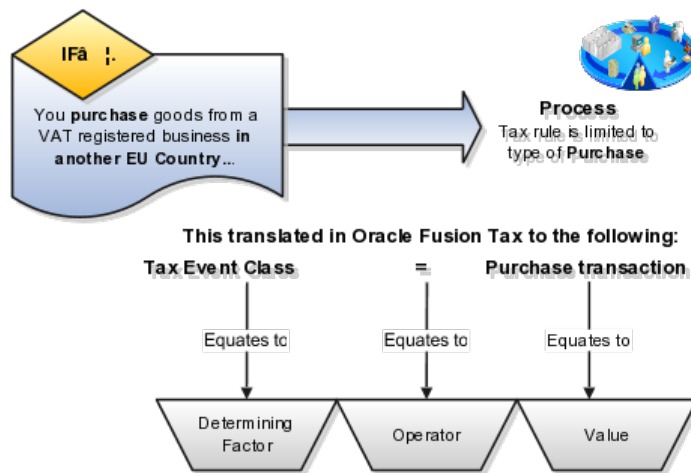
Legislation Phrase	Text	Requirement
1	If you purchase goods...	The tax rule is limited to purchase transactions.
2	...from a VAT-registered business in another European Community country ...	The tax rule requires that the supplier be registered in another EU country.
3	...and the goods are removed...	The tax rule is limited to the Goods product type.
4	...are removed to the United Kingdom ...	The tax rule refers to goods delivered to the United Kingdom from another country in the EU country.
5	...you may be required to account for ...	The party must reverse charge (self-assess) the tax.
6	...for VAT in the United Kingdom ...	The tax is UK VAT.

Resulting Tax Rules

Legislation Phrase 1

Tax legislation phrase 1 indicates that the determining factor that defines this specific tax rule is only applicable to purchase transactions. This equates to a tax event class equal to purchase transactions. Use a tax event class rather than an event class as the tax event class covers other products in the procure-to-pay flow. This covers Oracle Fusion Payables and Oracle Fusion Purchasing processing with a single approach.

The following figure shows that the determining factor that defines this specific tax rule is only applicable to purchase transactions.



This table describes the contents of the tax condition set as represented in the previous figure:

Legislation Phrase	Determining Factor Name	Operator	Value
1	Tax Event Class	Equal to	Purchase transaction

Tip

Always look for the most generic approaches that cover more of the business requirements in a single tax rule. For example, here the tax event class is used instead of a specific event class for Payables transactions and another similar rule for Purchasing transactions.

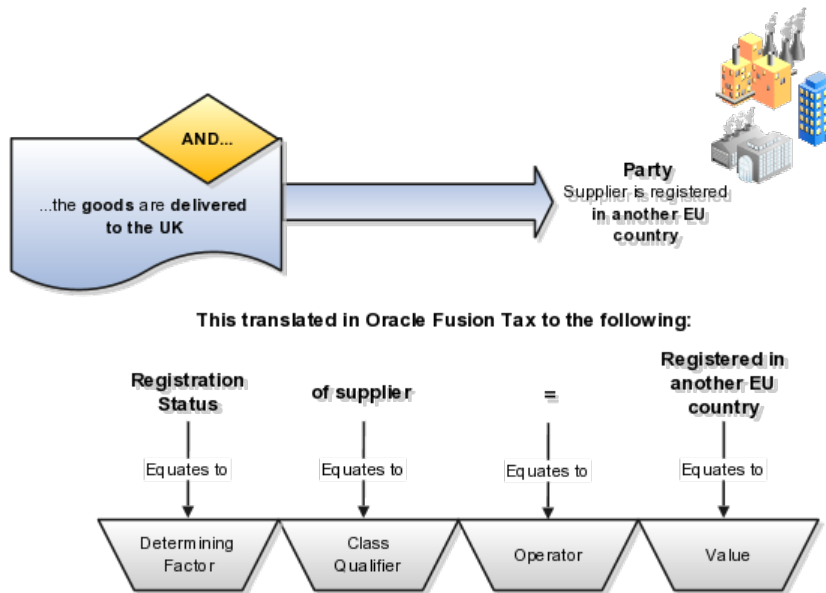
It is determining factors like this that allows you to define tax rules that are only applicable to specific types of transactions. The previous approach allows you a convenient way of splitting order-to-cash and procure-to-pay transactions. By using event class you can make a more detailed refinement so that tax rules are only applicable to specific product transactions. This flexibility drives the simplification of combining procure-to-pay tax setup with order-to-cash tax setup into a single model. In the majority of cases you do not need to distinguish between procure-to-pay or order-to-cash transactions within the tax rules, however, where there is a need create specific procure-to-pay or order-to-cash tax rules using this key design concept.

Legislation Phrase 2

Tax legislation phrase 2 indicates that the determining factor that defines the supplier is registered in another EU. There are several ways of modeling this

but the approach that is recommended for you to take is to use a registration status on the tax registration record set up for the GB tax regime. It is also recommended that a business process is in place and documentary evidence retained to show that the supplier is validated as a true supplier registered in another EU country. Until you complete this manual business process the supplier should not be marked with the registration status of registered in another EU country.

The following figure shows the determining factor that defines that the supplier is registered in another EU country.



This table describes the contents of the tax condition set as represented in the previous figure:

Legislation Phrase	Determining Factor Name	Class Qualifier	Operator	Value
2	Registration Status	of supplier	Equal to	Registered in another EU country

Tip

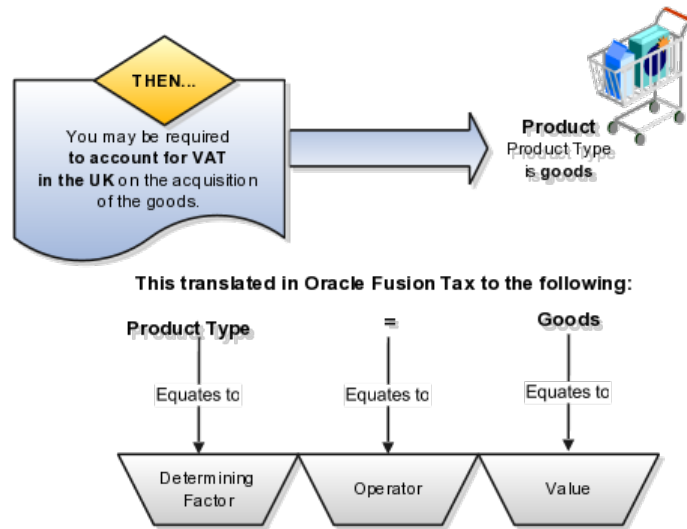
Always look for approaches which coupled with business procedures provide the necessary controls. In this case it is recommended that you devise and implement a business procedure to ensure that sufficient level of checking is done before the supplier or supplier site tax registration record is created and that the correct registration status entered. This business procedure ensures that the supplier is a valid supplier and that their tax registration number is a valid tax registration number.

Legislation Phrase 3

Tax legislation phrase 3 indicates that the determining factor that defines the product type is goods. Another way of modeling this is to use a product fiscal classification which can automatically be derived from the item defined on the

transaction. However, in this case if an item is not specified on the transaction, for example in an unmatched purchase invoice being processed, then there is no product fiscal classification derived. You need to create additional tax rules and setup to address this situation.

The following figure shows the determining factor that defines that the product type is goods.



This table describes the contents of the tax condition set as represented in the previous figure:

Legislation Phase	Determining Factor Name	Operator	Value
3	Product Type	Equal to	Goods

Tip

Always look for an approach which provides an automated process that covers as many transactions as possible. For example, by using product type of **Goods** rather than a product fiscal classification then unmatched Purchase invoice tax processing can also be covered by this one tax rule.

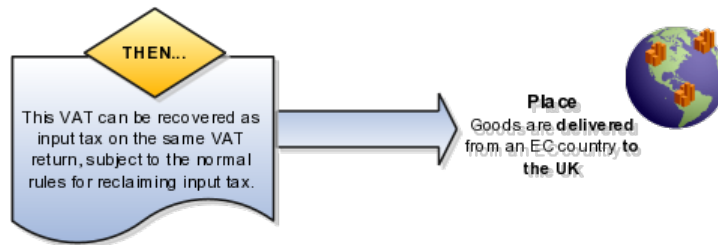
Legislation Phrase 4

Tax legislation phrase 4 indicates that the determining factors that define the supply is from another EU country. This is modeled by:

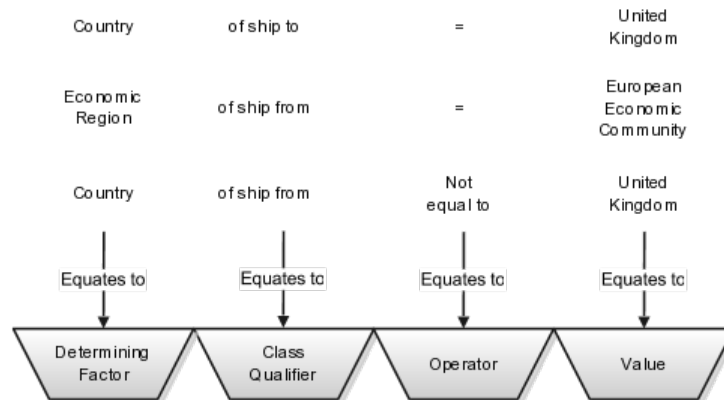
1. Goods are being shipped to UK
2. Goods are being shipped from an EU country
3. The shipped from country is not UK

You can take items 2 and 3 to ensure that the goods are being sent from another EU country outside the UK.

The following figure shows the determining factor that defines the supply is from another EU country.



This translated in Oracle Fusion Tax to the following:



This table describes the contents of the tax condition set as represented in the previous figure:

Legislation Phrase	Determining Factor Name	Class Qualifier	Operator	Value
4	Country	of ship to	Equal to	United Kingdom
4	Economic Region	of ship from	Equal to	European Economic Community
4	Country	of ship from	Not equal to	United Kingdom

Tip

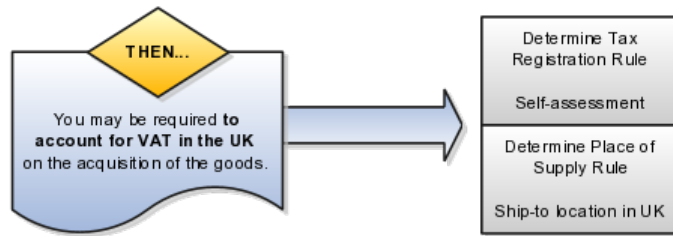
Geography and tax zones are powerful features of Oracle Fusion Tax and you should use them wherever possible to identify tax jurisdictions and geography requirements in general. Use the geography or tax zone information for tax reporting instead of trying to build geography information into concepts such as tax rates. For example, use tax jurisdictions, such as over sea tax territories based on tax zone, to identify specific territories needed for tax reporting rather than creating specific tax regimes, taxes, tax statuses, and tax rates.

Legislation Phrases 5 and 6

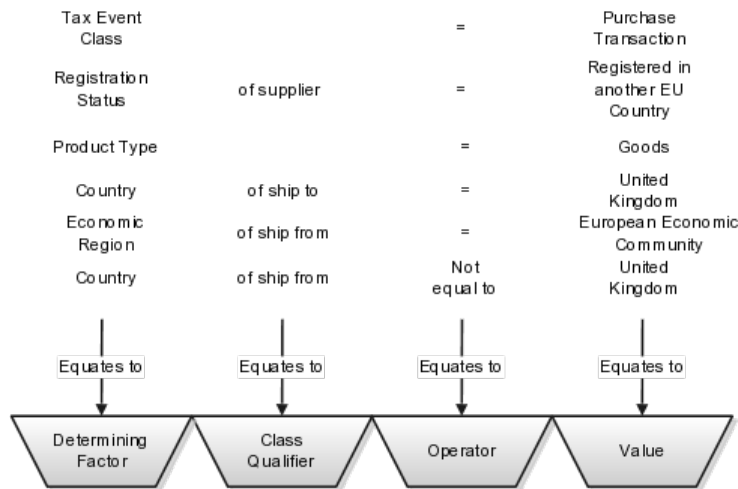
Tax legislation phrase 5 indicates how the determining factors discussed previously are brought together as the basis for the Tax Registration tax rule which identified that the bill-to party registration be used in preference to the normal default bill-from party registration. It is this bill-from party registration that triggers the reverse charge (self-assessment) for the type of transaction.

Tax legislation phrase 6 indicates how the determining factors discussed previously are brought together as the basis for the Place of Supply tax rule. This tax rule changes the normal place of supply to be the ship-to location, which in the context of this setup means that at least for the reverse charge (self-assessment) side of this transaction it is deemed to have occurred in the UK.

The following figure shows how you can bring together the determining factors discussed previously as the basis for the Tax Registration and Place of Supply tax rules.



This translated in Oracle Fusion Tax to the following:



This table describes the contents of the tax condition set for the Tax Registration and Place of Supply tax rules as represented in the previous figure:

Legislation Phrase	Determining Factor Name	Class Qualifier	Operator	Value
5 and 6	Tax Event Class		Equal to	Purchase transaction
5 and 6	Registration Status	of supplier	Equal to	Registered in another EU country
5 and 6	Product Type		Equal to	Goods
5 and 6	Country	of ship to	Equal to	United Kingdom
5 and 6	Economic Region	of ship from	Equal to	European Economic Community
5 and 6	Country	of ship from	Not equal to	United Kingdom

Tip

From this example you can see that a simple Tax Registration tax rule and Place of Supply tax rule is all that is needed to define what is a complex scenario for the purchasing of goods from a another EU country, not the UK, from an EU registered supplier by a UK registered business. The other tax rules that are used if these goods are purchased in the UK, are the normal tax rules such as Tax Status, Tax Rate, and Tax Recovery tax rules.

FAQs for Manage Tax Rules

What's the difference between using tax exemptions or tax rules to modify the taxable nature of a transaction?

You can modify the taxable nature of a transaction using tax exemptions, but you can also accomplish this through the use of tax rules. Use tax rules, such as the Determine Tax Applicability rule, to exclude certain categories of transactions from taxation. If you choose to implement tax rules to achieve your tax exemption requirements, the impacted transactions do not appear on many tax reports as they do not have any tax lines.

If you must report on a transaction then set up a tax exemption on the customer's party tax profile which results in a tax line being created with the modified tax rate. Use tax exemptions where certificates of exemption are issued for specific customers, which is typical in tax regimes for US Sales and Use Tax.

You can create an exempt tax rate with a zero percentage rate as a method of applying exemptions. This achieves many of the intended reporting objectives as the application generates a tax line. Reports that specifically refer to an item as exempt may exclude items with a zero percentage rate from that portion of the report because the exempt indicator is blank.

If you define an exempt tax with a zero tax rate, the transaction shows as fully taxable on all reports. If you want reports to show the full line amount as taxable you cannot add any exemption details, such as exempt reason codes, as this results in an exemption being created on the customer record and a zero taxable amount on the reports.

Manage Configuration Owner Tax Options

Tax Settings and Rules: How They Apply to Tax Line Operations

Enter and update detail and summary tax lines according to the requirements of your transactions. Depending on your security settings and options specified during tax setup, you can:

- Enter manual tax lines
- Enter tax only tax lines
- Change existing tax line information
- Cancel tax lines

Note

The Summary Tax Lines component is applicable only to Oracle Fusion Payables.

Entering Manual Tax Lines

These requirements apply to entering a manual detail or summary tax line:

1. Enable the **Allow entry of manual tax lines** option for the:
 - Configuration owner and application event class

- Tax
2. Ensure that the **Manual Tax Line Entry** profile option is enabled. It is enabled by default.
 3. Enter a unique combination for a tax regime and tax. You cannot enter a manual tax line for a tax that already exists for the transaction line.
 4. Enter a tax status to enter a tax rate.
 5. Enter a tax regime, tax, tax status, and tax rate to enter a tax amount.
- The tax calculation on a manual tax line is a standard formula of Tax Amount = Taxable Basis * Tax Rate. The tax determination process does not evaluate tax rules defined for the tax of any tax rule type.

Entering Tax Only Tax Lines

You can enter a tax-only invoice in Payables to record tax lines that are not linked to a transaction. A tax-only invoice is used, for example, to record tax lines on purchases that are assessed and invoiced separately or to enter tax-only invoices from tax authorities or import agents that record import taxes.

These requirements apply to entering a tax only tax line:

1. Enable the **Allow manual tax only lines** option for the configuration owner and application event class.
2. Select a tax regime from the tax regimes belonging to the configuration option of the applicable legal entity or business unit.
3. Select a tax, tax status, and tax rate and enter a tax amount.

Note

When you select or deselect the Tax Only Line option on a tax line for the first time, the update does not take effect. You must select the specific tax line, click the row header or a noneditable area, and then select the Tax Only Line option.

Editing Tax Line Information

These requirements apply to changing an existing detail or summary tax line:

1. Enable the **Allow override for calculated tax lines** option for the:
 - Configuration owner and application event class
 - Tax
2. Ensure that the **Manual Tax Line Entry** profile option is enabled. It is enabled by default.
3. Optionally, enable the following options for the configuration owner and application event class:
 - **Allow recalculation for manual tax lines** option. The tax determination process recalculates the manual tax lines when there is an update to automatically calculated tax lines.
 - **Tax line override impacts other tax lines** option. The tax determination process recalculates the taxes on all other tax lines on the same transaction when there is an override of automatically calculated tax lines on transactions.
4. Save any changes to summary tax lines before you enter or change Payables summary tax lines.

5. Change the tax status if necessary. These requirements apply to changing tax statuses:
 - You cannot update the tax status if the tax on the detail tax line is enforced from the natural account.
 - If you edit a tax only tax line and change the tax status, you must re-enter the tax rate code.
6. Change the tax rate if necessary. These requirements apply to changing tax rates:
 - The **Allow tax rate override** option is enabled for the applicable tax status.
 - The **Allow ad hoc rate** option is enabled for the applicable tax rate.
 - You may need to change the tax status to change to the appropriate tax rate.
 - You can change the calculated tax rate derived from the tax status by selecting another tax rate defined for the same tax regime, tax, and tax status.
7. Change the tax rate percentage or quantity rate if necessary. These requirements apply to changing tax rate percentages or quantity rates:
 - You cannot update the tax rate code and rate fields if the tax on the detail tax line is enforced from the natural account.
 - You can only update the tax rate percentage if the tax rate code has the **Allow ad hoc rate** option enabled.
8. Change the tax amount if necessary. These requirements apply to changing tax amounts:
 - When you change the tax amount the setting for the **Adjustment for ad hoc amounts** option of the tax rate determines which value is adjusted, the taxable amount or the tax rate.
 - You can only edit the tax amount if a detail tax line belongs to an historic transaction.
 - You can change the tax amount independent of the tax inclusive and compound tax settings.
 - If you defined tax tolerances for Payables transactions, then if you edit the tax amount and it exceeds the specified tolerance, Oracle Fusion Tax places the invoice on hold.
 - You can only enter 0 as the tax amount if the tax rate is 0.
9. Update the **Inclusive** option setting if necessary. The tax determination process recalculates the taxable amount and transaction amount.

For tax calculation, a limited evaluation of tax rules on certain updates to a tax line is performed.

Canceling Tax Lines

These requirements apply to canceling an existing detail or summary tax line:

1. Cancel tax lines on Payables transactions only.
2. Enter a new manual tax line to reverse a canceled tax line if necessary.

Note

On canceling the invoice or invoice lines, tax lines are automatically canceled.

When you cancel a tax line both the associated tax line and any distributions that were previously accounted are reversed. If the distributions were not accounted, then the amounts are set to zero.

Note

When you select or deselect the Cancel option on a tax line for the first time, the update does not take effect. You must select the specific tax line, click the row header or a noneditable area, and then select the Cancel option.

Configuration Owner Tax Options Controls and Defaults: Points to Consider

Set up configuration owner tax options for a combination of configuration owner and application event class. Configuration owner tax options let a configuration owner update default tax options on transactions that belong to a specific application event class. At transaction time, Oracle Fusion Tax uses the tax option settings of the configuration owner and application event class instead of the default settings.

Defining Controls and Defaults

The following table describes the defaults and controls available at the configuration owner tax options level for the following applications and event classes:

- Payables: Expense Reports
- Payables: Prepayment Invoices
- Payables: Standard Invoices
- Purchasing: Purchase Order and Agreement
- Purchasing: Purchase Requisition
- Purchasing: Change Orders

Default Tax Options Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow exemptions	Not applicable	None	None	Not applicable to these applications

Regime Determination Set	Controls which determination method is used	None	None	Controls whether the tax determination process uses the migrated 11i approach using standard tax classification codes where the value is STCC or full regime determination using the predefined rule of TAXREGIME to determine applicable tax regimes or user-created regime determination rules
Perform additional applicability for imported documents	Controls whether additional taxes are calculated on imported documents	None	None	If selected then it triggers tax calculation to determine additional taxes on imported documents
Enforce tax from reference document	Controls whether tax calculated on another related document is used as the basis of tax on a new document	None	None	If selected then it enforces that tax calculation is based on the tax previously calculated on the reference document
Enforce tax from account	Controls whether tax rates are determined from account information associated with the transaction line	None	None	If selected it enforces that tax calculation is based on the tax account information associated with the transaction tax line
Allow offset tax calculation	Controls whether offset tax calculation is used at transaction time	None	None	If not selected it prevents offset tax calculation at transaction time for this configuration owner, application, and event class
Allow tax applicability	Controls whether tax is automatically calculated at transaction time	None	None	If not selected it prevents automatic tax calculation at transaction time for this configuration owner, application, and event class

Allow entry of manual tax lines	Controls whether you can enter manual tax lines at transaction time	None	None	Use this option in conjunction with Allow entry of manual tax lines option for the tax. When both fields are set you can enter manual tax lines at transaction time.
Allow recalculation of manual tax lines	Controls whether tax is recalculated when you enter manual tax lines	None	None	If selected then tax is recalculated for manual tax lines when you update transaction lines
Allow override of calculated tax lines	Controls whether you can override calculated tax lines at transaction time	None	None	Use this option in conjunction with the Transaction Tax Line Override profile option and the Allow override of calculated tax lines option for the tax. When all options are selected you can update the calculated tax line, excluding the update of the Inclusive option and the tax rate. To update the Inclusive option and tax rate at transaction time you need to select additional options for the tax rate.
Tax line override impacts other tax lines	Controls whether other taxes are calculated if you update the tax line at transaction time	None	None	Where transaction line tax can be changed this option controls whether other related taxes may be impacted and therefore, need to be recalculated

Allow override and entry of inclusive tax lines	Controls whether you can override and enter inclusive or exclusive line amounts	None	None	Use this option in conjunction with the Transaction Tax Line Override profile option, the Allow override of calculated tax lines option for the configuration owner tax options, and the Allow override and entry of inclusive tax lines option for the tax rate to allow you to update the Inclusive option on the tax line at transaction time

The following table describes the defaults and controls available at the configuration owner tax options level for the following applications and event classes:

- Receivables: Credit Memo
- Receivables: Debit Memo
- Receivables: Invoice

Default Tax Options Region

Field	Description	Default Derived from	Default Appears on	Controls
Allow exemptions	Controls where tax exemptions are allowed	None	None	If not selected it prevents tax exemptions for this application, event class, and configuration owner
Regime Determination Set	Controls which determination method is used	None	None	Controls whether the tax determination process uses the migrated 11i approach using standard tax classification codes where the value is STCC or full regime determination using the predefined rule of TAXREGIME to determine applicable tax regimes or user-created regime determination rules

Enforce tax from account	Controls whether tax rates are determined from account information associated with the transaction line	None	None	If selected it enforces that tax calculation is based on the tax account information associated with the transaction tax line
Allow tax applicability	Controls whether tax is automatically calculated at transaction time	None	None	If not selected it prevents automatic tax calculation at transaction time for this configuration owner, application, and event class
Allow entry of manual tax lines	Controls whether you can enter manual tax lines at transaction time	None	None	Use this option in conjunction with Allow entry of manual tax lines option for the tax. When both fields are set you can enter manual tax lines at transaction time.
Allow recalculation of manual tax lines	Controls whether tax is recalculated when you enter manual tax lines	None	None	If selected then tax is recalculated for manual tax lines when you update transaction lines
Allow override of calculated tax lines	Controls whether you can override calculated tax lines at transaction time	None	None	Use this option in conjunction with the Transaction Tax Line Override profile option and the Allow override of calculated tax lines option for the tax. When all options are selected you can update the calculated tax line, excluding the update of the Inclusive option and the tax rate. To update the Inclusive option and tax rate at transaction time you need to select additional options for the tax rate.

Tax line override impacts other tax lines	Controls whether other taxes are calculated if you update the tax line at transaction time	None	None	Where transaction line tax can be changed this option controls whether other related taxes may be impacted and therefore, need to be recalculated
Allow override and entry of inclusive tax lines	Controls whether you can override and enter inclusive or exclusive line amounts	None	None	Use this option in conjunction with the Transaction Tax Line Override profile option, the Allow override of calculated tax lines option for the configuration owner tax options, and the Allow override and entry of inclusive tax lines option for the tax rate to allow you to update the Inclusive option on the tax line at transaction time

Manage Simulator Transactions

Tax Simulator: Explained

The Tax Simulator is a tool for simulating the tax determination process in your tax setup. The Tax Simulator lets you preview the workings of your tax configuration before you perform tax calculations on live transactions in a subledger application. The Tax Simulator also allows you to test new tax configuration in conjunction with existing tax configuration to preview the resulting tax calculation. The Tax Simulator is a useful tool to identify the root cause when tax calculation is not what is expected on live data.

Run taxes from all applicable tax regimes against a sample transaction to verify that your tax configuration and tax rules were created and applied according to your requirements. You can either create a sample transaction within Tax Simulator or copy an existing transaction. The simulated tax calculations do not affect live data.

Principle aspects of the Tax Simulator include:

- Functions and verifications
- Analysis tools
- Restrictions

Tax Simulator Functions and Verifications

The Tax Simulator lets you simulate the tax determination process on transactions without creating live data.

The Tax Simulator enables you to complete these functions:

- Enter transactions to simulate tax calculation based on various scenarios.
- Simulate the characteristics of the Payables, Purchasing, and Receivables transactions and create the tax line for each type of operation.
- View the detail tax lines generated for each transaction line.
- View the tax rules that were applied to a tax calculation and the processed result for each rule type.

The Tax Simulator provides these verifications:

- How the tax rules that you have defined for one or more taxes work in conjunction with the defaults that you have set for them.
- Whether a tax rule that you expected to have a successful evaluation for a given set of transaction conditions achieved the desired result.
- How the options that you have set at various levels are reflected in the results of tax determination processing. If a certain transaction does not process taxes as you predicted, then you can use the simulated result to troubleshoot the cause. For example:
 - You thought that there were product tax exceptions, but they were not used on a transaction as expected. You then discover that the **Allow tax exceptions** option was not enabled on the applicable tax rate record.
 - Your supplier record has the option enabled to use offset taxes, but the offset taxes do not appear. You then discover that the tax rate record does not have an offset tax rate associated with it.

Tax Simulator Analysis Tools

The Tax Simulator provides these pages to analyze the tax calculations on simulated transactions:

- Simulator Transaction page: View the details of the simulated transaction.
- Tax Line Details page: View the calculated tax lines for the simulated transaction. The page displays, for each transaction line, the applicable tax and tax configuration details, as well as if the result was determined by a tax rule or the default value. If a tax rule was applied, the page also displays the associated tax condition set.
- Rule Type page: View details of all enabled rules for a rule type. The page displays the processed result for each rule. The page also displays the associated tax condition sets and their processing details and results.

Tax Simulator Restrictions

The following restrictions apply when using the Tax Simulator:

- Payables tax recovery processing cannot be simulated.

- Application-specific actions on transactions or transaction lines, such as canceling, deleting, and reversing, are not tested.
- User control settings are not tested or verified.

Simulating Subledger Transactions: What Is Copied

Copy transactions from Oracle Fusion Payables, Oracle Fusion Purchasing, and Oracle Fusion Receivables and use them to test the entire tax and related configuration. Once the Tax Simulator copies data into the simulated transaction, you can update and delete lines as needed.

Settings That Affect Subledger Transactions

Oracle Fusion Tax uses your search criteria defined for the application, legal entity, and business unit to provide a listing of subledger transactions. The Tax Simulator copies the attributes of the selected transaction and populates them on the Create Simulator Transaction page.

What Subledger Data Is Copied

The Tax Simulator copies the following data from the subledger transaction:

- Transaction header information, including supplier and customer information
- Tax lines with a line type of line or freight
- Calculated tax amount if you use an external service provider for tax calculation
- Line-level tax attributes
- Discounts and exceptions for Receivables transactions
- Ship-to information for Receivables transactions

The system does not copy:

- Any referencing, applied, or adjusted documents
- Tax-only lines
- Canceled lines

Update and delete lines and attributes as needed. The only fields that you cannot update are the document event class and source document number.

Simulating Tax on Transaction Data: Explained

The Tax Simulator allows you to validate new and existing tax setup for procure-to-pay and order-to-cash transactions. The format of the Tax Simulator interface is a lightweight version of the procure-to-pay and order-to-cash respective work areas allowing ease of data entry and flow of item lines to tax calculation and tax lines. In addition to the required transaction attributes the additional tax attributes that drive tax calculation are highly visible and available for your

entry and update. Simulated transactions do not impact live data and you can purge them from the application using a process request.

Use the Tax Simulator to create, duplicate, and simulate transactions. The interface also supports associating adjusting, referencing, and applied documents on applicable event classes. In addition to simulating tax output for live transactions you can test the tax calculation of taxes that are not yet active and see the standalone tax calculation or the impact of this tax with taxes that are active. The Tax Simulator provides comprehensive information and a view into the tax processing logic to help you implement and troubleshoot tax setup. One of the critical uses of the Tax Simulator is for you to be able to safely trigger transactions without having a detailed knowledge of the core transaction systems or having to create transactions in these applications that impact the core applications.

Using the Tax Simulator

The Tax Simulator allows ease of data entry. The flow of transaction entry is similar to the respective work area so you are familiar with the flow. There is partial page rendering for procure-to-pay and order-to-cash event classes to expose the appropriate attributes. For example, when you enter a purchase order you are prompted for a supplier. When you populate the supplier information, the Tax Simulator populates the default ship to and bill to information. When you enter a Receivables sales invoice event class you are able to enter customer bill to and customer ship to details in a format similar to the Receivables Invoice work area. Other attributes include warehouse, discounts, and exemptions for Receivables event classes and line classes for Payables event classes.

The data you enter in the Tax Simulator is not live data, it is not accounted, reported, or visible from other product interfaces. In addition to manual entry of transaction data, you can copy live data to view or modify in the Tax Simulator. The Manage Tax Simulator Transactions page allows you to choose a source of Payables, Purchasing, Receivables, or Tax Simulator. Search on the source of Tax Simulator for transactions entered or copied into the Tax Simulator. The other product sources allow you to query and copy transactions from the respective subledgers.

For example, you have a Payables invoice where the tax calculation is not what you expect. Use the Tax Simulator to:

1. Search in the Manage Simulator Transactions page for a source of Payables, an event class of Purchase invoice, and respective business unit, document number, and date information.
2. View the applicable transaction in the Search Results table. If needed there is **Query by Example** available in the table for you to further identify the desired transaction.
3. Select the Purchase invoice and click **Simulate Transaction** to copy this transaction into the Tax Simulator.
4. Review the information on the Create Simulator Transaction page. The application populates the transaction details.
5. Populate the document number with the new number. The source document number is populated with the original document number. You can update all attributes except the document event class and source document number.
6. Save the document and click **View Tax Lines** to view the tax output.

If you want to test multiple variations of the same transaction you can query the transaction with a source of Tax Simulator in the Manage Tax Simulator Transactions page. Select the transaction in the search results and click the **Duplicate** action to duplicate the transaction details into a new document leaving the previous transaction details intact.

Using Additional Tax Attributes

In addition to the required fields for transaction entry and tax calculation, such as **Document Event Class**, **Document Date**, **Legal Entity**, **Business Unit**, **Currency**, **Supplier**, **Customer**, and **Line Amount**, the Tax Simulator gives you visibility into additional tax attributes that are commonly used to drive tax calculation based on tax rules. The Tax Simulator removes many of the attributes that do not impact tax calculation to simplify the page and let you focus on the needed elements.

At the header level the **Taxation Country** is visible for entry and update. At the line level you can enter and update attributes such as **Line Class**, **Line Type**, **Item**, and **Product Type**. Additional tax attributes, such as **Tax Inclusive**, **Transaction Business Category**, **Assessable Value**, **Tax Classification**, **Product Category**, **Intended Use**, **Product Fiscal Classification**, **User-Defined Fiscal Classification**, and **Account**, are organized in a tabbed region. All of these attributes can drive tax determination or tax calculation directly based on tax rules and tax formulas. Almost every additional tax attribute on the Tax Simulator interface directly impacts tax determination and tax calculation in a format that resembles the work areas so it is easy for you to understand and navigate.

Using Reference, Adjusted, and Applied Documents

Reference, adjusted, and applied documents can have tax calculation impacted by the documents they are associated with. The Tax Simulator presents information on some of the impacts. Others, such as variances in distributions, are not presented since accounting is not part of the Tax Simulator functionality. Also, when a document is simulated or copied in the Tax Simulator, the application does not copy referencing, adjusted, and applied documents. You must copy each document separately and associate them in the Tax Simulator.

The following is a list of the available event classes and associations that can be made in the Tax Simulator:

Application	Header Level Document Event Class	Item Line Attribute Line Class	Reference, Adjusted, and Applied Tab: Document Event Class	Reference, Adjusted, and Applied Tab: Document Number	Reference, Adjusted, and Applied Tab: Document Date	Reference, Adjusted, and Applied Tab: Document Line Number
Payables	Standard Invoice	Invoice	Purchase Order (not required)	Select the purchase order document number.	Populated when the document number is selected and it is read-only.	When you enter the document number of the purchase order this list is available with the respective invoice lines.

Payables	Standard Invoice	Prepayment	Prepayment Invoice	Select the prepayment invoice number.	Populated when the document number is selected and it is read-only.	When you enter the document number of the prepayment invoice this list is available with the respective prepay invoice lines.
Payables	Standard Invoice	Credit Memo	Standard Invoice	Select the credit memo document number.	Populated when the document number is selected and it is read-only.	When you enter the document number of the invoice this list is available with the respective invoice lines.
Payables	Prepayment Invoice	Column not displayed	Tab not displayed	Tab not displayed	Tab not displayed	Tab not displayed
Purchasing	Purchase Order	Column not displayed	Tab not displayed	Tab not displayed	Tab not displayed	Tab not displayed
Receivables	Invoice	Column not displayed	Tab not displayed	Tab not displayed	Tab not displayed	Tab not displayed
Receivables	Credit Memo	Column not displayed	Invoice	Required	Populated when the document number is selected and it is read-only	When you enter the document number of the invoice this list is available with the respective invoice lines.

An example of an applied document that impacts tax calculation is that of a Receivables credit memo that references an invoice. In Receivables there can be standalone credit memos that drive tax calculation based on the tax attributes entered on the credit memo and there are applied credit memos that drive tax calculation based on the referenced document; the invoice. If there is a credit memo that is not calculating what you expected in Receivables, you can:

1. Copy the transaction into the Tax Simulator.
2. Simulate each document independently and associate them in the user interface. The Tax Simulator does not copy associated documents
3. Review the credit memo tax lines independently before the transaction association and see that the tax calculation is based on the attributes entered on the credit memo.
4. Associate the invoice in the Reference, Adjusted, and Applied tab with the appropriate document number and line and drill to the tax lines. See

that the result type value for the rule results is derived from the reference document. This is indicating that the tax is not based on the credit memo attributes but those of the invoice.

Enabling Taxes for Transactions and Simulation: Explained

A feature of the Tax Simulator is the option for you to choose the status of the taxes to consider for evaluation. The transaction header region in the Tax Simulator includes an **Evaluate Taxes** attribute. The options are: **Enabled for simulation**, **Enabled for transactions**, and **Enabled for transactions and simulation**.

When you define a tax there are two different statuses the tax can have when the setup is complete. When you select **Enable tax for simulation** the tax is available only for processing on Tax Simulator transactions and is not calculated on live transactions. When you select **Enable tax for simulation** and **Enable tax for transactions** then the tax is considered active and is available for processing on both live transactions and Tax Simulator transactions.

When you create a Tax simulator transaction and the evaluate taxes status is set to:

- **Enabled for simulation:** Only taxes with the status **Enable tax for simulation** are selected for processing.
- **Enabled for transactions:** Only taxes that are live or have both **Enable tax for simulation** and **Enable tax for transactions** selected on the tax record are considered for processing.

This mimics the behavior of the processing for active taxes in the subledgers and is the default value when simulating or copying subledger transactions in the Tax Simulator.

- **Enabled for transactions and simulation:** Both taxes that have a status of **Enable tax for simulation** and taxes that have a status of **Enable tax for simulation** and **Enable tax for transactions** selected are processed.

This allows you to see behavior of both active and not active taxes on the same transaction. This is a useful tool when the calculation of one tax can impact another such as in the case of compounding tax formulas for tax calculation.

Example

You have two taxes defined that both evaluate to true for a particular Purchase invoice.

The first tax, FUS_CA, is defined for the sales tax for the state of California. The tax status is set to **Enable tax for simulation** and **Enable tax for transactions**. The second tax, FUS_ENV, is defined for an environmental tax. The tax status is set to **Enable tax for simulation**.

Simulate a live transaction in the Tax Simulator with the **Evaluate Taxes** option set to **Enabled for transactions**. In this case only taxes enabled for transactions are processed so the FUS_CA is the only tax calculated.

Next, update the **Evaluate Taxes** option set to **Enabled for simulation**. In this scenario only taxes that are enabled for simulation are processed so FUS_ENV is the only tax calculated.

Finally, update the **Evaluate Taxes** option set to **Enabled for transactions and simulation**. In this scenario both taxes enabled for simulation and enabled for both simulation and transactions are selected so both FUS_CA and FUS_ENV are calculated.

Tax Rules Evaluation in the Tax Simulator: Explained

Transactions pass key tax drivers relating to parties, products, places, and processes captured on the transaction to Oracle Fusion Tax for tax determination. Using these tax driver values as input, the tax determination process performs a series of process steps utilizing the defined tax configuration, including various tax rules defined for each rule type and calculates the taxes that are applicable on the transaction. Use the Tax Simulator to preview the workings of your tax configuration before you perform tax calculations on live transactions in a subledger application.

From the transaction tax details it might not be clearly evident as to which tax rule from your defined tax setup got processed or if the calculated tax is the result of the relevant rule condition. Using the Tax Simulator you can verify the tax determination process breakdown, the details of the tax rules that are evaluated for each rule type, and other key factors that are analyzed and applied during the tax determination process. The Tax Simulator is a tool that allows you to replicate the transaction details directly or as a copy from the source transaction. The Tax Simulator provides a detailed analysis of the decision criteria applied in the tax determination process, with reference to the defined tax configuration and displays the corresponding results for each rule type.

The Tax Line Details page within the Tax Simulator captures and lists out the following key process results that the tax determination process considers for each tax applied on the transaction:

- The tax determination methodology applied, such as regime determination or standard tax classification codes
- The rounding criteria applied, including rounding rule, rounding level, minimum accountable unit, and tax precision
- The types of taxes evaluated, for example, those enabled for transactions or enabled for simulation
- The rule evaluation details for each rule type, such as:
 - Result type, default or rule-based
 - Rule result
 - Sequence of the rule evaluation, the successful, unsuccessful and not evaluated tax rules and their corresponding determining factor sets, condition sets, and detailed condition elements

This abstract gives you a snapshot of the key results returned from each tax determination process step and provides pointers to validate it against the available tax setup. You can modify the tax setup if the key result areas are not as per the requirements.

Details for Simulated Transaction Lines: Explained

Use the Tax Line Details page to review the transaction level details that influence all tax lines and view the calculated tax lines for your simulated transaction. Each tax line for each transaction line number is listed in the Tax Line Details table with the corresponding tax configuration details. Open the Tax Line Details page by clicking the **View Tax Lines** button on the Simulator Transaction pages from the Manage Simulator Transactions task.

Attributes in tax line details include:

- Configuration owner, document event class, and source
- Allow tax applicability
- Regime determination set
- Default rounding level

Configuration Owner, Document Event Class, and Source

The configuration owner identifies the business unit or legal entity on the transaction that owns the tax configuration. For example, if the business unit is subscribing to the legal entity's data, the legal entity is identified, rather than the business unit. In order for a tax regime to be applicable on the transaction the configuration owner identified has to subscribe to the applicable tax regime.

The source attribute can have a value of **Event class** or **Configuration owner tax options**. This indicates if the application derives the event class-specific tax options from a configuration owner tax option that is defined for the combination of configuration owner, event class, and date range or if the application derives the options from the default predefined values for the event class. These tax options include the option to calculate tax, the regime determination set, options to allow manual entry and override, rounding defaults, and details regarding tax calculation on referencing documents. If the value is **Event class** then there are no configuration owner tax options defined for this combination of configuration owner, event class, and date and the predefined values are used including the predefined value of **TAXREGIME** for the regime determination set.

Allow Tax Applicability

The two allow tax applicability attributes identify whether the tax configuration setup provides for the calculation of taxes on this transaction. Both attributes must be set to **Yes** to calculate tax.

The two occurrences indicate the following:

- The first occurrence indicates if **Allow Tax Applicability** is selected on the predefined event class or applicable configuration owner tax options setup. If you do not set up configuration owner tax options, then the default value is set to **Yes** based on the event class mapping. A value of **No** appears if configuration owner tax options are set up and the **Allow Tax Applicability** option is not selected.
- The second occurrence of **Allow Tax Applicability** validates the hierarchy of tax applicability from the supplier and supplier site definitions for procure-to-pay transactions, to the party tax profile, and finally

to the default option for the predefined event class. If the **Allow Tax Applicability** option is not selected at any of the applicable levels then tax is not calculated. If the **Allow Tax Applicability** option is selected at a lower level and not selected at a higher level then tax is not applicable. If the **Allow Tax Applicability** option is set to **No** then you can drill down on the link to see where this option is not selected.

Regime Determination Set

The regime determination set indicates how the application determines the tax regimes to use for this transaction.

There are two values for this attribute:

- When the regime determination set is a value other than **STCC** (standard tax classification code) it is a determining factor set of type regime determination that includes transaction input factors of location types to derive the owning country on the transaction for tax purposes. Tax regimes that you defined for the derived country have taxes evaluated for calculation. The predefined regime determination set is **TAXREGIME** and this value always populates if the source is **Event class**. Use the drill down to the regime determination set details to identify the precedence of locations to determine the tax regime country.
- When the regime determination set is set to **STCC**, the additional tax attribute of **Tax Classification** set at the Line Level Tax Attributes tab drives tax calculation either directly or based on the Tax Classification Based Direct Rate Rules.

For example, if your simulated transaction does not have any tax lines, check the regime determination set value. If it is set to **STCC** and the **Tax Classification** field on the Line Level Tax Attributes tab is blank, tax is not calculated. Review your application tax options to verify that the defaulting hierarchy that specifies both the sources to use for tax classification codes and the order in which the application searches these sources to find a valid tax classification code at transaction time.

Default Rounding Level

The default rounding level shows in order of precedence, the party type, source, and rounding level value. At a minimum, a default value is set. The options are header level or line level rounding. Header level rounding applies rounding to calculated tax amounts once for each tax rate per invoice. Line level applies rounding to the calculated tax amount on each invoice line. The rounding rule is the method used to round off taxes to the minimum accountable unit. If there is any concern as to how rounding is determined or if setup needs to be modified you can use the dialog details in conjunction with party information to determine where the setup needs to be modified.

For example, on the Rounding Level dialog box for a purchase invoice you see the following:

Rounding Precedence	Party Type	Source	Rounding Level
1	Bill-from party	Supplier site	
1	Bill-from party	Party tax profile	Header
2	Bill-to party	Supplier site	
2	Bill-to party	Party tax profile	Line

3	Ship-from party	Supplier site	
3	Ship-from party	Party tax profile	Line
4	Ship-to party	Supplier site	
4	Ship-to party	Party tax profile	Header
Default			Header

The lowest level of 1 takes precedence over all other levels. The application uses, the default precedence only if none of the other levels are populated. If the value is blank then there is no attribute set at this level. If the you determine that in this example the bill-from party tax profile rounding level of **Header** is incorrect you can identify the bill-from party from the Tax Line Details header information and query the appropriate party tax profile to modify the setup. This example is simple in that the header level is the level used for rounding. If the value was **Line** there is more derivation logic starting with the party type derived for the Determine Tax Registration rule.

Line Level Details for Simulated Transaction Lines: Explained

Use the Tax Line Details page to review the calculated tax lines with the corresponding tax configuration details for each transaction line. Open the Tax Line Details page by clicking the **View Tax Lines** button on the Simulator Transaction pages from the Manage Simulator Transactions task.

Details include:

- Tax regime, tax, tax jurisdiction, tax status, tax rate code, and tax rate
- Tax amount and taxable amount
- Tax enabled status
- Indicators such as: inclusive, self-assessed, manually entered, and tax only line
- Calculated tax amount and tax base modifier rate
- Legal justification text
- Place of supply

For the tax lines associated with each transaction line, you can review the attributes that are specific to each tax line, such as:

- Rounding rule
- Inclusive
- Minimum accountable unit and tax precision
- Tax rate modification

Rounding Rule

The Rounding Rule dialog box shows the rounding details for the transaction line. The rounding rule is the method used to round off taxes to the minimum accountable unit. The rounding rule is derived based on the rounding level specified in the hierarchy visible in the dialog box with level one taking precedence over level 2 and so on. If the rounding level is at the header level then rounding is applied to calculated tax amounts once for each tax rate per

invoice. If the rounding level is at the line level then rounding is applied to calculated tax amounts on each invoice line.

Inclusive

The Inclusive dialog box shows the setup related to enforcing inclusiveness or exclusiveness of tax on a transaction line by order of precedence. The level 0 precedence is the highest overriding all other values with the level 5 precedence being the lowest or the default if none others are populated. The values are **Yes** or blank with blank meaning an option was not selected for inclusive handling.

In the scenario represented in the following table, tax is calculated as inclusive based on the setting for the tax rate. If you needed to modify this you can update the inclusive handling on the appropriate tax rate. If the transaction input value tax inclusive is set to **Yes** this means this option was overridden directly on the transaction.

Precedence	Source	Inclusive
0	Transaction input value tax inclusive	
1	Tax rate	Yes
2	Tax registration	
3	Site party tax profile	
4	Party tax profile	Yes
5	Tax	

Minimum Accountable Unit and Tax Precision

The Minimum Accountable Unit and Tax Precision dialog box shows the derivation of these values by precedence. The minimum accountable unit is the smallest unit a tax amount can have. Tax precision is a one-digit number that indicates the number of decimal places to which to calculate a tax.

For example, a precision of 0 rounds to a whole currency. To round off a calculated tax amount of 1.366 to 1.37, define a tax precision of **2**, a rounding rule of **Up** or **Nearest** and a minimum accountable unit of **.01**. If the results are not what you expected the dialog window gives you more information as to the source of the definitions. The precedence of 1 is the highest with the definition at the currency level superseding the definition at the tax level.

The following table illustrates this example:

Precedence	Source	Minimum Accountable Unit	Precision
1	Currency		2
2	Tax	.01	2

Tax Rate Modification

The Tax Rate Modification dialog box identifies if any applicable rate exceptions have been applied, and, in the case of Receivables, if any exemptions are applicable. The rates before and after any modifications are also shown. The tax rate modification value is **Yes** or **No** with a link for you to drill down to detail

information. If the tax rate modification value is **Yes** then there is a modification to the tax rate either from an exception or an exemption. The dialog box detail shows the tax rate name, the tax rate before modification, attributes to identify if exemptions or exceptions or both are applied, and the tax rate after each of these modifications.

In the following table the original tax rate was 5 percent with an exemption applied that reduced the tax rate to 2 percent.

Attribute	Value
Tax Rate Name	VAT 5%
Tax Rate Before Modification	5%
Exception Applied	No
Tax Rate after Exception	5%
Exemption Applied	Yes
Tax Rate after Exemption	2%

Tax Rule Details for Simulated Transaction Lines: Explained

For the tax lines associated with each transaction line, you can review the tax rule details that are specific to each tax line, such as:

- Rule results
- Rule conditions
- Tax rules process results

Rule Results

Use the Rule Results table to view the tax rules that are applied to each tax line for each tax calculation process. For each rule type, you can view the processed result and verify whether the result was determined by a tax rule or the default value.

For example, the following table shows the attributes displayed in the Rule Results table:

Rule Type	Result Type	Result	Rule Code	Rule Order
Determine Place of Supply	Default	Ship to		
Determine Tax Applicability	Default	Applicable		
Determine Tax Registration	Rule based	Ship-to party	REGRULE2	20

Where a tax rule is applied, you can determine the associated tax rule from the Rule Results table. In the previous example, the tax determination process uses defaults to determine the place of supply and tax applicability. However, the tax determination process determines the tax registration based on a tax rule. The applicable tax rule code is REGRULE2.

Rule Conditions

By selecting the Determine Tax Registration row, you can review the rule conditions that are successfully evaluated in the Determine Tax Registration: Rule Conditions table. The following table shows the attributes displayed:

Determining Factor Class	Class Qualifier	Tax Determining Factor Name	Operator	Value or From Range	To Range
Registration	Ship-from party	Registration Status	Equal to	Not Registered	

For example, if your transaction is calculating tax lines for a tax that should not be applicable, review the Determine Tax Applicability rule values in the Rule Results table for that tax line. If the Result Type is **Default** with a result of **Applicable**, verify that you have a Determine Tax Applicability tax rule that evaluates your transaction as not applicable.

Tax Rules Process Results

Use the Tax Rules Process Results table to view the processing and evaluation of the rules associated with a rule type. For each associated rule, the process result consists of one of the following:

- **Failed**
- **Successful**
- **Not evaluated**

For example, the Determine Tax Registration rule type may have 3 associated tax rules as represented in the following table:

Rule Code	Process Result	Evaluation Order	Rule Order
REGRULE1	Failed	1	10
REGRULE2	Successful	2	20
REGRULE3	Not evaluated	3	30

In this example, the tax rule with the highest rule order priority failed, while the rule with the next highest rule order priority is successful. In this case of 3 associated tax rules, the tax determination process does not evaluate the remaining tax rule.

For each rule in the Tax Rules Process Results table, you can also review the following:

- **Rule information:** Provides a summary of details associated with the tax rule, such as configuration owner, tax regime, tax, effectivity, rule order, and tax determining set code.
- **Event information:** Provides additional information for the event class if this rule was defined as applicable to a specific event class.
- **Geography information:** Provides additional parent geography and geography details defined for a specific tax rule if the rule is geography specific.

For each tax rule listed in the Tax Rules Process Results table, you can drill down to the associated rule conditions to review the condition details.

For example, if your transaction is correctly using tax rules to calculate taxes but is applying an incorrect tax rule, use the Tax Rules Process Results table to review the rule order and the associated rule conditions for each tax rule.

Using the Tax Simulator to Analyze Tax Not Calculating as Expected: Example

Use the Tax Simulator to create a simulated transaction and analyze the tax calculations of your transaction before you enable your setup for live data or to troubleshoot existing tax setup. Use the header level details in the Tax Simulator to troubleshoot issues where tax is not calculated as expected.

The following scenario illustrates when you might want to use the Tax Simulator to evaluate a Payables invoice where you expect tax to be calculated and it is not.

Scenario

If there is a transaction in the subledger work area that is not calculating tax you can simulate this transaction in the Tax Simulator.

Note

The transaction date in the Tax Simulator is updated to the system date so modify the transaction date to the expected date of tax calculation.

The following represents each of the attributes in order to assist you in determining what information they can provide to identify the issue:

- **Document Date:** Ensure that the document date is correct and that the regime to rate setup and applicable tax rules are effective as of this date?
- **Configuration Owner:** Determine if the configuration owner is the legal entity or the business unit. Does the respective configuration owner have a subscription definition to the tax regime where you are expecting tax to calculate? Is the subscription effective on the document date?
- **Document Event Class and Source:** Determine if the source is accurately reflected. The source identifies if the tax options are derived from the predefined event class or if they are derived from the configuration owner tax options that are defined. If they are derived from the configuration owner tax options you can query the configuration owner tax option definition by the configuration owner and document event class and view options based on transaction date effectivity. Other attributes and options, such as **Allow Tax Applicability**, **Tax Regime Determination**, and **Enforce tax from reference document** are included in configuration owner tax options. Issues with tax calculation may stem from the regime determination definition not being what is expected either the standard tax classification code and not the TAXREGIME determination or the reverse. If these are intercountry transactions ensure that the precedence of regime determination points to the expected country of taxation.
- **Allow Tax Applicability:** Ensure that this option is set to **Yes** for tax to calculate. This is the value defined on the source value in the previous attribute. There is another **Allow Tax Applicability** attribute in this region that checks the value from the applicable party.

- **Regime Determination Set:** Ensure that the regime determination set is accurately specified. This attribute indicates if tax calculation is determined by the standard tax classification code or if country of regime is evaluated as in the case of the predefined TAXREGIME regime determination set.
- **Default Rounding Level:** This does not impact tax calculation but identifies the rounding derivation.
- **Third party location:** Determine if the third party locations are accurately reflected. These attributes help identify locations on this transaction that may influence regime determination and tax calculation based on location. There may be other locations set at a line level that may impact tax calculation as well.
- **Allow Tax Applicability:** Ensure that this option is set to **Yes** for tax to calculate. This option is derived from the supplier, supplier site, third party, and third party site tax profile depending on the event class. Tax applicability must be set to **Yes** for all relevant party tax profiles in order for tax to calculate. If tax applicability is set to **No** for either attribute then tax is not processed.
- **Evaluate Taxes:** Ensure the status of the tax you are expecting to calculate. Is it **Enabled for transactions**, **Enabled for simulation**, or **Enabled for transactions and simulation**? This identifies what status of taxes is evaluated for calculating tax.

Define Advanced Tax Configuration

Manage Tax Geographies

Place Information: Explained

All tax regimes need information about place or geography.

Information is required to determine:

- Where the tax is applicable
- The tax rules that can identify when a transaction is an export, or delivered to another country, or deliveries inside or outside an economic region such as, the European Community (EC).
- Specific regions such as, city, country, and states for US Sales and Use Tax or provinces in Canada.

To support these requirements, Oracle Fusion Tax allows you to define and use geography regions and tax zones. Geography regions and tax zones provide a conceptual model to use place information on transactions and information related to the transaction.

The following types of places are supported for tax purposes in Oracle Fusion Tax:

- **Country information:** Use country as a specific geography element in tax rules to define tax regimes, taxes, and tax jurisdictions.

- Geography elements: Use geography elements or levels defined in the Oracle Fusion Trading Community Model geography functionality in tax rules to define tax regimes, taxes, and tax jurisdictions.
- Tax zones: Use geography elements or levels defined in Trading Community Model geography in tax rules to define tax regimes, taxes, and tax jurisdictions.

Use place information for determining factors within tax rules in the tax determination process. Also, use place information while defining tax regimes, tax geography, and tax jurisdictions.

Country Information

Country is a required field in all of the tax-related address locations. The country fields are supported by a predefined ISO 3166 country name and two-character country code. For more information on country names and codes, see http://www.iso.org/iso/english_country_names_and_code_elements.

You do not set up a country as a specific geography level in Trading Community Model geography because country is an inherent part of all tax-related address locations.

Tip

Use the highest level of geography, typically country, wherever possible.

Geography Elements

Define geography elements as part of Trading Community Model geography. They control the use of geography and addresses throughout Oracle Fusion. Oracle Fusion Tax commonly uses the following features: geography or tax zones, geography levels, address controls, and geography name referencing.

Use geography levels to define the levels of geography that are used within a country. For example, addresses in the US comprise of state, county, city, street, and postal code. Addresses in the UK comprise of county, city or town, street, and postal code. There may be other geography elements as well, such as building. From a tax perspective it is only those elements of the address that are referenced for tax purposes. For example, state, county, and city are important for US Sales and Use Tax while county in UK is not relevant from a tax perspective and therefore, you do not need to set it up.

Tip

When address elements are needed for tax purposes, such as country and city for US Sales and Use Tax, set these address levels as mandatory within Trading Community Model geography. This ensures that these elements are always present on all applicable addresses.

Setting address levels as mandatory ensures that amended or newly applicable addresses are validated and that the level is either derived or entered. When you are setting up migrated addresses ensure that they are also compliant with the mandatory levels being present. This should be validated and any address levels added as part of the migration process.

The geography name referencing process within Trading Community Model geography links specific addresses to the levels defined in the geography setup.

This process is typically automatic. However, when you encounter issues, you may need to trigger this process to ensure that all addresses are correctly linked to their applicable levels.

Tax Zones

Use the tax zone functionality when you need to identify a group of geography elements while calculating tax. Tax zones are defined as part of Trading Community Model geography.

For example, in the EC it is important to know whether goods and services are being delivered within the EC. Use the tax zone functionality to create a tax zone, which defines the membership to the EC as well as, the dates on which a country became the member.

Tip

Create a generic tax zone so that you create a tax zone type that can be used in multiple situations. For example, for a tax zone type needed to identify EC, create a generic tax zone type for all economic communities, which can later be used in other situations where economic communities or trade agreements affect tax determination.

You can also use the tax zone functionality to group postal codes to provide useful groupings that can identify some higher-level tax regions such as, cities or counties.

Country Information: How It Works in Tax Rules and on Transactions

Geography determination factors allow you to use country information in the tax rules. A combination of determination factor class, class qualifier, and determining factor represent these determination factors. Specify the taxation country at transaction time which is used, along with the tax rules, during the tax determination process.

Country Information in Tax Rules

Use geography as the determining factor class, location type on the transaction as the class qualifier, and country as the determining factor. You can also use country as a tax rule qualifier.

The tax determining factors for locations are given generic names such as ship-to and bill-from, depending on the transaction types. The transaction types are **Order-to-cash**, for example, Oracle Fusion Order Management and Oracle Fusion Receivables, and **Procure-to-pay**, for example Oracle Fusion Purchasing and Oracle Fusion Payables.

Oracle Fusion Tax translates these generic locations into specific locations based on the transaction as shown in the following table:

Generic Party	Order-to-Cash Party	Procure-to-Pay Party
Bill-from party	Location assigned to the business unit for the transactions	Supplier
Bill-to party	Customer	Location assigned to the business unit for the transactions
Ship-to party	Customer (ship-to) party site	Ship-to location on the line

Ship-from party	Warehouse on the line. If there is no warehouse on the line, such as with services, the default location assigned in the Receivables system parameters is used.	Supplier (ship-from) party site
Point of acceptance party	Customer point of acceptance party	Not applicable
Point of origin party	Customer point of origin party	Not applicable

Country Information at Transaction Time

Specify the taxation country on the transaction to identify the country in which the transaction is deemed to have taken place for taxation purposes. The default value is the country of the legal entity. Use the country name to search for country defaults, which control the fiscal classification defaults, party tax profile defaults, and tax regime and tax defaults. Use the country name to select the following fiscal classifications associated with that specific country:

- User-defined fiscal classifications
- Product categories
- Intended use fiscal classifications
- Transaction business categories

Using Country Information in Tax Rules: Example

For many regimes, it is important to know if the supply of goods is exported. The easiest way of doing this is to ensure that the ship-from location is from the country in question and the ship-to location is a different country.

The following scenario illustrates setting up tax rule components to identify if the goods are exported from the United States.

Scenario

Use geography as the determining factor class, country as the class qualifier for ship-from and ship-to locations, and country as the determining factor as shown in the following table:

Determining Factor Class	Class Qualifier	Determining Factor Name
Geography	Ship-from	Country
Geography	Ship-to	Country

Create a condition set that refers to this geography determining factor as follows:

Determining Factor Class	Class Qualifier	Determining Factor Name	Operator	Value
Geography	Ship-from	Country	Equal to	United States
Geography	Ship-to	Country	Not equal to	United States

Use this combination of determining factors in any situation where you need to identify exports from the United States.

Geography Elements: How They Work in Tax Rules

Geography determination factors allow you to use geography elements in tax rules. A combination of determination factor class, class qualifier, and determining factor represent these determination factors.

Geography Elements in Tax Rules

Use geography as the determining factor class, location type on the transaction as the class qualifier, and geography level such as county, province, or city, as the tax determining factor.

The tax determining factors for locations are given generic names such as ship-to and bill-from, depending on the transaction types. The transaction types are **Order-to-cash**, for example, Oracle Fusion Order Management and Oracle Fusion Receivables, and **Procure-to-pay**, for example Oracle Fusion Purchasing and Oracle Fusion Payables.

These generic locations are mapped to the specific location, based on the transaction as shown in the following table:

Generic Party	Order-to-Cash Party	Procure-to-Pay Party
Bill-from party	First party legal entity	Supplier
Bill-to party	Customer	First party legal entity
Ship-to party	Customer (ship-to) party site	First party legal entity
Ship-from party	First party legal reporting unit	Supplier (ship-from) party site
Point of acceptance party	Customer point of acceptance party	Not applicable
Point of origin party	Customer point of origin party	Not applicable

You can also use the geography level as a tax rule qualifier.

Using Geography Levels in Tax Rules: Example

Use the geography element in tax rules to identify a specific geography region when taxes in a specific country need to identify specific geography elements below the country level. For example, in US Sales and Use Tax for county taxes, there may be specific rules for a specific state.

The following scenario describes how you can set up tax rule components to identify when goods are being delivered to a specific state, such as Ohio.

Scenario

Use geography as the determining factor class, ship-to as the class qualifier, and state as the determining factor as shown in the following table:

Determining Factor Class	Class Qualifier	Determining Factor Name
Geography	Ship-to	State

Create a condition set that refers to a specific state value as follows:

Determining Factor Class	Class Qualifier	Determining Factor Name	Operator	Value
Geography	Ship-to	State	Equal to	Ohio

You can use this combination of determining factors in any situation where you need to identify specific deliveries to a specific state.

Tax Zones: How They Work in Tax Rules

Geography determination factors allow you to use geography elements in the tax rules. A combination of determination factor class, class qualifier, and determining factor represent these determination factors.

Tax Zones in Tax Rules

Use geography as the determining factor class, location type on the transaction as the class qualifier, and tax zone type such as county, as the determining factor.

The tax determining factors for locations are given generic names such as ship-to and bill-from, depending on the transaction types. The transaction types are **Order-to-cash**, for example, Oracle Fusion Order Management and Oracle Fusion Receivables, and **Procure-to-pay**, for example Oracle Fusion Purchasing and Oracle Fusion Payables.

These generic locations are mapped to the specific location based on the transaction as shown in the following table:

Generic Party	Order-to-Cash Party	Procure-to-Pay Party
Bill-from party	First party legal entity	Supplier
Bill-to party	Customer	First party legal entity
Ship-to party	Customer (ship-to) party site	First party legal entity
Ship-from party	First party legal reporting unit	Supplier (ship-from) party site
Point of acceptance party	Customer point of acceptance party	Not applicable
Point of origin party	Customer point of origin party	Not applicable

You can also use tax zones as tax rule qualifiers.

Using Tax Zones in Tax Rules: Example

For the European Community (EC) or the Economic Union (EU) it is important to know whether goods and services are being delivered within the EC. Use the tax zone functionality to create a tax zone that defines the membership of the EC as well as the dates on which a country became a member.

The following scenario describes the use of a partial condition set that you can use within tax rules to define when a delivery is being made to an EC from the United Kingdom.

Scenario

Use geography as the determining factor class, ship-to as the class qualifier, and all economic communities and country as the determining factors of the tax zone type as shown in the following table:

Determining Factor Class	Class Qualifier	Determining Factor Name
Geography	Ship-to	All Economic Communities
Geography	Ship-to	Country
Geography	Ship-from	Country

Create the condition set as follows:

Determining Factor Class	Class Qualifier	Determining Factor Name	Operator	Value
Geography	Ship-to	All Economic Communities	Equal to	European Community
Geography	Ship-to	Country	Not equal to	United Kingdom
Geography	Ship-from	Country	Equal to	United Kingdom

You can use this combination of determining factors in any situation where you need to identify the deliveries that are made from the UK to other EU countries.

Manage Tax Statuses

Tax Status Controls and Defaults: Points to Consider

Set up tax statuses that you need for each tax that you create for a combination of tax regime, tax, and configuration owner. You define a tax status under a tax and a configuration owner, and define all applicable tax rates and their effective periods under the tax status. The tax status controls the defaulting of values to its tax rates.

Defining Controls and Defaults

The following table describes the defaults and controls available at the tax status level.

Header Region

Field	Description	Default Derived from	Default Appears on	Controls
Set as default tax status	Controls whether this tax status is defined as the default tax status for this tax	None	None	If selected then this tax status is defined as the default tax status for this tax. Where no tax status rules are applicable then the tax determination process selects this tax status as the applicable tax status for transactions in the date range defined.

Tax Information Region

Field	Description	Default Derived from	Default Appears on	Controls
Default Settlement Option	Lookup code to indicate whether an input tax is recovered when an invoice is recorded or only when the invoice is paid and whether an output tax is due for settlement when the invoice is issued or only when the payment is received against it	Tax	Tax rate	None
Allow tax exceptions	Controls whether tax exceptions are allowed for this tax	Tax	Tax rate	None
Allow tax exemptions	Controls whether tax exemptions are allowed for this tax	Tax	Tax rate	None
Allow tax rate override	Controls whether you can override the tax rate at transaction time	None	Tax rate	None

Manage Tax Formulas

Tax Formulas: Explained

Tax formulas are used in the tax calculation process to determine the taxable basis of a transaction line and the calculation methodology that must be applied to obtain the tax amount.

When the parameters available on a transaction do not satisfy the rule conditions, the default tax formulas defined for the tax are applicable.

There are two types of tax formulas:

- Taxable basis tax formula
- Tax calculation tax formula

Taxable Basis Tax Formula

The taxable basis tax formula is used in the tax calculation process to determine the amount or quantity that should be considered as the taxable basis of a transaction line. The tax rate is applied on the taxable basis amount to derive the basic tax amount on a transaction line.

The key factor that decides the characteristics of the taxable basis amount is the taxable basis type that is defined in the taxable basis formula. The various taxable basis types are:

- **Assessable value**
- **Line amount**
- **Prior tax**
- **Quantity**

The following standard predefined taxable basis tax formulas are available:

- STANDARD_QUANTITY
- STANDARD_TB
- STANDARD_TB_DISCOUNT

Assessable Value

Use **Assessable value** when the transaction line amount does not reflect the correct taxable basis, from the tax calculation perspective. The assessable value given on the transaction line is considered as the taxable basis amount for the purpose of tax calculation.

Line Amount

Use **Line amount** when the transaction line amount is to be treated as the taxable basis for tax calculation purposes.

The transaction line amount is considered as the taxable basis. This is done after deducting the associated discounts, or after proportionately enhancing or reducing it by a certain percentage, or after adding other applicable taxes available on the transaction line. These adjustments on the line amount are controlled through the following parameters that are defined on the tax formula:

- **Subtract cash discount:** The cash discount applicable on the transaction, derived through the attached payment terms, is deducted from the transaction line amount. This option is considered only for Receivable transactions.
- **Base rate modifier:** The transaction line amount is increased or decreased based on the percentage value given.
- **Tax formula compounding:** The tax details specified in the tax formula compounding region are added to the transaction line amount to determine the taxable basis amount. These tax details are also enforced by selecting the **Enforce Compounding** option. If a compounded tax is enforced and if it is not calculated on the transaction, the tax to which this tax formula is associated with also does not become applicable.

Prior Tax

Use **Prior tax** if the taxable basis is one or more than the other taxes calculated on the transaction line. The option to compound the prior taxes that are calculated on the transaction line are also available.

Quantity

Use **Quantity** if a tax on the transaction is to be calculated based on the number of units or items that are involved in the transaction.

Tax Calculation Tax Formula

The tax calculation tax formula is used to determine the calculation methodology that is applied to derive the basic tax amount on a transaction line. The tax amount on a transaction is generally calculated by multiplying the derived tax rate by the taxable basis. However, in some cases the tax amount is required to be altered by adding other taxes that are applicable on the same transaction line. Use a tax calculation formula defined with compounding criteria to address this requirement.

The tax details specified in the tax formula compounding region are added to the calculated tax that is associated with the tax formula. These compounded tax details can also be enforced when you select the **Enforce Compounding** option. When the compounded tax is enforced and when it is not calculated on the transaction, the tax to which this tax formula is associated with also does not become applicable.

Taxable Basis Tax Formula: Examples

The tax calculation process uses the taxable basis tax formula to determine the amount or quantity that should be considered as the taxable basis of a transaction line. The tax rate is applied on the taxable basis amount to derive the basic tax amount on a transaction line.

Taxable basis type that is defined in the taxable basis formula is a key factor that decides the characteristics of the taxable basis amount. The taxable basis types are:

- **Assessable value**
- **Line amount**
- **Prior tax**
- **Quantity**

Taxable Basis Formula Based on Assessable Value

The tax formula that is based on assessable value is used as the taxable basis for calculating tax when the tax authority does not consider the transaction amount to reflect the true sale consideration, from the tax perspective.

Consider a sales transaction between two companies, A and B. The item value on the invoice is 1000 USD. However, if they are related companies, that is, within the same group, the tax authority has the discretion to mark the item value as 5000 USD for the purpose of tax based on the average market price. The tax authority can choose to collect the tax based on that value instead of the actual sales value of 1000 USD.

The tax amount is calculated from the transaction details and tax setup as follows:

- Invoice line amount: 1000 USD
- Assessable value: 5000 USD
- State tax rate: 10%
- Taxable basis type: Assessable value
- Taxable Basis: 5000 USD

The state tax is equal to the taxable basis multiplied by the state tax rate (5000 USD * 10% = 500 USD).

Taxable Basis Formula Based on Line Amount

In this case, the amount given on the transaction line is considered for deriving the taxable basis.

Consider a situation when two taxes, state tax and county tax, are applicable on a transaction. In such a situation, the transaction details and tax setup is as follows:

- Invoice line amount: 1000 USD
- Payment terms: 2/10, Net 30
- State tax rate: 20%
- County tax rate 10%
- Taxable basis type: Line amount
- Subtract cash discount: Yes
- Base rate modifier: 50%
- Compounding tax regime: Sale and use tax
- Compounding tax: State tax

The tax calculation is as follows:

- The state tax is equal to the invoice line amount multiplied by the state tax rate (1000 USD * 20% = 200 USD).
- The taxable basis for the county tax is equal to the line amount plus the base rate modifier less the cash discount at 2% plus the state tax (1000 USD + 500 USD - 20 USD + 200 USD = 1680 USD).

The country tax is equal to the taxable basis multiplied by the county tax rate (1680 USD * 10% = 168 USD).

Taxable Basis Formula Based on Prior Tax

In this case, the previous tax that is calculated on a transaction is considered as the taxable basis.

Consider a situation when two taxes, state tax and county tax, are applicable on a transaction. In such a situation, the transaction details and tax setup is as follows:

- Invoice line amount: 1000 USD
- State tax rate: 20%
- Country tax rate: 10%
- Taxable basis type: Prior tax
- Compounding regime: Sale and use tax
- Compounding tax: State tax

The tax calculation is as follows:

- The state tax is equal to the invoice line amount multiplied by the state tax rate (1000 USD * 20% = 200 USD).
- The taxable basis for the county tax is the tax calculated for the state tax (200 USD).

The country tax is equal to the taxable basis multiplied by the county tax rate (200 USD * 10% = 20 USD).

Taxable Basis Formula Based on Quantity

In this case, the quantity of the goods or serviceable units is considered as the taxable basis.

Consider a scenario in which liquor is transacted between two organizations in Canada. In such situation, when excise tax is levied on it, the transaction details and tax setup is as follows:

- Line amount: 1000 CAD
- Quantity: 50 liters
- Price per liter: 20 CAD
- Excise tax: 11.69 CAD per liter
- Taxable basis type: Quantity

The tax calculation is as follows:

- The taxable basis for the excise tax is the quantity given on the invoice (50).
- The excise tax is equal to the taxable basis multiplied by the excise tax (50 * 11.69 CAD = 584.5 CAD).

Tax Calculation Tax Formula: Example

The tax calculation tax formula is used to determine the calculation methodology that is applied to derive the basic tax amount on a transaction line.

Scenario

Consider a situation when two taxes, state tax and county tax, are applicable on a transaction. In such a situation, the transaction details and tax setup is as follows:

- Line amount: 1000 USD
- State tax rate: 20%
- County tax rate: 10%
- Compounding regime: Sale and use tax
- Compounding tax: State tax

The tax calculation is as follows:

- The state tax is equal to the invoice line amount multiplied by the state tax rate (1000 USD * 20% = 200 USD).
- The county tax is equal to the invoice line amount multiplied by the county tax rate plus the state tax ((1000 USD * 10%) + 200 USD = 300 USD).

Manage Transaction Tax Classifications

Define Transaction Tax Classifications: Overview

Many tax regimes define rules for specific transactions or information related to the transaction. To support these requirements Oracle Fusion Tax has extensive and powerful features to allow the transaction process to be classified. These classifications provide a conceptual model to classify the type of transactions and documents related to the transaction. Set up your transaction process classifications in the Define Transaction Tax Classifications activity.

The following process classifications for tax purposes can be used within Oracle Fusion Tax and are summarized in the following table:

Process Classification	Description
Transaction business category	Use this classification to classify a transaction line to define the type of transaction.
Transaction fiscal classification	Use this classification to group transaction business categories so that tax rules setup and maintenance can be minimized.
Document fiscal classification	Use this classification where there is a need to relate documents to a transaction that affect the tax applicability or determination of transaction taxes on the transaction.
User-defined fiscal classification	Use this classification for classifying transaction lines where none of other classification are appropriate.

Tip

If possible, use other fiscal classifications that are automatically derived at transaction time in preference to the process classification which requires manual intervention at transaction time.

Use these classifications as determining factors within tax rules in the tax determination process, although you can also use them for tax reporting.

Transaction Business Categories: Explained

Use transaction business categories to classify transaction lines to drive tax determination and reporting.

Transaction business categories provide a hierarchy of up to five levels. The first level is predefined with standard events that are supported by Oracle Fusion Tax. The predefined levels are:

- EXPENSE_REPORT
- INTERCOMPANY_TRANSACTION
- PAYMENT_REQUEST
- PURCHASE_PREPAYMENTTRANSACTION

- PURCHASE_TRANSACTION
- SALES_TRANSACTION
- SALES_TXN_ADJUSTMENT

Use the transaction business category functionality to add additional levels and transaction business categories to these levels. However, you cannot add additional level one transaction business categories, you can only add additional transaction business categories that are children, or lower levels, of the predefined level one records.

When defining additional transaction business categories, use the **Country** field to specify the taxation countries where the transaction business category is used. During transaction time, the taxation country is used to restrict the list of transaction business categories that are available on the transaction line to those that have been set up with the same country or where the country is blank.

When setting up transaction business categories, leave the **Country** field blank or use the country name as defined on any parent level of the record that is being added.

Use the Associated Transaction Fiscal Classifications region to link a specific transaction business category to the transaction fiscal classification. You can use this association to allow different transaction business categories to be linked to the same transaction fiscal classification. This facilitates in setting up tax rules using a specific transaction fiscal classification instead of creating multiple tax rules for different transaction business categories.

Tip

While setting up the transaction business categories, use different levels so that you can define all of the necessary tax rules at the highest level possible. This facilitates in minimizing the needed number of tax rules.

Transaction Business Categories in Tax Rules

The transaction business category tax determination factors allow you to use the transaction business category in tax rules. A combination of determination factor class, class qualifier, and determining factor represent these determination factors.

Use the transaction generic classification as the determining factor class, the level of the transaction business category being used, level 1, level 2, level 3, level 4, or level 5 as the class qualifier, and transaction business category as the determining factor.

When a country name is specified on the condition set, the application selects only those transaction business categories that match the country name or where the country name is blank on the transaction business category.

Transaction Business Categories at Transaction Time

During transaction time, enter the transaction business category on the transaction line to classify the transaction line for tax determining and reporting purposes.

The transaction business category is stored in the tax reporting ledger and is available for reporting.

Transaction Business Categories: Example

Transaction business categories classify transaction lines for tax determination and reporting.

The following scenario illustrates how transaction business categories can be used for tax determination and reporting in Brazil.

Scenario

In Brazil, you need to identify a transaction correctly to be able to report and determine the correct applicable taxes. Create specific transaction business categories as children of the sales transaction. The transaction business categories include:

Level	Fiscal Classification Code	Fiscal Classification Name	Country	Start Date
1	SALES_TRANSACTION	Sales Transaction		1-Jan-1951
2	INTERSTATE MNFTRD FOR SALE	Interstate Manufactured for Sale	Brazil	The earliest transaction date or start date of tax.
2	INTERSTATE MNFTRD FOR MANUFACTURE	Interstate Manufactured for Manufacture	Brazil	The earliest transaction date or start date of tax.

To create these transaction business categories:

1. On the Manage Transaction Business Codes page select the **SALES_TRANSACTION** record.
2. Click **Create Child Node**. The Create Fiscal Classification Code page appears.
3. Enter the values as shown in the above table. By default, the start date is the start date of the sales transaction parent record, that is, 1-Jan-1951.
4. Specify the latest of:
 - a. Earliest applicable transaction to be used in the implementation.
 - b. Start date of the applicable Brazilian tax.

Tip

Specify the country name while creating transaction business categories. This ensures that a limited applicable list is presented while entering the transaction business category during transaction or tax rule creation.

Tip

While using the transaction business categories classification, classify the nonstandard items of your business as standard items. This can be modeled as

a default tax rule and therefore, does not require an explicit classification or an explicit tax rule. Classify only exception items and define specific tax rules for them. For a standard item, none of the explicit tax rules are applicable and the default rate applies.

Transaction Fiscal Classifications: Explained

Use transaction fiscal classifications to categorize transaction business categories so that multiple transaction business categories can be classified and a single transaction fiscal classification can be used within the tax rules. This facilitates all of the applicable transaction business categories to trigger the relevant tax rule.

Transaction fiscal classifications provide a hierarchy of up to five levels. Each grouping of 1 to 5 levels is given a fiscal classification type group, which is used to retrieve all of the associated levels of one transaction fiscal classification type.

You assign each level a fiscal classification type code and name with associated start and end dates. Use the fiscal classification type code as the determining factor when you create tax rules. The start date must be equal to or before the earliest transaction date that triggers a tax rule that uses the applicable transaction fiscal classification.

Associate each fiscal classification type record with a tax regime that is used when the tax rules are created. This ensures that the list of values of the transaction fiscal classification is restricted by the tax regime for which the tax rule is being created.

Tip

Set the transaction fiscal classification start date to the earliest tax regime start date of any tax that uses the given transaction fiscal classification.

To create these transaction fiscal classifications:

1. On the Create Transaction Fiscal Classification Types page save the current transaction fiscal classification type values before proceeding to the next step of creating transaction fiscal classification codes, associating business categories, and specifying tax reporting codes.
2. Use the Edit Transaction Fiscal Classification Codes page to create the level 1 fiscal classification code nodes.
 - a. Select the level 1 node.
 - b. Click the **Create Child Node** to create the subordinate levels. Create the subordinate levels up to the maximum levels defined for the transaction fiscal classification type group.
3. Associate the fiscal classification type record with one or more transaction fiscal classification codes. These codes are used to group the transaction business category, which is used in the tax rule as the condition set value.

Tip

While setting up the transaction fiscal classification, use different levels so that all of the necessary tax rules are defined at the highest level possible. This facilitates in minimizing the needed number of tax rules.

Associate and form a relationship between the transaction fiscal classification codes and the transaction fiscal classification. This relationship is used during transaction time to derive the transaction fiscal classification that validates the tax rules that use the transaction fiscal classification.

Use the Associated Codes Details region to define the relationship between transaction fiscal classification codes, the transaction business category codes, and the tax reporting codes. Use the Transaction Business Category Codes and the Tax Reporting Codes tab to define the relationship.

Transaction Fiscal Classifications in Tax Rules

The transaction fiscal classification tax determination factors allow you to use the transaction fiscal classifications in tax rules. A combination of determination factor class and determining factor represent these determination factors.

Use the transaction fiscal classification as the determining factor class and the specific transaction fiscal classification type as the determining factor.

Transaction Fiscal Classifications at Transaction Time

During transaction time, use the transaction business category entered on the transaction line to classify the transaction line. The application derives the transaction fiscal classification using the defined relationship between the transaction business category and the transaction fiscal classification.

The tax determination process uses the derived transaction fiscal classification and any associated parent records for the higher levels to compare against the relevant tax rules.

Transaction Fiscal Classifications: Example

A transaction fiscal classification is the grouping multiple transaction business categories into a single transaction fiscal classification that is used with tax rules. This facilitates in triggering all of the applicable transaction business categories with relevant tax rules.

The following scenario illustrates how transaction fiscal classifications can be used for tax determination and reporting in Brazil.

Scenario

In Brazil, you need to identify a transaction correctly to be able to report and determine the correct applicable taxes. Create specific transaction business categories as children of the sales transaction. The transaction business categories include:

Level	Fiscal Classification Code	Fiscal Classification Name	Country	Start Date
1	SALES_TRANSACTION	Sales Transaction		1-Jan-1951
2	INTERSTATE MNFTRD FOR SALE	Interstate Manufactured for Sale	Brazil	The earliest transaction date or start date of tax.

2	INTERSTATE MNFTRD FOR MANUFACTURE	Interstate Manufactured for Manufacture	Brazil	The earliest transaction date or start date of tax.

Tip

Specify the country name while creating transaction business categories. This ensures that a limited applicable list is presented while entering the transaction fiscal classification during transaction or tax rule creation.

Tip

In this classification and many other tax classifications, classify the nonstandard items of your business as standard items. This can be modeled as a default tax rule and therefore, does not require an explicit classification or an explicit rule. Classify only exception items and define specific tax rules for them. For a standard item none of the explicit tax rules are applicable, only the default rate applies.

The tax rules that apply to sales transactions are also applicable to purchase transactions. In this case, equivalent set rules are needed to represent the purchase side of the same transaction type. Therefore, create the following additional transaction business categories:

Level	Fiscal Classification Code	Fiscal Classification Name	Country	Start Date
1	PURCHASE_TRANSACTION	Purchase Transaction		1-Jan-1951
2	INTERSTATE MNFTRD FOR SALE	Interstate Manufactured for Sale	Brazil	The earliest transaction date or start date of tax.
2	INTERSTATE MNFTRD FOR MANUFACTURE	Interstate Manufactured for Manufacture	Brazil	The earliest transaction date or start date of tax.

In the above scenario, instead of creating tax rules based on the type of transaction business category, that is, separate tax rules for sales and purchase transactions, create a single transaction fiscal classification and both the applicable sales and purchase transactions can be linked to it.

Create the following specific transaction fiscal classification with the relevant tax regime and transaction business category associations. In addition, create appropriate tax rules against this transaction fiscal classification.

Level	Transaction Fiscal Classification Code	Fiscal Classification Name	Start Date
1	BRAZIL MNFTRD (O2C and P2P) FOR SALE	Brazil Manufacture	1-Jan-1951

At transaction time, the tax determination process derives this transaction fiscal classification whenever the related transaction business categories are used on the transaction.

Document Fiscal Classifications: Explained

Use the document fiscal classification in situations where the documentation associated with the transaction is needed for tax determination and reporting. Unlike other process classifications, document classifications are associated with the header of the transaction and therefore, apply to all the transaction lines on a transaction.

Document fiscal classifications provide a hierarchy of up to five levels. When defining the document fiscal classification codes, use the **Country** field to specify the taxation countries where the document fiscal classification is used.

During transaction time, the taxation country is used to restrict the list of document fiscal classification on the transaction line to those that have been set up with the same country or where the country is blank. When setting up the document fiscal classification, leave the **Country** field blank or use the same country that is defined on any parent level of the record that is being added.

Tip

While setting up the document fiscal classification, use different levels so that all the necessary rules are defined at the highest level possible. This facilitates in minimizing the needed number of tax rules.

Document Fiscal Classifications in Tax Rules

The document fiscal classification tax determination factors allow you to use the document fiscal classification in tax rules. A combination of the determination factor class, class qualifier, and determining factor represents these determination factors.

Use document as the determining factor class, the level of the transaction business category being used, level 1, level 2, level 3, level 4, or level 5 as the class qualifier, and the document fiscal classification as the determining factor.

The value you enter against the condition set is the document fiscal classification code or name set up for the specific level defined in the class qualifier, as well as for the same country or where the country is blank on the document fiscal classification.

Document Fiscal Classifications at Transaction Time

During transaction time, enter the document fiscal classification on the transaction to classify the transaction for tax determining and reporting purposes.

The document fiscal classification is stored in the tax reporting ledger and is available for reporting.

Document Fiscal Classifications: Example

The document fiscal classifications classify transactions for tax determination and reporting. Use this classification when the documentation associated

with the transaction is needed to support the tax determination and reporting processes.

The following scenario illustrates how Intra-EU supplies are controlled through zero-rating of transactions. A zero-rating is given to a transaction only when the export documentation related to the transaction is received.

Scenario

When the export documentation is not received in time, the customer is invoiced with the VAT that is applicable in the country of the supplier. The transaction is not zero-rated, which is the normal case for Intra-EU business-to-business supplies.

To model this scenario, create a document fiscal classification and attach it to a transaction only when the documentation is received. If the document fiscal classification is not attached to a transaction, the Intra-EU goods business-to-business supply rules are not triggered and the applicable VAT is charged.

When the documentation is received after the invoice is generated, the invoice that is sent is credited and a new invoice is produced.

