Oracle SCM Cloud

Implementing Common Features for SCM

19D
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Preface

This preface introduces information sources that can help you use the application.

Using Oracle Applications

Help

Use help icons ? to access help in the application. If you don't see any help icons on your page, click your user image or name in the global header and select Show Help Icons. Not all pages have help icons. You can also access the Oracle Help Center to find guides and videos.

Watch: This video tutorial shows you how to find and use help.

You can also read about it instead.

Additional Resources

- Community: Use Oracle Cloud Customer Connect to get information from experts at Oracle, the partner community, and other users.

- Training: Take courses on Oracle Cloud from Oracle University.

Conventions

The following table explains the text conventions used in this guide.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>boldface</td>
<td>Boldface type indicates user interface elements, navigation paths, or values you enter or select.</td>
</tr>
<tr>
<td>monospace</td>
<td>Monospace type indicates file, folder, and directory names, code examples, commands, and URLs.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than symbol separates elements in a navigation path.</td>
</tr>
</tbody>
</table>
Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website. Videos included in this guide are provided as a media alternative for text-based help topics also available in this guide.

Contacting Oracle

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit My Oracle Support or visit Accessible Oracle Support if you are hearing impaired.

Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides! You can send an e-mail to: oracle_fusion_applications_help_ww_grp@oracle.com.
1 Overview

Overview of Oracle SCM Cloud Common Configuration

This guide contains information to help you perform implementation tasks that are common to multiple Oracle SCM Cloud offerings. The information appears in the order in which the associated tasks appear in most of the offerings. To start an implementation of SCM, a user with the Application Implementation Consultant role (ORA_ASM_APPLICATIONIMPLEMENTATIONCONSULTANT_JOB) must opt into the offerings applicable to your business requirements. Refer to the Oracle Applications Cloud Using Functional Setup Manager guide to manage the opt-in and setup of your offerings.

Determining Which Tasks to Perform

Your offering contains task lists and tasks in the order in which you must perform them. Download the task list for your offering, and then consult this guide to do those tasks.

Other SCM Guides to Use

You will also need the implementation guide specific to your offering to complete the implementation tasks. Some topics in this guide and your offering-specific guide may refer you to other guides.

You will need to refer to one or more of these guides as you go along:

- Getting Started with Your Manufacturing and Supply Chain Materials Management Implementation
- Oracle SCM Cloud Implementing Manufacturing and Supply Chain Materials Management
- Oracle SCM Cloud Implementing Order Management
- Oracle SCM Cloud Implementing Product Management
- Oracle SCM Cloud Implementing Supply Chain Planning
- Oracle SCM Cloud Implementing Innovation Management
- Oracle SCM Cloud Modeling Configurations for SCM

Other Guides to Use

For more information about the common set for reference data, see the Oracle Global Human Resources Cloud Implementing Global Human Resources guide.
2 Synchronization of Users and Roles from LDAP

User and Role Synchronization: Explained

User accounts for users of Oracle Fusion Applications are maintained in your Lightweight Directory Access Protocol (LDAP) directory. The LDAP directory also holds information about roles provisioned to users.

During implementation, any existing information about users and their roles must be copied from the LDAP directory to the Oracle Fusion Applications tables. To copy this information, you use the task Run User and Roles Synchronization Process. This task calls the Retrieve Latest LDAP Changes process. You can perform the task Run User and Roles Synchronization Process from either an implementation project or the Setup and Maintenance work area.

Once the Oracle Fusion Applications tables are initialized with this information, it's maintained automatically.
3 Implementation Users

Overview of Implementation Users

Implementation users perform the setup tasks in Oracle Enterprise Resource Planning (ERP) Cloud and Oracle Supply Chain Management (SCM) Cloud implementation projects. This topic introduces the tasks in the Define Implementation Users task list. You can find more information about implementation users and tasks they perform in the product specific implementation and security guides for your offering.

Create Implementation Users

You must have at least one implementation user. To ensure segregation of critical duties, multiple implementation users are recommended. For example, one implementation user typically performs functional setup tasks and another performs security setup tasks. When you create implementation users, you also assign predefined job roles to them directly. The job roles vary with the tasks that the implementation users perform.

The cloud service administrator creates implementation users.

Related Topics

- Implementation Users
4 Currencies and Currency Rates

Currencies

Considerations for Defining Currencies

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

Currency Codes

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

Date Ranges

You can enter transactions denominated in the currency only for the dates within the specified range. If you don’t enter a start date, then the currency is valid immediately. If you don’t enter an end date, then the currency is valid indefinitely.