Create the following document fiscal classification:

Level	Fiscal Classification Code	Fiscal Classification Name	Country	Start Date
1	INTRA-EU DOCUMENTS	Sales Transaction		The earliest transaction date or start date of tax.
2	INTRA-EU EXPORT DOCUMENTATION	Intra-EU Export Documentation Received.		The earliest transaction date or start date of tax.

The tax rule that defines the conditions under which the Intra-EU supply of business-to-business goods are zero-rated includes a determining factor as shown in the following table:

Determining Factor Class	Class Qualifier	Determining Factor	Operator	Value
Document	Level 2	Document Fiscal Classification	Equal to	INTRA-EU EXPORT DOCUMENTATION

Tip

Specify the country name while creating transaction business categories. This ensures that a limited applicable list is presented while entering the document fiscal classification during transaction or tax rule creation.

Tip

In this classification and many other tax classifications, classify the nonstandard items of your business as standard items. This can be modeled as a default tax rule and therefore, does not require an explicit classification or an explicit

rule. Classify only exception items and define specific tax rules for them. For a standard item none of the explicit tax rules are applicable, only the default rate applies.

User-Defined Fiscal Classifications: Explained

Use user-defined fiscal classification to classify transactions to drive tax determination and reporting. Use user-defined fiscal classifications when other classifications are not appropriate or an additional classification is required. Enter user-defined classifications on a transaction line at the time of transaction.

User-defined fiscal classifications provide only one level. When defining the user-defined fiscal classification codes, use the **Country** field to specify the taxation countries where that user-defined fiscal classification is used. Leave the country blank if the user-defined fiscal classification code is used for multiple countries. When setting up user-defined fiscal classification, leave the country field blank or use the same country as defined on any parent level of the record that is being added. During transaction time, the taxation country is used to restrict the list of user-defined fiscal classifications on the transaction line to those that are set up with the same country or where the country is blank on the user-defined fiscal classification.

User-Defined Fiscal Classifications in Tax Rules

The user-defined fiscal classification tax determination factors allow you to use user-defined fiscal classification in tax rules. A combination of determination factor class and determining factor represent these determination factors.

Use the transaction input factor as the determining factor class and user-defined fiscal classification as the determining factor.

The value entered against the condition set is the specific user-defined fiscal classification code or name and the same country or where the country on the user-defined fiscal classification is blank.

User-Defined Fiscal Classifications at Transaction Time

During transaction time, enter the user-defined fiscal classification on the transaction line to classify the transaction for tax determination and reporting purposes.

The user-defined fiscal classification is stored in the tax reporting ledger and is available for reporting.

User-Defined Fiscal Classifications: Example

Use the user-defined fiscal classification to classify transactions for tax determination and reporting. This classification is used when other classifications are not appropriate or an additional classification is required in tax determination and reporting.

This scenario illustrates how a user-defined fiscal classification is used to identify if a customer is a foreign diplomat and therefore, exempt from value-added tax (VAT).

Scenario

To model this scenario, create a user-defined fiscal classification that is added to a transaction line only when the customer is a foreign diplomat and VAT is exempted.

In practice, it is likely that most businesses monitor such transactions and therefore, specifically create a zero (0%) rate within the exempt tax status to allow monitoring of such situations. By reporting this specific 0% rate, all applicable transaction can be identified.

Create the following user-defined fiscal classification:

Fiscal Classification Code	Fiscal Classification Name	Country	Start Date
FOREIGN DIPLOMAT EXEMPTION	Foreign Diplomat Exemption	United Kingdom	The earliest transaction date or start date of tax.

Set up the following determining factor for the tax rule that defines the condition where the sales transaction is zero percent (0%) rated using the special exempt rate, tax status and tax rate rule:

Determining Factor Class	Class Qualifier	Determining Factor	Operator	Value
Transaction Input Factor		User-Defined Fiscal Classification	Equal to	FOREIGN DIPLOMAT EXEMPTION

This tax rule, to apply a zero tax rate to a transaction, is applicable only when the user-defined fiscal classification is associated with the transaction line.

Tip

Specify the country name while creating the user-defined fiscal classification. This ensures that a limited applicable list is presented while entering the user-defined fiscal classification during transaction or tax rule creation.

Manage Tax Determining Factor Sets and Tax Condition Sets

Tax Determining Factor Sets and Condition Sets: Explained

A tax determining factor is an attribute that contributes to the outcome of a tax determination process, such as a geographical location, tax registration status, or a fiscal classification. Determining factors are represented in tax rules as the following concepts:

- **Determining factor class:** Tax determining factors are categorized into logical groupings called determining factor classes, such as Accounting or Geography.
- **Tax class qualifier:** Use a class qualifier with a determining factor class when it is possible to associate a determining factor class with more than one value on the transaction. For example, you need to specify which location type, such as ship-to party, a specific geography level, such as country, is associated with.

- Determining factor name: Each determining factor class contains one or more determining factor names that constitute the contents of the class.

The result of a determining factor class, and its class qualifiers and determining factor names, is a list of available factors for use with tax conditions. Each tax condition within a tax condition set must result in a valid value or range of values for tax determination.

Conceptually, determining factors fall into four groups: party, product, process, and place. The following figure expands upon the determining factors within each grouping.



The relationship between the determining factor and condition sets and the party, product, process, and place is shown in the following table. The relationship value is a concept to group tax drivers and not an element in the tax rule definition. The determining factor, determining factor class, tax class qualifier, determining factor name, condition set operator, and condition set value are all components of tax rule setup.

Relationship	Determining Factor	Determining Factor Class	Tax Class Qualifier	Determining Factor Name	Condition Set - Operator	Condition Set - Value
Process	Accounting	Accounting		Line Account	Equal to	Flexible with range of qualifiers and segment or account values

Process	Document	Document	Document fiscal classification level (1-5) or blank	Document Fiscal Classification	• Equal to • Not equal to • Is blank • Is not blank	Document fiscal classification codes of the class qualifier level or all document fiscal classification codes if there is not class qualifier

Place	Geography	Geography	Location type which can be one of the following: • Bill from • Bill to • Point of acceptance • Point of origin • Ship from • Ship to	Geography type from Oracle Fusion Trading Community Model	• Equal to • Equal to determining factor • Not equal to • Not equal to determining factor • Range • Is blank • Is not blank	Trading Community Model geography names of the geography type belonging to the location identified by the class qualifier, for example, country or state. If the operator is Equal to determining factor or Not equal to determining factor then the values are: • Bill from • Bill to • Point of acceptance • Point of origin • Ship from • Ship to The available values do not include the tax class qualifier value.

Party	Legal Party Classification	Legal party fiscal classification	First party	Legal activity codes for: • Chile • Colombia • Peru • United Kingdom • Venezuela	• Equal to • Not equal to • Is blank • Is not blank	Legal classification codes of the legal classification activity
Party	Party Fiscal Classification	Party fiscal classification	Location type which can be one of the following: • Bill-from party • Bill-to party • Point of acceptance party • Point of origin party • Ship-from party • Ship-to party	Party fiscal classification type	• Equal to • Not equal to • Is blank • Is not blank	Fiscal classification codes of the party fiscal classification type assigned to the party identified by the class qualifier
Product	Product Inventory Linked	Product inventory linked		Name of a specific level of a product fiscal classification	• Equal to • Not equal to • Is blank • Is not blank	Fiscal classification codes of the applicable product fiscal classification type

Product	Product Noninventory Linked	Product noninventory linked	Product fiscal classification level (1-5) or blank	Product category product fiscal classification type	• Equal to • Not equal to • Is blank • Is not blank	Product classification codes of the class qualifier level or all product fiscal classification codes if there is no class qualifier
Party	Registration Status	Registration	Location type which can be one of the following: • Bill-from party • Bill-to party • Ship-from party • Ship-to party	Registration Status	• Equal to • Equal to determining factor • Not equal to • Not equal to determining factor • Is blank • Is not blank	The registration status defined in the registration status lookup. If the operator is Equal to determining factor or Not equal to determining factor then the values are: • Bill-from party • Bill-to party • Ship-from party • Ship-to party
Process	Transaction Fiscal Classification	Transaction fiscal classification		Transaction fiscal classification type	• Equal to • Not equal to • Is blank • Is not blank	Specific transaction fiscal classification code

Process	Transaction Business Category	Transaction generic classification	Classification level (1-5) or blank	Transaction Business Category	• Equal to • Not equal to	Transaction business category fiscal classification codes of the class qualifier level or all fiscal classification codes if there is no class qualifier
Process	Transaction Type	Transaction generic classification	Classification level (1-5) or blank	Transaction Business Category	• Equal to • Not equal to	Transaction business category fiscal classification codes of the class qualifier level or all fiscal classification codes if there is no class qualifier
Process	Intended Use	Transaction input factor		Intended Use	• Equal to • Not equal to • Is blank • Is not blank	Product intended use fiscal classification codes
Product	Line Class	Transaction input factor		Line Class	• Equal to • Not equal to • Is blank • Is not blank	Transaction event classes and activities Code list of line transaction types such as: • Procure-to-pay • Credit memo order-to-cash • Miscellaneous cash

Process	Product Type	Transaction input factor		Product Type	• Equal to • Not equal to • Is blank • Is not blank	Predefined goods or services
Process	Tax Classification Code	Transaction input factor		Tax Classification Code	• Equal to • Not equal to • Is blank • Is not blank	Tax classification codes
Process	User-Defined Fiscal Classification	Transaction input factor		User-Defined Fiscal Classification	• Equal to • Not equal to • Is blank • Is not blank	User-defined fiscal classification codes
Place	User-Defined Geography	User-defined geography	Location type which can be one of the following: • Bill from • Bill to • Point of acceptance • Point of origin • Ship from • Ship to	Tax zone types	• Equal to • Equal to determination factor • Not equal to • Not equal to determination factor • Is blank • Is not blank	Tax zones of the tax zone type belonging to the location identified by the class qualifier

Tip

Do not mix the interpretation of the party, product, process, and place and the associated determining factors if possible. For example, if the information you need to model concerns the geography associated with the locations on the transaction do not use party classifications to model this type of requirement.

Tip

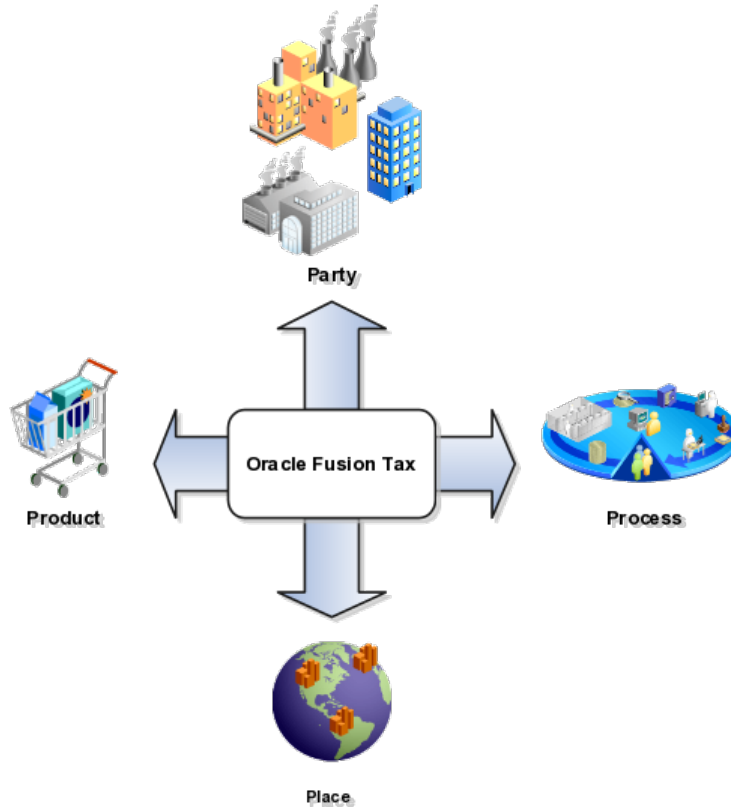
Whenever possible, use automatically determined or derived determining factors, such as party classifications, product fiscal classifications, or geography instead of using those that are reliant on information entered at transaction time, such as product category, intended use, or user-defined fiscal classifications. Those entering information at transaction time may not be familiar with the impact this information has on tax determination.

You can use multiple party and product fiscal classifications at the same time. However, only the primary product fiscal classification, as defined in the country defaults is displayed on the transaction line. When you override the product fiscal classification at transaction time that value is used in preference to the default product fiscal classification.

Party, Product, Place, and Process as Determining Factors: Explained

Determining factors are the key building blocks of the tax rules. They are the variables that are passed at transaction time derived from information on the transaction or associated with the transaction. They are used within tax rules logic to determine the conditions under which specific tax rules are applicable to a specific transaction.

Conceptually they fall into four groups as shown in the following figure:



The four groups are described as:

- **Party:** Information about the parties on or associated with a transaction such as party fiscal classification, tax registration, and tax exemptions.
- **Product:** Information of the types and classifications of the goods and services on or associated to items on a transaction.
- **Place:** Information on the addresses of the locations associated to the party and party locations on the transaction.
- **Process:** Information on the type of tax services that are being requested such as purchase invoice and debit memo.

How Tax Is Determined Using Party, Product, Place, and Process Transaction Attributes

The following table describes how the party, product, place, and process transaction attributes contribute to the outcome of the tax determination process:

Group	Transaction Attributes	Process
Place	• Ship from • Ship to • Bill from • Bill to • Point of acceptance • Point of origin	Restrict your tax rules based on the location where the transaction took place. For example, you may only want to apply this tax rule to goods that are delivered from an EC country into the UK. The tax determination process uses the countries associated with the transaction to select the tax regimes associated with the first parties defined for those countries. The tax determination process also uses the location on the transaction that corresponds to the location type derived from the tax rule for the candidate tax or the rule default location type. It then identifies the tax jurisdiction of the candidate tax to which the location identified belongs. If the location does not belong to any tax jurisdiction of this tax, then the tax does not apply to the transaction.

Party	• First party legal entities • Ship from or ship to parties and bill from or bill to parties • Tax registration and registration statuses of each party • Type or classification of a party	Restrict your tax rules based on the party of the transactions. For example, the supplier must be registered in another EC country for this tax rule to be applied. The tax determination process determines the first party of the transaction which is either the legal entity or business unit. It uses the first party legal entity or business unit to identify the tax regimes to consider for the transaction. It also identifies other configuration options, if defined, to use in processing taxes for the transaction. The tax determination process also determines the party whose tax registration is used for each tax on the transaction, and, if available, derives the tax registration number. If the tax registration or registrations are identified, the process stamps the transaction with the tax registration numbers.
Product	• Designation of physical goods or services • Type or classification of a product	Restrict your tax rules to apply to a specific product in the transaction. The tax determination process then applies these rules to transactions with those specific attributes. For example, the product type must be goods for this tax rule to apply. For each tax, the tax determination process determines if a product tax exception applies to the transaction. It looks for an exception rate specific to the inventory item or fiscal classification of the item and adjusts the rate appropriately.
Process	• Procure-to-pay transactions, such as purchases, prepayments, and requisitions • Order-to-cash transactions, such as sales, credit memos, and debit memos. • Type of sale or purchase, such as retail goods, manufactured goods, intellectual property, and resales.	Restrict your tax rules to apply to a specific type of transaction. The tax determination process then applies these rules to transactions with those specific attributes. For example, the tax rule is limited to purchases. For each tax, the tax determination process determines if a customer tax exemption applies to an order-to-cash transaction and updates the tax rate accordingly.

Manage Tax Reporting Types

Tax Reporting Types and Codes: Explained

Use tax reporting types to capture additional tax information on transactions for your tax reports. You can use tax reporting types for your internal reporting needs and to fulfill country-specific reporting requirements. Create tax reporting codes for a tax reporting type to provide additional granularity for tax reporting.

A tax reporting type identifies a specific unit of information, such as a date or a text comment, to associate with a specific tax usage, such as a fiscal classification or tax jurisdiction. You can:

- Define tax reporting types at a generic level, tax regime level, or tax level.
- Define the validation for the tax reporting type for tax reporting codes to be added in terms of data type and a minimum and maximum length. Data types include **Date**, **Numeric value**, **Text**, and **Yes or no indicator**.
- Use tax reporting codes you create under one tax reporting type across various entities, such as tax, tax status, tax rate, party tax profiles, and fiscal classifications. To use a tax reporting type for a particular entity, associate that entity to the tax reporting type in the Reporting Type Uses region on the Create Tax Reporting Type page.

There is no impact of the tax reporting type on tax calculation. The tax reporting codes are used in the tax reports.

Tax configuration facilitates the association between various entities and tax reporting codes. The entity details are stored as part of the tax repository. During tax report generation necessary tax reporting codes are derived based on the entities associated with the tax line. The functionality to include the reporting type code is handled by the Tax Reporting Ledger.

Tax Reporting Type Uses

Some reporting type uses have a one to one relationship of tax reporting type use to an entity, such as tax, tax jurisdiction, tax rate, and tax status. For example, the tax reporting type use of Tax defines tax reporting type codes for association to taxes you define and the Tax Jurisdiction tax reporting type use defines tax reporting type codes for association to the tax jurisdictions you define.

The Fiscal Classification tax reporting type use defines tax reporting type codes for association to the following classifications:

- User-defined fiscal classifications
- Product category fiscal classifications
- Document fiscal classifications
- Transaction fiscal classifications

The Party Tax Profile tax reporting type use defines reporting type codes for association to the following party tax profiles:

- Legal entity tax profiles

- Legal reporting unit tax profiles
- Business unit party tax profiles
- Third party tax profiles
- Third party site tax profiles

The Process Result tax reporting type use defines reporting type codes for association to the following rule types:

- Direct tax rate determination rules
- Place of supply rules
- Tax applicability rules
- Tax registration rules
- Tax status rules
- Tax rate rules
- Taxable basis rules
- Tax calculation rules

Tax Reporting Types and Codes and Their Use in Tax Reporting

The following table describes key predefined tax reporting types and codes and their association and use in tax reporting:

Country	Reporting Type and Code	Associated to	Use
Italy and Spain	• REPORTING_STAT • Y	Tax	Used to track tax lines that are not yet finally reported
Italy and Spain	• EMEA_VAT_REPOF • VAT	Tax	Used in the EMEA VAT selection process
Italy	• EMEA_VAT_REPOF • Custom bill	Tax rate code	Used in the Italian Purchase VAT Register definition program to recognize customs invoices
Italy	• EMEA_VAT_REPOF • Self invoice	Tax rate code	Used in the Italian Purchase VAT Register definition program to recognize self invoices
Italy	• EMEA_VAT_REPOF • Nontaxable	Tax rate code	Used in the Italian Purchase VAT Register definition program to recognize nontaxable invoices
Italy	• EMEA_VAT_REPOF • Exempt	Tax rate code	Used to identify invoice lines with exemption limit groups
Spain	• EMEA_VAT_REPOF • Services	Tax rate code	Used for VAT reporting

Legal Justification Tax Reporting Types: Explained

Legal justification tax reporting types are introduced as a feature to support European Union (EU) value-added tax (VAT) changes for the year 2010. The changes are introduced to modernize and simplify rules relating to cross-border supply of services and recovery of input tax. These are the most far-reaching changes to VAT law since the introduction of the Single European Market in 1993. This impacts all businesses, which supply and purchase services across EU countries. Companies must rethink their service flow, as well as, their compliance and reporting obligations.

The new rule for place of supply of services, for tax determination in a business-to-business transaction, is where the customer is established and not where the supplier is established, as is the case before January 1, 2010. Therefore, if services are supplied in another EU member state, they are taxable in the recipient's country. For business-to-customer supply of services, the general rule for place of supply continues to be the place where the supplier is established. There are exceptions to the new rule for certain types of services. Examples include: services provided for immovable property, passenger transport services, cultural, and educational events. It also includes ancillary services, short term hiring of means of transport, and restaurant and catering services carried out on board a ship, aircraft, or train within the EU.

Legal Messages

A legal message specifying that the customer of such services must self-assess the relevant tax, should be printed on Receivables (intra-EU services) invoices. Create a Bill Presentment Architecture template to print the legal justification message on the Receivables invoice. The exact text of the message is defined by the country-specific legislation. The reporting code is also a selection parameter to display the intra-EU services invoice lines on the European Union Sales Listing report.

Configure these messages using the Create Tax Reporting Types page. Associate these messages to invoices through the association to a tax rate definition and a tax rule result. When defining these tax reporting codes the tax reporting purpose is the **Legal justification message type** and the applicable reporting type uses are **Process Result** and **Tax Rate**. Enter the legal justification text which should be as defined by legislation.

Manage Intrastat Country Characteristics

Using Triangulation Method: Examples

You can specify how triangular trade transactions will be analyzed for the generation of Intrastat report of an individual country.

You can report triangular trade transactions by:

- **Invoice-** A triangular trade transaction is reported in the Intrastat report based on the issue of an invoice. A record is created based on the invoice and not the physical movement of goods.

- **Shipment-** A triangular trade transaction is reported in the Intrastat report based on the physical movement of goods. A record is created based on the physical movement of goods and not the invoice.

You can also specify who declares the transaction when the seller is the same country as the shipper and the customer to avoid duplication of records in the Intrastat report.

Examples of the how triangular trade transactions are reported are discussed for the following scenarios:

Shipment based triangular trade transactions

Your company based in Italy receives an order from a German company. To fulfill the order, you order goods from your supplier in the France. The goods are delivered from the French company to the German company.

The following transactions are created as a result of this triangular trade:

- You send a sales order to your customer in Germany
- You invoice your customer in Germany
- You create a purchase order to your supplier in France
- Your supplier in France sends you an invoice
- France creates a shipment to Germany, fulfilling the sales order

If you have selected Shipment as your triangulation method, then no record is generated for inclusion in the Intrastat report since no physical movement of goods occurred in Italy. However, Germany is required to declare the arrival of goods from France.

Invoice based triangular trade transactions

Considering the example of the triangular trade transaction scenario given above, if you have selected Invoice as your triangulation method, then:

- A sales order or dispatch record is generated from Italy to Germany with the following information:
 - Movement Amount: zero (no movement of goods took place between these countries)
 - Movement Quantity: zero (no movement of goods took place between these countries)
 - Extended Value: calculated as the invoice quantity multiplied by invoice price
 - Dispatch Country: Italy
 - Destination Country: Germany
 - Triangulation Country: France

Note

Germany is required to declare the arrival of goods from France.

- A purchase order or arrival record is generated in Italy for France with the following information:
 - Movement Amount: calculated as the receipt quantity multiplied by unit price
 - Movement Quantity: zero (no movement of goods took place between these countries)
 - Extended Value: is calculated as the receipt quantity multiplied by unit price
 - Dispatch Country: France
 - Destination Country: Germany
-

Note

Germany is required to declare the arrival of goods from France.

Required Attributes: Points to Consider

You can define the required set of attributes that need to be reported in the Intrastat report for an individual country. These attributes can be defined for both the Arrival and Dispatch flow types.

Before selecting the required attributes, consider:

- What is the required set of attributes for the individual country for the Arrival flow?
- What is the required set of attributes for the individual country for the Dispatch flow?

Arrival

The Intrastat authority of an individual country requires that a specific set of attributes should be included in the Intrastat report for an Arrival flow. Before selecting the required attributes for the Arrival flow type, you must consider:

- Commodity description

Consider if a description of the commodities arriving in the country should be provided in the Intrastat report.
- Freight terms

Consider if the freight terms or Incoterms applicable for the arrival transaction should be provided in the Intrastat report.
- Mode of transport

Consider if the mode of transport for every arrival transaction is provided in the Intrastat report.

- Region of destination

Consider if the details of the region within the destination or receiving country where the good will be finally consumed should be provided in the Intrastat report.

- Country of origin

Consider if the details of the dispatch country from where the goods originated should be provided in the Intrastat report.

- Nature of transaction code

Consider if the Nature of transaction code details of the arrival transaction should be provided in the Intrastat report. Nature of transaction codes is published by an individual country's Intrastat authority and hence may vary based on country.

- Fiscal regime

Consider if the Fiscal regime details for the arrival transaction should be provided in addition to the Nature of transaction code details in the Intrastat report.

- Statistical procedure

Consider if the Statistical procedure code details for the arrival transaction should be provided in addition to the Nature of transaction code details in the Intrastat report.

Note

You can provide either the Fiscal regime attribute or the Statistical procedure attribute.

- Net Mass

Consider if the net mass of the transaction, which is the quantity of items multiplied by the unit weight of the item, should be provided in the Intrastat report.

- Invoice amount

Consider if the actual invoice amount that is already created for the transaction should be provided in the Intrastat report.

Dispatch

The Intrastat authority of an individual country requires that a specific set of attributes should be included in the Intrastat report for a Dispatch flow. Before selecting the required attributes for the Dispatch flow type, you must consider:

- Freight terms

Consider if the freight terms or Incoterms applicable for the dispatch transaction should be provided in the Intrastat report.

- Mode of transport

Consider if the mode of transport for every dispatch transaction is provided in the Intrastat report.

- Region of origin

Consider if the details of the region within the dispatching country from where the goods are dispatched should be provided in the Intrastat report.

- Country of origin

Consider if the details of the dispatch country from where the goods originated should be provided in the Intrastat report.

- Nature of transaction code

Consider if the Nature of transaction code details of the dispatch transaction should be provided in the Intrastat report. Nature of transaction codes is published by an individual country's Intrastat authority and hence may vary based on country.

- Fiscal regime

Consider if the Fiscal regime details for the dispatch transaction should be provided in addition to the Nature of transaction code details in the Intrastat report.

- Statistical procedure

Consider if the Statistical procedure code details for the dispatch transaction should be provided in addition to the Nature of transaction code details in the Intrastat report.

Note

You can provide either the Fiscal regime attribute or the Statistical procedure attribute.

- Net Mass

Consider if the net mass of the transaction, which is the quantity of items multiplied by the unit weight of the item, should be provided in the Intrastat report.

- Invoice amount

Consider if the actual invoice amount that is already created for the transaction should be provided in the Intrastat report.

Intrastat Rule Types: Explained

Intrastat rules are used to configure Intrastat reporting as per the requirement of an individual country. Intrastat rules enable you to define the guidelines

and validations that are applicable for creating the Intrastat Declaration. These rules can be shared across Legal Reporting Units or can be specific to one Legal Reporting Unit.

The 7 Intrastat rule types that can be used to define the reporting criteria for Intrastat transactions are:

- Validation
- Supplementary UOM
- Nature of Transaction Code
- Fiscal Regime
- Statistical Procedure Code
- Statistical Value Calculation
- Exclusion

Validation Rules

Validation rules enable you to define the criteria for validating the collected and manually entered Intrastat transactions. Only those transactions that are validated successfully as per the specified criteria can be reported in the Intrastat declaration. Validation rules are defined for a combination of source transaction and Intrastat reporting attribute.

Validation rules enable you to specify the following:

- the required attribute to be reported for a particular source transaction
- the value set that should be used for validating the values of the specific attributes

Note

If an attribute is defined as required for a source transaction, then an exception is logged if the collected transaction does not have that attribute.

Supplementary UOM

Supplementary UOM rules enable you to define the requirement for reporting Intrastat transactions in a supplementary UOM other than the weight UOM. The movement of goods or specific items is reported in an UOM other than the weight UOM. For example, it specifies that movement of commodity, Oil, should be reported in Barrels.

Supplementary UOM rules are defined for a category code under the Intrastat catalog. And that category code in turn defines the UOM in which the Intrastat transaction is reported. Whenever there is an item in an Intrastat transaction that belongs to the specific category code, then the supplementary UOM rule is applied. The quantity of the item is thereby derived in supplementary UOM based on the UOM conversion factor.

Nature of Transaction Code

Nature of Transaction Code is used to define the category of the Intrastat transaction. The Nature of Transaction Codes are published by the Intrastat authority of an individual country and hence differ based on country. The codes can be either in single digit or double digits.

The Nature of Transaction Code rules enable you to define the Nature of Transaction Code applicable based on source transaction, inventory organization, item, and trading partner attributes of the base transaction. The rules defined at a specific or granular level are given priority over rules defined at a higher level. For example, there are two rules; one for a Source Transaction and other for a Source Transaction and Item. In this case, the rule for Source Transaction and Item is given higher priority wherever applicable.

Fiscal Regime Code

Fiscal Regime Code is used in some countries in addition to Nature of Transaction Code in to categorize transactions. Fiscal Regime rules define the Fiscal Regime Code applicable based on source transaction, inventory organization, item, and trading partner attributes of the base transaction. Similar to the Nature of Transaction Code rules, the Fiscal Regime Code rules defined at a specific or granular level are given priority over rules defined at a higher level.

Note

You can only define either a Fiscal Regime Code or a Statistical Procedure Code for a particular transaction.

Statistical Procedure Code

Statistical Procedure Code is used in some countries of the European Union in addition to Nature of Transaction Code in to categorize transactions. Statistical Procedure Code enables you to define the Statistical Code applicable for deriving the statistical procedure of the collected transaction. This is based on source transaction, inventory organization, item, and trading partner attributes of the base transaction.

Note

You can only define either a Statistical Procedure Code or a Fiscal Regime Code for a particular transaction.

Statistical Value Calculation

Statistical value calculation rules enable you to specify the freight factor that is included in the statistical value. Freight factor is defined in percentage and indicates the component of freight charge that should be included in the statistical value.

You can define this rule based on country, organization, item, freight terms, and mode of transport of the base transaction. You can then specify the freight factor, which is a percentage of the freight charge. This freight factor is included while calculating the statistical value. For example, you need to only include the freight charge up to the country's border for a dispatch transaction. You can specify this by defining a freight factor that accounts for the freight charge up to the country's border only.

Note

In cases where freight charges are applicable for shipments across two countries within the European Union, you are required to only include the freight charge for moving the goods from the establishment to the border of the country.

Exclusion

Exclusion rules enable you to define the criteria to exclude specific goods movement transactions from collections. You can exclude a specific item that you do not want to be reported in the Intrastat collections by defining the exclusion criteria in the rule. For example, you don't require service items to be included in the collection. You can define this rule based on source transaction, organization, category code, item, and trading partner of the base transaction. You can specify the exclusion criterion that includes the source transaction, category code, and item details of the transaction containing the service items. This ensures that the specified items are not included in the collections.

FAQs for Manage Intrastat Country Characteristics

Can I define Intrastat parameters for any legal reporting unit?

No, Intrastat parameters cannot be defined for every legal reporting unit. They can be defined only for the legal reporting units where the country characteristics are defined for the country of the legal reporting unit. If the Intrastat parameters are to be defined for a secondary legal reporting unit, then the secondary legal reporting unit must be associated with an inventory organization.

Can I configure Intrastat according to individual country guidelines?

Yes. Intrastat rules can be used to configure Intrastat reporting as per the guidelines of an individual country of the European Union. You can specify the validations that are applicable for creating the Intrastat Declaration.

Can I identify exceptions in the collected transactions?

Yes. Use an **Exception Validation** rule to identify exceptions in the collected transactions. The exception validation process uses validation rules to identify if there are any exceptions in the transactions that might cause noncompliance issues during submission of declarations.

Can I use the supplementary UOM reporting requirement for specific item categories?

Yes. Supplementary UOM rules are used to define reporting requirements for certain commodity codes or item categories in alternate UOMs other than the weight UOM. For example, it may be required to report liquids in Liters.

Can I use the statistical value calculation for including freight values in the statistical value?

Yes. Statistical value calculation can be used to represent an approximate freight factor for a set of qualifiers like mode of transport, item category, etc. For example, some countries require including the freight cost incurred within the country of reporting in the statistical value. In this case, you can use the statistical value calculation to specify the freight values.

Define Project Portfolio Management Common Reference Objects

Manage Project Portfolio Management Value Sets

Value Sets: Explained

A value set is a group of valid values that you assign to a flexfield segment to control the values that are stored for business object attributes..

An end user enters a value for an attribute of a business object while using the application. The flexfield validates the value against the set of valid values that you configured as a value set and assigned to the segment.

For example, you can define a required format, such as a five digit number, or a list of valid values, such as green, red, and blue.

Flexfield segments are usually validated, and typically each segment in a given flexfield uses a different value set. You can assign a single value set to more than one segment, and you can share value sets among different flexfields.

Caution

Be sure that changes to a shared value set are compatible with all flexfields segments using the value set.

The following aspects are important in understanding value sets:

- Managing value sets
- Validation
- Security
- Precision and scale
- Usage and deployment

Managing Value Sets

To access the Manage Value Sets page, use the Manage Value Sets task, or use the Manage Descriptive Flexfields and Manage Extensible Flexfields tasks for

configuring a segment, including its value set. To access the Manage Values page, select the value set from the Manage Value Sets page, and click **Manage Values**. Alternatively, click **Manage Values** from the Edit Value Set page.

Validation

The following types of validation are available for value sets:

- Format only, where end users enter data rather than selecting values from a list
- Independent, a list of values consisting of valid values you specify
- Dependent, a list of values where a valid value derives from the independent value of another segment
- Subset, where the list of values is a subset of the values in an existing independent value set
- Table, where the values derive from a column in an application table and the list of values is limited by a WHERE clause

A segment that uses a format only value set doesn't present a list of valid values to users.

Note

Adding table validated value sets to the list of available value sets available for configuration is considered a custom task.

Security

Value set security only works in conjunction with usage within flexfield segments.

You can specify that data security be applied to the values in flexfield segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment end users can view or modify.

Value set security applies at the value set level. The value set is the resource secured by data security policies. If a value set is secured, every usage of it in any flexfield is secured. It isn't possible to disable security for individual usages of the same value set.

Value set security applies to independent, dependent, or table-validated value sets.

Value set security applies mainly when data is being created or updated, and to key flexfield combinations tables for query purposes. Value set security doesn't determine which descriptive flexfield data is shown upon querying.

Security conditions defined on value sets always use table aliases. When filters are used, table aliases are always used by default. When predicates are defined for data security conditions, make sure that the predicates also use table aliases.

For key flexfields, the attributes in the view object that correspond to the code combination ID (CCID), structure instance number (SIN), and data set number (DSN) cannot be transient. They must exist in the database table. For key flexfields, the SIN segment is the discriminator attribute, and the CCID segment is the common attribute.

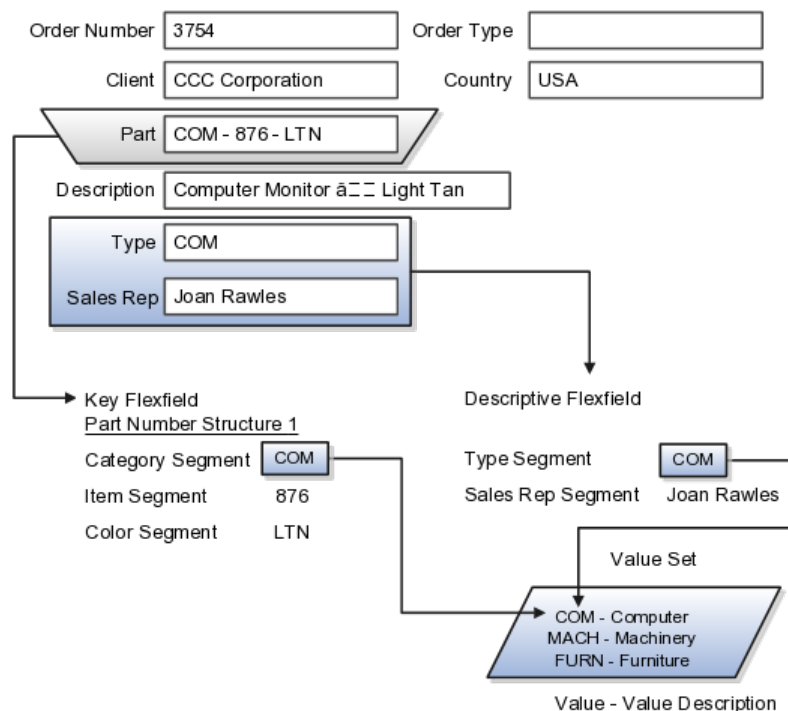
Precision and Scale

If the data type of a value set is Number, you can specify the precision (maximum number of digits user can enter) or scale (maximum number of digits following the decimal point).

Usage and Deployment

The usage of a value set is the flexfields where that value set is used. The deployment status of flexfields in which the value set is used indicates the deployment status of the value set instance.

The figure shows a value set used by a segment in a key flexfield and the context segment of a descriptive flexfield.



For most value sets, when you enter values into a flexfield segment, you can enter only values that already exist in the value set assigned to that segment.

Global and context-sensitive segment require a value set. You can assign a value set to a descriptive flexfield context segment. If you specify only context values, not value sets for contexts, the set of valid values is equal to the set of context values.

Defining Value Sets: Critical Choices

Validation and usage of value sets determine where and how end users access valid values for attributes represented by flexfield segments.

Tip

As a flexfield guideline, define value sets before configuring the flexfield, because you can assign value sets to each segment as you configure a flexfield. With descriptive and extensible flexfield segments, you can create value sets when adding or editing a segment on the run time page where the flexfield appears.

The following aspects are important in defining value sets:

- Value sets for context segments
- Format-only validation
- Interdependent value sets
- Table validation
- Range
- Security
- Testing and maintenance

Value Sets for Context Segments

When assigning a value set to a context segment, you can only use table-validated or independent value sets.

You can use only table and independent value sets to validate context values. The data type must be character and the maximum length of the values being stored must not be larger than the context's column length. If you use a table value set, the value set cannot reference flexfield segments in the value set's WHERE clause other than the flexfield segment to which the value set is assigned.

Format Only Validation

The format only validation type enables end users to enter any value, as long as it meets your specified formatting rules. That is, the value must not exceed the maximum length you define for your value set, and it must meet any format requirements for that value set.

For example, if the value set allows only numeric characters, users can enter the value 456 (for a value set with maximum length of three or more), but can't enter the value ABC. A format only value set doesn't otherwise restrict the range of different values that users can enter. For numeric values, you can also specify if a numeric value should be zero filled or how many digits should follow the radix separator.

Interdependent Value Sets

Use an independent value set to validate input against a list that isn't stored in an application table, and not dependent on a subset of another independent value set.

You cannot specify a dependent value set for a given segment without having first defined an independent value set that you apply to another segment in the same flexfield. Use a dependent value set to limit the list of values for a given segment based on the value that the end user has chosen for a related

independent segment. The available values in a dependent list and the meaning of a given value depend on which value was selected for the independently validated segment.

For example, you could define an independent value set of U.S. states with values such as CA, NY, and so on. Then you define a dependent value set of U.S. cities, with values such as San Francisco and Los Angeles that are valid for the independent value CA, and New York City and Albany that are valid for the independent value NY. In the UI, only the valid cities can be selected for a given state.

Because you define a subset value set from an existing independent value set, you must define the independent value set first. End users don't need to choose a value for another segment first to have access to the subset value set.

Independent, dependent, and subset value sets require a customized list of valid values. Use the Manage Values page to create and manage a value set's valid values and the order in which they appear.

Tip

You can customize the Manage Value Sets page to capture additional attributes for each valid value by adding context-sensitive segments in a new context for FND_VS_VALUES_B descriptive field.

Table Validation

Typically, you use a table-validated set when the values you want to use are already maintained in an application table, such as a table of vendor names. Specify the table column that contains the valid value. You can optionally specify the description and ID columns, a WHERE clause to limit the values to use for your set, and an ORDER BY clause.

If you specify an ID column, then the flexfield saves the ID value, instead of the value from the value column, in the associated flexfield segment. If the underlying table supports translations, you can enable the display of translated text by basing the value set's value column on a translated attribute of the underlying table. You should also define an ID column that is based on an attribute that isn't language-dependent so that the value's invariant ID (an ID that doesn't change) is saved in the transaction table. This allows the run time to display the corresponding translated text from the value column for the run time session's locale.

Table validation lets you enable a segment to depend upon multiple prior segments in the same context structure. You cannot reference other flexfield segments in the table-validated value set's WHERE clause. That is, the WHERE clause cannot reference SEGMENT.segment_code or VALUESET.value_set_code.

Table-validated value sets have unique values across the table, irrespective of bind variables. The WHERE clause fragment of the value set is considered if it doesn't have bind variables. If it has bind variables, the assumption is that the values are unique in the value set.

Range

In the case of format, independent, or dependent value sets, you can specify a range to further limit which values are valid. You can specify a range of values

that are valid within a value set. You can also specify a range validated pair of segments where one segment represents the low end of the range and another segment represents the high end of the range.

For example, you might specify a range for a format-only value set with format type Number where the user can enter only values between 0 and 100.

Security

In the case of independent and dependent values, you can specify that data security be applied to the values in segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment end users can view or modify.

To enable security on a value set, specify a database resource, typically the code value for the value set. Using the Manage Database Security Policies task, specify conditions, such as filters or SQL predicates, and policies that associate roles with conditions. You can use a filter for simple conditions. For more complex conditions, use a SQL predicate.

Value set data security policies and conditions differ from data security conditions and policies for business objects in the following ways:

- You can grant only read access to end users. You cannot specify any other action.
- When defining a condition that is based on a SQL predicate, use `VALUE`, `VALUE_NUMBER`, `VALUE_DATE`, `VALUE_TIMESTAMP`, or `VALUE_ID` to reference the value from a dependent, independent, or subset value set. For table value sets, use a table alias to define the table, such as `&TABLE_ALIAS category=70`.

When you enable security on table-validated value sets, the security rule that is defined is absolute and not contingent upon the bind variables (if any) that may be used by the `WHERE` clause of the value set. For example, suppose a table-validated value set has a bind variable to further filter the value list to `x`, `y` and `z` from a list of `x`, `y`, `z`, `xx`, `yy`, `zz`. The data security rule or filter written against the value set shouldn't assume anything about the bind variables; it must assume that the whole list of values is available and write the rule, for example, to allow `x`, or to allow `y` and `z`. By default in data security, all values are denied and show only rows to which access has been provided.

Testing and Maintenance

There is no need to define or maintain values for a table-validated value set, as the values are managed as part of the referenced table or independent value set, respectively.

You cannot manage value sets in a sandbox.

When you change an existing value set, the deployment status for all affected flexfields changes to Edited. You must redeploy all flexfields that use that value set to make the flexfields reflect the changes. In the UI pages for managing value sets, the value set's usages show which flexfields are affected by the value set changes.

If your application has more than one language installed, or there is any possibility that you might install one or more additional languages for your application in the future, select **Translatable**. This doesn't require you to provide translated values now, but you cannot change this option if you decide to provide them later.

Planning Value Sets: Points to Consider

The value sets you create and configure depend on the valid values on the business object attributes that will use the value set. When creating value sets, you first give the value set a name and description, and then define the valid values of the set.

The following aspects are important in planning value sets:

- List of values
- Plain text input
- Value ranges
- Value format specification
- Security

List of Values

You can use one of the following types of lists to specify the valid values for a segment:

- Table column
- Custom list
 - Subset of custom list
- Dependent custom list

If the valid values exist in a table column, use a table value set to specify the list of values. To limit the valid values to a subset of the values in the table, use a SQL WHERE clause. Table value sets also provide some advanced features, such as enabling validation depending on other segments in the same structure.

Use an independent value set to specify a custom set of valid values. For example, you can use an independent value set of Mon, Tue, Wed, and so forth to validate the day of the week. You can also specify a subset of an existing independent value set as the valid values for a segment. For example, if you have an independent value set for the days of the week, then a weekend subset can be composed of entries for Saturday and Sunday.

Use a dependent value set when the available values in the list and the meaning of a given value depend on which independent value was selected for a previously selected segment value. For example, the valid holidays depend on which country you are in. A dependent value set is a collection of value subsets, with one subset for each value in a corresponding independent value set.

For lists of values type value sets, you can additionally limit the valid values that an end user can select or enter by specifying format, minimum value, and

maximum value. For list of values type value sets, you can optionally implement value set data security. If the Oracle Fusion applications are running in different locales, you might need to provide different translations for the values and descriptions.

Plain Text Input

Use a format-only value set when you want to allow end users to enter any value, as long as that value conforms to formatting rules. For example, if you specify a maximum length of 3 and numeric-only, then end users can enter 456, but not 4567 or 45A. You can also specify the minimum and maximum values, whether to right-justify, and whether to zero-fill. With a format-only value set, no other types of validation are applied.

Value Ranges

You can use either a format-only, independent, or dependent value set to specify a range of values. For example, you might create a format-only value set with Number as the format type where the end user can enter only the values between 0 and 100. Or, you might create a format-only value set with Date as the format type where the end user can enter only dates for a specific year, such as a range of 01-JAN-93 to 31-DEC-93. Because the minimum and maximum values enforce these limits, you need not define a value set that contains each of these individual numbers or dates.

Value Format

Flexfield segments commonly require some kind of format specification, regardless of validation type. Before creating a value set, consider how you will specify the required format.

The following table shows options for validation type and value data type.

Option	Description
Value data type	Character, Number, Date, Date Time.
Value subtype	Text, Translated text, Numeric digits only, Time (20:08), Time (20:08:08). An additional data type specification for the Character data type for the Dependent, Independent, and Format validation types.
Maximum length	Maximum number of characters or digits for Character data type.
Precision	Maximum number of digits the user can enter.
Scale	Maximum number of digits that can follow the decimal point.
Uppercase only	Lowercase characters automatically changed to uppercase.
Zero fill	Automatic right-justification and zero-filling of entered numbers (affects values that include only the digits 0-9).

Caution

You cannot change the text value data type to a translated text value subtype after creating a value set. If there is any chance you may need to translate displayed values into other languages, choose Translated text. Selecting the Translated text subtype doesn't require you to provide translated values.

Value Sets for Context Segments

You can use only table and independent value sets to validate context values. The data type must be character and the maximum length of the values being stored must not be larger than the context's column length. If you use a table value set, the value set cannot reference flexfield segments in the value set's WHERE clause other than the flexfield segment to which the value set is assigned.

Security

When enabling security on a value set, the data security resource name is an existing value set or one that you want to create. The name typically matches the code value for the value set.

Restriction

You cannot edit the data security resource name after you save your changes.

Table-Validated Value Sets and Bind Variables: Points to Consider

After you assign a value set to a flexfield, you can use bind variables in the WHERE clause.

The following bind variables refer to flexfield elements:

- `:{SEGMENT.<segment_code>}`
- `:{CONTEXT.<context_code>;SEGMENT.<segment_code>}`
- `:{VALUESET.<value_set_code>}`
- `:{FLEXFIELD.<internal_code>}`
- `:{PARAMETER.<parameter_code>}`

Segment Code

`:{SEGMENT.<segment_code>}`

This bind variable refers to the ID or value of a segment where `<segment_code>` identifies the segment. Where referring to the ID, the value set is ID-validated. Where referring to the value, the value set isn't ID-validated. The data type of the bind value is the same as the data type of the segment's column.

For both descriptive and extensible flexfields, the segment must be in the same context as the source segment. The source segment contains the WHERE clause.

For descriptive flexfields, if the segment is global, then the source segment must be global.

The segment must have a sequence number that is less than the sequence number of the target segment with this bind variable. A matching segment must exist in the current flexfield context.

This bind variable is useful when the set of valid values depends on the value in another segment. For example, the values to select from a CITIES table might depend upon the selected country. If SEGMENT1 contains the country value, then the WHERE clause for the CITIES table might be `<country_code> = : {SEGMENT.SEGMENT1}`.

Context Code

```
: {CONTEXT.<context_code>; SEGMENT.<segment_code>}
```

This bind variable, which is valid only for extensible flexfields, refers to the ID (if the value set is ID-validated) or value (if not ID-validated) of a segment that is in a different context than the target segment (the segment with the WHERE clause).

- The `<context_code>` identifies the context and must be in the same category or in an ancestor category. It cannot be a multiple-row context.
- The `<segment_code>` identifies the segment. The data type of the bind value is the same as the data type of the segment's column.

Tip

The target segment should appear in the UI after the source segment to ensure the source segment has a value. If the target segment's context is a single-row context, the source and target segments must be on separate pages and the target page must follow the source page.

This bind variable is useful when the set of valid values depends on the value of a segment in another context. For example, the values to select from a CERTIFICATION table for a segment in the Compliance and Certification context might depend on the value of the country segment in the Manufacturing context.

Value Set Code

```
: {VALUESET.<value_set_code>}
```

This bind variable refers to the ID (if the value set is ID-validated) or value (if not ID-validated) of the segment that is assigned to the value set that is identified by the `value_set_code`. The data type of the bind value is the same as the data type of the segment's column.

The segment must have a sequence number that is less than the sequence number of the segment with this bind variable. If more than one segment is assigned to the value set, the closest prior matching segment will be used to resolve the bind expression. A matching segment must exist in the current flexfield context.

This bind variable is useful when the set of valid values depends on the value in another segment and that segment code can vary, such as when the value set is used for more than one context or flexfield. For example, the values to select

from a CITIES table might depend upon the selected country. If the value set for the segment that contains the country value is COUNTRIES, then the WHERE clause for the CITIES table might be `<country_code> = :{VALUESET.COUNTRIES}`.

Flexfield Internal Code

```
:{FLEXFIELD.<internal_code>}
```

This bind variable refers to an internal code of the flexfield in which the value set is used, or to a validation date. The `internal_code` must be one of the following:

- `APPLICATION_ID` - the application ID of the flexfield in which this value set is used. The data type of `APPLICATION_ID` and its resulting bind value is `NUMBER`.
- `DESCRIPTIVE_FLEXFIELD_CODE` - the identifying code of the flexfield in which this value set is used. The data type of `DESCRIPTIVE_FLEXFIELD_CODE` and its resulting bind value is `VARCHAR2`. Note that you use this string for both descriptive and extensible flexfields.
- `CONTEXT_CODE` - the context code of the flexfield context in which this value set is used. The data type of `CONTEXT_CODE` and its resulting bind value is `VARCHAR2`.
- `SEGMENT_CODE` - the identifying code of the flexfield segment in which this value set is used. The data type of `SEGMENT_CODE` and its resulting bind value is `VARCHAR2`.
- `VALIDATION_DATE` - the current database date. The data type of `VALIDATION_DATE` and its resulting bind value is `DATE`.

Flexfield Parameters

```
:{PARAMETER.<parameter_code>}
```

This bind variable refers to the value of a flexfield parameter where `parameter_code` identifies the parameter. The data type of the resulting bind value is the same as the parameter's data type.

Note

You cannot assign a table value set to a context segment if the WHERE clause uses `VALUESET.value_set_code` or `SEGMENT.segment_code` bind variables.

Table-Validated Value Set: Worked Example

In an application user interface, you want to display a list of values that allow customers to enter satisfaction scores. The value column name is 1, 2, 3, 4, 5 and the value column description is Extremely Satisfied, Satisfied, and so on. Users can pick the appropriate value or description which stores the corresponding name so the name value can be used in a calculation expression.

In this case, you can use the `FND_LOOKUPS` table as the basis for a table-validated value set. The lookup meaning corresponds to the Value Column Name and the lookup description corresponds to the Description Column Name. The properties of the value set are as follows:

Property	Value
FROM clause	FND_LOOKUPS
WHERE clause	lookup_type = 'CN_XX_CUST_SATISFACT_SCORE'
ID column	lookup_code
Value column	meaning
Description column	description
Enable Flag column	enabled_flag
Start Date column	start_date_active
End Date column	end_date_active
Order by	display_sequence

After completing this task, you should have created your customer satisfaction value set for the Incentive Compensation page of your implementation project.

Creating a Value Set Based on a Lookup

1. From the Setup and Maintenance work area, find the Manage Value Sets task and click the **Go to Task** icon button.
2. On the Manage Value Sets page, click the **Create** icon button.
3. On the Create Value Set page, enter the following values:
 - a. In the Value Set Code field, enter CN_XX_CUSTOMER_SATISFACTION_SCORES
 - b. In the Description field, enter Customer satisfaction score.
 - c. In the Module field, select **Search....**
 - d. In the Search and Select: Module subwindow, enter *Incent* in the User Module Name field
 - e. Select Incentive Compensation.
 - f. Click **OK**.
4. On the Create Value Set page, enter the following values:
 - a. In the Validation Type field, select Table.
 - b. In the Value Data Type field, select Character.
 - c. In the Definition section FROM Clause field, enter FND_LOOKUPS.
 - d. In the Value Column Name field, enter DESCRIPTION.
 - e. In the Description Column Name field, enter MEANING.
 - f. In the ID Column Name field, enter LOOKUP_CODE.
 - g. In the Enabled Flag Column Name field, enter 'Y'.
 - h. In the Start Date Column Name field, enter START_DATE_ACTIVE.
 - i. In the End Date Column Name field, enter END_DATE_ACTIVE.
 - j. In the WHERE Clause field, enter LOOKUP_TYPE = 'CN_XX_CUST_SATISFACT_SCORE'.
5. Click **Save and Close**.
6. In the Manage Value Sets page, click **Done**.

Adding Attributes to the Manage Value Sets Page: Procedures

For independent, dependent, and subset value sets, you can add attributes to a value set. The attributes appear in the Manage Value Sets UI for capturing additional information about each valid value, such as its purpose.

Typically, these attributes are used to capture internal information. To display attributes on an application page, you must programmatically modify the application to access them.

1. Find the FND_VS_VALUES_B flexfield using the Manage Descriptive Flexfields task.
2. Open FND_VS_VALUES_B for editing.
3. Click **Manage Contexts**.
4. Create a new context and use the value set code for the context code.
5. Add the new attributes as context-sensitive segments.
6. Deploy FND_VS_VALUES_B to the run time.
7. Sign out and sign back in.
8. Open the Manage Value Sets page to view the new attributes.

Translating Flexfield and Value Set Configurations: Explained

When you first configure a flexfield or segment, the translatable text that you enter, such as prompts and descriptions, is stored as the text for all installed locales. You may then provide a translation for a particular locale. If you don't provide a translation for a given locale, then the value that was first entered is used for that locale.

To translate the text for a particular locale, log in with that locale or specify the locale by selecting **Settings and Actions - Personalization - Set Preferences** in the global area. Then, update the translatable text in the flexfield using the Manage Descriptive Flexfields task, Manage Key Flexfields task, or Manage Extensible Flexfields task. Your modifications change the translated values only for the current session's locale.

After you complete the translations, deploy the flexfield.

You can define translations for a dependent value set or an independent value set, if it is of type Character with a subtype of Translated text. You define the translations by setting the current session to the locale for which you want to define the translation and using the Manage Value Sets task to enter the translated values and descriptions for that locale.

For a table value set for which the underlying table supports multiple languages and for which the value set's value column is based on a translated attribute of the underlying table, you can define translated values using the maintenance task for the underlying table. For more information on using multilanguage support features, see the Oracle Fusion Applications Developer's Guide.

FAQs for Manage Project Portfolio Management Value Sets

What happens if a value set is security enabled?

Value set security is a feature that enables you to secure access to value set values based on the end user's role in the system.

As an example, suppose you have a value set of US state names. When this value set is used to validate a flexfield segment, and users can select a value for the segment, you can use value set security to restrict them to selecting only a certain state or subset of states based on their assigned roles in the system.

For example, Western-region employees may choose only California, Nevada, Oregon, and so on as valid values. They cannot select non-Western-region states. Eastern-region employees may choose only New York, New Jersey, Virginia, and so on as valid values, but cannot select non-Eastern-region states. Value set security is implemented using Oracle Fusion Applications data security.

How can I set a default value for a flexfield segment?

When you define or edit a flexfield segment, you specify a default value from the values provided by the value set assigned to that segment.

You can set the default value for a descriptive flexfield segment to be a parameter, which means the entity object attribute to which the chosen parameter is mapped provides the initial default value for the segment.

You can set the default value to be a constant, if appropriate to the data type of the value set assigned to the segment.

In addition to an initial default value, you can set a derivation value for updating the attribute's value every time the parameter value changes. The parameter you choose identifies the entity object source attribute. Any changes in the value of the source attribute during run time are reflected in the value of the segment.

If the display type of the segment is a check box, you can set whether the default value of the segment is checked or unchecked.

Manage Project Portfolio Management Descriptive Flexfields

Flexfields: Overview

A flexfield is an extensible set of placeholder fields in application pages that are associated with a business object. Each segment of the flexfield corresponds to a single application field, such as a segment of a key identifying a particular purchase, or the components of a student's contact information, or the features of a product in inventory.

Using descriptive and extensible flexfields, you can extend business objects to capture data that wouldn't otherwise be tracked by the application. If you need to add custom fields to a business object to meet your enterprise-specific requirements, configure the flexfield to have one segment for each needed field.

Using key flexfields, you can configure intelligent key codes comprised of meaningful parts according to your business practices. You configure the key flexfield to have one segment for each part that makes up your key code.

Flexfields let you meet enterprise requirements without changing the data model. Different data can be captured on the same database table. Each segment captures a single atomic value, has a name, and maps to a pre-reserved column in the application database.

You can use a flexfield to extend a business object if it has been registered for use on that object. Application developers create a flexfield and register it so that it is available for configuration. Administrators and implementation consultants set up or configure segments and other properties of the available flexfields. End users see flexfield segments as fields or attributes of information displayed in the application user interface. They enter a value for the attribute. The value may be selected from a list of valid values or entered as free-form text that complies with formatting rules.

The following aspects provide an overview of flexfields:

- Accessing flexfields and flexfield management tasks
- Types of flexfields
- Flexfield segments
- Value sets
- Structure and context
- Deployment
- Run time appearance

Accessing Flexfields and Flexfield Management Tasks

You can view flexfields on a page where they occur using the Highlight Flexfields feature. You can access flexfield management tasks directly from a highlighted flexfield, through product-specific flexfield management tasks, or by starting in the Setup and Maintenance Overview page which is available from the Navigator or the Administration menu.

For lists of flexfields, see assets with the Flexfield: Descriptive, Flexfield: Extensible, or Flexfield: Key type in Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

Types of Flexfields

The following three types of flexfields are available in Oracle Fusion Applications and provide a means to customize applications features without programming.

- Key
- Descriptive
- Extensible

For example, in Oracle Fusion Financials, key flexfields represent objects such as accounting codes and asset categories. Generally, correct operations of a product depend on key flexfield setup. In Oracle Fusion Payables, a descriptive flexfield lets you collect custom invoice details fields on an invoices page. You can implement these fields, which are descriptive flexfield segments, as context-sensitive so they appear only when needed on a row-by-row basis when specific contextual information is met. Extensible flexfields are similar to descriptive flexfields, but provide additional advanced features. Generally, setup of descriptive and extensible flexfields is optional because their segments capture custom fields needed beyond the predefined fields.

Segments

Each field that you configure using flexfields is a flexfield segment. Segments represent attributes of information. They can appear globally wherever the flexfield is implemented, or based on a structure or context.

You define the appearance and meaning of individual segments when configuring a flexfield.

A key flexfield segment commonly describes a characteristic of the entity identified by the flexfield, such as a part number structured to include information about the type, color, and size of an item. A descriptive flexfield segment represents an attribute of information that describes a characteristic of the entity identified on the application page, such as details about a device containing components, some of which are globally present on the page while others are contextually dependent on the category of the device.

Value Sets

A value set is a named group of values that can be used to validate the content of a flexfield segment.

You configure a flexfield segment with a value set that establishes the valid values that an end user can enter for the segment. You define the values in a value set, including such characteristics as the length and format of the values. You can specify formatting rules, or specify values from an application table or predefined list. Multiple segments within a flexfield, or multiple flexfields, can share a single value set.

Structure and Context

Key flexfields have structure. Descriptive flexfields and extensible flexfields have context.

Each key flexfield structure is a specific configuration of segments. Adding or removing segments, or rearranging their order, produces a different structure. The database columns on which segments in different structures are based can be reused in as many structures as desired.

Descriptive flexfield segments can be context-sensitive, which means available to an application based on a context value rather than globally available wherever the flexfield appears. A descriptive flexfield context is a set of context-sensitive segments that store information related to the same context value. You define contexts as part of configuring a descriptive flexfield. End users see global segments, as well as any context-sensitive segments that apply to the selected context value.

Extensible flexfield segments are made available to an application based upon a category value. An extensible flexfield context serves as a container for related segments, used to organize the various segments that are applicable to a category value. You define contexts with context-sensitive segments and associate them to categories as part of configuring an extensible flexfield. End users see the segments displayed in subregions, one for each context associated to the selected category value.

In descriptive flexfields and extensible flexfields, the database columns on which context-sensitive segments are based can be reused in as many contexts as desired.

Deployment

A flexfield must be deployed to display its current definition in a run time application user interface. For example, if the deployment status is Edited, the flexfield segments may appear in the UI based on the flexfield definition at the time of last deployment, rather than the current definition.

Run time Appearance

In an application user interface, descriptive flexfield segments appear as label and field pairs or as a table of fields where the column headers correspond to the labels. The fields represent the flexfield segments and accept entered input or a selection from a list of choices that correspond to the segment's assigned value set. Extensible flexfield segments appear grouped within labeled regions, where each grouping is a context and the region labels are the context names.

Use the **Highlight Flexfields** command in the Administration menu of the Setup and Maintenance work area to identify the location of the flexfields on the run time page. Flexfields in highlight mode display an **Information** icon button to access details about the flexfield, an **Edit** icon button to manage the flexfield, and an **Add Segment** icon button to add flexfield segments.

All segments of a single flexfield are grouped together by default. The layout and positions of the flexfield segments depend on where the application developer places the flexfield on the page. Flexfields may also be presented in a separate section of the page, in a table, or on their own page or subwindow.

You can use Oracle Composer to edit the layout, position, or other display features of the flexfield segments.

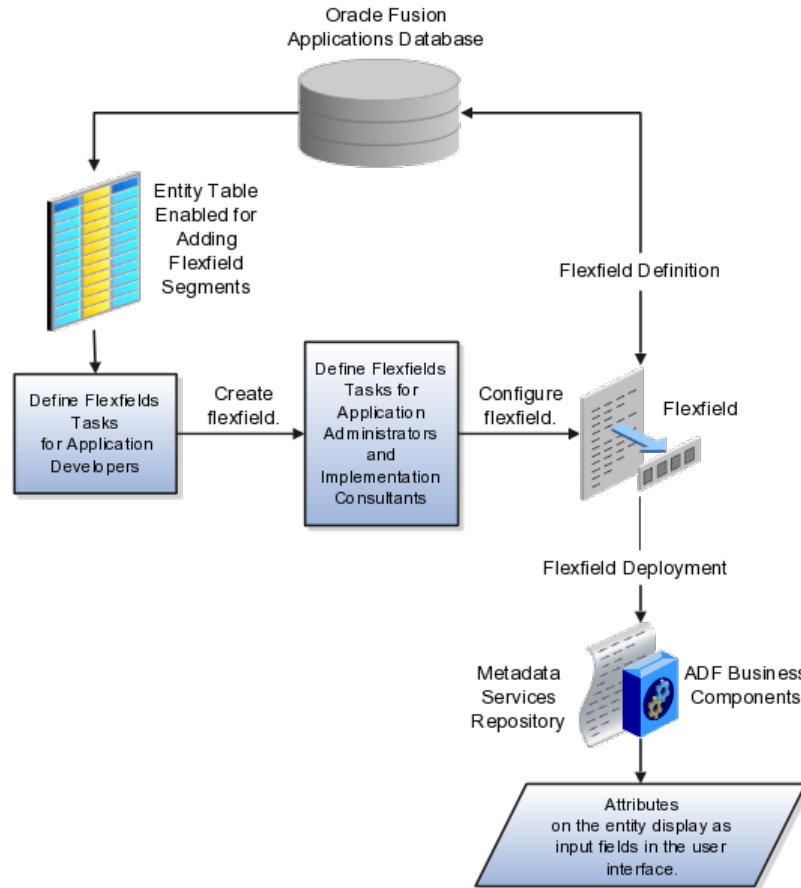
Flexfields and Oracle Fusion Application Architecture: How They Work Together

Administrators configure flexfield segments to capture data that represents the values of attributes. Flexfield segments represent attributes of entities (business objects). Most business objects are enabled for descriptive flexfields. Some business objects are enabled for extensible flexfields.

For example, an airline manufacturer might require very specific attributes for their orders that aren't provided by the out-of-the-box implementation of an order. Because a flexfield exists for the order business object, you can use it to create and configure the desired attribute.

The figure shows the layers of a flexfield: the business entity table and metadata in the database, business components that are Application Development

Framework (ADF) objects or ADF business component (ADFbc) objects derived from the metadata and stored in the Metadata Services Repository (MDS), and the user interface where the input fields defined by the flexfield segments are rendered. The flexfield definition consists of all the metadata defined during configuration and stored in the database.



Application developers create a flexfield and register it so that it is available for configuration. Administrators and implementation consultants configure segments and other properties of the available flexfields. This information is stored as additional flexfield metadata in the database. Deploying the flexfield generates ADF business components based on the flexfield metadata in the database.

The following aspects are important in understanding how flexfields and Oracle Fusion Applications architecture work together:

- Integration
- Deployment
- Import and Export
- Run time
- Patching

Integration

The attributes that you add by configuring flexfields are available throughout the Oracle Fusion Middleware technology stack, allowing the flexfields to be

used in user interface pages, incorporated into the service-oriented architecture (SOA) infrastructure, and integrated with Oracle Business Intelligence. You identify flexfield segments for integration by the segment's Application Programming Interface (API) name.

A flexfield affects the Web Services Description Language (WSDL) schemas exposed by ADF services and used by SOA composites. The Web services that expose base entity data also expose flexfield segment data.

Attributes incorporate into SOA infrastructure (BPEL, Rules) and integrate with business intelligence (Oracle Business Intelligence, Extended Spread Sheet Database (ESSbase)).

Flexfield configurations are preserved across Oracle Fusion Applications updates.

Deployment

The metadata for the flexfield is stored in the application database as soon as you save your configuration changes. Deploying the flexfield generates the ADF business components so that the run time user interface reflects the latest definition of the flexfield in the metadata.

Importing and Exporting

You can export and import flexfields with a deployment status of Deployed or Deployed to Sandbox across instances of Oracle Fusion Applications using the Setup and Maintenance Overview page. Ensure a flexfield is eligible for migration (by verifying that it has successfully deployed) prior to attempting the migration.

Run time

For a flexfield to reflect the latest flexfield definition at run time it must be deployed. The user interface accesses a business object and the deployed flexfield definition indicates which business object attributes the flexfield captures values for. If you add display customizations for a flexfield using Oracle Composer, these are customizations on the page so that the same flexfield segments can appear differently on various different pages.

Values entered for segments are validated using value sets.

Patching

Flexfield configurations are preserved during patching and upgrading.

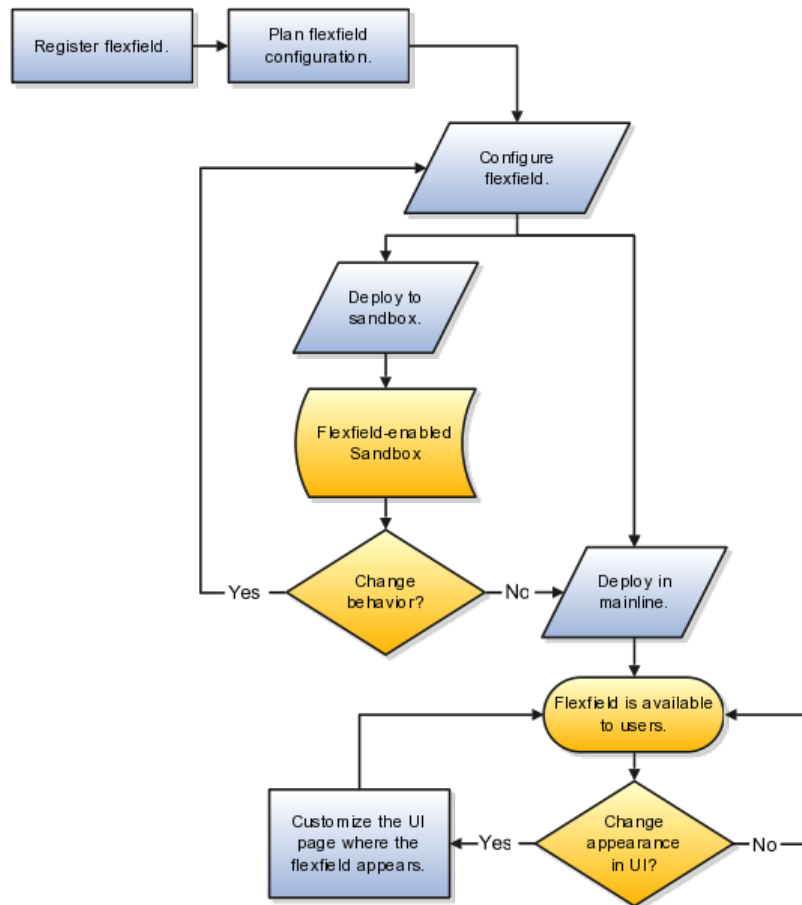
Manage Flexfields

Managing Flexfields: Points to Consider

Managing flexfields involves registering, planning, and configuring flexfields.

You plan and configure the registered flexfields provided in your applications by applications developers. How you configure flexfield segments determines how the flexfield segments appear to end users. Optionally, you can customize the UI page to change how the flexfield segments appear to end users on that page.

The figure shows the processes involved in making flexfields available to end users. The tasks in the Define Flexfields activity let administrators configure and deploy flexfields. If you deploy a flexfield to a sandbox and decide to apply the configuration to the mainline, select the flexfield in the Manage Flexfields tasks of the Define Flexfields activity and deploy the flexfield in the mainline so that it is available to users.



Consider the following aspects of managing flexfields:

- Registering flexfields
- Planning flexfields
- Configuring flexfields
- Enabling a flexfields segment for business intelligence
- Deploying flexfields
- Optionally changing a flexfield segment's appearance in a user interface page
- Identifying flexfields on a run time page and troubleshooting

Registering Flexfields

Application development registers flexfields so they are available to administrators and implementation consultants for configuration.

As part of registering a flexfield, application development reserves columns of entity tables for use in flexfields so an enterprise can capture segments to meet their business needs. Many flexfields are registered in Oracle Fusion Applications.

A flexfield must be registered before it can be configured.

For more information on registering flexfields, see Oracle Fusion Applications Developer's Guide.

Planning Flexfields

Before you begin planning flexfields, determine what type is appropriate to your needs, and which business objects are available for customizing flexfields.

All flexfields consist of segments which represent attributes of an entity. The values an end user inputs for an attribute are stored in a column of the entity table.

Carefully plan flexfields before configuring them. Before configuring new segments for your flexfields, be sure to plan their implementation carefully.

If you have determined that a business object supports flexfields, and those flexfields have been registered, you can begin planning how to configure the flexfield for your needs. Note the code name of the flexfield you intend to configure so you can find it easily in the Define Flexfield activity.

In some cases you can customize how the flexfield appears on the page.

See Oracle Fusion Applications Help for specific products to determine any restrictions on using product-specific flexfields.

Configuring Flexfields

Administrators or implementers configure flexfields so they meet the needs of the enterprise. Some flexfields require configuration to make an application operate correctly.

You can configure flexfields using the following methods:

- Go to the manage flexfield tasks in the Setup and Maintenance work area.
- Use the Highlight Flexfields command in the Administration menu while viewing a run time page.
 - Use the **Configure Flexfield** icon button to manage a flexfield, such as change a segment's sequence number, or configure a flexfield segment's business intelligence label.
 - Use the **Add Segment** icon button to add descriptive flexfield segments and context values, or extensible flexfield segments.

Configuring a flexfield includes the following:

- Defining value sets against which the values entered by end users are validated
- Defining the structure or context of the segments in the flexfield
- Specifying the identifying information for each segment

- Specifying the display properties such as prompt, length and data type of each flexfield segment
- Specifying valid values for each segment, and the meaning of each value within the application

Tip

You can create value sets while creating descriptive and extensible flexfield segments. However, define value sets before configuring key flexfield segments that use them, because you assign existing value sets while configuring key flexfield segments.

When creating table-validated, independent, dependent, or subset value sets while creating descriptive and extensible flexfield segments, you can optionally specify to display the description of the selected value to the right of the segment at run time.

You can assign sequence order numbers to global segments and to context-sensitive segments in each context. Segment display is always in a fixed order based on the segments' sequence numbers. You cannot enter a number for one segment that is already in use for a different segment.

Tip

Consider numbering the segments in multiples, such as 4, 5, or 10, to make it easy to insert new attributes.

A flexfield column is assigned to a new segment automatically, but you can change the assignment before saving the segment. If you need to set a specific column assignment for a segment, create that segment first to ensure that the intended column isn't automatically assigned to a different segment.

Enabling a Flexfield Segment for Business Intelligence

You can enable flexfield segments for business intelligence if the flexfield is registered in the database as an Oracle Business Intelligence-enabled flexfield. For more information on enabling segments for business intelligence, see points to consider when enabling key and descriptive flexfield segments for business intelligence.

For extensible flexfield segments, you can't assign labels and use equalization to prevent duplication.

Deploying Flexfields

Once you have configured a flexfield,, you must deploy it to make the latest definition available to run time users.

In the Define Flexfields tasks, you can deploy a flexfield using either of the following commands:

- The Deploy Flexfield command to deploy a flexfield to mainline. This is for general use in a test or production environment.
- The Deploy to Sandbox command to deploy a flexfield to sandbox. This is to confirm that the flexfield is correctly configured before deploying it to the mainline.

When using the **Add Segment** and **Edit Segment** tools for descriptive flexfields in Highlight Flexfields mode, you can use the Save and Deploy command to save your changes and deploy the flexfield to mainline.

Once deployed, the deployment status indicates the state of the currently configured flexfield relative to the last deployed definition.

Optionally Changing a Flexfield Segment Appearance

The flexfield attributes that you define integrate with the user interface pages where users access the attributes' business object. Application development determines the UI pages where business objects appear and the display patterns used by default to render flexfield segments.

After a flexfield has been deployed to a mainline metadata services (MDS) repository so that it appears on application pages, you can customize it on a per-page basis using Page Composer. For example, you can hide a segment, change its prompt or other properties, or reorder the custom global attributes so that they are interspersed with the core attributes in the same parent layout.

You can only customize the appearance of descriptive and extensible flexfield segments in the UI page using Page Composer once the flexfield is deployed to the mainline.

If the Oracle Fusion applications are running in different locales, you can provide different translations for translatable text, such as prompts and descriptions. Enter translations by signing in using the locale that requires the translated text. You do this by selecting **Settings and Actions - Personalization - Set Preferences** in the global area and changing the text to the translated text for that locale.

Identifying Flexfields on a Run time Page and Troubleshooting

The **Highlight Flexfields** command in the Administration menu of the Setup and Maintenance work area identifies the location of flexfields on the run time page by displaying an **Information** icon button for accessing details about each flexfield.

Even if a descriptive or extensible flexfield hasn't yet been deployed and no segments appear on the run time page in normal view, the flexfield appears in the Highlight Flexfield view for that page. In the case of descriptive flexfields, the segments as of the last deployment appear. **Highlight Flexfields** accesses the current flexfield metadata definition.

Use the highlighted flexfield's **Edit** icon button to manage flexfields directly. Alternatively, note a highlighted flexfield's name to search for it in the tasks for managing flexfields.

To examine a flexfield's configuration, export the deployed artifacts using the `exportMetadata WLST..`

For more information on creating flexfields and adding them to a UI page, see the Oracle Fusion Applications Developer's Guide.

For more information about customizing flexfield segment appearance with Oracle Composer, see guidance on customizing existing pages in the Oracle Fusion Applications Extensibility Guide.

Flexfield Segment Properties: Explained

Independent of the value set assigned to a segment, segments may have properties that affect how they are displayed and how they behave.

The following aspects are important in understanding

- Display properties
- Properties related to segment values
- Properties related to search
- Range validation segments
- Rule validation of segment values
- Naming conventions

Display Properties

The following table summarizes display properties.

Property	Description
Enabled	Whether the segment can be used.
Sequence	The order the segment appears in relation to the other configured segments.
Prompt	The string to be used for the segment's label in the user interface.
Display type	The type of field in which to display the segment.
Checked and unchecked values	If the display type is check box, the actual values to save. For example, Y and N or 0 and 1.
Display size	The character width of the field.
Display height	The height of the field as measured in visible number of lines when the display type is a text area.
Read only	Whether the field should display as read-only, not editable text.
Description help text	The field-level description help text to display for the field. Use description help text to display a field-level description that expands on or clarifies the prompt provided for the field. If description help text is specified, a Help icon button is displayed next to the field in the run time application. The description help text is displayed when the user hovers over the Help icon button.
Instruction help text	The field-level instruction help text to display for the field. Use instruction help text to provide directions on using the field. If instruction help text is specified, it is displayed in an in-field help note window that appears when users give focus to or hover over the field.

Properties Related to Search

Extensible flexfield segments can be marked as selectively required in search using the indexed property. The indexed property requires end users to enter a value before conducting a search on the attribute represented by the indexed segment. A database administrator must create an index on the segment column representing the indexed attribute.

Range Validation of Segments

Range validation enables you to enforce an arithmetic inequality between two segments of a flexfield. For example, a product must be ordered before it can be shipped. Therefore, the order date must be on or before the ship date, and consequently the order date segment value must be less than or equal to the ship date segment value. You can use range validation to ensure this relationship.

The conditions for range validation are as follows:

- Segments must be configured for range validation in pairs, one with the low value and one with the high value.
- Both segments must be of the same data type.
- Both segments must be parts of the same structure in a key flexfield or parts of the same context in a descriptive flexfield or extensible flexfield.
- The low value segment must have a lower sequence number than the high value segment.
- Non-range validated segments can exist between a range validated pair, but range validated pairs cannot overlap or be nested.

You can configure as many range validated pairs as you want within the same flexfield. Your application automatically detects and applies range validation to the segment pairs that you define, in sequence order. It must encounter a low value segment first, and the next range validated segment that it encounters must be a high value segment. These two segments are assumed to be a matching pair. The low value and the high value can be equal.

Rule Validation of Segment Values

Validation rules on descriptive and extensible flexfield segments determine how an attribute is validated. The value entered for an attribute on a business object may need to match a specified format or be restricted to a list of values. Use a value set to specify the validation rules.

Value set validation is required for global segments and context-sensitive segments, and optional for context segments. In the case of context segments, the application may validate an input value instead of the value set validating the input value against the context segment. However the application input values must match exactly the valid context segment values. If the context segment values are a superset or subset of the input values, you must assign a table-validated value set or independent value set to validate context values.

When you configure a descriptive flexfield segment, you can specify a constant to use for setting the initial value. The initial value can be an available parameter. For every planned segment, list the constant value or parameter, if any, to use for the initial value.

Naming Conventions

Enter a unique code, name, and description for the segment. These properties are for internal use and not displayed to end users. You can't change the code after the segment is created.

The Application Programming Interface (API) name is a name for the segment that isn't exposed to end users. The API name is used to identify the segment in various integration points including web services, rules, and business intelligence. Use alphanumeric characters only with a leading character. For example, enter a code consisting of the characters A-Z, a-z, 0-9 with a non-numeric leading character. The use of spaces, underscores, multi-byte characters, and leading numeric characters isn't permitted. You can't change the API name after the segment has been created.

Flexfields Segments: How They Are Rendered

Flexfield segments appear on pages as attributes of business objects.

Settings That Affect Flexfield Segment Display

When you configure flexfield segments, the value you enter for the segment's display type determines how the segment appears on the run time page.

How Display Type Values Appear

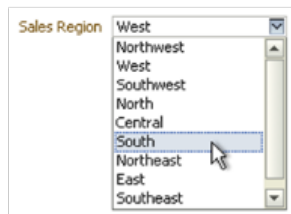
The figure shows how display types appear at run time.

In the following figure, identify the display type by letter when referring to the table of descriptions for check box, drop-down list, list of values, pop-up list of values, and radio button group.

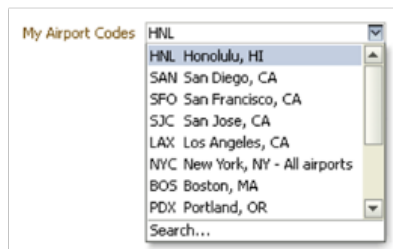
A. Check Box

A check box control with a green checkmark icon and the text "Display next notification after my response".

B. Drop-down List

A drop-down list control with the label "Sales Region". The list is open, showing options: West, Northwest, West, Southwest, North, Central, South (highlighted), Northeast, East, and Southeast.

C. List of Values

A list of values control with the label "My Airport Codes". The list is open, showing options: HNL, HNL Honolulu, HI, SAN San Diego, CA, SFO San Francisco, CA, SJC San Jose, CA, LAX Los Angeles, CA, NYC New York, NY - All airports, BOS Boston, MA, PDX Portland, OR, and a Search... field.

D. Pop-up List of Values

A pop-up list of values control with the label "Location". It consists of a text box and a magnifying glass icon.

In the following figure, identify the display type by letter when referring to the table of descriptions for radio button group, text area, text box, and date/time.

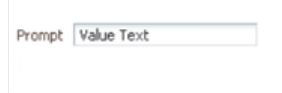
E. Radio Button Group



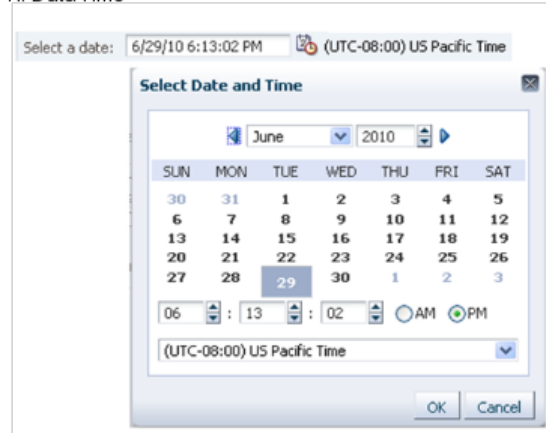
F. Text Area



G. Text Box



H. Date/Time



The table describes each display type. The Example column refers to the figures above.

Display Type	Example	Description
Check Box	A	The field is displayed as a check box. If the end user selects the checkbox, the checked value is used. Otherwise, the unchecked value is used.
Drop-down List	B	The field displays a dropdown list of values from which the end user can select a value.
List of Values	C	The field displays a dropdown list of values from which the end user can select a value. The user can also click Search to find more values.
Pop-up List of Values	D	The field displays as a text field with a Search icon button. The end users can type a value in the text field or they can click the Search icon button to open a subwindow for searching.
Radio Button Group	E	The field is displayed as a set of radio buttons. The end user can select one button. Selecting a button deselects any previously selected button in the set.

Text Area	F	The field is displayed as a text area in which the end user can type multiple lines of text. The display width and height specify the visible width and number of lines in the text area, respectively.
Text Box	G	The field is displayed as a text field in which the end user can type a single line of text. The display width controls the width of the text box.
Date/Time	H	The field enables the end user to enter a date if the data type is Date, or a date and time if the data type is Date Time. The user can select the date from a calendar. If the data type is Date Time, the field also displays fields for specifying the hour, minutes, seconds, AM or PM, and time zone.
Hidden		The field isn't displayed.

Flexfields and Value Sets: How They Work Together

Value sets are specific to your enterprise. When gathering information using flexfields, your enterprise's value sets validate the values that your users enter based on how you defined the value set.

You can assign a value set to any number of flexfield segments in the same or different flexfields. Value set usage information indicates which flexfields use the value set.

The following aspects are important in understanding how flexfields and value sets work together:

- Defining value sets
- Shared value sets
- Deployment

Defining Value Sets

As a key flexfield guideline, define value sets before configuring the flexfield, because you assign value sets to each segment as you configure a flexfield. With descriptive and extensible flexfields, you can define value sets when adding or editing a segment.

Caution

Be sure that changes to a shared value set are compatible with all flexfield segments that use the value set.

Shared Value Sets

When you change a value in a shared value set, the change affects the value set for all flexfields that use that value set. The advantage of a shared value set is that a single change propagates to all usages. The drawback is that the change shared across usages may not be appropriate in every case.

Value Set Values

To configure custom attributes to be captured on the value set values screen in the Manage Value Sets task, configure the Value Set Values descriptive flexfield. The object's code is FND_VS_VALUES_B. This flexfield expects the context code to correspond to the value set code. For each value set, you can define a context whose code is the value set code, and whose context-sensitive segments will be shown for the values of that value set. By default the context segment is hidden since it defaults to the value set code and is not expected to be changed.

You can also define global segments that will be shown for all value sets.

However, this would be quite unusual since it would mean that you want to capture that attribute for all values for all value sets.

Deployment

When you deploy a flexfield, the value sets assigned to the segments of the flexfield provide end users with the valid values for the attributes represented by the segments.

Defaulting and Deriving Segment Values: Explained

To populate a flexfield segment with a default value when a row is created, specify a default type of constant or parameter and a default value.

To synchronize a segment's value with another field's value whenever it changes, specify the derivation value to be the flexfield parameter from which to derive the attribute's value. Whenever the parameter value changes, the attribute's value is changed to match. If you derive an attribute from a parameter, consider making the attribute read-only, as values entered by users are lost whenever the parameter value changes.

When defaulting or deriving a default value from a parameter, only those attributes designated by development as parameters are available to be chosen.

Different combinations of making the segments read only or editable in combination with the default or derivation value or both, have different effects.

Initial run time behavior corresponds to the row for the attribute value being created in the entity table. If the default value is read only, it cannot subsequently be changed through the user interface. If the default value isn't read only, users can modify it. However, if the segment value is a derived value, a user-modified segment value is overwritten when the derivation value changes.

Default Type	Default value specified?	Derivation value specified?	Initial run time behavior	Run time behavior after parameter changes
None	No	Yes	No initial segment value	The changed parameter derivation value updates segment value
Constant	Yes	No	Default segment value	N/A
Constant	Yes	Yes	Default segment value	The changed parameter derivation value updates segment value

Parameter	Yes	No	The default segment value is the parameter's default value	N/A
Parameter	Yes	Yes, and same as default value	The default segment value is the parameter's default and derivation value	The changed parameter derivation value updates segment value
Parameter	Yes	Yes, and different from default value	The default segment value is the parameter's default value	The changed parameter default value doesn't update segment value. Only the changed derivation value updates the segment value.

Flexfield Usages: Explained

Usage affects various aspects of flexfields. The usage of the flexfield is set when the flexfield is registered and specifies the application and table with which the flexfield is associated.

Entity usage indicates the table containing the segments of a flexfield.

A flexfield can have multiple usages. The first table registered for a flexfield is the master usage. Segments are based on the master usage, and other usages of the same table for the same flexfield use the same segment setup, though the column names optionally may have a differentiating prefix.

Extensible Flexfields

You can configure different behavior for extensible flexfield contexts at the usage level. The usage of an extensible flexfield context determines in which scenarios or user interfaces the segments of a context appear to end users. For example, if a Supplier page displays an extensible flexfield's supplier usage and a buyer page displays that same extensible flexfield's buyer usage, a context that is associated to the supplier usage but not the buyer usage displays only on the supplier page and not the buyer page.

Value Sets

The usage of value sets specifies the flexfields having segments where the value set is assigned.

Deploy Flexfields

Flexfield Deployment: Explained

Deployment generates or refreshes the Application Development Framework (ADF) business component objects that render the flexfield in a user interface.

The deployment process adds the custom attributes to the Web Services Description Language (WSDL) schemas that are exposed by Oracle ADF services and that are used by SOA composites. Flexfields are deployed for the first time during the application provisioning process. After you configure or change a flexfield, you must deploy it to make the latest definition available to end users.

If a descriptive flexfield is enabled for business intelligence, the deployment process redeploys the flexfield's business intelligence artifacts.

You can deploy a flexfield to a sandbox for testing or to the mainline for use in a test or production run time environment. You can deploy extensible flexfields as a background process.

After deployment, the custom attributes are available for incorporating into the SOA infrastructure, such as business process and business rule integration. For example, you can now write business rules that depend on the custom attributes. You must sign out and sign back in to Oracle Fusion Applications to see the changes you deployed in the run time.

The following aspects are important in understanding flexfield deployment:

- Deployment Status
- Initial Deployment Status
- Metadata Validations
- Metadata Synchronization
- Deployment as a Background Process

Deployment Status

Every flexfield has a deployment status.

A flexfield can have the following deployment statuses.

Deployment Status	Meaning
Edited	The flexfield metadata definition hasn't been deployed yet. Updates of the metadata definition aren't applied in the run time environment yet.
Patched	The flexfield metadata definition has been modified through a patch or through a data migration action, but the flexfield hasn't yet been deployed so the updated definition isn't reflected in the run time environment.
Deployed to Sandbox	The current metadata for the flexfield is deployed in ADF artifacts and available as a flexfield-enabled sandbox. The status of the sandbox is managed by the Manage Sandboxes task available to the Administrator menu of the Setup and Maintenance work area.
Deployed	The current metadata for the flexfield is deployed in ADF artifacts and available to end users. There haven't been any changes to the flexfield since it was last deployed in the mainline.
Error	The deployment attempt in the mainline failed.

Note

Whenever a value set definition changes, the deployment status of a flexfield that uses that value set changes to edited. If the change results from a patch, the deployment status of the flexfield changes to patched.

Initial Deployment Status of Flexfields

The Oracle Fusion Applications installation loads flexfield metadata into the database. This initial load sets the flexfield status to Edited. The application provisioning process during installation deploys the flexfields of the provisioned applications, which sets their status to Deployed if no errors are encountered.

When accessing a provisioned application, deployed flexfields are ready to use. In some cases, flexfield availability at run time requires setup, such as defining key flexfields.

Metadata Validation

Use the Validate Metadata command to view possible metadata errors before attempting to deploy the flexfield. Metadata validation is the initial phase of all flexfield deployment commands. By successfully validating metadata before running the deployment commands, you can avoid failures in the metadata validation phase of a deployment attempt. The deployment process aborts if it encounters an error during the metadata validation phase. Metadata validation results don't affect the deployment status of a flexfield.

Metadata Synchronization

When an extensible or descriptive flexfield is deployed, the deployment process regenerates the XML schema definition (XSD), which makes the custom attributes available to web services and the SOA infrastructure.

After deploying a flexfield configuration, you must synchronize the updated XML schema definition (XSD) files in the MDS repositories for each SOA application.

Note

To synchronize the updated XSD files in the MDS repositories in Oracle Cloud implementations, log a service request using My Oracle Support at <http://support.com/>

Deployment as a Background Process

You can deploy extensible flexfields or incremental changes made to extensible flexfields as a background process. You must use this action to deploy extensible flexfields that have more than 30 categories. You can also use this action if you want to deploy several extensible flexfields, or if you want to continue working in your session without having to wait for a deployment to complete.

Flexfield Deployment Status: How It Is Calculated

Flexfield deployment status indicates how the flexfield metadata definition in the Oracle Fusion Applications database relates to the Application Development

Framework (ADF) business components generated into a Metadata Services (MDS) repository.

The following aspects are important in understanding how flexfield deployment status is calculated:

- Settings that affect flexfield deployment status
- How deployment status is calculated

Settings That Affect Flexfield Deployment Status

If you have made a change to a flexfield and expect a changed deployment status, be sure you have saved your changes. No settings affect flexfield deployment status.

How Deployment Status Is Calculated

If the flexfield definition has been edited through the Define Flexfields activity task flows, the status is Edited. The latest flexfield metadata definition in the Oracle Fusion application diverges from the latest deployed flexfield definition. Any change, including if a value set used in a flexfield changes, changes the deployment status to Edited. If a flexfield has never been deployed, its status is Edited.

Note

When an application is provisioned, the provisioning framework attempts to deploy all flexfields in that application.

If you deploy the flexfield to a sandbox successfully, the status is Deployed to Sandbox. The latest flexfield metadata definition in the Oracle Fusion application matches the metadata definition that generated ADF business components in a sandbox MDS repository. Whether the sandbox is active or not doesn't affect the deployment status. If the flexfield was deployed to a sandbox and hasn't been edited or redeployed to the mainline since then, the status remains Deployed to Sandbox independent of whether the sandbox is active, or who is viewing the status.

If you deploy the flexfield successfully to the mainline, the status is Deployed. The latest flexfield metadata definition in the Oracle Fusion application matches the metadata definition that generated ADF business components in a mainline MDS repository. Change notifications are sent when a flexfield is deployed successfully to the mainline.

If either type of deployment fails so that the current flexfield definition isn't deployed, the status is Error. The deployment error message gives details about the error. The latest flexfield metadata definition in the Oracle Fusion application likely diverges from the latest successfully deployed flexfield definition.

If the flexfield definition has been modified by a patch, the status is Patched. The latest flexfield metadata definition in the Oracle Fusion application diverges from the latest deployed flexfield definition. If the flexfield definition was Deployed before the patch and then a patch was applied, the status changes to Patched. If the flexfield definition was Edited before the patch and then a patch was applied, the status will remain at Edited to reflect that there are still changes (outside of the patch) that aren't yet in effect.

When a deployment attempt fails, you can access the Deployment Error Message for details.

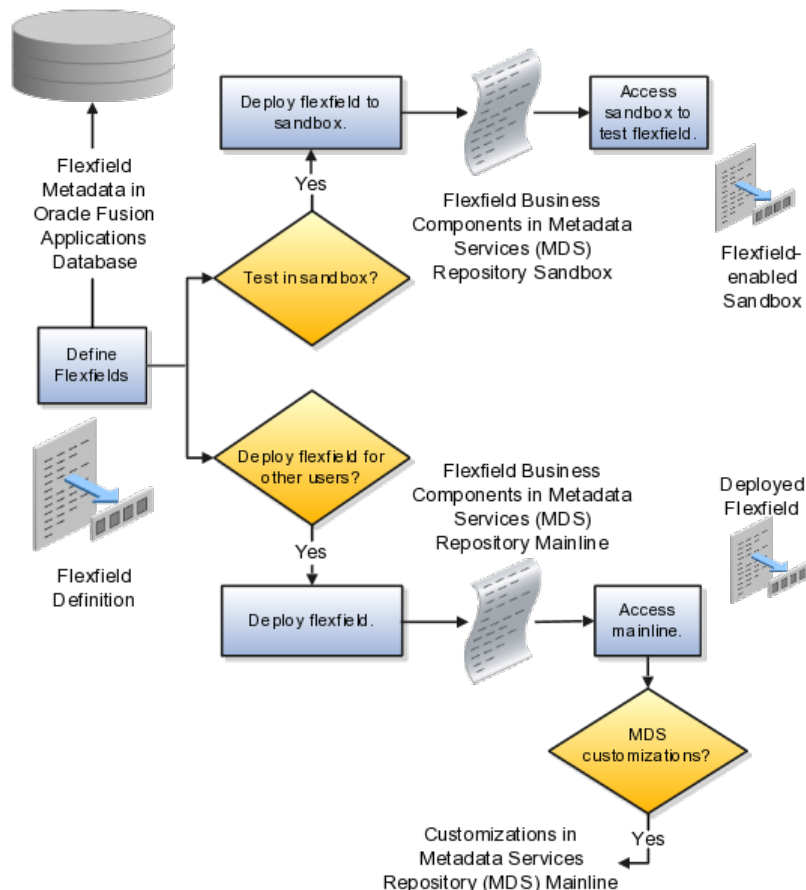
Deploying a Flexfield-Enabled Sandbox: How It Works With Mainline Metadata

The flexfield definition in a sandbox corresponds to the flexfield metadata definition in the Oracle Fusion Applications database at the time the flexfield was deployed to the sandbox. When the flexfield is ready for end users, the flexfield must be deployed to the mainline.

A flexfield-enabled sandbox uses the following components.

- Flexfield metadata in the Oracle Fusion Applications database
- Flexfield business components in a sandbox Metadata Services (MDS) repository
- User interface customizations for the flexfield in the mainline MDS repository

The figure shows the two types of deployment available in the Manage Flexfield tasks of the Define Flexfields activity. Deploying a flexfield to a sandbox creates a sandbox MDS repository for the sole purpose of testing flexfield behavior. The sandbox is only accessible to the administrator who activates and accesses it, not to users generally. Deploying a flexfield to the mainline applies the flexfield definition to the mainline MDS repository where it is available to end users. After deploying the flexfield to the mainline, customize the page where the flexfield segments appear. Customization of the page in the sandbox MDS repository cannot be published to the mainline MDS repository.



Sandbox Metadata Services Repository Data

Deploying the flexfield to a sandbox generates the Application Development Framework (ADF) business components of a flexfield in a sandbox MDS repository for testing in isolation.

Warning

Don't customize flexfield segment display properties using Page Composer in a flexfield-enabled sandbox as these changes will be lost when deploying the flexfield to the mainline.

Mainline Metadata Services Repository Data

The Oracle Fusion Applications database stores the single source of truth about a flexfield. When the flexfield is deployed, the ADF business component objects that implement the flexfield in the run time user interface are generated in the mainline MDS repository from this source.

Deploying a Flexfield to a Sandbox: Points to Consider

Deploying a flexfield to a sandbox creates a flexfield-enabled sandbox. Each flexfield-enabled sandbox contains only one flexfield.

You can test the run time behavior of a flexfield in the flexfield-enabled sandbox. If changes are needed, you return to the Define Flexfield tasks to change the flexfield definition.

When you deploy a flexfield to sandbox, the process reads the metadata about the segments from the database, generates flexfield Application Development Framework (ADF) business component artifacts based on that definition, and stores in the sandbox only the generated artifacts derived from the definition.

When you deploy a flexfield sandbox, the process generates the name of the flexfield sandbox, and that flexfield sandbox is set as your current active sandbox. When you next sign in to the application, you can see the updated flexfield configurations. The Oracle Fusion Applications global area displays your current session sandbox.

Note

Unlike a standalone sandbox created using the Manage Sandboxes tool, the sandbox deployed for a flexfield contains only the single flexfield. You can manage flexfield sandboxes, such as setting an existing flexfield sandbox as active or deleting it, using the Manage Sandboxes tool.

When you deploy a flexfield to the mainline after having deployed it to the sandbox, the sandbox-enabled flexfield is automatically deleted.

Sandbox MDS Repository Data

The sandbox data lets you test the flexfield in isolation without first deploying it in the mainline where it could be accessed by users.

Warning

Don't customize flexfield segment display properties using Page Composer in a flexfield-enabled sandbox as these changes will be lost when deploying the flexfield to the mainline.

Managing a Flexfield-Enabled Sandbox

When you deploy a flexfield as a sandbox, that flexfield-enabled sandbox automatically gets activated in your user session. When you sign back in to see the changes, the sandbox is active in your session.

You can only deploy a flexfield to a sandbox using the Define Flexfields task flow pages.

You also can use the Manage Sandboxes feature in the Administration menu of the Setup and Maintenance work area to activate and access a flexfield-enabled sandbox.

Note

Whether you use the Define Flexfields or Manage Sandboxes task flows to access a flexfield-enabled sandbox, you must sign out and sign back in before you can see the changes you deployed in the run time.

You cannot publish the flexfield from the sandbox to the mainline. You must use the Define Flexfields task flow pages to deploy the flexfield for access by users of the mainline because the flexfield configuration in the mainline is the single source of truth.

Deploying Flexfields Using the Command Line: Explained

You can use the Manage Key Flexfields, Manage Descriptive Flexfields, and Manage Extensible Flexfields tasks to deploy flexfields. You can also use WebLogic Server Tool (WLST) commands for priming the Metadata Services (MDS) repository with predefined flexfield artifacts and for deploying flexfields.

The table describes the available commands.

WebLogic Server Tool Command	Description
deployFlexForApp	Deploys all flexfields for the specified enterprise application. Only flexfields whose status is other than deployed are affected by this command unless the option is enabled to force all flexfields to be deployed regardless of deployment status. Initial application provisioning runs this command to prime the MDS repository with flexfield artifacts.
deployFlex	Deploy a single flexfield regardless of deployment status
deployPatchedFlex	Deploys flexfield changes that have been delivered using a flexfield Seed Data Framework (SDF) patch. Deploys flexfields that have a Patched deployment status.

<code>deleteFlexPatchingLabels</code>	Displays MDS label of flexfield changes for viewing and deleting patching labels.
<code>validateFlexDeploymentStatus</code>	Displays list containing flexfields that aren't deployed or failed deployment.

Executing these commands outputs a report at the command line. The report provides the following information for every flexfield that is processed.

- Application identity (APPID)
- Flexfield code
- Deployment result, such as success or error

In case of errors, the report lists the usages for which the errors were encountered. If a run time exception occurs, the output displays the traceback information. For each WLST flexfield command, adding the `reportFormat='xml'` argument returns the report as an XML string.

Consider the following aspects of command line deployment.

- Preparing to use the WLST flexfield commands
- Using the `deployFlexForApp` command
- Using the `deployFlex` command
- Using the `deployPatchedFlex` command
- Using the `deleteFlexPatchingLabels` command
- Using the `validateFlexDeploymentStatus` command
- Exiting the WLST and checking the results

Preparing To Use the WLST Flexfield Commands

You can only execute the WLST flexfield commands on a WebLogic Administration Server for a domain that has a running instance of the Oracle Fusion Middleware Extensions for Applications (Applications Core) Setup application.

For more information on deploying the Applications Core Setup application, see the Oracle Fusion Applications Developer's Guide.

Ensure that the AppMasterDB data source is registered as a JDBC data source with the WebLogic Administration Server and points to the same database as the ApplicationDB data source.

Start the WebLogic Server Tool (WLST) if it isn't currently running.

UNIX:

```
sh $JDEV_HOME/oracle_common/common/bin/wlst.sh
```

Windows:

```
wlst.cmd
```

Connect to the server, replacing the user name and password arguments with your WebLogic Server user name and password.

```
connect('wls_username', 'wls_password', 'wls_uri')
```

The values must be wrapped in single-quotes. The `wls_uri` value is typically `T3://localhost:7101`.

For more information on the WLST scripting tool, see the Oracle Fusion Middleware Oracle WebLogic Scripting Tool.

Using the `deployFlexForApp` Command

The `deployFlexForApp` command translates the product application's predefined flexfield metadata into artifacts in the MDS repository.

Important

This command is run automatically when you provision applications. However, after custom applications development, you must run the `deployFlexForApp` command after you configure your application to read the flexfield artifacts from the MDS repository and before you log into the application for the first time, even if there is no predefined flexfield metadata.

This command doesn't deploy flexfields that have a status of Deployed unless the `force` parameter is set to `'true'` (the default setting is `'false'`).

For more information on priming the MDS partition with configured flexfield artifacts, see the Oracle Fusion Applications Developer's Guide.

From the WLST tool, execute the following commands to deploy the artifacts to the MDS partition, replacing `product_application_shortcode` with the application's short name wrapped in single-quotes.

```
deployFlexForApp('product_application_shortcode'[, 'enterprise_id']  
[, 'force'])
```

In a multi-tenant environment, replace `enterprise_id` with the Enterprise ID to which the flexfield is mapped. Otherwise, replace with `'None'` or don't provide a second argument.

To deploy all flexfields regardless of their deployment status, set `force` to `'true'` (the default setting is `'false'`). If you want to deploy all flexfields in a single-tenant environment, you either can set `enterprise_id` to `'None'`, or you can use the following signature:

```
deployFlexForApp(applicationShortName='product_application_shortcode', force='true')
```

Tip

The application's short name is the same as the application's module name.

For more information about working with application taxonomy, see the Oracle Fusion Applications Developer's Guide.

Using the deployFlex Command

From the WLST tool, execute the following command to deploy a flexfield, replacing `flex_code` with the code that identifies the flexfield, and replacing `flex_type` with the flexfield's type, which is either DFF, KFF, or EFF. The values must be wrapped in single-quotes.

```
deployFlex('flex_code', 'flex_type')
```

Optionally, execute the following command if the flexfield is an extensible flexfield, and you want to deploy all the flexfield's configurations.

Note

By default, extensible flexfields are partially deployed. That is, only the pages, contexts, or categories that had recent changes, are deployed.

```
deployFlex('flex_code', 'flex_type', ['force_Complete_EFF_Deployment'])  
where, forceCompleteEFFDeployment=None
```

Using the deployPatchedFlex Command

Use the `deployPatchedFlex` command for situations where the patching framework doesn't invoke the command, such as when an application has been patched offline.

If the installation is multi-tenant enabled, the command deploys all patched flexfields for all enterprises. This command isn't intended to be invoked manually.

Check with your provisioning or patching team, or the task flows for managing flexfields, to verify that the flexfield has a Patched deployment status.

From the WLST tool, execute the following command to deploy the artifacts to the MDS partition.

```
deployPatchedFlex()
```

Execute the following command to deploy all flexfields that have either a READY status or an ERROR status.

```
deployPatchedFlex(mode='RETRY')
```

Using the deleteFlexPatchingLabels Command

Whenever you deploy flexfield changes to MDS using the `deployPatchedFlex()` WLST command, an MDS label is created in the format `FlexPatchingWatermarkdate+time`. Use the `deleteFlexPatchingLabels` command to inquire about and delete these labels.

From the WLST tool, execute the `deleteFlexPatchingLabels()` command with no arguments to delete the flexfield patching labels.

To output a list of flexfield patching labels, execute the command with the `infoOnly` argument, as follows:

```
deleteFlexPatchingLabels(infoOnly='true')
```

Using the validateFlexDeploymentStatus Command

The `validateFlexDeploymentStatus()` WLST command checks the deployment status of all flexfields in an Oracle Fusion Applications deployment.

```
validateFlexDeploymentStatus()
```

Use this command to verify that all flexfields in the current instance of provisioned Java EE applications are deployed.

Exiting the WLST and Checking the Results

To exit the tool, execute the following command.

```
disconnect()
```

Optionally, sign into the application, access user interface pages that contain flexfields, and confirm the presence of flexfields for which configuration exists, such as value sets, segments, context, or structures.

Manage Descriptive Flexfields

Descriptive Flexfields: Explained

Descriptive flexfields provide a way to add custom attributes to entities, and define validation and display properties for them. These attributes are generally standalone. They don't necessarily have anything to do with each other and aren't treated together as a combination.

All Oracle Fusion Applications business entities that you can access are enabled for descriptive flexfields. Descriptive flexfields are optional. You can choose whether or not to configure and expose segments for the descriptive flexfield defined and registered in your database. For lists of descriptive flexfields, see assets with the Flexfield: Descriptive type in Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>).

A descriptive flexfield provides a set amount of segments for an entity. You make the segments of a descriptive flexfield available to end users as individual fields in the application user interface.

Context

A descriptive flexfield can have only one context segment to provide context sensitivity.

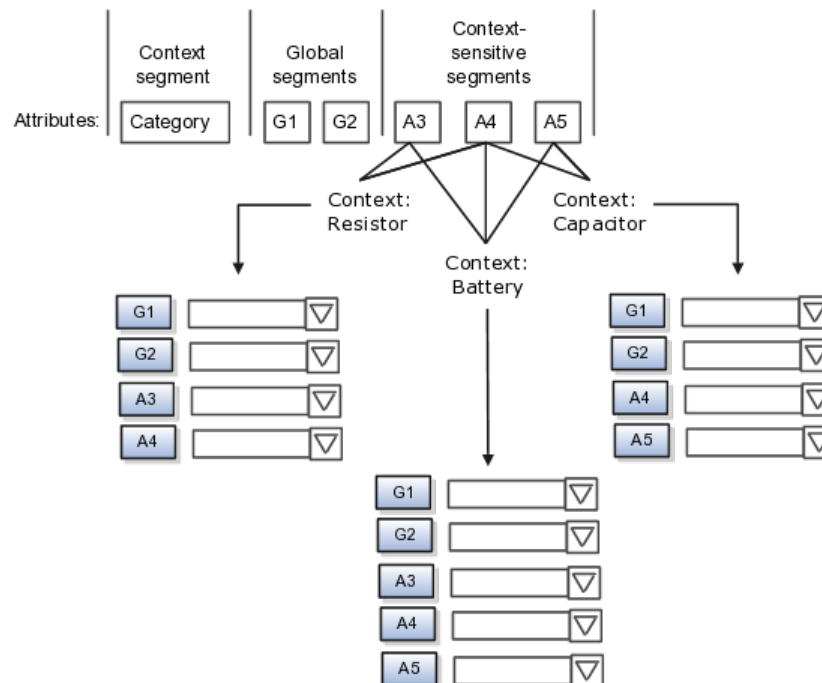
The same underlying column can be used by different segments in different contexts. For example, you can define a Dimensions context that uses the ATTRIBUTE1 column for height, the ATTRIBUTE2 column for width, and the ATTRIBUTE3 column for depth. You can also define a Measurements context that uses the same columns for other attributes: the ATTRIBUTE1 column for weight, the ATTRIBUTE2 column for volume, and the ATTRIBUTE3 column for density.

Segments and Contexts

Descriptive flexfield segments are of the following types.

Segment Type	Run Time Behavior
Global segment	Always available
Context segment	Determines which context-sensitive segments are displayed
Context-sensitive segment	Displayed depending on the value of the context segment

In the figure, a descriptive flexfield has one context segment called Category for which there are three values: Resistor, Battery, and Capacitor. In addition, the descriptive flexfield consists of two global segments that appear in each of the contexts, and three context-sensitive segments that only appear in the context in which they are configured.



Application development determines the number of segments available for configuring. During implementation, you configure the flexfield by determining the following:

- Which attributes to add using the available segments
- The context values
- The combination of attributes in each context

A segment can be used for different attributes, such as Height in Context1 and Color in Context2. Each segment of a descriptive flexfield that you make available to end users is exposed in the user interface as an individual field.

Value Sets

For each global and context-sensitive segment, you configure the values allowed for the segment and how the values that end users enter are validated, including interdependent validation among the segments.

Planning Descriptive Flexfields: Points to Consider

Once you have identified a flexfield to configure, plan the configuration in advance. Compile a list of the UI pages and other artifacts in your deployment that are affected by the configuration. Verify that you are provisioned with the roles needed to view and configure the flexfield. View the flexfield using the Highlight Flexfields command in the Administration menu while viewing the run time page where the flexfield appears. Plan how you will deploy the flexfield for test and production users. Review the tools and tasks available for managing flexfields, such as the Define Flexfields task list, Manage Sandboxes, and Highlight Flexfields for adding and editing flexfield segments.

Planning a descriptive flexfield can involve the following tasks:

1. Identify existing parameters.
2. Identify existing context values and whether the context value is derived.
3. Identify custom attributes and plan the descriptive flexfield segments, segment properties, and structure.
4. Plan validation rules.
5. Plan initial values.
6. Plan attribute mapping to Oracle Business Intelligence objects.

Identify Existing Descriptive Flexfield Parameters

Some descriptive flexfields provide parameters that can be used to specify the initial value of a descriptive flexfield segment. The parameter is external reference data, such as a column value or a session variable. For example, if a flexfield has a user email parameter, you can configure the initial value for a customer email attribute to be derived from that parameter.

Review the list of available parameters in the **Derivation Value** field in the Create Segment page for a descriptive flexfield. If you decide to use one of the parameters to set an initial value, select that parameter from the **Derivation Value** drop-down list when you add the descriptive flexfield segment.

Evaluate Whether the Context Value Is Derived

The context value for a descriptive flexfield might have been preconfigured to be derived from an external reference. For example, if the context is Marriage Status, then the value might be derived from an attribute in the employee business object. When the context value is derived, you might need to take the derived values and their source into consideration in your plan.

To determine whether the context value is derived, access the Edit Descriptive Flexfield task to view the list of configured context values for the flexfield. The Derivation Value field in the Context Segment region displays a list of available parameters.

If context values have been preconfigured, see Oracle Fusion Applications Help for product-specific information about the use of those values.

Plan the Segments, Segment Properties, and Structure

Identify the custom attributes you need for a business object to determine the segments of the descriptive flexfield. Determine the segment properties such as the prompt, display type, or initial value.

The structure of the descriptive flexfield is determined by its global, context, and context-sensitive segments. Plan a global segment that captures an attribute for every instance of the business object. Plan a context for segments that depend on a condition of situation applying to a particular instance of the business object. Plan context-sensitive segments to capture attributes that are relevant in the context.

There is only one context segment available for descriptive flexfields. If you have more than one group of custom attributes where you could use the context segment, you will have to pick one group over the others, based on your company's needs and priorities, and add the other custom attributes as global segments.

Plan Validation Rules

Define each segment's validation rules and check if value sets exist for those rules or you must create new ones. If you must create a value set, you can create it either before configuring the flexfield or while creating or editing a segment.

When determining a segment's validation rules, consider the following questions:

- What is the data type - character, date, date and time, or number?
- Does the segment require any validation beyond data type and maximum length?
- Should a character type value be restricted to digits, or are alphabetic characters allowed?
- Should alphabetic characters automatically be changed to uppercase?
- Should numeric values be zero-filled?
- How many digits can follow the radix separator of a numeric value? In base ten numerical systems the radix separator is decimal point.
- Does the value need to fall within a range?
- Should the value be selected from a list of valid values? If so, consider the following questions:

- Can you use an existing application table from which to obtain the list of valid values, or do you need to create a custom list?
- If you are using an existing table, do you need to limit the list of values using a WHERE clause?
- Does the list of valid values depend on the value in another flexfield segment?
- Is the list of valid values a subset of another flexfield segment's list of values?

Plan Initial Values

For every segment, list the constant value or SQL statement, if any, to use for the initial value of the custom attribute.

Plan How Segments Map to Oracle Business Intelligence Objects

If a descriptive flexfield has been enabled for Oracle Business Intelligence, you can make it available for use in Oracle Business Intelligence applications. You can use segment labels to map segments to logical objects. Plan to map segments to logical objects before deploying the flexfield as a way to streamline the import into Oracle Business Intelligence.

Use the Manage Segment Labels page to view preconfigured segment labels. If a segment label doesn't exist for the logical object, then decide on a code, name, and description in preparation for adding that label. Choose a code, name, and description that will help end users select the correct label.

The mapping equalizes similar context-sensitive attributes that are from different contexts but are mapped to a single logical object. For information about objects in the logical model, see the "Working with Logical Tables, Joins, and Columns" chapter in the Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition (Oracle Fusion Applications Edition).

Managing Descriptive Flexfields: Points to Consider

Configuring descriptive flexfields involves managing the available flexfields registered with your Oracle Fusion Applications database and configuring their flexfield-level properties, defining and managing descriptive flexfield contexts, and configuring global and context-sensitive segments.

Every descriptive flexfield is registered to include a context segment, which you may choose to use or not.

In general, configuring descriptive flexfields involves:

1. Creating segment labels for business intelligence enabled flexfields.
2. Configuring global segments by providing identity information, the initial default value, and the display properties.

3. Configuring the context segment by specifying the prompt, whether the context segment should be displayed, and whether a value is required.
4. Configuring contexts by specifying a context code, description, and name for each context value, and adding its context-sensitive segments, each of which is configured to include identifying information, the column assignment, the initial default value, and the display properties.

The following aspects are important in understanding descriptive flexfield management:

- Segments
- Adding Segments to a Highlighted Flexfield
- Usages
- Parameters
- Delimiters
- Initial Values
- Business Intelligence

Segments

You can assign sequence order numbers to global segments and to context-sensitive segments in each context. Segment display is always in a fixed order. You cannot enter a number for one segment that is already in use for a different segment.

Value sets are optional for context segments. The value set that you specify for a context segment consists of a set of context codes, each of which corresponds to a context that is appropriate for the descriptive flexfield. The value set must be independent or table-validated. If table-validated, the WHERE clause must not use the VALUESET.value_set_code or SEGMENT.segment_code bind variables. The value set must be of data type Character with the maximum length of values being stored no larger than the context's column length.

If you don't specify a value set for a context segment, the valid values for that context segment are derived from the context codes. The definition of each context segment specifies the set of context-sensitive segments that can be presented when that context code is selected by the end user.

For reasons of data integrity, you cannot delete an existing context. Instead, you can disable the associated context value in its own value set by setting its end date to a date in the past.

You can configure the individual global segments and context-sensitive segments in a descriptive flexfield. These segment types are differentiated by their usage, but they are configured on application pages that use most of the same properties.

Adding Segments to a Highlighted Flexfield

When you highlight flexfields on a run time page and use an **Add Segment** icon button to create a segment, the segment code, name, description, table column,

and sequence number are set automatically. If you use an **Add Segment** icon button to configure descriptive flexfield segments, you cannot use an existing value set. Value sets are created automatically when you add the segments. You can enter the valid values, their descriptions, and the default value or specify the formatting constraints for the value set, such as minimum and maximum values.

Depending on display type, the value set you create with the **Add Segment** icon button is either an independent value set or a format-only value set. The table shows which type of value set is created depending on the segment display component you select.

Display Component	Value Set Created with Add Segment
Check box	Independent
Drop-down list	Independent
List of Values	Independent
Radio Button Group	Independent
Text Field With Search	Independent
Text box	Format Only
Text area	Format Only
Date/Time	Format Only

Tip

After you add a context value, refresh the page to see the new value.

Usages

Descriptive flexfield usages allow for the same definition to be applied to multiple entities or application tables, such as a USER table and a USER_HISTORY table. Descriptive flexfield tables define the placeholder entity where the flexfield segment values are stored once you have configured the descriptive flexfield. When you configure a flexfield, the configuration applies to all its usages.

Parameters

Some descriptive flexfields provide parameters, which are attributes of the same or related entity objects. Parameters are public arguments to a descriptive flexfield. Parameters provide outside values in descriptive flexfield validation. You use parameters to set the initial value or derivation value of an attribute from external reference data, such as a column value or a session variable, rather than from user input. Parameters can be referenced by the logic that derives the default segment value, and by table-validated value set WHERE clauses.

Delimiters

A segment delimiter or separator visually separates segment values when the flexfield is displayed as a string of concatenated segments.

Initial Values

The SQL statement defining an initial value must be a valid statement that returns only one row and a value of the correct type.

You can use two types of SQL statements:

- SQL statement with no binding. For example, select MIN(SALARY) from EMPLOYEES.
- SQL statement with bind variables. You can use the following bind variables in the WHERE clause of the SQL statement.
 - `: {SEGMENT.<segment_code>}`: Identifies a segment in the same context.
 - `: {CONTEXT.<context_code>; SEGMENT.<segment_code>}`: Identifies a segment in a different context. The context must be in the same category or in an ancestor category, and it cannot be a multiple-row context.
 - `: {VALUESET.<value_set_code>}`: Identifies the closest prior segment in the same context that is assigned to the specified value set.
 - `: {FLEXFIELD.<internal_code>}`: Identifies a flexfield.

For more information about using bind variables, see the help for value sets.

Business Intelligence

Selecting a global, context, or context-sensitive segment's BI Enabled checkbox specifies that the segment is available for use in Oracle Business Intelligence.

When the flexfield is imported into Oracle Business Intelligence, the label you selected from the BI Label dropdown list equalizes the segment with segments in other contexts, and maps the segment to the logical object represented by the label.

Enabling Descriptive Flexfield Segments for Business Intelligence: Points to Consider

A descriptive flexfield that is registered in the database as enabled for Oracle Business Intelligence (BI) includes a BI Enabled setting for each of its segments. When a global, context, or context-sensitive segment is BI-enabled, it is available for use in Oracle Business Intelligence.

The following aspects are important in understanding BI-enabled flexfield segments:

- Flattening business components to use BI-enabled segments in Oracle BI
- Equalizing segments to prevent duplication and complexity in the flattened component

- Mapping attributes of flattened business components to logical objects in Oracle BI
- Managing the labels that map segments to logical objects in Oracle BI

After you deploy a business intelligence-enabled flexfield, use the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process to import the flexfield changes into the Oracle Business Intelligence repository. Users can make use of the newly-generated attributes in business intelligence applications. For example, a user can generate a report that includes attributes added by the descriptive flexfield. For additional information about logical objects and import, refer to the Oracle Transactional Business Intelligence Administrator's Guide.

Flattening

When you deploy a business intelligence-enabled descriptive flexfield, the deployment process generates an additional set of flattened Application Development Framework (ADF) business components in addition to the usual ADF business components and ADF faces run time artifacts that are generated during deployment. The flattened business components include attributes for business intelligence-enabled segments only. Flattening means each custom column in each context shows up as an attribute in an Oracle Business Intelligence folder.

Flattened components include one attribute for the BI-enabled context-segment, and one attribute for each business intelligence-enabled global segment. For BI-enabled context-sensitive segments, consider the following:

- If you assigned a label to the segment, the flattened components include an additional single attribute representing segments with that label.
- If you didn't assign a label, the flattened components include a discrete attribute for each BI-enabled context-sensitive segment in each context.

Mapping to Logical Objects in Business Intelligence

You can simplify reporting by representing similar segments as a single logical object in Business Intelligence.

If you assign a label to any set of context-sensitive segments that serve the same purpose in different contexts, you can consolidate or equalize the segments into a single attribute. This prevents duplication and the extra workload and complexity that result from the flattening process. For example, a United States context might have a Passport segment and a Canada context might have Visa segment. If you assign the NationalID segment label to both the Passport and Visa segments, they are equalized into the same NationalID attribute in the flattened business component.

Non-labeled context-sensitive segments aren't equalized across context values, so the flattened components include a separate attribute for each context-sensitive segment for each context value.

Note

It may not be possible to equalize similarly labeled segments if they have incompatible data types or value set types.

Assign a label to a global segment, context segment, or context-sensitive segment to map the corresponding attribute in the flattened components to a logical object in Oracle Business Intelligence. Using labels to map segments to BI logical objects minimizes the steps for importing the flexfield into Oracle Business Intelligence.

Note

Assigning a label to a context-sensitive segment serves to equalize the attribute across contexts, as well as map the equalized attribute to business intelligence.

Managing Labels

You may assign a predefined label (if available) to segments or create new labels for assignment, as needed. Specify a code, name, and description to identify each label. In the BI Object Name field, enter the name of the logical object in Oracle Business Intelligence to which the segment label should map during import. Specifying the BI logical object minimizes the steps for importing the flexfield into Oracle Business Intelligence and helps to equalize context-sensitive segments across contexts.

If no labels are assigned to a BI-enabled segment, or the BI Object Name on the assigned label doesn't exist in business intelligence, you must manually map the segment to the desired logical object when importing into Oracle Business Intelligence.

In addition, context-sensitive segments without labels cannot be equalized across context values. The flattened components include a separate attribute for each non-labeled context-sensitive segment in each context.

Importing to Oracle Business Intelligence Repository

After you deploy a business intelligence-enabled flexfield, import the flexfield changes into the Oracle Business Intelligence repository to make use of the newly flattened business components in business intelligence and then propagate the flexfield object changes. When you import the metadata into the Oracle Business Intelligence repository, you must do so as the FUSION_APPS_BI_APPID user.

Note

To import flexfield changes into the Oracle Business Intelligence repository in Oracle Cloud implementations, run the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process. For additional information about import, refer to the Oracle Transactional Business Intelligence Administrator's Guide.

Tip

When you import a flexfield into the Oracle Business Intelligence repository, you see both `<name>_` and `<name>_c` attributes for each segment, along with some other optional attributes. The `<name>` attribute contains the value. The `<name>_c` attribute contains the code of the value set that the value comes from, and is used for linking to the value dimension. You must import both attributes.

FAQs for Manage Project Portfolio Management Descriptive Flexfields

Why did my flexfield changes not appear in the run time UI?

The ADF business components or artifacts of a flexfield, which are generated into an metadata services (MDS) repository when the flexfield is deployed, are cached within a user session. You must sign out and sign back in again to view flexfield definition changes reflected in the run time application user interface page.

A flexfield's deployment status indicates whether the flexfield segments as currently defined in the metadata are available to end users. The flexfield segments seen by end users in the run time correspond to the flexfield definition that was last deployed successfully.

What happens if a value set is security enabled?

Value set security is a feature that enables you to secure access to value set values based on the end user's role in the system.

As an example, suppose you have a value set of US state names. When this value set is used to validate a flexfield segment, and users can select a value for the segment, you can use value set security to restrict them to selecting only a certain state or subset of states based on their assigned roles in the system.

For example, Western-region employees may choose only California, Nevada, Oregon, and so on as valid values. They cannot select non-Western-region states. Eastern-region employees may choose only New York, New Jersey, Virginia, and so on as valid values, but cannot select non-Eastern-region states. Value set security is implemented using Oracle Fusion Applications data security.

How can I set a default value for a flexfield segment?

When you define or edit a flexfield segment, you specify a default value from the values provided by the value set assigned to that segment.

You can set the default value for a descriptive flexfield segment to be a parameter, which means the entity object attribute to which the chosen parameter is mapped provides the initial default value for the segment.

You can set the default value to be a constant, if appropriate to the data type of the value set assigned to the segment.

In addition to an initial default value, you can set a derivation value for updating the attribute's value every time the parameter value changes. The parameter you choose identifies the entity object source attribute. Any changes in the value of the source attribute during run time are reflected in the value of the segment.

If the display type of the segment is a check box, you can set whether the default value of the segment is checked or unchecked.

Can I display the context segment in the project Cost Collection flexfield?

No. The context segment is predetermined for each page. Displaying it and changing the value may result in capture of data that is not applicable for the current transaction.

Manage Project Portfolio Management Messages

Messages: Highlights

The message dictionary contains messages that tell users about business rule errors, such as missing or incorrect data, and how to resolve them, to warn users about the consequences of intended actions, and provide information in log files. These messages are defined for specific applications and modules, but a few are common messages that can be used in any application. All applications also use messages stored outside of the message dictionary.

The message dictionary is described in the Oracle Fusion Applications Developer's Guide.

Managing Messages

- Use the Manage Messages page to create and edit custom messages in the message dictionary, as well as edit predefined messages. Do not delete predefined messages unless you are sure that they are not used anywhere. Refer to the Oracle Fusion Applications Developer's Guide.

See: Introduction to Message Dictionary Messages

- Messages outside of the message dictionary, such as confirmations and field validations, are managed either in the Oracle Application Development Framework or through message resource bundles used for translation.

Creating and Editing Messages: Highlights

Each message in the message dictionary has many attributes and components, including message properties, text, and tokens, that you define when creating or editing the message. To create or edit a message, navigate to the Manage Messages page in the Setup and Maintenance work area.

Details about these messages are described in the Oracle Fusion Applications Developer's Guide.

Message Properties

- The message type identifies the type of information that the message contains.

See: Understanding Message Types

- The message name and number are identifiers for the message. There are specific message number ranges for predefined messages in each application, and you should not edit numbers assigned to predefined messages. When creating custom messages, use only message numbers within the 10,000,000 to 10,999,999 range.

See: About Message Names

See: About Message Numbers

- The translation notes for predefined messages might contain internal content that you can disregard.

See: About Translation Notes

- The message category, severity, and logging enabled option are related to the incident and logging process.

See: About Grouping Messages by Category and Severity

See: Understanding Incidents and Diagnostic Logs with Message Dictionary

Message Text and Tokens

- The message text comprises various components, some of which are displayed only to select users. To determine which component of the message text is displayed to a particular user, set the Message Mode profile option (FND_MESSAGE_MODE) at the user level for that user. The message component short text is visible to all users and therefore, the profile option does not apply to this component. Also, the profile option applies only to messages in the message dictionary.

See: About Message Components

- Tokens are variables that represent values to be displayed in the message text.

See: About Tokens

Common Messages: Points to Consider

Common messages, which have message names that begin with FND_CMN and message numbers between 0 and 999, are used throughout Oracle Fusion Applications. Each common message can appear in multiple places in any product family. For example, the FND_CMN_NEW_SRCH message can be used for any search to indicate that no results were found. Common messages that are of type error or warning are part of the message dictionary.

Editing Common Messages

Because a common message can be used in any application, consider the ramifications if you edit any aspect of the message, including incident and logging settings. Changes would be reflected in all instances where the message is used. For example, if you change the message text, make sure that the text

would make sense to all users across Oracle Fusion Applications who might see it.

Creating Common Messages

You can create custom common messages for use in multiple places within a single product. Do not begin the message name with FND_CMN, but use another suitable convention. The message number should be within the range that is designated for the product.

Manage Project Portfolio Management Attachment Categories

Attachments: Explained

Attachments are pieces of supplementary information that users can associate with specific business objects such as expense reports or purchase orders. Attachments can be URLs, desktop files, text, or in cases where available, repository folders. For any given business object, a user may be able to only view attachments, or also create, delete, or edit attachments, depending on security. For more information on an introduction to attachments, see the Oracle Fusion Applications Developer's Guide.

Repository

Attachments are stored in a content management repository provided by Oracle WebCenter Content Server. Users managing attachments have no real interaction with the repository unless the repository mode is enabled for attachments on specific business objects. In that case, users can share attachments among objects, update attachments by checking them out of and back into the repository, and perform other tasks. Access to attachment files is controlled by a digital signing mechanism. Depending on security, users might have direct access to the repository.

Security

Data security that applies to a specific business object also applies to attachments for that object, as determined by the attachment entity defined for the object. For example, if a user has no access to a specific expense report, then the same user cannot access attachments for the expense report. You can also use attachment categories to control access and actions on attachments, based on roles associated with the category. For more information on securing attachments, see the Oracle Fusion Applications Developer's Guide.

Attachment Entities: Explained

An attachment entity is usually a database entity, for example a table or view, that represents a business object attachments can be associated with. Each

attachment UI must be defined with a corresponding attachment entity, which not only identifies the business object to attach to, but also controls what users can do. Attachment entities are used only in the context of attachments and exist separately from the database entities that they are based on.

Edit and create attachment entities on the Manage Attachment Entities page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Attachment Entities task. Though you would generally use predefined attachment entities with attachment UIs, you might need to create new entities, for example when developing custom UIs.

Entity Names

An attachment entity name should match the name of the table or view that represents the business object to attach to. The name is also used in the repository folder that is automatically created to store attachments for the entity. The attachment entity display name should be something that users know to represent the business object.

Database Resource

The data security policies associated with the database resource defined for the attachment entity would apply to attachments for that entity. For example, based on the database resource for the expense reports attachment entity, the same policies apply to attachments for expense reports. The database resource value must match the value in the OBJ_NAME column in the FND_OBJECTS table for the business object that the entity represents.

Enabling Security

Security based on the database resource associated with the attachment entity is always in effect. What you can enable or disable is security based on attachment categories. If any of the attachment categories associated with the attachment entity has data security defined, then that security applies to this entity only if enabled.

Attachment Entities and Attachment Categories: How They Work Together

The association between attachment entities and categories determines which categories can be used for an entity. For example, categories associated with the expense report attachment entity are available to be implemented in attachment UIs for expense reports. You can define these associations when managing either entities or categories. Any association changes in either the Manage Attachment Entities or Manage Attachment Categories page are reflected on the other page. You can access either page by starting in the Setup and Maintenance Overview page and searching for attachment tasks.

Managing Entities

You determine which attachment categories are relevant to a particular entity on the Manage Attachment Entities page, and each entity must have at least one

category. Depending on configuration, any or all of the available categories for that entity are used. For example, you assign three categories to the expense reports attachment entity. For a particular expense report page with attachments functionality, you can customize the attachments component to specify which of the three categories are used. Based on your selection, the data security defined for each category, if any, is applied to attachments on that page if the attachment entity has category-based security enabled.

Managing Categories

If you create an attachment category and need to assign it to multiple attachment entities, use the Manage Attachment Categories page. The association means the same as the association on the Manage Attachment Entities page.

Attachments Troubleshooting: Explained

Attachments UIs for users to add and manage attachments are fully functional as is, and users usually would not encounter issues. If you customize attachments in any way, for example by creating additional attachment categories and implementing data security on them, then some issues might arise.

Issue: Unable to View, Add, Update, or Delete Attachments

Users encounter issues when trying to view attachments or perform actions such as adding attachments.

- Users can no longer see specific attachments that they were previously able to see.
- Likewise, they can no longer update or delete attachments.
- Users get an error stating that they do not have permission to add attachments.

Resolution

Use the Manage Attachment Entities page to ensure that attachment categories are associated to the relevant attachment entity. For example, if users can no longer see attachments for an expense report, then search for the expense report attachment entity and assign all necessary categories to it. You might need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or what categories to assign.

If data security is implemented on the categories for the attachment entity, then verify that the Enable Security check box is selected in the Manage Attachment Entities page for that entity. Make sure that users have a role with the privileges shown in the following table, to view, add, update, or delete attachments with a specific attachment category.

Action	Privilege
View	Read Application Attachment (FND_READ_APPLICATION_ATTACHMENT_DATA)

Add or Update	Update Application Attachment (FND_UPDATE_APPLICATION_ATTACHMENT_DATA)
Delete	Delete Application Attachment (FND_DELETE_APPLICATION_ATTACHMENT_DATA)

For example, if users have the Read Application Attachment privilege for all categories associated with the expense report attachment entity, except the Receipts attachment category, then they can view all expense report attachments except those created with the Receipts category. Likewise, if users do not have the Update Application Attachment privilege for any attachment categories tied to the expense report attachment entity, then they cannot create any attachments at all for expense reports.

For more information on attachment category data security, see the Oracle Fusion Applications Developer's Guide.

Finally, certain attachments UI for users have predefined restrictions on categories in place. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

Issue: Missing Attachment Category

Users can see existing attachments, but the attachments no longer have an attachment category value.

Resolution

When the attachment was added, at least one category existed for the corresponding attachment entity, as otherwise the attachment could not have been added. Since then, the entity was edited so that it no longer has any assigned categories, so the user cannot see the category associated with that attachment.

Use the Manage Attachment Entities page to reassign attachment categories to the relevant attachment entity. For example, if users can no longer see the Receipts attachment category for an attachment to an expense report, then search for the expense report attachment entity and assign to it the Receipts category. You might need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or what additional categories to assign.

Finally, certain attachments UI for users have predefined restrictions on categories in place. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

FAQs for Manage Project Portfolio Management Attachment Categories

What's an attachment category?

An attachment category is used to classify and secure attachments. Each attachment user interface must be defined with at least one category for users

to be able to add attachments. If there are multiple categories, users can view them and select one when adding attachments. For example, attachments for an expense report can be categorized as receipts, scanned invoice images, and so on.

You can also associate roles with categories to determine user access and actions for attachments, based on the categories assigned to the attachment entity. For example, security for expense report attachments can be based in part on the categories assigned to the expense report attachment entity. You can define multiple categories per module, and add and manage custom categories for your own purposes. For more information on attachment category data security, see the Oracle Fusion Applications Developer's Guide.

Use the Manage Attachment Categories page, which you can access by starting in the Setup and Maintenance Overview page and searching for the Manage Attachment Categories task.

Project Foundation Configuration: Overview

Define Project Foundation Configuration: Overview

In the Define Project Foundation Configuration activity, you configure foundation components for creating and maintaining projects in Oracle Fusion Project Portfolio Management.

Setup tasks in the Define Project Foundation Configuration activity are grouped into the following task lists and tasks:

Task List	Description
Define Project Foundation Common Reference Objects	Review and manage common objects, for example value sets and messages, that are used by Oracle Fusion Project Foundation.
Define Project Calendars and Periods	Manage calendars, accounting period statuses, and project accounting period statuses used for costing, budgeting, forecasting, billing, and project performance reporting.
Define Types and Categorizations	Manage various classifications used to describe and group projects, tasks, and transactions.
Define Project Roles	Define project roles and the business rules that control how the roles are assigned.
Define Project Spaces	Configure how Oracle Fusion Project Portfolio Management interacts with Oracle WebCenter Spaces.
Define Project Resources	Define job mapping, attributes, and rate schedules for project resources.
Define Rate Schedules and Costing Rules	Define rate schedules and costing rules used for costing, billing, work planning, and financial planning purposes.
Define Project Resource Breakdown Structures	Define resource breakdown structures used for project planning, billing, and reporting.
Define Burdening	Configure options used to calculate, group, and apply indirect costs to project expenditure items to report and account the total cost of a project.

Manage Project Types	Create classifications for projects and configure basic options that are inherited by each project associated with that project type.
Define Cross-Charge Options	Configure options used to charge project costs across organizations.
Define Transfer Pricing	Define rules and schedules to determine the transfer price amount of cross-charge transactions that require borrowed and lent or intercompany billing processing.
Define Action Controls	Define source products and configure action controls to determine which actions cannot be performed in Oracle Fusion Project Portfolio Management on data imported from a particular third-party source.
Define Project Extensions	Implement client extensions to customize the project approval process.
Distribute and Install Desktop Integrator Client	Distribute and install the software needed to integrate Excel with costing, budgeting, and forecasting.

Project Foundation Configuration: Define Project Calendars and Periods

Maintaining Accounting Periods and Project Accounting Periods: Critical Choices

During business unit implementation you determine whether to maintain common accounting and project accounting periods, or define project accounting periods that have a different frequency than the accounting periods.

Accounting periods are used by Oracle Fusion Projects to assign accounting periods and dates to transactions. Accounting periods are maintained by ledger and use the same calendar as the general ledger periods. Project accounting periods are used by Oracle Fusion Projects for project planning, costing, billing, budgeting, forecasting, and performance reporting. Project accounting periods are maintained by business unit and typically do not use the same calendar as the accounting and general ledger periods.

Maintaining Common Accounting and Project Accounting Periods

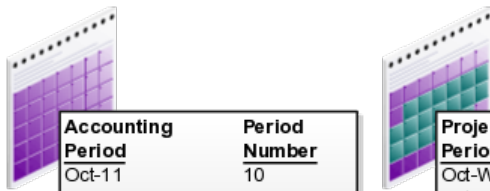
If you want to report project information with the same frequency as the accounting periods, you can use the accounting period as both the accounting and project accounting period.

When you maintain common accounting and project accounting periods, period maintenance is simplified, calendar periods are not copied to Oracle Fusion Projects, and period information is maintained in one physical location. Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods.

Defining Project Accounting Periods that are Different from Accounting Periods

If you want to account for project transactions and report project information more frequently than the accounting periods allow, you can define project accounting periods that are shorter than the accounting periods. For example,

you can define weekly project accounting periods and monthly accounting periods, as shown in the following diagram.



Accounting Period	Period Number
Oct-11	10
Sep-11	9
Aug-11	8
Jul-11	7
Jun-11	6
May-11	5
Apr-11	4
Mar-11	3
Feb-11	2
Jan-11	1
Dec-10	12
Nov-10	11
Oct-10	10

Project Accounting Period	Period Number
Oct-W4-11	42
Oct-W3-11	41
Oct-W2-11	40
Oct-W1-11	39
Sep-W4-11	38
Sep-W3-11	37
Sep-W2-11	36
Sep-W1-11	35
Aug-W4-11	34
Aug-W3-11	33
Aug-W2-11	32
Aug-W1-11	31
Jul-W4-11	30

Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods, and Oracle Fusion Projects to maintain project accounting period statuses and run the processes to open and close project accounting periods.

FAQs for Define Project Calendars and Periods

What's the difference between a project accounting period, an accounting period, and a general ledger period?

Project accounting periods are used to track budgets and forecasts, summarize project amounts for reporting, and track project status. Project accounting periods are maintained by business unit. You can set up project accounting periods to track project periods on a more frequent basis than accounting periods. For example, you can define weekly project accounting periods and monthly accounting periods. If you use the same calendar as your accounting periods, the project accounting periods and accounting periods will be the same, although the statuses are maintained independently.

Accounting periods, which are used to derive accounting dates, are maintained by ledger and use the same calendar as the general ledger periods. Period statuses for the accounting period and general ledger period are maintained independently.

Note

You can select an option on the business unit definition to maintain common accounting and project accounting periods. This option allows the accounting period to be used as the project accounting period so you need to maintain only one period status.

How can I set up project accounting periods that are different from accounting periods?

Complete these tasks to set up project accounting periods that are different from accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, specify the project accounting calendar for each business unit.
 - Verify that the option to maintain common accounting and project accounting periods is not selected.
- Copy the accounting calendar into the project accounting period table, which copies the period start and end dates.
- Manage the period statuses for project accounting periods.

How can I set up common accounting and project accounting periods?

Complete these tasks to set up common accounting periods and project accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, set the project accounting calendar to the accounting calendar and select the option to maintain common accounting and project accounting periods.

Can I change a project accounting period date range?

No. You cannot change a project accounting period date range if the following conditions exist:

- The period exists in the project accounting period table.
- The period exists as an accounting period that is associated with a project accounting period.
- The period exists in project summarization tables.

What happens if I close an accounting or project accounting period permanently?

You cannot enter any transactions in the period you have closed and you can adjust transactions in subsequent periods.

Project Foundation Configuration: Define Types and Categorizations

Manage Revenue Categories

Revenue Categories: Examples

Your implementation team creates revenue categories to group expenditure types and event types for revenue recognition. A revenue category describes a source of your organization's revenue.

Revenue Categories for Labor and Other Transactions

The following table illustrates possible revenue categories your implementation team can define for labor and other types of revenue.

Revenue Category Name	Description
Fee	Fee Earned
Labor	Labor Revenue
Other	Nonlabor Revenue
Payment	Payment

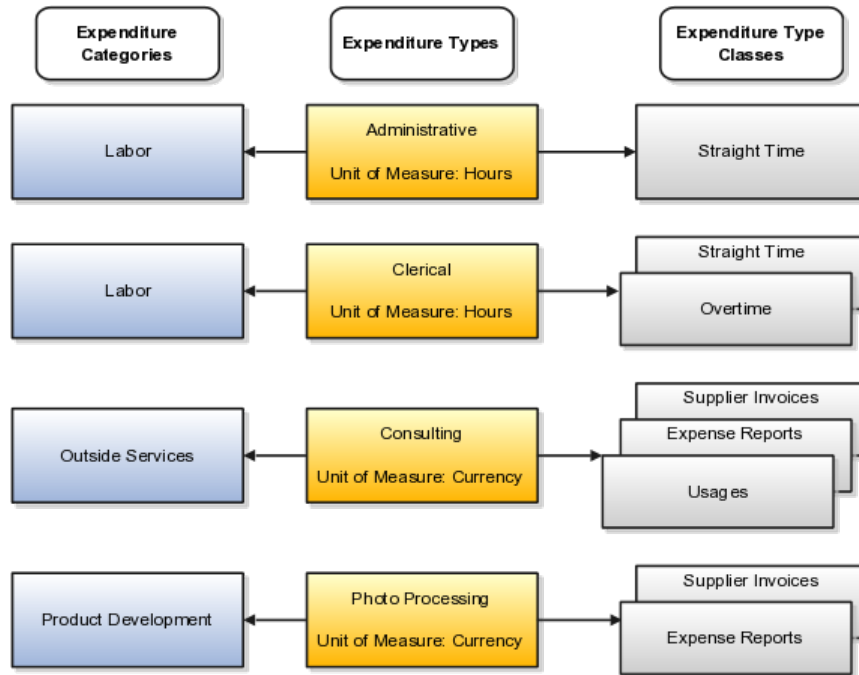
Manage Expenditure Categories and Types

Expenditure Classifications: Examples

Expenditures are divided into expenditure categories and revenue categories. Within these groups, expenditures are further classified by expenditure type classes, expenditure types, and nonlabor resources.

Expenditure Classifications

This following graphic shows examples of expenditure classifications. Each expenditure type consists of an expenditure category, a unit of measure and one or more expenditure type classes.



Following are the expenditure categories, units of measure, and expenditure type classes for each expenditure type shown in the diagram.

- Administrative
 - Expenditure Category: Labor
 - Unit of Measure: Hours
 - Expenditure Type Class: Straight Time
- Clerical
 - Expenditure Category: Labor
 - Unit of Measure: Hours
 - Expenditure Type Classes: Straight Time and Overtime
- Consulting
 - Expenditure Category: Outside Services
 - Unit of Measure: Currency
 - Expenditure Type Classes: Supplier Invoices, Expense Reports, and Usages
- Photo Processing
 - Expenditure Category: Product Development
 - Unit of Measure: Currency
 - Expenditure Type Classes: Supplier Invoices and Expense Reports

- Expenditure Category: Product Development
- Unit of Measure: Currency
- Expenditure Type Classes: Supplier Invoices and Expense Reports

Expenditure Type Classes: Explained

An expenditure type class tells Oracle Fusion Projects how to process an expenditure item.

Oracle Fusion Projects predefines all expenditure type classes, which include the following:

- Straight Time
- Overtime
- Burden Transaction
- Expense Reports
- Inventory
- Miscellaneous Transaction
- Supplier Invoices
- Usages
- Work-in-Process

Expenditure Type Classes for Labor Costs

Oracle Fusion Projects uses the following expenditure type classes to process labor costs.

- Straight Time: Labor costs calculated using a base cost rate multiplied by hours.
- Overtime: Labor costs calculated using a premium cost rate multiplied by hours.

Expenditure Type Classes for Nonlabor Projects

Oracle Fusion Projects uses the following expenditure type classes to process nonlabor projects.

- Burden Transaction: Burden transactions track burden costs that are calculated in an external system or calculated by Oracle Fusion Projects as separate, summarized transactions. These costs are created as a separate expenditure item that has a burdened cost amount, and a quantity and raw cost value of zero.

You can adjust burden transactions that are not system-generated.

- Expense Reports: Expense reports imported from Oracle Fusion Payables or an external system.

Expense reports that you import into Oracle Fusion Projects must be fully accounted prior to import.

- **Inventory:** Inventory transactions imported from Oracle Fusion Inventory or an external system.
- **Miscellaneous Transaction:** Used to track miscellaneous project costs. Following are examples of miscellaneous transactions.
 - Fixed assets depreciation
 - Allocations
 - Interest charges
- **Supplier Invoices:** Supplier invoices, discounts, and payments from Oracle Fusion Payables or an external system, and receipt accruals from Oracle Fusion Cost Management.
- **Usages:** You must specify the nonlabor resource for every usage item that you charge to a project.

For each expenditure type classified by a Usages expenditure type class, you also define nonlabor resources and organizations that own each nonlabor resource.

- **Work-in-Process:** Used when you import work-in-process transactions from third-party applications or Oracle Fusion Project Costing using Microsoft Excel or web services, or enter work-in-process transactions directly into Oracle Fusion Projects.

Expenditure Type Class for Allocation Transactions: Points to Consider

When defining an allocation rule, you must specify the expenditure type class for the allocation transaction attributes. Choosing the expenditure type class determines how the allocated amount is created as costs on the expenditure item.

Miscellaneous Transactions

The miscellaneous transaction expenditure type class is used to allocate the source amount as raw cost on the expenditure item.

Burden Transactions

The burden transactions expenditure type class is used to allocate the source amount as the burden cost for the expenditure item, while expenditure item quantity and raw cost remain zero.

Expenditure Types: Explained

An expenditure type is a classification of cost that you assign to each expenditure item that you enter in Oracle Fusion Projects. Create expenditure types for processing requirements, such as calculating raw costs, to classify costs, and to plan, budget, forecast, and report on projects.

Following are examples of other ways that you can use expenditure types:

- Assign an expenditure type to each burden cost code when capturing burden costs on separate, summarized expenditure items. The assigned expenditure type becomes the expenditure type for that type of burden cost.
- Specify default expenditure types for each resource class for different project units. The application uses the default expenditure type for planning purposes. For example, when determining the raw and burdened cost rates for a planning resource, if the resource format does not contain an expenditure type or nonlabor resource, then the application uses the default expenditure type for the resource class of the resource to determine the rates.
- Labor cost multipliers are used to calculate costs for overtime expenditure items. Associate a labor cost multiplier to an expenditure type with the Overtime expenditure type class. The costing process multiplies the standard labor cost rate by the multiplier and the hours to calculate the cost for overtime expenditure items.
- Assign an expenditure type with the Usages expenditure type class to each nonlabor resource to define nonlabor resources that are used to record usage transactions.

Expenditure types contain the following attributes.

- Expenditure and revenue categories
- Unit of measure
- Rate required
- Proceeds of sale
- Expenditure type classes
- Assigned sets
- Tax classification codes

Important

If you create and save an expenditure type, you cannot subsequently update the following attributes for the expenditure type.

- Expenditure and revenue categories
- Unit of measure
- Rate required option

Instead, you must enter an end date for the expenditure type and create a new one. The end date for an expenditure type has no effect on existing transactions. Oracle Fusion Projects uses the old expenditure type to report on and process existing transactions.

Expenditure and Revenue Category

Expenditure categories group expenditure types for costing. Revenue categories group expenditure types for revenue and billing.

Unit Of Measure

The expenditure type unit of measure is used as the default value on costing or planning transactions.

For inventory transactions, the primary unit of measure is from the inventory item, and not from the expenditure type on the transaction.

You must use Hours as the unit of measure for labor expenditure types.

Rate Required Option

Enable the **Rate Required** option for an expenditure type that requires a cost rate.

Note

For supplier invoice expenditure types, if you specify that a rate is required, Oracle Fusion Projects requires you to enter a quantity in Oracle Fusion Payables for invoice distributions using that expenditure type. When you interface the invoice distribution to Oracle Fusion Projects, the application copies the quantity and amount to the expenditure item and calculates the rate. If you define a supplier invoice expenditure type with the **Rate Required** option disabled, then the quantity of the expenditure item is set to the amount you enter in Oracle Fusion Payables.

Proceeds of Sale Option

Enable the **Proceeds of Sale** option for expenditure types that are used to track the proceeds of sale for a capital project.

Expenditure Type Classes

Expenditure type classes specify how an expenditure item is processed. For example, if you assign the Straight Time expenditure type class to an expenditure type, Oracle Fusion Projects uses labor cost schedules to calculate the cost of an expenditure item with that expenditure type and expenditure type class.

You can assign multiple expenditure type classes to an expenditure type. For example, an expenditure with the expenditure type Materials can have the expenditure type class Supplier Invoice if it originated in Oracle Fusion Payables, and the expenditure type class Inventory if it originated in Oracle Fusion Inventory. This allows you to use a single expenditure type to classify as many costs as you need. You can use the same expenditure type for expenditures with different origins, and therefore different accounting, that should otherwise be grouped together for costing, budgeting, or summarization purposes.

Assigned Sets

You must assign at least one project transaction type set to each expenditure type. You can add and delete set assignments for an expenditure type at any

time, except that you cannot delete the last set assignment for an expenditure type.

Tax Classification Codes

You can optionally select a default tax classification code to use for customer invoice lines for an expenditure type and business unit.

FAQs for Manage Expenditure Categories and Types

Can I update or delete an expenditure category?

You can update expenditure category names and descriptions at any time. You cannot delete an expenditure category if it is used in transaction controls, expenditure types, resource transaction attributes, or cost distribution organization overrides. You can, however, stop usage of an expenditure category by setting an end date for it.

Can I assign multiple expenditure type classes to an expenditure type?

Yes. For example, an expenditure with the expenditure type Materials can have the expenditure type class Supplier Invoice if it originated in Oracle Fusion Payables, and the expenditure type class Inventory if it originated in Oracle Fusion Inventory. This allows you to use a single expenditure type to classify as many costs as you need. You can use the same expenditure type for expenditures with different origins, and therefore different accounting, that should otherwise be grouped together for costing, budgeting, or summarization purposes.

Can I distinguish cost of removal and proceeds of sale amounts when processing retirement costs?

Yes. When capturing retirement costs in a capital project, enter proceeds of sale amounts using expenditure types specifically created for that purpose. Oracle Fusion Projects automatically classifies amounts for all other expenditure types associated with the retirement cost task as cost of removal.

Can I update or delete an expenditure type?

You can update expenditure type names, descriptions, and dates at any time. However, you cannot update the following attributes for the expenditure type: expenditure category, revenue category, unit of measure, rate required, and expenditure type class. To update these attributes, you must set an end date for the expenditure type and create a new expenditure type with a unique name.

You cannot delete an expenditure type and the associated expenditure type class. To stop usage of an expenditure type you can set an end date for it.

What's an expenditure category?

Describes and groups organization costs. For example, an expenditure category named Labor refers to the cost of labor. An expenditure category named Supplier

refers to the cost incurred on supplier invoices. You use expenditure categories for budgeting, transaction controls, when you define organization overrides, and in accounting rules and reporting.

Manage Project Class Categories

Setting Up Class Categories: Points to Consider

You define project classifications to group projects. Project classifications include a class category and a class code. The category is a broad subject within which you can classify projects, such as Industry Sector. The code is a specific value of the category, such as Construction, Banking, or Health Care.

You specify the following options when setting up project classifications.

- Assign to all projects
- Assign to all project types
- Available as accounting source
- One class code per project
- Enter class codes percent
- Class codes
- Project types

Assign to All Projects

Enable this option if all projects must have a code assigned to this class category. Do not enable if this class category is optional.

Assign to All Project Types

Enable this option if you want this class category to be required for projects of all project types.

Available as Accounting Source

This option indicates if the class category is available as an accounting source so that Oracle Fusion Subledger Accounting can use the category to create mapping sets, account rules, journal line rules, and description rules.

Note

Only one class category at a time is available as an accounting source in Oracle Fusion Subledger Accounting. To change the class category that Oracle Fusion Subledger Accounting uses, inactivate the old class category and create a new one with a different date range.

One Class Code Per Project

Specify whether you want to allow entry of only one class code with this class category for a project.

Note

Defining multiple class codes for one category for a project may affect reporting by class category. For example, defining multiple class codes may cause a code to be reported more than once.

Enter Class Codes Percent and Total Percent Must Equal 100

Enable this option if you want to associate percentages with the class codes associated with this category. When you have multiple classification codes associated with a single class category, you can report the relative values of your projects in terms of sales or a similar metric. When you enable this option, the application requires class code percentages for the category regardless of the project type.

Enable the Total Percent Must Equal 100 option if you want the application to require that the sum of all class code percentages to be 100% for the selected class category. You can clear this option at any time.

Class Codes

You can define class codes for the category to create more specific groups of projects for reporting. Assign each class code to a reference data set so that only codes that are relevant to the project unit are available for the project.

Project Types

Associate project classifications with project types for the classification to be available for selection on projects with that project type. You can add classifications to a project type definition, and add project types to a class category definition.

Select the **Assign to all projects** option for a project type if you require all projects of the project type to be associated with the class category.

Using Class Categories: Examples

Class categories and class codes enable you to classify projects. The following example illustrates how you can use project classifications.

Scenario

InFusion Corporation designs and implements heavy engineering projects for government and private customers. Because InFusion Corporation maintains

a diverse portfolio of contracts, the ability to track sector and funding is very important to corporate management.

Therefore, the organization classifies projects by market sector and funding source. The following table describes the two class categories used.

Class Category	Assign to All Projects	One Class Code per Project	Enter Percentage for Class Codes	Description
Market Sector	Yes	Yes	No	Market sector in which project work takes place. A single class code must be provided on the project for the class category.
Funding Source	Yes	No	Yes	Source of funding for project. At least one class code must be provided on the project for the class category. Percentages must be provided to indicate contribution for each source.

The following table describes the class codes available for the categories specified above.

Class Category	Class Code	Description
Funding Source	Private	Project funded by private organizations
Funding Source	Federal	Project funded by the federal government
Funding Source	State or Local	Project funded by a state or local government
Funding Source	Foreign	Project funded by a foreign government
Market Sector	Utilities	Project involves utility or power plant construction
Market Sector	Waste	Project involves waste disposal or recycling facility constructions
Market Sector	Mechanical	Project involves mechanical design and engineering work
Market Sector	Structural	Project involves structural design and engineering work

InFusion management can easily assess projects based on the above class categories and codes.

For example, assume you specify a class category Funding Source on your project. With this category, you select two class codes: Private and Federal. If you assign 30 percent to Private and 70 percent to Federal, then you indicate the proportion of funding received for your project from the two sources.

On the other hand, because you must select a single market sector, you indicate whether project work involves utilities, waste, mechanical, or structural activities.

Manage Work Types

Work Types for Billing: Explained

A work type represents a classification of work. You use work types to classify both actual and scheduled work. The billable status of a work type assigned to a scheduled assignment determines the default billable status of scheduled work.

In billing, you can use work types to classify work for the following purposes:

- To determine the default billable status of expenditure items.
- To classify cross-charge amounts into cost and revenue for cross-charge transactions.

Billable Project Work

The default billable status of scheduled work is determined by the billable status of the work type assigned to the scheduled assignments. You can also control the billable status of actual work by the work type assigned to actual transactions. If you choose to do this, then you must change the work type on an actual transaction to change the billable status of the transaction. It is recommended that you do this in order to maintain consistency between processing of actual transactions for customer billing and reporting for billable utilization.

Tip

To use work types to determine whether an expenditure item is billable you must set the profile option Work Type Derived for Expenditure Item to **Yes**.

Cross-Charge Work

Cross-charge work is project work performed by resources from one organization on a project belonging to another organization.

Typically the project-owning organization provides some compensation to the resource organization for this cross-charge work. The compensation can be in the form of sharing revenue with the resource organization or taking on the cost from the resource organization. This allows each organization to be measured on its performance independent of one another. You can classify the transfer price amount type of cross-charge work into cost or revenue based on the work type assigned to project work: scheduled or actual.

Manage Project Statuses

Project Status Components: How They Work Together

Oracle Fusion Projects uses statuses for projects and progress.

- The **Project** status type controls which processes are allowed during each stage of a project.

Oracle Fusion Projects provides the following predefined project statuses.

- Unapproved
 - Submitted
 - Approved
 - Rejected
 - Pending close
 - Closed
- The **Progress** status type specifies overall progress of a project, task, or resource. Progress statuses are used for reporting and do not control what you can do with a project.

Following are the predefined progress statuses:

- On track
- At risk
- In trouble

You can define additional project and progress statuses based on the available system statuses to meet your business needs.

Status Attributes

Each status is associated with a status type and a system status. Optionally you can specify status attributes for initial project status and workflow.

- **Status Type:** Types are Project or Progress.
- **System Status:** Determines which actions are allowed for the project or progress status. Every status must map to a predefined system status.
- **Initial Project Status:** If this option is enabled for a project status, and if the project status belongs to a reference set that is associated with the project unit of the project, then the status is eligible for use as the starting status for the project.

Initial starting status does not apply to progress statuses.

- **Workflow Attributes:** Oracle Fusion Projects provides an approval workflow that allows you to separate project creation from project

approval. If you enable workflow for a status, the approval workflow begins when a project changes to that status.

Project status approval workflow includes these attributes:

- **Status After Change Accepted:** The status that the application assigns to the project when a project status change is approved.
- **Status After Change Rejected:** The status that the application assigns to the project when a project status change is rejected.

The project status after workflow is rejected can be the same as the current status.

Workflow attributes do not apply to progress statuses.

Assigned Sets

You assign project statuses to reference data sets so that only statuses that are relevant to the project unit are available for the project.

Important

Before you can select a status for a project, the status must belong to a reference data set that is associated with the project unit of the project.

Status Controls

Status controls for a system status determine which actions are allowed for projects in a project status that is associated with the system status.

The following actions are controlled with status controls:

- Adjust transactions
- Capitalize assets
- Capitalized interest
- Create burden transactions
- Create new transactions
- Summarize project data

By default, all actions are allowed for projects in an **Approved** system status.

Not all of the default status controls are editable. For example, if a project status is associated with the **Closed** system status, you cannot change the status controls to allow the creation of new transactions.

Status controls do not apply to progress statuses.

Next Allowable Statuses

Next allowable statuses specify which statuses are permitted as the new status when a status is changed manually. You must define next allowable statuses for each project status.

Defining the next allowable statuses determines the project process flow. For example, you can specify that a project with a Requested status can have the status changed to either Approved or Rejected. This example shows two possible process flows for the project: Requested to Approved status, or Requested to Rejected status.

The following four options are available when you specify the next allowable statuses:

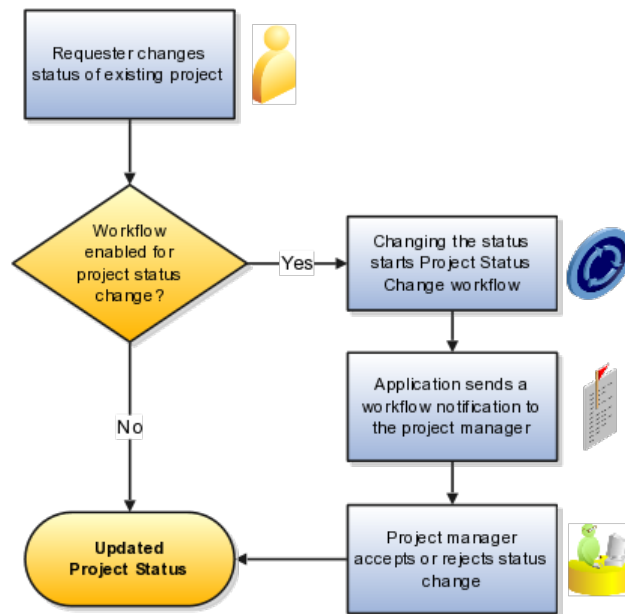
- **All:** The current status can change to any status. This is the default value.
- **None:** The current status cannot change.
- **System Status:** The next allowable statuses are based on system statuses. Specify which system statuses are next allowable statuses.
- **Status Name:** The next allowable statuses are based on project statuses. Specify which project statuses are next allowable statuses.

Next allowable statuses do not apply to progress statuses.

Project Status Change Workflow: Explained

Oracle Fusion Projects provides a default Project Status Change workflow process. If you enable workflow for a project status, the approval workflow begins when a project changes to that status. The default workflow process routes a request for approval of the project status change to the project manager. You can use client extensions to modify the default workflow process to accommodate the needs of your business.

The following diagram shows the process of changing a project status.



Project Status Change Workflow Settings

During implementation, you specify the project statuses that require approval before a project changes to that status.

For each project status with workflow enabled, you can also specify the following parameters:

- The status that the application assigns to the project when a project status change is accepted.

- The status that the application assigns to the project when a project status change is rejected.

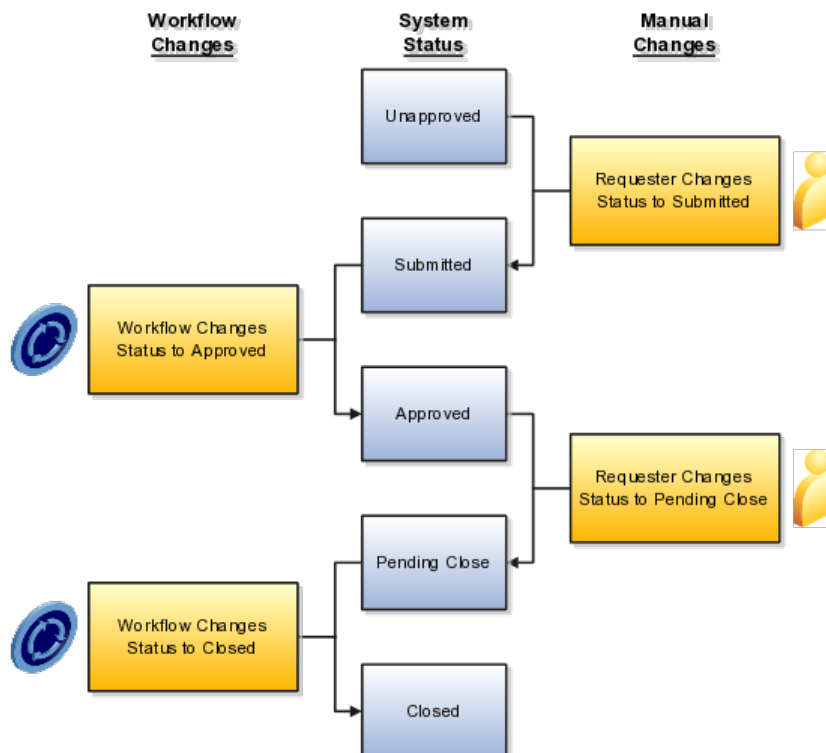
For example, assume that during implementation, you enable workflow for the Submitted status, and configure the following workflow attributes:

- In the **Status After Change Accepted** field for the Submitted project status, you specify the Approved status as the status that the application assigns to the project when the status change is accepted.
- In the **Status After Change Rejected** field for the Submitted project status, you specify the Rejected status as the status that the application assigns to the project when the status change is rejected.

In this example, when a requester changes the project status to Submitted, the workflow process routes the status change request to the project manager's worklist. If the project manager accepts the status change, the workflow process assigns the Approved status to the project. If the project manager rejects the status change, the workflow process assigns the Rejected status to the project.

Workflow attributes do not apply to progress statuses.

The following diagram shows an example project status flow when Project Status Change workflow is used for status changes during the lifecycle of a project. In this example, a requester changes the project status to Submitted. A workflow notification is sent to the project manager, who accepts the status change. Workflow is configured to change the project status to Approved after a request to change the status to Submitted is accepted. After project completion, the requester changes the project status to Pending Close. A workflow notification is sent to the project manager, who accepts the status change. Workflow is configured to change the project status to Closed after a request to change the status to Pending Close is accepted.



Project Status Change Workflow Extensions

You can extend the functionality of Project Status Change workflow by using the following client extensions:

- **Project Status Change Approver Extension:** Overrides the project status change approver.

Use this client extension to specifying a status change approver other than the project manager. By default, the project status change approver is the active project manager.

- **Project Status Change Workflow Enabled Extension:** Determines whether to call the workflow process when the project status changes.

Use this extension to add and modify the conditions that enable workflow for project status changes.

- **Project Status Change Rules Extension:** Specifies the conditions that must be satisfied before a project status can change.

Use this extension to build additional rules for changing a project status. For example, you can enforce a rule that certain class categories and class codes must be assigned to a project before you can change the project to an Approved status.

Project Foundation Configuration: Define Project Roles

Project Roles in Budgeting and Forecasting: Explained

Default project roles, including project application administrator, project manager, and project administrator can perform specific budgeting and forecasting tasks.

Default Access for Roles

The following table describes the default access for each role.

Entitlement Area	Project Application Administrator	Project Manager	Project Administrator	Notes
Edit budget and forecast planning options	Yes	No	No	Project application administrators set planning options for financial plan types. Project managers and accountants can view planning options at the version level.
Create versions	No	Yes	Yes	None
Generate versions	No	Yes	Yes	Applies to budgets generated when setting a baseline for the project plan. Project administrators cannot generate forecasts from progress (they do not have access to publish progress.)

Edit versions in Excel	No	Yes	Yes	None
Submit versions	No	Yes	Yes	None
Approve versions	No	Yes	No	A team member with project manager security role access must be manually designated as the project manager for the project. Note Project creators are not automatically designated as project managers for their projects. If workflow is enabled, then approval takes place through a notification. Menu actions are not available on the budgeting and forecasting pages.
Review versions	No	Yes	Yes	None

Project Foundation Configuration: FAQs for Define Project Spaces

How are project space roles mapped to project resources?

The application automatically assigns each project resource to a project space role on the associated project space. The project manager is assigned the role of project space moderator. All other project resources are project space participants.

Project space moderators can manually add additional participants or modify participant access, if required.

Project Foundation Configuration: Define Project Resources

Manage Job Mappings

Job Mapping: Explained

Job mapping enables you to associate granular human resource jobs to less-detailed project jobs that you can use for project management.

Job titles usually reflect human resource characteristics and can vary across countries or units, even within the same enterprise. For example, you may have a project manager in the United States and a chef de projet in France. However, when managing projects, especially global ones, you may want to use the same job definitions for all resources rather than unique jobs that are defined by each resource-owning organization. These common, or global, jobs ease the maintenance of costing rates and processes.

Following is a description of job mapping and a brief example.

Mapping Jobs

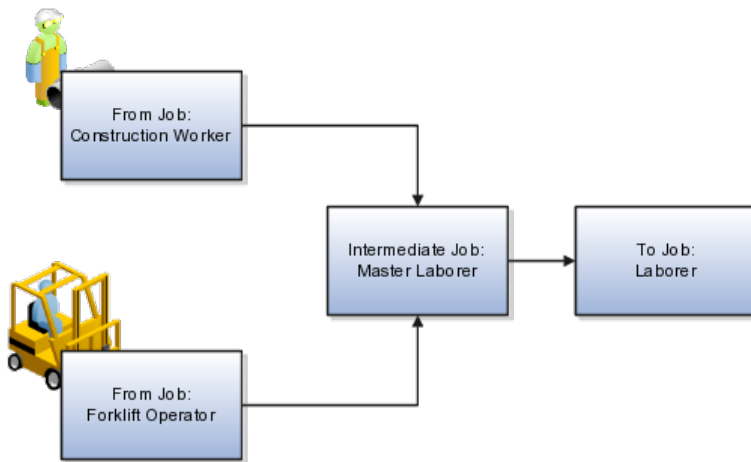
You map jobs from two job sets through an intermediate job set. That is, you must map jobs in your human resource jobs sets to jobs from an intermediate set of jobs. You then map the jobs in the intermediate job set to jobs in your project job sets.

For each combination of **From Job Set**, **Intermediate Job Set**, and **To Job Set**, you manually associate the intermediate job to the to job only once. For subsequent mappings, the to job is displayed automatically when you select the intermediate job and cannot be modified.

For example, and as illustrated in the following diagram, assume you want to map jobs from Human Resources Job Set to Projects Job Set through an intermediate job set called Master Job Set. Within the Human Resources Job Set, you want to map jobs Construction Worker and Forklift Operator to a single job called Laborer in the Projects Job set.

You first select Construction Worker as the from job, Master Laborer as the intermediate job, and Laborer as the to job. The intermediate job Master Laborer

and the to job Laborer are now linked. Next, when you select Forklift Operator as the to job and Master Laborer as the intermediate job, Laborer is displayed automatically as the to job.



After you map the jobs, you can use the single job Laborer for project management purposes.

Creating a Job Mapping: Example

Job mapping enables you to associate granular human resource jobs to less-detailed project jobs that you can use for project management. The following example illustrates how you map jobs from two job sets using an intermediate job set.

Scenario

InFusion Corporation is a global enterprise with business units in the United States and France. The following table lists sample job titles in those two countries.

Job Set	Jobs
United States Job Set	Manager Staff Consultant Senior Consultant Design Engineer Electrical Engineer Construction Worker
France Job Set	Chef de Projet Ingenieur Formateur Architecte Ouvrier

For project work, InFusion Corporation uses the following generic job roles, created for the Global job set:

- Project Manager
- Consultant
- Architect
- Laborer

To map the global jobs to country-specific jobs, InFusion Corporation created an intermediate job set, called the Master job set, with the following jobs:

- Master Project Manager
- Master Consultant
- Master Architect
- Master Laborer

Jobs are mapped as follows for the United States job set:

Job in From Job Set	Job in Intermediate Job Set	Job in To Job Set
Manager	Master Project Manager	Project Manager
Staff Consultant	Master Consultant	Consultant
Senior Consultant	Master Consultant	Consultant
Design Engineer	Master Architect	Architect
Electrical Engineer	Master Architect	Architect
Construction Worker	Master Laborer	Laborer

Jobs are mapped as follows for the France job set:

Job in From Job Set	Job in Intermediate Job Set	Job in To Job Set
Chef de Projet	Master Project Manager	Project Manager
Ingénieur Formateur	Master Consultant	Consultant
Architecte	Master Architect	Architect
Ouvrier	Master Laborer	Laborer

InFusion Corporation associates the Global job set to its planning resource breakdown structures. Therefore, jobs such as Project Manager and Laborer are available for creating planning resources. In addition, the Global job set is used to define rates that can be then used for costing, invoicing, and financial planning.

FAQs for Manage Job Mappings

How can I map a human resource job to a project job?

You map jobs from two job sets through an intermediate job set. That is, you must map jobs in your human resource jobs sets to jobs from an intermediate set of jobs. You then map the jobs in the intermediate job set to jobs in your project job sets.

For example, you can map the human resources jobs Construction Worker and Forklift Operator to a single projects job called Laborer through the intermediate job Master Laborer. After you have mapped your jobs, you can use the single job Laborer for your project management purposes.

What's a job set?