Symbols

Some applications support displaying currency symbols. You may enter the symbol associated with a currency so that it appears along with the amount.

Euro Currency Derivation

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. If you have to use a different currency for Euro, you can disable the predefined 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 don’t 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 must 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 Currencies

When do I create or enable currencies?
Create or enable any currency for displaying monetary amounts, assigning currency to ledgers, entering transactions, recording balances, or for any reporting purpose. All currencies listed in the International Organization for Standardization (ISO) 4217 standard are supported.
The default currency is set to United States Dollar (USD).

What's the difference between precision, extended precision, and minimum accountable unit for a currency?
Precision refers to the number of digits placed after the decimal point used in regular currency transactions. For example, USD would have 2 as the precision value for transactional amounts, such as $1.00.

Extended precision is the number of digits placed after the decimal point and must be greater than or equal to the precision value. For calculations requiring greater precision, you can enter an extended precision value such as 3 or 4. That would result in the currency appearing as $1.279 or $1.2793.

Minimum accountable unit is the smallest denomination for the currency. For example, for USD that would be .01 for a cent.
In Setup and Maintenance work area, search for the Manage Currencies task to set these values for a currency.

What's a statistical unit currency type?
The statistical unit currency type denotes the Statistical (STAT) currency used to record financial statistics in the financial reports, allocation formulas, and other calculations.

Conversion Rate Types

Guidelines for Creating Conversion Rate Types
Maintain different conversion rates between currencies for the same period using conversion rate types. The following conversion rate types are predefined:

- **Spot**
- **Corporate**
- **User**
- **Fixed**

You can use different rate types for different business needs. During journal entry, the conversion rate is provided automatically based on the selected conversion rate type and currency, unless the rate type is **User**. For **User** rate types, you must enter a conversion rate. You can define additional rate types as needed. Set your most frequently used rate type as the default. Conversion rate types can't 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 conversion rate type of **Spot** to populate period average rates, and
the conversion rate type of **Corporate** to populate 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.

When creating conversion rates, decide whether to:

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

### Enforce Inverse Relationships

The **Enforce Inverse Relationship** option indicates whether to enforce the automatic calculation of inverse conversion rates when defining daily rates. The following table describes the impact of selecting or not selecting the option.

<table>
<thead>
<tr>
<th>Action</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>When you enter a daily rate to convert currency A to currency B, the inverse rate of currency B to currency A is automatically calculated and entered 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 option enforces the inverse relationship is maintained but doesn't prevent you from updating the rates.</td>
</tr>
<tr>
<td>Not Selected</td>
<td>The inverse rate is calculated, but you can change the rate and update the daily rates table without the corresponding rate being updated.</td>
</tr>
</tbody>
</table>

### 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** option is deselected 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 automatically creates the rates between EUR to CAD and CAD to EUR. You don't have to manually define the EUR to CAD and CAD to EUR rates.

Select the **Allow Cross Rates Override** check box to permit your users to override application generated cross rates. If you accept the default of not selected, 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 aren't retroactive and don't 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.

Related Topics
- What's the difference between calendar and fiscal period naming

Examples of Using Conversion Rate Types in a Journal
The four predefined conversion rate types are:
- **Spot**
- **Corporate**
- **User**
- **Fixed**

Scenario
You are the general ledger accountant for Vision US Inc. You are entering a journal entry to capture three transactions that were transacted in three different foreign currencies.
- Canadian Dollar CAD: A stable currency
- Mexican Peso MXP: A fluctuating currency
• Hong Kong Dollar HKD: An infrequently used currency

You enter two journal lines with accounts and amounts for each foreign currency transaction. Based on your company procedures, you select the 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.

The following table lists the currency, the rate type that you select, and the reasons for the rate type selection.

<table>
<thead>
<tr>
<th>Selected Currency</th>
<th>Selected Rate Type</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>Corporate</td>
<td>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 Canadian dollars, a stable currency that fluctuates only slightly over the month.</td>
</tr>
<tr>
<td>MXP</td>
<td>Spot</td>
<td>Entered a periodic type of transaction. Your company enters daily rates each day for the Mexican peso because the currency is unstable and fluctuates.</td>
</tr>
<tr>
<td>HKD</td>
<td>User</td>
<td>Entered a one time transaction. Your company does not maintain daily rates for Hong Kong dollars.</td>
</tr>
</tbody>
</table>

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 EUR was 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 Euro.

FAQs for 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 fluctuations of the entered foreign currency and your company procedures for maintaining daily rates.