An organizational partition of jobs. Use job sets to define how you create and use jobs in your business. You can define a single set of jobs and use them across your business. Alternatively, you can create separate job sets for each country or line of business.

For example, assume that the set of jobs your business uses for project management is less granular than that used to define human resource jobs for employees. You can define generic jobs for your project job set and map it to the human resource job sets. Associating the project job set with planning, reporting, and billing resource breakdown structures then ensures appropriate project reporting, costing, invoicing, and revenue generation.

Manage Resource Classes

Resource Formats and Resource Classes: How They Work Together to Create Planning Resources

The resources you can create for planning and billing resource breakdown structures are determined by a combination of predefined resource classes and the resource format hierarchies you select for use.

Resource Formats and Resource Format Hierarchies

Before creating planning or billing resources, you must select the resource formats and resource format hierarchies you want to use on your resource breakdown structure. For example, if you want to plan for project-related expenses such as air fare, then you must select resource format hierarchies created using the resource type **Expenditure Type**.

Also, as resource format hierarchies support up to three levels, selecting from the available hierarchies enables you to determine the granularity with which resources are created.

For example, for planning resource breakdown structures used for high-level or preliminary planning, you may decide to enable only the **Resource Class** resource format. You can then create and use planning resources representing the four resource classes: Labor, Equipment, Material Items, and Financial Resources.

To plan in greater detail, you may decide to use a two-level resource format hierarchy, such as **Resource Class: Job** or a three-level hierarchy such as **Resource Class: Job: Named Person**. You can then create a resource such as Labor: Electrical Engineer or Labor: Electrical Engineer: Chris Black.

Note

Selecting more granular resource formats automatically selects resource formats higher up within the same hierarchy. For example, if you select the resource

format **Expenditure Type: Named Person: Job**, then the resource formats **Expenditure Type: Named Person** and **Expenditure Type** are automatically selected for use.

Resource Classes

Resource classes influence the creation of planning and billing resources in the following ways:

- Resource class as a resource format: As mentioned earlier, **Resource Class** is a resource type that is available for use within resource format hierarchies on planning and billing resource breakdown structures.
- Predefined association with resource formats: For each resource format, you can create planning or billing resources based on certain resource classes. For example, if the resource format contains Job, then the only available resource class is Labor. However, if the resource format is Expenditure Category, then you can select any of the resource classes (Labor, Material, Equipment, and Financial Resources) when you create a resource.

Resource Classes: Explained

Resource classes are predefined classification of resources. For each resource class, you can define specific attributes that associated planning resources inherit.

Following is a description of the available resource classes and their attributes.

Available Resource Classes

The resource classes available in Oracle Fusion Projects are as follows:

Resource Class	Description
Labor	Named persons or any grouping of named persons whose time capacity is consumed to complete project work. Named persons may be grouped by attributes such as job, organization, or role.
Equipment	Nonperson resource such as machinery, equipment, or facilities with time capacity that is consumed to complete project work. Examples include telecommunication charges (charged by call), or shared facilities or laboratory (charged for hours used).
Material items	Resources that are physically tracked as inventory, subassembly, work in progress (WIP), purchasable items, or finished goods.
Financial resources	Resources that have a financial value for the project. These resources use Currency as the unit of measure.

Resource Class Attributes

The attributes you can define for each resource class are as follows:

Attribute	Description
Spread curve	Determines how planned amounts for a planning resource are spread across the duration of the project or financial plan. You can change the spread curve that you select for a resource class at the planning resource level and for any corresponding task assignments, or budget or forecast lines.
Item master and category set	Determine the material item and item category lists used in planned transactions and planning, billing, and reporting resource breakdown structures.
Expenditure types	Determine default raw and burdened rates for a planning resource. For example, if the resource format does not contain an expenditure type or nonlabor resource, then the application uses the default expenditure type for the resource class of the resource to determine the rates. You must individually specify expenditure types for project units.

Resource Class Rate Schedules

Create rate schedules for resource classes that you can use for project and financial planning. When creating resource class rate schedules, you can specify both rates and markup percentages for each combination of resource class and organization.

Note

Markup percentage takes precedence for amount-based transactions where the unit of measure is Currency.

You specify a resource class rate schedule in the planning options for a financial or project plan type, project plan, or financial plan version as the source for rates or markup percentages, unless they are available elsewhere. For example, assume you are using actual rates on your financial plan version. If one of the planning resources is an expenditure category, then resource class rate schedules are used to derive rates for that resource because actual rates are not maintained for expenditure categories.

Manage Nonlabor Resources

Nonlabor Cost Rates: How They Are Determined

Oracle Fusion Projects uses cost rates to calculate the raw cost for transactions. For example, for cost transactions, the application determines a cost rate for each transaction and calculates the raw cost during transaction costing, unless you import the raw cost for transactions.

How Nonlabor Cost Rates Are Determined

Oracle Fusion Projects applies the following rules to determine the cost rate for each transaction.

1. The application uses an organization costing rule to determine the nonlabor cost rate schedule, using the following logic. At each level, the application searches for a rule with a date range that includes the transaction date.
 - a. Organization costing rule for the expenditure organization.

The application searches for an active costing rule assigned to the organization of the transaction on the date of the transaction.
 - b. Organization costing rule for the parent expenditure organization.

If an organization costing rule for the expenditure organization is not found, the application searches for a rule assigned to the parent organization of the expenditure organization, and continues up the project expenditure organization hierarchy until a rule is found.

You specify the project expenditure organization hierarchy for the business unit during implementation. If an organization has multiple parent organizations, and a rule is assigned to more than one parent, the application uses the rule assigned to the lowest level parent organization.
 - c. Organization costing rule for the business unit.

If no costing rule is found for the expenditure organization and parent organization, the application uses the costing rule assigned to the business unit for the transaction.
2. The application uses the nonlabor rate schedule and then applies the cost rate that is associated with the unique combination of expenditure type, nonlabor resource, and nonlabor resource organization.
3. If a cost rate does not exist for the combination of expenditure type, nonlabor resource, and nonlabor resource organization, then the application uses the cost rate for the expenditure type and nonlabor resource combination that is applicable to all nonlabor resource organizations to which the nonlabor resource belongs.

Note

This rule applies to cost transactions only. For billing and planning transactions, you can either not use a nonlabor resource organization, or map the nonlabor resource organization to the organization that maintains the rate schedule.

4. If a cost rate does not exist for the combination of expenditure type and nonlabor resource, then the application uses then the applications uses the cost rate defined for the expenditure type.

If a rate is not found at any of these levels, then an error is generated for the transaction.

Turning Equipment into Nonlabor Resources: Example

This example illustrates setting up assets as nonlabor resources.

Scenario

You are asked to set up nonlabor resources and assign them to the appropriate organizations for the InFusion Corporation.

Defining Nonlabor Resources

InFusion Corporation wants to capture costs for computer equipment, vehicles, survey equipment, and other assets.

In this example, assume that expenditure types and organizations are already set up, which are prerequisites of defining nonlabor resources.

The Other Assets expenditure type is assigned to all divisions. This nonlabor resource captures miscellaneous items.

Analysis

To define a nonlabor resource, you specify a name and description of each asset, such as a piece of equipment or pool of assets, and a date range during which the resource can be used.

For each nonlabor resource, you must choose an expenditure type with the **Usage** expenditure type class. Every usage item that you charge to a project must specify the nonlabor resource utilized and the nonlabor resource organization that owns the resource. You can select organizations that are classified as project and task owning organizations or project expenditure organizations.

A nonlabor resource may be a piece of equipment with capacity that is consumed, such as a training room, or equipment with physical output that is consumed, such as a copier. Enable the Equipment resource class to plan and report nonlabor resources as equipment with capacity that is consumed.

Nonlabor Resource Details

The following table shows the nonlabor resources for InFusion Corporation.

Resource Name	Description	Expenditure Type	Equipment Resource Class	From Date	Organizations
Laptop	Laptop on the Headquarters Network	Computer Services	Not enabled	January 1, 2011	Data Systems Finance Information Services Risk Analysis
HQ SPARC T3-1 Server	Headquarters Sparc Enterprise Server	Computer Services	Not enabled	January 1, 2011	Information Services
Oracle Exadata Storage Server	Data Systems Oracle Storage Server	Computer Services	Not enabled	January 1, 2011	Data Systems
Oracle Solaris Studio	Engineering and Services Oracle Development Platform	Computer Services	Not enabled	January 1, 2011	InFusion Engineering InFusion Services

Survey	Standard Surveying Equipment	Field Equipment	Enabled	May 1, 2011	InFusion Engineering
Van	Heavy Duty Van	Vehicle	Not enabled	January 1, 2011	InFusion Construction West Midwest East South International
Minivan	Site Visit Minivan	Vehicle	Not enabled	August 1, 2011	InFusion Construction West Midwest East South International
Pickup Truck	Heavy Duty Pickup Truck	Vehicle	Not enabled	January 1, 2011	West Midwest East
Other Asset	Other Asset	Other Assets	Not enabled	January 1, 2011	Administration InFusion Construction InFusion Engineering InFusion Services

FAQs for Manage Nonlabor Resources

What's a nonlabor resource?

An asset or a pool of assets. For example, a nonlabor resource may be a piece of equipment with capacity that is consumed, such as a training room, or equipment with physical output that is consumed, such as a copier.

Note

- Before you create nonlabor resources, you must define organizations and expenditure types.
- To define nonlabor resources, you can choose only expenditure types that belong to the Usages expenditure type class.

- To plan and report on equipment as a nonlabor resource with capacity that is consumed, enable the Equipment resource class. The expenditure type that is associated with the Equipment resource class must have a unit of measure in Hours.
-

What's a nonlabor resource organization?

The organization to which a nonlabor resource is assigned. For example, a nonlabor resource named Survey may represent a piece of survey equipment that is assigned to the Engineering organization, and a nonlabor resource named PC may represent a pool of personal computers that are assigned to the Information Services, Finance, and Engineering organizations.

Note

- Any organization from the organization hierarchy can be assigned nonlabor resources, regardless of whether the organization has the Project Expenditure Organization classification, and regardless of the start and end dates for the organization.
 - Every usage item that you charge to a project must specify the nonlabor resource utilized and the nonlabor resource organization to which the resource is assigned.
-

Project Foundation Configuration: Define Rate Schedules and Costing Rules

Rate Schedule Types: Explained

Schedule types determine usage for rates within rate schedules. You specify a schedule type for rate schedules created for costing, billing, or planning purposes in Oracle Fusion Projects.

The schedule types are:

- Job
- Person
- Nonlabor
- Resource class

Job

Job rate schedules contain rates used to calculate amounts for the following types of labor transactions:

- Costing
- Billing (invoice and revenue)
- Planning
- Budgeting
- Forecasting
- Transfer price

The rate is based on the standard hourly rate assigned to a job title in Oracle Fusion Human Capital Management.

If you are using planning rates for financial or project planning, you can select a specific job rate schedule when configuring rate settings at the plan type or project level. Job rate schedules are used if rates cannot be derived from the person labor rate schedule.

When creating a job schedule type, you must select a job set from Oracle Fusion Human Capital Management. The job set is the source of jobs in your rate schedule. Assign rates or markup percentages to jobs in the rate schedule.

Person

Person schedules contain raw cost rates and billing rates or markup percentages for labor transactions and transfer price amounts. The rate that calculates the cost or billing amount for a project transaction is based on the standard hourly rate or markup percentage assigned to a person, or the job or organization assigned to the person in the schedule. The job or organization is based on the person's assignment in Oracle Fusion Human Capital Management.

You have the option of assigning rates to the following:

- Person
- Person and job
- Person, job and organization

If you assign a rate to a person and job combination, that rate has precedence over the person rate. If you assign a rate to a person, job and organization combination, that rate has precedence over the person rate or person and job combination.

If you are using planning rates for financial or project planning, you can select a specific person rate schedule when configuring rate settings at the plan type or project level. Person rate schedules are used if rates cannot be derived from the labor rate schedule.

Nonlabor

Nonlabor rate schedules contain rates or markup percentages that calculate cost, bill, revenue, plan, budget, forecast, or transfer price amounts for nonlabor resources.

Enter a rate or markup percentage for expenditure types with the Rate Required option enabled. Otherwise, assign it only a markup percentage. Assign rates to nonlabor resources and optionally define rates for nonlabor resource organizations.

If you are using planning rates for financial or project planning, you can select a specific nonlabor rate schedule when configuring rate settings at the plan type or project level.

Resource Class

Resource class schedules contain the planning rates or markup percentages for a resource class or a combination of resource class and organization. You optionally assign a resource class schedule to a project plan or financial plan (budgets and forecasts) at the plan type level or version level. The resource class rate schedule determines rates for the associated resources if the rates cannot be derived elsewhere.

Enter a rate or markup percentage for each resource class in the rate schedule. Optionally, assign the rate or markup percentage to a specific organization for a resource class.

Labor Cost Rates: How They Are Determined

Oracle Fusion Projects uses cost rates to calculate the raw cost for expenditure items. The application determines a cost rate for each expenditure item and calculates the raw cost during cost distribution processing, unless you import the raw cost for expenditure items.

How Labor Cost Rates Are Determined

When you assign a labor costing rule and a rate schedule to an organization, Oracle Fusion Projects applies the following rules in the order presented to determine the labor costing rule for each transaction.

1. Oracle Fusion Projects determines whether any labor costing overrides exist for the employee who is associated with the expenditure item. The application uses the effective dates for the labor costing overrides to determine whether an override is active on the expenditure item date. A labor costing override can have either an overriding cost rate or an overriding rate schedule. If a labor costing override applies, then Oracle Fusion Projects uses it to determine the cost rate.

Labor expenditure items always have a unit of measure of Hours.

For labor transactions, the application searches for a labor costing override in the following order.

- a. Person, job, and organization combination
 - b. Person and job combination
 - c. Person
2. If no override exists, Oracle Fusion Projects uses an organization costing rule to determine the cost rate. The following logic determines the cost rate. At each level, the application searches for a rule with a date range that includes the expenditure item date.

- a. Organization costing rule for the expenditure organization

The application searches for an active costing rule assigned to the organization of the expenditure item on the date of the transaction.

- b. Organization costing rule for the parent expenditure organization

If an organization costing rule for the expenditure organization is not found, the application searches for a rule assigned to the parent organization of the expenditure organization, and continues up the project expenditure organization hierarchy until a rule is found.

You specify the project expenditure organization hierarchy for the business unit during implementation. If an organization has multiple

parent organizations, and a rule is assigned to more than one parent, the application uses the rule assigned to the lowest level parent organization.

c. Organization costing rule for the business unit

If no costing rule is found for the expenditure organization and parent organization, the application uses the costing rule assigned to the business unit for the expenditure.

Oracle Fusion Projects applies the costing rule to determine the cost rate for the expenditure item. You can associate either a rate schedule, or a Labor Costing extension with an organization labor costing rule, to determine the cost rate.

Labor Costing Rules: Explained

A labor costing rule determines how an employee is paid. For example, you can define a labor costing rule for pay types such as exempt, nonexempt, uncompensated, compensated, and hourly.

When an employee charges time to a project, Oracle Fusion Projects processes the labor hours according to the employee's labor costing rule. For example, if an employee's labor costing rule is Hourly, the employee is eligible for overtime pay; if the employee's labor costing rule is Exempt, the employee is not eligible for overtime pay.

Following are the key components of a labor costing rule:

- Costing method
- Overtime labor costing multipliers
- Default overtime transaction attributes

Costing Method

For labor costing rules with the Rates costing method, labor costs are calculated for entered hours using hourly cost rates.

For labor costing rules with the Extension costing method, labor costs are calculated by the Labor Costing extension. When you use the Extension costing method, you are not required to maintain hourly cost rates in Oracle Fusion Projects.

Overtime Labor Costing Multipliers

If your employees enter overtime hours manually, you can assign cost multipliers to overtime expenditure types. When you use the Rates costing method, and a transaction is charged to an expenditure type that has an assigned multiplier, the application applies the multiplier as labor costs are calculated.

To calculate rates for overtime expenditure items, before you define labor costing rules, you must define an expenditure type with the Overtime expenditure type class.

If overtime hours are calculated using the Overtime Calculation extension, you can specify the default expenditure types for the overtime expenditure items generated by the extension.

Default Overtime Transaction Attributes

If overtime hours are created by the Overtime Calculation extension, you can specify the default business unit, project, and task that incur the overtime costs generated by the extension. These attributes apply only if you use the Overtime Calculation extension to calculate overtime hours.

Defining Labor Costing Rules: Example

This example illustrates setting up labor costing rules to calculate overtime labor costs.

Scenario

You are asked to set up labor costing rules to calculate overtime labor costs for nonexempt and hourly employees for the InFusion Corporation.

Overtime Costs

InFusion Corporation uses the Overtime Calculation extension to calculate overtime hours for nonexempt employees. All overtime premium costs for nonexempt employees are charged to an indirect project.

Hourly employees are required to enter overtime hours manually. All labor costs, including overtime premiums, are charged to the project and task indicated on the timecard.

Analysis

For nonexempt employees, the expenditure types for overtime transactions created using the Overtime Calculation extension are derived from the overtime labor cost multipliers that are assigned to the labor costing rule.

For hourly employees, when time is charged to an overtime expenditure type, the application applies the costing multiplier assigned to the labor costing rule when labor costs are calculated.

Labor Costing Rule Details

The following table shows the labor costing rules for InFusion Corporation:

Labor Costing Rule	Costing Method	Project	Task
Nonexempt	Rates	Overtime	Time and a Half
Hourly	Rates		

The following table shows the overtime labor cost multipliers that are associated with the labor costing rules:

Labor Costing Rule	Expenditure Type	Labor Cost Multiplier
Nonexempt	Overtime	Time and a Half
Hourly	Overtime	Time and a Half
Hourly	Premium Overtime	Double Time

Creating Labor Costing Multipliers: Examples

A labor costing multiplier is a value by which Oracle Fusion Projects multiplies an employee's labor cost rate to calculate the employee's overtime premium cost rate. This is represented by the formula: labor cost rate * labor costing multiplier = overtime premium labor cost rate.

Oracle Fusion Projects then multiplies the overtime premium labor cost rate by the number of overtime hours that an employee works to calculate the overtime premium for the employee. This is represented by the formula: overtime premium labor cost rate * overtime hours = overtime premium.

Labor Costing Multipliers

You define a labor costing multiplier for each kind of overtime your business uses such as double time, or time and a half. For example, if you pay an employee double time for all overtime hours, you define a labor cost multiplier of 1.0. You multiply the employee's labor cost rate by 1.0 to calculate the employee's overtime premium labor cost rate. If you pay an employee time and a half for all overtime hours, you define a labor cost multiplier of 0.5 to calculate the employee's overtime premium labor cost rate. An employee's total labor cost is the overtime premium plus the total number of hours that employee worked multiplied by the employee's labor cost rate. This is represented by the formula: overtime premium + (total hours x labor cost rate) = total labor cost.

The following table shows examples of labor cost multipliers for double time, time and a half, and uncompensated overtime. The negative multiplier for uncompensated overtime reverses the cost of any overtime hours for the individuals who do not get paid overtime.

Labor Costing Multiplier Name	Multiplier
Double Time	1.0
Time and a Half	0.5
Uncompensated Overtime	-1.0

Setting Up Labor Costing Overrides: Critical Choices

You can override the labor costing definition for individual employees and contingent workers for a business unit. The application uses a labor costing override to determine the labor rate for cost transactions, and to plan, budget, and forecast transactions when you use an actual plan type.

Following are the key implementation concepts for setting up labor costing overrides:

- Override for a Person, Job, And Organization
- Override by Rate, Rate Schedule, or Extension
- People with Future-Dated and Terminated Assignments

Override for a Person, Job, and Organization

You specify the labor costing override for a person, or for a more granular override, specify a combination of person and job, or person, job, and organization.

The job and organization represent the human resources job and organization of the person. The jobs that you can select to associate with a labor costing override are based on the person value. The organizations that you can select are based on the job value. When you select a job, an organization is automatically selected by default. The default organization value is based on the selected job assignment. You can accept the default organization for the labor costing override, select a different organization that is associated with the job and person, or remove the organization so the labor costing override is for person and job combination.

In the example shown in the following table, a person is assigned the Nurse job in two different organizations. When you select Nurse to create a labor costing override, the application automatically selects the default organization General Hospital. You can accept the General Hospital default organization, or change the selection to the University Hospital organization, to create an override for the person, job, and organization combination. Alternatively, you can remove the organization value to create an override for the person, job, and any organization.

Job	Department	Organization	Person Type	Primary
Nurse	Administration	General Hospital	Employee	Yes
Nurse	Optometry	University Hospital	Contingent Worker	No

Override by Rate, Rate Schedule, or Extension

When you use a labor costing override, an override rate, rate schedule, or extension takes precedence over a standard rate schedule for the business unit.

When you select a labor costing rule for the override, if the costing method of the rule is Extension, then the override type is Extension by default. If you do not select a labor costing rule, you cannot select an override type of Extension.

People with Future-Dated and Terminated Assignments

You can set up labor costing overrides for people with a start date in the future if you enable the People with Future Effective Start Dates as Project Members Allowed profile option. You can set up labor costing overrides for people with terminated assignments if you enable the Number of Days to Display People with Terminated Assignments profile option.

Organization Costing Rule Components: How They Work Together

Use organization costing rules to assign labor costing rules, labor cost rate schedules, and nonlabor cost rate schedules, to business units or specific expenditure organizations. The schedule type on the organization costing rule determines if a labor cost rate schedule or nonlabor cost rate schedule is assigned.

The following components work together to determine organization costing rules.

- Business unit and expenditure organization
- Schedule type
- Labor costing rule and cost rate schedule
- Default overtime transaction attributes

Business Unit and Expenditure Organization

If you select a business unit for an organization costing rule, Oracle Fusion Projects limits the expenditure organizations that you can select to just the organizations that belong to the project expenditure organization hierarchy for the selected business unit. If you do not select a business unit for an organization costing rule, you can select any expenditure organization that belongs to any project expenditure organization hierarchy.

If you assign an organization labor costing rule to an organization that is not classified as a project expenditure organization, the labor costing rule applies to all organizations that are below the specified organization in the project expenditure organization hierarchy, unless you assign a labor costing rule to an organization at a lower level in the hierarchy.

For example, assume a hierarchy has three organizations: Organization 1, Organization 2, and Organization 3. Organization 1 is the parent of Organization 2. Organization 2 is the parent of Organization 3. Organization 3 is the only organization that is classified as a project expenditure organization. If you assign organization labor costing rules only to Organization 1 and Organization 2, the rule that you assign to Organization 2 takes precedence for Organization 3.

Schedule Type

Use the Labor schedule type to use labor cost rate schedules to calculate costs for labor transactions such as timecards. If you select a schedule type of Labor, you must enter a labor costing rule.

Use the Nonlabor schedule type to use nonlabor cost rate schedules to calculate costs for nonlabor transactions such as miscellaneous or usage transactions. If you select a schedule type of Nonlabor, you must enter a nonlabor cost rate schedule.

If the plan type is configured to use actual rates, the pricing engine also uses these rates for planning, budgeting, and forecasting transactions.

Labor Costing Rule and Cost Rate Schedule

To calculate labor costs, you must assign a labor costing rule to each expenditure organization. You assign a labor costing rule to the organization costing rule. If the labor costing rule has a costing method of Rates, you must also assign a cost rate schedule that defines the hourly cost rates for employees in the selected organization.

The labor costing rules and cost rate schedules that you assign to an organization apply to all employees in the organization.

Default Overtime Transaction Attributes

If an organization uses the Overtime Calculation extension, you can enter default overtime projects and tasks for the system-generated transactions.

Define Labor Costing Business Unit Options

Overtime Calculation Components: How They Work Together

If you charge overtime costs to a project, you can use Oracle Fusion Projects to record the cost premium that you pay for overtime. Your business can then recover overtime costs with higher bill rates or higher overhead rates.

You can set up Oracle Fusion Projects to calculate overtime hours and charge the hours to your overtime project using one of the following methods:

- Manually enter time card transactions to calculate overtime hours and charge them to a project.
- Implement the Overtime Calculation Extension to calculate and charge the hours to a project automatically.

Other components of overtime cost calculations are:

- Costing Method
- Overtime Expenditure Types
- Labor Costing Multipliers
- Labor Costing Rules
- Overtime Projects and Tasks

Rates Costing Method

If you enter overtime hours manually, you can assign cost multipliers to overtime expenditure types. When you use the Rates costing method, and a transaction is charged to an expenditure type that has an assigned labor costing multiplier, the application applies the multiplier as labor costs are calculated. To calculate rates for overtime expenditure items, before you define labor costing rules, you must define an expenditure type with the Overtime expenditure type class.

When you charge overtime to the project on which overtime was worked, you can track all overtime costs on one expenditure item. Oracle Fusion Projects uses the following formula to calculate the overtime premium cost: $(\text{Overtime Hours} * \text{Hourly Cost Rate}) + (\text{Overtime Hours} * \text{Hourly Cost Rate} * \text{Labor Cost Multiplier})$.

Extension Costing Method

Use the Overtime Calculation Extension to define your own rules to implement company-specific overtime calculation policies. The application calculates labor costs based on the logic that you configure in the extension. If you use this extension, labor costing rules establish the default overtime transaction attributes, such as business unit, project, and task. In addition, you are not required to maintain hourly cost rates in Oracle Fusion Projects.

Sample business rules in the Overtime Calculation Extension calculate and charge overtime costs to a project other than the project where the labor is charged. You can use this extension to create overtime transactions as separate expenditure items to track overtime costs. In addition, you can customize this extension to use multiple projects to track costs.

Note

To charge overtime to the project where the labor is charged, consider creating overtime expenditure items using the Related Transaction Extension.

If you use both the Overtime Calculation Extension and Related Transaction Extension, then you must define conditions in both extensions so that each transaction is processed by only one of the extensions.

Important

You must select the **Enable Overtime Calculations** business unit implementation option for the Import and Process Cost Transactions process to use the custom logic that you configure in the Overtime Calculation Extension to create overtime premium transactions.

Overtime Expenditure Types

You must set up at least one overtime expenditure type that is classified by the Overtime expenditure type class.

Following are examples of overtime premium expenditure types and the corresponding expenditure type class:

Expenditure Type	Expenditure Type Class
Double Time Premium	Overtime
Time and Half Premium	Overtime

Labor Costing Multipliers

Labor costing multipliers are values by which labor cost rates are multiplied to calculate overtime premiums. You define a labor cost multiplier for each type

of overtime your business uses, such as double time or time and a half. For example, if you pay a person double time for all overtime hours, then define a labor cost multiplier of 1.0. The person's labor cost rate is multiplied by 1.0 to calculate the person's overtime premium labor cost rate. If you pay a person time and a half for all overtime hours, then define a labor cost multiplier of 0.5 to calculate the person's overtime premium labor cost rate.

Oracle Fusion Projects uses the following formula to calculate the overtime premium cost rate: $\text{Labor Cost Rate} * \text{Labor Cost Multiplier} = \text{Overtime Premium Labor Cost Rate}$. The application then multiplies the overtime premium labor cost rate by the number of overtime hours a person works to calculate the overtime premium for that person, as shown in this formula: $\text{Overtime Premium Labor Cost Rate} * \text{Overtime Hours} = \text{Overtime Premium Cost}$.

A person's total labor cost is the overtime premium cost plus the total number of hours that the person worked multiplied by the person's labor cost rate, as shown in this formula: $\text{Overtime Premium Cost} + (\text{Total Hours} * \text{Labor Cost Rate}) = \text{Total Labor Cost}$.

For example, assume that a person worked 10 hours of overtime at a rate of time and a half. The labor cost multiplier is 0.5, and the person's labor cost rate is \$40.00. Oracle Fusion Projects calculates the person's total labor cost as follows:

- $\$40.00 * 0.5 = \$20.00$ per hour Overtime Premium Labor Cost Rate
- $\$20.00 * 10 \text{ hours} = \$200.00$ Overtime Premium Cost
- $\$200.00 + (10 * \$40.00) = \$600.00$ Total Labor Cost

Labor Costing Rules

Labor costing rules associate overtime expenditure types with labor costing multipliers and determine how straight time and overtime costs are calculated. When a person charges time to a project, Oracle Fusion Projects processes the labor hours according to the person's labor costing rule.

You specify the default overtime project and overtime task in the labor costing rule to be used for the overtime expenditure items that are generated by the Overtime Calculation Extension.

Overtime Projects and Tasks

You can define one project to hold all overtime costs, or you can define many projects, such as one project for each group or office in your company. For example, you can create an overtime project for each office. You then charge each employee's overtime hours to the overtime project for the office to which they are assigned.

For each overtime project, you must define a task for each type of overtime your business uses. Examples of task names are Time and Half, Double Time, and Uncompensated Overtime.

If you use more than one project to hold overtime costs and you use the Overtime Calculation Extension to create overtime transactions automatically, you must include the logic in the extension to charge the overtime hours to the appropriate overtime project. You must also include logic in the Overtime Calculation Extension to charge overtime hours to the appropriate overtime task.

Define Labor Costing Extensions

Labor Costing Extension

Use Labor Costing Extensions to derive raw cost amounts for individual labor transactions. Examples of labor costing extensions that you may define are:

- Standard cost rate by job
- Capped labor cost rates
- Multiple cost rates per employee

The extension is identified by the following items:

Extension Component	Name
Body template	pjf_client_extn_costing.pkb
Specification template	pjf_client_extn_costing.pkh
Package	PJF_CLIENT_EXTN_COSTING
Procedure	calc_raw_cost

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Parameters

In the following table is information about parameters for this extension:

Parameter Name	Description
Transaction type	The default value is ACTUAL. Other values are BUDGET and FORECAST.
Transaction interface identifier	Passed in when the transaction type is ACTUAL.
Expenditure type class	Refers to system linkage function.
Resource assignment identifier	Passed in when the transaction type is BUDGET or FORECAST and when invoked for labor planning transactions when actual rates are used.
Transaction raw cost	The raw cost amount that your procedure calculates is assigned to the x_raw_cost parameter. Leave this value blank to use the standard costing method which uses the employee's hourly cost rate. If you pass a value to this parameter, Oracle Fusion Projects calculates the raw cost rate of the transaction using the x_raw_cost parameter value divided by the number of hours.
Transaction currency	Currency in which the transaction is incurred.

Status	Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as shown: - x_status is 0: The extension executed successfully. - x_status is less than 0: An application error occurred and the process did not complete. - x_status is greater than 0: An application error occurred and the process did not complete.
Error details	An application error occurs if the extension fails to return a value for the raw cost rate or amount. Oracle Fusion Projects writes an error message to the process log file.
Cost rate	Parameter returned by the extension.

You can use Labor Costing Extensions to implement unique costing methods other than the standard method, which calculates raw cost using the number of hours multiplied by the employee's hourly cost rate. For example, you may want to calculate the raw cost using a capped labor rate for specific employees.

Oracle Fusion Projects processes Labor Costing Extensions before calculating standard raw cost amounts. If Oracle Fusion Projects encounters a Labor Costing Extension that derives the raw cost amount of a labor transaction, it skips the standard raw cost calculation section for that transaction.

Overtime Calculation Extension

Use the Overtime Calculation Extension to define your own rules to implement company-specific overtime calculation policies.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_calc_overtime.pkb
Specification template	pjc_client_extn_calc_overtime.pkh
Package	pjc_client_extn_calc_overtime

Oracle Fusion Projects provides sample business rules in the Overtime Calculation Extension. You can use the sample to understand the extension, and then make appropriate changes to meet your business needs.

The sample business rules in the extension calculate overtime costs and charge them to an indirect project other than the project where the labor is charged.

Note

If you want to charge overtime to the project where the labor is charged, consider creating items using the Related Transaction Extension.

Points to consider when implementing the Overtime Calculation Extension:

- Define all overtime expenditure types with an end date.
- Base automatic overtime calculation on weekly overtime rules. Oracle Fusion Projects is designed to process weekly time cards. All expenditure item dates on a time card must be within the expenditure week ending date of the time card. Therefore, automatic overtime calculation is most easily performed based on weekly overtime rules.

The sample business rules in the Overtime Calculation Extension follows these steps to process overtime:

- Determines all employees and corresponding weeks which may include new overtime to process. The Overtime Calculation Extension calculates and creates overtime only for employees with time cards processed in the Import and Process Cost Transactions process that calls the Overtime Calculation Extension. These employees and weeks are identified by the request ID of the straight time expenditure items that are costed before the Overtime Calculation Extension is called.
- Sums the hours required to calculate overtime for identified employees and weeks. The standard Overtime Calculation Extension sums the total hours for the week and the total hours for each day of the week, relying on the time card entry validation rule that all labor expenditure item dates must be within the expenditure week ending date of the time card.
- Calculates overtime hours based on the hours worked, the employee's labor costing rule, and other criteria you specify. The standard Overtime Calculation Extension calculates overtime for an employee and a week based on the employee's labor costing rule.
- Creates overtime expenditure items for each type of overtime for which the employee is eligible. The overtime item is charged to the overtime project and appropriate overtime task that is specified in the Overtime Calculation Extension using the overtime expenditure type defined for the employee's labor costing rule. The expenditure item date is set to the week ending date.

The extension uses the same batch name as the source straight time expenditure items to create the new overtime expenditure items.

- Lists overtime transactions created by this extension in the Import and Process Cost Transactions Execution Report.

The new overtime items are costed after the Overtime Calculation Extension completes, within the Costing stage in the Import and Process Cost Transactions process.

Project Foundation Configuration: Define Project Resource Breakdown Structures

Manage Planning and Billing Resource Breakdown Structures

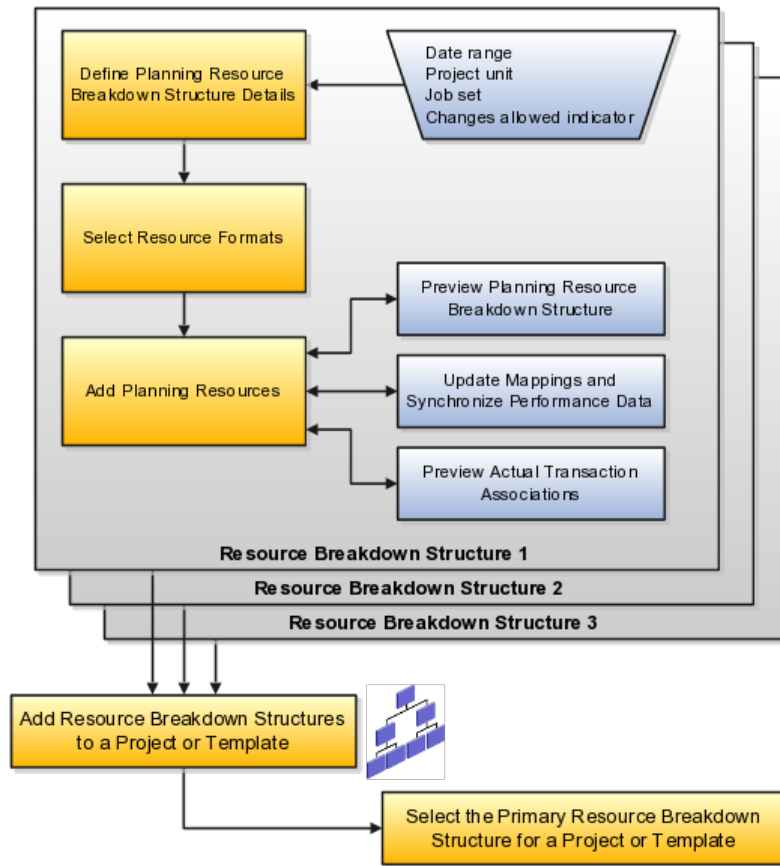
Planning Resource Breakdown Structures: Explained

A planning resource breakdown structure is a list of valid planning resource formats available for financial and project planning and control. A resource format is a hierarchy of up to three resource types.

Before you can set up resource breakdown structures, you must set up the following:

- Attributes for the predefined resource classes of labor, equipment, material items, and financial resources.
- Inventory items, including item categories and item cost, if applicable.
- Resource elements, such as event types, expenditure categories, expenditure types, jobs, organizations, people, revenue categories, roles, and suppliers.

Setting up planning resource breakdown structures is a three-step guided process. The following diagram illustrates the flow of planning resource breakdown structures as they are created and added to projects or project templates.



As shown in the diagram, the steps to set up planning resource breakdown structures include the following:

- Define planning resource breakdown structure details
- Select resource formats
- Add planning resources

The last two steps shown in the diagram (add resource breakdown structures to a project or template and select the primary resource breakdown structure) occur during project or template definition.

Resource Breakdown Structure Details

Planning resource breakdown structure details include the following attributes:

- Date range during which this planning resource breakdown structure is available to assign to projects
- Project unit
- Indicator that specifies whether resource changes are allowed at the project level

Important

If resource changes are not allowed at the project level, then all projects with the same planning resource breakdown structure share the same set of resources, and it is not possible to define additional resources in the context of an individual project. For example, new resources and resource formats that are

added to a planning resource breakdown structure for one project are available to all projects with this planning resource breakdown structure.

If resource changes are allowed at the project level, then in addition to the resources defined centrally on this resource breakdown structure, you can add resources for an individual project that are not available to other projects with the same planning resource breakdown structure. However, resource formats are still shared between the projects.

Resource Formats

You select resource formats to add to the planning resource breakdown structure.

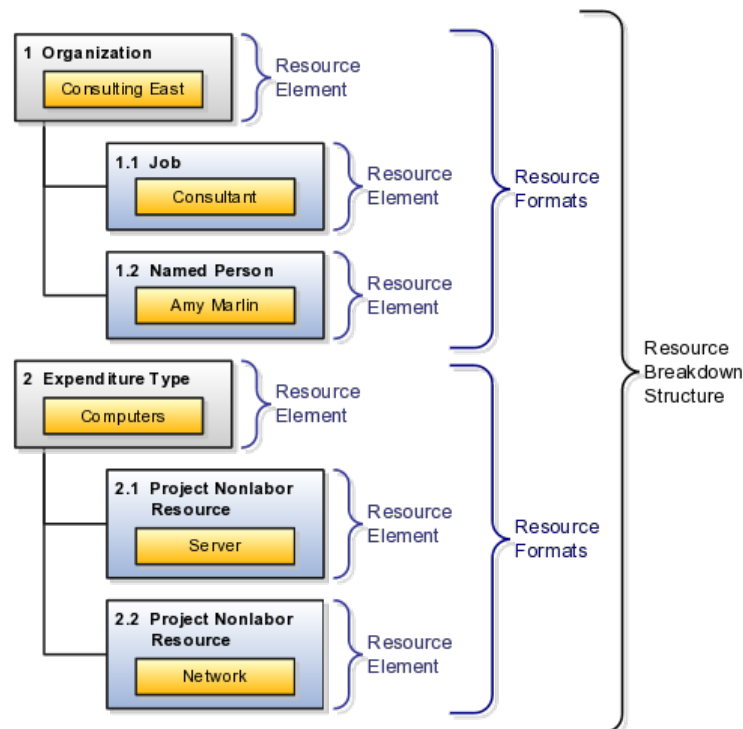
Planning resource breakdown structures can have resource formats with up to three hierarchical levels of resource types, as shown in the following example:

- Organization
 - Expenditure category
 - Named person

If you select a child resource format, the application automatically selects the parent. For example, if you select the resource format of organization-expenditure category-named person, the application automatically selects the organization-expenditure category format and expenditure category format.

The resource breakdown structure consists of one or more hierarchies of resource elements. An element is a resource type, such as an organization or job, or a combination of resource type and specified resource, such as the job of consultant or a person named Amy Marlin.

The following diagram shows examples of hierarchical levels of resource elements:



Planning Resources

You can add planning resources to any level of the resource format. You are not required to add resources to every level.

For example, assume that your resource breakdown structure has a resource format with three hierarchical levels. The top level is organization, the second level is expenditure category, and the third level is named person. You can add an organization resource to the first level, an expenditure category resource to the second level, and a named person to the third level. Alternatively, you may add a named person to the third level only, and not add planning resources to the first two levels.

After you add planning resources to the resource breakdown structure, you can preview actual transaction associations to find out where actual transaction amounts would be mapped in the project plan, budget, or forecast.

You update the resource mappings with these planning resources for the planning resource breakdown structures that are used on the project plan and in project forecasts. When you update the mappings, the project performance reporting data are synchronized with the planning resource breakdown structure.

Primary Resource Breakdown Structure

You designate one planning resource breakdown structure as the primary structure on a project. The primary planning resource breakdown structure is used for project planning.

Billing Resource Breakdown Structures: Explained

Use a billing resource breakdown structure to manage billing controls.

You need only a single level billing resource breakdown structures to create billing controls.

Predefined Billing Resource Breakdown Structures

Oracle Fusion Projects provides the following two predefined billing resource breakdown structures:

- **Control Billing:** Provides a list of resources you can reference when creating billing controls on regular contracts.
- **Control Intercompany Billing:** Provides a list of resources you can reference when creating billing controls on intercompany and interproject contracts.

You cannot create or delete these billing resource breakdown structures. You can edit the resource formats and specify the associated billing resources to meet the needs of your enterprise.

Resource Formats and Resource Classes: How They Work Together to Create Planning Resources

The resources you can create for planning and billing resource breakdown structures are determined by a combination of predefined resource classes and the resource format hierarchies you select for use.

Resource Formats and Resource Format Hierarchies

Before creating planning or billing resources, you must select the resource formats and resource format hierarchies you want to use on your resource breakdown structure. For example, if you want to plan for project-related expenses such as air fare, then you must select resource format hierarchies created using the resource type **Expenditure Type**.

Also, as resource format hierarchies support up to three levels, selecting from the available hierarchies enables you to determine the granularity with which resources are created.

For example, for planning resource breakdown structures used for high-level or preliminary planning, you may decide to enable only the **Resource Class** resource format. You can then create and use planning resources representing the four resource classes: Labor, Equipment, Material Items, and Financial Resources.

To plan in greater detail, you may decide to use a two-level resource format hierarchy, such as **Resource Class: Job** or a three-level hierarchy such as **Resource Class: Job: Named Person**. You can then create a resource such as Labor: Electrical Engineer or Labor: Electrical Engineer: Chris Black.

Note

Selecting more granular resource formats automatically selects resource formats higher up within the same hierarchy. For example, if you select the resource format **Expenditure Type: Named Person: Job**, then the resource formats **Expenditure Type: Named Person** and **Expenditure Type** are automatically selected for use.

Resource Classes

Resource classes influence the creation of planning and billing resources in the following ways:

- Resource class as a resource format: As mentioned earlier, **Resource Class** is a resource type that is available for use within resource format hierarchies on planning and billing resource breakdown structures.
- Predefined association with resource formats: For each resource format, you can create planning or billing resources based on certain resource classes. For example, if the resource format contains Job, then the only available resource class is Labor. However, if the resource format is Expenditure Category, then you can select any of the resource classes (Labor, Material, Equipment, and Financial Resources) when you create a resource.

Resource Formats: Explained

Resource formats are predefined resource types or hierarchies of resource types. You create resources for planning or billing resource breakdown structures based on resource formats.

Following is a description of resource types and resource format hierarchies.

Resource Types

Resource formats are created based on the following predefined resource types.

Name	Description
Named Person	Employee or a contingent worker who performs services for the deploying enterprise.
Event Type	Implementation-defined classification of events that determines the revenue and invoice effect of an event.
Expenditure Category	Implementation-defined grouping of expenditure types by type of cost.
Expenditure Type	Classification of cost assigned to each expenditure item. Expenditure types are grouped into cost groups (expenditure categories) and revenue groups (revenue categories).
Item Category	Categorization of inventory items that is used to track the aggregate consumption of material.
Inventory Item	An item that can be purchased or produced, and for which you can budget and track the costs associated with the consumption of the item.
Job	A set of duties to which an employee can be assigned.
Organization	Divisions, groups, cost centers, or other organizational units within a company.
System Person Type	Distinguishes employees and contingent workers. For example, assume that a project requires 100 hours of labor effort and you have resources only for 80 hours. You can plan 80 hours of employee time and 20 hours of contingent worker time on the project.
Project Nonlabor Resource	Implementation-defined asset or pool of assets. An asset may represent actual pieces of equipment whose time is consumed, or an asset whose output is consumed.
Resource Class	Higher-level grouping of planning resources, into labor, equipment, material items, and financial resources, that drives how resources are used.
Revenue Category	Implementation-defined grouping of expenditure types by type of revenue.
Supplier	A business or individual that provides goods or services, or both in return for payment.

Resource Format Hierarchies

Resource formats consist of one resource type or a hierarchy of up to three resource types. Before you add planning resources to a planning or billing resource breakdown structure, you must select the resource formats you want to use. For example, you can add the resource formats **Job**, **Job: Organization**, and **Job: Organization: Named Person** to your resource breakdown structure.

The resource formats and resource format hierarchy determine how planning amounts roll up and are displayed when you view financial and project plans by resource structure. Thus, each resource format hierarchy represents a separate structure. For example, the resource format hierarchies **Job: Expenditure Type: Organization** and **Organization: Expenditure Type: Job** are distinct.

Resource Mapping: How It Is Calculated

The Update Mapping process matches actual costs and revenue to the latest, saved planning resources for project planning and forecasting. Summarized actual costs and revenue are recalculated for project performance reporting.

Resource Mapping Considerations

Consider these points when using the Update Mapping process:

- You can update resource mappings after you change resource formats or add resources, and save the resource breakdown structure.
- Baseline project plan values are not affected by the Update Mapping process.
- The Update Mapping process applies only if you do not allow resource changes at the project level.

Tip

If you allow resource changes at the project level, use the Update Actual Amounts action on the project plan to update the actual amounts for all tasks on the project plan. Use the process monitor to start the process to summarize project performance data for reporting.

-
- After running the Update Mapping process, regenerate forecast versions to reflect the new actual costs.

How Resource Mapping Is Calculated

You can track the cost impact of every resource that has been assigned to a project task and use the resource breakdown structure to view the breakdown of these costs. Oracle Fusion Projects associates the costs of the resources used for tasks with branches and levels in the resource breakdown structure. The process for determining the correct association is managed by rules of precedence.

Oracle Fusion Projects uses the following rules to associate cost amounts with resources:

- Select the lowest level in the resource breakdown structure to which a transaction can map.
 - If there is only one level to which the transaction maps, the cost amounts are mapped to that level.
 - If the transaction maps to more than one level, Oracle Fusion Projects sums the precedence numbers for all resource types in the branch, and gives precedence to the resource element in the branch with the lowest sum.
 - If more than one branch has the lowest precedence number at the lower level, the application uses the precedence number of the next level up.
- If the sum of precedence numbers is the same for more than one branch, precedence is given to the branch with the lowest number at the lowest level.

- If one branch contains a user-defined resource type, precedence is given to the branch that does not contain a user-defined resource type.

Note

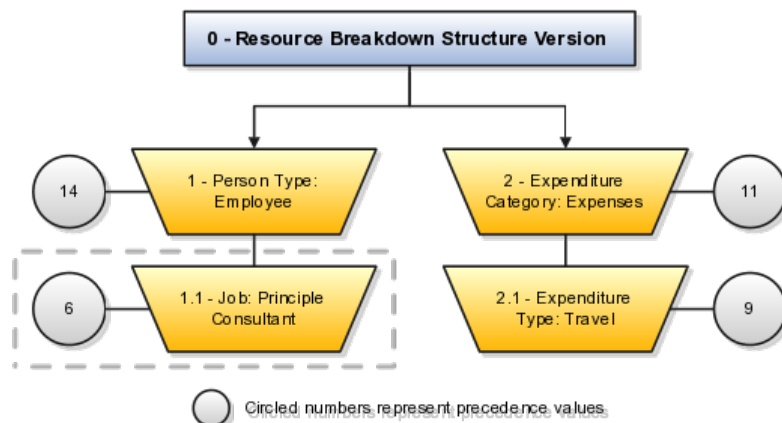
Oracle Fusion Projects gives more precedence to a lower precedence number. For example, a resource element with a precedence number of 1 is given precedence over a resource element with a precedence number of 10.

Rules of precedence are listed in the following table:

Resource Type	Precedence in Labor Resource Class	Precedence in Equipment Resource Class	Precedence in Material Items Resource Class	Precedence in Financial Resources Resource Class
Named Person	1	1	1	1
Project Nonlabor Resource	3	3	3	3
Inventory Item	5	5	5	5
Job	6	6	6	6
Item Category	8	8	8	8
Expenditure Type	9	9	9	9
Event Type	10	10	10	10
Expenditure Category	11	11	11	11
Revenue Category	12	12	12	12
Organization	13	13	15	15
System Person Type	14	14	14	14
Supplier	15	15	13	13
Resource Class	16	16	16	16

Example of Resource Mapping Using Rules of Precedence

This example illustrates that precedence is given to the branch with the lowest number at the lowest level if the sum of precedence numbers is the same for more than one branch.



In this example, a time card transaction for a principle consultant who incurs travel expenses maps to two branches.

- The first branch consists of two levels (1-Person Type: Employee and 1.1-Job: Principle Consultant). The highest level has a precedence number of 14, and the lowest level has a precedence number of 6, for a sum of 20 for the branch
- The second branch also consists of two levels (2-Expenditure Category: Expenses and 2.1-Expenditure Type: Travel). The highest level has a precedence number of 11, and the lowest level has a precedence number of 9, for a sum of 20 for the branch.

The transaction cost amount is mapped to the Job: Principle Consultant resource element because it has the lowest number (6) at the lowest level.

FAQs for Manage Planning and Billing Resource Breakdown Structures

Can I add new resource formats?

No. Oracle Fusion Projects provides a set of predefined resource formats. You select resource formats as the basis for adding resources to planning and billing resource breakdown structures.

Can I add new billing resource breakdown structures?

No. You cannot create billing resource breakdown structures. However, you can add billing resources to the two predefined billing resource breakdown structures, Control Billing and Control Intercompany Billing, as required.

What's a default planning resource breakdown structure?

A planning resource breakdown structure consisting of one resource format (resource class) with four associated planning resources: Labor, Equipment, Material Items, and Financial Resources.

A default planning resource breakdown structure is created automatically for each project unit. When you create a project template, it is selected as the primary planning resource breakdown structure. You can designate other planning resource breakdown structures as primary if required. However, you cannot remove the default planning resource breakdown structure from the project template or project.

What's a primary resource breakdown structure?

A planning resource breakdown structure that is selected as the primary at the project template or project level. The primary planning resource breakdown structure is used for project planning.

When you create a project template, the default planning resource breakdown structure for the project unit is automatically added and set as primary. You can

add additional planning resource breakdown structures to the template and set any one of them as primary. Projects inherit planning resource breakdown structures from the associated template. As with templates, you can add or remove planning resource breakdown structures and change the primary designation as required.

What's the difference between a planning resource breakdown structure, billing resource breakdown structure, and a reporting resource breakdown structure?

Planning resource breakdown structures provide a list of resource formats and associated planning resources that you can use for project and financial planning, and optionally, project reporting.

Billing resource breakdown structures are similar in organization to planning resource breakdown structures. However, only two predefined billing resource breakdown structures exist and they provide a restricted set of implementation-defined resource formats and billing resources that are used for invoicing and recognizing revenue for contracts.

Reporting resource breakdown structures provide a resource hierarchy consisting of resources, resource types, and other resource groupings, which is used for reporting on planning and actual amounts on a project. Also, unlike planning and billing resource breakdown structures, you can use reporting resource breakdown structures in allocation rules to determine the allocation source and basis amounts.

What happens if I change a name used in a resource combination on a resource breakdown structure?

If you change the value of a resource type used in a resource combination, you must run the Refresh Resource Breakdown Structure Element Names process to refresh the value that appears in the combination. For example, assume you have a resource that includes the expenditure type named Telephone Charges in the resource combination. If you change the name from Telephone Charges to Communication Charges on the expenditure type setup page, the change will not appear in the resource combination until you run the Refresh Resource Breakdown Structure Element Names process.

Manage Reporting Resource Breakdown Structures

Reporting Resource Breakdown Structure Versions: Explained

Use reporting resource breakdown structures to view the rolled-up data in Oracle Fusion Project Performance Reporting. The structure provides a method for viewing planned and actual cost and revenue for a project by resource, resource type, and other resource groupings.

Versions

Reporting resource breakdown structure versions provide a history of resource breakdown structures used for resource reporting.

When a resource breakdown structure is created, a working version is automatically created. You can have only one working version at a time. You can make changes to the working version until you are ready to freeze it.

Only a frozen version can be associated with a project. When you freeze one version, a new working version is created on which you can make further changes.

When you freeze a resource breakdown structure version, that version becomes the current reporting version the next time project performance data is summarized. Although you can have multiple frozen versions, only one is used for current reporting at any given time.

Resource Types and Resources

All planning resource breakdown structures can be used for reporting.

In addition, you can build reporting resource breakdown structures based on the resource types and resources already defined in the system. Select the resource type and specify the associated resource for each level of the hierarchy. You can create up to ten hierarchical levels in a reporting resource breakdown structure. This is different than planning resource breakdown structures, which may contain up to three hierarchical levels.

The User Defined resource type enables you to define your own groups of resources. Select the User Defined resource type, enter a free-form definition of the group, and then create hierarchical levels that link the actual resource types and resources.

Cost Allocations

Enable the **Use For Allocations** option if you want to allocate costs with this reporting resource breakdown structure.

If you enable this option, you can select this reporting resource breakdown structure when defining source and target details for an allocation rule. In this situation, the reporting resource breakdown structure must be assigned to all source or target projects.

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Project Foundation Configuration: Define Burdening

Manage Burden Cost Base Types, Bases, and Codes

Burden Costs: How They Are Calculated

Burdening provides a buildup of raw and burden costs to represent the total cost of doing business accurately. You can calculate burdened costs as a buildup of costs using a precedence of multipliers. Taking the raw cost, Oracle Fusion Project Costing performs a buildup of burden costs on raw costs to provide a true representation of costs. Using burdening, you can perform internal costing, revenue accrual, and billing for any type of burdened costs that your company applies to raw costs.

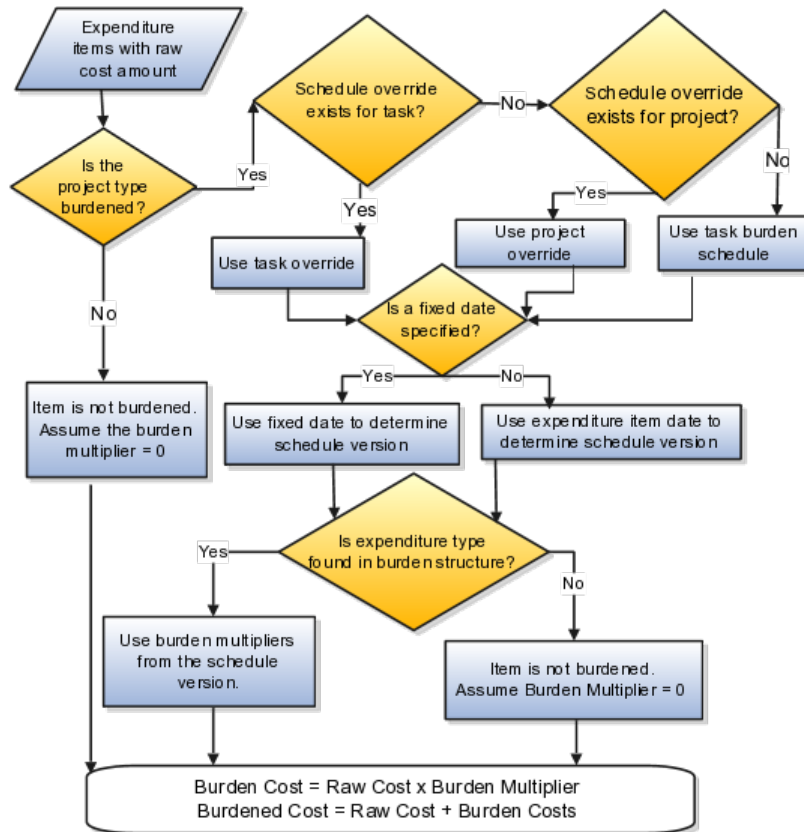
Settings That Affect Burden Cost Calculation Processing

You define the projects that need to be burdened by enabling project types for burdening. When you specify that a project type is burdened, you must then specify the burden schedule to be used. The burden schedule stores the burden multipliers and indicates the transactions to be burdened, based on cost bases defined in the burden structure. You specify the expenditure types that are included in each cost base. With burdening, you can use an unlimited number of burden cost codes, easily revise burden schedules, and retroactively adjust multipliers. You can define different burden schedules for costing, revenue, and billing purposes.

How Burden Costs Are Calculated

The calculation of burden cost includes the following processing decision logic and calculations:

The following is a diagram of the burden cost calculation process and its explanation:



1. Expenditure items with a raw cost amount are selected for processing.
2. The process determines if the related project type of the expenditure item is defined for burdening.
3. If the project type is enabled for burdening, then the process determines the burden schedule to be used.
4. If the project type is not enabled for burdening, then the expenditure item is not burdened. The process assumes the burden multiplier is zero; therefore, burden cost is zero and thus burdened cost equals raw cost.
5. To determine which burden multiplier to use, the process determines if there is a burden schedule override for the expenditure.
6. If a burden schedule override exists, then the process uses the task burden schedule override on the associated task.
7. If no task burden schedule override exists on the associated task, then the process uses the project burden schedule override on the associated project.
8. If there are no burden schedule overrides, the process determines the burden schedule to use for burden cost calculations in the following order:
 - a. Burden schedule assigned at the task level
 - b. Burden schedule assigned at the project level
9. The process checks if a fixed date is specified for burdening. If yes, it uses the fixed date to determine the schedule version.

10. If fixed date is not specified, then the process uses the expenditure item to determine the burden schedule version.
11. After a schedule version is determined, the process verifies that the expenditure type of the expenditure item is found in any of the cost bases of the selected burden schedule version.
12. If an expenditure type is excluded from all cost bases in the burden structure, then the expenditure items that use that expenditure type are not burdened (burden cost equals zero, thus burdened cost equals raw cost).
13. The application calculates burden cost and burdened cost amounts according to the following calculation formulas:
 - Burden cost equals raw cost multiplied by a burden multiplier.
 - Burdened cost equals the sum of raw cost and burden costs.

Cost Buildup

The burden structure assigned to the burden schedule version determines whether calculations are additive or based on the precedence assigned to each cost code. A burden structure can be additive or precedence based.

If you have multiple burden cost codes, an additive burden structure applies each burden cost code to the raw costs in the appropriate cost base. The examples in the following tables illustrate how Oracle Fusion Projects calculates burdened cost as a buildup of raw and burden costs and how different burden structures using the same cost codes can result in different total burdened costs:

The following table shows the cost codes and multipliers for calculating burdened cost using the additive burden structure.

Cost Code	Precedence	Multiplier
Overhead	1	.10
Material Handling	1	.10
General Administrative Costs	1	.10

Cost Type	Calculation	Amount
Raw Cost	Not Applicable	1000.00
Overhead	1000.00×0.10	100.00
Material Handling	1000.00×0.10	100.00
General Administrative Costs	1000.00×0.10	100.00
Burdened Cost	$1000.00 + 100.00 + 100.00 + 100.00$	1300.00

A precedence burden structure is cumulative and applies each cost code to the running total of the raw costs, burdened with all previous cost codes. The calculation applies the multiplier for the cost code with the lowest precedence number to the raw cost amount.

The calculation applies the cost code with the next lowest precedence to the subtotal of the raw cost plus the burden cost for the first multiplier. The calculation logic continues in the same way through the remaining cost codes. If

two cost codes have the same precedence number, then both are applied to the same subtotal amount.

The following table shows the cost codes and multipliers for calculating burdened cost using the precedence burden structure for a nonrate-based expenditure item:

Cost Code	Precedence	Multiplier
Overhead	10	.10
Material Handling	20	.10
General Administrative Costs	30	.10

Cost Type	Calculation	Amount
Raw Cost	Not Applicable	1000.00
Overhead	1000.00×0.10	100.00
Material Handling	$(1000.00 + 100.00) \times 0.10$	110.00
General Administrative Costs	$(1000.00 + 100.00 + 110.00) \times 0.10$	121.00
Burdened Cost	$1000.00 + 100.00 + 110.00 + 121.00$	1331.00

Note

The order of the burden cost codes has no effect on the total burdened cost with either additive or precedence burden structures.

Creating Burden Cost Bases: Example

You use burden cost bases in burden structures to group the burden cost codes with the expenditure types to which they will be applied. As a result, you need to create burden cost bases to support each unique grouping of burden cost codes and expenditure types.

The following scenario illustrates burden cost bases that are used to group raw costs for the purpose of calculating burdened costs.

Burden Cost Bases

Burden cost bases with the type Burden Cost, as shown in the following table, are used to group raw costs for the purpose of calculating burdened costs. Reports sort cost bases first by the report order value and then by the cost base name.

Cost Base	Report Order	Cost Base Type
Labor	10	Burden Cost
Material	20	Burden Cost
Expense	30	Burden Cost

Note

Oracle Fusion Projects predefines the cost base types Burden Cost and Other.

Creating Burden Cost Codes: Example

The following scenario illustrates burden cost codes that represent distinct types of burden to apply to raw costs.

Burden Cost Codes

Burden cost codes are created for each type of burden that will be applied to raw costs. In this example, assume that labor raw costs are burdened with fringe benefits, overhead, and administrative costs. Material raw costs are burdened with material handling fees and administrative costs. Expenses are burdened only with administrative costs.

You can optionally assign an expenditure type to any burden cost code to capture burden costs on separate, summarized expenditure items. Only expenditure types with a Burden Transactions expenditure type class are available for assignment to a burden cost code. The assigned expenditure type becomes the expenditure type for that type of burden cost.

Note

Expenditure types that you assign to burden cost codes must be classified as a Burden Transactions expenditure type.

Note

Ensure that the expenditure types that you assign to burden cost codes are assigned to the reference data sets for each project unit that will own projects receiving summarized burden transactions.

The following table shows burden cost codes that represent distinct types of burden to apply to raw costs.

Burden Cost Code	Description	Expenditure Type
Administrative	Corporate expenses such as corporate staff and marketing	General and Administrative
Fringe - Faculty	Employer paid payroll costs, insurance, and pension for faculty	Fringe Benefits
Fringe - Staff	Employer paid payroll costs and insurance for staff	Fringe Benefits
Material Handling	Material handling fees	Material
Overhead	Support staff, equipment rental, supplies, building rent, and facilities	Overhead

FAQs for Manage Burden Cost Base Types, Bases, and Codes

What's a cost base type?

Identifies whether the burden cost base is used for burden cost calculations or grouping expenditure items for different purposes. Oracle Fusion Projects provides two predefined cost base types: Burden Cost and Other. Cost bases with the type Burden Cost are used in burden calculations. Cost bases with a

type other than Burden Cost are not included in burden calculations; these cost bases are used for grouping expenditure types for different purposes, such as for billing extension calculations.

When do I create burden cost codes?

Before you create burden cost codes, you define an expenditure type for burden cost codes that will be processed as separate, summarized burden transactions. The expenditure type assigned to a burden cost code must be classified as a burden transaction and belong to the reference data set for the project unit.

After you create burden cost codes, you can add it to a burden structure and specify what cost base it is applied to, the expenditure types it is associated with, and the order in which it is applied to raw costs within the cost base.

Manage Burden Structures

Defining Burden Structures: Example

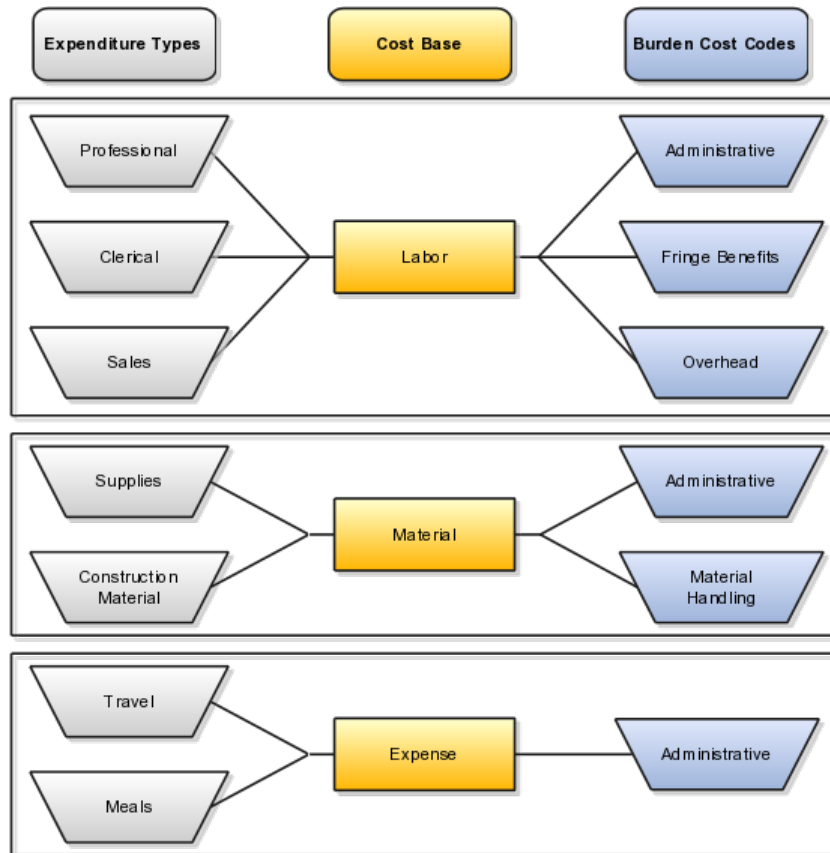
The following scenario illustrates the relationship between expenditure types and burden cost codes in a burden structure. This relationship determines what burden costs Oracle Fusion Project Costing applies to specific raw costs.

Note

Before you can define burden structures, you must define expenditure types, burden cost bases, and burden cost codes.

Burden Structure

The following diagram shows the expenditure types and burden cost codes that are assigned to the Labor, Material, and Expense burden cost bases.



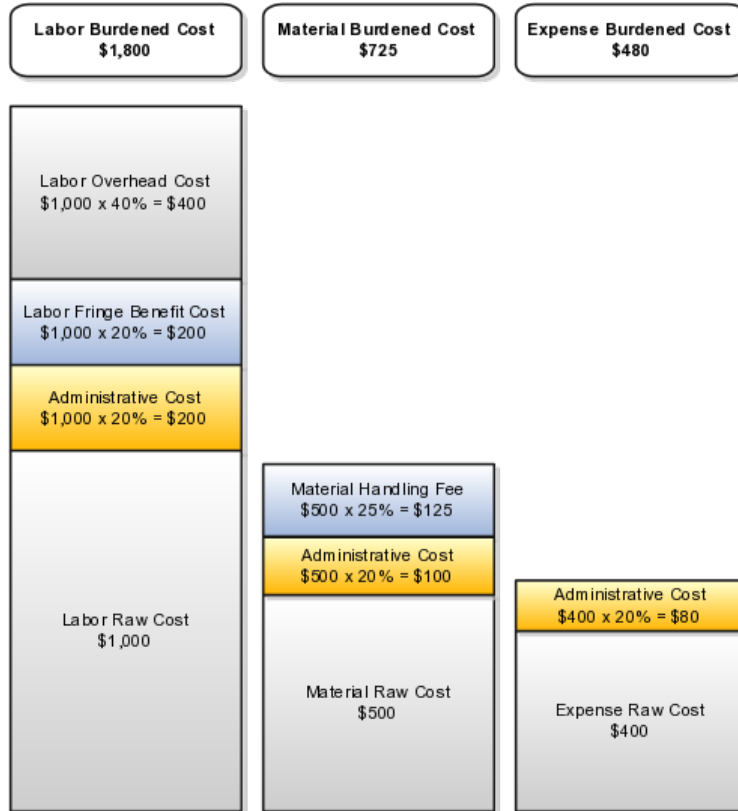
The following table shows the multipliers that are used to calculate burden costs for raw costs in the Labor, Material, and Expense cost bases. This is an additive burden structure that applies each burden cost code to the raw costs in the appropriate cost base.

Note

Multipliers are defined on the burden schedule.

Burden Cost Base	Raw Cost Amount (USD)	Administrative Cost Code Multiplier	Labor Fringe Benefit Cost Code Multiplier	Labor Overhead Cost Code Multiplier	Material Handling Cost Code Multiplier
Labor	1,000	.20	.20	.40	
Material	500	.20			.25
Expense	400	.20			

The following diagram shows the resulting burdened costs for labor, material, and expenses.



Additive and Precedence Burden Structures: Examples

A burden structure can be additive or precedence based. If you have multiple burden cost codes, an additive burden structure applies each burden cost code to the raw cost in the appropriate cost base. A precedence burden structure is cumulative and applies each cost code to the running total of the raw cost, burdened with all previous cost codes. You assign the multiplier on the burden schedule that Oracle Fusion Project Costing uses to perform the cost buildup for each detailed transaction.

Additive Burden Structure

Create an additive burden structure to apply each burden cost code assigned to a cost base using the same precedence when calculating burden costs, as shown in the following table.

Cost Code	Precedence	Multiplier	Formula	Amount (USD)
Raw Cost				100.00
Overhead	1	0.50	$0.50 * 100.00$	50.00
Fringe Benefits	1	0.30	$0.30 * 100.00$	30.00
General and Administrative	1	0.20	$0.20 * 100.00$	20.00
Burdened Cost				200.00

Note

Each burden cost code in an additive burden structure is automatically assigned a default precedence value of 1.

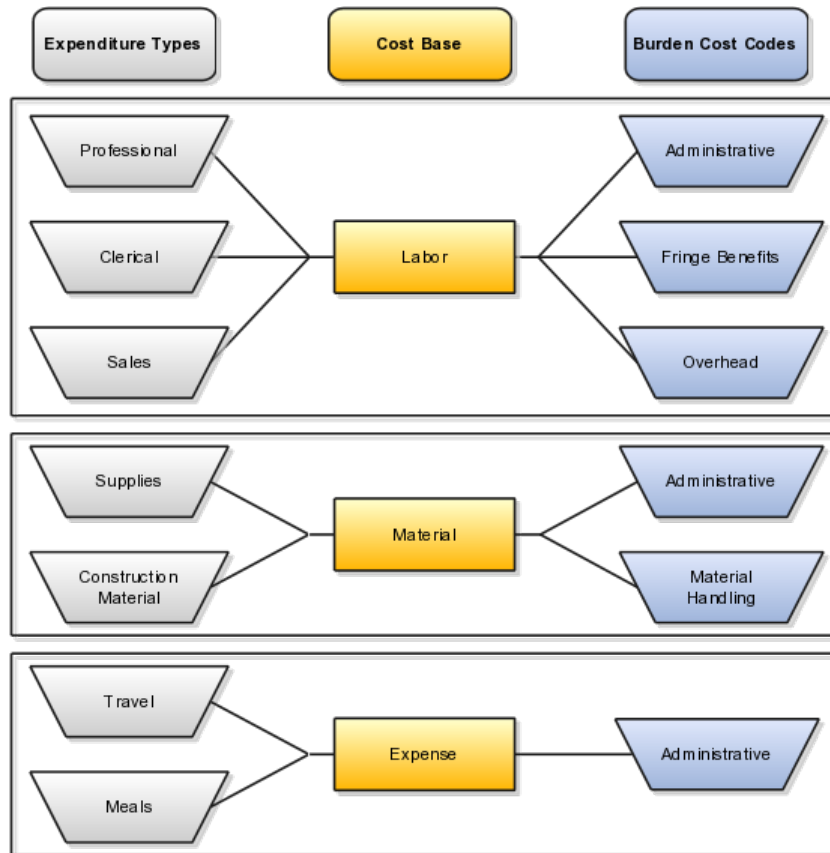
Precedence Burden Structure

Create a precedence burden structure to specify the order in which each burden cost code assigned to a cost base is applied to raw costs, as shown in the following table.

Cost Code	Precedence	Multiplier	Formula	Amount (USD)
Raw Cost				100.00
Overhead	10	0.50	$0.50 * 100.00$	50.00
Fringe Benefits	20	0.30	$0.30 * 150.00$	45.00
General and Administrative	30	0.20	$0.20 * 195.00$	39.00
Burdened Cost				234.00

Burden Structure Components: How They Work Together

You define the project cost buildup using a burden structure. A burden structure determines how you group expenditure types into burden cost bases and establishes the method of applying burden costs to raw costs. Before creating burden structures you must define expenditure types, cost bases, and burden cost codes, which are the main components of a burden structure.



The diagram illustrates a burden structure with the following cost bases.

- Labor
 - Includes the expenditure types Professional, Clerical, and Sales.
 - Is assigned the burden cost codes Administrative, Fringe Benefits, Overhead.
- Material
 - Includes the expenditure types Supplies and Construction Material.
 - Is assigned the burden cost codes Administrative and Material Handling.
- Expense
 - Includes the expenditure types Travel and Meals.
 - Is assigned the burden cost code Administrative.

Cost Bases

Cost bases are the groups of raw costs used for applying burden costs. You assign cost bases to burden structures, and then specify the types of raw costs, represented by expenditure types, that are included in the cost base, and the types of burden costs that are applied to the cost base.

You can also use cost bases to group expenditure types for other purposes, such as in billing extension calculations. These cost bases are not used for burdening, and are defined with a cost base type other than Burden Cost. When you assign

cost bases with a type other than Burden Cost to a burden structure, you can specify expenditure types for the cost base, but you cannot specify burden cost codes for the cost base since the cost base is not used for burdening.

Burden Cost Codes

Burden cost codes represent the distinct type of burden to apply to raw costs. For example, if labor costs receive both fringe benefits and overhead burden, then define a cost code for each type of burden. Assign an expenditure type to each burden cost code that Oracle Fusion Project Costing processes as separate, summarized expenditure items. The assigned expenditure type becomes the expenditure type for that type of burden cost.

Cost Base Types

Cost base types refer to the use of cost bases. Oracle Fusion Project Costing provides the following cost base types.

- **Burden Cost:** Assign to cost bases that are used to calculate burden costs.
- **Other:** Assign to cost bases that are used for other purposes than to calculate burden costs.

You can define additional cost base types to use for non-burden transactions.

Expenditure Types

Expenditure types classify raw costs and burden cost codes classify burden costs. The relationship between expenditure types and burden cost codes within each cost base determines what burden costs are applied to specific raw costs, and the order in which processing applies the burden costs.

In a burden structure, each expenditure type can belong to only one cost base with a cost base type of Burden Cost. This restriction ensures that Oracle Fusion Project Costing does not burden an expenditure type more than once. If you do not assign an expenditure type to a cost base, then burden costs are not applied to the raw costs with those expenditure types. In other words, the burdened cost for these transactions is the same as the raw cost of the transaction.

FAQs for Manage Burden Structures

Why is there no burden cost on a transaction?

Burden costs are not applied to a transaction if either of these situations exist:

- The expenditure type associated with the transaction is not assigned to a cost base.
- The project type for the project is not enabled for burden calculation. In this situation, raw cost is equal to burdened cost.

Manage Burden Schedules

Burden Schedule Components: How They Work Together

Burden schedules establish the multipliers used to calculate the burdened cost, revenue, or bill amount of each expenditure item charged to a project. The

burden schedule determines which transactions are burdened, based on burden cost bases defined in the burden structure. The project type determines which projects are burdened and contains the default burden schedule. A burden schedule type can be firm or provisional. Rates can be overridden by using a schedule of multipliers negotiated for a specific project or task.

Burden Schedule Types

Use a firm burden schedule if you do not expect the multipliers to change. Firm burden schedules can have multiple versions, but never more than one version for a date range.

Use a provisional burden schedule if the multipliers are based on estimates, such as a yearly forecast budget. Provisional schedules can have provisional and actual versions active for the same date range. When the actual multipliers are available, replace the provisional version with the actual version. When the actual burden schedule is built, the impacted expenditure items are automatically reprocessed to adjust the burden cost amounts.

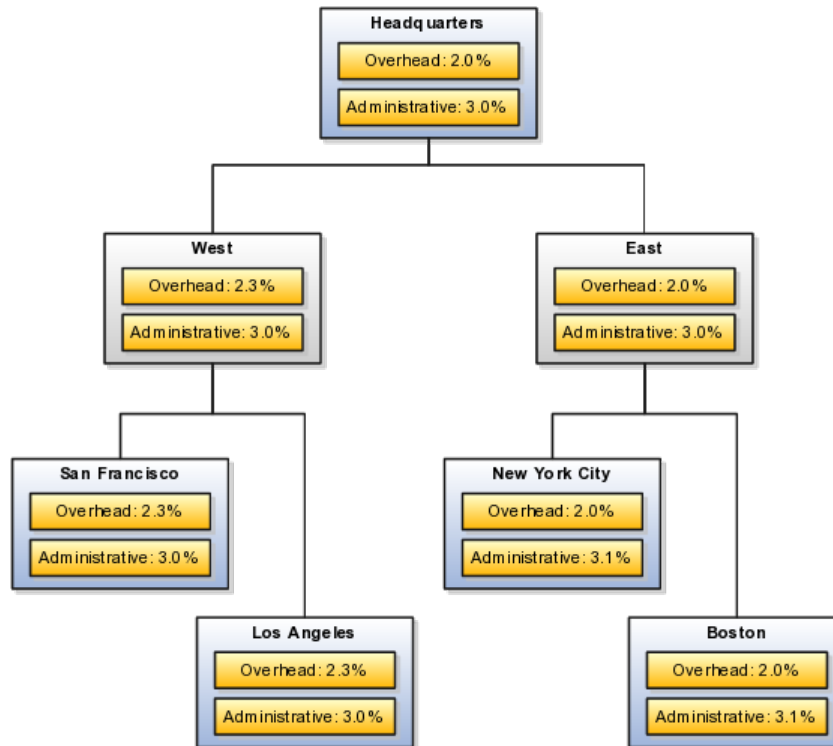
Multipliers

The multiplier specifies the rate by which to multiply the raw cost amount to obtain the burden cost amount. You assign a multiplier to a combination of burden cost code and either a unique organization or a parent organization.

The organization hierarchy is used to cascade rates down to lower level organizations where multipliers are not explicitly defined. If Oracle Fusion Projects finds a level in the hierarchy that does not have a multiplier defined, the application uses the multipliers of the parent organization. Therefore, an organization multiplier schedule hierarchy is used to identify the exceptions. You define the multipliers for an organization only if you want to override the multipliers of the parent organization.

The following diagram shows an example of multipliers that are used by organizations. The parent organization, Headquarters, has two defined multipliers: Overhead with a multiplier of 2.0, and Administrative with a multiplier of 3.0.

- When the application processes transactions for the East organization, no multipliers are found. Therefore, the application uses the multipliers from the parent organization, Headquarters.
- The Boston and New York City organizations are assigned an Administrative multiplier of 3.1, and no Overhead multiplier. Therefore, the application uses the Administrative multiplier of 3.1, and the Overhead multiplier from the Headquarters organization, when processing transactions for the Boston and New York City organizations.
- The West organization is assigned an Overhead multiplier of 2.3, and no Administrative multiplier. Therefore, the application uses the Overhead multiplier of 2.3, and the Administrative multiplier from the Headquarters organization, when processing transactions for the West organization.
- No multipliers are assigned to the San Francisco and Los Angeles organizations. Therefore, the application uses the Overhead multiplier from the West organization, and the Administrative multiplier from the Headquarters organization, when processing transactions for the San Francisco and Los Angeles organizations.



Burden Schedule Versions

Burden schedule versions define the date range within which multipliers are effective. You build the burden schedule to make the burden schedule versions active and available for use.

Note

If an organization is added to the hierarchy after the schedule is built, then submit the Build New Organization Burden Multipliers process. A burden schedule version must be active to add multipliers for a new organization.

Burden Multipliers for New Organizations: How They Are Added to Burden Schedules

The Build New Organization Burden Multipliers process adds burden multipliers to burden schedules for an organization when you add a new organization to your organization hierarchy. If you do not add the organization to a specific burden schedule version, this process builds multipliers for the organization in all burden schedule versions using the multipliers of the parent organization as defined in the organization hierarchy. A burden schedule version must be active to add multipliers for a new organization.

Important

Run this process after you create the organization and before you charge transactions using this organization as the expenditure organization.

Run this process for the parent organization before you run it for the child organization.

If the new organization requires multipliers that are different than the multipliers assigned to the parent organization, you can manually add multipliers for each burden cost code on the burden schedule versions, and then rebuild the versions.

Settings That Affect Burden Multipliers for New Organizations

The process parameter is the new organization for which you want to build multipliers for existing burden schedule versions. Typically you run this process during implementation as part of the Burden Definition setup task list.

Process results are summarized in the Build New Organization Burden Multipliers Execution Report that displays the impacted burden schedules and burden schedule versions.

Recalculating Burden Costs: Points to Consider

Oracle Fusion Projects identifies existing transactions that are eligible for burden cost recalculation and marks the transactions for reprocessing. For example, when a multiplier for an organization and burden cost code changes on a burden schedule version, the application marks for recalculation all transactions for the organization that are charged to an expenditure type that is linked to the burden cost code.

Burden Cost Recalculation is Required

Burden cost recalculation is required in any of the following situations:

- A build occurs on a burden schedule version that was previously built.
- An actual burden schedule version is built to replace a provisional burden schedule version.
- During recalculation, one or more transactions are not marked for recalculation of burden cost amounts, such as when an expenditure item is locked by another unprocessed adjustment, or a technical error occurs in the process.

Select the **Recalculate Burden Cost Amounts** button on the burden schedule for the process to identify and mark eligible transactions for burden cost recalculation.

Note

A burden schedule can have multiple versions. The **Burden Cost Calculation Required** button is available for selection on the burden schedule if at least one version requires recalculation.

After the impacted transactions are marked for burden cost recalculation, the Recalculate Burden Cost Amounts process starts the Import and Process Cost Transactions process to create expenditure items and cost distribution lines for the transactions.

If burden cost recalculation is still required after the Recalculate Burden Cost Amounts process completes, then review the process execution report to determine why the process did not mark eligible transactions for recalculation.

Burden Cost Recalculation is Not Required

Burden cost recalculation is not required in the following situations:

- All burden schedule versions for the build are in a new status.
- Changes are made to burden schedule versions prior to the build.
- The Recalculate Burden Cost Amounts process is complete and all impacted transactions are successfully marked for burden cost recalculation.

If burden cost recalculation is not required, the **Recalculate Burden Cost Amounts** button is not available for selection on the burden schedule.

Testing Burden Cost Calculations: Explained

Test burden cost calculations to view a breakdown of the total burdened cost for a specific project transaction and to verify your burden structure and burden schedule implementation. The test emulates an actual burden cost transaction for a set of criteria consisting of the project, task, burden schedule, expenditure type, expenditure organization, raw cost, quantity, and transaction date.

The application uses the burden schedule that you specify as burden cost criteria to calculate burden amounts. If you specify a project as burden cost criteria, and you do not specify a task or burden schedule, then the application uses the burden schedule on the project. If you specify a project and task, and you do not specify a burden schedule, then the application uses the burden schedule on the task.

Test burden cost calculations to:

- Verify that the amounts for each burden cost code and for the total burdened cost are calculated correctly according to the specified criteria.
- Confirm that the correct schedule is used for the given project and task.
- Confirm that the desired burden cost codes and rates are used for the organization and expenditure type.

Note

When the Burden Cost Calculation Override extension is enabled, the transaction quantity is passed to the extension. If you do not enter the quantity, the application considers the transaction quantity as one.

FAQs for Manage Burden Schedules

How can I prepare for creating burden schedules?

Before you create burden schedules, you must define business units, the organization hierarchy, implementation options, and burden structures.

What's a burden schedule?

Burden schedules establish the multipliers that are applied to the raw cost amount of each expenditure item to calculate the burdened cost, revenue, or

bill amount charged to a project. You assign burden schedules to project types, projects, or tasks. The project type provides the default burden schedule for a project. You can override the default burden schedules for each project by using a schedule of multipliers negotiated for the project or task.

In planning, if you use planning rates, then you assign a burden schedule in the project or financial planning options. If you use Oracle Fusion Project Integration Gateway to export resource rates to a scheduling application, then you must specify the burden schedule to use, because the set of resources and rates are global and have no project context from which to derive a burden schedule.

What's burden costing?

A method of applying burden costs to raw costs that enables you to track the total burdened costs of your projects.

What's the difference between a firm burden schedule and a provisional burden schedule?

Use firm burden schedules if you do not expect your burden multipliers to change. Firm schedules are typically used for internal costing or commercial billing schedules. Firm burden schedules can have multiple versions, but never more than one version for an effective date range.

Use provisional multipliers if you do not know the burden multipliers at the time that you are calculating total burdened costs. Provisional multipliers are typically estimates based on the annual forecast budget. When you determine the actual multipliers to apply to raw costs, then you replace the provisional multipliers with the actual multipliers. Oracle Fusion Project Costing processes the adjustments from provisional to actual changes for costing, revenue, and billing.

Note

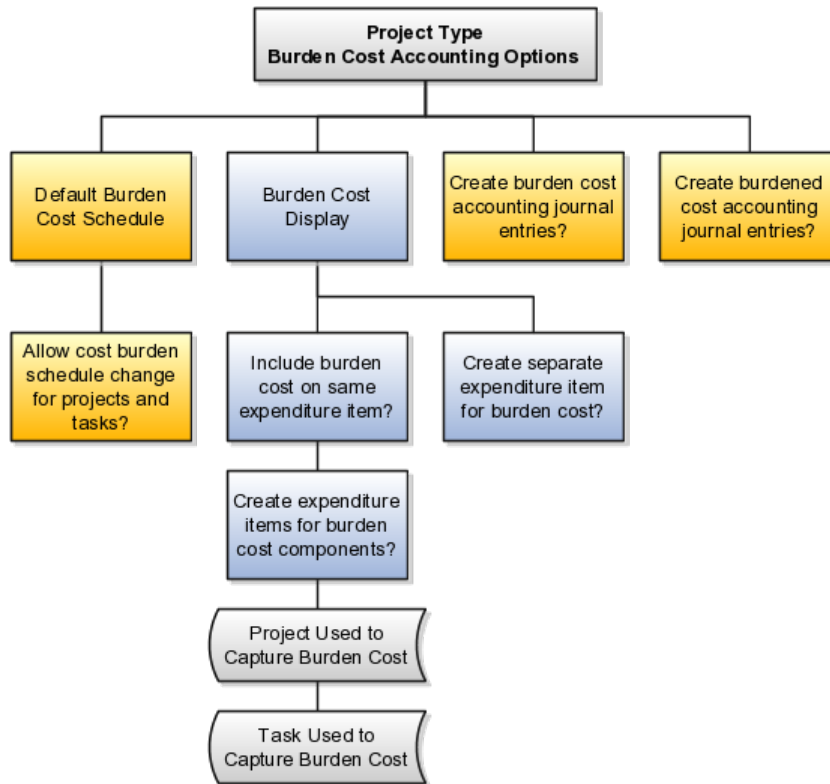
The actual burden schedule version, when created, is automatically placed on hold. You must remove the hold prior to building the actual rates and recalculating costs.

Manage Project Types: Burdening Options

Burdening Options for Project Types: Points to Consider

Burdening is a method of applying one or more burden cost components to the raw cost amount of each individual transaction to calculate burden cost amounts. Use project types to control how burden transactions are created and accounted. If you enable burdening for a project type, you can choose to account for the individual burden cost components or the total burdened cost amount.

The following diagram illustrates the burden cost accounting options for project types.



You specify the following options when setting up burdening options for project types.

- Default Cost Burden Schedule
- Allow Cost Burden Schedule Change for Projects and Tasks
- Include Burden Cost on Same Expenditure Item
 - Create Expenditure Items for Burden Cost Components
- Create Separate Expenditure Item for Burden Cost
- Create Burden Cost Accounting Journal Entries
- Create Burdened Cost Accounting Journal Entries

Default Cost Burden Schedule

If you enable burdening for the project type, you must select the burden schedule to use as the default cost burden schedule for projects that are defined with this project type.

Allow Cost Burden Schedule Change for Projects and Tasks

Enable this option to allow a change of the default cost burden schedule when entering and maintaining projects and tasks. Do not enable this option if you want all projects of a project type to use the same schedule for internal costing.

Include Burden Cost on Same Expenditure Item

Enable this option to include the burden cost amount in the same expenditure item. You can store the total burdened cost amount as a value with the raw cost

on each expenditure item. Oracle Fusion Projects displays the raw and burdened costs of the expenditure items on windows and reports.

If you include burden cost amounts on the same expenditure item, but wish to see the burden cost details, enable the option to create expenditure items for each burden cost amount on an indirect project and task.

Create Separate Expenditure Item for Burden Cost

Enable this option to account for burden cost amounts as separate expenditure items on the same project and task as the raw expenditures. The expenditure items storing the burden cost components are identified with a different expenditure type that is classified by the expenditure type class Burden Transaction. Oracle Fusion Projects summarizes the cost distributions to create burden transactions for each applicable burden cost code. The most important summarization attributes are project, lowest task, expenditure organization, expenditure classification, supplier, project accounting period, and burden cost code. You can use the Burden Summarization Grouping Extension to further refine the grouping.

Create Burden Cost Accounting Journal Entries

Indicate whether to create an entry for the burden cost amount.

If burdened costs are calculated for reporting purposes only, and you do not want to interface burdened costs to the general ledger, you can disable the creation of accounting journal entries. If you select this option, only the burden cost, which is the difference between the burdened cost and raw cost, is interfaced to general ledger.

Create Burdened Cost Accounting Journal Entries

Indicate whether to account for the total burdened cost amount of the items. You typically use this option to track the total burdened cost amount in a cost asset or cost work-in-progress account.

The burdened cost is the sum of raw and burden costs. Therefore, selecting this option may result in accounting for raw cost twice. For example, assume that the raw cost of an item is 100 USD, the burden cost is 50 USD, and the burdened cost is 150 USD. When the application creates a journal entry for 150 USD, it accounts for the 100 USD that was already accounted for as raw cost, plus the 50 USD burden cost.

Define Burdening Extensions

Burden Schedule Override Extension

Use the Burden Schedule Override Extension to override the default burden schedule version identifier for transactions charged to a burdened project.

Oracle Fusion Projects calls the Burden Schedule Override Extension during costing processes. You can modify the extension to meet your business rules for assigning burden schedules.

The extension is identified by the following items:

Extension Component	Name
Specification template	pjf_client_extn_burden.pkh
Body template	pjf_client_extn_burden.pkb
Package	PJF_CLIENT_EXTN_BURDEN
Procedure	override_rate_rev_id

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Burden Summarization Grouping Extension

You can use the Burden Summarization Grouping Extension to control the reporting, accounting and display of burden transactions. By including certain attributes in the grouping, you can also ensure that the summarized burden transactions are rolled up to, and reported under, the same resource as the source transactions.

The extension is identified by the following items:

Extension Component	Name
Specification template	pjc_client_extn_burden_summary.pkh
Body template	pjc_client_extn_burden_summary.pkb
Package	PJC_CLIENT_EXTN_BURDEN_SUMMARY

The CLIENT_GROUPING function returns a VARCHAR2 value which is a concatenated string of the parameter values. You can customize the function to create the return string using the attributes by which you want to group each transaction. This string can be used as an additional grouping criterion.

The CLIENT_COLUMN_VALUES procedure works in conjunction with the CLIENT_GROUPING function to return NULL for the parameters that are not used for additional grouping in the CLIENT_GROUPING function. This ensures that the attributes used for the grouping are also included on the expenditure items created for burden transactions, and therefore impact how these expenditure items are rolled up in the resource breakdown structures for reporting.

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Burden Cost Calculation Override Extension

Oracle Fusion Projects calls the Burden Cost Calculation Override Extension to override the default burden amounts calculated for each of the burden cost codes. The extension is called after the burden amounts are calculated using

the latest built multipliers. The extension then overrides the burden costs using transaction attributes specified in the extension. These amounts are summed to derive a new total burdened cost.

You can use the Burden Cost Calculation Override Extension when:

- You multiply the transaction quantity with a fixed rate instead of multiplying the raw cost with a multiplier. For example, the number of hours a person has worked multiplied with a fixed rate is used instead of applying multipliers to the transactions raw cost amount.
- You do not include a specific cost code or choose to override the multiplier. The Burden Cost Calculation Override Extension can update the multiplier for a cost code to zero so that the cost code is not included for the transaction. For example, do not apply a specific cost code after the actual cost for the project reaches a specified amount.
- You define a fixed burden rate for a cost code in the descriptive flex field and choose to use this rate for a specific project or task.

Note

The extension is not called when calculating revenue and invoice amounts or when calculating rates for the Oracle Fusion Project Integration Gateway or Oracle Fusion Projects Integration for Microsoft Project.

The extension is identified by the following components.

Extension Component	Name
Specification template	pjf_client_extn_calc_burden.pkh
Body template	pjf_client_extn_calc_burden.pkb
Package	pjf_client_extn_calc_burden
Function	is_client_extn_implemented
Procedure	override_burden_cost

The API details for the extension component, Function, are as follows:

- API Name: Is_client_extn_implemented
- API Type: Function
- API Purpose: Indicates whether Burden Cost Calculation Override Extension is enabled or not.
- Parameters: None
- Return Values:
 - Y indicates that the client extension is enabled.
 - N indicates that the client extension is not enabled. This is the default value hard coded in the function.

The API details for the extension component, Procedure, are as follows:

- API Name: Override_burden_cost
- API Type: Procedure
- API Purpose: Allow you to override the calculated burden cost amounts in PJF_BURDEN_RATE_EXTN table.
- Parameters

Parameter Name	Parameter Data Type	Description
p_calling_module	VARCHAR2	Identifies the calling module, which invokes the extension. The valid values are: • TEST-EXP: The extension is called for an expenditure item in View Burden Cost Details window. • TEST-STANDARD: The extension is called from Test Burden Cost Calculations Page. • TEST-BUDGET: The extension is called for project plan, budget and forecast in View Burden Cost Details window. • BUDGET-PROCESS: The extension is called during burdened cost calculation in project plan, budget and forecast. • IMPORT-PROCESS: The extension is called during burdened cost calculation for expenditure items that have burdening on the same line. • BURDEN-PROCESS: The extension is called when Generate Summarized Burden Transactions process is run to create separate burden expenditure item lines.

p_current_run_id	NUMBER	This is the identifier of the set of transactions that need to be processed in a given run.

- Return Values: None

Note

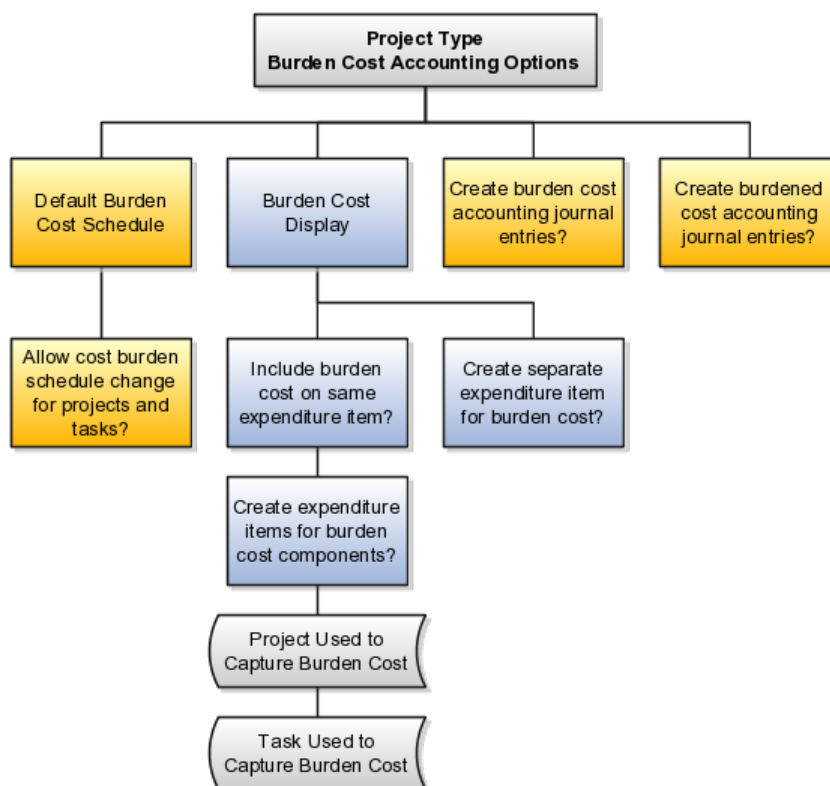
To implement the extension, modify the function to enable the extension and modify the procedure to override the burden amounts. Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write or implement a written procedure, compile it and store it in the database.

Project Foundation Configuration: Manage Project Types

Burdening Options for Project Types: Points to Consider

Burdening is a method of applying one or more burden cost components to the raw cost amount of each individual transaction to calculate burden cost amounts. Use project types to control how burden transactions are created and accounted. If you enable burdening for a project type, you can choose to account for the individual burden cost components or the total burdened cost amount.

The following diagram illustrates the burden cost accounting options for project types.



You specify the following options when setting up burdening options for project types.

- Default Cost Burden Schedule
- Allow Cost Burden Schedule Change for Projects and Tasks
- Include Burden Cost on Same Expenditure Item
 - Create Expenditure Items for Burden Cost Components
- Create Separate Expenditure Item for Burden Cost
- Create Burden Cost Accounting Journal Entries
- Create Burdened Cost Accounting Journal Entries

Default Cost Burden Schedule

If you enable burdening for the project type, you must select the burden schedule to use as the default cost burden schedule for projects that are defined with this project type.

Allow Cost Burden Schedule Change for Projects and Tasks

Enable this option to allow a change of the default cost burden schedule when entering and maintaining projects and tasks. Do not enable this option if you want all projects of a project type to use the same schedule for internal costing.

Include Burden Cost on Same Expenditure Item

Enable this option to include the burden cost amount in the same expenditure item. You can store the total burdened cost amount as a value with the raw cost on each expenditure item. Oracle Fusion Projects displays the raw and burdened costs of the expenditure items on windows and reports.

If you include burden cost amounts on the same expenditure item, but wish to see the burden cost details, enable the option to create expenditure items for each burden cost amount on an indirect project and task.

Create Separate Expenditure Item for Burden Cost

Enable this option to account for burden cost amounts as separate expenditure items on the same project and task as the raw expenditures. The expenditure items storing the burden cost components are identified with a different expenditure type that is classified by the expenditure type class Burden Transaction. Oracle Fusion Projects summarizes the cost distributions to create burden transactions for each applicable burden cost code. The most important summarization attributes are project, lowest task, expenditure organization, expenditure classification, supplier, project accounting period, and burden cost code. You can use the Burden Summarization Grouping Extension to further refine the grouping.

Create Burden Cost Accounting Journal Entries

Indicate whether to create an entry for the burden cost amount.

If burdened costs are calculated for reporting purposes only, and you do not want to interface burdened costs to the general ledger, you can disable

the creation of accounting journal entries. If you select this option, only the burdened cost, which is the difference between the burdened cost and raw cost, is interfaced to general ledger.

Create Burdened Cost Accounting Journal Entries

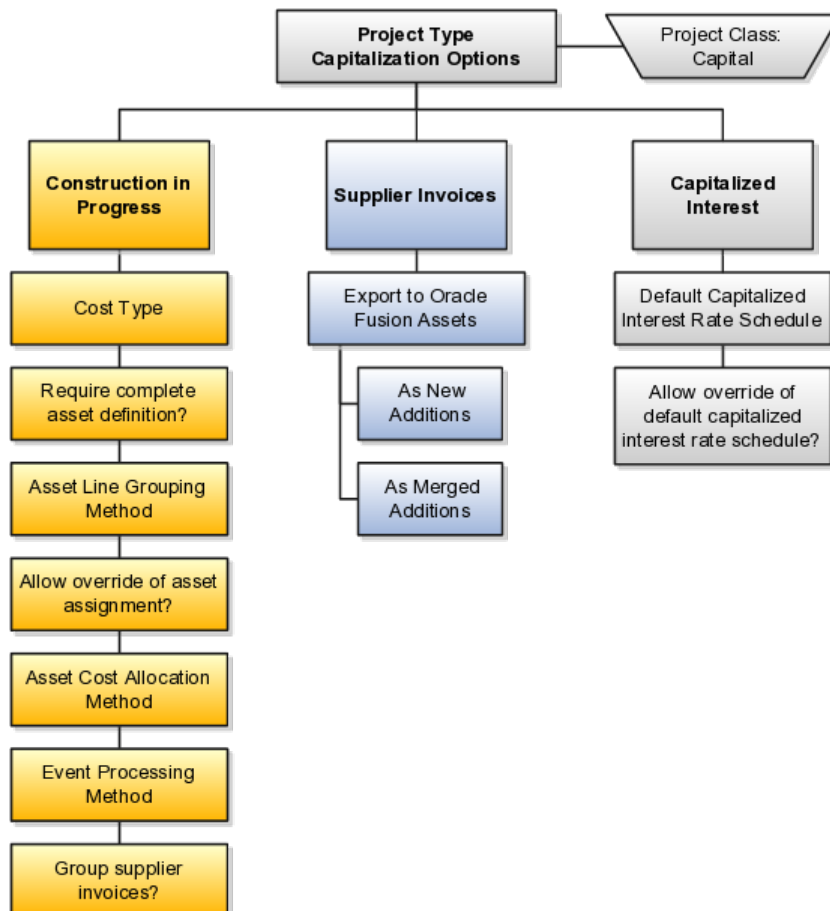
Indicate whether to account for the total burdened cost amount of the items. You typically use this option to track the total burdened cost amount in a cost asset or cost work-in-progress account.

The burdened cost is the sum of raw and burden costs. Therefore, selecting this option may result in accounting for raw cost twice. For example, assume that the raw cost of an item is 100 USD, the burden cost is 50 USD, and the burdened cost is 150 USD. When the application creates a journal entry for 150 USD, it accounts for the 100 USD that was already accounted for as raw cost, plus the 50 USD burden cost.

Capitalization Options for Project Types: Points to Consider

You can assign assets to a project if capitalization is enabled for the project type. Use project types to configure capitalization options that are inherited by each project associated with that project type.

The following diagram illustrates the capitalization options for project types.



You specify the following information when setting up capitalization options for project types.

- Construction in Progress (CIP) Options
- Supplier Invoices Export Options
- Capitalized Interest Options

Construction in Progress Options

You specify the following Construction in Progress options when setting up capitalization options for project types.

Cost Type

Indicate whether to capitalize costs at the burdened or raw cost amount for projects with this project type.

Complete Asset Definition

Enable this option to require a complete asset definition in Oracle Fusion Projects before sending costs to Oracle Fusion Assets. If you select this option, you do not need to enter information for the imported asset line in Oracle Fusion Assets. The Transfer Assets to Oracle Fusion Assets process places asset lines with complete definitions directly into the Post queue in Oracle Fusion Assets.

Asset Line Grouping Method

Specify one of the following methods to summarize asset lines.

- **All**, which is the highest level of summarization
- **CIP Grouped by Client Extension**
- **Expenditure Category**
- **Expenditure Category Nonlabor Resource**
- **Expenditure Type**
- **Expenditure Type Nonlabor Resource**

Asset Assignment Override

This option interacts with the assignment status of the asset to either use or disregard the Asset Assignment extension, as shown in the following table:

Override Asset Assignment	Asset Lines Assigned to Assets	System Uses Asset Assignment Extension
Do Not Override (option not selected)	Not Assigned	Yes
Do Not Override	Assigned	No
Override	Not Assigned	Yes
Override	Assigned	Yes

You can set up the Asset Assignment extension to assign any unassigned asset lines that result from the Generate Asset Lines process, or to override the current asset assignment for specified lines.

Asset Cost Allocation Method

Select one of the following predefined allocation methods to automatically distribute indirect and common costs across multiple assets, or select no allocation method.

- **Actual Units**
- **Current Cost**
- **Client Extension**
- **Estimated Cost**
- **Standard Unit Cost**
- **Spread Evenly**

Event Processing Method

You can specify a capital event processing method to control how assets and costs are grouped over time. You can choose to use either periodic or manual events, or no events.

Group Supplier Invoices

Enable this option to consolidate the expenditure items on a supplier invoice into one asset line according to the asset line grouping method. Deselect this option to send the lines to Oracle Fusion Assets based on the supplier invoice export option.

Supplier Invoice Export Options

If you choose not to group supplier invoices, then select one of the following supplier invoice export options.

- **As New Additions:** Sends each expenditure item on a supplier invoice line to Oracle Fusion Assets as a separate addition line with a status of New.
- **As Merged Additions:** Sends each supplier invoice line to Oracle Fusion Assets as a separate addition line with the status of Merged.

Note

After the addition lines are sent to Oracle Fusion Assets, you can split, merge, or unmerge the lines manually in Oracle Fusion Assets.

Capitalized Interest Options

Use this field to specify a default interest rate schedule for capitalized interest.

You can select the **Allow Override** option to allow an override of the default capitalized interest rate schedule for individual projects.

Associating Project Types and Class Categories: Examples

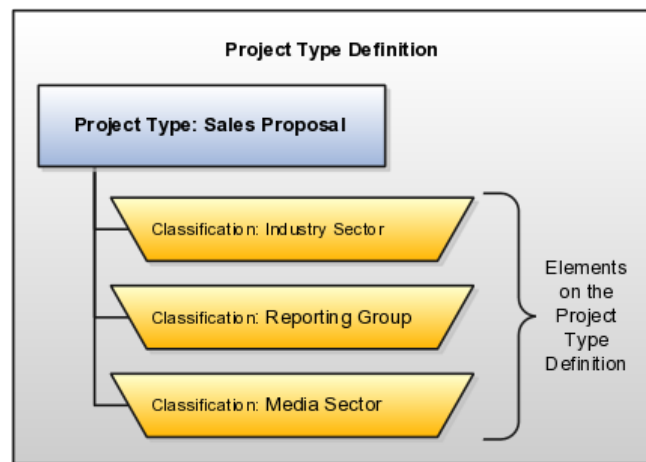
Project classifications group your projects according to categories and codes that you define. When you associate project classifications with project types, the classification is available for selection on projects with that project type.

Use any of the following methods to associate class categories with project types:

- Add a classification to the project type definition
- Add a project type to the class category definition
- Enable the **Assign to all Project Types** option on the class category definition

Add Classification to Project Type Definition

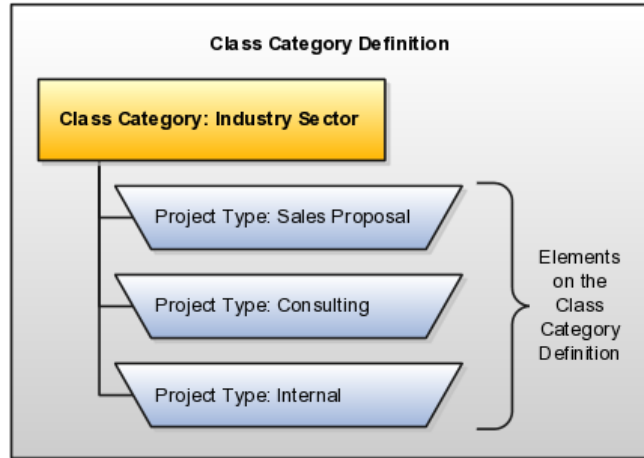
The following diagram shows an example of three classifications that are associated with a project type definition. In this example, the Industry Sector, Reporting Group, and Media Sector classifications are available for selection on projects with the Sales Proposal project type.



For each classification that you associate with the project type, you can enable the **Assign to All Projects** option for the application to automatically add the classification to the project definition for all new projects with the project type. When this option is enabled, all projects with this project type must be assigned a class code for the class category.

Add Project Type to Class Category Definition

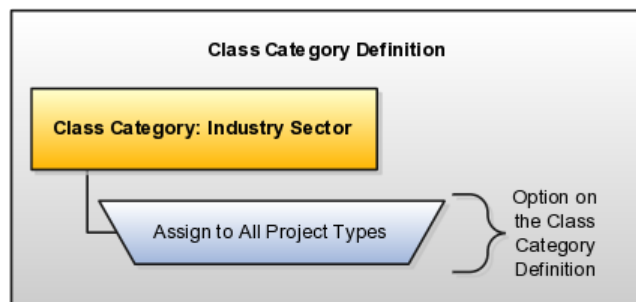
The following diagram shows an example of three project types that are associated with a class category definition. In this example, the Industry Sector classification is available for selection when you create projects with the Sales Proposal, Consulting, or Internal project types.



For each project type that you associate with the class category, you can enable the **Assign to All Projects** option for the application to automatically add the class category to the project definition for all new projects with any of these project types. When this option is enabled, all projects with this project type must be assigned a class code for the class category.

Assign to All Project Types

The following diagram shows an example of a class category definition with the **Assign to All Project Types** option enabled. In this example, a code for the Industry Sector class category is required for all projects, regardless of the project type.



Asset Cost Allocation Methods: Explained

The asset cost allocation method determines how indirect or common costs incurred on a project are allocated to multiple assets.

You can specify an asset cost allocation method to enable Oracle Fusion Projects to automatically allocate unassigned asset lines and common costs across multiple assets. Unassigned asset lines typically occur when more than one asset is assigned to an asset grouping level.

Project templates and projects inherit a default asset cost allocation method from the associated project type. You can override the default at the project level. If

you use capital events to allocate costs, then you can also override the asset cost allocation method at the event level.

Asset Cost Allocation Methods

The following table describes the available asset cost allocation methods.

Method	Basis of Cost Allocation
Actual Units	Number of units defined for each asset
Client Extension	Rules defined specifically for your organization
Current Cost	Construction-in-process (CIP) cost of each asset
Estimated Cost	Estimated cost of each asset
Standard Unit Cost	Combination of the standard unit cost and the number of units defined for each asset
Spread Evenly	Equal allocation of cost to each asset

Project Foundation Configuration: Define Cross-Charge Options

Define Business Unit Cross-Charge Options

Project Business Unit Cross-Charge Options: Critical Choices

Oracle Fusion Projects provides two methods to process cross-charge transactions.

- **Borrowed and Lent Accounting:** Creates accounting entries that move an amount equal to the transfer price between the provider and receiver organizations within a legal entity. There is no formal internal invoice created with this method. Costs or revenue are shared based on transfer price rules.

Use the Borrowed and Lent processing method to apply cross-charge transactions within a business unit or between business units.

- **Intercompany Billing:** Enables the provider organization to present a formal invoice based on the transfer price to the receiver organization and receive payment for services rendered and materials supplied. You can use this processing method between legal entities.

You must set up the contract business unit to use the Intercompany Billing processing method.

This section describes the project business unit options for setting up cross-charge transactions for sharing costs and revenue within and between business units in the same legal entity.

Transfer Price Currency Conversion

Select the date type, either transaction date or project accounting date, and rate type that the system uses by default to determine the conversion rate to convert the transfer price amount from the transaction currency to the ledger currency.

You can override the default values by using the Transfer Price Currency Conversion Override extension.

Cross-Charge Transactions Within a Legal Entity

The method of creating cross-charge transactions can be different for transactions within a business unit than the method used across business units. You can choose either the Borrowed and Lent Processing method of creating cross-charge transactions, or specify that no cross-charge transactions will be created.

The processing method that you specify for cross-charge transactions between business units is the default method used between the provider business unit and any other receiver business unit. You can override the default processing method for specific receiver business units.

Note

If you delete the override of the default processing method for a specific receiver business unit, you must manually adjust transactions to reflect the deleted controls.

Prerequisites for Setting Up Business Unit Options for Cross-Charge Transactions: Explained

Before you can set up the cross-charge options during business unit implementation to enable cross-charge transactions within a business unit and between business units, you must complete prerequisite setup steps.

Prerequisites for Creating Cross-Charge Transactions

You must define the following objects before you can create cross-charge transactions.

- Legal entities, including setting up accounting and associating the balancing segment values to the legal entity.
- Business units with the project accounting business function.
- Organizations and organization hierarchies that will share resources.

Note

The application uses the project expenditure organization hierarchy, and the project and task owning organization hierarchy, to determine the transfer price defined for the provider organization and receiver organization combination.

Prerequisites for Borrowed and Lent Processing Method

You can implement the Borrowed and Lent processing method of creating cross-charge transactions after defining the following objects.

- Transfer price rule and schedule

- Either a rate schedule or burden schedule, based on the transfer price rule

Prerequisites for Intercompany Billing Processing Method

For the Intercompany Billing processing method of creating cross-charge transactions, set up at least one of the following schedules.

- Rate schedule
- Burden schedule
- Transfer price rule and schedule

FAQs for Define Business Unit Cross-Charge Options

What's the difference between intercompany billing and interproject billing?

Intercompany billing creates internal invoices and accounting entries to pass costs and share revenue across organizations on an intercompany billing contract. A provider organization performs work and charges it a project owned by the receiver organization. The provider organization creates an invoice in Oracle Fusion Receivables and the receiver organization imports the invoice from Oracle Fusion Payables. Accounting entries for revenue are created between the organizations.

Interproject billing creates internal invoices for costs incurred between a provider project and a receiver project defined on an interproject billing contract. The provider project generates an Oracle Fusion Receivables invoice, which the receiver project receives as an Oracle Payables invoice.

Specify Customer Contract Management Business Function Properties: Cross-Charge Options

Contract Components for Internal Billing: How They Work Together

To use intercompany billing or interproject billing, your implementation team must configure a number of distinct features within Oracle Fusion Enterprise Contracts. These features work in cohesion with financial and project features to create internal invoices and transfer revenue between organizations.

Contract Type for Intercompany Billing

Select the intercompany billing option on a contract type to identify a contract as enabled for intercompany billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the intercompany payables invoice such as expenditure type, expenditure organization, receiver project, receiver task, and the provider business unit.

Contract Type for Interproject Billing

Select the interproject billing option on a contract type to identify a contract as enabled for interproject billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the interproject payables invoice such as expenditure type, expenditure organization, receiver project, and the receiver task.

Contract Business Unit Internal Billing Options

Review and update the customer contract management business function options to control the processing of interproject billing. This table lists the internal billing options that must be defined for the contract business unit.

Feature Name	Description
Invoice Numbering Method	• If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type. • If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number.
Invoice Batch Source	Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables.

Contract Line and Receiver Project

After you create an internal contract, link a contract line to the receiver project and task. This allows for the cross-charge transactions that are charged to the project and task to be billed from the provider business unit to the receiver business unit.

By default, the receiver project is also the associated project for the contract line, and you cannot add another associated project or change the associated project for that contract line. However, the associated task and receiver task can be different, so you can select another associated task for the project if necessary.

The receiver project must have the same legal entity as the internal customer.

Note

Only one receiver project can be linked to a contract line. The intercompany invoice generation process automatically groups invoice lines by the contract lines. Interproject invoices have a fixed format.

Project Components for Internal Billing: How They Work Together

To use the intercompany billing or interproject billing functionality, your implementation team must configure a number of distinct features within Oracle

Fusion Projects. These features work in cohesion with contract and financial features to create internal invoices and revenue transfers between organizations.

Invoice Formats

Define internal invoice formats for invoices generated by intercompany or interproject billing contracts. The invoice formats control the grouping of transactions on invoice lines for intercompany contracts. Specify the grouping options to summarize expenditure items and events, and the fields that should be displayed on the invoice line. Create different invoice formats for intercompany labor, nonlabor, and event billing.

If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

Restriction

All internal invoices must have a fixed format. Enable the fixed format feature to prevent the rearranging or regrouping invoice line details on intercompany invoices.

Invoice Methods and Revenue Methods

Define invoice methods and revenue methods to determine the calculation method of invoice and revenue amounts for intercompany contracts during invoice generation and revenue recognition. Enable the invoice methods and revenue methods for intercompany billing.

Select from the following labor and nonlabor schedule types that are available for rate-based intercompany invoice generation and revenue recognition:

- Bill rate
- Burden rate
- Transfer price

Billing Resource Breakdown Structure

Enter resource formats and resource types for the intercompany billing resource structure that is shared by business units. This billing resource breakdown structure defines the types of resources that can be referenced on billing controls for intercompany and interproject contracts.

Receiver Project

Create a receiver project in the receiver business unit. The receiver project can be a project that is linked to both an external contract (for external billing) and an intercompany contract (for creating internal cross-charge transactions). The receiver business unit receives the supplier invoices.

Each receiver project can receive invoices from multiple internal contracts or from multiple contract lines of the same contract.

Enable the tasks on the receiver project that can be used for interproject billing and to allow cross-charge transactions.

Provider Project

Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

FAQs for Specify Customer Contract Management Business Function Properties: Cross-Charge Options

Can I create a contract for intercompany billing with transfer price rules?

Yes, but only if you must derive rates for an intercompany contract based on an organization hierarchy structure instead of the bill rates defined on a bill plan.

The contract line and bill plan architecture enables you to can specify a different bill plan for each provider and receiver organization. Select a bill rate or burden rate schedule for each of your contract's bill plans. However, if your rates are defined at a very granular level, you may need to derive rates for an organization hierarchy structure using transfer price rules.

Why can't I see the internal billing details on a contract?

If you do not see the internal billing features on a contract, check the attributes on the contract type. The internal billing options of a contract are only visible if the contract type is designated as either intercompany or interproject.

Define Cross-Charge Extensions

Provider and Receiver Organizations Override Extension

Use this client extension to enforce cross-charge rules at a higher level in the organization hierarchy than the level at which you assign resources and projects. Doing so provides a single place for you to enforce and maintain your business rules in all organizations in your enterprise.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_cc_ident.pkb
Specification template	pjc_client_extn_cc_ident.pkh
Package	pjc_client_extn_cc_ident
Procedure	override_prvdr_recvr

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

The system identifies cross-charged transactions based on the provider and receiver organizations for the transaction. It derives default values for these organizations as follows:

- Provider organization: The expenditure organization or nonlabor resource organization for usage transactions.
- Receiver organization: The organization that owns the task or project to which the transaction is charged.

To override the cross-charge identification, code this extension to use a higher level in the organization hierarchy to derive the appropriate provider and receiver organizations and then determine if a transaction is a cross-charge transaction.

This extension is called by the Identify Cross-Charge Transactions process. If you use the Borrowed and Lent Accounting cross-charge processing method, the application automatically calls the Identify Cross-Charge Transactions process as part of the Distribute Borrowed and Lent Amounts process. However, if you use the Intercompany Billing cross-charge processing method, you must manually run the Identify Cross-Charge Transactions process.

Cross-Charge Processing Method Override Extension

Use the Cross-Charge Processing Method Override Extension to have custom business rules that help you identify how to process cross-charged transactions.

Use this extension to:

- Exclude certain cross-charged transactions from cross-charge processing
- Change the cross-charge processing method, such as from Intercompany Billing to Borrowed and Lent Accounting

Note

Use this extension only on cross-charged transactions.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_cc_ident.pkb
Specification template	pjc_client_extn_cc_ident.pkh
Package	pjc_client_extn_cc_ident
Procedure	override_cc_processing_method

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

The system validates the value returned for the cross-charge code to ensure that it meets the following rules:

Cross-Charge Transaction Type	Allowed Processing Methods
Within a business unit	Borrowed and Lent Accounting
Between business units	Borrowed and Lent Accounting Intercompany Billing
Between legal entities	Intercompany Billing

This extension is called by the Identify Cross-Charge Transactions process. If you use the Borrowed and Lent Accounting cross-charge processing method, the application automatically calls the Identify Cross-Charge Transactions process as part of the Distribute Borrowed and Lent Amounts process. However, if you use the Intercompany Billing cross-charge processing method, you must manually run the Identify Cross-Charge Transactions process.

The Identify Cross-Charge Transactions process:

1. Identifies the transaction as a cross-charged transaction.
2. Determines the cross-charge processing set method based on the cross-charge options.
3. Calls the extension to override the cross-charge processing method.

Internal Payables Invoice Attribute Override Extension

Use the Internal Payables Invoice Attribute Override Extension to override the default expenditure type and expenditure organization attributes for intercompany and interproject invoices that are created in Oracle Fusion Receivables.

The Update Invoice Details from Receivables process calls the Internal Payables Invoice Attribute Override Extension as it creates Oracle Fusion Payables invoices for intercompany and interproject contracts.

Note

Use this extension only if you want to override the receiver expenditure organization and receiver expenditure type on the Oracle Fusion Payables invoice. The source of the receiver expenditure organization and expenditure type is the intercompany or interproject contract.

The extension is identified by the following items.

Extension Component	Name
Body template	pjb_cc_ap_inv_client_extn.pkb
Specification template	pjb_cc_ap_inv_client_extn.pkh
Package	pjb_cc_ap_inv_client_extn
Procedure	override_exp_type_exp_org

This billing extension can derive the receiver expenditure type and receiver expenditure organization based on the parameters you enter.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_internal_billing_type	Internal billing type Valid values are: - PA_IC_INVOICES (Intercompany contract) - PA_IP_INVOICES (Interproject contract)
p_contract_id	Contract ID for the Oracle Fusion Receivables invoice.
p_contract_line_id	Contract line ID for the Oracle Fusion Receivables invoice.
p_receiver_project_id	Receiver project ID for the Oracle Fusion Payables invoice.
p_receiver_task_id	Receiver task ID for the Oracle Fusion Payables invoice.
p_invoice_number	Invoice number from the pjb_invoice_header table.
p_draft_invoice_line_num	Invoice_line_num from pjb_invoice_line.
p_invoice_date	Invoice date
p_ra_invoice_number	Oracle Fusion Receivables invoice number. The invoice number is either user-entered or created by the application, as defined in the implementation options. Refer to ra_invoice_number from pjb_invoice_headers
p_provider_org_id	Provider business unit ID
p_receiver_org_id	Receiver project organization ID
p_cc_ar_invoice_id	Customer transaction ID created in ra_customer_trx_all.customer_trx_id
p_cc_ar_invoice_line_num	Line number from ra_customer_trx_lines_all.line_number.
p_contract_line_customer_id	Customer ID on the bill plan associated with the contract line.
p_vendor_id	Supplier ID (poz_suppliers.vendor_id)
p_vendor_site_id	Supplier site ID (poz_supplier_sites_all_m.vendor_site_id)

p_expenditure_type	Expenditure type defined on the contract line internal attribute.
p_expenditure_type_id	Expenditure type ID defined on the contract line internal attribute.
p_expenditure_organization_id	Expenditure organization defined on the contract line internal attribute.
x_expenditure_type_id	Expenditure type ID returned by the extension.
x_expenditure_type	Expenditure type returned by the extension.
x_expenditure_organization_id	Expenditure organization ID returned by the extension.
x_status	Return status of the extension.
x_Error_Stage	Error stage returned by the extension.
X_Error_Code	Error code returned by the extension.

Project Foundation Configuration: Define Transfer Pricing

Manage Transfer Price Rules

Transfer Price Rules: Critical Choices

Create rules to determine how transfer prices are calculated for cross-charge transactions that require borrowed and lent processing or intercompany billing processing. Transfer price calculation can be based on the raw cost, burdened cost, or revenue of the cross-charged transaction.

To set up transfer price rules, you need to understand the following components:

- Transfer price rule attributes
- Transfer price determination logic
- Transfer price extensions

Transfer Price Rule Attributes

To create a transfer price rule, you specify the rule name and description, and define these attributes:

- **Type:** Valid transfer price rule types are **Labor** or **Nonlabor**.
- **Transfer Price Basis:** The basis for transfer price calculation. Transfer price basis options are:
 - Raw cost
 - Burdened cost
 - External recognized revenue
- **Calculation Method:** Transfer price calculation methods are:
 - Basis only: Use the transfer price with no further adjustments
 - Apply burden schedule: Specify the name of an existing burden schedule to apply to the basis

- **Apply rate schedule:** Specify the name of an existing rate schedule to apply to the basis
- **Burden Schedule:** The burden schedule to apply to the transfer price basis if the transfer price calculation method is to apply a burden schedule. You can select any burden schedule from any set.
- **Rate Schedule:** The rate schedule to apply to the transfer price basis if the transfer price calculation method is to apply a rate schedule. You can select any rate schedule from any set.
- **Markup or Discount Percentage:** A rate to apply to the transfer price amount that the rule calculates.

Transfer Price Determination Logic

The following table lists the valid combinations of transfer price basis and calculation methods, and the calculation logic used to determine transfer price amounts based on transfer price rules.

Transfer Price Basis	Calculation Method	Calculation Logic	Transfer Price Transaction Currency
Raw cost	Basis only	Raw cost with no multipliers applied	Same as transaction currency of expenditure item
Raw cost	Apply burden schedule	Burden multipliers are applied to raw cost	Same as transaction currency of expenditure item
Raw cost	Apply rate schedule	If the rate schedule has a markup, the markup is applied to raw cost If the rate schedule has a multiplier, the multiplier is applied to the amount	Currency of the rate schedule
Burdened cost	Basis only	Burdened cost with no multipliers applied	Same as transaction currency of expenditure item
Burdened cost	Apply burden schedule	Burden multipliers are applied to burdened cost	Same as transaction currency of expenditure item
Burdened cost	Apply rate schedule	Rate multipliers are applied to burdened cost	Currency of the rate schedule
External recognized revenue	Basis only	External recognized revenue with no multipliers applied	Regular recognized revenue in ledger currency, which is an attribute of the expenditure item

Transfer Price Extensions

Set up the following transfer price extensions as needed:

- The Transfer Price Determination Extension is called at the beginning of the pricing calculation to bypass the transfer price amount that is

calculated using the standard transfer price rule. If you use this extension, the transfer price amount is calculated and cross-charge transactions are created based on the extension logic.

- The Transfer Price Override Extension is called at the end of the pricing calculation to override the transfer price amount that is calculated using the standard transfer price rule. The calculated transfer price amount is a parameter to the extension. If you use this extension, the transfer price amount is calculated and cross-charge transactions are created based on the extension logic.
- The Transfer Price Currency Conversion Override Extension overrides the default currency conversion attributes defined in the cross-charge implementation options for the business unit.

Contract Components for Internal Billing: How They Work Together

To use intercompany billing or interproject billing, your implementation team must configure a number of distinct features within Oracle Fusion Enterprise Contracts. These features work in cohesion with financial and project features to create internal invoices and transfer revenue between organizations.

Contract Type for Intercompany Billing

Select the intercompany billing option on a contract type to identify a contract as enabled for intercompany billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the intercompany payables invoice such as expenditure type, expenditure organization, receiver project, receiver task, and the provider business unit.

Contract Type for Interproject Billing

Select the interproject billing option on a contract type to identify a contract as enabled for interproject billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the interproject payables invoice such as expenditure type, expenditure organization, receiver project, and the receiver task.

Contract Business Unit Internal Billing Options

Review and update the customer contract management business function options to control the processing of interproject billing. This table lists the internal billing options that must be defined for the contract business unit.

Feature Name	Description
Invoice Numbering Method	• If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type. • If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number.

Invoice Batch Source	Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables.

Contract Line and Receiver Project

After you create an internal contract, link a contract line to the receiver project and task. This allows for the cross-charge transactions that are charged to the project and task to be billed from the provider business unit to the receiver business unit.

By default, the receiver project is also the associated project for the contract line, and you cannot add another associated project or change the associated project for that contract line. However, the associated task and receiver task can be different, so you can select another associated task for the project if necessary.

The receiver project must have the same legal entity as the internal customer.

Note

Only one receiver project can be linked to a contract line. The intercompany invoice generation process automatically groups invoice lines by the contract lines. Interproject invoices have a fixed format.

Project Components for Internal Billing: How They Work Together

To use the intercompany billing or interproject billing functionality, your implementation team must configure a number of distinct features within Oracle Fusion Projects. These features work in cohesion with contract and financial features to create internal invoices and revenue transfers between organizations.

Invoice Formats

Define internal invoice formats for invoices generated by intercompany or interproject billing contracts. The invoice formats control the grouping of transactions on invoice lines for intercompany contracts. Specify the grouping options to summarize expenditure items and events, and the fields that should be displayed on the invoice line. Create different invoice formats for intercompany labor, nonlabor, and event billing.

If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

Restriction

All internal invoices must have a fixed format. Enable the fixed format feature to prevent the rearranging or regrouping invoice line details on intercompany invoices.

Invoice Methods and Revenue Methods

Define invoice methods and revenue methods to determine the calculation method of invoice and revenue amounts for intercompany contracts during

invoice generation and revenue recognition. Enable the invoice methods and revenue methods for intercompany billing.

Select from the following labor and nonlabor schedule types that are available for rate-based intercompany invoice generation and revenue recognition:

- Bill rate
- Burden rate
- Transfer price

Billing Resource Breakdown Structure

Enter resource formats and resource types for the intercompany billing resource structure that is shared by business units. This billing resource breakdown structure defines the types of resources that can be referenced on billing controls for intercompany and interproject contracts.

Receiver Project

Create a receiver project in the receiver business unit. The receiver project can be a project that is linked to both an external contract (for external billing) and an intercompany contract (for creating internal cross-charge transactions). The receiver business unit receives the supplier invoices.

Each receiver project can receive invoices from multiple internal contracts or from multiple contract lines of the same contract.

Enable the tasks on the receiver project that can be used for interproject billing and to allow cross-charge transactions.

Provider Project

Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

Managing Transfer Price Rates: Examples

Use these examples to understand how to configure cross-charge options on bill plans and revenue plans to achieve various interproject and intercompany billing scenarios.

One Cross-charge Rule or Rate, One Provider Business Unit, Any Receiver Business Unit, All Projects

To share one cross-charge rule or rate between one provider business unit and any receiver business unit, and all projects associated with the contract, configure your contract billing information as follows:

Bill Plan	Bill Rate Schedule
Bill Plan 1	Assign the bill rate schedule you want to use for the contract (provider) business unit to this bill plan.

One Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, All Projects

To share one cross-charge rule or rate between one provider and receiver business unit, and all projects associated with the contract, configure your contract billing information as follows:

Bill Plan	Bill Rate Schedule
Bill Plan 1	Assign the bill rate schedule you want to use for the provider business unit to this bill plan.
Bill Plan 2	Assign the bill rate schedule you want to use for the receiver business unit to this bill plan.
Note All contract lines associated with the receiver projects can use this bill plan.	

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, One Project

To override a cross-charge rule or rate between a provider and receiver business unit for one project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a rate override for the contract line associated with the receiver project.	Project level

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Task

If a resource is assigned to multiple roles and has more than one rate on a project, you may need to create an override at the project task level. To override a cross-charge rule or rate between a provider and receiver business unit, for the task on a specific project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a job rate override for the contract line associated with the receiver project.	Task level

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Resource

If you are invoicing for a contractors, you may want to create an override at the resource level. To override a cross-charge rule or rate between a provider and receiver business unit, for a specific resource on a project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a person rate override for the contract line associated with the receiver project.	Task level

Project Business Unit Cross-Charge Options: Critical Choices

Oracle Fusion Projects provides two methods to process cross-charge transactions.

- **Borrowed and Lent Accounting:** Creates accounting entries that move an amount equal to the transfer price between the provider and receiver organizations within a legal entity. There is no formal internal invoice created with this method. Costs or revenue are shared based on transfer price rules.

Use the Borrowed and Lent processing method to apply cross-charge transactions within a business unit or between business units.

- **Intercompany Billing:** Enables the provider organization to present a formal invoice based on the transfer price to the receiver organization and receive payment for services rendered and materials supplied. You can use this processing method between legal entities.

You must set up the contract business unit to use the Intercompany Billing processing method.

This section describes the project business unit options for setting up cross-charge transactions for sharing costs and revenue within and between business units in the same legal entity.

Transfer Price Currency Conversion

Select the date type, either transaction date or project accounting date, and rate type that the system uses by default to determine the conversion rate to convert the transfer price amount from the transaction currency to the ledger currency.

You can override the default values by using the Transfer Price Currency Conversion Override extension.

Cross-Charge Transactions Within a Legal Entity

The method of creating cross-charge transactions can be different for transactions within a business unit than the method used across business units. You can choose either the Borrowed and Lent Processing method of creating cross-charge transactions, or specify that no cross-charge transactions will be created.

The processing method that you specify for cross-charge transactions between business units is the default method used between the provider business unit and any other receiver business unit. You can override the default processing method for specific receiver business units.

Note

If you delete the override of the default processing method for a specific receiver business unit, you must manually adjust transactions to reflect the deleted controls.

FAQs for Manage Transfer Price Rules

What's a transfer price rule?

Determines how Oracle Fusion Projects calculates the transfer price for cross-charge transactions. Each rule contains the following attributes that you define.

- Type of transaction to which the rule applies: labor or nonlabor
- Basis for the cross-charge transaction: raw cost, burdened cost, or revenue amount
- Method used to calculate the transfer price: rate schedule, burden schedule, or no further adjustment
- Markup or discount percentage to apply to the transfer amount calculated by the rule
- Range of dates when you can use the rule

Can I select any burden schedule or bill rate schedule for a transfer price rule?

Yes. You can assign any rate schedule to a transfer price rule, regardless of the project rates set assigned to the bill rate schedule.

Can I select any burden schedule or bill rate schedule for a transfer price rule?

Yes. You can assign any rate schedule to a transfer price rule, regardless of the project rates set assigned to the bill rate schedule.

Manage Transfer Price Schedules

Transfer Price Schedules: Explained

Transfer price schedules contain the rules to determine the transfer price amount for transactions charged from a provider organization to a receiver organization. You create different transfer price schedules to use for various combinations of legal entities, business units, and organizations. You can create different schedules to use different rules for various projects and tasks between the same pairs of provider and receiver organizations. For example, you can define one schedule that contains the rules for capital projects and another for contract projects.

Before you set up transfer price schedules, you must set up organizations and transfer price rules.

Transfer Price Schedule Lines

Transfer price schedule lines contain details about the provider and receiver organization, labor transfer price rule and markup or discount percentage, nonlabor transfer price rule and markup or discount percentage, and amount type.

A transfer price schedule can contain provider and receiver organizations from any organization classification that is relevant to projects. The available organization classifications are determined at implementation when setting up organization hierarchies and classifications. If you do not select a receiver organization, the transfer price schedule applies to any receiver organization that receives transactions from the specified provider organization.

A labor rule is valid transfer price rule with a type of labor. A nonlabor rule is a valid transfer price rule with a type of nonlabor. A transfer price schedule must contain either a labor or nonlabor rule, or both. You can assign a markup or discount percentage to each transfer price rule to apply to the transfer price amount that the rule calculates.

You assign cost transfer or revenue transfer as the amount type for the transfer price calculation.

Transfer Price Schedule Hierarchy

A transfer price schedule should be determined based on whether the cross-charge transaction is processed using the borrowed and lent processing method or the intercompany billing method. If you use the borrowed and lent processing method, a transfer price schedule should be assigned to the receiver task or the project. If you use the intercompany billing method, the bill and the revenue plan can have a transfer price schedule.

Note

The interproject billing method does not use transfer price calculation logic. Only the billing methods based on bill rate schedule or burden rate schedule are allowed for interproject billing.

You can define a transfer price schedule at any organization level and legal entity level. Oracle Fusion Projects uses the following logic to identify the appropriate schedule line:

1. If a transfer price schedule line exists for the provider organization (the project expenditure organization) and the receiver organization (the project and task owning organization), then the corresponding rule is used to calculate the transfer price.

Note

The project expenditure organization hierarchy is defined in the implementation options for the provider business unit. The project and task owning organization hierarchy is defined in the implementation options for the receiver business unit.

2. If a schedule line is not found in the previous step, the application checks for a line with the provider organization and a receiver parent organization.

If the receiver organization has multiple intermediate parents and schedule lines are defined for more than one of the parents, the schedule line defined for the lowest level parent takes precedence over schedule lines defined for parents higher in the organization hierarchy.

3. If a schedule line is not found in the previous step, the application checks for a line with the provider parent organization and receiver parent organization.

If the provider organization has multiple intermediate parents and schedule lines are defined for more than one of the parents, the schedule line defined for the lowest level parent takes precedence over schedule lines defined for parents higher in the organization hierarchy.

Note

If there is a schedule line with only a provider organization, and another schedule line with both provider and receiver organizations, the application gives precedence to the schedule line with both provider and receiver organizations.

If there is a schedule line with only a provider organization, and another schedule line with the provider organization and the receiver parent organization, the application gives precedence to the schedule line with the provider organization and the receiver parent organization.

-
4. If a schedule line is not found in the previous step, the application checks for the default line for the transfer price schedule.
 5. If a schedule line is not found in the previous step, the process results in an error.

Managing Transfer Price Rates: Examples

Use these examples to understand how to configure cross-charge options on bill plans and revenue plans to achieve various interproject and intercompany billing scenarios.

One Cross-charge Rule or Rate, One Provider Business Unit, Any Receiver Business Unit, All Projects

To share one cross-charge rule or rate between one provider business unit and any receiver business unit, and all projects associated with the contract, configure your contract billing information as follows:

Bill Plan	Bill Rate Schedule
Bill Plan 1	Assign the bill rate schedule you want to use for the contract (provider) business unit to this bill plan.

One Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, All Projects

To share one cross-charge rule or rate between one provider and receiver business unit, and all projects associated with the contract, configure your contract billing information as follows:

Bill Plan	Bill Rate Schedule
Bill Plan 1	Assign the bill rate schedule you want to use for the provider business unit to this bill plan.
Bill Plan 2	Assign the bill rate schedule you want to use for the receiver business unit to this bill plan.
Note All contract lines associated with the receiver projects can use this bill plan.	

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, One Project

To override a cross-charge rule or rate between a provider and receiver business unit for one project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a rate override for the contract line associated with the receiver project.	Project level

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Task

If a resource is assigned to multiple roles and has more than one rate on a project, you may need to create an override at the project task level. To override a cross-charge rule or rate between a provider and receiver business unit, for the task on a specific project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a job rate override for the contract line associated with the receiver project.	Task level

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Resource

If you are invoicing for a contractors, you may want to create an override at the resource level. To override a cross-charge rule or rate between a provider and receiver business unit, for a specific resource on a project, configure your contract billing and contract line details as follows:

Bill Plan	Schedules and Overrides	Associated Projects
Bill Plan 1	Create a person rate override for the contract line associated with the receiver project.	Task level

FAQs for Manage Transfer Price Schedules

What happens if I change a transfer price rule or transfer price schedule?

Changes to transfer price rules and schedules affect only future transactions. To change a previously processed transaction, you must manually adjust the transaction.

Define Transfer Price Extensions

Transfer Price Determination Extension

Use the Transfer Price Determination Extension to derive the transfer price for a cross-charge transaction. If a price is not derived, the application uses the standard transfer price process.

The Distribute Borrowed and Lent Amounts process and Generate Invoices process call the extension before calling the standard transfer price determination process.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_cc_tp.pkb
Specification template	pjc_client_extn_cc_tp.pkh
Package	PJC_CLIENT_EXTN_CC_TP
Procedure	determine_transfer_price

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

The system validates that you provided a value for only one of the following output audit parameters:

- x_bill_rate
- x_bill_markup_percentage

If a value is not valid, a rejection message appears in the process execution report.

The extension procedure specifies a transfer price for the transaction being processed. If this extension returns a valid value for the transfer price, Oracle Fusion Projects uses that value as the transfer price instead of computing the transfer price.

Transfer Price Override Extension

Use the Transfer Price Override Extension to override the price derived by the standard transfer price process.

The Distribute Borrowed and Lent Amounts process and Generate Invoices process call the extension after calculating the transfer price based on the transfer price rules and schedules.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_cc_tp.pkb
Specification template	pjc_client_extn_cc_tp.pkh
Package	PJC_CLIENT_EXTN_CC_TP
Procedure	override_transfer_price

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

The system validates that you provided a value for only one of the following output audit parameters:

- x_bill_rate
- x_bill_markup_percentage

If a value is not valid, a rejection message appears in the process execution report.

The extension procedure overrides the transfer price for a transaction.

Transfer Price Currency Conversion Override Extension

Use this extension to override the default attributes used to convert the transfer price from the transaction currency to the functional currency.

The Distribute Borrowed and Lent Amounts process and Generate Invoices process call the extension after the processes calculate the transfer price. The

cross-charge transaction implementation options for the business unit determine the default conversion attributes.

The extension is identified by the following items:

Extension Component	Name
Body template	pjc_client_extn_cc_tp.pkb
Specification template	pjc_client_extn_cc_tp.pkh
Package	PJC_CLIENT_EXTN_CC_TP
Procedure	override_curr_conv_attributes

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

Oracle Fusion Projects validates that the values returned by the extension meet all conversion requirements.

Project Foundation Configuration: Define Action Controls

Action Controls: Explained

Action controls control data that is imported from Microsoft Project to Project Financial Management applications in Oracle Fusion Project Portfolio Management. An action control prevents you from performing an action in Oracle Fusion Project Portfolio Management on a record that originated in Microsoft Project.

Available Action Controls

You can set controls on the following actions:

- Add Task
- Delete Task
- Update Project Dates
- Update Project Description
- Update Project Name
- Update Project Number
- Update Project Organization
- Update Project Status
- Update Task Dates
- Update Task Description
- Update Task Name
- Update Task Number
- Update Task Organization

For example, consider the following scenario:

- You imported a project from Microsoft Project.
- Your business rule states that project and task dates are always maintained in Microsoft Project.
- To ensure data integrity, you want to prevent projects and tasks that originate in Microsoft Project from being deleted in Oracle Fusion Project Portfolio Management.

To enforce this rule, you enter the following action controls for the source Microsoft Project:

- Update Project Dates
- Update Task Dates
- Delete Task

Project Foundation Configuration: Define Project Extensions

Project Status Change Workflow Enabled Extension

Use the Project Status Change Workflow Enabled Extension to determine whether to call the workflow process when the project status changes.

The extension is identified by the following items:

Extension Component	Name
Body template	pjf_client_extn_proj_status.pkb
Specification template	pjf_client_extn_proj_status.pkh
Package	pjf_client_extn_proj_status

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

Oracle Fusion Projects calls the Project Status Change Workflow Enabled Extension when a change of status is requested for a project.

When designing Project Status Change Workflow Enabled Extensions, you determine what business rules to apply when a project status change is selected for a project.

The name of this procedure is Check_Bpel_enabled. Oracle Fusion Projects determines whether to call workflow for a project status change based on the Enable Workflow option on the project status definition.

Project Status Change Rules Extension

Use the Project Status Change Rules Extension to define rules to determine whether a project status can change.

The extension is identified by the following items:

Extension Component	Name
Body template	pjf_client_extn_proj_status.pkb
Specification template	pjf_client_extn_proj_status.pkh
Package	pjf_client_extn_proj_status

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

Oracle Fusion Projects calls the Project Status Change Rules Extension when a change of status is requested for a project.

When designing Project Status Change Rules Extensions, you determine what business rules to apply when a project status change is selected for a project.

The name of this procedure is `Verify_Project_Status_Change`.

Organization Change Rules Extension

Use the Organization Change Rules Extension to build business rules to determine whether an organization change is allowed for a project and task owning organization, and to define the error messages that are used when the rules are violated.

Oracle Fusion Projects calls the Organization Change Rules Extension during the Change Project and Task Organizations process, and in the project definition when you change the project and task owning organization.

This table shows the names of the extension components.

Extension Component	Name
Body template	pjf_org_client_extn.pkb
Specification template	pjf_org_client_extn.pkh
Package	PJF_ORG_CLIENT_EXTN
Procedure	verify_org_change

Important

Do not change the name of the extension procedure or parameters. Also, do not change the parameter types or parameter order in the procedure. After you write a procedure, compile it and store it in the database.

Project Status Change Approver Extension

Use the Project Status Change Approver Extension to override the internal identifier of the project status change approver.

By default, the extension returns the internal identifier of the project manager. The default project workflow process calls the Project Status Change Approver Extension to determine the project approver.

The extension is identified by the following items:

Extension Component	Name
Body template	pjf_client_extn_project_wf.pkb
Specification template	pjf_client_extn_project_wf.pkh
Package	pjf_client_extn_project_wf

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

The Select Project Approver (select_project_approver) procedure is included in the Project Status Change Approver Extension. This procedure returns the project approver ID to the calling workflow process. You can modify the procedure to add rules to determine who can approve a project. The default procedure returns the ID of the project manager.

Project Foundation Configuration: Distribute and Install Desktop Integrator Client

Project Cost Transactions: How They Are Imported to Oracle Fusion Project Costing

Collect and import all types of project costs from Oracle Fusion and third-party applications. During this process you can validate transactions to reduce corrections and rework. Before you import the transactions to Oracle Fusion Projects, you can review the exceptions for third-party transactions and correct the errors.

Settings That Affect Transactions Import

Setup options in the transaction document and document entry specify how the transactions are imported and processed

How Transactions Are Imported

You create, validate, and transfer the transactions to the Oracle Fusion Project Costing interface as specified in the following table.

Transactions Type	Creating Transactions	Validating Transactions	Importing Transactions
Oracle Fusion Projects Costs - Uncosted labor transactions - Uncosted nonlabor transactions	Initially only in Excel templates. You can later edit or add transactions in the Manage Unreleased Expenditure Batches page.	Validation is compulsory and is performed automatically during transaction entry.	Click the Export button in Excel spreadsheet to export, and optionally process, transactions.

Third-Party Application Costs • Uncosted labor transactions • Uncosted nonlabor transactions • Costed or accounted labor or nonlabor transactions	Web services, ADFDI Excel templates, or Oracle Cloud templates. You can also create transactions in the Manage Unprocessed Transactions page.	If you are using the Excel integration, optionally validate transactions during export. Note Validation is optional when you enter or export transactions but is always performed when you run the Import and Process Costs Transactions process.	Methods to import : • For Excel integration, click the Export button on the Excel spreadsheet to export, and optionally process, transactions. • Use Oracle Fusion Project Costing Web services to transfer transactions to the Oracle Fusion Project Costing interface. • For Oracle Cloud, use the Load Interface File for Import process. You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process, which are both part of the External Data Integration Services for Oracle Cloud feature. For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository for Oracle Fusion Applications.
Costs from Other Fusion applications	Source applications	Validation is compulsory. As transactions are validated in their source applications, they are not validated again during the Import and Process Costs Transactions process.	Use the Import and Process Cost Transactions process.

All transactions are validated but at various points, transaction entry or transfer, or processing. If you are exporting transactions from desktop Excel integration

spreadsheets, you can release the transactions directly from the spreadsheet itself by selecting the **Process Costs** option. Costs are submitted for **Import and Process Cost Transactions** process avoiding the need to do it from the application.

Restriction

The **Process Costs** option is not available in the Excel template, when you have separate duties for entering and releasing Oracle Fusion Projects expenditure batches. You can review the expenditure batches in the Manage Unreleased Expenditure Batches page and submit them for processing.

After the transactions are imported to Oracle Fusion Projects, the application tracks transactions with errors including the details for the cause of the error and the action to be taken to fix the error. While the successful transactions are ready for cost processing.

Document and Document Entry Edit Options of Predefined and Third-Party Sources: Explained

You can define the transaction document and document entry options for transactions that originate from predefined sources and third-party applications sources. However, there is a limitation in editing these options. The options that you can edit for each source depend on whether the document entry is predefined for use with Oracle Fusion Applications or defined during implementation for use with third-party application sources.

Document Edit Options

The following table provides a list of document options that you can edit for predefined and third-party application source transactions.

Note

For third-party application source transactions, the following table details whether the options are editable after you have created and imported transactions for the source.

Document Options	Predefined Sources	Third-Party Application Sources
Archive After Import	Editable	Editable
Allow Duplicate Reference	Not editable	Not editable
Allow Override of Person Organization	Not editable	Not editable
Import Raw Cost Amount	Not editable	Not editable
Import Burdened Amount	Not editable	Not editable
Accounted in Source Application	Not editable	Not editable
Create Raw Cost Accounting Journal Entries	Not editable	Not editable

Create Adjustment Accounting Journal Entries	Editable	Editable
Reconcile with Source	Not editable	Editable

Document Entry Edit Options

The following table provides a list of document entry options that you can edit for predefined and third-party application source transactions.

Note

For third-party application source transactions, the following table details whether the options are editable after you have created and imported transactions for the source.

Document Entry Options	Predefined Sources	Third-Party Application Sources
Expenditure Type Class	Not editable	Not editable
Allow Adjustments	Editable	Editable
Allow Reversals	Not editable	Editable
Allow Interface Modifications	Not editable	Editable
Process Cross-Charge Transactions	Editable	Editable
Create Related Items	Editable	Editable

FAQs for Distribute and Install Desktop Integrator Client

Can I change the source and document for transactions after exporting them to Oracle Fusion Projects?

No. You cannot change the source, document, and document entry after creating a transaction.

What's the difference between export and Oracle ADF Desktop Integration for Excel?

Use the **Export** button or menu option to download data to view or analyze. You get a Microsoft Excel file, of any type that Excel supports, containing selected or all records from the corresponding table. If row selection is disabled, then the export would include all rows. When all rows are exported, that includes all the rows that are not visible on the page. However, any search criteria, filters, and Query By Example values applied to the table can exclude rows from the export. Data from hidden columns are also not included in the export.

Use Oracle ADF Desktop Integration for Excel to create or edit records in a Microsoft Excel workbook and upload the records back into Oracle Fusion Applications. This feature is helpful for mass updates or working outside of Oracle Fusion Applications. In most cases, you download the desktop integrated workbook from a link in the regional area, for example the **Create Expense Items in Spreadsheet** link, or from a table, for example using the **Prepare in Spreadsheet** button. The workbooks downloaded from a link can include rows of data, or empty rows except for default values in some columns. From a table, what is included in the workbook is determined the same way as for the export option. If no rows are selected, however, the workbook does not include any records from the table.

Note

If you are using a feature integrated with Oracle Fusion Applications that presents a set number of rows per page or view, then exporting or downloading all rows might not include all the data you want. You might need to navigate to subsequent sets of rows to export or download.

Why can't I find the business unit in the downloaded desktop Excel integration spreadsheets?

If your access is revised, then you have to download the desktop Excel integration spreadsheets again. For example, if you initially have access to Vision Operations business unit, then you view only this business unit listed in the Excel spreadsheets. If new business units are assigned or removed, you must download the templates again to view the business units according to your access in the Excel spreadsheets.

Project Costing Configuration: Define General Costing Setup

Manage Project Transaction Sources

Transaction Sources: Explained

Transaction sources identify the source of transactions that you import into Oracle Fusion Project Costing. You control the transaction import and processing by the specifying the source, document, and document entry options.

The transaction sources can be classified into two categories:

- Predefined sources
- Third-party application sources

Predefined Sources

Oracle Fusion Project Costing provides a set of predefined transaction sources that you use to import transactions from other Oracle Fusion applications. The predefined sources and their associated document entries are as follows:

- Oracle Fusion Payables: Supplier costs, expense reports, intercompany invoices, and interproject invoices.
- Oracle Fusion Projects: Time cards, usage expenditures, miscellaneous expenditures, inventory expenditures, burden expenditures, summarized burden expenditures, work-in-progress expenditures, capital interest expenditures, and allocation expenditures.
- Oracle Fusion Cost Management: Purchase receipts and miscellaneous inventory cost.
- Oracle Fusion Purchasing: Purchase requisition and purchase order commitment costs.

Third-Party Application Sources

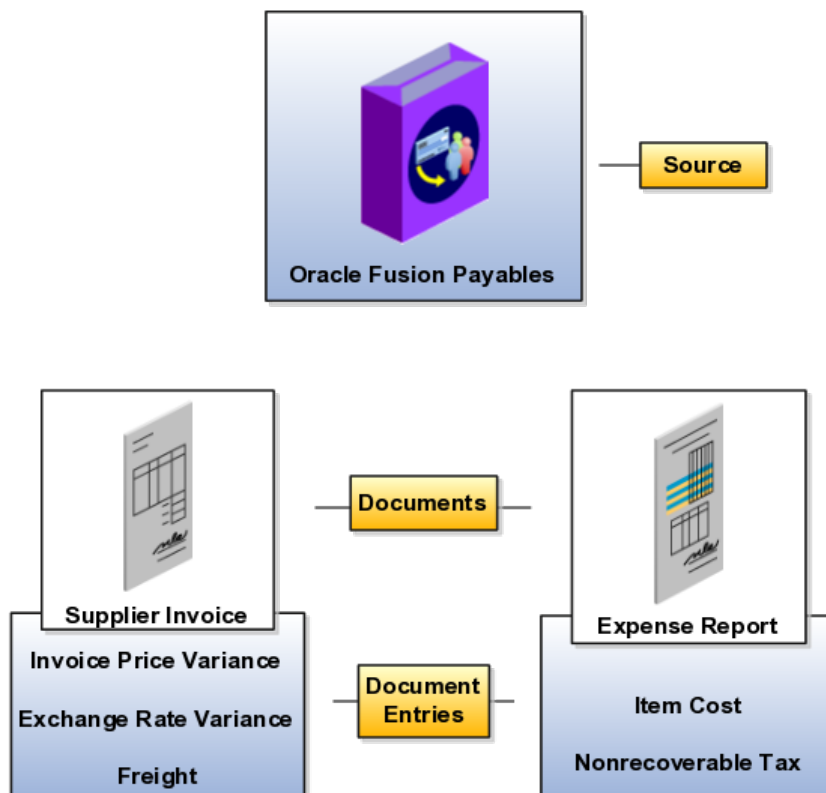
You can define additional transaction sources to import transactions from non-Oracle applications. For example, you can define the transaction source Payroll to identify expenditure items imported from an external payroll system.

Similarly, you create documents for a specific transaction source and document entries for a specific document.

Source, Document, and Document Entry Components: How They Work Together

When you create a transaction source, you select the transaction source options to control the transaction import processing. Transaction source, document, and document entry definitions determine how the application handles validation, import, processing, adjustment, and accounting of project cost transactions.

The following figure provides an example of a transaction source called Oracle Fusion Payables, associated documents called Supplier Invoice and Expense Report, and their document entries such as Invoice Price Variance, Exchange Rate Variance, Freight, Item Cost, and Nonrecoverable Tax.



Sources

At the transaction source level, you define the source, the processing set size, preprocessing, and postprocessing extensions. The extensions record the internal identifiers of imported expenditure items in the source application or perform other user-defined processing before and at the end of the Import and Process Cost Transactions process. Review and update the transaction sources to call the transaction preprocessing and postprocessing extensions during the import and process cost transactions process.

- Processing set size: When transferring large number of transactions, you can reduce the impact of unexpected errors by processing transactions in sets. Define the set size by providing the set size.
- Preprocessing extension: Used for transaction validation before importing, uploading the transactions to Transaction Import Interface, or for other processing tasks before importing.
- Postprocessing extension: Used to record the transaction number of the imported expenditure items in the source application.

Documents

Documents represent the transactions that are imported to Oracle Fusion Project Costing. They are associated to a source. You specify the import and accounting options for transactions. Some of the options are interdependent.

- If the document entry is associated with the expenditure type class, Supplier Invoice or Expense Report, you cannot deselect the Accounted in Source Application and Import raw cost amounts options.
- If the document entry is associated with the expenditure type class, Burden Transactions, you cannot deselect the Import raw cost amounts or Import burdened amounts options.
- You can select the Import burdened amounts option only when the Import raw cost amounts option is selected.
- You can select the Create raw cost accounting journal entries option, if the Accounted in Source Application option is set to **No**.
- You cannot create a document for predefined transaction sources.

Document Entries

Document entries are a further breakdown of the document. They represent different types of transactions that come under a single, specific document. For the Burden Transactions expenditure type class, you specify the Import raw cost amounts and Import burdened amounts options at the document level; however, you cannot specify the Allow adjustments and Allow reversals options at the document entry level. Therefore, to allow adjustments and reversals, you either change the document options or select a different expenditure type class. You can define the following document entry options:

- Allow interface modifications: After importing the transactions, you can edit the unprocessed transactions.
- Create related items: When importing the transactions the Create Related Items extension is used to process the related items.
- Cross-charge transaction processing: You can allow cross-charge transactions processing.

Setting Up Transaction Sources: Points to Consider

Transaction sources identify the source of external transactions and determine how you import them into Oracle Fusion Projects.

Consider the following aspects when you set up transaction sources:

- Transaction Source Options
- Document Options
- Document Entry Options

- Predefined Transaction Sources

Transaction Source Options

You specify the following options when setting up transaction sources.

Option	Description
Processing Set Size	The number of records to be processed in each set. When processing a large amount of data, you can reduce the impact of unexpected errors by processing transactions in sets. The import process saves to the database after each set is complete. If an error occurs and a rollback is issued, only the transactions in the current set are affected.
Preprocessing Extension	Use the Manage Transaction Sources: Preprocessing Extension to perform custom logic at the beginning of Import and Process Cost Transactions process. For example, you can implement custom validation logic before processing the costs.
Postprocessing Extension	Use the Manage Transaction Sources: Postprocessing Extension to record the internal identifiers of imported expenditure items in the source application or perform other custom processing at the end of the Import and Process Cost Transactions process.

Document Options

You specify the following options when setting up transaction source documents.

Option	Description
Commitment Source	Identifies if this document is used for importing commitment transactions.
Commitment Type	Identifies type of the commitment transaction that can be imported using this document. Possible values are purchase order, purchase requisition, supplier invoice, or any other commitment transaction.
Import Raw Cost Amounts	Imports transactions with the raw cost amount of the transaction already calculated. The amount is not modified after the transaction is imported into Oracle Fusion Projects. Designating an imported transaction as costed does not affect burdening or accounting. Note If Burden Transaction is the expenditure type class for one or more document entries, you cannot disable the Import Raw Cost Amounts option for the document. If commitment source option is enabled, then import raw cost amounts option will be enabled but cannot be edited.

Import Burdened Amounts	Imports burdened costs for transactions. If selected, transactions that do not have a burdened cost amount are rejected. When you select this option, the Import Raw Cost Amounts option is automatically selected. Note If Burden Transaction is the expenditure type class for one or more document entries, you cannot disable the Import Burden Amounts option for the document.
Allow Duplicate Reference	Allows this document to have multiple transactions with the same original system reference. If you select this option, you cannot uniquely identify the item by source, document, and original system reference.

The following options are not applicable and cannot be edited for commitment document if commitment source option is enabled.

Option	Description
Allow Override of Person Organization	Allows the external application to provide an expenditure organization that is different from the owning organization of the person. If no expenditure organization is provided, the import process populates the expenditure organization with the owning organization of the person.
Reconcile with Source	Ties transactions from this document back to the transaction source application.
Archive After Import	Automatically archives successful imported transactions when the import process completes.
Accounted in Source Application	Controls the accounts that are imported and the fields that are required from the transaction source application.
Create Raw Cost Accounting Journal Entries	Interfaces cost accounting journals for the raw cost to the general ledger. Note Settings on the project type determine whether accounting journal entries for the burden cost and burdened cost are sent to the general ledger.
Create Adjustment Accounting Journal Entries	Interfaces adjustments to the general ledger.

Document Entry Options

You specify the following option when setting up transaction source document entries.

Option	Description
Expenditure Type Class	Expenditure type class used for this document entry. If the document is a commitment document, then the expenditure type class is set to Supplier Invoice and cannot be edited.

The following options cannot be edited if the document is a commitment document.

Option	Description
Allow Adjustments	Allow adjustments to imported transactions in Oracle Fusion Projects after the import process. Note If Burden Transaction is the expenditure type class, you cannot disable the Allow Adjustments option.
Allow Reversals	Allow reversals of expenditure batches or expenditure items for the document entry. Note So that the originating external application can be reconciled with Oracle Fusion Projects, you may need to create corresponding reversals in the external application. In addition, if both this option and the Import Raw Cost Amounts option are selected, you may need to create corresponding reversals in the external application for the transactions that you reverse in Oracle Fusion Projects. Note If Burden Transaction is the expenditure type class, you cannot select the Allow Reversals option.
Allow Interface Modifications	Allows modifications to rejected transactions after the import process completes. Allows modifications to pending transactions after they are loaded to the interface table and before the import process is submitted.
Create Related Items	Indicates that the Related Transaction Extension is used to create related transactions for expenditure items charged to projects.
Process Cross-Charge Transactions	If this option is selected for a document entry, Oracle Fusion Projects performs cross-charge processing for transactions that originate from the source, document, and document entry.

Predefined Transaction Sources

Oracle Fusion Projects provides a set of predefined transaction sources that you use to import transactions from other Oracle Fusion applications. In addition, Oracle Fusion Projects uses predefined transaction sources to import project allocations, capitalized interest transactions, and summarized burden transactions that are generated internally.

You can define additional transaction sources to import transactions from third-party applications. For example, you can define the transaction source Payroll to identify expenditure items imported from an external payroll application. You control the Transaction Import processing by the options that you select for each transaction source.

Predefined transaction sources exist for payables, cost management, projects, and purchasing.

Transaction Document Import and Accounting Options: Points to Consider

Specify the import and accounting options in the transaction document to define the way in which the transactions are imported and processed.

Transaction Import Options

The import options that you define for documents impact how the application imports transactions for that document. You specify the following import options for each document:

Import Options	Description
Import raw cost amounts	Select this option to import raw cost amounts on transactions from this document.
Import burdened amounts	Select this option to import burdened cost amounts on transactions from this document.
Allow duplicate reference	Select this option to allow the same original application reference for transactions from this document.
Allow override of person organization	Select this option to override the primary human resources assignment organization of the person on transactions from this document.
Reconcile with source	Select this option to reconcile transactions associated to this document in the source application.
Archive after import	Select this option to archive transactions from this document after importing them successfully.

Transaction Accounting Options

The accounting options that you define for documents impact how the application accounts transactions for that document. You specify the following accounting options for each document:

Accounting Options	Description
Accounted in source application	Select this option to specify that cost transactions can be accounted in the source application. That is, you can account for raw, burden, or burdened costs externally. Restriction If the raw cost, burden, or burdened cost is accounted in the source, then the respective general ledger accounts are required to import the transactions successfully.
Create raw cost accounting journal entries	Select this option to create raw cost accounting journal entries on transactions.
Create adjustment accounting journal entries	Select this option to create adjustment accounting journals entries on transactions.

Document and Document Entry Edit Options of Predefined and Third-Party Sources: Explained

You can define the transaction document and document entry options for transactions that originate from predefined sources and third-party applications sources. However, there is a limitation in editing these options. The options that you can edit for each source depend on whether the document entry is predefined for use with Oracle Fusion Applications or defined during implementation for use with third-party application sources.

Document Edit Options

The following table provides a list of document options that you can edit for predefined and third-party application source transactions.

Note

For third-party application source transactions, the following table details whether the options are editable after you have created and imported transactions for the source.

Document Options	Predefined Sources	Third-Party Application Sources
Archive After Import	Editable	Editable
Allow Duplicate Reference	Not editable	Not editable
Allow Override of Person Organization	Not editable	Not editable
Import Raw Cost Amount	Not editable	Not editable
Import Burdened Amount	Not editable	Not editable
Accounted in Source Application	Not editable	Not editable
Create Raw Cost Accounting Journal Entries	Not editable	Not editable

Create Adjustment Accounting Journal Entries	Editable	Editable
Reconcile with Source	Not editable	Editable

Document Entry Edit Options

The following table provides a list of document entry options that you can edit for predefined and third-party application source transactions.

Note

For third-party application source transactions, the following table details whether the options are editable after you have created and imported transactions for the source.

Document Entry Options	Predefined Sources	Third-Party Application Sources
Expenditure Type Class	Not editable	Not editable
Allow Adjustments	Editable	Editable
Allow Reversals	Not editable	Editable
Allow Interface Modifications	Not editable	Editable
Process Cross-Charge Transactions	Editable	Editable
Create Related Items	Editable	Editable

FAQs for Manage Project Transaction Sources

Can I assign a document to multiple sources?

You can have a document with the same name in multiple sources but you cannot share documents across sources. For example, a corporation with multiple time capture systems can associate a time card document with Oracle Fusion Projects and a non-Oracle application as sources. The rules on how these transactions are treated may differ depending on how they are processed in the source applications.

Can I create documents and document entries for predefined transactions sources?

No. You can create documents and document entries only for third-party transaction sources.

Can I delete transaction sources, documents, and document entries?

You can delete third-party transaction sources, documents, or document entries only if no cost transactions exist. However, you cannot delete the predefined transaction sources, documents, or document entries.

Can I allow adjustments and reversals for all transactions in the document entry?

No. You decide whether to allow transaction adjustments and reversals for each document entry that you create during implementation. However, you cannot define document entries to allow adjustments and reversals for transactions that are generated by the application such as allocation transactions, capital interest expenditure transactions, summarized burden transactions.

Can I change the source and document for transactions after exporting them to Oracle Fusion Projects?

No. You cannot change the source, document, and document entry after creating a transaction.

Project Costing Configuration: Define Capital Projects

Asset Cost Allocation Methods: Explained

The asset cost allocation method determines how indirect or common costs incurred on a project are allocated to multiple assets.

You can specify an asset cost allocation method to enable Oracle Fusion Projects to automatically allocate unassigned asset lines and common costs across multiple assets. Unassigned asset lines typically occur when more than one asset is assigned to an asset grouping level.

Project templates and projects inherit a default asset cost allocation method from the associated project type. You can override the default at the project level. If you use capital events to allocate costs, then you can also override the asset cost allocation method at the event level.

Asset Cost Allocation Methods

The following table describes the available asset cost allocation methods.

Method	Basis of Cost Allocation
Actual Units	Number of units defined for each asset
Client Extension	Rules defined specifically for your organization
Current Cost	Construction-in-process (CIP) cost of each asset
Estimated Cost	Estimated cost of each asset
Standard Unit Cost	Combination of the standard unit cost and the number of units defined for each asset
Spread Evenly	Equal allocation of cost to each asset

FAQs for Define Capital Projects

What's a standard unit cost method?

Standard unit cost method is one of the asset cost allocation methods that is used to allocate common and indirect costs to different assets. For example, you

can allocate amounts such as salaries, administrative overhead, and equipment charges across several assets.

A standard unit cost is defined for an asset book and asset category combination. When you use this method, Oracle Fusion Projects multiplies the standard unit cost times the actual units based on the asset book and asset category of each asset and it determines the proration basis for allocating costs. Optionally, you can override the asset cost allocation method when defining capital events.

Can I distinguish cost of removal and proceeds of sale amounts when processing retirement costs?

Yes. When capturing retirement costs in a capital project, enter proceeds of sale amounts using expenditure types specifically created for that purpose. Oracle Fusion Projects automatically classifies amounts for all other expenditure types associated with the retirement cost task as cost of removal.

Define Capitalized Interest

Capitalized Interest Setup: Explained

To set up capitalized interest, you must specify the following capitalized interest options to calculate and capitalize interest on construction-in-progress costs.

- **Capitalized Interest Rate:** Define thresholds when projects or tasks become eligible for interest calculation and selecting the basis attributes used to calculate interest amounts.
- **Capitalized Interest Rate Schedules:** Create capitalized interest rate schedules with multipliers for organization and interest rate combinations to calculate capitalized interest.
- **Capitalized Interest Rate Schedules for Project Types:** Review and update project types to specify the default rate schedule for a capital project type. The rate schedule that you specify for a project type is the default rate schedule for all projects that you create for this project type. You can specify to override the default rate schedule at the project level.
- **Capitalized Interest Generation on Project Status Controls:** Use project status controls to determine the capitalized interest calculation through the various stages of a project. You must determine the project statuses for which you want to allow the calculation of capitalized interest and update project status controls accordingly. You can review the statuses at a later stage and modify them as required.
- **Capitalized Interest Extensions:** Implement client extensions to customize and control how interest is capitalized and recorded on capital projects.

Capitalized Interest Rate Schedule Components: How They Work Together

Capitalized interest rate schedules help you maintain the interest rates at the organization level. If the capitalized interest rate is not defined for

the organization, the application automatically uses the next higher-level organization in the organization hierarchy.

Capitalized Interest Rate Schedule Components

The following components work together to define a schedule for capitalized interest rates. Provide the rate schedule attributes and then build new multipliers for the version to take effect. You can assign the interest rate schedule to a project type and allow the override of the assigned capitalized interest rate schedule at the project level.

Rate Schedule Components	Description
Default Organization Hierarchy	Organization hierarchy to assign rates to organizations. If there is no rate for an organization, the capitalized interest calculation uses the rate for the next higher-level organization in the organization hierarchy.
Hierarchy Version	The default version of the organization hierarchy to be applied to the schedule.
Hierarchy Start Organization	Start organization to indicate which branch of the organization hierarchy is used as the top of the hierarchy for assigning capitalized interest rates to organizations.
Hold from Build	Select this option to prevent the rate schedule version from being built, if version is not yet ready for the build.
Rate Multipliers	Specify rate multiplier for an organization and capitalized interest rate combination. Optionally, copy multipliers from other schedule version to this version and use it.

Note

To delete an interest rate schedule, you must build the schedule and then delete it.

Setting Up Capital Projects for Calculating Capitalized Interest: Points to Consider

To correctly calculate capitalized interest, ensure that correct capitalization options are defined at the project type, project template, and project levels. At the project level, verify the following:

- The project allows capitalized interest calculation
- The appropriate capital interest rate schedule and capitalized interest stop date are specified

Allowing Capitalized Interest for a Project

Indicate whether the project is eligible for capitalized interest. By default, this option is enabled for all capital projects. However, you can update the option as required.

Selecting a Capital Interest Schedule and Capital Interest Stop Date

Capitalized interest rate schedules to define rates of interest calculation for each organization. The default interest schedule is inherited from the project type. You can override it if the project type allows schedule changes at the project level.

FAQs for Define Capitalized Interest

What's a capital interest stop date?

Date that determines the accounting period up to which capital interest is calculated for a project or task.

For example, assume the stop date for your project is December 27, 2010 and your accounting periods are weekly. That is, the stop date falls in the fourth period of December. In such a case, capital interest is calculated only up to the third period in December 2010.

Project Costing Configuration: FAQs for Define Expenditure Extensions

How can I create related expenditure items?

When you define a document entry, select the **Create related items** option. You can create related items for any type of transactions from third-party applications. The Import and Process Cost Transactions process creates related items based on the user-defined specifications in the client extension. All related items are associated with a source transaction. Use related items to process raw cost amount separately from the source transaction raw cost amount.

However, you cannot create related items, if the document entry is associated with allocation, capital interest, and application-generated summarized burden expenditure transactions.

Project Costing Configuration: Define Project Costing Integrations

Oracle Fusion Project Costing Integration with Oracle Fusion Applications: How They Work Together

Oracle Fusion Project Costing fully integrates with Oracle Fusion Purchasing, Oracle Fusion Self Service Procurement, Oracle Fusion Receipt Accounting, Oracle Fusion Expenses, Oracle Fusion Payables, Oracle Fusion Inventory Management, and Oracle Fusion Cost Management and enables you to capture and transfer project-related transactions. For example when you purchase goods, the project information is carried from the requisition to purchase orders to supplier invoices to finally project expenditure items.

Oracle Fusion Project Costing also integrates with Oracle Fusion Assets to capture capital assets and retirement adjustment costs. Oracle Fusion Project Costing fully integrates with Oracle Fusion Subledger Accounting so that you can create accounting for your project-related transactions.

Implementing Oracle Fusion Payables

Implement Oracle Fusion Payables to enter project-related supplier invoices in Oracle Fusion Payables and to import project-related expense reports from Oracle Fusion Expenses. You use supplier and invoice information in Oracle Fusion Payables to create expenditure items for projects in Oracle Fusion Projects.

When the primary accounting method is accrual basis accounting, you transfer invoice distributions and payment discounts as actual costs. When invoices are matched to receipt accrual purchase orders, Oracle Fusion Supply Chain Management transfers invoice variances to Oracle Fusion Projects. For receipt accruals, Oracle Fusion Payables transfers discounts to Oracle Fusion Projects.

Implementing Oracle Fusion Purchasing, Oracle Fusion Self Service Purchasing, Oracle Fusion Receipt Accounting, and Oracle Fusion Cost Management

Implement Oracle Fusion Purchasing and Oracle Fusion Self Service Purchasing to enter project-related requisitions, requests for quotations, and purchase orders, and then report them as outstanding committed costs of requisitions and purchase orders on your projects.

Implement Oracle Fusion Receipt Accounting to create receipts against purchase orders. Thereafter, Oracle Fusion Cost Management transfers project-related

receipt accruals as actual supplier costs. When the primary accounting method is accrual basis accounting, you transfer the costs associated with the receipt as actual costs. Oracle Fusion Cost Management transfers the variances for receipt accruals by accumulating the costs from Oracle Fusion Payables and then transfers them to Oracle Fusion Projects.

Implementing Oracle Fusion Inventory Management

Implement Oracle Fusion Inventory Management to order and receive items into inventory before assigning them to a project. You can capture project information for miscellaneous transactions and movement requests as you take items out of or receive items into Oracle Fusion Inventory Management. When you enter project-related transactions in Oracle Fusion Inventory Management, you enter the project information on the source transaction. Oracle Fusion Cost Management transfers project-related miscellaneous inventory issues and move orders to Oracle Fusion Projects.

Implementing Oracle Fusion Expenses

Employees and contingent workers can enter and submit expense reports. Oracle Fusion Expenses integrates with Oracle Fusion Payables to provide quick processing of expense reports for payment. You can create project-related expense reports in Oracle Fusion Expenses and transfer to Oracle Fusion Payables and then to Oracle Fusion Project Costing.

Implementing Oracle Fusion Assets

Implement integration with Oracle Fusion Assets to collect construction-in-progress and expense costs in Oracle Fusion Project Costing for each asset you are building. You can then update your fixed asset records when assets are ready to be placed in service or retired. In addition, you can perform retirement cost processing to capture retirement-work-in progress costs associated with the retirement of assets in Oracle Fusion Assets.

Implementing Oracle Fusion Subledger Accounting

Oracle Fusion Subledger Accounting is the single source of all internally derived accounting. Oracle Fusion Project Costing seamlessly integrates with Oracle Fusion Subledger Accounting for accounting costs. After the accounting events are generated in Oracle Fusion Projects, the subledger accounting entries are created and then transferred to the Oracle Fusion General Ledger.

For transactions imported from other Oracle Fusion applications, such as Oracle Fusion Payables, Oracle Fusion Receipt Accounting, and Oracle Fusion Cost Management, you can view accounting entries created in Oracle Fusion Subledger Accounting without navigating to the source application. For transactions imported from non-Oracle applications, you can view the accounts imported into Oracle Fusion Project Costing without navigating to the third-party application.

Capturing Project Costs: Explained

Capture project-related costs from both Oracle Fusion Applications and third-party applications and then transfer them to Oracle Fusion Project Costing. You can capture costs manually by creating uncosted, costed, and accounted transactions for third-party application sources in Oracle Fusion Project Costing.

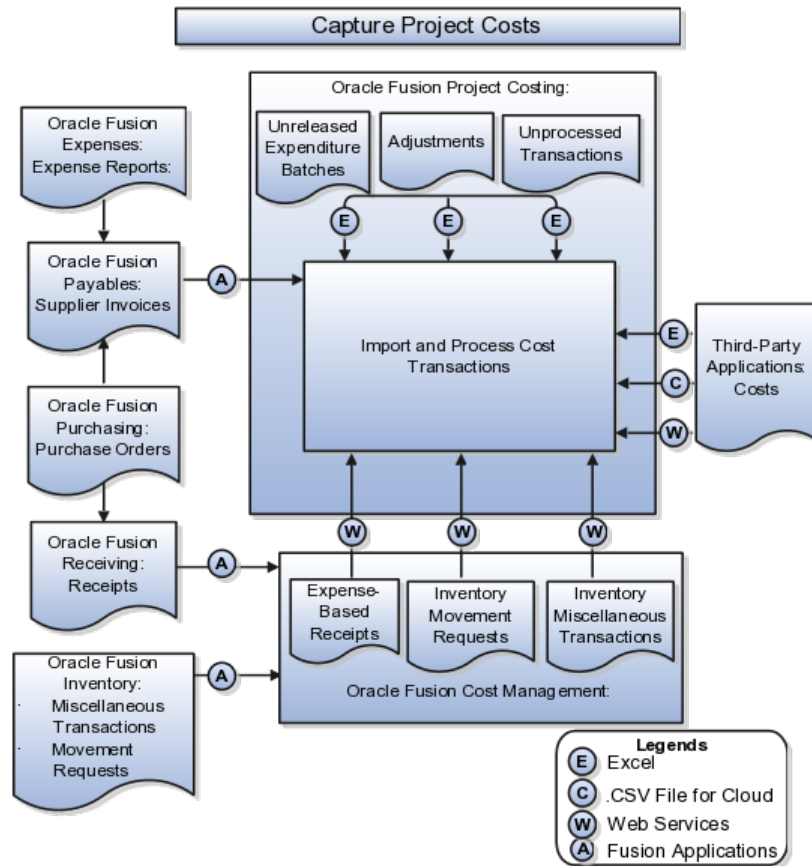
Transaction Sources

Costs are created in internal and external applications before being processed. The following table lists cost types and the corresponding source applications.

Source Name	Type of Transactions
Oracle Fusion Expenses	Expense Reports Note Expense report transactions are imported from Oracle Fusion Payables as actual costs to Oracle Fusion Project Costing.
Oracle Fusion Payables	Supplier Invoices
Oracle Fusion Purchasing	• Purchase Orders • Purchase Requisitions Note Purchase orders and purchase requisitions are available as committed costs for reporting in Oracle Fusion Project Costing.
Oracle Fusion Receiving	Receipts
Oracle Fusion Inventory	• Miscellaneous Transactions • Movement Requests
Oracle Fusion Cost Management	• Expense-Based Receipts • Inventory Miscellaneous Transactions • Inventory Movement Requests
Oracle Fusion Project Costing	• Costs in Unreleased Expenditure Batches • Adjustment Transactions • Unprocessed Transactions
Third-Party Applications	External Costs imported using desktop Excel integration, Web services, or Oracle Cloud interface.

Capture of Costs

Capture various types of costs from internal and external applications, and then transfer them to Oracle Fusion Project Costing.



The following table shows various sources of transactions and how they are exported to Oracle Fusion Project Costing.

Source of Transaction	Description
Capture Costs from other Oracle Fusion applications	Enter and process project-related transactions and then submit the Import and Process Cost Transactions process. For example, you enter invoices with project-related distributions in Oracle Fusion Payables, validate, account, and then import them to Oracle Fusion Project Costing.

Capture Costs from Third-Party Applications	Import costs using one of the following: • Desktop Excel integration • Web services • Load data to the interface table in Oracle Cloud Note You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process, which are both part of the External Data Integration Services for Oracle Cloud feature. For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository for Oracle Fusion Applications.
Create individual third-party transactions in the application	You can create individual transactions with third-party application source directly from the Manage Unprocessed Transactions page in Oracle Fusion Project Costing. For example, this approach works well if you are near a period close and have to create a few individual third-party transactions rather than waiting for the transactions to come from the third-party application.

Capture of Additional Transaction Attributes

Use the Cost Collection flexfield to capture product-specific attributes on actual cost transactions and cost commitment transactions. You can manage naming, validation, and ordering of these attributes within each of the documents that capture them such as expense reports, purchase orders. You can capture, store, display, search, and report project-related attributes in the transaction source applications.

Deriving Project-Related Accounts for Oracle Fusion Applications: Explained

Account rules specify how the Account Combination is derived on subledger journal entry lines. You can specify the conditions under which a rule becomes applicable. Using this feature, you can develop complex rules for deriving accounts under different circumstances. Accounts imported from third-party applications or the Oracle Application Development Framework Fusion Desktop Integration are available as sources in Oracle Fusion Subledger Accounting.

You can optionally create account rules with your specifications. If you define an account rule for an account combination, then the rule determines each segment of the Accounting flexfield. If you define an account rule for a segment, then the rule determines the value for a single Accounting flexfield segment. You can use both segment and account combination rules to derive a single account. If you assign both types of account rules to a single journal line definition, then Oracle Fusion Subledger Accounting uses the account segment rules first and then takes the remaining values from the account combination rule.

Deriving Projects-Related Accounts

The only method to derive project-specific accounts is to use project sources in the accounting method. You define account rules to derive project-related accounts for the following Oracle Fusion applications:

- Oracle Fusion Purchasing: Project-specific accounts, such as the purchasing charge account and accrual account, are derived by using transaction account derivation rules
- Oracle Fusion Cost Management: All project-specific accounts are derived during accounting creation in Oracle Fusion Subledger Accounting.
- Oracle Fusion Payables: The project-specific accounts are not derived until the journal entries are created within Oracle Fusion Subledger Accounting. Oracle Fusion Expenses need not derive project-specific accounts because they are derived after the records are transferred to Oracle Fusion Payables.
- Oracle Fusion Receivables: AutoAccounting does not generate accounts for invoices originating from Oracle Fusion Projects. Project-specific accounts are derived during accounting creation in Oracle Fusion Subledger Accounting.

You must update the account rules to derive project-specific accounting. Create project-specific rules by evaluating the Project Identifier. Derive a project-specific account combination or override a single account segment with a project-specific value. Use more than 100 project-specific sources to create mapping sets and account rule conditions. Examples of these sources include:

- Billable Indicator
- Capitalizable Indicator
- Retirement Indicator
- Project Type
- Expenditure Type
- Expenditure Type Descriptive Flexfield Attribute 1
- Task Descriptive Flexfield Attribute 1

FAQs for Define Purchasing Integration

Where do I provide project information for project-related requisitions and supplier invoices?

You enter project information at the distribution line level for project-related requisitions and purchase orders in Oracle Fusion Purchasing, and for project-

related supplier invoices in Oracle Fusion Payables. For requisitions, the requisition distribution attributes default from what is specified during the implementation. For purchase orders, the purchase order attributes default from the purchase order line and the purchase order line attributes default from the purchase order header. The distribution level values are used for validation and import.

FAQs for Define Payables Integration

How can I validate distribution sets for projects information?

Oracle Fusion Projects performs validations on Oracle Fusion Payables distribution sets for payables invoices at the time you create the actual distribution set lines. It validates the project and task number during the invoice validation.

Distribution sets are typically used on recurring transactions, and the associated project does not have transaction controls. When you create a distribution set in Oracle Fusion Payables, the distribution set line is not validated against the project transaction controls in Oracle Fusion Projects because you do not enter an expenditure item date, which is required for transaction control validation. The expenditure item date is not provided because you use the distribution sets for an indefinite period of time.

FAQs for Define Inventory Integration

How can I define bill rates for inventory items?

You can enter cost markups in the nonlabor rate schedule instead of rates for expenditure types that are related to inventory items.

Alternatively, if you enter a bill rate for an expenditure type that relates to inventory items, then the base unit of measure for inventory transactions reported under the expenditure type must be the same as the unit of measure for the expenditure type. If the base unit of measure for an inventory transaction differs from the unit of measure for the expenditure type, the Generate Revenue process reports an error and does not process the transaction.

Project Control Configuration: Overview

Budgeting and Forecasting Security: Explained

Budget and forecast security is determined by a combination of project role, security roles (job and duty roles) and entitlements, and workflow setup.

The following sections describe the entitlements required to perform various steps in the budget creation, submission, and approval process. They also describe the impact of using workflow to manage status changes.

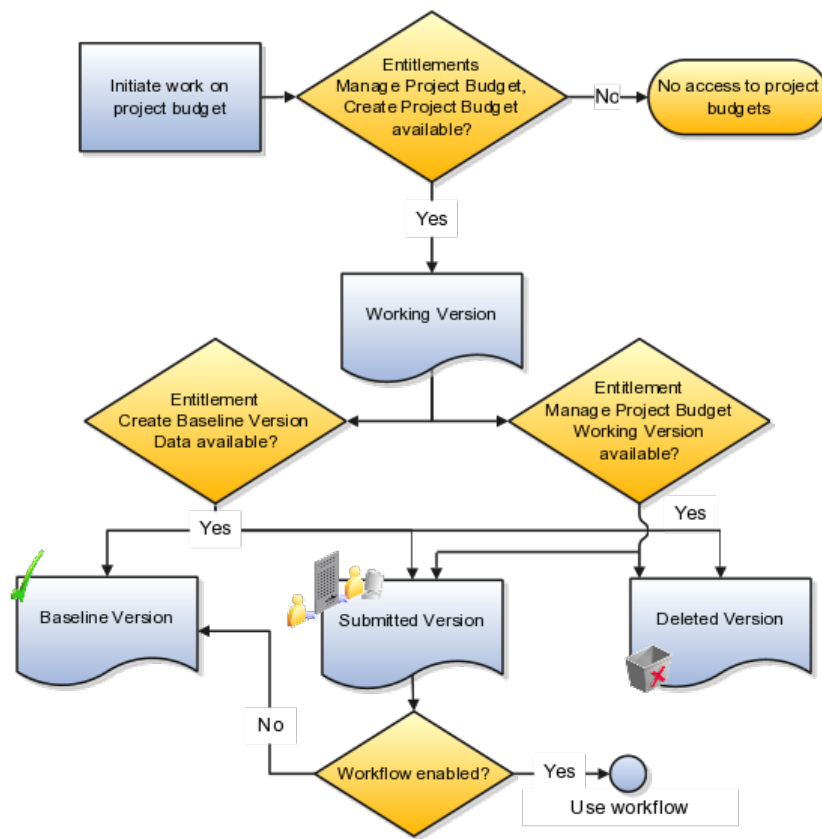
Note

The entitlements and workflow setup for forecasting mirrors that for budgeting.

Creating and Submitting a Budget Version

The following text and table describe the access required to create and submit a budget version.

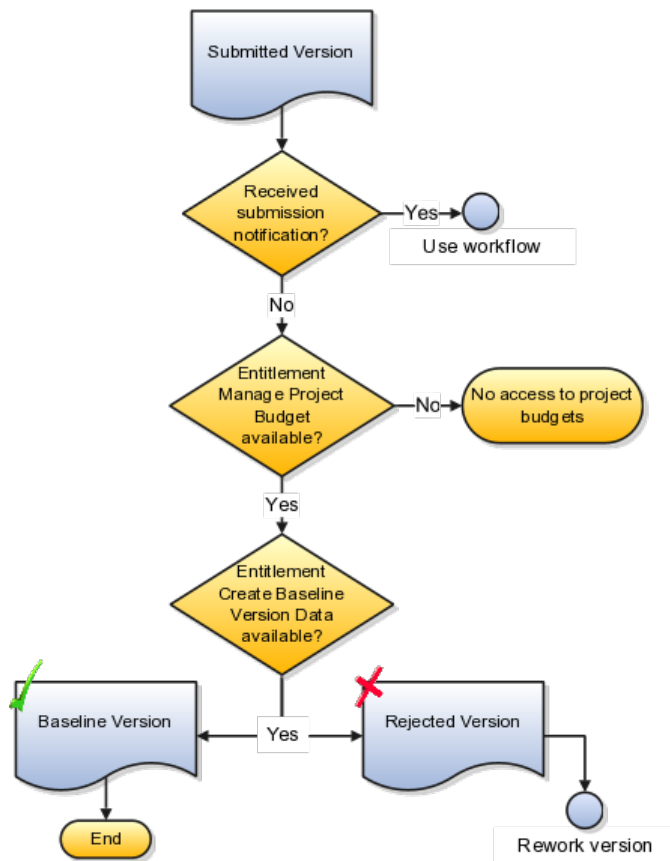
Step	Action	Entitlement
1	Access budget versions for a project	Manage Project Budget
2	Create a budget version	Create Project Budget Note The entitlement required for editing budget versions in Excel is Manage Project Budget Excel Integration.
3	Submit working version	Manage Project Budget Working Version
4	Create baseline directly	Create Baseline Version Data Note Project managers may select to create a baseline directly instead of submitting a version for approval first.



Creating a Baseline for a Budget Version

The following text and table describe the access required to create a baseline for a budget version or reject it.

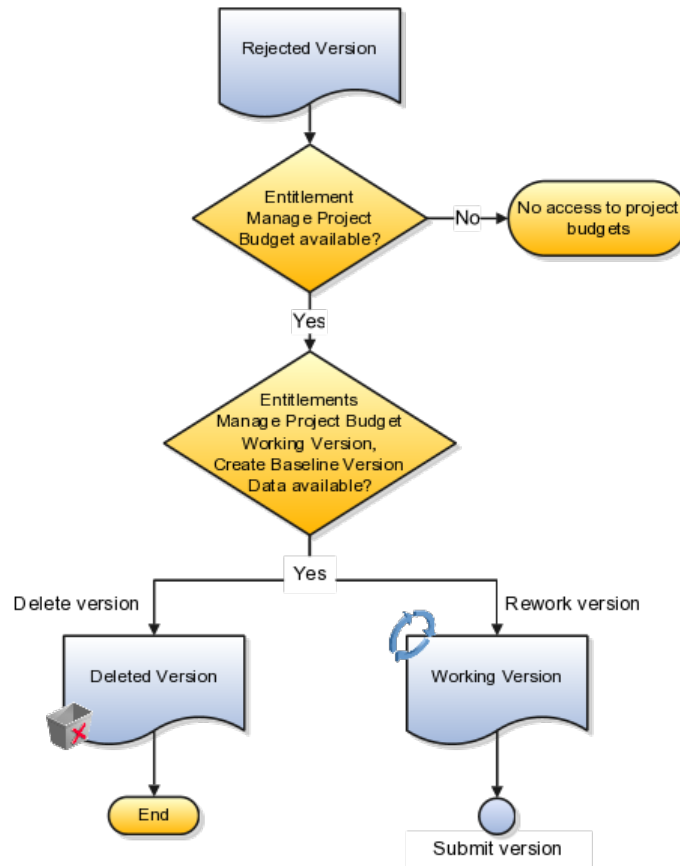
Step	Action	Entitlement
1	If using workflow, receive notification of budget submission	NA (Approver e-mail ID is entered manually by users)
2	Access budget versions for a project	Manage Project Budget
3	Create baseline or reject budget	Create Baseline Version Data



Reworking a Rejected Budget Version

The following text and table describe the access required to required to rework a rejected version (set it back to Working status) or delete it, if it is no longer required.

Step	Action	Entitlement
1	Access budget versions for a project	Manage Project Budget
2	Rework working version	Manage Project Budget Working Version
3	Delete working version	Manage Project Budget Working Version



Budget and Forecast Workflow: Explained

Use Business Process Engineering Language (BPEL) workflows to manage budget and forecast approvals. To do so, select to use workflow for status changes when creating or editing a financial plan type.

The following is a description of security considerations, approval rules, and the workflow process.

Addressing Security and Setting Approval Rules

Project managers and project administrators can create budget or forecast versions and submit them for approval. However, only the designated project manager for the project can approve budget or forecast versions.

Submitted versions undergo a single level of approval. However, during implementation, you can define approval rules based on the following parameters:

- Total raw cost
- Total burdened cost
- Labor effort
- Equipment effort
- Margin percentage
- Margin

For example, set rules like the following:

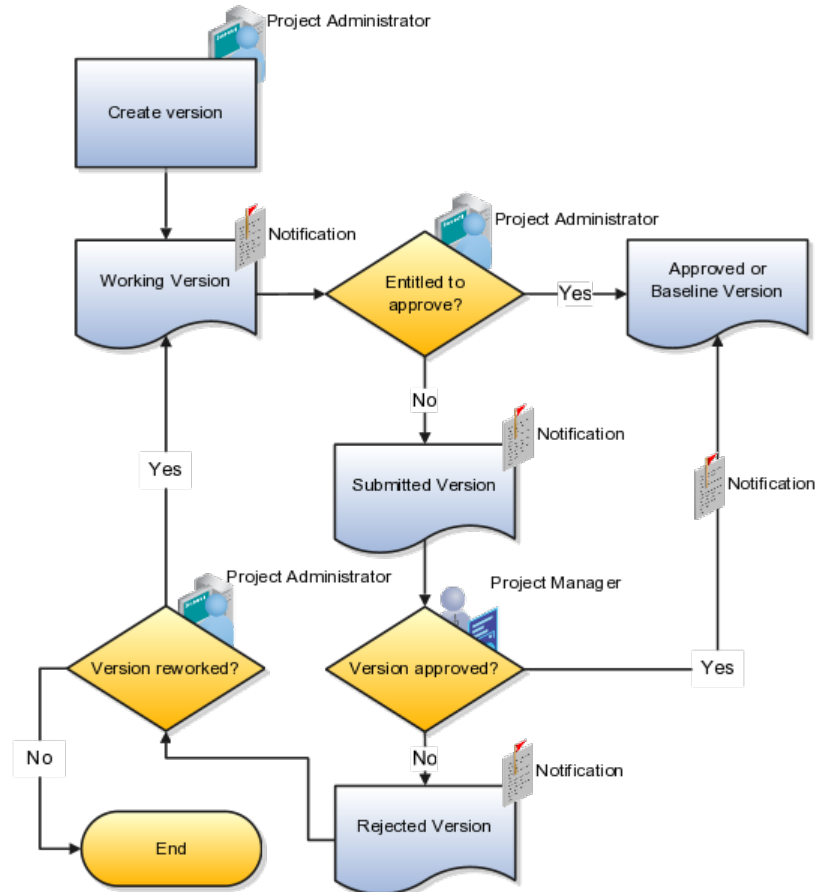
- If total burdened cost is less than or equal to \$50,000, then the project administrator can approve budget versions.

- If total burdened cost is greater than \$50,000, then the project manager must approve budget versions.

Understanding the Budget and Forecast Status Flow

The following table and graphic describe the stages in the budget and forecast status flow.

Action Performed	Status	Notification Sent To	Action Required
Create version	Working	Creator (requester)	None.
Submit version	Submitted	Requester and approver	Approver can approve or reject version.
Approve version	Approved or Baseline	Requester and approver	None.
Reject version	Rejected	Requester and approver	None. Requester can optionally rework version.
Rework version	Working	Requester and approver	None.



Project Roles in Budgeting and Forecasting: Explained

Default project roles, including project application administrator, project manager, and project administrator can perform specific budgeting and forecasting tasks.

Default Access for Roles

The following table describes the default access for each role.

Entitlement Area	Project Application Administrator	Project Manager	Project Administrator	Notes
Edit budget and forecast planning options	Yes	No	No	Project application administrators set planning options for financial plan types. Project managers and accountants can view planning options at the version level.
Create versions	No	Yes	Yes	None
Generate versions	No	Yes	Yes	Applies to budgets generated when setting a baseline for the project plan. Project administrators cannot generate forecasts from progress (they do not have access to publish progress.)
Edit versions in Excel	No	Yes	Yes	None
Submit versions	No	Yes	Yes	None

Approve versions	No	Yes	No	A team member with project manager security role access must be manually designated as the project manager for the project. Note Project creators are not automatically designated as project managers for their projects. If workflow is enabled, then approval takes place through a notification. Menu actions are not available on the budgeting and forecasting pages.
Review versions	No	Yes	Yes	None

FAQs for Project Control Configuration: Overview

What happens when a budget or forecast version is submitted?

When you submit a current working version of a budget or forecast for approval, the version status changes to Submitted. If the project manager approves the version, then the version status changes to Current Baseline or Current Approved, as appropriate. Simultaneously, a current working version is also created. If you use Business Process Engineering Language (BPEL) workflow for status changes, then submitting a budget or forecast triggers a notification to the project manager and the requester. Requesters must manually specify approver details.

Project Control Configuration: Manage Period Profiles

Period Profiles: Explained

Period profiles specify how periods are grouped and displayed when you edit financial or project plans that allow entry of amounts based on a calendar.

Important

Period profiles do not affect the periods for which you enter amounts. That is determined by the start and end dates of the financial or project plan line.

You select a period profile when specifying plan settings for a financial plan type or a project plan type. With the appropriate access, you can override this selection when creating budget or forecast versions for a project. Similarly, you can override the period profile associated with the project plan type at the project template or project level.

Period profiles are based on groups of periods from either an accounting calendar or a project accounting calendar. You can define an unlimited number of period groupings of varying duration in a period profile.

Predefined Period Profiles

Oracle Fusion Projects provides two predefined period profiles: one based on the accounting calendar and the other based on the project accounting calendar. Both have 52 single period groupings. That is, each period grouping contains one period of a week's duration.

Selecting a Current Period for a Period Profile: Example

You designate one period grouping in a period profile as the current period. The current period provides a reference point for grouping historical, current, and future period amounts.

When reviewing financial or project plans, the current planning period determines the period grouping with the current period. Periods before and after the current period are grouped using the period groupings. Amounts for periods outside the range specified by the period profile are summed and displayed as total amounts for a preceding period or succeeding period.

Scenario

The following table describes a period profile set up to accommodate detailed and summary-level planning for long-term projects. This period profile enables entry of amounts for a mix of monthly, quarterly, semiannual, and annual periods for a span of five years.

Period Grouping	Number of Periods	Year
1	12	1
2	6	2
3	3	2
4	3	2
5	1	3
6 (current period)	1	3
7	1	3
8	1	3
9	1	3
10	1	3
11	3	3
12	3	3
13	12	4
14	12	5

Assume that the period profile is associated with a project with the following details:

- Start Date: July 1, 2005
- Duration: 10 years
- Current Planning Period: Aug-2010

When you review financial or project plans, information appears as follows:

Period or Period Group	Number of Periods	Duration
Preceding	36	July 2005 to June 2008
1	12	July 2008 to June 2009
2	6	July 2009 to December 2009
3	3	January 2010 to March 2010
4	3	April 2010 to June 2010
5	1	July 2010
6	1	August 2010

7	1	September 2010
8	1	October 2010
9	1	November 2010
10	1	December 2010
11	3	January 2011 to March 2011
12	3	April 2011 to June 2011
13	12	July 2011 to June 2012
14	12	July 2012 to June 2013
Succeeding	36	July 2013 to June 2015

Using Period Profiles: Examples

Period profiles specify how periods are grouped and displayed when you edit financial or project plans that allow entry of amounts based on a calendar.

The following are examples of defining period profiles for planning short-term and long-term projects. Both examples assume the use of one-month periods from the accounting calendar.

Period Profiles for Short-Term Projects

The following table describes a period profile set up to accommodate detailed planning for short-term projects. This period profile enables entry of amounts by month for a period of one year.

Period Grouping	Number of Periods
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1

Period Profiles for Long-Term Projects

The following table describes a period profile set up to accommodate detailed and summary-level planning for long-term projects. This period profile enables

entry of amounts for a mix of monthly, quarterly, semiannual, and annual periods for a span of five years.

Period Grouping	Number of Periods	Year
1	12	1
2	6	2
3	3	2
4	3	2
5	1	3
6	1	3
7	1	3
8	1	3
9	1	3
10	1	3
11	3	3
12	3	3
13	12	4
14	12	5

Project Control Configuration: Manage Spread Curves

Spread Curves: Explained

Spread curves let you distribute quantity, cost, and revenue amounts automatically across accounting or project accounting periods. You assign a spread curve to each resource class. Planning resources (in the planning resource breakdown structure) inherit the spread curve setting from the associated resource class. You can change the spread curve for the planning resource and for any corresponding task assignments, or budget or forecast lines.

You can create spread curves, use predefined spread curves, or edit them as required. The following is a description of spread curve components (spread points and distribution factors) and predefined spread curves.

Spread Curves, Spread Points, and Distribution Factors

Spread curves other than Daily Spread Basis and Even contain 10 spread points. Specify distribution factors for any combination of the spread points.

Note

When using a daily spread basis, the application allocates amounts to each period based on the ratio of the days in the period to the duration of the task assignment.

Spread points are distributed proportionately across periods during financial or project planning. For example, if amounts are to be spread across four periods, Oracle Fusion Projects allocates the combined value of 2.5 spread points to each period. The spread points for each period are the total number of spread points divided by the total number of periods ($10 / 4$).

Distribution factors are prorated according to the spread points allocated to each period. For example, if \$100 is to be spread across four months for a planning resource that uses an even spread curve (where amounts are distributed evenly), the application assigns each period \$25. The amount assigned to each period is the total amount multiplied by the spread points for the period ($2.5 * 10$).

Important

Spread points without values are assigned a zero distribution factor and hence corresponding periods are not allocated any amounts.

Predefined Spread Curves

The following table lists predefined spread curves provided by Oracle Fusion Projects.

Name	Description	Distribution Factors
Even	Ensures a linear distribution of financial or project plan values across periods.	10-10-10-10-10-10-10-10-10-10
Prorated Even	Ensures a linear distribution of financial or project plan values across periods, with an exception of the first period and last period in the financial plan. Financial or project plan values for the first period and last period are prorated based on the number of days in the period.	10-10-10-10-10-10-10-10-10-10
Back Loaded	Ensures a back-loaded distribution of financial or project plan values across periods. Assigned amounts increase over succeeding periods.	0-5-10-15-20-25-30-35-40-45
Front Loaded	Ensures a front-loaded distribution of financial or project plan values across periods. Assigned amounts decrease over succeeding periods.	45-40-35-30-25-20-15-10-5-0
S Curve	Ensures an S-shaped distribution of financial or project plan values across periods.	18-10-8-10-15-17-18-17-15-8
Bell Curve	Ensures a bell-shaped distribution of financial or project plan values across periods. Assignment of plan values is highest in the middle periods.	0-4-10-12-14-12-10-4-0-0
Daily Spread Basis	Ensures the spread is based upon the number of days in each financial period throughout the duration of the task assignment. Amounts are proportionally distributed throughout all periods for the duration of the task assignment.	None

Project and Financial Plan Period Amounts: How They Are Calculated Using Daily Spread Basis

Assign the Daily Spread Basis spread curve to a resource class or planning resource to proportionately distribute budget, forecast, or project plan amounts

across periods based on the ratio of the days in each period to the duration of the task assignment.

Settings That Affect Amount Distribution

You cannot define spread points for the Daily Spread Basis spread curve. Therefore, distribution factors are not calculated. Task assignment start and finish dates determine the number of days in each period, including the first and last periods, and consequently the allocation factor for each period.

Note

Assignment start and finish dates are included in the number of days in the period.

How Daily Spread Basis Amounts Are Calculated

When calculating period amounts, Oracle Fusion Projects performs the following steps:

1. Determines the number of days in the first and last period within the task assignment duration using assignment start and finish dates.
2. Determines the number of days in the other periods within the assignment duration.
3. Determines the total number of days for the duration of the task assignment.
4. Calculates the allocation factor for each period using the following formula:

$$\text{Period Allocation Factor} = \text{Number of Days in Period} / \text{Task Assignment Duration}$$

5. Calculates the periodic amount using the following formula:

$$\text{Amount} = \text{Period Allocation Factor} * \text{Total Resource Cost or Revenue}$$

Example: Standard Accounting Calendar

In this example, a company uses an accounting calendar with periods that are identical to calendar months. A resource is assigned to a task for 121 days, from February 21 until June 21.

The following table shows how the task assignment days are determined, and the resulting allocation factors.

Month	Period Dates	Days in Period	Task Assignment Days	Period Allocation Factor
January	January 1 through January 31	31	0	0
February	February 1 through February 28	28	8	$8 / 121 = 0.0661$
March	March 1 through March 31	31	31	$31 / 121 = 0.2561$
April	April 1 through April 30	30	30	$30 / 121 = 0.2479$

May	May 1 through May 31	31	31	$31 / 121 = 0.2561$
June	June 1 through June 30	30	21	$21 / 121 = 0.1735$
			121	$121 / 121 = 1$

Example: 4-4-5 Accounting Calendar

In this example, a company uses a 4-4-5 accounting calendar, with four weeks in the first and second months of the quarter, and five weeks in the third month of the quarter. A resource is assigned to a task from February 21 until June 21.

The following table shows how the task assignment days are determined, and the resulting allocation factors.

Month	Weeks in Period	Week Number	Ledger Start Date	Ledger End Date	Days in Period	Days in Ledger	Task Assignment Days	Period Allocation Factor
January	4	1	1	7	7			
		2	8	14	7			
		3	15	21	7			
		4	22	28	7	28	0	0
February	4	1	29	4	7			
		2	5	11	7			
		3	12	18	7			
		4	19	25	7	28	5	$5 / 121 = 0.0413$
March	5	1	26	4	7			
		2	5	11	7			
		3	12	18	7			
		4	19	25	7			
		5	26	1	7	35	35	$35 / 121 = 0.2892$
April	4	1	2	8	7			
		2	9	15	7			
		3	16	22	7			
		4	23	29	7	28	28	$28 / 121 = 0.2314$
May	4	1	30	6	7			
		2	7	13	7			
		3	14	20	7			
		4	21	27	7	28	28	$28 / 121 = 0.2314$
June	5	1	28	3	7			
		2	4	10	7			
		3	11	17	7			

		4	18	24	7			
		5	25	1	7	35	25	$25 / 121 = 0.2066$
							121	$121 / 121 = 1$

Calculating Distribution Factors for Spread Curves: Examples

Distribution factors are prorated according to the spread points allocated to each period.

For example, if \$100 is to be spread across four months for a planning resource that uses a prorated even spread curve (where amounts are distributed evenly), then each period is assigned \$25 each. That is, 10 spread points spread over 4 months equals 2.5 spread points per period. Each spread point has a distribution factor of 10.

The following is a description of how distribution factors are calculated for full or partial periods.

Calculating Weighted Distribution Factors

To continue our previous example: Say our planning resource was using a back-loaded spread curve rather than a prorated even spread curve.

Note

Default distribution factors for a back-loaded spread curve are as follows: 0-5-10-15-20-25-30-35-40-45. Hence the total distribution for the spread curve is 225.

The following table describes how distribution factors are determined and amount allocated over the four planning periods.

Period	Distribution Factor Calculation	Weighted Distribution Factor	Distribution Percentage	Distributed Amount
1	Distribution factors assigned to spread points 1 and 2 plus half of the distribution factor assigned to spread point 3: $0 + 5 + (0.5 * 10)$	10.0	4.44%, $(10.0 / 225)$	\$4.44
2	Half of distribution factor assigned to spread point 3 plus distribution factors assigned to spread points 4 and 5: $(0.5 * 10) + 15 + 20$	40.0	17.78%, $(40.0 / 225)$	\$17.78

3	Distribution factors assigned to spread points 6 and 7 plus half of the distribution factor assigned to spread point 8: $25 + 30 + (0.5 * 35)$	72.5	32.22%, $(72.5/225)$	\$32.22
4	Half of distribution factor assigned to spread point 8 plus distribution factors assigned to spread points 9 and 10: $(0.5 * 35) + 40 + 45$	102.5	45.56%, $(102.5/225)$	\$45.56
	Totals	225	100%	\$100

Deriving Spread Point Values and Prorating Distribution Factors for Partial Periods

Transaction start dates associated with a planning resource or task frequently do not coincide with the start or end dates of a period. In such a case, the actual number of planning resource or task transaction days determines how spread points and constituent distribution factors are allocated to full and partial periods.

Assume that the dates for a task assignment cover only 15 days of the first month (a 30-day month) of a four-month planning period. That first month represents the value of 0.5 spread points.

In such a case, the spread point value for each full period is calculated by dividing the total number of spread points (10) by the number of periods corresponding to the transaction (3.5). In other words, spread point values are as follows:

- Full period : $10/3.5 = 2.8571$
- Partial Period: $(10/3.5) * 0.5 = 1.4287$

Project Control Configuration: Manage Financial and Project Plan Types

Financial and Project Plan Types: Explained

Financial plan types contain default setup information and planning options that you use for creating different types of budgets or forecasts. Similarly, project plan types contain default information used for creating a project plan and capturing progress.

When creating budget or forecast versions for a project, you must select an appropriate financial plan type. Versions inherit planning options from the financial plan type. Depending on access levels, you can change some settings.

You associate one project plan type to a project template and override planning options if required. Projects created using the template inherit the updated planning options. You can revise these options at the project level, or even replace the project plan type.

Financial and Project Plan Setup Options

The following is a description of the basic budget, forecast, or project plan setup options that determine how a plan type is used in the context of a project. Except for third-party scheduling, these options are not editable at the project level.

Option	Location	Description
Planning amounts	Financial plan type	Indicates that the financial plan type supports the creation of versions with the following amounts: • Cost amounts • Revenue amounts • Both cost and revenue amounts • Either cost or revenue amounts

Approved budget or primary forecast	Financial plan type	Determines whether a financial plan type is used for creating approved budget versions or primary forecast versions that are used for plan comparison or project performance reporting.
Default financial plan type	Financial plan type	Determines whether the financial plan type is the default selection when you create budget or forecast versions.
Workflows	Financial plan type	Enables the use of a workflow for managing budget or forecast status changes.
Third-party scheduling software	Project plan type	Indicates whether project planning is performed in Microsoft Project. If third-party scheduling is disabled in the project plan type, you can use the associated project or project template to create a project in Microsoft Project. However, you cannot export the new project or link it to one created in Oracle Fusion Projects. Note The third-party scheduling option does not affect integration with Primavera P6 Enterprise Project Portfolio Management.
Multiple transaction currencies	Financial and project plan type	Enables entry of plan amounts in currencies other than the project currency.

Planning Amounts in Financial Plan Versions: Critical Choices

For each financial plan type, you select the planning amounts included in the financial plan versions created using the plan type.

Options include the following:

- Cost amounts only
- Revenue amounts only
- Both cost and revenue amounts
- Either cost or revenue amounts

Restriction

You can plan for revenue only if you are licensed to use Oracle Fusion Project Billing.

Planning for Cost Only or Revenue Only

If you select to plan only for cost or revenue, then all budget or forecast versions created for the financial plan type contain only those amounts.

When you review versions created for cost-only financial plan types, margin values and other comparisons dependent on revenue amounts are not available. Similarly, cost amounts are unavailable during review of versions of revenue-only financial plan types.

Planning for Both Cost and Revenue

You can select to plan for cost and revenue together. In such a case, each budget or forecast version created for the financial plan type contains both cost and revenue amounts.

Planning for either Cost or Revenue

If you select to plan for cost and revenue separately, then each budget or forecast version created for the financial plan type can contain either cost or revenue amounts. When you review cost versions, select any revenue version created for the same financial plan type as the source for revenue amount for use in plan comparison.

Summarized Financial Plan Types: Explained

Summarized financial plan types are financial plan types whose previous and current approved versions (for forecasts) or original and current baseline versions (for budgets) are used in summarization of project performance data.

Particular financial plan types are included in summarization by default, while you must manually select others.

Default Financial Plan Types

Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Important

A budget or forecast financial plan type may support both cost and revenue in one version.

User-Selected Financial Plan Types

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

Tip

You can include a financial plan type before it is used on a project for creating a version.

You can replace a user-selected financial plan type until project performance data is summarized for reporting. After that, you can only disable the financial plan type to exclude it from further summarization.

Manage Financial and Project Plan Types: Set General Planning Options

Associating Sets with Financial Plan Types: Example

You associate sets with financial or project plan types so that project managers can use them to create financial plans (budget or forecast versions) or project plans for projects or project templates. Financial or project plan types are available for selection only when projects or project templates are created for project units linked to selected sets.

The following example illustrates the relationship between financial plan types, sets, and project units. Project plan types share an identical relationship with sets and project units.

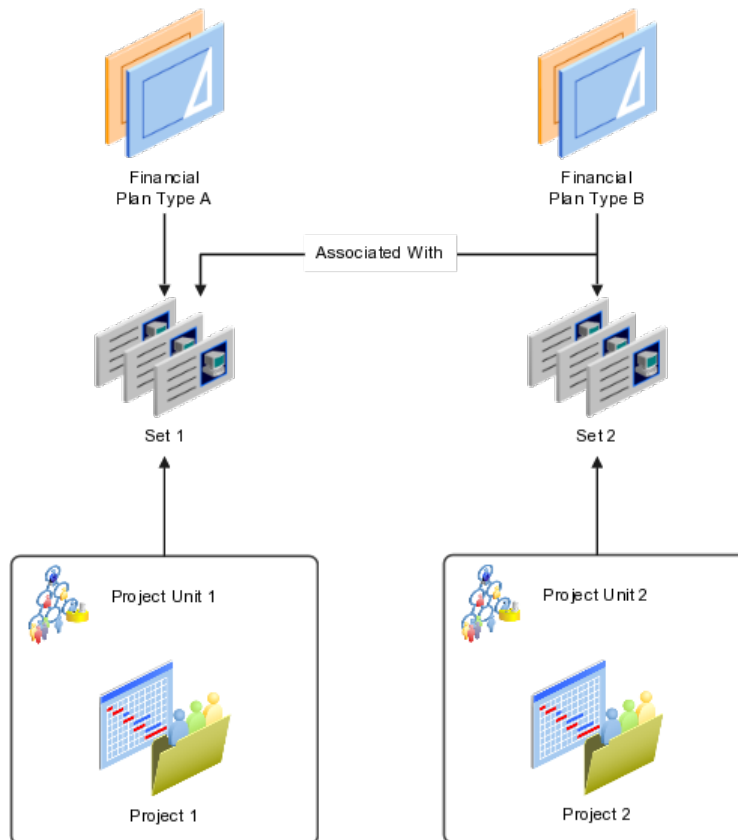
Scenario

An organization has two designated project units for project creation: Project Unit 1 and Project Unit 2. Project Unit 1 is associated with Set 1 and Project Unit 2 is associated with Set 2.

During implementation, two financial plan types were created: Financial Plan Type A and Financial Plan Type B. Financial Plan Type A is associated with Set 1. However, Financial Plan Type B is associated with both Set 1 and Set 2.

In such a case, project managers working on projects for Project Unit 1 can use only Financial Plan Type A to create financial plan versions. Project managers working on projects for Project Unit 2 can use both Financial Plan Type A and Financial Plan Type B.

The following diagram further illustrates the relationship between financial plan types, sets, and projects. Project plan types share the same relationship with sets.



Selecting Rate Schedules for Project and Financial Planning: Points to Consider

When specifying rate settings for financial or project plan types, you select to use either actual or planning rates for calculating cost or revenue for planning resources. Actual rates are those that are used for calculating actual amounts for expenditure items. If you use planning rates, then you can select rate schedules created specifically for planning purposes.

Some of the reasons for using planning rates are as follows:

- Project planning extends into the future, beyond dates for which actual rates are available. Using planning rates enables you to plan for future periods by making assumptions about potential rate increases or decreases.
- Planning is at a more summary level than when using actual rates. For example, use job-based rate schedules to plan, but actually track labor costs using cost rates defined at the employee level.

The following is a description of the points to consider when selecting actual or planning rate schedules for calculating raw costs, burdened costs, and revenue.

Selecting Rate Schedules when Using Actual Rates

When using actual rates for project plan types and financial plan types that support cost amounts, you select cost rate schedules at the resource class level.

Similarly, for financial plan types that support revenue amounts, you select bill rate schedules at the resource class level. If the application is unable to determine cost or bill rates for a planning resource, then it uses the resource class rates schedules you specify here.

Selecting Rate Schedules when Using Planning Rates

When using planning rates, you select rate schedules at the resource, job, and resource class levels. The following table summarizes the precedence order for determining cost or bill rates for a planning resource when deriving raw costs or revenue for rate-based planning resources.

Rate Source	Precedence	Description
Override rate	1	Rate manually entered by users in the budget, forecast, or project plan
Labor or nonlabor rate schedules	2	Rate schedules selected for labor or nonlabor resources
Job rate schedules	3	Applicable only for labor resources
Resource class rate schedules	4	Used when rates are not available at the resource level. Specifying a resource class rate schedule is optional.

Specifying a Burden Schedule when Using Planning Rates

Optionally specify a burden schedule when specifying planning rate schedules. Oracle Fusion Projects uses this burden schedule to calculate the burdened cost for all planning resources (including those that are not rate-based).

If an expenditure type is not associated with the planning resource, then Oracle Fusion Projects uses the expenditure type defined for the associated resource class to determine the burden multiplier, and ultimately, the burdened cost.

Manage Financial Plan Types: Set Forecasting Options

Forecast Approval Options: Critical Choices

Forecast approval options determine the approval process for forecast versions created for a particular financial plan type. Approval options determine whether you can do the following:

- Use workflow and notifications for approvals
- Automatically approve forecast versions
- Automatically submit forecasts for approval when creating baseline budgets

Using Workflow for Status Changes

Select this option if you want to use Business Process Execution Language (BPEL) workflows and notifications for forecast approvals. Workflows enable you to define a chain of approvers for moving forecasts from the working to the approved status.

Automatically Approving Forecasts

If you do not use workflow for forecast approvals, you can select to approve forecast versions directly (without first submitting them to an approver). The automatically approve forecasts option applies even if you are not entitled to approve forecasts. So, use it to enable automatic approval for certain financial plan types while controlling the forecast approval entitlement for others.

For example, disable this option for primary forecast financial plan types to ensure that only entitled users approve corresponding versions. On the other hand, enable this option for other financial plan types that do not require explicit approval, for example, those whose versions are used for what-if analysis.

Important

The automatic approval option applies only when manually approving forecasts. To approve forecasts versions that are generated automatically when publishing progress, you must be entitled to approve forecasts.

Automatically Submitting Forecast for Approval

Automatic submission for approval applies only to primary forecasts. If you select this option, the current working primary forecast version is submitted for approval when you create a baseline for an approved budget version for a project.

Important

If you select to automatically approve forecasts, the newly created working version of the primary forecast is directly approved.

The option to automatically submit forecasts for approval does not apply when manually creating forecasts.

Manage Project Plan Types: Set Project Plan Options

Task and Assignment Date Settings: How They Work Together

Task and task assignment date options are selected when specifying project planning options. Task and assignment date settings interact to determine how planned and transaction dates are set for tasks and how dates are set for task assignments.

Rolling Up Planned Dates for Tasks

You can select to roll planned dates for lowest-level subtasks up the task hierarchy. In this case, planned dates for summary tasks, top tasks, and the project are not editable. Edit planned dates for lowest-level tasks as required. Updated dates roll up the hierarchy to ensure that planned dates at the summary and project level are equal to the earliest start date and the latest end date of lower-level tasks.

Conversely, if you select not to roll up planned dates, lowest-level subtask dates are editable but must be within the planned date range for summary tasks and the project. You can also edit project or summary task dates as required.

Synchronizing Task Transaction Dates with Planned Dates

If you select to synchronize transaction dates with planned dates, then task transaction dates are not editable. Transaction dates always match task planned dates, plus or minus the number of days specified as a date adjustment buffer.

Tip

Specify a positive buffer value to indicate the number of days before the planned start date and the number of days after the planned finish date that a transaction can be charged to a task. Conversely, specify a negative buffer value to indicate the number of days after the planned start date and the number of days before the planned finish date that a transaction can be charged to a task. In other words, when specifying a negative buffer, transaction dates are within the range of the planned dates.

If you select not to synchronize transaction dates with planned dates, then transaction dates are blank by default and can be edited as required. Transaction dates entered at the summary-task level are used as the default transaction dates for tasks at lower levels. Transaction dates specified for subtasks must be within the transaction dates for the summary task. If none of the summary tasks in the hierarchy have transaction dates, then the new transaction date must be within the project date range.

You can modify the date synchronization option until you charge transactions to a task. Implications of changing between options are as follows:

- Deselected to selected: Existing transaction dates are replaced with dates calculated based on task planned dates plus or minus the date adjustment buffer.
- Selected to deselected: Existing transaction dates can be edited. New tasks have blank transaction dates that are editable. Existing transaction dates outside the project dates are cleared.

Setting Task Assignment Dates Using Planned Dates for Tasks

If you select to base task assignment dates on task planned dates, task assignments span the entire task duration. Task assignment dates are not editable.

Note

You can override this option for individual task assignments.

Project Date Cascade Options: Explained

Use cascade options to determine whether your changes to project dates cascade to tasks.

You can select one of the following options:

- Do not cascade date changes: Both start and finish dates are editable. However, you must ensure the following:
 - The project start date is not later than the earliest task date.
 - The project finish date is not earlier than the latest task date.
- Cascade change to the start date: You can edit only the project start date.
- Cascade change to the finish date: You can edit only the project finish date.

Restriction

If you have selected to roll up planned dates for tasks or are using an external application for scheduling, then you cannot modify the project start or finish dates.

Cascading Changes to Transaction Dates

If you have selected to synchronize transaction dates with planned dates, then transaction dates are updated automatically when date changes cascade to tasks.

Note

If transactions are already charged to a task, then you must ensure that your new summary dates are before or after the transaction date (depending on whether you are cascading start or finish dates.)

Cascading Changes to Assignment Dates

If you have selected to synchronize task assignment dates with task dates, then your changes to project dates will cascade to assignments automatically. Otherwise, you must ensure that all task assignment dates are within the range of the new task dates.

FAQs for Manage Financial and Project Plan Types

What happens if I edit a financial or project plan type after using it on a project?

Once you associate a project plan type with a project or project template, or create budget or forecast versions using a financial plan type, you cannot edit

certain financial or project plan setup options. These options include the primary forecast and approved budget designations, use of workflow, and the use of multiple transaction currencies.

Also, changes made to a financial plan type apply only to new financial plan versions. Similarly, there is no impact on existing project associations when you modify a project plan type.

Why can't I select some financial plan types when generating a budget version while setting a baseline for the project plan?

For generating a budget when setting a baseline project plan, you can select any active budget financial plan type otherwise available for budget creation. However, some financial plan types (including the default financial plan type selected in the budget generation options of the project plan type) are unavailable for selection in the following circumstances:

- If your project plan contains costs in multiple planning currencies, then only financial plan types that support planning in multiple transaction currencies are available.
- If you have already selected an approved cost or revenue budget financial plan type for creating a budget version, then no other approved budget financial plan types are available.

Can I select a financial plan type for summarization before creating a version of it on a project?

Yes.

FAQs for Manage Financial Plan Types: Set Financial Plan Options

What's an approved budget?

Budget financial plan types can be designated as approved cost budgets, approved revenue budgets, or both. Versions of such financial plan types are used for plan comparison when you review budgets or forecasts. Approved budget versions are also used by default when reporting on project performance.

For each project, you can use only one financial plan type that is designated as an approved cost budget or an approved revenue budget. Either select separate financial plan types (one approved cost budget and one approved revenue budget) or a single financial plan type with both designations.

What's a primary forecast?

Forecast financial plan types can be designated as primary cost forecasts, primary revenue forecasts, or both. Versions of such financial plan types are used

for plan comparison when you review budgets or forecasts. Primary forecast versions are also used by default when reporting on project performance.

For each project, you can use only one financial plan type that is designated as a primary cost forecast or a primary revenue forecast. Either select separate financial plan types (one primary cost forecast and one primary revenue forecast) or a single financial plan type with both designations.

FAQs for Manage Project Plan Types: Set Project Plan Options

What happens if I use Microsoft Project as a third-party scheduling application?

Using Microsoft Project for scheduling limits your ability to modify project and task dates in Oracle Fusion Project Foundation. Start and finish dates for the project and existing tasks cannot be modified. You can enter start and finish dates for new tasks. However, these dates must be within the planned dates for the summary task. You can modify transaction dates. However, these must be within both the task planned dates and transaction dates for the summary task or project.

What's a baseline project plan?

Key planned information for tasks and task assignments, including dates, costs, quantity, effort, and rates, that you can save from current project plan values. Setting a baseline for a project plan does not create a new plan version. Rather, current plan information is saved in baseline columns of the current project plan.

You must set a baseline for your project plan before capturing progress. Baseline amounts determine earned value for lowest-level tasks, which in turn are used to roll up physical percent complete to summary tasks.

Baseline data cannot be deleted, and does not change until it is overwritten when you next set a baseline for the tasks.

Tip

By generating a budget version when you set a baseline for your project plan, you can maintain an historical record of past baseline data.

Project Billing Configuration: Define Project Revenue Options

Invoice and Revenue Method Components: How They Work Together

Invoice methods and revenue methods control the way you create invoices and recognize revenue for contracts. During implementation you create the methods and assign them to bill plans and revenue plans. Any contract or contract line that uses the bill or revenue plan calculates the invoice or revenue amount according to the instructions in the invoice or revenue method.

Method Classification

Invoice method classifications and revenue method classifications are predefined by Oracle Fusion Projects. Select an invoice or revenue method classification to set the approach for calculating invoice or revenue amounts.

This table lists the invoice method classifications and their descriptions.

Invoice Method Classification	Description
Amount Based	Generate invoices and revenue as billing events are completed.
Percent Complete	Generate invoices as progress is estimated. • When you select the percent complete invoice method classification, the percent complete billing extension is automatically added to the invoice method. • The percent complete billing extension automatically creates a billing event with the percent complete invoice amount for an contract line.

Percent Spent	Generate invoices as progress is calculated, based on actual cost to date over budget cost. • When you select the percent spent invoice method classification, the percent spent billing extension is automatically assigned to the invoice method. • The percent spent billing extension automatically creates a billing event with the percent spent amount for an invoice line.
Rate Based	Generate invoices as costs are incurred, using an invoice-specific set of bill rates, a burden schedule, or transfer price rates.

This table lists the revenue method classifications and their descriptions.

Revenue Method Classification	Description
Amount Based	Recognize revenue as billing events are completed.
As Billed	Recognize revenue as customers are invoiced, using a common set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.
As Incurred	Recognize revenue as costs are incurred, using a revenue specific set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.
Percent Complete	Recognize revenue as progress is estimated. • When you select the percent complete revenue method classification, the percent complete billing extension is automatically added to the revenue method. • The percent complete billing extension automatically creates a billing event with the percent complete revenue amount for a contract line.
Percent Spent	Recognize revenue as progress is calculated, based on actual cost to date over budget cost. • When you select the percent spent revenue method classification, the percent spent billing extension is automatically assigned to the revenue method. • The percent spent billing extension automatically creates a billing event with the percent spent revenue amount for a contract line.

Rate Based	Recognize revenue as costs are incurred, using a revenue-specific set of bill rates, a burden schedule, or transfer price rates. Tip Use this revenue classification method if you are using a fixed price for invoices, or if you require different burden schedules for invoices and revenue.

Intercompany Billing Option

If the invoice or revenue method will be used for intercompany contracts, enable the intercompany billing option to calculate the intercompany invoice or revenue amounts. Intercompany invoices and revenue use a rate-based classification method. Select a labor and nonlabor schedule for use when generating invoices or calculating revenue.

Important

An intercompany contract can use an invoice or revenue method that is not enabled for intercompany billing, or an invoice or revenue method that is enabled for intercompany billing. Enable the intercompany billing option if the invoice or revenue method will be used for intercompany contracts only.

Intercompany invoices can use any type of invoice method classification.

Rate Definition

Select schedules for labor and nonlabor if your invoice or revenue method uses a rate-based classification method.

Tip

The schedule types for labor are **Person** and **Job**.

Billing Extension Assignment

Optionally, assign custom billing extensions to automatically calculate the invoice or revenue amounts for contract lines that use the bill plans and revenue plans associated with the invoice or revenue method.

If the invoice or revenue method is percent complete or percent spent, the extension creates the billing event based on the calculation level for the billing extension specified in the bill plan or revenue plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation level is associated project, the event is created for the contract line and its associated project and task.

Note

If the invoice or revenue method classification is percent complete or percent spent, the percent complete or percent spent billing extension is automatically added to the invoice or revenue method. You cannot change the status of the billing extension assignment to inactive, it must be active for a percent complete or percent spent billing extension.

Project and Contract Revenue Components: How They Work Together

Project and contract components work together to create revenue distributions. The contract contains the instructions for calculating revenue amounts, and the associated project contains the cost transaction details. When you generate revenue, revenue distributions are created for the contract.

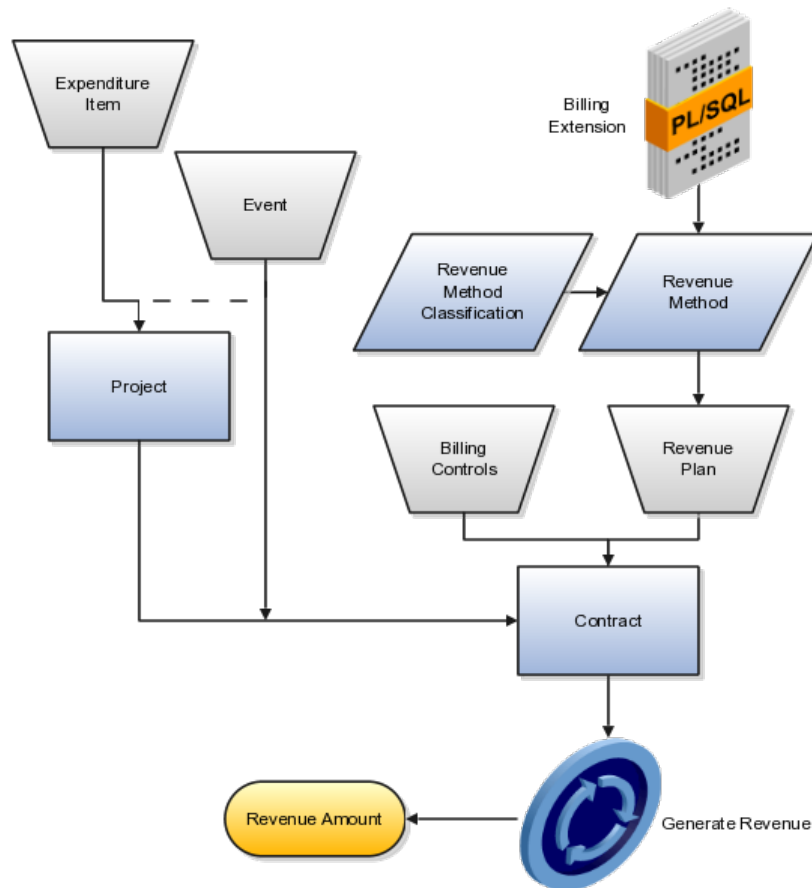
Expenditure items and events are the transactions for projects and contracts. Revenue method classifications determine how transactions recognize revenue.

The revenue method determines how revenue rates are derived and which billing extensions are called to calculate revenue. Enter a revenue method on a revenue plan, which you create for a contract and assign to contract lines to provide a set of instructions for recognizing revenue.

Create billing controls for a contract or contract line to define the valid transaction dates, billing resources, and amount limits for transactions associated with the contract.

Generate revenue to calculate the revenue amounts for a contract.

The following diagram illustrates the components of a project and a contract that determine revenue amounts, and the relationships between the components.



Revenue Method Classification

Assign a predefined revenue method classification to a revenue method. The revenue method classification determines whether the revenue amount is calculated based on rates, amounts, or progress.

Revenue Method

Create revenue methods for revenue plans to use for recognizing revenue. The revenue methods contain revenue recognition instructions in the form of the revenue method classification, rate definition schedule types and any applicable billing extensions. If you assign a billing extension to the revenue method, the extension calculates the revenue amount and creates an automatic revenue event. The billing extension assignment must be active to calculate revenue and create an event.

You must assign a revenue method to a revenue plan, which will give the revenue recognition instructions to a specific contract or contract line. A revenue method can be used by more than one revenue plan.

Caution

Enable the revenue method for intercompany billing if it will be used for intercompany billing only.

Revenue Plan

A revenue plan contains a set of instructions for recognizing revenue on a contract or contract line. Create a revenue plan within a contract that uses the revenue method you require. Assign the revenue plan to one or more contract lines that are enabled for billing.

If the revenue method classification for the revenue plan uses a billing extension, that billing extension is automatically added to the revenue plan.

Important

Revenue cannot be recognized for a revenue plan on hold.

Billing Control

A billing control defines the type of permitted transactions (using billing resources), transaction date range, and maximum invoice and revenue amounts for a contract or contract line. Create a billing control within a contract at either the contract or contract line level. The revenue amount cannot exceed the hard limit amount of a billing control. If the revenue amount exceeds the soft limit, revenue recognition will still occur, but you will receive a warning.

Expenditure Item

The project and task for an expenditure item are matched to the associated contract line during revenue generation. Revenue recognition can occur if the transaction date and billing resource for the expenditure item pass the contract billing controls.

If the expenditure item is mapped to more than one eligible contract line, the processing order is determined as follows:

- The contract billing sequence determines the processing order of multiple contracts.
- The contract billing controls determine the processing order of multiple contract lines within a single contract.
- The contract contribution percentage determines the eligible amount of revenue to recognize for each contract line.

Oracle Fusion Project Billing creates a billing transaction for each unique combination of expenditure item and contract line. The billing transaction is the source for creating revenue distributions.

Event

Revenue events are automatically created during revenue generation if the revenue plan for a contract line plan contains a billing extension. The billing extension calculates the revenue event amount, and creates a revenue distribution.

Manual events are also processed during revenue generation. Oracle Fusion Project Billing creates a billing transaction for each event. The billing transaction is the source for creating revenue distributions.

Invoice and Revenue Method Classifications: Critical Choices

Only bill plans and revenue plans with certain combinations of invoice and revenue method classifications can be used on the same contract line. If you add a bill plan and revenue plan with an invalid invoice and revenue method classification to the same contract line, you will receive an error message when you submit the contract for approval.

The possible revenue method classifications are:

- Amount based
- As incurred
- As invoiced
- Percent complete
- Percent spent
- Rate based

The possible invoice method classifications are:

- Amount based
- Rate based

- Percent complete
- Percent spent

Invoice and Revenue Method Combinations

Valid bill plan and revenue plan combinations for a contract line are dependent on the invoice method classification and revenue method classification. Most invoice method and revenue method classifications are valid. The invalid combinations are described in the table below.

Revenue Method Classification	Invoice Method Classification	Valid Combination?
As incurred	Amount based	No
As incurred	Percent complete	No
As incurred	Percent spent	No
As invoiced	Amount based	No
As invoiced	Percent complete	No
As invoiced	Percent spent	No
Rate based	Rate based	Yes, but a burden schedule is required for the bill plan and revenue plan.

Note

After the contract is approved, any changes to the bill plan including the revenue or invoice method classification must go through the change management process.

FAQs for Define Project Revenue Options

What's a revenue method?

Rule defined by the implementation team that determines the calculation method of revenue amounts for contracts during revenue generation.

What's a revenue method classification?

Predefined classification for a revenue method that determines the basis for calculating revenue amounts.

The predefined revenue method classifications are as-billed, as-incurred, amount based, percent complete, percent spent, and rate based.

Assign a revenue method classification to a revenue method. When you select the percent spent or percent complete revenue method classification, the percent

spent or percent complete billing extension is automatically assigned to the revenue method.

What happens if I assign a billing extension to an invoice method or revenue method?

If you assign a billing extension to an invoice method or revenue method, the billing extension is automatically added to bill plans or revenue plans that use the method. The billing extension creates automatic invoice or revenue events for contract lines or projects associated with that bill or revenue plan.

The event amounts are calculated at the calculation level selected on the bill plan or revenue plan.

Important

You must enter the funding amount for either the contract line or the project and contract association, depending on the calculation level selected in the bill plan or revenue plan.

Project Billing Configuration: Define Business Unit Project Billing Options

Customer Contracts Business Unit Setup: Explained

Using the **Specify Customer Contract Management Business Function Properties** task, available by navigating to Setup and Maintenance work area and searching on the task name, you can specify a wide variety of business function settings for customer contracts in a specific business unit. The selections you make for these business functions impact how Oracle Fusion Enterprise Contracts behaves during contract authoring.

Using the **Specify Customer Contract Management Business Function Properties** task, manage these business function properties:

- Enable related accounts
- Set currency conversion details
- Manage project billing options
- Set up clause numbering
- Set up the Contract Terms Library

The setup options available for the Contract Terms Library are applicable to both customer and supplier contracts, and are described in the business unit setup topic for the Contract Terms Library. That topic is available as a related link to this topic.

Enabling Related Customer Accounts

Contract authors can specify bill-to, ship-to, and other accounts for the parties in a contract. Enable the related customer accounts option if you want accounts previously specified as related to the contract party to be available for selection.

Managing Currency Conversion Options

If your organization plans to transact project-related business in multiple currencies, then select the multicurrency option. This allows a contract author

to override a contract's currency, which defaults from the ledger currency of the business unit. It also enables the contract author to specify currency conversion attributes to use when converting from the bill transaction currency to the contract currency and from the invoice currency to the ledger currency.

In the Bill Transaction Currency to Contract Currency region, enter currency conversion details that will normally be used, by all contracts owned by this business unit, to convert transaction amounts in the bill transaction currency to the contract currency. Newly created contracts contain the default currency conversion values, but you can override the values on any contract, if needed.

In the Invoice Currency to Ledger Currency region:

- Enter invoice transaction conversion details if the invoice and ledger currencies can be different.
- Enter revenue transaction conversion details if the revenue and ledger currencies can be different for as-incurred and rate-based revenue.

Managing Project Billing Options

The options available for selection in the Project Billing region control the behavior of project invoicing and revenue recognition for contracts with project-based work.

Project billing can behave differently for external contracts (customer billing) or intercompany and interproject contracts (internal billing).

Set these options, which apply to all contracts:

- Select the **Transfer Revenue to General Ledger** option if you want to create revenue accounting events and entries, and transfer revenue journals to the general ledger. If this option is not selected, then revenue can still be generated, but will not be transferred to the general ledger.
- Indicate if a reason is required for credit memos that are applied to invoices.

There are two sets of the following options, one for customer billing and a second for internal billing:

- Select an invoice numbering method, either **Manual** or **Automatic**. The invoice numbering method is the method that Oracle Fusion Receivables uses to number its invoices, upon release of draft invoices from Project Billing.
 - If the invoice numbering method is **Manual**, then select an invoice number type, which sets the type of Receivables invoice numbers that are allowed. Valid values are **Alphanumeric** and **Numeric**.
 - If the invoice numbering method is **Automatic**, then enter the next invoice number to use when generating Receivables invoice numbers.
- Select the Receivables batch source to use when transferring invoices to Receivables.

Set this option only for customer billing:

- Indicate if you want contract authors to manually enter the Receivables transaction type on the customer contracts they create.

Managing Clause Numbering

You can choose to number clauses manually or automatically.

If you choose the automatic numbering method, you must select a determinant level for the numbering. You must then select the appropriate clause sequence category from document sequences that you set up for this numbering level.

FAQs for Define Business Unit Project Billing Options

Why can't I locate an invoice?

Access to invoices is secured by the business unit. You only have access to invoices that belong to contracts in the business unit assigned to your role. You can see all invoices for projects that are linked to the contracts which you can access.

Project Billing Configuration: Define Project Invoicing Options

Invoice and Revenue Method Components: How They Work Together

Invoice methods and revenue methods control the way you create invoices and recognize revenue for contracts. During implementation you create the methods and assign them to bill plans and revenue plans. Any contract or contract line that uses the bill or revenue plan calculates the invoice or revenue amount according to the instructions in the invoice or revenue method.

Method Classification

Invoice method classifications and revenue method classifications are predefined by Oracle Fusion Projects. Select an invoice or revenue method classification to set the approach for calculating invoice or revenue amounts.

This table lists the invoice method classifications and their descriptions.

Invoice Method Classification	Description
Amount Based	Generate invoices and revenue as billing events are completed.
Percent Complete	Generate invoices as progress is estimated. • When you select the percent complete invoice method classification, the percent complete billing extension is automatically added to the invoice method. • The percent complete billing extension automatically creates a billing event with the percent complete invoice amount for an contract line.

Percent Spent	Generate invoices as progress is calculated, based on actual cost to date over budget cost. - When you select the percent spent invoice method classification, the percent spent billing extension is automatically assigned to the invoice method. - The percent spent billing extension automatically creates a billing event with the percent spent amount for an invoice line.
Rate Based	Generate invoices as costs are incurred, using an invoice-specific set of bill rates, a burden schedule, or transfer price rates.

This table lists the revenue method classifications and their descriptions.

Revenue Method Classification	Description
Amount Based	Recognize revenue as billing events are completed.
As Billed	Recognize revenue as customers are invoiced, using a common set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.
As Incurred	Recognize revenue as costs are incurred, using a revenue specific set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.
Percent Complete	Recognize revenue as progress is estimated. - When you select the percent complete revenue method classification, the percent complete billing extension is automatically added to the revenue method. - The percent complete billing extension automatically creates a billing event with the percent complete revenue amount for a contract line.
Percent Spent	Recognize revenue as progress is calculated, based on actual cost to date over budget cost. - When you select the percent spent revenue method classification, the percent spent billing extension is automatically assigned to the revenue method. - The percent spent billing extension automatically creates a billing event with the percent spent revenue amount for a contract line.

Rate Based	Recognize revenue as costs are incurred, using a revenue-specific set of bill rates, a burden schedule, or transfer price rates. Tip Use this revenue classification method if you are using a fixed price for invoices, or if you require different burden schedules for invoices and revenue.

Intercompany Billing Option

If the invoice or revenue method will be used for intercompany contracts, enable the intercompany billing option to calculate the intercompany invoice or revenue amounts. Intercompany invoices and revenue use a rate-based classification method. Select a labor and nonlabor schedule for use when generating invoices or calculating revenue.

Important

An intercompany contract can use an invoice or revenue method that is not enabled for intercompany billing, or an invoice or revenue method that is enabled for intercompany billing. Enable the intercompany billing option if the invoice or revenue method will be used for intercompany contracts only.

Intercompany invoices can use any type of invoice method classification.

Rate Definition

Select schedules for labor and nonlabor if your invoice or revenue method uses a rate-based classification method.

Tip

The schedule types for labor are **Person** and **Job**.

Billing Extension Assignment

Optionally, assign custom billing extensions to automatically calculate the invoice or revenue amounts for contract lines that use the bill plans and revenue plans associated with the invoice or revenue method.

If the invoice or revenue method is percent complete or percent spent, the extension creates the billing event based on the calculation level for the billing extension specified in the bill plan or revenue plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation level is associated project, the event is created for the contract line and its associated project and task.

Note

If the invoice or revenue method classification is percent complete or percent spent, the percent complete or percent spent billing extension is automatically added to the invoice or revenue method. You cannot change the status of the billing extension assignment to inactive, it must be active for a percent complete or percent spent billing extension.

Project and Contract Invoice Components: How They Work Together

Project and contract components work together to create invoice distributions. The contract contains the instructions for calculating invoice amounts, and the project owns the cost transaction details. When you generate an invoice, invoice distributions are created for the contract.

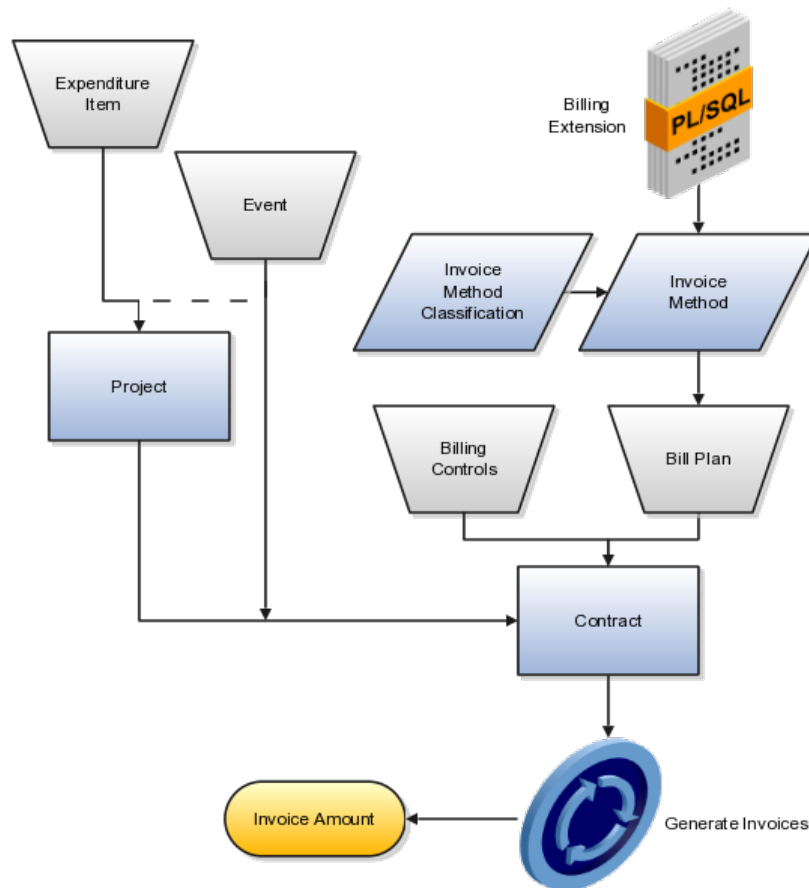
Expenditure items and events are the transactions for projects and contracts. Invoice method classifications determine how transactions are invoiced.

The invoice method determines how invoice amounts are derived and which billing extensions, if applicable, calculate invoice amounts. Enter an invoice method on a bill plan, which you create for a contract and assign to contract lines to provide a set of instructions for creating an invoice.

Create billing controls for a contract or contract line to define the valid transaction dates, billing resources, and amount limits for transactions associated with the contract.

Generate invoices to calculate the invoice amounts for a contract.

The following diagram illustrates the components of a project and a contract that determine invoice amounts, and the relationships between the components.



Invoice Method Classification

Assign a predefined invoice method classification to an invoice method. The invoice method classification determines whether the invoice amount is calculated based on rates, amounts, or progress.

Invoice Method

Create invoice methods for bill plans to use for determining the approach for generating invoice amounts. The invoice methods contain invoice generation instructions in the form of the invoice method classification and rate definition schedule types. Rate definition schedule types determines whether the rate source for invoicing comes from rate schedules, burden schedules, or transfer price schedules.

The invoice methods also contain any applicable billing extensions. If you assign a billing extension to the invoice method, the extension calculates the invoice amount and creates an automatic invoice event. The billing extension assignment must be active to calculate the invoice amount and create an event.

You must assign an invoice method to a bill plan, which contains the invoice generation instructions for a specific contract or contract line. An invoice method can be used by more than one bill plan.

Caution

Enable the invoice method for intercompany billing if it will be used for intercompany billing only.

Bill Plan

Create a bill plan within a contract that uses the invoice method you require. Assign the bill plan to one or more contract lines.

If the invoice method classification for the bill plan uses a billing extension, that billing extension is automatically added to the bill plan.

Important

Oracle Fusion Project Billing does not create invoice amounts for contract lines that have a bill plan on hold.

Billing Control

A billing control defines the types of permitted transactions (using billing resources), transaction date range, and maximum invoice (and revenue) amounts for a contract or contract line. Create a billing control within a contract at either the contract or contract line level. The inception-to-date (ITD) invoice amount cannot exceed the hard limit amount of a billing control. If the ITD invoice amount exceeds the soft limit, invoice generation will still occur, but you will receive a warning the first time this occurs.

Expenditure Item

The project and task for an expenditure item are matched to the associated contract line during invoice generation. Invoicing can occur if the transaction

date, billing resource, and amount for the expenditure item pass the contract billing controls.

If the expenditure item is mapped to more than one eligible contract line, the processing order is determined as follows:

- The contract billing sequence determines the processing order of multiple contracts.
- The contract billing controls determine the processing order of multiple contract lines within a single contract.
- The contract contribution percentage determines the eligible invoice amount for each contract line.

Oracle Fusion Project Billing creates a billing transaction for each unique combination of expenditure item and contract line. The billing transaction is the source for creating invoice distributions.

Event

Invoice events are automatically created during invoice generation if the bill plan for a contract line plan contains a billing extension. The billing extension calculates the invoice event amount, and creates an invoice event.

Manual events are also processed during invoice generation. Oracle Fusion Project Billing creates a billing transaction for each automatic or manual event. The billing transaction is the source for creating invoice distributions.

Specifying the Unit of Measure for Invoice Lines Sent to Oracle Fusion Receivables: Critical Choices

The Specify Unit of Measure for Invoice Lines Sent to Oracle Fusion Receivables profile option indicates the unit of measure to use for all invoice lines transferred from Oracle Fusion Projects to Oracle Fusion Receivables. This profile option is required in order to use Oracle Fusion Project Billing. If you are using Oracle Fusion Projects without Oracle Fusion Receivables, you do not need to set this profile.

Oracle Fusion Receivables requires a unit of measure for each invoice line. Oracle Fusion Projects creates each invoice line with a quantity of 1, a unit of the unit type you specify in your profile option, and an amount equal to the currency amount of the invoice line as it appears in Oracle Fusion Projects.

Note

The internal name for this profile option is PJB_AR_INVOICE_UOM.

Unit of Measure Class

Define a unit of measure class before you define a unit of measure. Oracle Fusion Receivables requires that you associate each unit of measure you define with a

unit of measure class. You must define a unit of measure class before you can set the profile option.

Unit of Measure

The default unit of measure value is **Each**. Define a unit of measure of **Each** in Oracle Fusion Receivables to use with this profile option.

Invoice and Revenue Method Classifications: Critical Choices

Only bill plans and revenue plans with certain combinations of invoice and revenue method classifications can be used on the same contract line. If you add a bill plan and revenue plan with an invalid invoice and revenue method classification to the same contract line, you will receive an error message when you submit the contract for approval.

The possible revenue method classifications are:

- Amount based
- As incurred
- As invoiced
- Percent complete
- Percent spent
- Rate based

The possible invoice method classifications are:

- Amount based
- Rate based
- Percent complete
- Percent spent

Invoice and Revenue Method Combinations

Valid bill plan and revenue plan combinations for a contract line are dependent on the invoice method classification and revenue method classification. Most invoice method and revenue method classifications are valid. The invalid combinations are described in the table below.

Revenue Method Classification	Invoice Method Classification	Valid Combination?
As incurred	Amount based	No
As incurred	Percent complete	No
As incurred	Percent spent	No
As invoiced	Amount based	No
As invoiced	Percent complete	No
As invoiced	Percent spent	No

Rate based	Rate based	Yes, but a burden schedule is required for the bill plan and revenue plan.

Note

After the contract is approved, any changes to the bill plan including the revenue or invoice method classification must go through the change management process.

Invoice Formats: Explained

An invoice format determines how Oracle Fusion Projects creates an invoice line. You can define different formats for labor, nonlabor and event invoice line items, and specify if you want to use the format for customer invoices, internal invoices, or both. Additionally, you can specify how you want to summarize expenditure items, and the fields you want an invoice line to display. You can also include free-form text on an invoice line.

You can use customer invoice formats only for regular contract invoices, and internal invoice formats only for invoices generated by intercompany and interproject contracts. You can also use an invoice format for both customer and internal invoices.

You configure the following components of an invoice format:

- Format type
- From and to dates
- Grouping option
- Customer or internal invoice option
- Fixed format
- Start and end position
- Text column

Format Type

The format type controls the invoice formats you see for labor, nonlabor and events when you enter invoice formats using the Projects window.

From and To Dates

The from and to dates determine the period during which the invoice format is active.

Grouping Option

A grouping option specifies the way invoice distribution lines are grouped together to form an invoice line.

Customer or Internal Invoice Option

If you are using intercompany or interproject billing, create an internal invoice format to summarize cross-charge transactions. Depending on the requirements of the receiver business units, you may need to define several internal invoice formats. All internal formats automatically have a fixed format.

If you create an internal invoice format, you must select contract line as an attribute. This is to ensure that no two contract lines can be combined into a single invoice line, as they could be tied to different receiver projects or tasks, and would need to be created as separate invoice lines in order to post to the correct receiver project or task.

Although one invoice format can support both customer and internal invoices, the list of values for the Field Name only includes those values that are shared by the two formats.

Fixed Format

A fixed format prohibits distributions from being moved to other invoice lines. Intercompany and interproject invoices must have a fixed format.

Start and End Positions

The start and end positions are values between 1 and 240 that specify where the text in the Field Name appears on the invoice line.

Text Column

Enter the text in this column that you want to display on the invoice.

FAQs for Define Project Invoicing Options

What's an invoice method?

Rule defined by the implementation team that determines the calculation method of invoice amounts for contracts during invoice generation.

What's an invoice method classification?

Predefined classification for an invoice method that determines the basis for calculating invoice amounts.

The predefined invoice method classifications are: amount based, percent complete, percent spent and rate based.

Assign an invoice method classification to an invoice method. The percent spent or percent complete billing extension is automatically assigned to the invoice method when you select the percent spent or percent complete invoice method classification.

What happens if I assign a billing extension to an invoice method or revenue method?

If you assign a billing extension to an invoice method or revenue method, the billing extension is automatically added to bill plans or revenue plans that use the method. The billing extension creates automatic invoice or revenue events for contract lines or projects associated with that bill or revenue plan.

The event amounts are calculated at the calculation level selected on the bill plan or revenue plan.

Important

You must enter the funding amount for either the contract line or the project and contract association, depending on the calculation level selected in the bill plan or revenue plan.

Project Billing Configuration: Define Additional Intercompany and Interproject Billing Options

Project Components for Internal Billing: How They Work Together

To use the intercompany billing or interproject billing functionality, your implementation team must configure a number of distinct features within Oracle Fusion Projects. These features work in cohesion with contract and financial features to create internal invoices and revenue transfers between organizations.

Invoice Formats

Define internal invoice formats for invoices generated by intercompany or interproject billing contracts. The invoice formats control the grouping of transactions on invoice lines for intercompany contracts. Specify the grouping options to summarize expenditure items and events, and the fields that should be displayed on the invoice line. Create different invoice formats for intercompany labor, nonlabor, and event billing.

If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

Restriction

All internal invoices must have a fixed format. Enable the fixed format feature to prevent the rearranging or regrouping invoice line details on intercompany invoices.

Invoice Methods and Revenue Methods

Define invoice methods and revenue methods to determine the calculation method of invoice and revenue amounts for intercompany contracts during invoice generation and revenue recognition. Enable the invoice methods and revenue methods for intercompany billing.

Select from the following labor and nonlabor schedule types that are available for rate-based intercompany invoice generation and revenue recognition:

- Bill rate

- Burden rate
- Transfer price

Billing Resource Breakdown Structure

Enter resource formats and resource types for the intercompany billing resource structure that is shared by business units. This billing resource breakdown structure defines the types of resources that can be referenced on billing controls for intercompany and interproject contracts.

Receiver Project

Create a receiver project in the receiver business unit. The receiver project can be a project that is linked to both an external contract (for external billing) and an intercompany contract (for creating internal cross-charge transactions). The receiver business unit receives the supplier invoices.

Each receiver project can receive invoices from multiple internal contracts or from multiple contract lines of the same contract.

Enable the tasks on the receiver project that can be used for interproject billing and to allow cross-charge transactions.

Provider Project

Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

Contract Components for Internal Billing: How They Work Together

To use intercompany billing or interproject billing, your implementation team must configure a number of distinct features within Oracle Fusion Enterprise Contracts. These features work in cohesion with financial and project features to create internal invoices and transfer revenue between organizations.

Contract Type for Intercompany Billing

Select the intercompany billing option on a contract type to identify a contract as enabled for intercompany billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the intercompany payables invoice such as expenditure type, expenditure organization, receiver project, receiver task, and the provider business unit.

Contract Type for Interproject Billing

Select the interproject billing option on a contract type to identify a contract as enabled for interproject billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the interproject payables invoice such

as expenditure type, expenditure organization, receiver project, and the receiver task.

Contract Business Unit Internal Billing Options

Review and update the customer contract management business function options to control the processing of interproject billing. This table lists the internal billing options that must be defined for the contract business unit.

Feature Name	Description
Invoice Numbering Method	• If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type. • If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number.
Invoice Batch Source	Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables.

Contract Line and Receiver Project

After you create an internal contract, link a contract line to the receiver project and task. This allows for the cross-charge transactions that are charged to the project and task to be billed from the provider business unit to the receiver business unit.

By default, the receiver project is also the associated project for the contract line, and you cannot add another associated project or change the associated project for that contract line. However, the associated task and receiver task can be different, so you can select another associated task for the project if necessary.

The receiver project must have the same legal entity as the internal customer.

Note

Only one receiver project can be linked to a contract line. The intercompany invoice generation process automatically groups invoice lines by the contract lines. Interproject invoices have a fixed format.

FAQs for Define Additional Intercompany and Interproject Billing Options

Why can't I see the internal billing details on a contract?

If you do not see the internal billing features on a contract, check the attributes on the contract type. The internal billing options of a contract are only visible if the contract type is designated as either intercompany or interproject.

Project Billing Configuration: Define Project Billing Extensions

Billing Extension Components: How They Work Together

Implement a billing extension to define a set of company-specific business rules that create automatic invoice and revenue events. To use the billing extension functionality, create a billing extension and assign it to a bill plan or revenue plan.

General Information

- Order
 - If multiple billing extensions are assigned to a bill or revenue plan, enter a numeric value to determine when this extension is called. Oracle Fusion Project Billing calls billing extensions in ascending order.
- Procedure
 - To implement a company specific rule for creating automatic invoice and revenue events, you must first write a PL/SQL procedure that calculates the event amount. Enter the name of the PL/SQL procedure on the billing extension page.
- Transaction Independent
 - Transaction independent billing extensions are called once for each contract line or associated project, depending on the extension calculation level defined in the bill or revenue plan. They are usually defined to import transactions from external applications. If the billing extension is for invoices, the extension is called during the Generate Invoice process before the invoice preprocessor, which creates billing transactions. If the billing extension is for revenue, the extension is called during the Generate Revenue process before revenue transactions are processed.

Note

If you do not enable the transaction independent feature of a billing extension, it will be transaction dependent. Transaction dependent billing extensions are called only if billable expenditure items and events exist that need to be processed.

Call Process

The call process determines whether to call the PL/SQL procedure that calculates the amount during invoice generation or revenue generation.

Note

If you require a procedure to create both automatic invoice and revenue events, you must create two separate billing extensions.

Call Location

Select a location (time) within the invoice or revenue generation program where the billing extension is called. The predefined locations are:

- Before billing transaction creation
 - Select this location if you want to call the billing extension before any recognizing revenue or calculating invoice amounts for the contract line or project and contract line combination.
 - An example of a requirement for which you may want to use this call location is if you want to place all unbilled, unpaid supplier invoice items on hold so they are not billed; and to release the billing hold on any unbilled, paid supplier invoice transactions that are on hold. You can then bill the paid supplier invoice items during standard invoice processing.
- After invoice and revenue distribution lines are created
 - Select this option to call the billing extension after the revenue and invoice processing is complete.
 - Examples of requirements for which you may want to use this call location are if you want to notify a project manager when an invoice of a certain amount is created, or if you want to create a fixed fee event that is dependent on the total transaction amount billed on the invoice.
- Before invoice deletion
 - Select this option if you want to call the billing extension before deleting invoice distribution lines. This call location is only valid for invoice billing extensions.

Required Input

Specify whether an amount or percentage is required for entry when you assign the billing extension to a bill or revenue plan. When you define a bill or revenue plan that uses the billing extension, you must enter a specific amount or percentage that is used when calculating the automatic invoice or revenue event.

Default Event Type

Specify an event type to determine the default event attributes to use for events created by the billing extension. You can override the attributes for default event type in your procedure.

Default Plan Type

Specify a default financial cost plan type to use for calculations that use budgeted amounts. If the value is not provided for a cost plan type, but is needed for the calculation, the process will error. You can override the attributes for default plan in your procedure.

Planning Your Billing Extension Implementation: Explained

You should carefully design billing extensions before implementing them in Oracle Fusion Projects. Careful planning of your billing extensions help to ensure that you are calculating and generating revenue and invoices according to your company-specific rules.

Design Billing Extensions

Carefully plan the definition of billing extensions before you begin writing them. Typically, the logic of your billing extensions are dependent on your company's implementation of Oracle Fusion Projects. Consider the following issues when designing your billing extensions:

- Are you calculating a revenue amount or an invoice amount? Are the amounts generated during revenue generation or invoice generation?
- How are the amounts calculated? What are the inputs to the calculation?
- How are the inputs derived?
- How are the amounts processed:
 - For reporting purposes?
 - For accounting purposes?
 - For invoicing?
- How are the attributes of the automatic event set: event type, event organization, event description, completion date?
- Under what conditions is this calculation used? What types of contracts? What types of billing terms?
- How is the billing extension processed for adjustments? Adjustments are defined as revenue credits or invoice credit memos, based on other transactions.
- Can this billing extension be called with other billing extensions assigned to the same bill plan or revenue plan? If so, what is the dependency and order of your billing extensions?
- What is the exception handling if some input values cannot be found?
- How is the logic affected if the inputs change over time?

- Is there a limit on the amount calculated? If so, what is the logic?

Once you answer these questions, you should have the appropriate information to define a billing extension in Oracle Fusion Projects and to document the functional specifications for your technical resource to use in writing the PL/SQL procedure.

Write and Store PL/SQL Procedures

After you design your billing extensions, write the PL/SQL procedures that define the logic of the billing extensions.

After you write your procedures, store them in the database and test them to ensure that your billing extension logic works as expected.

Define Billing Extensions

Define your billing extensions that specify the PL/SQL procedure name and additional information for Oracle Fusion Projects to use when processing billing extensions.

You use the Create Billing Extensions page to define billing extensions.

Note

This step assumes that an event type has already been defined for the default event type.

Assign Billing Extensions to Invoice Methods and Revenue Methods

Assign billing extensions to the appropriate invoice methods and revenue methods. Your contract users will select these invoice methods and revenue methods on bill plans and revenue plans. The assigned billing extensions are copied from the methods to the plans.

Billing Extension

Use the Billing Extension to implement company-specific business rules to automatically create invoice or revenue events. Billing extensions automatically calculate summary invoice or revenue amounts during invoice or revenue generation.

To use the billing extension functionality, you must implement a billing extension and assign it to either an invoice method or a revenue method. You can assign a billing extension to more than one invoice or revenue method. When you specify the invoice or revenue method on a bill or revenue plan, the billing extensions assigned to that method are copied to the plan. Depending on the definition of the assigned billing extension, you might be required to specify a percentage or amount to use as input when calculating the event amount.

The extension is defined by the following items.

Extension Component	Name
Body template	pjb_bill_extn_sample_pkg.pkb
Specification template	pjb_bill_extn_sample_pkg.pkh
Package	pjb_bill_extn_sample_pkg
Procedure	SampleExtn

Your extension procedure can call other procedures or views. These other procedures or views can be predefined or you can write your own.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_bill_plan_id	Bill plan or revenue plan identifier from pjb_bill_plans_b or okc_k_lines_b.
p_contract_id	Contract identifier from okc_k_headers_all_b.
p_contract_line_id	Contract line identifier from okc_k_lines_b.
p_linkage_id	Project and contract linkage identifier from pjb_cntrct_proj_links. Pass the value when the calculation level code is PROJECT_CONTRACT_LINKAGE.
p_linked_project_id	Project identifier from pjb_cntrct_proj_links linked to the contract. Pass the value when the calculation level code is PROJECT_CONTRACT_LINKAGE.
p_linked_task_id	Task identifier from pjb_cntrct_proj_links linked to the contract. Pass the value when the calculation level code is PROJECT_CONTRACT_LINKAGE.
p_calling_process	Calling process for the billing extension. Valid values are: • REV (for revenue) • INV (for invoice)
p_calculation_level	Calculation level code for the billing extension. Valid values are: • LINE • PROJECT_CONTRACT_LINKAGE
p_bill_frm_date	Invoice or revenue from date.
p_bill_to_date	Invoice or revenue to date.
p_amt	Invoice amount or revenue amount. This is generally used when the extension calling place is AFTER_DRAFT .
p_percent	Percentage
p_assignment_detail_id	Assignment detail identifier pjb_assignment_details.
p_extension_id	Billing extension identifier obtained from table pjb_billing_extensions.
p_assignment_id	Assignment identifier
p_event_type_id	Event type identifier from pjb_event_types_b.
p_default_event_type_description	Event type description identifier from pjf_event_types_tl.
p_cost_fin_plan_type	Cost financial plan type identifier. This is generally used when the invoice or revenue method is Percent Spent .
p_invoice_id	Invoice identifier

p_request_id	Request identifier
p_cont_curr_code	Contract currency code
p_ledger_curr_code	Ledger currency code
X_return_status	Status of the procedure. Valid values are: • S (for success) • E (for expected error) • U (for unexpected error)
X_msg_count	Message count. Valid values are greater than or equal to zero.
X_msg_data	Actual message when there is an exception.

Implementing Billing Extensions for Your Company

To implement your company-specific billing methods, you first design and write rules to calculate billing amounts using PL/SQL procedures. You then enter the billing extension definition in Oracle Fusion Project Financial Management to specify additional information (such as the procedure name to call) that is used by the revenue and invoice programs to process the extension.

You define billing extensions in the Create Billing Extensions page, and specify the following items:

- The name of the procedure to call.
- Whether the procedure is called during invoicing or revenue recognition.
- The call location within the invoice or revenue program where the extension is called.
- Whether an amount or percentage is required when the billing extension is assigned to a bill plan or revenue plan.
- The budget type to use as input for calculations that use budgeted amounts.

The values entered in the Create Billing Extensions page can be used in your billing extension procedure by accessing the table `pjb_billing_extensions`. The values entered in the Billing Extensions tab of the Create Bill Plan or Create Revenue Plan page can also be used in your billing extension procedure by accessing the table `pjb_assignment_details`.

Processing

When you run the revenue or invoice processes, the application looks for active billing extensions assigned to a bill plan or revenue plan. When a billing extension is found, the processes read the billing extension definition and call the appropriate procedure. If there are multiple active billing extensions assigned to a bill or revenue plan, the application calls the extensions by the order entered on the Create Billing Extension page, and then by the order of the assignment to the bill or revenue plan.

Automatic Events

Your billing extension calculates revenue and invoice amounts and creates one or more automatic events. Oracle Fusion Project Financial Management processes these events as it does other manually entered events. You can store audit amounts and references for these events in the audit amount and reference columns of the Events table.

You can increase or decrease revenue and invoice amounts for automatic events. You can also place automatic events on invoice or revenue hold indefinitely, and remove the holds later.

Automatic events are either only applicable to invoicing or only applicable to revenue recognition, but not both.

The billing extension uses the public procedure `MyPackageName.insert_event` to automatically create events.

Internal Payables Invoice Attribute Override Extension

Use the Internal Payables Invoice Attribute Override Extension to override the default expenditure type and expenditure organization attributes for intercompany and interproject invoices that are created in Oracle Fusion Receivables.

The Update Invoice Details from Receivables process calls the Internal Payables Invoice Attribute Override Extension as it creates Oracle Fusion Payables invoices for intercompany and interproject contracts.

Note

Use this extension only if you want to override the receiver expenditure organization and receiver expenditure type on the Oracle Fusion Payables invoice. The source of the receiver expenditure organization and expenditure type is the intercompany or interproject contract.

The extension is identified by the following items.

Extension Component	Name
Body template	pjb_cc_ap_inv_client_extn.pkb
Specification template	pjb_cc_ap_inv_client_extn.pkh
Package	pjb_cc_ap_inv_client_extn
Procedure	override_exp_type_exp_org

This billing extension can derive the receiver expenditure type and receiver expenditure organization based on the parameters you enter.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_internal_billing_type	Internal billing type Valid values are: - PA_IC_INVOICES (Intercompany contract) - PA_IP_INVOICES (Interproject contract)
p_contract_id	Contract ID for the Oracle Fusion Receivables invoice.
p_contract_line_id	Contract line ID for the Oracle Fusion Receivables invoice.
p_receiver_project_id	Receiver project ID for the Oracle Fusion Payables invoice.

p_receiver_task_id	Receiver task ID for the Oracle Fusion Payables invoice.
p_invoice_number	Invoice number from the pjb_invoice_header table.
p_draft_invoice_line_num	Invoice_line_num from pjb_invoice_line.
p_invoice_date	Invoice date
p_ra_invoice_number	Oracle Fusion Receivables invoice number. The invoice number is either user-entered or created by the application, as defined in the implementation options. Refer to ra_invoice_number from pjb_invoice_headers
p_provider_org_id	Provider business unit ID
p_receiver_org_id	Receiver project organization ID
p_cc_ar_invoice_id	Customer transaction ID created in ra_customer_trx_all.customer_trx_id
p_cc_ar_invoice_line_num	Line number from ra_customer_trx_lines_all.line_number.
p_contract_line_customer_id	Customer ID on the bill plan associated with the contract line.
p_vendor_id	Supplier ID (poz_suppliers.vendor_id)
p_vendor_site_id	Supplier site ID (poz_supplier_sites_all_m.vendor_site_id)
p_expenditure_type	Expenditure type defined on the contract line internal attribute.
p_expenditure_type_id	Expenditure type ID defined on the contract line internal attribute.
p_expenditure_organization_id	Expenditure organization defined on the contract line internal attribute.
x_expenditure_type_id	Expenditure type ID returned by the extension.
x_expenditure_type	Expenditure type returned by the extension.
x_expenditure_organization_id	Expenditure organization ID returned by the extension.
x_status	Return status of the extension.
x_Error_Stage	Error stage returned by the extension.
X_Error_Code	Error code returned by the extension.

Labor Billing Extension

The Labor Billing Extension allows you to derive labor billing amounts for individual labor transactions.

You can use the labor billing extension to implement unique labor billing methods. Some examples of how you can use the labor billing extension are to:

- Bill overtime premium hours at cost.
- Bill based on volume of work performed.

The Labor Billing Extension is called during the invoice or revenue generation process to determine labor revenue and billing amounts.

The extension is defined by the following items:

Extension Component	Name
Body template	pjb_client_extn_billing.pkb
Specification template	pjb_client_extn_billing.pkh
Package	pjb_client_extn_billing
Procedure	Calc_Labor_Bill_Amount

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_transaction_type	Varchar2 Valid values are: • ACTUAL (default value) • FORECAST
p_contract_id	Number
p_expenditure_item_id	Number
x_amount	Number No value is passed in to the x_amount parameter. Do not expect an amount in this parameter when you create calculations in the extension. The billing extension must assign a value to the x_amount parameter, or else the extension will be ignored by the calling program.
x_bill_rate_flag	Varchar2 Return one of the following values as the x_bill_rate_flag parameter value to specify if the amount that you have derived is based on a bill rate or a percent markup: • B (specifies bill rate) • null or value other than B (specifies markup) If you specify that your amount is based on a bill rate, Oracle Fusion Projects populates the bill rate of the expenditure item by dividing the bill amount by the number of hours. If you specify that your amount is a markup, Oracle Fusion Projects does not set the bill rate.

x_bill_trans_currency_code	Varchar2
x_bill_txn_bill_rate	Number
x_markup_percentage	Number If you specify that your amount is based on markup, populate x_markup_percentage with the markup percentage amount, so that the expenditure item record will contain accurate data.
x_rate_source_id	Number
x_return_status	Varchar2
x_msg_count	Number
x_msg_data	Varchar2

Oracle Fusion Projects uses the labor billing extension for rate-based invoice method classifications or rate-based and as-incurred revenue method classifications during the invoice or revenue generation process. During processing, if Oracle Fusion Projects encounters a transaction that has a derived bill amount from a labor billing extension, it skips the standard bill amount and rate calculation section of the revenue generation process for that transaction.

Design Issues

Consider the following design issues for labor billing extensions:

- What are the conditions and circumstances in which you cannot use the standard, rate-based invoice and revenue method classifications supported by Oracle Fusion Projects?
- How are the invoice and revenue amounts calculated in these cases?
- How do you identify labor transactions that meet these conditions?
- How do you store rates and other information that your calculations may require? How are the rates and other information maintained?
- What are the exception conditions for your labor billing extension? What is the exception handling if you cannot find a rate that should exist?

Nonlabor Billing Extension

The Nonlabor Billing Extension enables you to derive billing amounts for individual nonlabor transactions.

You can use the Nonlabor Billing Extension to implement unique nonlabor invoice methods or revenue methods. Some examples of how you can use the Nonlabor Billing Extension are for:

- A tiered pricing method
- External application rate derivation

The Nonlabor billing extension procedure Oracle provides can be called during either the invoice or revenue generation process to determine the nonlabor invoice or revenue amounts.

The extension is defined by the following items:

Extension Component	Name
Body template	pjb_client_extn_billing.pkb
Specification template	pjb_client_extn_billing.pkh
Package	pjb_client_extn_billing
Procedure	Calc_NLBR_Bill_Amount

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Parameters

Information about parameters for this client extension are below.

Bill Rate

Return one of the following values as the `x_bill_rate_flag` parameter value to specify if the amount that you have derived is based on a bill rate or a percent markup:

- B (specifies bill rate)
- null or value other than B (specifies markup)

If you specify that your amount is based on a bill rate, Oracle Fusion Projects populates the bill rate of the expenditure item by dividing the bill amount by the number of hours. If you specify that your amount is a markup, Oracle Fusion Projects does not set the bill rate.

Status

Use the `x_status` parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as described in the following table.

Status	Description
<code>x_status = 0</code>	The extension executed successfully.
<code>x_status < 0</code>	An Oracle error occurred and the process did not complete. Oracle Fusion Projects writes an error message to the process log file and rolls back the transactions processed for the entire project.
<code>x_status > 0</code>	An application error occurred. Oracle Fusion Projects writes a rejection reason to <code>PA_EXPENDITURE_ITEMS.REV_DIST_REJECTION_CODE</code> and does not mark items as revenue distributed. You can review the rejection reason in the revenue generation exception report.

Oracle Fusion Projects uses nonlabor billing extensions for rate-based invoice method classifications or rate-based and as-incurred revenue method classifications during invoice or revenue generation. During processing, if Oracle Fusion Projects encounters a transaction that has a derived bill amount from a nonlabor billing transaction, it skips the standard bill amount and rate calculation section of the invoice or revenue process for that transaction.

Design Issues

Consider the following design issues for nonlabor billing extensions:

- What are the conditions and circumstances in which you cannot use the standard, rate-based invoice and revenue method classifications supported by Oracle Fusion Projects?
- How are the invoice and revenue amounts calculated in these cases?
- How do you identify nonlabor transactions that meet these conditions?
- How do you store rates and other information that your calculations require? How are the rates and other information maintained?
- What are the exception conditions for your nonlabor billing extension? What is the exception handling if you cannot find a rate that should exist?

Output Tax Extension

You set up a hierarchy for Oracle Fusion Projects in the application tax options of Oracle E-Business Tax. The Generate Invoice process uses the Application Tax Options hierarchy to determine the default tax classification codes on invoice lines. The Output Tax billing extension is one of the default tax options in the Application Tax Options hierarchy.

The Generate Invoice process calls the Output Tax extension if it does not find the default tax classification code from the other tax options you defined in the application Tax Options hierarchy. You can use the extension to satisfy your business rules in assigning the default tax classification code for invoice lines.

The name for this procedure is `get_tax_codes`. This procedure assigns a tax classification code to an invoice line.

The extension is defined by the following items:

Extension Component	Name
Body template	<code>pjb_client_extn_output_tax.pkb</code>
Specification template	<code>pjb_client_extn_output_tax.pkh</code>
Package	<code>pjb_client_extn_output_tax</code>
Procedure	<code>get_tax_codes</code>

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_Contract_Id	Contract identifier, Number
p_Customer_Id	Customer identifier, Number
p_bill_to_site_use_id	Bill-to Site identifier, Number
p_ship_to_site_use_id	Ship-to Site identifier, Number
p_ledger_id	Ledger, Number
p_expenditure_item_id	Expenditure item, Number
p_event_id	Event, Number
p_line_type	Default value is Null, Number
x_output_tax_code	Tax ID
x_return_status	Return status of the procedure. Valid values are: • S (Successful) • E (Error) Varchar2
x_msg_count	Message count. Valid values are: • >=0 (Greater than zero) Number
x_msg_data	Actual message in case of any errors. Default value is Null. Varchar2

Receivables Transaction Type Extension

The Receivables Transaction Type Extension enables you to determine the receivables transaction type when you transfer invoices to Oracle Fusion Receivables.

Oracle Fusion Projects calls the Receivables Transaction Type Extension during the Transfer Invoices to Oracle Fusion Receivables process.

The extension is defined by the following items:

Extension Component	Name
Body template	pjb_client_extn_inv_transfer.pkb
Specification template	pjb_client_extn_inv_transfer.pkh
Package	pjb_client_extn_inv_transfer
Procedure	get_ar_trx_type

Important

Do not change the name of the extension procedures or parameters. Also, do not change the parameter types or parameter order in your procedure. After you write a procedure, compile it and store it in the database.

Parameters

Information about parameters for this billing extension are in the table below.

Parameter Name	Description
p_Contract_Id	Contract identifier, Number Corresponds to column CONTRACT_ID in the OKC_K_HEADERS_ALL_B table.
p_Invoice_Num	Invoice number Corresponds to column INVOICE_NUM in the PJB_INVOICE_HEADERS table.
p_Invoice_Class	Invoice class, Varchar2 Valid values are: • INVOICE (Regular invoice) • CREDIT_MEMO (Crediting invoice) • WRITE_OFF (Write-off invoice) • CANCEL (Canceling invoice)
p_Contract_Curr_Inv_Amt	Sum of invoice amount in contract currency, Number Corresponds to column CONTRACT_CURR_INV_AMT in the PJB_INVOICE_LINES table.
p_Contract_Curr_Code	Contract currency code, Varchar2 Corresponds to column Contract_Currency_code in the PJB_INVOICE_HEADERS table.
p_Inv_Curr_Code	Invoice currency code, Varchar2 Corresponds to the column Invoice_Currency_code in the PJB_INVOICE_HEADERS table.
p_Inv_Curr_Inv_amt	Sum of invoice amount in invoice currency, Number Corresponds to column Inv_Curr_Line_Amt in the PJB_INVOICE_LINES table.
p_Ar_trx_type_Id	Transaction Type ID, Number Corresponds to column CUST_TRX_TYPE_ID in the RA_CUST_TRX_TYPES table.
X_ar_trx_type_id	Transaction type ID, Number
x_return_Status	Return status of the procedure, Varchar2 Valid values are: • S (Successful) • E (Error)

x_msg_count	Message count, Number Valid values are greater than zero.
X_msg_data	Actual message when an error exists, Varchar2 Default value is Null.
X_Validate_Trx_Type	Valid values are: • Y (Yes) • N (No)

Receivables Transaction Type Extension Validation Options: Critical Choices

Select one of the following values as the validation option in the Receivables Transaction Type extension:

- Yes
- No

Yes

Select Yes when you are ready to validate and transfer the invoice data to Oracle Fusion Receivables.

No

Select No when the invoices are generated in Oracle Fusion Project Billing from transactions fully invoiced and migrated from a different source application and are not to be reported as open receivables in Oracle Fusion Receivables.

The No option instructs the Transfer Invoice Details to Receivables process to bypass the receivables transaction type validation in Oracle Fusion Project Billing. Define the receivables transaction type to bypass the open receivable validation in the automatic invoice process in Oracle Fusion Receivables.

Note

You cannot reverse or adjust the receivables transaction type for invoices already sent to Oracle Fusion Receivables. Ensure that you select the correct validation option before you transfer invoices to Oracle Fusion Receivables.

FAQs for Define Project Billing Extensions

What's the difference between transaction dependent and transaction independent billing extensions?

Transaction dependent billing extensions are only executed when other transactions are processed. Transaction dependent billing extensions are called

only if billable expenditure items and events exist that need to be processed. For example, a transaction dependent billing extension is not called when there are new transactions set to nonbillable status that are not processed during revenue or invoice generation.

Transaction independent billing extensions are executed for each contract with an active billing assignment, even if there are no transactions to process. This type of billing extension relies on input other than billable transactions on a contract.

Note

Transaction independent billing extensions are processed every time you generate revenue or invoices.

Project Performance Reporting Configuration: Manage Project Units: Performance Reporting Options

Performance Data Summarization: How It Is Calculated

Summarization is a systematic organization of information for purposes of project analysis and tracking. You use summarized data to analyze the health of projects and drill down to the causes of any deviation from set thresholds. You can complete the following tasks using summarized data:

- Analyzing project performance data
- Reviewing project performance
- Analyzing KPI categories and KPIs
- Tracking project progress
- Viewing revenue and invoice summaries

After you run summarization, the KPI related information is rendered out of date with respect to the latest summarized information. Therefore, it is important that you generate KPI values once the summarization process is completed. You can avoid generating KPI values manually, by enabling automatic generation of KPI values in the summarization options.

Settings That Affect Performance Data Summarization

You summarize data for a project unit or a business unit. You can also summarize performance data for a range of projects or projects owned by a project manager. Besides this, you must specify the following parameters each time you want to run the summarization process manually:

- Select the appropriate summarization method:
 - Incremental, for general purpose summarization.
 - Bulk, for summarizing large amounts of data all at once.
 - Delete and resummarize, for correcting summary data when the source system data is changed outside the regular transaction flow.

- Resource breakdown structure, for migrating all summary data from one resource breakdown structure version to the next. If you select this option you must also specify the resource breakdown structure header.
- Specify whether to summarize budget and forecast, commitment, actual cost, revenue and invoice, and client extension transactions.

How Performance Data Summarization Is Calculated

Performance data summarization collects data from various sources and assigns amounts to relevant tasks and resources in the project. After data is summarized, you can view how much is being spent on, incurred by, or received by a task or resource. Also, data is grouped according to periods so that it can be tracked across different time lines.

You can run the summarization process for different situations, such as:

- Your data is out of date and you want to update it.
- Your data is corrupt and you want to delete the existing data and resummarize.
- You have a large volume of data that is not yet summarized and want to summarize the entire bulk of data in one run.

After you select the parameters for summarization and submit a request, the application performs the following steps to generate the data that you view in the application:

- Scope summarization by determining the list of projects, contracts, and batches of transaction data for which to run summarization.
- Extract data to be summarized from data sources, group it by periods, and ensure the data is prepared for resource mapping.
- Populate summary data into designated tables before resource breakdown structure mapping.
- Populate business unit, project unit, and other lookup information.
- Populate performance reporting dimension data including time, task breakdown structure, and resource breakdown structure.
- Look up resource breakdown structure mappings, scenario dimension members, period IDs, and prepare data for Essbase load.
- Load data into Essbase and merge data into summary tables.

You can track the progress of summarization on the process monitor. If the process fails to complete, it continues from the point of failure when you resubmit it.

Setting Up the Planning Amount Allocation Basis: Points to Consider

When you set up summarization options, you are required to specify the planning amount allocation basis. You can select a planning amount allocation

basis only if you have selected the budgets and forecast data source for summarization. The following are the methods of allocating planning amounts:

- Period start date
- Period end date
- Daily proration

Note

You cannot change the planning amount allocation basis if summarized data exists.

Assume that a project includes a task for team members to undergo some product and soft skills training. A budget of \$5900 is allocated to this task between 1 January 2011 and 28 February 2011. While summarizing using a monthly accounting calendar, the application can allocate the planned amount in three ways.

Period Start Date Basis Method

Allocate the entire budget of \$5900 to the first period of January 2011 regardless of when the training takes place. This allocation method could impact period to date cost variance measures for January and February if the actual training costs occur in February. The period start date basis method is the default option.

Period End Date Basis Method

Allocate the entire budget of \$5900 to the last period of February 2011 regardless of when the training takes place. This allocation method could impact period to date cost variance measures for January and February if the actual training costs occur in January.

Daily Proration Basis Method

Distribute the budget of \$5900 equally over the entire period so that \$3100 is spent in January 2011 and \$2800 is spent in February 2011. The following shows how the budget is distributed:

- Allocate the total amount of \$5900 and dividing it by the total number of days to arrive at the daily amount.

Total Number of Days = 31 + 28 = 59

Daily Amount = \$5900 / 59 = \$100

- Multiply daily amount by the number of days the task is active.

Amount for January 2011 = \$100 x 31 = \$3100

Amount for February 2011 = \$100 x 28 = \$2800

Summarizing project performance data using daily proration requires more system resources than summarizing project performance data using the period start or end date basis. To distribute plan amounts evenly across plan duration,

the application creates a summarized record for each day for the affected projects and tasks in the project unit.

Using the daily proration basis method reduces the chances of impacting period to date cost variance measures for January and February.

FAQs for Manage Project Units: Performance Reporting Options

Can I specify the budgets and forecasts to include in summarization?

Certain financial plan types are included in summarization by default, while you must manually select others. Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

How can I update project performance data and generate KPI values?

The project manager must run summarization for the selected project using the **Actions** menu in the **Project List** region on the **Project Performance Reporting** dashboard. The project manager must use the **Important Dates** or the **Data Updates** window to update project performance data if the data is not current or if there are unprocessed transactions.

To update performance data for all projects in a project unit, the projects application administrator must run the Update Project Performance Data process. After you update project performance data you must generate key performance indicator (KPI) values again. If you have not chosen to generate KPI values automatically after updating project performance data, you should generate KPI values manually.

You must generate KPI values manually when you enable a new KPI for use and want to view it in the KPI watchlist. You may update data manually if you need to look at the data less frequently, such as, at the end of a period.

What actions trigger performance data summarization?

The following actions trigger performance data summarization:

- Run the Update Project Performance Data process for a project from the Project Performance Dashboard or Projects Overview area.
- Run or schedule the Update Project Performance Data process from the process scheduler.
- Enable the reporting option on the project unit to summarize project data before generating key performance indicators.
- Create revenue and invoice transactions.

Important

Summarized revenue and invoice transaction amounts appear in the revenue and invoice work area; however, these transactions do not appear in summarized data on the Project Performance Dashboard until the transactions are summarized using the Update Project Performance Data process.

What happens when I select a planning amount allocation basis for the project unit?

The **Period Start Date** option allocates amounts based on the period start date. The **Period End Date** option allocates amounts based on the period end date. The **Daily Proration** option spreads plan amounts evenly across the plan duration.

Project Performance Reporting Configuration: Define Key Performance Indicators

Manage Trend Indicators

KPI Trends: How They Are Calculated

Trend indicators show whether the trend of a key performance indicator (KPI) is favorable or unfavorable for a project. When you define KPIs you specify a value for tolerance percentage. The tolerance percentage is taken into account while calculating trend indicators for a KPI.

Note

KPI trends may not be useful if KPI values are generated often. The reason is, if the tolerance percentage is 10 percent and KPI values are generated every day, the values decrease by 1 percent each day. In this scenario, no change is observed in the trend as the decrease is well within the tolerance. However, if you generate KPI values at the start and end of the month, a significant change is observed in the trend.

Settings That Affect KPI Trends

The trend indicator that appears for a KPI is based on the defaults set in the performance trend indicator setup. The different trend indicators available are:

- Up, favorable: The project performance trend is increasing in value and is desirable.
- Up, unfavorable: The project performance trend is increasing in value and is undesirable.
- Down, favorable: The project performance trend is decreasing in value and is desirable.

- Down, unfavorable: The project performance trend is decreasing in value and is undesirable.
- Unchanged: The project performance trend is unchanged.

You can change the sort order of the trend indicators based on how you want to sequence KPIs in a table based on the performance of KPIs in a project.

How KPI Trends Are Calculated

Trend Indicators are calculated based on the percentage increase or decrease in a KPI value, while taking into consideration the tolerance percentage specified while creating the KPI. The following example illustrates how trend indicators are calculated for a KPI.

Consider a scenario where KPI values are generated for the first time on January 15, 2011, and again on February 15 and April 15. KPI trends are calculated when there are at least two values that exist for a KPI.

Note

All values in the following tables are percentages unless specified otherwise.

KPI Values Generated on January 15, 2011

KPI	Tolerance Percentage and Trend Indicator Setting	Current KPI Value and Status Indicator	Previous KPI Value and Status Indicator	Trend Indicator
PTD Actual Spent Labor Effort Percentage	5 Up is Favorable	70 On Track	-	-
PTD Actual Spent Equipment Effort Percentage	5 Up is Unfavorable	30 On Track	-	-
PTD Actual Invoice Amount	5 Up is Favorable	\$5000 Warning	-	-
Actual Billable Cost Percentage	2 Up is Favorable	90 On Track	-	-
PTD Actual Margin Percentage	2 Up is Favorable	30 On Track	-	-

After generating KPI values on January 15, 2011, the most critical KPI is PTD Actual Invoice Amount. The overall project health status is Warning, because the most critical KPI, PTD Actual Invoice Amount, has a status of Warning.

KPI Values Generated on February 15, 2011

KPI	Tolerance Percentage and	Current Period KPI Value and Status Indicator	Previous Period KPI Value and Status Indicator	Trend Indicator based on Previous Period

	Trend Indicator Setting			
PTD Actual Spent Labor Effort Percentage	5 Up is Favorable	71 On Track	70 On Track	Unchanged
PTD Actual Spent Equipment Effort Percentage	5 Up is Unfavorable	29 On Track	30 On Track	Unchanged
PTD Actual Invoice Amount	5 Up is Favorable	\$4800 Warning	\$5000 Warning	Unchanged
Actual Billable Cost Percentage	2 Up is Favorable	91 On Track	90 On Track	Unchanged
PTD Actual Margin Percentage	2 Up is Favorable	30.2 On Track	30 On Track	Unchanged

This table shows how the trend indicator is calculated based on the previous period. Although the KPI values for the current period are different from the previous period, the difference in the values is not significant enough to change the trend indicator, based on the tolerance percentage defined for each KPI. For example, the PTD Actual Spent Labor Effort Percentage is 71 percent, compared to the previous period KPI value of 70 percent. If the current period KPI value is more than 73.5 percent, which is more than 5 percent higher than the previous period, then the trend indicator is Up, Favorable. If the current period KPI value is less than 66.5 percent, which is more than 5 percent lower than the previous period, then the trend indicator is Down, Unfavorable.

The overall project health status is Warning, based on the most critical of all KPI statuses. After generating KPI values on February 15, 2011, the most critical KPI is PTD Actual Invoice Amount.

KPI Values Generated on April 15, 2011

KPI	Tolerance Percentage and Trend Indicator Setting	Current Quarter KPI Value and Status Indicator	Previous Quarter KPI Value and Status Indicator	Trend Indicator Based on Previous Quarter
PTD Actual Spent Labor Effort Percentage	5 Up is Favorable	75 On Track	71 On Track	Up, Favorable
PTD Actual Spent Equipment Effort Percentage	5 Up is Unfavorable	25 On Track	29 On Track	Down, Favorable
PTD Actual Invoice Amount	5 Up is Favorable	\$3500 Critical	\$4800 Warning	Down, Unfavorable
Actual Billable Cost Percentage	2 Up is Favorable	91 On Track	91 On Track	Unchanged
PTD Actual Margin Percentage	2 Up is Favorable	28.5 Warning	30.2 On Track	Down, Unfavorable

This table shows how the trend indicator is calculated based on the previous quarter. The current KPI values are compared to the latest generation date of KPIs for the previous quarter.

Note

It is possible that the previous period trend and the previous quarter trend are calculated based on KPI values from the same generation date. This occurs when the previous period generation date is the same as the latest generation date in the previous quarter.

The first three KPI values changed enough since the previous quarter to change the trend calculator. For example, the current quarter value of PTD Actual Invoice Amount is \$3,500, which exceeds the threshold tolerance of 5 percent from the previous quarter KPI value of \$4,800. Therefore the KPI is in a Critical status, and the trend indicator is Down, Unfavorable. If the current quarter value is greater than \$5,040, which is more than 5 percent higher than the previous quarter, then the trend indicator is Up, Favorable.

A project manager might review the KPI values, statuses, and trends shown in this table and determine that a transaction was not billed, because the KPIs that are based on revenue and invoice amounts have both dropped.

The overall project health is critical because of the status of the PTD Actual Invoice Amount.

FAQs for Manage Trend Indicators

Why did the trend indicator show a downward trend when KPI performance is improving?

While defining key performance indicators (KPIs), you can determine if a positive increase between the current and previous KPI value is a favorable or unfavorable trend. Therefore, an upward trend may not necessarily indicate that KPI performance is improving.

For example, for a KPI based on a non-billable percentage of total costs, a low value for non-billable costs is preferred. Hence, a downward trend is favorable.

FAQs for Manage Performance Measures

What's the difference between effort-based, amount-based, and percentage-based performance measures?

Performance measures that are based on effort hours are effort-based. Examples are, actual spent labor effort and actual spent equipment effort.

Performance measures that are based on currency values are amount-based. Examples are, actual revenue and actual raw cost.

Performance measures that are based on percentages are percentage-based. Examples are, actual margin percentage and actual nonbillable cost percentage.

Note

KPIs that are percentage-based can be tracked at the task, resource, and project levels.

What happens if I use period-to-date amount-based measures for large projects?

Period-to-date amount-based measures use the same threshold values for all phases of the project. This may result in a spike in the key performance indicator (KPI) values if the amounts used to calculate the KPI values vary widely throughout the project. To avoid this problem, consider using different sets of threshold values for amount-based KPIs defined in small and large projects.

Manage Key Performance Indicators

KPI Components: How They Work Together

A key performance indicator (KPI) enables you to define thresholds of possible values for a performance measure for any project in a project unit. During KPI definition, you associate a performance status indicator with each threshold level. When you generate KPI values, the application compares the value against the thresholds defined for the KPI. If the value falls within any of the defined threshold levels, then the application associates the status indicator of that threshold with the performance measure. The following are the KPI components we will discuss:

- Performance Measure
- Performance Status Indicator
- Threshold Level
- Trend Indicator
- Tolerance Percentage
- Project Performance Data
- Project Unit

Performance Measure

Oracle Fusion Project Performance Reporting provides both fundamental and derived measures that present an objective insight into the performance of the project. In addition, you can create custom measures to meet the unique needs of your organization. Use any delivered or custom performance measure to create a KPI.

Performance measures are available in the areas of budgets and forecasts, billing and revenue, costs, effort, margin, capitalization, and more. Following are examples of predefined performance measures:

- EAC Budget Cost (the estimate at completion burdened cost from the current baseline budget)
- ITD Forecast Revenue Variance (the inception-to-date current baseline budget revenue - current approved forecast revenue)
- Prior Period Margin Percentage Variance (the prior period current baseline budget margin percentage - actual margin percentage)

A performance measure is associated with a time dimension. The following time dimensions are available:

- Estimate-at-completion (EAC)
- Inception-to-date (ITD)
- Prior Period
- Period-to-date (PTD)
- Quarter-to-date (QTD)
- Year-to-date (YTD)

A particular performance measure set, such as Budget Cost, can have as many as six performance measures: one for each time dimension.

A performance measure can be expressed as a currency amount, as a percentage, or in time units such as hours when effort is measured. If the KPI is used on projects that use different currencies, you can enter different thresholds levels for each currency you need.

Performance Status Indicator

Performance status indicators give an immediate picture of the status of a project, such as critical, at risk, and on track. Icons with unique colors and shapes indicate the status and severity of performance. During KPI definition, you first associate status indicators with performance statuses:

- Critical
- Severe
- At risk
- On track

- Ahead

You then associate these statuses with threshold levels. When KPI values are generated for a project, each value is compared to the defined thresholds and the corresponding status indicator for the KPI appears on project performance reports.

A status can identify negative performance so that you can take the appropriate actions to prevent or quickly resolve problems. Conversely, a status can identify positive performance to help you track expected or excellent performance.

Threshold Level

During KPI definition, you define threshold levels to cover all possible values for a KPI. If a KPI value exceeds the range of values defined for the KPI threshold levels, the closest threshold is used to determine the KPI status. For example, if a KPI value falls below the lowest threshold level, the application assigns the status of the lowest threshold level to the KPI.

A status indicator can be associated with more than one threshold level. For example, both underutilization and overutilization of resources can indicate a critical performance status.

Trend Indicator

Performance trend indicators give an immediate picture of improving or worsening KPI value trends on the project. Icons with unique colors and shapes indicate whether an increasing performance trend has a positive or negative impact. For example, an increase in nonbillable costs is considered unfavorable to organizations that are able to bill costs to their clients. In this example, the performance trend indicator will show a negative impact.

Tolerance Percentage

A tolerance percentage is used to compare the previous KPI value to the current value to show if the performance trend is increasing, decreasing, or staying the same. For example, if the tolerance percentage is 10 percent for a KPI, and the difference between the previous KPI value and current value is greater than 10 percent, then the trend is increasing. If the difference is greater than -10 percent, then the trend is decreasing. If the difference is between -10 percent and 10 percent, then the trend shows no change. A single tolerance percentage value, such as 10 percent in this example, represents both negative and positive tolerances.

Project Performance Data

The application provides programs that extract and update transaction data and maintain project performance data. The process of generating KPI values uses this project performance data. Before you generate new KPI values, check the date that the project performance data was last generated to make sure that the data includes all transactions that may impact project performance results. Then decide if you must update project performance data before you generate KPI values. After you run these programs you will have a true picture of project performance.

When you generate KPI values, the period for which KPI values are being generated is determined by the KPI Period Determination Date. The data during

that period is used to generate project performance data that will be populated on the project performance dashboard.

Note

KPIs that are enabled for use in the KPI definition are included when KPI values are generated.

Project Unit

KPIs are created for specific project units. During project unit implementation you specify whether KPIs are tracked for the project unit.

KPI Values: How They Are Generated

Key performance indicator (KPI) values are calculated when you generate KPI values. KPI values must be generated after project data is updated.

Settings That Affect KPI Values

You must specify the following parameters:

Settings	Description
KPI Period Determination Date	Set the date used to derive the project calendar and accounting calendar periods for performance measure calculations when KPI values are generated.
Replace Current KPI Values	Replace the current KPI values with the values that are generated now.
Delete Previous KPI Values	Delete the KPI values that were generated the previous time the generate KPI values process was run.
Number of Days to Retain KPI Values	Retain KPI values for the specified number of days starting from the current date before deleting previous KPI values.

For example, assume KPI values were generated on the following dates:

KPI Period Determination Date	Generation Date
October 29, 2010	November 12, 2010
September 30, 2010	October 15, 2010

If you generate KPI values on November 18, 2010 and select to replace the current KPI values, the KPI values generated on November 12, 2010 are deleted and replaced with KPI values generated on November 18, 2010. You must select to replace the current KPI values for a given period if you want to retain one set of KPI values and review KPI values during the period.

You can also delete KPI values that are not required for reporting. The options, **Delete Previous KPI Values** and **Number of Days to Retain KPI Values**, enable

you to delete KPI values that were generated prior to a specific number of days. For example, if today is November 18, and you want to remove all KPI values generated in the previous year, you must select to delete previous KPI values, and set **Number of Days to Retain KPI Values** to 322. All KPI values created since January 1, 2010 are retained and KPI values generated before that period are deleted.

Important

Do not delete previous KPI values in the following cases:

- When you are generating KPI values for the first time in a period.
- If you want to see trending information for the KPIs over the life of the project.

When you generate KPI values, you can select to receive a notification by e-mail by enabling workflow notifications, once KPI values are generated.

How KPI Values Are Generated

KPI values are calculated based on the value of the performance measure associated with the project. When you generate KPI values, the KPI period determination date is compared to the current date to determine the period. KPI values are generated for the period based on the options in the key performance indicator definition. Only one set of key performance indicators is kept for a single KPI period determination date.

For example, KPI values are generated for a KPI period determination date of August 24 at 8:15 a.m. for Projects A and B. Then KPI values are generated for a KPI period determination date of August 24 at 10:45 a.m. just for Project B. The KPI values for Project B generated at 8:15 a.m. are deleted, but KPIs belonging to Project A are retained.

Note

To keep historical information, use a unique KPI period determination date.

Performance Status for Tasks and Resources: How It Is Calculated

The application calculates performance status for individual tasks and resources for percentage-based key performance indicator (KPI) values.

Settings That Affect Performance Status for Tasks and Resources

When you enable the **Track by Task** and **Track by Resource** options on the project definition, a status indicator appears for the task and resource on project performance reports when the individual KPI value is not on track. Enabling this option helps you easily identify the troubled tasks and resources in a hierarchical task and resource structure in a project.

Note

You can track performance by task and resource only for KPI values that are expressed as a percentage.

How Performance Status for Tasks and Resources Are Calculated

Performance status is individually calculated for all levels of the task and resource hierarchy based on the KPI threshold definition. KPI threshold values are defined when KPIs are created. Based on the threshold values defined, the status for tasks and resources are calculated for the KPI values that are based on a percentage. This example shows how the status of tasks and resources are calculated. For example, assume that the KPI named ITD Nonbillable Cost as a Percentage of Total Cost has the following threshold definition.

Threshold Level	Threshold Range From	Threshold Range To	Status Indicator
1	-99.00%	-12.00%	Critical
2	-11.99%	-5.00%	At Risk
3	-4.99%	4.99%	On Track
4	5.00%	11.9%	At Risk
5	12.00%	99%	Critical

Example of System Implementation Task

In the example, we have a System Implementation task containing six subtasks.

Task	Task	ITD Nonbillable Cost	ITD Billable Cost	ITD Total Cost	ITD Nonbillable Cost as a Percentage of Total Cost
System Implementation		20,000	105,000	125,000	16.00%
	Planning	0	21,000	21,000	0%
	Definition	6,000	51,000	57,000	10.53%
	Build	15,000	33,000	48,000	31.25%
	Test	0	0	0	0%
	Release	0	0	0	0%
	Support	0	0	0	0%

The ITD Nonbillable Cost as a Percentage of Total Cost KPI value for the Definition task is 10.53% (6,000/57,000). Based on the threshold levels defined for this KPI, the Definition task shows the At Risk status indicator.

Example of a Consulting Resource Breakdown Structure

In another example, the Consulting resource breakdown structure contains a Labor resource. Labor is a parent to the Project Manager resource, which is a parent to resources Max Martin, Robert Altima, and Fred Jones. The ITD Nonbillable Cost as a Percentage of Total Cost KPI value for Labor is 12.97% (15,700.00/121,015.00). The ITD Nonbillable Cost as a Percentage of Total

Cost KPI value for Fred Jones is 0%. Because the KPI value for each row in the hierarchical structure is calculated separately, Labor has a status indicator of Critical and Fred Jones does not have a status indicator.

Resource	Resource	Resource	Resource	ITD Nonbillable Cost	ITD Billable Cost	ITD Total Cost	ITD Nonbillable Cost as a Percentage of Total Cost
Consulting				19,776	105,315	125,091	15.81%
	Labor			15,700	105,315	121,015	12.97%
		Project Manager		15,700	50,000	65,700	23.90%
			Max Martin	2,800	14,000	16,800	16.67%
			Robert Altima	8,400	0	8,400	100.00%
			Fred Jones	0	36,000	36,000	0%

If you track tasks and resources for a project, each task and resource with a KPI value that is not on track is designated as an exception. The KPI value for the project does not impact the exception designation for individual tasks and resources. For example, if a task has a Critical status indicator based on the KPI value and threshold definition, it is designated as an exception even if the project has an On Track status indicator.

Important

Task and resource performance status is based on the latest summarized data, which may not be the same as the summarized data used to generate the latest KPI values.

Tolerance Percentage: Explained

Tolerance percentages are used to compare the previous key performance indicator (KPI) value to the current value to arrive at the performance trend.

Trend indicators are calculated based on the percentage increase or decrease in a KPI value and the tolerance percentage on the KPI definition.

Example of Tolerance Percentage

When you create a KPI, you must enter a tolerance percentage that is used in determining the trend indicator to display for a KPI. The percentage change in KPI value is calculated using the following formula:

Percentage Change in KPI Value = $\frac{\text{absolute value of (Current Value - Previous Value)} \times 100}{\text{Previous Value}}$

The following example illustrates how tolerance percentage is used to calculate the trend indicator to display.

KPI	Tolerance Percentage and Trend Indicator Setting	Current Period KPI Value and Status Indicator	Previous Period KPI Value and Status Indicator	Percentage Change	Trend Indicator Based on Previous Period
PTD Actual Invoice Amount	5 percent Up is Favorable	\$3500 Critical	\$4800 Warning	27 percent	Down, Unfavorable
PTD Actual Spent Labor Effort Percentage	5 Up is Favorable	75 On Track	71 On Track	5.6 percent	Up, Favorable
PTD Actual Margin Percentage	2 percent Up is Favorable	28.5 percent Warning	30.2 percent On Track	5.6 percent	Down, Unfavorable

Creating Different Threshold Levels for Each Currency: Examples

You must define threshold levels for each currency for currency-based KPIs.

Scenario

A company is in the business of selling and installing human resource software. One of the standard KPIs used for the installation projects is Period-to-Date (PTD) Invoice Amount. Installation projects are performed in different countries having different project and ledger currencies, such as, United States dollars, Japanese yen, Mexican pesos, and Indian rupees. Projects performed using currency in United States dollars have a higher threshold for criticality with respect to PTD invoice amounts. This is reflected with unique currency threshold definitions.

Ledger Currency Definitions

For projects with a ledger currency in United States dollars, the PTD invoice amount is considered critical if the value is between 0 and 3,000 USD. For projects with a ledger currency in Indian rupees, a critical PTD invoice amount would be between 0 and 50,000 INR. The different currency thresholds do not have to necessarily correlate to exact currency conversion.

FAQs for Manage Key Performance Indicators

What's the difference between key performance indicator and performance measure?

Key performance indicators (KPIs) measure how well an organization or individual performs an operational, tactical, or strategic activity that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage.

Performance measures are singular data elements defined by a specific account, scenario, and time dimension combination. For example, the performance measure, Quarter-to-Date (QTD) Forecast Labor Effort, references the account of labor hours, in the scenario of primary forecast, and the quarter-to-date time dimension.

A KPI is created based on a performance measure, and specifies how a performance measure value is interpreted using threshold levels. For example, the KPI PTD Actual Spent Equipment Effort is based on the measure actual spent equipment effort.

What's the difference between key performance indicator and KPI category?

Key performance indicators (KPIs) measure how well an organization or individual performs an operational, tactical, or strategic activity that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage.

A KPI category is a group of KPIs that belong to a specific performance area. Examples are: cost, profitability, financial, and schedule.

From the examples above, PTD Actual Margin Percentage must be in the KPI category of profitability.

What's a KPI period determination date?

Date used to determine the accounting calendar and project accounting calendar periods for performance measure calculations during key performance indicator (KPI) value generation.

For example, assume that your project uses a monthly accounting calendar and a weekly project accounting calendar. You generate KPI values on December 8, 2010 with a KPI period determination date of November 30, 2010. The current period for KPI generation is determined based on the type of calendar used. In the accounting calendar, the date November 30, 2010 falls into the November 2010 period. In the project accounting calendar, November 30, 2010 falls in the first week of December 2010.

Note

The KPI period determination date must be a date in the past.

Why can't I create or edit a key performance indicator for a project unit?

Since the project unit is not enabled to track key performance indicators.

What happens if I attach different KPIs to a project for the same measure?

Overall project health is based on the most severe KPI status even if you have more than one KPI that uses the same performance measure.

For example, assume the Financial category contains three KPIs, and two of those KPIs use the same performance measure with two different threshold definitions. If the KPI status falls in the critical and on track ranges for the two KPIs that use the same performance measure, and the KPI status is on track for the third KPI, then the overall project health is critical. If the KPI status is on track for the two KPIs that use the same performance measure, and is critical for the third KPI, the overall project health is still critical.

Can I track KPI values at the task and resource level?

Yes. You can track key performance indicators (KPIs) that have a percentage measure format. Tracking by task and resource for a project enables you to identify problem areas on the task structure and resource structure during KPI analysis.

What happens if a KPI value exceeds the threshold limits defined for the KPI?

An up or down arrow appears in the **Exceeds Threshold** column of the **KPI History** table, and the closest threshold is used to determine the key performance indicators (KPIs) status. If KPI values fall outside the threshold ranges, consider extending the upper and lower threshold ranges.

Where do the currency type options for a key performance indicator come from?

The currency type appears for a selection only if the currency type is enabled for summarization for the project unit.

Where do the calendar type options for a key performance indicator come from?

The calendar type appears for a selection only if the calendar type is enabled for summarization for the project unit.

How can I evaluate project performance if KPIs are not tracked?

You must use the **Review Project Performance** page to perform more detailed financial performance analysis for a project than is possible on the **Project Performance Dashboard**. You can review amounts at the task or resource level, and drill down to individual expenditure items.

Project Performance Reporting Configuration: FAQs for Define Region Personalization

Can I select the regions to appear on Project Performance Reporting dashboard pages?

Yes. Using the Personalization option you can select the **Edit Current Page** option in the **Personalization** list to show or hide regions. You can also modify the arrangement of the region layouts using the **Change Layout** option.

Project Integration Gateway Configuration: Overview

Oracle Fusion Project Foundation and Oracle Fusion Project Management: How They Work Together

Use Oracle Fusion Project Integration Gateway to integrate Oracle Fusion Project Foundation with Oracle Fusion Project Management.

The integration enables project accountants, project billing specialists, and executives to centrally perform project costing, billing, accounting, and executive reporting tasks in Oracle Fusion Project Foundation and other Project Financial Management applications while enabling project managers to use Oracle Fusion Project Management to plan, progress, and manage projects.

Oracle Fusion Project Integration Gateway ensures data security, integrity, and efficiency by:

- Enabling you to create an integration for a specific project unit
- Defining a set framework in which data is transferred between Oracle Fusion Project Foundation and Oracle Fusion Project Management

Managing Integration Options

Determine how Oracle Fusion Project Foundation and Oracle Fusion Project Management interact. When defining integration options you do the following:

- Specify the integration name and project unit.
- Select an integration planning resource breakdown structure.
- Define how rates are derived when exporting resources.
- Specify how data is processed during import and export.

Exporting Planning Resources

Export labor resources and financial resources from the integration planning resource breakdown structure in Oracle Fusion Project Foundation to create project enterprise resources in Oracle Fusion Project Management.

Exporting Project and Task Information

Activate integration and export your project and tasks to Oracle Fusion Project Management after you build out the task structure to the required reporting level in Oracle Fusion Project Foundation.

Restriction

You cannot export projects if you previously exported them to another scheduling application using Oracle Fusion Project Integration Gateway.

The initial export links project and task information in the two applications, and enables you to incrementally export project and task data to Oracle Fusion Project Management. In Oracle Fusion Project Management, you can add subtasks under the exported tasks. You can also assign resources to the subtasks to complete detailed planning.

Restriction

After you export a project, you cannot delete the exported tasks, increase or decrease indent, or move the exported tasks within the project plan in either application.

Importing Project Plan and Progress Information

After you export a project, build out the project plan, add subtasks under integrated tasks, assign resources, and complete planning to the desired detail. When you are ready, import the updated project plan and progress information into Oracle Fusion Project Foundation.

When you import a project, the application summarizes planning and progress information for each resource across all subtasks within the hierarchy of each integrated task. Summarized amounts are imported into a single task assignment created for the resource on the integrated task.

A baseline project plan is automatically created in Oracle Fusion Project Foundation and progress is captured and published. Based on project plan planning options, a baseline budget version can be generated using baseline project plan values and a forecast version generated based on published progress.

Note

The current date is always used as the progress as-of date for published progress.

Primavera P6 Enterprise Project Portfolio Management and Oracle Fusion Project Portfolio Management: How They Work Together

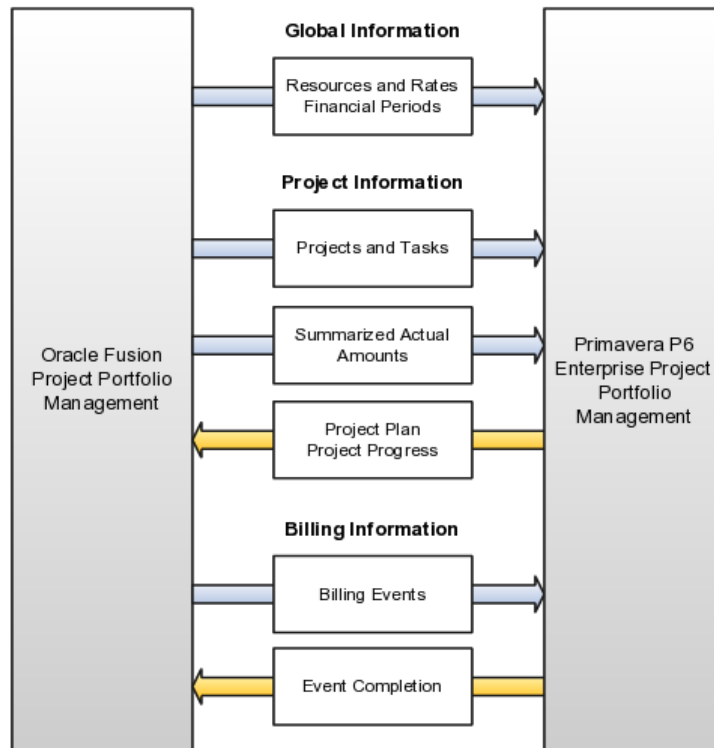
Use Oracle Fusion Project Integration Gateway to integrate Oracle Fusion Project Portfolio Management with Primavera P6 Enterprise Project Portfolio Management. The integration enables project accountants, project billing specialists, and executives to centrally perform project costing, billing, accounting, and executive reporting tasks in Oracle Fusion Project Portfolio Management while enabling each project manager to perform detailed

project planning and scheduling in Primavera P6 Enterprise Project Portfolio Management.

Oracle Fusion Project Integration Gateway ensures data security, integrity, and efficiency by defining a set framework in which data is exported from and imported into Oracle Fusion Project Portfolio Management.

The following table and diagram provide an overview of the flow of information.

Information Type	From Application	To Application
Global integration information	Oracle Fusion Project Portfolio Management	Primavera P6 Enterprise Project Portfolio Management
Projects and task definition	Oracle Fusion Project Portfolio Management	Primavera P6 Enterprise Project Portfolio Management
Summarized project actual quantity and cost	Oracle Fusion Project Portfolio Management	Primavera P6 Enterprise Project Portfolio Management
Project plans and progress	Primavera P6 Enterprise Project Portfolio Management	Oracle Fusion Project Portfolio Management
Billing events	Oracle Fusion Project Portfolio Management	Primavera P6 Enterprise Project Portfolio Management
Event completion	Primavera P6 Enterprise Project Portfolio Management	Oracle Fusion Project Portfolio Management



Global Integration Information

Export resources from the integration planning resource breakdown structure and associated rates to the global dictionary for resource and roles in Primavera P6 Enterprise Project Portfolio Management. Before export, raw or burdened cost rates are derived using logic for actual cost rates, increasing the accuracy of planned costs calculated for planned units.

Export either accounting or project accounting periods to use in Primavera P6 Enterprise Project Portfolio Management and to enable import of periodic project plans into Oracle Fusion Project Portfolio Management.

Project and Task Information

Create projects and the task structure required for financial management and reporting in Oracle Fusion Project Portfolio Management. You can then activate project integration and export project and tasks.

Tip

Define a template called Oracle Fusion Applications Integrated Project Template in Primavera P6 Enterprise Project Portfolio Management to create projects based on your preferences.

Export processing creates links between the project and tasks in Oracle Fusion Project Portfolio Management and the project and WBS created in Primavera P6 Enterprise Project Portfolio Management. All export and import processing is dependent on these links.

Actual Amount Information

Export summarized actual amounts, as required, for comparing with planned amounts. For each integrated WBS that is linked to a lowest-level task, a summary activity is created to store actual quantity and costs in Primavera P6 Enterprise Project Portfolio Management.

Project Plan and Progress Information

After exporting a project and its tasks to Primavera P6 Enterprise Project Portfolio Management, you can build out the project structure, add WBS nodes and activities, assign resources, and complete planning to the desired detail. Use resources, roles, and expense categories created in the global dictionary based on the integration planning resource breakdown structure.

Tip

Integration supports manual creation of resources or planning for labor or nonlabor amounts directly against activities in Primavera P6 Enterprise Project Portfolio Management.

Import project plan information into Oracle Fusion Project Portfolio Management as required. Before import, planned amounts for each resource are totaled across all activities and child WBSs within the hierarchy of an integrated

WBS. The summarized planning amounts are imported into a single task assignment that Oracle Fusion Project Portfolio Management creates for the resource against the lowest-level task associated with the integrated WBS.

After import, a baseline project plan is automatically created in Oracle Fusion Project Portfolio Management and progress is captured and published. A baseline budget version can be created simultaneously based on project plan planning options.

Billing Information

For contract-based projects, you can export billing events that are assigned to milestone tasks to create finish milestone activities under the integrated WBS in Primavera P6 Enterprise Project Portfolio Management.

Import event completion information into Oracle Fusion Project Portfolio Management, as required, so that you can initiate contract billing activities.

Project Integration Gateway Configuration: Define Project Management Integration

Oracle Fusion Project Management Integration Options: Points to Consider

Project integration options determine how Oracle Fusion Project Foundation and Oracle Fusion Project Management interact.

When defining integration options you do the following.

- Specify integration definition information including the integration name and project unit.
- Select the integration planning resource breakdown structure.
- Specify resource rate options.
- Specify data processing options.

Selecting a Project Unit

You create an integration for a project unit. The project unit you select determines which planning resource breakdown structure you can select as the integration planning resource breakdown structure.

Selecting a Planning Resource Breakdown Structure

Select the integration planning resource breakdown structure that is the source of labor resources and financial resources exported to Oracle Fusion Project Management to create project enterprise resources.

Restriction

You must select a planning resource breakdown structure that does not allow resource changes at the project level.

All projects exported from Oracle Fusion Project Foundation must use the integration planning resource breakdown structure as the primary planning resource breakdown structure.

Specifying Resource Rates

Specify the source of actual cost and bill rates for the resources you export to Oracle Fusion Project Management. The following table describes rate options.

Integration Option	Description
Default business unit	Business unit used to derive the rate schedules that are the source of rates for resources exported to Oracle Fusion Project Management. Determines the currency used to display amounts in Oracle Fusion Project Management after you transfer project and task information. This currency is the primary ledger currency of the business unit.
Resource class rate schedule	Default source of cost rates when actual rates cannot be derived for the resource.
Burden schedule	Determines rate calculation if you assign burdened rates to project enterprise resources.
Effective rate date	Date as of which rates are retrieved and exported.

Specifying Processing Options

Specify the number of records to be processed in each set when exporting resources or projects, or when importing project plans from Oracle Fusion Project Management.

Planning Resources: How They are Exported to Oracle Fusion Project Management

Export labor resources and financial resources to Oracle Fusion Project Management to enable project managers to plan project tasks using a consistent set of resources and facilitate integration of task assignments with Oracle Fusion Project Foundation.

Settings That Affect the Export of Planning Resources

Oracle Fusion Project Management integration options determine how planning resources are exported to create project enterprise resources.

- Integration planning resource breakdown structure: Determines the planning resources you can export.
- Resource rate options: Determine how rates are derived for the planning resources.

The planning resources exported depend on whether you are performing an initial export for your integration or a subsequent one. When you first export resources, all planning resources from the integration planning resource breakdown structure are exported. During subsequent exports, you can select an incremental or a full export, as described in the table below.

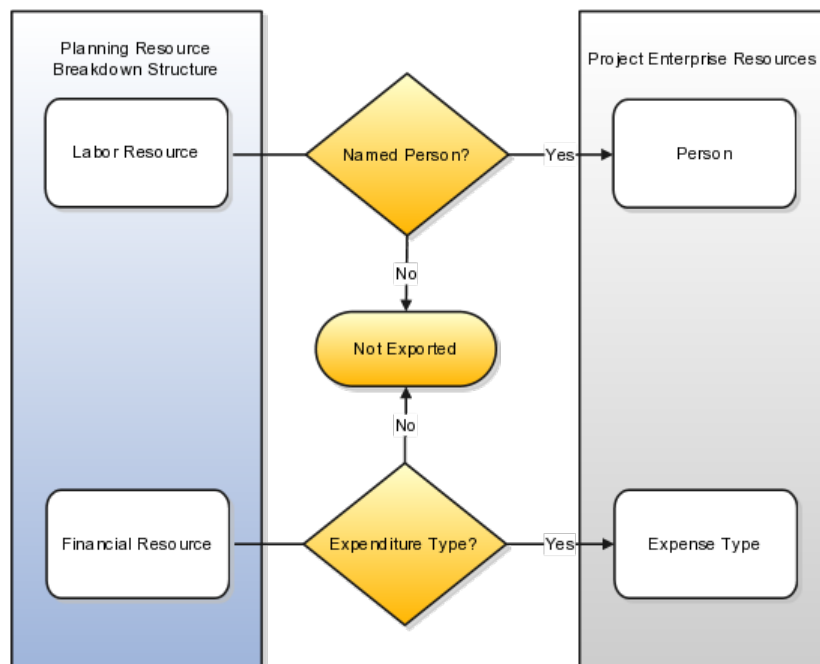
Processing Type Incremental	Impact
Incremental	Export only resources that were added or modified since the last time you successfully exported resources.
Full	Export all resources from the integration planning resource breakdown structure irrespective of when they were created or modified. Tip Use full export if you want to export rates for all resources (new and existing) for a revised effective rate date in Oracle Fusion Project Management integration options.

Note

If you delete a previously exported planning resource from the integrated planning resource breakdown structure, task assignments for the resource are treated as unplanned resources when you next import project plan information from Oracle Fusion Project Management.

How Planning Resources Are Exported

As illustrated in the following figure, planning resources are exported to Oracle Fusion Project Management based on resource type.



- Labor resources: If the resource is an HCM person, that is, the Named Person resource type is part of the resource format, then the planning resource is exported as a Person project enterprise labor resource
- Financial resources: Exported only if the resource type is Expenditure Type
- Material items and equipment: Not exported

Project Integration Gateway Configuration: Define Primavera P6 Enterprise Project Portfolio Management Integration

Primavera P6 Integration Options: How They Work Together

Project integration options determine how Oracle Fusion Project Portfolio Management interacts with Primavera P6 Enterprise Project Portfolio Management. When defining integration options you do the following.

- Specify integration definition information including the integration name, business unit, project unit, and the integration language.
- Select the integration planning resource breakdown structure.
- Specify resource rate options.
- Select the actual amount information for export.
- Specify calendar and period options.

Specifying the Integration Definition

Primary steps when defining integration options include selecting an integration created previously in Oracle Fusion Topology Manager, and the business unit and project unit for the integration.

Warning

You cannot change the integration name, business unit, or project unit after exporting data from or importing data into Oracle Fusion Project Portfolio Management.

Your business unit selection determines the integration (ledger) currency. The ledger currency is the primary ledger currency for the business unit, that is, the project ledger currency. Primavera P6 Enterprise Project Portfolio Management stores amounts in a single base currency across all projects. Therefore, the ledger currency is used for exporting all actual costs and resource rates from Oracle Fusion Project Portfolio Management. In addition, cost amounts for expense categories and nonintegrated material resources are imported from Primavera P6 Enterprise Project Portfolio Management using the ledger currency.

You also select an integration language. When you export data, all translatable text is sent to Primavera P6 Enterprise Project Portfolio Management in this language. Similarly, after you import data, translatable information is stored in association with the selected language.

Selecting a Planning Resource Breakdown Structure

The integration planning resource breakdown structure is the source of resources exported to Primavera P6 Enterprise Project Portfolio Management. Exported resources create labor, nonlabor, and material resources, roles, or expense categories that you can use on projects in that application.

In Oracle Fusion Project Portfolio Management, you must use this planning resource breakdown structure as the primary planning resource breakdown structure on all integrated projects. That is, you must use it for task assignments on the project plan.

Using a single set of planning resources facilitates the creation of task assignments when you import project plan information into Oracle Fusion Project Portfolio Management.

Options are limited to planning resource breakdown structures that belong to the selected project unit and do not allow resource changes at the project level.

Restriction

You cannot change the integration planning resource breakdown structure after you export resources.

Specifying Calendar and Period Options

Selecting a common set of periods for planning in Oracle Fusion Project Portfolio Management and Primavera P6 Enterprise Project Portfolio Management enables you to exchange periodic planned amounts. The following table describes which integration options enable sharing of financial periods.

Integration Option	Description
Calendar type and financial period from date	Together determine the type of calendar (accounting or project accounting) and the date from which periods must be exported.
	Restriction You cannot modify the calendar type after you export financial periods.
Default period profile	Default period profile to use if Oracle Fusion Project Portfolio Management must change the calendar type for a project when importing the project plan. (The calendar type selected on the planning options of the associated project plan type must match the calendar type specified in the integration options.) Options are limited to period profiles associated with the selected calendar type.

Selecting Resource Rate Options

When defining project integration options, you can select options for exporting cost rates associated with the resources from the integration planning resource breakdown structure. Rates are maintained as part of the global dictionary for resources and roles in Primavera P6 Enterprise Project Portfolio Management.

The following table describes rate options.

Integration Option	Description
Resource class rate schedule	Used to specify a default source of cost rates when rates cannot be derived for the resource using logic for actual cost rates. Options are limited to rate schedules that are available to the integration business unit.
Burden schedule	Used as the source of burdened cost rates when calculating the resource rate to export from Oracle Fusion Project Portfolio Management. If you do not specify a burden schedule, then the burdened rate equals the raw cost rate for the effective rate date.
Effective rate date	Date as of which rates are retrieved and exported. Note For Roles, Primavera P6 Enterprise Project Portfolio Management does not maintain date effective rates. That is, only a single rate is available for each role.

Selecting Project Plan and Progress Options

The following options determine how project plan and progress information is exported from and imported into Oracle Fusion Project Portfolio Management.

Integration Option	Description
WBS Code Source	Determine whether to generate the WBS code in Primavera P6 Enterprise Project Portfolio Management based on the task number or the last segment of the outline number in Oracle Fusion Project Portfolio Management. Alternatively, select not to export a value from Oracle Fusion Project Portfolio Management. In this case, the WBS code source is automatically generated and never updated based on data exported from Oracle Fusion Project Portfolio Management. However, you can manually edit the value in Primavera P6 Enterprise Project Portfolio Management.
Export Actual Amounts	Determine whether you want to export burdened cost, burdened cost and quantity, or if you do not want to export actual amounts. Use exported actual amounts to compare with planned amounts for the WBS. If you export actual amounts, Primavera P6 Enterprise Project Portfolio Management creates a summary activity to store these amounts for each affected WBS.

Import Progress with Existing As-of Date	Decide whether project managers can import progress for a date as of which latest published progress already exists in Oracle Fusion Project Portfolio Management. If you allow import, then existing progress information is deleted and replaced by progress imported from the scheduling application. Else, an error is reported.

Planning Resources: How They Are Exported to Primavera P6 Enterprise Project Portfolio Management

Export planning resources to Primavera P6 Enterprise Project Portfolio Management to enable project managers to plan project activities using a consistent set of resources and facilitate integration of resource assignments with Oracle Fusion Projects.

Settings That Affect the Export of Planning Resources

The integration planning resource breakdown structure you select when defining project integration determines the planning resources you can export. In addition, the planning resources exported depend on whether you are performing an initial export for your integration or a subsequent one.

When you export resources for the first time, all planning resources from the integration planning resource breakdown structure are exported. Primavera P6 Enterprise Project Portfolio Management creates corresponding resources, roles, or expense categories. If you subsequently export planning resources, you can select an incremental or a full export, as described in the table below.

Processing Type	Impact
Incremental	Oracle Fusion Project Integration Gateway exports only resources that were added or modified since the last time you successfully exported resources.
Full	Oracle Fusion Project Integration Gateway exports all resources from the integration planning resource breakdown structure irrespective of when they were created or modified. Use the full export option to recreate resources that are mistakenly deleted in Primavera P6 Enterprise Project Portfolio Management and must be recreated. You can also use full export if you want to export rates for all resources (new and existing) for a revised effective rate date in Oracle Fusion Projects integration options.

Note

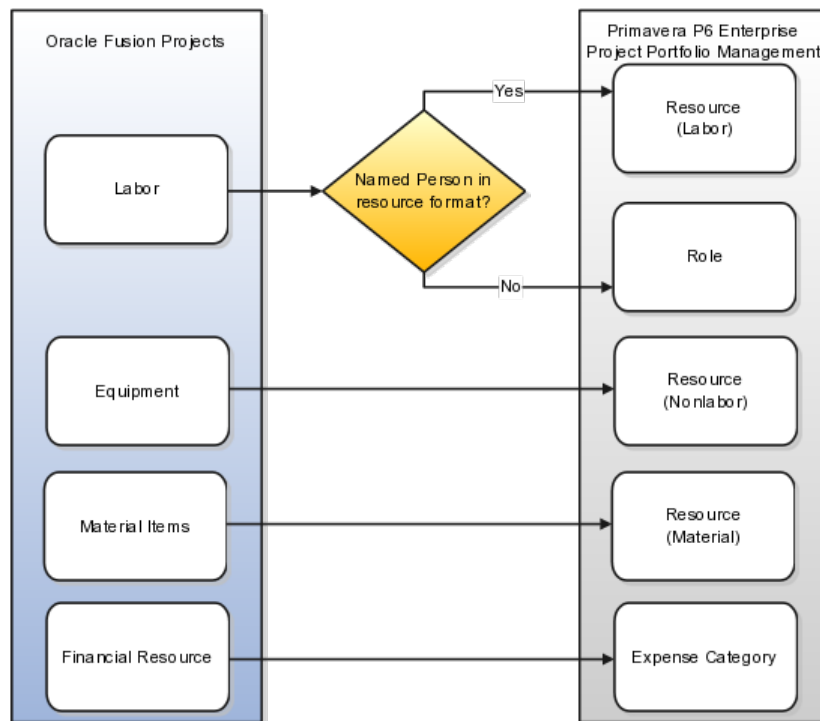
If you delete a previously exported resource in Oracle Fusion Projects, then mapping information is deleted. The corresponding resource is not deleted in

Primavera P6 Enterprise Project Portfolio Management but is then treated as a nonintegrated resource when you subsequently import project plan information.

How Planning Resources Are Exported

As illustrated in the following diagram, planning resources are exported to Primavera P6 Enterprise Project Portfolio Management based on the associated resource class, and in the case of labor resources, on the associated resource format:

- Resources of the **Labor** resource class are exported as follows based on the resource format:
 - If the resource format contains the Named Person resource type, it is exported as labor resource.
 - All other resource formats are exported as roles.
- Resources of the **Equipment** resource class are exported as nonlabor resources.
- Resources of the **Material Items** resource class are exported as material resources.
- Resources of the **Financial Resource** resource class are exported as expense categories.



During export, Oracle Fusion Projects transfers information for each resource as appropriate. Exported information includes:

- Resource name
- Resource ID
- Resource class and format

- Resource enabled indicator

Warning

Resource and role names are limited to 100 characters and expense category names to 36 characters in Primavera P6 Enterprise Project Portfolio Management. Therefore, resource, role, and expense category names are truncated if their length is over the limit.

In Primavera P6 Enterprise Project Portfolio Management, other important resource attributes are defined as described in the following table.

Resource Attribute	Description
Resource calendar	Set to the default global calendar
Resource currency	Set to the base currency
Resource type (if not supplied during export)	Set to Labor

Projects and Tasks: How They Are Exported to Primavera P6 Enterprise Project Portfolio Management

You export projects to Primavera P6 Enterprise Project Portfolio Management after you have completed high-level planning (created tasks up to the desired financial planning and reporting level) in Oracle Fusion Project Portfolio Management.

Settings That Affect the Export of Projects and Tasks

You must activate integration for a project before exporting it. In addition, for subsequent export, you can select to export all information for the selected linked projects or only incremental changes since the previous export.

Use the full export option to recreate an integrated WBS that was inadvertently deleted in Primavera P6 Enterprise Project Portfolio Management or to restore the WBS hierarchy to match the task structure in Oracle Fusion Project Portfolio Management.

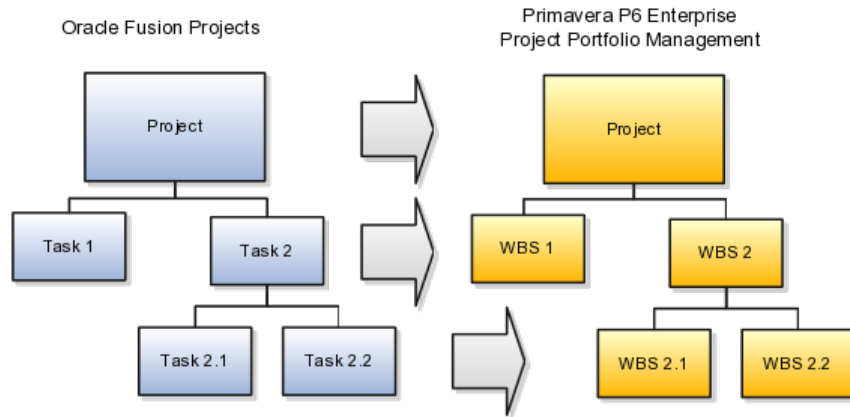
How Projects and Tasks Are Exported

In Primavera P6 Enterprise Project Portfolio Management, exported projects are added to an enterprise project structure (EPS) node called **Imported Projects**. Move the exported projects to a different EPS node as required.

As illustrated in the following diagram, during initial export, project information from Oracle Fusion Project Portfolio Management is used to create a new project in Primavera P6 Enterprise Project Portfolio Management. Alternatively, if the project number of a project matches the project ID of an existing project in Primavera P6 Enterprise Project Portfolio Management, then the two projects are linked.

Similarly, WBSs are created for each task in the hierarchy, up to the lowest-level task. The tasks and WBS are linked. If you build out your WBS in Primavera P6 Enterprise Project Management by adding further WBS and activities,

all information is summarized up to the integrated WBS before project plan information is imported into Oracle Fusion Project Portfolio Management.



The following table describes how changes in the task structure in Oracle Fusion Project Portfolio Management affect the WBS of a linked project during a subsequent export.

Change	Impact to Project in Primavera P6 Enterprise Project Portfolio Management
Create task	New WBS created and integrated with task. Note If the task number of the new task matches the WBS ID of an existing WBS, then it is linked to the new task.
Delete task	Integrated WBS is not deleted. You must manually delete the WBS and revise planning, if required.
Move task	Indent for integrated WBS is increased or decreased accordingly.
Update task attributes	Modified task attributes, including name, description, and task manager, are used to update WBS information.
Create subtask for integrated task	New WBS created for subtask. You must move planning information from the parent WBS to the new WBS to continue importing it into Oracle Fusion Project Portfolio Management.

Project and Task Attributes Exported to Primavera P6 Enterprise Project Portfolio Management: Explained

When you export projects, project and task attribute values are used to update project and WBS information in Primavera P6 Enterprise Project Portfolio Management.

Following is a description of the project and task attributes exported from Oracle Fusion Projects.

Exported Project Attributes

The following table describes some of the important project attributes exported from Oracle Fusion Projects.

Attribute in Oracle Fusion Projects	Attribute in Primavera P6 Enterprise Project Portfolio Management
Project name	Project name
Project number	Project ID
Project start date	Project planned start date
Project finish date	Project must finish by date
Project manager	User-defined field
Project status	Project status

Warning

Primavera P6 Enterprise Project Portfolio Management restricts the length of project names and project IDs to 100 and 20 characters respectively. Therefore, project names and numbers from Oracle Fusion Projects are truncated if their length is over the limit.

Project status in Oracle Fusion Projects is exported as follows:

System Status in Oracle Fusion Projects	Status in Primavera P6 Enterprise Project Portfolio Management
Unapproved	Planned
Submitted	Planned
Approved	Active
Pending Close	Active
Closed	Inactive

Exported Task Attributes

When a WBS is created based on a task exported from Oracle Fusion Projects, the attribute **Integrated Type** is used to indicate that the WBS is integrated. Other WBS attributes updated using information exported from Oracle Fusion Projects are described below.

Attribute in Oracle Fusion Projects	Attribute in Primavera P6 Enterprise Project Portfolio Management
Task name	WBS name
Task number	WBS ID
Task number or outline number	WBS code
	Note WBS code is set to the task number or the last segment of the outline number depending on the value of the WBS Code Source integration option.

Outline number	Sequence number Note Integration processing transforms the outline number into a sequence number based on the position of a task in comparison to peer tasks. For example, the sequence number of task 1.0 is 10, task 2.0 is 20, and task 3.0 is 30. Similarly, the sequence number of task 1.1 is 10, task 1.2 is 20, and task 2.1 is 10.
Task description	Notebook topic at WBS level
Task manager	User-defined field
Chargeable option	WBS status Important The Chargeable option only impacts WBS that are mapped to lowest-level tasks. If the corresponding task is not chargeable, then the integrated WBS is marked as inactive and is not visible on the timesheet.

Warning

Primavera P6 Enterprise Project Portfolio Management restricts the length of WBS names and WBS IDs to 100 and 20 characters respectively. Therefore, task names and numbers from Oracle Fusion Projects are truncated if their length is over the limit.

FAQs for Define Primavera P6 Enterprise Project Portfolio Management Integration

Can I change the organization that owns a project or task?

Yes. You can change the project or task owning organization at any time, unless unprocessed transactions exist for the project. You can also simultaneously reprocess transactions for the affected tasks. Note that the project or task owning organization has no effective as-of date. Therefore, the new organization applies for the duration of the project.

Microsoft Project Integration: Overview

Microsoft Project and Project Financial Management Applications: How They Work Together

Microsoft Project integration enables project managers to create projects, complete in-depth scheduling using dependencies and constraints, and perform what-if analysis offline, before synchronizing project plan and progress information with Project Financial Management applications in Oracle Fusion Project Portfolio Management.

Project executives, project accountants, and billing specialists can use the information exported to Oracle Fusion Project Portfolio Management for financial planning, project costing, billing and revenue accrual, and performance reporting.

Microsoft Project integration enables you to do the following:

- Import templates or existing projects from Oracle Fusion Project Portfolio Management to create projects in Microsoft Project.
- Export projects from Microsoft Project to create projects in Oracle Fusion Project Portfolio Management.
- Synchronize existing projects with Oracle Fusion Project Portfolio Management.
- Import resources from the primary planning resource breakdown structure to use for creating task assignments in Microsoft Project.
- Plan and schedule projects, assign resources, and track progress.
- Import actual quantities and costs into Microsoft Project for progress collection.
- Export project plan and progress information to Oracle Fusion Project Portfolio Management.

Importing Projects

You can import a template or an existing project from Oracle Fusion Project Portfolio Management to create a new project file in Microsoft Project. During

import, select to import all project information or only planning resources. If you want to subsequently export new task assignments for the project to Oracle Fusion Project Portfolio Management, you must import resources from the primary planning resource breakdown structure.

Restriction

While importing from Oracle Fusion Project Portfolio Management, you cannot select templates whose primary planning resource breakdown structure allows changes at the project level. This restriction does not apply when importing projects.

When importing an existing project, retain the link if you intend to synchronize the project. If you only want to view project details, or intend to export the project to Oracle Fusion Project Portfolio Management as a different project later, then do not retain the project link.

Restriction

You cannot retain the project link if third-party scheduling is disabled for the project.

Exporting Projects

You can export a project from Microsoft Project to create a new project in Oracle Fusion Project Portfolio Management. Exporting links the projects in the two applications. Optionally, set a baseline for the project plan, and simultaneously generate a budget version and create a baseline.

When exporting a project, you must select a source project or template unless you had originally imported a project or template from Oracle Fusion Project Portfolio Management. The source project or template must allow for third-party scheduling and the associated primary planning resource breakdown structure must not allow changes at the project level.

Synchronizing Project Information

Use synchronization rules to transfer information from and to Microsoft Project. Select the required synchronization rule to synchronize all information, or import or export selected information only. For example, you can select to only synchronize schedule updates for the project. Depending on the synchronization rule, select synchronization options to determine how information is transferred.

The following table describes the default direction in which attributes are transferred.

Attributes	Imported into Microsoft Project	Exported from Microsoft Project
Task structure	Yes	Yes
Resources and resource rates	Yes	No
Task attributes	Yes	Yes
Actual quantities and costs	Yes	No
Scheduling and progress	No	Yes

Importing Resources and Rates

You can import all planning resources from the primary planning resource breakdown structure associated with the project in Oracle Fusion Project Portfolio Management or import selected resources only.

Import rates from Oracle Fusion Project Portfolio Management to calculate planned costs in Microsoft Project. The **Cost Type** synchronization option determines whether raw cost rates or burdened cost rates are imported.

Before import, rates are derived for each resource based on the actual or planning rate schedules specified on the associated project plan type. Any override rates you specify on the project plan in Oracle Fusion Project Portfolio Management are not imported.

Importing Actual Costs and Exporting Progress

You can import actual quantity and costs either from the latest summarized data or from draft progress. The source of actual amounts determines how progress is exported, as described in the following table.

Source of Actual Amounts	Impact on Importing Progress
Latest summarized data	Actual amounts on the draft progress are refreshed from the latest summarized data when you export progress. Also, you specify the progress as-of date in the synchronization options.
Draft progress	Actual amounts on the draft progress are not refreshed and hence, they match the actual amounts previously imported into Microsoft Project.

When you export progress from Microsoft Project, the estimate-to-complete (ETC) method and physical percent complete calculation method are set to **Manual**. Values for planned, actual, and estimated finish dates and physical percent complete are exported at each level in the task hierarchy and do not roll up in Oracle Fusion Project Portfolio Management. Values for all other attributes are transferred at the task assignment level and roll up in Oracle Fusion Project Portfolio Management.

After export, draft progress is published. A forecast version is generated depending on progress settings defined for the associated project plan type.

Restriction

If burdening is not enabled on the project type, then you can export progress with raw cost. If burdening is enabled, then you must use burdened cost to export progress. That is, set the **Cost Type** synchronization option to **Burdened cost**.

Manage Project Templates

Expenditure Item Chargeability: How It Is Determined

Oracle Fusion Projects checks all levels of chargeable controls when you try to charge a transaction to a project. The check is performed when you save the record.

Oracle Fusion Projects checks the chargeable status when you enter a new cost transaction or transfer expenditure items to another project or task.

Settings That Affect Chargeable Status

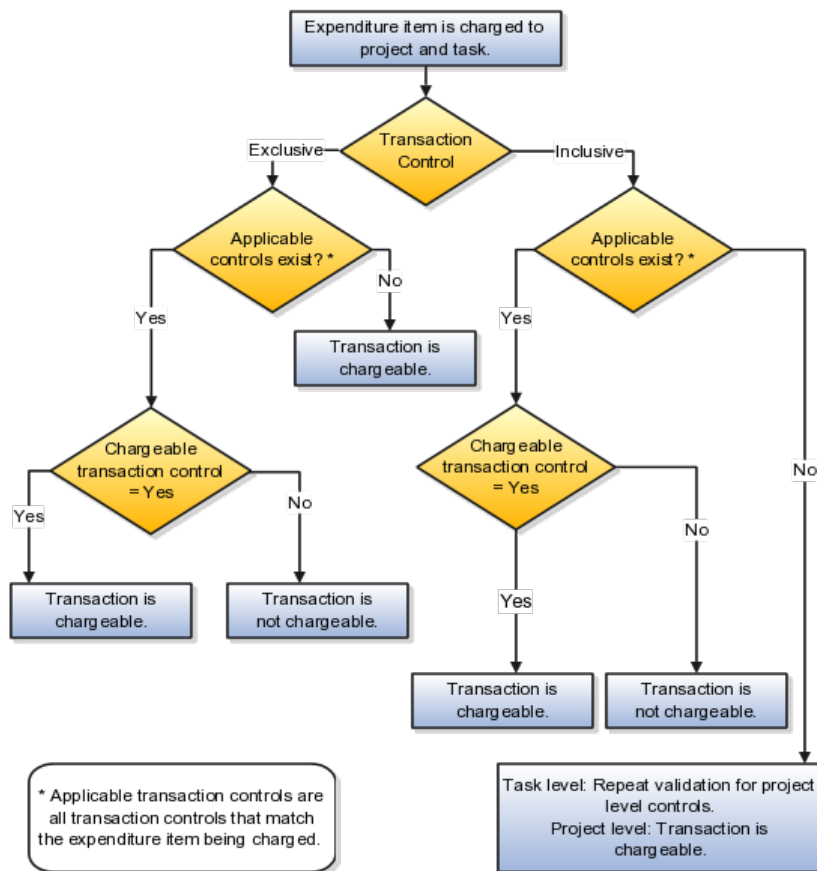
Use the exclusive and inclusive transaction control option to set the chargeable status for all expenditures charged to the project.

Inclusive transaction controls prevent all charges to a project or task except the charges you specifically allow. Specify the types of expenditures that you want to be chargeable and enable the **Chargeable** option.

Exclusive transaction controls allow all charges to a project or task by default. Specify the types of expenditures that do not want charged to the project or task.

How Chargeable Status Is Determined

The following illustration shows the steps Oracle Fusion Projects uses to determine the chargeable status of an expenditure item.



If the inclusive option is selected and applicable transaction controls do not exist, then the transaction is not chargeable. If applicable controls do exist, then the application checks whether the transaction controls allow charges. If the **Chargeable** check box is selected for an applicable control, then the transaction is chargeable. If the **Chargeable** check box is not selected, then the transaction is not chargeable.

If the exclusive option is selected and there are no applicable controls, then the transaction is chargeable. If applicable controls do exist, then the application checks whether the transaction controls allow charges. If the **Chargeable** check box is selected for an applicable control, then the transaction is chargeable. If the **Chargeable** check box is not selected, then the transaction is not chargeable.

Spaces: How They Work With Projects

Spaces provide an online location and collection of tools for teams to work together more effectively. Your projects can contain spaces for collaboration among team members, which enable you to optimize the efficiency of managing, executing, and controlling projects.

Each project has access to a private set of tools that includes:

- Announcements
- Calendar

- To Do lists
- Team members and roles
- Tool for creating Wikis
- Tool for creating blogs
- Discussion forums
- Document repository
- Tags and links
- Lists

To create a project space, a project space template must be part of the project template. Each time you create a project, you can select the project space template to automatically create a project space with the project.

Project team members from the source project template or source project are copied and added to the project and project space. New project team members are automatically added to the project space. Optionally, you can change project space roles or remove members from the space.

Project Space Templates

Your implementation team can associate a project space template to a project template. The project space template is used to automatically generate a project space during project creation.

Role Mappings

The project manager is assigned to the Moderator role in the project space. All other project team members are assigned to the project space as Participants.

Project Quick Entry: Explained

As part of a project template definition setup, you can configure quick entry fields. Oracle Fusion Projects prompts you to enter information in quick entry fields when you create new projects from the template.

Quick Entry Fields

Choose quick entry fields for project information you want to enter (instead of accepting the template default) each time you create a project. The following table describes the quick entry fields on a project template.

Name	Description
Field Name	The field you want displayed in the Project Details when creating a new project.
Specification	Enter a specification for the following fields: • Classification • Select the class category to use when creating the classification. • Team Member • Select the project role to use when creating the team member.

Prompt	Text for a field that appears only in the Project Details while you are creating a new project. After you create the project, the prompt field name is not present. For example, if you want to add a quick entry field for the project start date, update the prompt that appears during project creation to Enter the project start date . However the field in the project for all other pages will remain Project Start Date .
Required	Choose whether you want to require entry for the quick entry field. Note The following fields are required on all projects, and cannot be optional quick entry fields: • Legal Entity • Organization • Project Name • Project Number

The following table describes limitations for quick entry fields.

Field Name	Quick Entry Maximum
Classification	20
Partner organization	5
Project customer	5
Supplier organization	5
Team member	15 You can allow entry of more than one team member per role for all roles except Project Manager. You can enter only one project manager for a project.

Note

After creating the project, you can add further values to the fields in the project.

Summarized Financial Plan Types: Explained

Summarized financial plan types are financial plan types whose previous and current approved versions (for forecasts) or original and current baseline versions (for budgets) are used in summarization of project performance data.

Particular financial plan types are included in summarization by default, while you must manually select others.

Default Financial Plan Types

Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Important

A budget or forecast financial plan type may support both cost and revenue in one version.

User-Selected Financial Plan Types

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

Tip

You can include a financial plan type before it is used on a project for creating a version.

You can replace a user-selected financial plan type until project performance data is summarized for reporting. After that, you can only disable the financial plan type to exclude it from further summarization.

Transaction Controls: Explained

Define transaction controls to specify the types of transactions that are chargeable or nonchargeable for projects and tasks. Use transaction controls to configure your projects and tasks to allow only charges that you expect or plan. You can also define which items are billable and nonbillable on your projects that are enabled for billing. For capital projects, you can define which items are capitalizable and noncapitalizable.

You create transaction controls by configuring the following components:

- Expenditure category
- Expenditure type
- Nonlabor resource
- Person
- Job and organization for the person
- Person type
- Chargeable status
- Billable or Capitalizable status

- From and To dates

You can create any combination of transaction controls that you want; for example, you can create a transaction control for a specific person and expenditure type, or you can create a combination for a person, expenditure type, and nonlabor resource. You also specify the date range to which each transaction control applies. If you do not enter transaction controls, you can charge expenditure items from any person, expenditure category, expenditure type, and nonlabor resource to all lowest tasks on the project.

Chargeable Status

You can further control charges for each transaction control record by specifying whether to allow charges. The default value is to allow charges.

You usually select Chargeable when you are using inclusive transaction controls. For example, if you wanted to allow people to charge only labor to your project, you would define a transaction control with the Labor expenditure category, and allow charges to the project or task.

You usually do not select Chargeable when you are using exclusive transaction controls because exclusive transaction controls list the exceptions to chargeable transactions.

System Person Type

You can use this control to specify whether transactions incurred by employees, contingent workers (contractors), or both are chargeable.

The validation rules for system person type controls are described in the following table.

Transaction Control Type	System Person Type	Validation Rule
Inclusive	No value	Transactions incurred by employees and contingent workers are not chargeable.
Inclusive	Employee	Only transactions incurred by employees are chargeable.
Inclusive	Contingent worker	Only transactions incurred by contingent workers are chargeable.
Exclusive	No value	Transactions incurred by employees and contingent workers are not chargeable.
Exclusive	Employee	Transactions incurred by employees are not chargeable.
Exclusive	Contingent worker	Transactions incurred by contingent workers are not chargeable.

Billable and Capitalizable Status

You can define billable transactions for billable projects and capitalizable transactions for capital projects by selecting the billable or capitalizable option. You can choose between the options of **No** or **Task Level**. Select **No** if you want

the charges to be nonbillable or noncapitalizable. Select **Task Level** if you want the billable or capitalizable status to default from the task to which the item is charged.

You define the billable or capitalizable status for a task in the Task Details.

Note

The billable or capitalizable status of an individual transaction takes precedence over the billable or capitalizable status of a task.

From and To Dates

You can define transactions as chargeable for a given date range by entering a From Date and To Date for each transaction control record.

Using Class Categories: Examples

Class categories and class codes enable you to classify projects. The following example illustrates how you can use project classifications.

Scenario

InFusion Corporation designs and implements heavy engineering projects for government and private customers. Because InFusion Corporation maintains a diverse portfolio of contracts, the ability to track sector and funding is very important to corporate management.

Therefore, the organization classifies projects by market sector and funding source. The following table describes the two class categories used.

Class Category	Assign to All Projects	One Class Code per Project	Enter Percentage for Class Codes	Description
Market Sector	Yes	Yes	No	Market sector in which project work takes place. A single class code must be provided on the project for the class category.
Funding Source	Yes	No	Yes	Source of funding for project. At least one class code must be provided on the project for the class category. Percentages must be provided to indicate contribution for each source.

The following table describes the class codes available for the categories specified above.

Class Category	Class Code	Description
Funding Source	Private	Project funded by private organizations
Funding Source	Federal	Project funded by the federal government
Funding Source	State or Local	Project funded by a state or local government
Funding Source	Foreign	Project funded by a foreign government
Market Sector	Utilities	Project involves utility or power plant construction
Market Sector	Waste	Project involves waste disposal or recycling facility constructions
Market Sector	Mechanical	Project involves mechanical design and engineering work
Market Sector	Structural	Project involves structural design and engineering work

InFusion management can easily assess projects based on the above class categories and codes.

For example, assume you specify a class category Funding Source on your project. With this category, you select two class codes: Private and Federal. If you assign 30 percent to Private and 70 percent to Federal, then you indicate the proportion of funding received for your project from the two sources.

On the other hand, because you must select a single market sector, you indicate whether project work involves utilities, waste, mechanical, or structural activities.

FAQs for Manage Project Templates

Can I override the billable status of an expenditure item?

Yes. Change the billable status of an expenditure item on an invoice, or in the Manage Expenditure Items page.

How are project space roles mapped to project resources?

The application automatically assigns each project resource to a project space role on the associated project space. The project manager is assigned the

role of project space moderator. All other project resources are project space participants.

Project space moderators can manually add additional participants or modify participant access, if required.

Other Common Setup and Maintenance Tasks

Define Transactional Business Intelligence Configuration

Define Transactional Business Intelligence Configuration: Highlights

Configure Oracle Transactional Business Intelligence for ad hoc reporting, review certain setup objects to be used in Transactional Business Intelligence, and manage the presentation catalog and currency type display.

Defining Transactional Business Intelligence Configuration

- Review details about the Transactional Business Intelligence tasks. Refer to the Oracle Fusion Transactional Business Intelligence Administrator's Guide.

Define Extensions: Define Custom Enterprise Scheduler Jobs

Managing Job Definitions: Highlights

Oracle Enterprise Scheduler jobs are run in Oracle Fusion Applications to process data and, in some cases, to provide report output. A job definition contains the metadata that determines what the job does and what options are available to users who run the job. You can create and maintain job definitions for use in Oracle Fusion Applications.

Managing job definitions is described in the Oracle Fusion Applications Administrator's Guide and Oracle Fusion Applications Extensibility Guide for Developers. As you read content from these guides, note that the guides mention managing Oracle Enterprise Scheduler, including job definitions, from Oracle Enterprise Manager Fusion Applications Control. You can also access job definitions by starting in the Setup and Maintenance Overview page and searching for the Enterprise Scheduler job tasks for your applications.

Note

Oracle Enterprise Manager Fusion Applications Control is not available for Oracle Cloud implementations.

Selecting the Appropriate Implementation Task

Each Enterprise Scheduler job definition task uses one Java EE application, which is referenced in the task name. You must use the right task because, to access the product job definition that you want to view or work on, the view objects must be contained in the application. If you do not select the right task, then the job definition will not be displayed properly or function correctly. The application name is usually the same as the product that the job definition belongs to, but not always.

- For example, the Oracle Fusion Payables Java EE application contains the Oracle Fusion Expenses product view objects. To create or maintain a job definition for use in Expenses, you select the Manage Custom Enterprise Scheduler Jobs for Payables and Related Applications task.
- In another example, the Oracle Fusion Payments product view objects are contained in both Oracle Fusion Payables and Oracle Fusion Receivables Java EE applications. You need to select the task appropriate to the job definition for Payments. Use the Manage Custom Enterprise Scheduler Jobs for Receivables and Related Applications task if the job is for receivables functionality, or the Manage Custom Enterprise Scheduler Jobs for Payables and Related Applications task if the job is for payables functionality.
- Use the task description to see the products that correspond to the Java EE application specified in the task name. For example, the description for the Payables task lists Oracle Fusion Payables, Assets, Expenses, and Payments.
 - You can view task descriptions in the help window for the task, if any, or in the generated setup task lists and tasks report from the Getting Started page.
 - If you have access to the Manage Task Lists and Tasks page, you can also open the details for specific tasks to see the description.
 - For general information about product and Java EE application relationships, use Oracle Enterprise Manager Fusion Applications Control (Fusion Applications Control).

See: Topology Section

Viewing, Creating, and Editing Job Definitions

- You can access predefined and custom job definitions. In the table on the Manage Job Definitions tab, the Name column displays an asterisk for predefined job definitions. Refer to the Oracle Fusion Applications Administrator's Guide.

See: Viewing Job Definitions

- You or a technical administrator can create jobs based on Java, PL/SQL, Oracle Business Intelligence (BI) Publisher, or any other supported

technology. Every predefined or custom job must have a job definition. For Oracle Cloud implementations, custom job definitions can be created only for custom jobs based on Oracle BI Publisher reports. Refer to the Oracle Fusion Applications Administrator's Guide.

See: Creating a Job Definition

- If you are using the Setup and Maintenance work area, then the Enable submission from Enterprise Manager check box is available for the job definition.
 - If you do not select this check box, then the job cannot be run from Enterprise Manager.
 - If you select this check box, then you can define parameters for this job definition only in Enterprise Manager. Save the rest of your work on the job definition, and then go to Enterprise Manager if you need to define parameters.
- You can edit all aspects of custom job definitions. For predefined job definitions, you can't update parameters, but you can determine if user properties are read-only or not. You can also edit certain aspects of predefined definitions, which are described as job properties in the Oracle Fusion Applications Extensibility Guide for Developers.

See: Customizing Existing Oracle Enterprise Scheduler Job Properties

Managing List of Values Sources: Highlights

A list of values source for Oracle Enterprise Scheduler job definitions determines where a list of values comes from and what the specific values are. These lists of values are used in parameters and application defined properties of job definitions. For example, you can use a source of country values for a Country job parameter.

Note

Since parameters for predefined job definitions cannot be edited, list of values sources are only for parameters in custom job definitions.

Managing list of values sources is fully described in the Oracle Fusion Applications Administrator's Guide. As you read content from that guide, note that the guide describes managing Oracle Enterprise Scheduler, including list of values sources, from Oracle Enterprise Manager Fusion Applications Control. You can also access list of values sources by starting in the Setup and Maintenance Overview page and searching for Enterprise Scheduler job tasks.

Registering and Searching for List of Values Sources

- Create list of values sources to register them for use in job definitions.

See: Registering Sources for Lists of Values

- Search for list of values sources to edit or delete, or to make sure a particular source does not already exist before you create it.

See: Searching for List of Value Sources

Contextual Addresses

Setting Up the Mapping Service for Contextual Addresses: Points to Consider

A contextual address is marked with an orange square contextual action icon that can be clicked to display the address on a map. Use the Mapping Service for Contextual Addresses profile option to specify the web mapping service to be used to display the map. In the Setup and Maintenance work area, go to the Manage Administrator Profile Values task to set the profile option value.

Profile Option Default

By default, the Mapping Service for Contextual Addresses profile option has no value. Until you enter a valid value for this profile option, users get an error when they try to open a map for any contextual address.

Profile Option Value

After you find and select the Use the Mapping Service for Contextual Addresses profile option, enter a mapping service URL in the Profile Value column, for example:

- <http://maps.google.com/maps?output=embed&q=>
- http://maps.yahoo.com/maps_result.php?q1=
- <http://maps.live.com/default.aspx?where1=>
- <http://bing.com/maps/?v=2&encType=1&where1=>

Optionally, add parameters to the URL. For example, to avoid a locator box in Google Maps, add `&iwloc=&` to the URL, so that you enter `http://maps.google.com/maps?iwloc=&&output=embed&q=` as the profile value.

FAQ for Privacy Statement

How can I enable the privacy statement?

Use the Privacy Statement URL profile option to enable the Privacy Statement menu item in the global area. This menu item in the Settings and Actions menu is disabled by default.

Open the Setup and Maintenance work area, and use the Manage Applications Core Administrator Profile Values task to find the Privacy Statement URL profile option. In the Profile Value column, enter the full URL of the web page that contains the privacy content you want the menu item to link to.

External Integration

Web Services: Overview

Use web services to integrate web-based applications into your Oracle Fusion applications. Web services expose Oracle Fusion Applications business objects and processes to other applications through the use open standards-based technologies. Some of these technologies include Extensible Markup Language (XML), Simple Object Access Protocol (SOAP), Business Process Execution Language (BPEL), Web Services Description Language (WSDL), and XML schema definitions (XSD). Oracle Fusion Applications web services support development environments and clients that comply with these open standards.

Oracle Fusion Applications includes two types of web services: Application Development Framework (ADF) services and composite services. The following table describes the two types.

Web Service Type	Description
ADF services	ADF services usually represent business objects, such as employees or purchase orders. ADF services typically expose standard operations, such as create, update, and delete. However, for locally-persisted objects, ADF services are not limited to these operations. Examples of ADF services include: • <code>Worker.changeHireDate</code> - a service that updates the hire date of the worker business object. • <code>ProjectTask.createTask</code> - a service that adds a task to the project task business object.

Composite services	Composite services usually represent end-to-end business process flows that act on business events produced by the ADF services. Composite services orchestrate multiple object-based services, rules services, and human workflows. Examples of composite services include: • <code>ProjectStatusChangeApproval.process</code> - a service that accepts the change in project status. • <code>ScheduleOrchestrationOrderFulfillmentLineService.scheduleOr</code> - a service that schedules resources used to fulfill an order.

Access Oracle Enterprise Repository for Oracle Fusion Applications to find detailed information about integration assets, such as web services. To view lists of web services, select these asset types:

- ADF Service
- ADF Service Data Object
- Composite Service
- Composite

Service methods and parameters, the service path, the WSDL URL and other technical data, appear on the Detail tab of each web service. Step-by-step instructions regarding the invocation of a service and the service XSD appear on the Documentation tab.

Files for Import and Export

Files for Import and Export: Explained

You can import data into or export data out of Oracle Fusion Applications using repositories of content and processes for import and export.

Integration specialists stage data for import and export. Application administrators run processes to import data in repositories of content to application transaction tables, or retrieve data exported from applications.

Aspects of managing files for import and export involve the following.

- The File Import and Export page
- Interacting with content management
- Uploading for import
- Downloading for export
- File size

The File Import and Export Page

The File Import and Export page lets you upload content to or download content from the document repository of Oracle WebCenter Content Management. For information or assistance regarding general access to content management (including all metadata), to create and manage accounts, and to programmatically upload and download content, contact the WebCenter Content Administrator.

Search criteria on the page are limited to the minimum metadata of content management records needed for file import and export.

Navigation: **Navigator > Tools > File Import and Export.**

Interacting with Content Management

Everyone who uses the File Import and Export page is assigned to one or more accounts in content management.

Accounts organize and secure access to content items.

Uploading for Import

Uploading a file creates a record.

When you create a record, you must specify an account as well as the file. When you create a record, you must specify an account as well as the file. The account you specify determines which import process picks up that file to import it.

You can upload any file formats that can be parsed by the content repository being used, such as any MIME or content types. However, the format uploaded should conform to the requirements of the import process being used, such as a comma-separated values (CSV) file for the Load Interface File for Import process.

Downloading for Export

Processes you run to export data result in files in content management. Records in the search results table of the File Import and Export page provide links to the files for download.

Note

The owner of a data export file can be an application ID (APPID).

File Size

Upload and download does not intentionally apply the following:

- Data compression
- File chunking or splitting

The `UPLOAD_MAX_DISK_SPACE` parameter in the `web.xml` file determines the maximum allowable file size in content management. The default maximum size is 10240000 (10MB).

Files for Import and Export:Points to Consider

Interaction between the File Import and Export page and Oracle WebCenter Content requires securing content in an account. Oracle provides predefined accounts in Oracle WebCenter Content.

Areas of file import and export to consider involve the following.

- Security
- Searching records
- Accessing content in a new account
- Account names
- Deleting files

Security

The duty role needed for accessing the File Import and Export page is File Import and Export Management duty. This duty role is included in the predefined role hierarchy for integration specialist roles and product family administrator roles.

Files in Oracle WebCenter Content are associated with an account so that only users who have permission to a particular account can work with content items that belong to that account. You can only upload and download files to and from content management that are associated with accounts that you are entitled to access.

Oracle WebCenter Content does not support trailing slashes (/). Account names are appended with a \$ to ensure each account is unique. Account names are dynamic so that if they overlap (one name is completely contained in another, longer name, such as US and USSales), each account is treated as discrete by access grants.

Security such as virus scanning is handled by the underlying integrated content management.

Searching Records

A record in Oracle WebCenter Content contains metadata used for accessing the file.

When a scheduled process has run to completion on a file, the record for the file includes a process ID.

Accessing Content in a New Account

When you create a new account in Oracle WebCenter Content and the content server is not restarted, access to content in the new account from the File Import and Export page may be delayed until the policy store is updated.

Account Names

If you create custom accounts for importing or exporting data, use the following conventions for naming the account: Do not include a slash "/" at the beginning or end. End with "\$" to avoid partial string matching. Use "\$/" as a separator in the hierarchical structure.

For example: `fin$/journal$/import$`. The File Import and Export page transforms account names by removing the \$s. For example `fin$/journal$/import$` displays as `fin/journal/import`. The Remote Introdoc Client (RIDC) HTTP command-line interface (CLI) transforms the account name you specify without \$ symbols to one that includes them. For example, `fin/journal/import` becomes `fin$/journal$/import$` in WebCenter Content.

Deleting Files

You can delete one file at a time when you use the File Import and Export page. To delete multiple files simultaneously from the content repository, use the standard service page in Oracle WebCenter Content.

External Data Integration Services for Oracle Cloud

External Data Integration Services for Oracle Cloud: Overview

Use External Data Integration Services for Oracle Cloud to load data into Oracle Fusion Applications from external sources, such as legacy systems and third-party applications.

Components of External Data Integration Services for Oracle Cloud include:

- Templates and control files for formatting, structuring, and generating the data file.
- A general file load process for loading values from the data file into interface tables.
- Application-specific data import processes for transferring data from interface tables to the application tables in your Oracle Fusion Applications.

To use External Data Integration Services for Oracle Cloud to load data into Oracle Fusion Applications tables:

1. Prepare your data and generate a data file by using the product-specific templates and control files.
2. Transfer the data file to the integrated content management server.
3. Run the Load Interface File for Import process.
4. Correct data load errors, if necessary.

5. Run the appropriate application-specific process for validating and inserting the data into application tables.
6. Correct data import errors, if necessary.

For templates and control files, see assets with the File-Based Data Import type in Oracle Enterprise Repository for Oracle Fusion Applications (<http://fusionappsoer.oracle.com>). For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository.

Locating File Import Templates: Explained

External data that you integrate into your Oracle Fusion Applications must be structured and formatted according to the properties of the fields and tables that store the data. To prepare external data so that data types, structural relationships, and other properties of the data correctly align to the data types, structural relationships, and properties of the target tables, use the product-specific templates and control files in Oracle Enterprise Repository for Oracle Fusion Applications.

You access these files from the Documentation tab of the scheduled process that corresponds to the interface tables that store the data. To find the process, you can search the interface table or you can search the specific process, if you know it.

Aspects of preparing external data using templates involve these tasks.

- Finding templates and control files
- Downloading templates
- Opening XLS templates

Finding Templates and Control Files

To find the templates and control files:

1. Sign in to Oracle Enterprise Repository.
2. Enter the following information in the Search fields:

Field	Value
Search String	FBDI
Type	Scheduled Process
FusionApps: Logical Business Area	(Optional) Select the value relevant to your implementation.

3. Click Search.
4. Select Load Interface File for Import from the results.

Downloading Templates

To download the templates:

1. Use the Search area to locate the Load Interface File for Import job and then select it from the search results.
2. Click the Documentation tab in the lower pane to see a list of links to application-specific import jobs.
3. Click a link to access the job.
4. Click the Documentation tab in the lower pane to see a list of links that access:
 - Control files, which describe the logical flow of the data load process
 - XLS templates, which include worksheets and macros that assist you in structuring, formatting, and generating your data file
5. Click the link to download the file.

Opening the XLS Template

To prepare your data in a spreadsheet format, use XLS templates:

1. Open the XLS template.

The first worksheet in each file provides instructions for using the template.

Important

If you omit or fail to complete the instructions, data load errors and data import failure are likely.

2. Save a copy of the file.
3. Click the **Generate CSV File** button.

The macro generates a comma-separated values (CSV) file and compresses it into a ZIP file; you must transfer the ZIP file to the content management server.

Using Excel Integration Templates to Generate Data Files: Points to Consider

Oracle Enterprise Repository for Oracle Fusion Applications includes integration templates to help you prepare external data for loading and importing. Each template includes table-specific instructions, guidelines, formatted spreadsheets, and best practices for preparing the data file for upload. Use the templates to ensure that your data conforms to the structure and format of the target application tables.

Templates

This list details the characteristics of the templates:

- Each interface table is represented by a separate worksheet.
- Each interface table field is represented by a worksheet column with a header in the first row.

- Each column header contains bubble text, or comments, that include details about the column, such as the expected data type, length, and, in some cases, other instructional text.
- The worksheet columns appear in the order that the control file processes the data file.
- The columns that you do not intend to use can be hidden, but not reordered or deleted.

Important

Deleting or reordering columns will cause the load process to fail and result in an unsuccessful data load.

- The external data must conform to the data type that the control file and process for the associated database column accepts.
 - Date column values must appear in the YYYY/MM/DD format.
 - Amount column values must appear with no separators other than a period (.) as the decimal separator.
 - Negative values must be preceded by the minus (-) sign.
 - Column values that require whole numbers include data validation to allow whole numbers only.
- Columns are formatted, where applicable, to match the target field data type to eliminate data entry errors.
- For columns that require internal ID values, refer to the bubble text for additional guidance about finding these values.
- When using Microsoft Excel to generate or update the CSV file, you must select YYYY/MM/DD as your regional setting for date values.

Using XML Templates to Generate Data Files for Integration: Highlights

Oracle Enterprise Repository for Oracle Fusion Applications includes XML integration templates assets that you use with Oracle Data Integrator (ODI) to generate import files from your external data.

To use the XML templates and generate the import files, you must:

- Install and set up Oracle Data Integrator
- Create source and target models
- Create integration projects

Note

In Oracle Cloud implementations, you must upload the ZIP file to the content management repository in Oracle Cloud. In non-Cloud implementations, you

can streamline the data integration process by installing the content management document transfer utility so ODI performs the ZIP file transfer.

Oracle Data Integrator provides a solution for integrating complex data from a variety of sources into your Oracle Fusion applications. The Oracle Fusion Middleware Installation Guide for Oracle Data Integrator and the Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator provide complete details pertaining to the installation and set up of this product.

Installing and Setting Up Oracle Data Integrator

- Install Oracle Data Integrator to use Oracle Fusion Applications XML integration templates. Refer to the Oracle Fusion Middleware Installation Guide for Oracle Data Integrator.

See: Installing Oracle Data Integrator

- Set up Oracle Data Integrator to use Oracle Fusion Applications XML integration templates. Refer to the Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator.

See: Setting up the Topology

Creating Source and Target Models

- Create the ODI models for both the source and target datastores. You determine the source models that you use based on the system or technology of the external data that you to import into your Oracle Fusion application. You create the target models by importing the XML files, which you download from Oracle Enterprise Repository. For more information, refer to the Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator.

See: Creating and Reverse-Engineering a Model

Configuring Integration Projects

- Create and configure an integration project, which entails selecting the knowledge modules, creating the interfaces, and mapping the source and target datastores. For more information, refer to the Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator.

See: Creating an Integration Project

Using XML Integration Templates to Generate Data Files: Points to Consider

Use XML templates in Oracle Data Integrator to prepare your external data for loading and importing. Oracle Enterprise Repository for Oracle Fusion Applications includes three types of XML templates that you import as target models in your Oracle Data Integrator repository.

Oracle Enterprise Repository includes these three levels of XML files:

- Family-level
- Product-level

- Product

Family-Level XML Files

A family-level XML file is common to a group of product-level model folders and product models.

Consider the following points when you use family-level XML files:

- The family-level XML file supports all of the Oracle Enterprise Repository assets in the family, for example Oracle Fusion Financials or Human Capital Management.
- You import the family-level XML file into your Oracle Data Integrator repository prior to importing the other XML files.
- You import one family-level XML file as a model folder for each family of products.
- You import each family-level XML file as a top-level model folder.
- You import the family-level XML file one time; it supports all subsumed product-level model folders.
- You select Synonym mode Insert Update as the import type.

Product-Level XML Files

A product-level XML file is common to a group of product models.

Consider the following points when you use product-level XML files:

- The product-level XML file supports all of the Oracle Enterprise Repository assets in the product line, for example Fixed Assets, General Ledger, or Payables.
- You import one product-level XML file as a model folder for each line of products.
- You import the product-level XML file as a model folder into your Oracle Data Integrator repository after you import the family-level XML file, but before you import product XML files.
- You import each product-level XML file as a midlevel model folder within the appropriate family-level model folder.
- You import the product-level XML file one time; it supports all subsumed product models.
- You select Synonym mode Insert Update as the import type.

Product XML Files

A product XML file represents a specific Oracle Enterprise Repository interface table asset.

Consider the following points when you use product XML files:

- You import one product XML file as a model for each interface table or set of tables, for example Mass Additions.

- You import the product XML file as a model into your Oracle Data Integrator repository after you import the product-level XML file.
- You import each product XML file as a model within the appropriate product-level model folder.
- You import each product XML file one time.
- You select Synonym mode Insert Update as the import type.
- The model is based on File technology.
- After you import the product model, you connect the model to the correct logical schema.

Creating Integration Projects That Generate Data Files for Import: Points to Consider

When you use Oracle Data Integrator (ODI) to generate import data files from external data sources, you must configure an integration project. Integration projects are collections of ODI components that provide the procedural details of an integration from a source to a target. In this scenario, the source is your external data and the target is the import data file that you load and import into your Oracle Fusion Applications.

Configure these components to create your integration project.

- Knowledge modules
- Integration interfaces

Knowledge Modules

Knowledge modules contain the information that Oracle Data Integrator requires to perform a specific set of tasks against a specific technology or set of technologies. Examples include Check knowledge modules, which ensure that constraints on the sources and targets are not violated and integration knowledge modules, which load data to target tables.

Consider the following points about knowledge modules:

- The knowledge modules that you import into your integration project depend on the source and target technologies, as well as other integration-specific rules and processes.
- Multiple types of knowledge modules exist in ODI.
- Use the SQL File to Append module to create the import data file.

Integration Interfaces

Integration interfaces comprise sets of rules that define the loading of data from one or more sources to the target.

Consider the following points about integration interfaces:

- The source is the datastore from your external data model.

- The target is the interface table datastore, which is the CSV file from your interface table model.
- After you set up the source and target datastores, map the target fields to the source fields.
- You can map source field values to target fields or constants.

Transferring Data Files to Target Accounts in Oracle WebCenter Content: Explained

After you generate the ZIP file that contains the CSV data import file, transfer it to the content repository.

Use any of these methods to transfer file:

- File Import and Export page in Oracle Fusion Applications
- Oracle WebCenter Content Document Transfer Utility
- Oracle Fusion Financials Utility web service

Note

Consult Oracle Enterprise Repository for Oracle Fusion Applications for web service documentation.

Aspects of transferring data files to content management involve the following:

- Target accounts
- Accessing transferred content

Target Accounts

You must transfer files to these predefined account in content management that corresponds to the interface table or assets.

Interface Table	Predefined Account
Payables Standard Invoice Import	fin/payables/import
• AutoInvoice Import • Receivables Standard Receipt Import • Customer Import • China Value Added Tax Invoice Import	fin/receivables/import
• BAI2 Format Bank Statements Import • EDIFACT FINSTA Format Bank Statements Import • ISO200022 CAMT053 Format Bank Statements Import • SWIFT MT940 Format Bank Statements Import	fin/cashManagement/import

• Fixed Asset Mass Additions Import • Fixed Asset Mass Adjustments Import • Fixed Asset Mass Retirements Import • Fixed Asset Mass Transfers Import • Fixed Asset Units of Production Import	fin/assets/import
Intercompany Transaction Import	fin/intercompany/import
• Journal Import • Chart Of Accounts Segment Values and Hierarchies Import	fin/generalLedger/import
General Ledger Budget Balance Import	fin/budgetBalance/import
Supplier Bank Account Import	fin/payables/import
Tax Configuration Content Import	fin/tax/import
Import Blanket Purchase Agreements	prc/blanketPurchaseAgreement/import
Import Contract Purchase Agreements	prc/contractPurchaseAgreement/import
Import Purchase Orders	prc/purchaseOrder/import
Import Requisitions	prc/requisition/import
• Import Suppliers • Import Supplier Sites • Import Supplier Site Contacts • Import Supplier Site Assignments	prc/supplier/import
Project Enterprise Resource Import	prj/projectManagement/import
Project Unprocessed Expenditure Item Import	prj/projectCosting/import
Cycle Count Import	scm/cycleCount/import
Inventory Reservation Import	scm/inventoryReservation/import
Inventory Transaction Import	scm/inventoryTransaction/import
Item Import	scm/item/import
Receiving Receipt Import	scm/receivingReceipt/import
Shipment Request Import	scm/shipmentRequest/import

You can create subaccounts to further organize your files. However, you must create the account subordinate to the predefined account for the asset you are integrating.

Accessing Transferred Content

To access your transferred data you must access the account that corresponds to the interface table or asset appropriate for the data.

Available data integration processes move the content into and out of Oracle Fusion Applications tables. Running an import or export process creates a process ID in content management that you can use to identify the content you wish to overwrite or extract.

Oracle Enterprise Scheduler import process jobs result in the following hierarchy of items in Oracle WebCenter Content:

- A root import job is a list of all unprocessed files in an account. This job submits the child jobs that process each unprocessed file.
- A parent import job is a single file ID, account name, and the import steps (download, extract, import) for a single job, job set, or subrequests. This type of job tags the file with its request ID, provided the file is not deleted immediately after successful import.
- A child import job is a direct data load from a prepared file, typically a SQLLoader. Typically, the parent import job submits this job.

Document Transfer Utility: Explained

The WebCenter Content Document Transfer Utility for Oracle Fusion Applications is a feature-set Java library that provides programmatic access to the content repository. Use the utility to import and export documents, such as import files that contain external data that you want to load into interface and application tables.

The library includes:

- Oracle WebCenter Content client command line tool
- Oracle Data Integrator (ODI) upload and download tools
- Oracle WebCenter Content remote intradoc client (RIDC)
- Oracle HTTPClient
- Oracle Fusion Applications branding and defaults

Options for the WebCenter Content Document Transfer Utility for Oracle Fusion Applications fall into these categories:

- DownloadTool program options
- UploadTool program options
- Debugging and silent invocation options

DownloadTool Program Options

This table describes the download tool program options:

Option	Description
url	Protocol-specific connection URL of content server
username	Username to leverage
password	Password, supplied in command line
passwordFile	Password, supplied in text file on the first line of the file

dID	ID of document revision to download dID is unique across repository dID changes with each revision Note Alternatively, specify the dDocName and RevisionSelectionMethod to identify the dID to leverage.
dDocName	Content name Multiple revisions of a document can share the same dDocName value, otherwise it is unique. Note You should also provide RevisionSelectionMethod value.
RevisionSelectionMethod	Revision to download Valid values: Latest, LatestReleased Default value: Latest
outputFile	Path and name of local file to write

Here you see a sample download invocation command:

```
java -classpath "oracle.ucm.fa_client_11.1.1.jar"
  oracle.ucm.client.DownloadTool
url=http://ucmserver.com:16200/cs/idcplg username=weblogic
password=welcom3i
dID=21537 outputFile="/tmp/output.doc"
```

Here you see sample output:

```
Oracle WebCenter Content Document Transfer Utility
Oracle Fusion Applications
Copyright (c) 2013, Oracle. All rights reserved.
Performing download (GET_FILE) ...
Download successful.
```

UploadTool Program Options

This table describes the upload tool program options:

Option	Description
url	Protocol-specific connection URL of content server
username	Username to leverage
password	Password, supplied in command-line
passwordFile	Password, supplied in text file on the first line of the file
primaryFile	Fully-qualified path of local primary file to upload
dDocAccount	Destination account

dDocTitle	Document title
checkout	If uploading a document revision, check out the document from the repository before uploading the revision Valid values: true, false Default value: false
ignoreCheckoutErrorNeg22	Ignore error -22 (user has already checked-out the document) when checking-out the document. Valid values: true, false Default value: true

Here you see a sample upload invocation command:

```
java -classpath "oracle.ucm.fa_client_11.1.1.jar"
  oracle.ucm.client.UploadTool
url=http://ucmserver.com:16200/cs/idcplg username=weblogic
password=welcom3i
primaryFile="/tmp/resume.doc" dDocTitle="Resume of MSMITH" -dDocAccount=/
acme/sales
```

Here you see sample output:

```
Oracle WebCenter Content Document Transfer Utility
Oracle Fusion Applications
Copyright (c) 2013, Oracle. All rights reserved.
Performing upload (CHECKIN_UNIVERSAL) ...
Upload successful.
[dID=21537 | dDocName=UCMFA021487]
```

Debugging and Silent Invocation Options

This table describes the options which are common to all tools that the invoker can leverage.

Option	Description
verbose	Verbose output Log filled with Request/Response DataBinders
quiet	Minimal output
version	Print tool revision or version
log_file_name	Send program output to specified log file instead of the System.out log file
log_file_append	Append log to existing log file rather than overwrite it Valid values: true, false Default value: false
socketTimeout	Override time out of socket Specify override time in seconds

You can use the tools to test the connection. Provide only the url, username, and password as you see in this sample test:

```
java -classpath "oracle.ucm.fa_client_11.1.1.jar"  
  oracle.ucm.client.DownloadTool  
url=http://ucmserver.com:16200/cs/idcplg username=weblogic  
password=welcom3i
```

Here you see the sample output:

```
Oracle WebCenter Content Document Transfer Utility  
Oracle Fusion Applications  
Copyright (c) 2013, Oracle. All rights reserved.  
Performing connection test (PING_SERVER) ...  
Connection test successful.
```

Load Interface File for Import Process

Use to load external setup or transaction data from a data file in the content repository to interface tables. The process prepares the data for import into application tables.

You run this process from the Scheduled Processes page. You can run it on a recurring basis.

Before running this process, you must:

1. Prepare your data file.
2. Transfer the data file to the content repository.

Parameters

Import Process

Select the target import process.

Data file

Enter the relative path and the file name of the *.zip data file in the content repository.

Importing Data into Application Tables: Procedure

The final destination for your external data is the application data tables of your Oracle Fusion Applications product.

Aspects of importing data into application tables involve the following:

- Loading data into interface tables
- Finding and submitting the import process

Loading Data into Interface Tables

Interface tables are intermediary tables that store your data temporarily while the system validates format and structure. Run the Load Interface File for Import

scheduled process to load data from the data file into the interface table that corresponds to the template that you use to prepare the data.

To load your data into interface tables, submit the Load Interface File for Import scheduled process:

1. Sign in to Oracle Fusion Applications.
2. In the Navigator menu, select Tools, Scheduled Processes
3. Click the Schedule New Process button.
4. Search and select the Load Interface File for Import job.
5. When the Process Details page appears:
 - a. Select the target import process.
 - b. Enter the data file name.

Note

If the file exists in an account subordinate to the predefined account, you must enter the entire path relative to the predefined account in the content repository. Include all subaccounts and the file name.

-
6. Submit the process.

If no errors exist in the data file, then the process populates the interface tables.

Note

The data file remains in the content repository after the process ends.

Finding and Submitting the Import Process

Run the appropriate import process to import the data into the interface tables of your Oracle Fusion Applications product.

To import your data:

1. Sign in to Oracle Fusion Applications.
2. In the Navigator menu, select Tools, Scheduled Processes
3. Click the Schedule New Process button.
4. Find and select the import process that is specific to the target application tables.
5. When the Process Details page appears, select the process that corresponds to the data that you are importing.

If you prepared your data using the spreadsheet template, select the process named in the Overview section of the spreadsheet.
6. Submit the process.

Note

For more detailed information on the process used for data prepared using the spreadsheet template, see the Instructions and CSV Generation tab of the spreadsheet template.

Correcting Import Load Process Errors: Explained

The Load Interface File for Import process ends in error if the load of the data file fails on any row.

The following conditions apply when the process ends in error:

- The Load File to Interface child process ends in either warning or error.
- All rows that were loaded by the process are deleted, even those rows that loaded successfully.

To correct errors:

1. Review the error logs.
2. Change any formatting or structural anomalies that exist in the data.
3. Recreate the CSV and ZIP files.
4. Transfer the file to the content management server.
5. Submit the Load Interface File for Import job.
6. Repeat these steps until the process successfully loads the data.
7. Import the data using the appropriate product-specific process.

Importing and Exporting Setup Data

Configuration Packages: Explained

Almost all Oracle Fusion application implementations require moving functional setup data from one instance into another at various points in the lifecycle of the applications. For example, one of the typical cases in any enterprise application implementation is to first implement in a development or test application instance and then deploy to a production application instance after thorough testing. You can move functional setup configurations of applications from one application instance into another by exporting and importing Configuration packages from the Manage Configuration Packages page.

A Configuration Package contains the setup import and export definition. The setup import and export definition is the list of setup tasks and their associated business objects that identifies the setup data for export as well as the data itself. When you create a configuration package only the setup export and import definition exists. Once you export the configuration package appropriate setup data is added to the configuration package using the definition. Once a configuration package is exported, the setup export and import definition is locked and cannot be changed.

You generate the setup export and import definition by selecting an implementation project and creating a configuration package. The tasks and their associated business objects in the selected implementation project define the setup export and import definition for the configuration package. In addition, the sequence of the tasks in the implementation project determine the export and import sequence.

Exporting and Importing Setup Data: Explained

A configuration package is required to export setup data. You can export a configuration package once you create it, or at any time in the future. During export, appropriate setup data will be identified based on the setup export definition and added to the configuration package. The setup data in the configuration package is a snapshot of the data in the source application instance at the time of export. After the export completes, you can download the configuration package as a zipped archive of multiple XML files, move it to the target application instance, and upload and import it.

Export

You can export a configuration package multiple times by creating multiple versions. While the export definition remains the same in each version, the setup data can be different if you modified the data in the time period between the different runs of the export process. Since each version of the configuration package has a snapshot of the data in the source instance, you can compare and analyze various versions of the configuration package to see how the setup data changed.

Import

In the target application instance, the setup import process will insert all new data from the source configuration package that does not already exist and update any existing data with changes from the source. Setup data that exists in the target instance but not in source will remain unchanged.

Export and Import Reports

You can review the results of the export and import processes using reports. The results appear ordered by business objects and include information on any errors encountered during the export or import process. If a setup export or import process paused due to errors encountered or for a manual task to be performed outside of the application, then you can resume the paused process.

These reports show what setup data was exported or imported and by which specific process. You can change the reports to validate the setup data as well as to compare or analyze it. A report is generated for each business object. These reports show the same information as the export and import results seen directly in the application.

Process status details are available as text files showing the status of an export or import process including the errors encountered during the process.

Moving Common Reference Objects

Moving Common Reference Objects: Overview

The common reference objects in Oracle Middleware Extensions for Applications are used by several setup tasks in the Setup and Maintenance work area. The common reference objects become a part of the configuration package that is created for an implementation project. While moving the application content, for example, from the test phase to the production phase of an implementation, you must pay special attention to the nuances of these common reference objects.

Parameters

The common reference objects are represented as business objects. A single object can be referenced in multiple setup tasks with different parameters. In the configuration package that is created for the implementation project, parameters passed to a setup task are also passed to the business objects being moved. As a result, the scope of the setup tasks is maintained intact during the movement.

Dependencies

Common reference objects may have internal references or dependencies among other common reference objects. Therefore, it is necessary that all the dependencies are noted before the movement of objects so that there are no broken references among the objects.

Business Objects for Moving Common Reference Objects: Points to Consider

Common reference objects in Oracle Fusion Functional Setup Manager are represented by business objects. These business objects are the agents that contain the application content and carry them across whenever the application setup is moved from one environment to another, for example, test environment to production environment.

Choice of Parameters

The following table lists the business objects, the corresponding movement details, and the effect of the setup task parameter on the scope of the movement.

Note

- Only the translation in the current user language is moved.
 - The Oracle Social Network business objects and the Navigator menu customizations are moved using the customization sets on the Customization Migration page instead of using the export and import function in the Setup and Maintenance work area.
-

Business Object Name	Moved Functional Item	Effect on the Scope of Movement
Application Message	Messages and associated tokens	No parameters: all messages are moved. moduleType/moduleKey: only messages belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. messageName/applicationId: only the specified message is moved.
Application Taxonomy	Application taxonomy modules and components	No parameters: all taxonomy modules and components are moved.
Application Attachment Entity	Attachment entities	No parameters: all attachment entities are moved. moduleType/moduleKey: only attachment entities belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.

Application Attachment Category	Attachment categories and category-to-entity mappings	No parameters: all attachment categories and category-to-entity mappings are moved. <code>moduleType/moduleKey</code>: only attachment categories belonging to the specified module and its descendant modules in the taxonomy hierarchy along with the respective category-to-entity mappings are moved.
Application Document Sequence Category	Document sequence categories	No parameters: all categories are moved. <code>moduleType/moduleKey</code>: only categories belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>code/applicationId</code>: only the specified document sequence category code is moved.
Application Document Sequence	Document sequences and their assignments	No parameters: all sequences are moved. <code>moduleType/moduleKey</code>: only document sequences belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved <code>name</code>: only the specified document sequence is moved.

Application Descriptive Flexfield	Descriptive flexfield registration data and setup data	No parameters: all descriptive flexfields are moved. <code>moduleType/moduleKey</code>: only descriptive flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>descriptiveFlexfieldCode/applicationId</code>: only the specified descriptive flexfield is moved. Note Importing a flexfield's metadata can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment. Note Only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.
Application Extensible Flexfield	Extensible flexfield registration data and setup data, including categories	No parameters: all extensible flexfields are moved <code>moduleType/moduleKey</code>: only extensible flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>extensibleFlexfieldCode/applicationId</code>: only the specified extensible flexfield is moved. Note Importing a flexfield's metadata can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment. Note Only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.

Application Key Flexfield	Key flexfield registration data and setup data	No parameters: all key flexfields are moved. <code>moduleType/moduleKey</code>: only key flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>keyFlexfieldCode/applicationId</code>: only the specified key flexfield is moved. Note Importing a flexfield's metadata can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment. Note Only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.
Application Flexfield Value Set	Value set setup data	No parameters: all value sets are moved. <code>moduleType/moduleKey</code>: only value sets belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>valueSetCode</code>: only the specified value set is moved. Note Importing a value set's metadata can change the deployment status of flexfields that use the value set, and therefore the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment.
Application Reference Currency	Currency data	No parameters: all currencies are moved.
Application Reference ISO Language	ISO language data	No parameters: all ISO languages are moved.
Application Reference Industry	Industry data including industries in territories data	No parameters: all industries are moved.

Application Reference Language	Language data	No parameters: all languages are moved.
Application Reference Natural Language	Natural language data	No parameters: all natural languages are moved.
Application Reference Territory	Territory data	No parameters: all territories are moved.
Application Reference Time zone	Time zone data	No parameters: all time zones are moved.
Application Standard Lookup	Standard lookup types and their lookup codes	No parameters: all standard lookups are moved. <code>moduleType/moduleKey</code>: only standard lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>lookupType</code>: only the specified common lookup is moved.
Application Common Lookup	Common lookup types and their lookup codes	No parameters: all common lookups are moved. <code>moduleType/moduleKey</code> - only common lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>lookupType</code>: only the specified common lookup is moved.
Application Set-Enabled Lookup	Set-enabled lookup types and their lookup codes	No parameters: all set-enabled lookups are moved. <code>moduleType/moduleKey</code>: only set-enabled lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>lookupType</code>: only the specified set-enabled lookup is moved.
Application Profile Category	Profile categories	No parameters: all profile categories are moved. <code>moduleType/moduleKey</code>: only categories belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>name/applicationId</code>: only the specified category is moved.

Application Profile Option	Profile options and their values	No parameters: all profile options and their values are moved. <code>moduleType/moduleKey</code>: only profile options and their values belonging to the specified module are moved. <code>profileOptionName</code>: only the specified profile option and its values are moved.
Application Profile Value	Profile options and their values	No parameters: all profiles and their values are moved. <code>moduleType/moduleKey</code>: only profiles and their values belonging to the specified module are moved. <code>categoryName/</code> <code>categoryApplicationId</code>: only profiles and their values belonging to the specified category are moved. <code>profileOptionName</code>: only the specified profile and its values are moved.
Application Reference Data Set	Reference data sets	No parameters: all sets are moved.
Application Reference Data Set Assignment	Reference data set assignments	<code>determinantType</code>: only assignments for the specified determinant type are moved. <code>determinantType/</code> <code>referenceGroupName</code>: only assignments for the specified determinant type and reference group are moved.
Application Tree Structure	Tree structures and any labels assigned to the tree structure	No parameters: all tree structures (and their labels) are moved. <code>moduleType/moduleKey</code>: only tree structures (and their labels) belonging to the specified module are moved. <code>treeStructureCode</code>: only the specified tree structure (with its labels) is moved.

Application Tree	Tree codes and versions	No parameters: all trees are moved. <code>moduleType/moduleKey</code>: only trees belonging to the specified module are moved. <code>treeStructureCode</code>: only trees belonging to the specified tree structure are moved. <code>TreeStructureCode/TreeCode</code>: only trees belonging to the specified tree structure and tree code are moved.
Application Tree Label	Tree structures and any labels assigned to the tree structure	No parameters: all tree structures (and their labels) are moved. <code>moduleType/moduleKey</code>: only tree structures (and their labels) belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>treeStructureCode</code>: only the specified tree structure (with its labels) is moved.
Application Data Security Policy	Database resources, actions, conditions, and data security policies	No parameters: all database resources/actions/conditions/policies are moved. <code>moduleType/moduleKey</code>: only database resources/actions/conditions/policies belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. <code>objName</code>: only the specified database resource along with its actions/conditions/policies is moved. Note • If the policies being moved contain reference to newly created roles, move the roles before moving the policies. • If the source and target systems use different LDAPs, manually perform the GUID reconciliation after moving the data security policies.
Application Activity Stream Configuration	Activity stream options	No parameters: all activity stream options are moved.

Moving Related Common Reference Objects: Points to Consider

Certain common reference objects may use other common reference objects creating dependencies among the objects. During the movement of common reference objects, these dependencies or references need to be taken care of.

Dependencies

The dependencies among the common reference objects may be caused by any of the following conditions.

- Flexfield segments use value sets
- Value sets may make use of standard, common, or set-enabled lookups
- Key flexfields may have an associated tree structure and key flexfield segments may have an associated tree code
- Tree codes and versions may be defined over values of a value set
- Data security policies may be defined for value sets that have been enabled for data security

You may choose to move one, some, or all of the business objects by including the ones you want to move in your configuration package. For example, you may choose to move only value sets and not lookups, or you may choose to move both value sets and their lookups as part of the same package. Whatever be the combination, it is recommended that during the movement of objects, you follow an order that maintains the dependencies among the objects.

While moving the business objects, adhere to the guidelines and exactly follow the order as listed below.

1. Move created taxonomy modules before moving any objects that reference them, such as flexfields, lookups, profiles, attachments, reference data sets, document sequences, messages, and data security.
2. Move created currencies before moving any objects that reference them, such as territories.
3. Move created territories before moving any objects that reference them, such as languages and natural languages.
4. Move created ISO languages before moving any objects that reference them, such as languages, natural languages, and industries.
5. Move created tree structures before moving any objects that reference them, such as trees or tree labels.
6. Move created profile options before moving any objects that reference them, such as profile categories or profile values.
7. Move created attachment entities before moving any objects that reference them, such as attachment categories that reference them.

Note

In scenarios where there may be dependencies on other objects, you must move the dependencies before moving the referencing object. For example, if data security policies being moved have dependencies on newly created security roles, you must move the security roles before moving the security policies.

Using Seed Data Framework to Move Common Reference Objects: Points to Consider

To move the common reference objects, you can use the Seed Data Framework (SDF). You can also use the command line interface of SDF to move the object setup data. For more information about seed data loaders including common reference object loaders, see Oracle Fusion Applications Developer's Guide.

Movement Dependencies

The seed data interface moves only the setup metadata. For example, if you use SDF to import flexfield metadata, the flexfield setup metadata is imported into your database. However, you must invoke the flexfield deployment process separately after seed data import to regenerate the runtime flexfield artifacts in the target environment. Similarly, if you use SDF to import data security metadata, you must first move any new referenced roles and then manually run the GUID reconciliation where required.

To ensure that the reference data is not lost during the movement, certain guidelines are prescribed. It is recommended that you perform the movement of object data exactly in the order given below.

Note

Only the translation in the current user language is moved.

1. Move created taxonomy modules before moving any objects that reference them, such as flexfields, lookups, profiles, attachments, reference data sets, document sequences, messages, and data security.
2. Move created currencies before moving any objects that reference them, such as territories.
3. Move created territories before moving any objects that reference them, such as languages and natural languages.
4. Move created ISO languages before moving any objects that reference them, such as languages, natural languages, and industries.
5. Move created tree structures before moving any objects that reference them, such as trees or tree labels.
6. Move created profile options before moving any objects that reference them, such as profile categories or profile values.
7. Move created attachment entities before moving any objects that reference them, such as attachment categories that reference them.
8. Move created reference data sets before moving any objects that reference them, such as reference data set assignments and set-enabled lookups.

9. Move created document sequence categories before moving any objects that reference them, such as document sequences.
10. Move created tree labels before moving any objects that reference them, such as trees.
11. Move created data security objects and policies before moving any objects that reference them, such as value sets.
12. Move created value sets before moving any objects that reference them, such as flexfields.
13. Move created trees before moving any objects that reference them, such as key flexfields.

Glossary

abstract role

A description of a person's function in the enterprise that is unrelated to the person's job (position), such as employee, contingent worker, or line manager. A type of enterprise role.

account rule

The rule that builds the account on a subledger journal entry. It can be used to derive complete accounts or a segment value. Conditions can be defined within a rule so that a different account is used based on particular attributes of a transaction.

accounting attribute

Predefined fields that map to components of subledger journal entries. Sources are assigned to accounting attributes.

accounting event class

Categories that classify transaction types and group event types for accounting rules.

accounting event type

Represents a business operation that may have an accounting impact.

accounting method

A set of journal entry rules which determine how a subledger journal entry is to be created for each event class or event type.

accounting period

The fiscal period used to report financial results, such as a calendar month or fiscal period.

action

The kind of access named in a security policy, such as view or edit.

activity

A business action or task that uses a resource or incurs a cost. In Primavera P6 Enterprise Project Portfolio Management, the fundamental executable work element in the work breakdown structure of a project. Activities contain all the information necessary to perform the required work.

ADF

Acronym for Application Developer Framework. A set of programming principles and rules for developing software applications.

ADFdi

Abbreviation for Application Development Framework Fusion Desktop Integration. A tool that allows you to export data from spreadsheet application into Oracle Fusion applications.

application feature

A standardized functionality that is available to implemented.

application identity

Predefined application level user with elevated privileges. An application identity authorizes jobs and transactions for which other users are not authorized, such as a payroll run authorized to access a taxpayer ID while the user who initiated the job is not authorized to access such personally identifiable information.

application role

A role specific to applications and stored in the policy store.

Applications Core

Abbreviation for Oracle Middleware Extensions for Applications. The technical product code is FND.

approved budget

A financial plan type designated as an approved cost budget, approved revenue budget, or both, whose versions are used for specific purposes (for example, as default budget versions for project performance reporting).

ASN

Abbreviation for advance shipment notice. Electronic data interchange (EDI) or Extensible Markup Language (XML) from a supplier that informs the receiving organization that a shipment is in transit. ASNs speed the receiving process by enabling the receiver to check in entire shipments without entering individual line information. The ASN may contain details including shipment date, time, and identification number; packing slip data; freight information; item detail including cumulative received quantities; country of origin; purchase order number; and returnable packing unit information.

assignment

A set of information, including job, position, pay, compensation, managers, working hours, and work location, that defines a worker's or nonworker's role in a legal employer.

automatic offset

A method for balancing invoice and payment journal entries that cross primary balancing segment values.

balancing segment

A chart of accounts segment used to automatically balance all journal entries for each value of this segment.

balancing segment value

The value of a balancing segment used to automatically balance journal entries.

baseline project plan

Key planned information for tasks and task assignments, including dates, costs, quantity, effort, and rates, that you can save from current project plan values. Setting a baseline for a project plan does not create a new plan version. Rather, current plan information is saved in baseline columns of the current project plan.

beneficiary

A person or organization designated to receive benefits from a compensation plan on the death of the plan participant.

bill plan

A set of instructions on a contract that define how to invoice a customer. Multiple contract lines on a contract can use the same or different bill plans.

billing control

Contract feature that controls the types of transactions, dates, and amounts a customer may be invoiced for and revenue can be recognized for a contract or contract line. Define billing controls at the contract or contract line level.

billing extension

Company-specific business rule that creates automatic revenue or invoice events. You can assign a billing extension to a revenue method or invoice method.

borrowed and lent processing method

A method of processing cross-charge transactions that generates accounting entries to transfer costs or share revenue from the provider organization to the receiver organization within a legal entity.

BPEL

Business Process Execution Language; a standard language for defining how to send XML messages to remote services, manipulate XML data structures, receive XML messages asynchronously from remote services, manage events and exceptions, define parallel sequences of execution, and undo parts of processes when exceptions occur.

burden cost

Burden costs are legitimate costs of doing business that support raw costs and cannot be directly attributed to work performed.

burden cost base

The grouping of raw costs to which burden costs are applied.

burden cost code

A classification of overhead costs. A burden cost code represents the type of burden cost that you want to apply to raw cost. For each burden cost code in the burden structure, you specify what cost base it is applied to, the expenditure types it is associated with, and the order in which it is applied to raw costs within the cost base.

burden structure

Determines how expenditure types are grouped into burden cost bases and what types of burden costs are applied to the cost bases. A burden structure defines relationships between burden cost bases and burden cost codes, and between burden cost bases and expenditure types.

burdened cost

Cost of an expenditure item, including the raw cost and burden costs.

business function

A business process, or an activity that can be performed by people working within a business unit and describes how a business unit is used.

business object

A resource in an enterprise database, such as an invoice or purchase order.

business unit

A unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy.

calendar event

A period that signifies an event, such as a public holiday or a training course, that impacts worker availability.

chart of accounts

The account structure your organization uses to record transactions and maintain account balances.

class category

Method of classifying projects. For example, use class categories to define project funding sources, investment strategies, or industry sectors. Class categories are associated with a set of values called class codes.

class code

Implementation-defined value within a class category that is used to classify projects. For example, a class category called Industry Sector can have class codes such as Construction, Banking, and Health Care.

clause adoption

Reusing a clause from the global business unit in local business units either by adopting the clause without change or by localizing it.

clause localization

A type of clause adoption where the adopted clause is edited to suit the local business unit needs.

clearing company

The intercompany clearing entity used to balance the journal.

condition

An XML filter or SQL predicate WHERE clause in a data security policy that specifies what portions of a database resource are secured.

constant

Holds the numeric value used to evaluate numeric conditions in Contract Expert rules. A constant permits you to reset the conditions of many rules with just one edit.

context

A grouping of flexfield segments to store related information.

context segment

The flexfield segment used to store the context value. Each context value can have a different set of context-sensitive segments.

context-sensitive segment

A flexfield segment that may or may not appear depending upon a context such as other information that has been captured. Context-sensitive segments are custom attributes that apply to certain entity rows based on the value of the context segment.

contingent worker

A self-employed or agency-supplied worker. Contingent worker work relationships with legal employers are typically of a specified duration. Any person who has a contingent worker work relationship with a legal employer is a contingent worker.

contract deviations

Differences between the contract terms in a contract and those in the contract terms template applied to that contract and any deviations from company policies as determined by Contract Expert feature rules.

Contract Expert

A feature of the application that permits you to create business rules in the Contract Terms Library to enforce corporate policies and standards for contracts.

Contract Terms Library

A repository of standard clauses, contract terms templates, and business rules built using Contract Expert.

corporate rate type

Rate you define to standardize rates used in conversion of one currency to another over a period of time. This rate is generally a standard market rate determined by senior financial management for use throughout the organization.

cost center

A unit of activity or group of employees used to assign costs for accounting purposes.

cost organization

A grouping of inventory organizations that indicates legal and financial ownership of inventory, and which establishes common costing and accounting policies.

country holding company

A legal entity that acts on behalf of several divisions within an enterprise, and is the legal employer in a country.

current planning period

The current project accounting period or accounting period (depending on the selected calendar type) for the purposes of financial planning.

data dimension

A stripe of data accessed by a data role, such as the data controlled by a business unit.

data instance set

The set of human capital management (HCM) data, such as one or more persons, organizations, or payrolls, identified by an HCM security profile.

data role

A role for a defined set of data describing the job a user does within that defined set of data. A data role inherits job or abstract roles and grants entitlement to access data within a specific dimension of data based on data security policies. A type of enterprise role.

data role template

A template used to generate data roles by specifying which base roles to combine with which dimension values for a set of data security policies.

data security

The control of access to data. Data security controls what action a user can taken against which data.

data security policy

A grant of entitlement to a role on an object or attribute group for a given condition.

database resource

An applications data object at the instance, instance set, or global level, which is secured by data security policies.

department

A division of a business enterprise dealing with a particular area of activity.

description rule

The rule that defines the description content that appears on the subledger journal header and line.

descriptive flexfield

Customizable expansion space, such as fields used to capture additional descriptive information or attributes about an entity, such as customer cases. Information collection and storage may be configured to vary based on conditions or context.

determinant

A value that determines which reference data set will be used in a specific business context.

determinant type

Designates the field within transactional columns that controls how data is shared across organizations such as business unit, asset book, cost organization

or project unit. The type determines the reference data sets that would be used in a transaction.

determinant type

An additional and optional field within transactional columns (besides category and application) that is used to assign document sequences. The available determinant types are Business Unit, Ledger, Legal Entity, and Tax Registration.

determinant value

A value specific to the determinant type dimension of a document sequence. The determinant value is relevant in a document sequence assignment only if the document sequence has a determinant type. If Ledger is the determinant type for a document sequence, the determinant value is the specific ledger number whose documents are numbered by the document sequence.

distribution factor

A numerical value that determines the budget, forecast, or project plan amounts distributed to financial periods corresponding to each of the ten spread points that make up a spread curve.

division

A business-oriented subdivision within an enterprise. Each division is organized to deliver products and services or address different markets.

document

Business objects for which you import transactions from source applications. Examples of documents are time cards, expense reports, usages, or miscellaneous transactions.

document category

A high level grouping of person documents such as visas, licences, and medical certificates. Document subcategories provide further grouping of document categories.

document entry

Represents distinct type of transactions for a document that need to be processed in different ways.

document event class

Categorization of events within an application, such as Payables, Purchasing, or Receivables. For example, Payables event classes include standard invoices, prepayment invoices, and credit memos.

document fiscal classification

A classification used by a tax authority to categorize a document associated with a transaction for a tax.

document sequence

A unique number that is automatically or manually assigned to a created and saved document.

document type

A categorization of person documents that provides a set of options to control what document information to retain, who can access the documents, whether the documents require approval, and whether the documents are subject to expiry. A document type exists for a combination of document category and subcategory.

duty role

A group of function and data privileges representing one duty of a job. Duty roles are specific to applications, stored in the policy store, and shared within an Oracle Fusion Applications instance.

employment terms

A set of information about a nonworker's or employee's job, position, pay, compensation, working hours, and work location that all assignments associated with the employment terms inherit.

enterprise

An organization with one or more legal entities under common control.

enterprise role

Abstract, job, and data roles are shared across the enterprise. An enterprise role is an LDAP group. An enterprise role is propagated and synchronized across Oracle Fusion Middleware, where it is considered to be an external role or role not specifically defined within applications.

entitlement

Grants of access to functions and data. Oracle Fusion Middleware term for privilege.

Europe, Middle East, and Africa (EMEA)

A regional designation used for government, marketing and business purposes for countries in Europe, the Middle East, and Africa.

expenditure item

The smallest logical unit of expenditure you can charge to a project and task. For example, a time card item or an expense report item.

expenditure type

Classification of cost that you assign to each expenditure item in Oracle Fusion Projects.

expenditure type class

Tells Oracle Fusion Projects how to process an expenditure item.

extensible flexfield

Customizable expansion space, as with descriptive flexfields, but able to capture multiple sets of information within a context and multiple contexts grouped to appear in a named region of a user interface page. Some extensible flexfields let you group contexts into categories.

feature choice

A selection you make when configuring offerings that modifies a setup task list, or a setup page, or both.

financial plan type

A category or collection of either project budgets or project forecasts.

financial resource

A resource that uses currency as its unit of measure.

firm burden schedule

A burden schedule of burden multipliers that will not change over time. This is compared to provisional schedules in which actual multipliers are mapped to provisional multipliers after an audit.

fixed rate type

Rate you set between two currencies that remains constant. For example, a rate set between the euro currency and each Economic and Monetary Union (EMU) currency during the conversion to the euro currency.

flexfield

Grouping of extensible data fields called segments, where each segment is an attribute added to an entity for capturing additional information.

flexfield segment

An extensible data field that represents an attribute on an entity and captures a single atomic value corresponding to a predefined, single extension column in the Oracle Fusion Applications database. A segment appears globally or based on a context of other captured information.

function security

The control of access to a page or a specific widget or functionality within a page. Function security controls what a user can do.

gallery

A searchable collection of portraits that combines the functions of the person directory with corporate social networking and self-service applications for both workers and managers.

global area

The region across the top of the user interface. It provides access to features and tools that are relevant to any page you are on.

grade

A component of the employment model that defines the level of compensation for a worker.

HCM data role

A job role, such as benefits administrator, associated with specified instances of Oracle Fusion Human Capital Management (HCM) data, such as one or more positions or all persons in a department.

HCM securing object

An HCM object that secures access to both its own data and data in other, related objects. For example, access to a specified set of person records can allow access to data secured by person records, such as goal plans and evaluations.

identity

A person representing a worker, supplier, or customer.

import

In the context of data integration, the transfer of data from interface tables to **application tables**, where the data is available to application users.

Incoterms

Incoterms are a series of international sales terms that represent international commercial transportation practices and are used in contracts for the sale of goods. These terms help clarify and divide transaction costs, risks, and responsibilities between buyer and seller.

intercompany billing

Feature that enables you to bill an internal customer for work done on a receiver project and transfer internal revenue or costs between provider and receiver organizations.

interface table

A database table used for transferring data between applications or from an external application or data file.

interproject billing

Feature that enables you to bill an internal customer for work done on a provider project. The cost of work performed is not reflected on the receiver project until the project receives an invoice for the work.

inventory organization

An organization that tracks inventory transactions and balances, and can manufacture or distribute products.

invoice distribution

Accounting information for an invoice line, such as accounting date, amount, and distribution combination. An invoice line can have one or more invoice distributions.

invoice method

Rule defined by the implementation team that determines the calculation method of invoice amounts for contracts during invoice generation.

invoice method classification

Predefined classification for an invoice method that determines the basis for calculating invoice amounts.

item categories

Term used to refer to the categories maintained in Product Information Management (PIM) under the purchasing catalog. Within procurement, this category is referred to as a purchasing category. Item categories are used to group items for various reports and programs. For Procurement, every item must belong to an item category.

item master

A collection of data that describes items and their attributes recorded in a database file.

job

A generic role that is independent of any single department or location. For example, the jobs Manager and Consultant can occur in many departments.

job role

A role for a specific job consisting of duties, such as an accounts payable manager or application implementation consultant. A type of enterprise role.

journal

An element of a journal entry consisting of the name, accounting date, category, ledger, and currency for single currency journal entries. Used to group journal lines.

journal category

A name used to group journal entries with similar characteristics, such as adjustments, accruals, or reclassifications.

journal entry

Point of entry of business transactions into the accounting system. Chronological record, with an explanation of each transaction, the accounts affected, and the amounts to increase or decrease each account.

journal line

An element of journal entries consisting of account combinations and credit or debit amounts. Optionally, contains statistical quantities, currency information for multicurrency journals, and additional information.

journal line rule

A rule that includes options to convert transactional data into a subledger journal line. A condition can be defined within a rule so that the rule is only used based on particular attributes of a transaction.

journal source

A name that indicates the origin of journal entries, such as payables, receivables, or manual. Used as an attribute in automatic posting and journal import processes.

key flexfield

Configurable key consisting of multiple parts or segments, each of which may be meaningful individually or in combination with the others. Key flexfields are commonly implemented to represent part numbers and account numbers.

key flexfield structure

The arrangement of segments in a key flexfield. In some cases, multiple structures can be defined for a single key flexfield.

KPI

Abbreviation for key performance indicator. Key performance indicators (KPIs) measure how well an organization or individual project meets an operational, tactical, or strategic objective that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage.

KPI category

A group of key performance indicators that belong to a specific performance area. Examples are: cost, profitability, financial, and schedule.

KPI period determination date

Date used to determine the accounting calendar and project accounting calendar periods for performance measure calculations during key performance indicator (KPI) value generation.

labor costing rule

An employee costing method that determines how employees are paid. Typical labor costing rules include hourly and exempt.

legal authority

A government or legal body that is charged with powers such as make laws, levy and collect fees and taxes, and remit financial appropriations for a given jurisdiction.

legal classification

A classification associated with a legal entity that represents its legal status within a country and which also guides the tax determination process.

legal employer

A legal entity that employs people.

legal entity

An entity is identified and given rights and responsibilities under commercial law, through the registration with the country's appropriate authority.

legal jurisdiction

A physical territory, such as a group of countries, single country, state, county, parish, or city, which comes under the purview of a legal authority.

legal reporting unit

The lowest level component of a legal structure that requires registrations. Used to group workers for the purpose of tax and social insurance reporting or represent a part of your enterprise with a specific statutory or tax reporting obligation.

legislative data group

A means of partitioning payroll and related data. At least one legislative data group is required for each country where the enterprise operates. Each legislative data group is associated with one or more payroll statutory units.

line of business

Set of one or more highly related products which service a particular customer transaction or business need. Refers to an internal corporate business unit.

load

In the context of data integration, the transfer of external data from data files to the receiving **interface tables** in preparation for an import into application tables.

lookup code

A value available for lookup within a lookup type such as the code BLUE within the lookup type COLORS.

lookup type

A set of lookup codes to be used together as a list of values on a field in the user interface.

mainline

A branch of data that serves as a single source of truth.

managed person

In Oracle Fusion Human Capital Management security, a person for whom the user can maintain some information. For example, line managers can maintain information about their direct and indirect reports, and workers can maintain information about themselves, their dependents, and their beneficiaries.

manual payment

A payment created outside of Oracle Fusion Payables, but recorded in the application.

mapping set

Maps a combination of input source values to specific output values A mapping set can have a segment, account, or value set as output. The output value of a mapping set is used to derive accounts or segments in account rules.

natural account

Categorizes account segment values by account type, asset, liability, expense, revenue, or equity, and sets posting, budgeting, and other options.

natural account segment

A chart of accounts segment used to categorize your accounting transactions by account type: asset, liability, owner's equity, revenue, or expense.

nonlabor resource

An asset or pool of assets. For example, you can define a nonlabor resource with a name PC to represent multiple personal computers that your business owns.

offering

A comprehensive grouping of business functions, such as Sales or Product Management, that is delivered as a unit to support one or more business processes.

organization

An organizing unit of an enterprise that provides the framework for performing legal, management, and financial control and reporting. Organizations can represent departments, sections, divisions, business units, companies, contractors, and other internal or external units of the enterprise. Organizations can have multiple classifications. Oracle Fusion Projects uses organizations that are classified as project and task owning organizations and project expenditure organizations.

organization classification

Organization classifications control the information that you can set up at the organization level. You can assign multiple classifications to one organization, or define separate organizations to represent different types of entities. For example, you can classify an organization as both a legal entity and a department.

organization costing rule

Maps labor costing rules and rate schedules to organizations for labor costing, and maps rate schedules to organizations for costing nonlabor items.

organization hierarchy

A tree structure that determines the relationships between organizations, such as which organizations are subordinate to other organizations.

OWLCS

Abbreviation for Oracle WebLogic Communication Services. Offers the TPCC service to Oracle Sales Cloud and sets up the calls via SIP integration with the telephony network.

party

A physical entity, such as a person, organization or group, that the deploying company has an interest in tracking.

party fiscal classification

A classification used by a tax authority to categorize a party for a tax.

payroll statutory unit

A legal entity registered to report payroll tax and social insurance. A legal employer can also be a payroll statutory unit, but a payroll statutory unit can represent multiple legal employers.

pending worker

A person who will be hired or start a contingent worker placement and for whom you create a person record that is effective before the hire or start date.

performance measure

Performance measures are system-defined criterion for performance or schedule that are used to determine if a project is on track.

person number

A person ID that is unique in the enterprise, allocated automatically or manually, and valid throughout the enterprise for all of a person's work and person-to-person relationships.

person type

A subcategory of a system person type, which the enterprise can define. Person type is specified for a person at the employment-terms or assignment level.

personally identifiable information

Any piece of information that can potentially be used to uniquely identify, contact, or locate a single person. Within the context of an enterprise, some PII data can be considered public, such as a person's name and work phone number, while other PII data is confidential, such as national identifier or passport number.

PL/SQL

Abbreviation for procedural structured queried language.

planning amount allocation basis

Represents the method of distributing financial plan amounts to calendar periods for performance data summarization.

planning options

User-definable options, including plan settings, rate settings, currency settings, and generation options, used to control planning scenarios. Budget or forecast versions inherit planning options defined for financial plan types. Similarly, project plans at the project template or project level inherit planning options defined for project plan types.

portrait

A selection of information about a worker or nonworker, including contact details, social connections, and activities and interests, that can be viewed and edited. Both the amount and type of information and the available actions depend on the role of the portrait user.

position

A specific occurrence of one job, fixed within one department, also often one location. For example, the position Finance Manager is an instance of the job Manager in the Finance Department.

primary balancing segment value

A segment value used to represent a legal entity in the chart of accounts and automatically balance all intercompany and intracompany transactions and journal entries.

primary forecast

A financial plan type designated as a primary cost forecast, primary revenue forecast, or both, whose versions are used for specific purposes, for example, as default forecast versions for project performance reporting.

primary ledger

Main record-keeping ledger.

privilege

A grant or entitlement of access to functions and data. A privilege is a single, real world action on a single business object.

process category

Group of one or more logically related event classes. Can be used to restrict which events are processed by the Create Accounting process.

profile option

User preferences and system configuration options consisting of a name and a value, that can be set at hierarchical levels of an enterprise. Also called a profile or user option.

profile option level

A level at which profile option values are defined. Site, product, and user are predefined levels.

profile option level hierarchy

The ordering of profile option levels. The order of the levels in the hierarchy determines which levels take precedence.

profile option value

The value portion of a profile option's name and value. A profile option may have multiple values set at different levels, such as site or user.

project accounting period

Periods that are maintained by business unit and used to track budgets and forecasts, summarize project amounts for reporting, and track project status.

project and task owning organization

An organization that can own projects and tasks for the purpose of reporting, security, and accounting.

project enterprise labor resource

A labor resource that you can assign to multiple projects.

project expenditure organization

An organization that can incur expenditures and hold financial plans for projects.

project type

Controls basic project configuration options, such as burdening, billing, and capitalization options, and class categories, that are inherited by each project associated with the project type.

project unit

An operational subset of an enterprise, such as a line of business, that conducts business operations using projects, and needs to enforce consistent project planning, management, analysis, and reporting.

provider business unit

Business unit with resources that provide services to another project (provider project) or business unit. For cross-charge transactions, the provider business unit is the expenditure business unit; the project business unit owns the intercompany billing project.

provider organization

Organization that provides services to a project owned by another organization.

provider project

Contract project that performs work on behalf of another (receiver) project. In interproject billing, the provider project bills the receiver project through an Oracle Fusion Payables invoice generated by the Update Invoices from Oracle Fusion Receivables process.

provisional burden schedule

A burden schedule of estimated burden multipliers that are later audited to determine actual rates. You apply actual rates to provisional schedules by replacing the provisional burden multipliers with actual burden multipliers.

Oracle Fusion Projects processes adjustments that account for the difference between the provisional and actual calculations.

PSTN

Abbreviation for public switched telephone network which is the network of the world's public circuit-switched telephone networks.

public person

In Oracle Fusion Human Capital Management security, a person for whom some basic information is publicly available. For example, users typically access the contact details of public persons, such as phone numbers and locations, using the person gallery.

Query By Example

The fields directly above table column headers in which you can enter values for filtering the data in the table.

quick payment

A single payment that you create for one more invoices without submitting a payment process request.

rate-based planning resource

Resource for which cost and revenue are calculated based on a rate applied to the quantity that is entered in a unit of measure other than currency.

raw cost

Costs that are directly attributable to work performed. Examples of raw costs are salaries and travel expenses.

receiver business unit

Business unit whose projects receive services from another project or business unit. For cross-charge transactions, the receiver business unit is the business unit that owns the receiver project.

receiver organization

Organization that receives services provided by the provider organization.

receiver project

Project for which work is performed by another (provider) project. In interproject billing, the receiver project incurs costs from an Oracle Fusion Payables invoice generated by the Update Invoice from Oracle Fusion Receivables process performed for the provider project.

recognized revenue

Sum of all revenue distributions created for a billing transaction.

reference data

Data in application tables that is not transactional and not high-volume such as sales methods, transaction types, or payment terms, and can be shared and used across organizational boundaries.

reference data object

Set-enabled entity that has reference data that can be shared across organizations. A reference data set contains the reference data for a reference data object, such as transaction type or work type. Use reference data sharing to decide what reference data applies to all organizations, what reference data is shared among certain organizations, and what reference data is organization-specific.

reference data set

Contains reference data that can be shared across a number of business units or other determinant types. A set supports common administration of that reference data.

reference data sharing

Facilitates the reuse of common transactional data entities within the parts of a business flow or across organizations.

reference group

A logical grouping of tables that correspond to logical entities such as payment terms defined across multiple tables or views. Grouping establishes common partitioning requirements across the entities causing them to share the same set assignments.

reference object

Standardized data model containing reference information owned by other subledger applications and used by the Create Accounting process to create subledger journal entries from accounting events.

regional area

The collapsible region on the left side of the work area, containing controls that refresh, manipulate, or otherwise update the local area.

registration

The record of a party's identity related details with the appropriate government or legal authorities for the purpose of claiming and ensuring legal and or commercial rights and responsibilities.

related expenditure item

An additional transaction created for an individual item charged to projects.

resource

People designated as able to be assigned to work objects, for example, service agents, sales managers, or partner contacts. A sales manager and partner contact can be assigned to work on a lead or opportunity. A service agent can be assigned to a service request.

resource breakdown structure

One or more hierarchies of resources, resource types, resource formats, or other resource groupings that are used for financial and project planning and for viewing planned and actual amounts for a project.

revenue category

Source of revenue for an organization. Revenue categories group expenditure types and event types for revenue and invoices, and are also used to define accounting rules.

revenue method

Rule defined by the implementation team that determines the calculation method of revenue amounts for contracts during revenue generation.

revenue method classification

Predefined classification for a revenue method that determines the basis for calculating revenue amounts.

revenue plan

Common set of instructions for recognizing revenue within a contract. Multiple contract lines on a contract can use the same or different revenue plans.

reversal method

The method used to reverse an existing journal by switching debit and credit amount or by changing the sign on the amounts.

role

Controls access to application functions and data.

role hierarchy

Structure of roles to reflect an organization's lines of authority and responsibility. In a role hierarchy, a parent role inherits all the entitlement of one or more child roles.

role mapping

A relationship between one or more job roles, abstract roles, and data roles and one or more conditions. Depending on role-mapping options, the role can be provisioned to or by users with at least one assignment that matches the conditions in the role mapping.

role provisioning

The automatic or manual allocation of an abstract role, a job role, or a data role to a user.

sandbox

A run time session that commits changes out of reach of mainline users.

scenario dimension members

A scenario dimension is used to differentiate actual cost, current budget, original budget, prior forecast, current forecast, and variances between different plan types within summarization.

security profile

A set of criteria that identifies one or more human capital management (HCM) objects of a single type for the purposes of securing access to those objects. Security profiles can be defined for persons, organizations, positions, countries, LDGs, document types, payrolls, and payroll flows.

security reference implementation

Predefined function and data security in Oracle Fusion Applications, including role based access control, and policies that protect functions, data, and segregation of duties. The reference implementation supports identity management, access provisioning, and security enforcement across the tools, data transformations, access methods, and the information life cycle of an enterprise.

segment

See

segregation of duties

An internal control to prevent a single individual from performing two or more phases of a business transaction or operation that could result in fraud.

set

Reference data that is organized into groups appropriate to organizational entities, to enable reference data sharing.

set enabled

An entity, such as a lookup, customer, location, organization, or document attachment, that is allowed to participate in reference data sharing by drawing on the data of a reference data set.

SOA

Abbreviation for service-oriented architecture.

source

The application from which a transaction originates.

source

Contextual and reference information from subledger applications. This information is used in conjunction with accounting rules to create subledger journal entries.

source system

An external system from a non-Oracle software provider, or internally created, that generates events which are to be accounted in the Oracle Fusion Accounting Hub.

space

A work area that supports people working in a group of any size, organized around an area of interest or a common goal.

spot rate type

Rate you enter to perform conversion based on this rate as of a specific date. This rate applies to the immediate delivery of a currency.

SQL predicate

A type of condition using SQL to constrain the data secured by a data security policy.

subledger

A low-level ledger that stores and manages the details that substantiate the monetary value stored in the general ledger. Oracle Fusion Receivables and Oracle Fusion Payables are examples of subledgers.

subledger journal entry

A detailed journal entry generated for a transaction in a subledger application.

subledger journal entry line

An individual debit or credit line that is part of a subledger journal entry.

subledger journal entry rule set

A set of rules defining how to generate a complete journal entry for an accounting event.

summarization

The summarization or update project performance data process extracts data related to actual cost, commitment, budget, forecast, revenue, and invoice transactions and prepares the data for reporting purposes.

supporting reference

Stores additional source information about a subledger journal entry line. This information can be used to establish a subledger balance for a particular source value or combination of source values for a particular account.

system person type

A fixed name that the application uses to identify a group of people.

tax

The classification of a charge imposed by a government through a fiscal or tax authority.

tax determining factor

An input that affects the outcome of a tax calculation process. Tax determining factors are grouped into tax determining factor sets and used to define tax condition sets and tax rules.

tax exception

A condition or combination of conditions that result in a change from the standard values for a particular product.

tax exemption

A full or partial exclusion from taxes within a given time period.

tax formula

A tax formula is used to define the taxable basis and tax calculation for a given tax.

tax jurisdiction

A geographic area where a tax is levied by a specific tax authority.

tax rate

The rate specified for a tax status for an effective time period. A tax rate can be expressed as a percentage or a value per unit quantity.

tax recovery

The full or partial reclaim of taxes paid on the purchase or movement of a product.

tax regime

The set of tax rules that determines the treatment of one or more taxes administered by a tax authority.

tax registration

The registration of a party with a tax authority that confers tax rights and imposes certain tax obligations.

tax rule

A user-defined rule that looks for a result for a specific tax determination process, such as determining place of supply or tax registration, in relation to a tax on a transaction.

tax status

The taxable nature of a product in the context of a transaction for a tax.

territory

A legally distinct region that is used in the country field of an address.

third-party application source

Non-Oracle application source of transactions.

trading partner

An external party, such as a supplier, in the Oracle B2B application for which electronic documents are sent or from which documents are received. A trading partner in Oracle B2B corresponds to a supplier site.

transaction business category

A business classification used to identify and categorize an external transaction into a tax transaction.

transaction fiscal classification

A classification used by a tax authority to categorize a transaction for a tax. There could be more than one by tax. For example, for Brazil, three classifications are required: a) transaction nature, such as free sample, demonstration, consignment, donation; b) transaction classification, such as the sale of products previously acquired, the sale of products that were manufactured by the company; and c) operation classification, such as ship from - ship to relationship.

transaction object

Standardized data model containing transaction information used by the Create Accounting process to create subledger journal entries from accounting events.

tree

Information or data organized into a hierarchy with one or more root nodes connected to branches of nodes. A tree must have a structure where each node corresponds to data from one or more data sources.

tree structure

Characteristics applied to trees, such as what data to include or how the tree is versioned and accessed.

tree version

An instance of a tree. If a tree is associated with a reference data set, all versions belong to one set. Includes life cycle elements such as start and end date and a status indicator whether the tree is active or not.

user rate type

Rate you enter at journal entry time to convert foreign currency transactions to your functional currency.

value set

A set of valid values against which values entered by an end user are validated. The set may be tree structured (hierarchical).

value-added tax (VAT)

An indirect tax on consumer expenditure that is collected on business transactions and imported goods. Value-added tax (VAT) is charged at each production, distribution, and retail stage in the supply of products. If customers are registered for VAT and use the supplies for taxable business purposes, then they will typically receive credit for the VAT that is paid.

WBS

Abbreviation of work breakdown structure. Represents the hierarchy of work that must be accomplished to complete the project. In Primavera P6 Enterprise Project Portfolio Management, WBSs are structured in levels of work detail, starting with the completed product and then broken down into identifiable work elements. WBSs correspond to tasks in Oracle Fusion Project Portfolio Management.

work relationship

An association between a person and a legal employer, where the worker type determines whether the relationship is a nonworker, contingent worker, or employee work relationship.

worker type

A classification selected on a person's work relationship, which can be employee, contingent worker, pending worker, or nonworker.

workflow

An automated process in which tasks are passed from a user, a group of users, or the application to another for consideration or action. The tasks are routed in a logical sequence to achieve an end result.

XML

Abbreviation for eXtensible markup language.

XML filter

A type of condition using XML to constrain the data secured by a data security policy.