• Spot: For currencies with fluctuating conversion rates, or when exact currency conversion is needed.
• Corporate: For setting a standard rate across your organization for a stable currency.
• User: For infrequent entries where daily rates for the entered foreign currency aren't 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 currency maintenance. The User rate type can also provide an accurate conversion rate on the date of the transaction.
Enter Daily Rates Using the Daily Rates Spreadsheet

You are required to enter the daily rates for currency conversion from Great Britain pounds sterling (GBP) to United States dollars (USD) for 5 days.

To load rates using the Create Daily Rates Spreadsheet, you must first install Oracle ADF Desktop Integration client software. Oracle ADF Desktop Integration is an Excel add-in that enables desktop integration with Microsoft Excel workbooks. You can download the installation files from the Tools work area by selecting Download Desktop Integration Installer.

### Entering Daily Rates

1. From the General Accounting work area, select the **Period Close** link.
2. From the Tasks panel, 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 Date** field. Enter a valid value: 10/2/2017.
9. Click in the **To Conversion Date** field. Enter a valid value: 10/6/2017.
10. Click in the **Conversion Rate** field. Enter a valid value: 1.6.
11. Click **Submit** and click **OK** twice.
12. Review the **Record Status** column to verify that all rows were inserted successfully.
13. Save the template to use to enter daily rates frequently. You can save the spreadsheet to a local drive or a shared network drive.
14. Optionally, edit the rates from the Daily Rates user interface or resubmit the spreadsheet.

### Update Currency Rates

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

Related Topics

- Guidelines for Using Desktop Integrated Excel Workbooks
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 that describe its operations and provide a basis for reporting.

- Legal
- Managerial
- Functional

In Oracle Fusion, these structures are implemented using the chart of accounts and organization hierarchies. 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
- Departments

Align these structures with your strategic objectives.
This figure illustrates a grid with Business Axis, representing the enterprise division, Legal Axis representing the companies, and the Functional Axis representing the business functions.

Legal Structure
The figure illustrates 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.
- Owned by its shareholders, who may be individuals or other corporations.
Many other kinds of legal entities exist, 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 the entity 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 within the laws of each country in which their enterprise operates.

The figure illustrates:

- 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 contributes to 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 its 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 don’t have to be reflected directly in the legal structure of the enterprise. The management structure can include divisions, subdivisions, lines of business, strategic business units, profit, and cost centers. In the figure, the management structure is shown on the Business Axis. In Oracle Fusion Applications, the management structure is implemented using divisions and business units as well as being reflected in the chart of accounts.

**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. 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 and selling, general, and administrative 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

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 includes:

- **Set Up Enterprise Structures business process**, which consists of implementation activities that span many product families.
- **Information Technology**, a second Business Process Model which contains the Set Up Information Technology Management business process.
- **Define Reference Data Sharing**, which 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 to implement.
The following figure and tablet describe the Business Process Model structures and activities.

![Business Process Model (BPM)](image)

The table describes each BPM activity.

<table>
<thead>
<tr>
<th>BPM Activities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Enterprise</td>
<td>Define the enterprise to get the name of the deploying enterprise and the location of the headquarters.</td>
</tr>
<tr>
<td>Define Enterprise Structures</td>
<td>Define enterprise structures to represent an organization with one or more legal entities. Define organizations to represent each area of business within the enterprise.</td>
</tr>
</tbody>
</table>
### BPM Activities | Description
--- | ---
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 perform 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 has a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss.
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 your manufacturing and storage facilities as Inventory Organizations if Oracle Fusion tracks inventory balances there and Item Organizations if Oracle Fusion only tracks the items used in the facility but not the balances.
Define Reference Data Sharing | Define how reference data in the applications is partitioned and shared.

**Note:** Some product-specific implementation activities aren't listed here and depend on the applications you're implementing. For example, you can implement Define Enterprise Structures for Human Capital Management, Project Management, and Sales Management.

## Guidelines for Configuring Global Enterprises

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. 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?

Model Your Enterprise Management Structure

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 US dollars. Your product line includes all the components to build and maintain air quality monitoring applications 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 initial costs of these applications.

Analysis

The following are elements you must 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 want 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 do you use 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 units in which to perform all these functions? How is your shared service center configured?

Global Enterprise Structure Model

The following figure and table summarize the model that your committee has designed and uses numeric 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 application 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
In this chart, the green globe stands for required and gold globe stands for optional setup. The following statements expand on the data in the chart.

- The enterprise is required because it serves as an umbrella for the entire implementation. All organizations are created within an enterprise.
- Legal entities are also required. They can be optionally mapped to balancing segment values or represented by ledgers. Mapping balancing segment values to legal entities is required if you plan to use the intercompany functionality. The InFusion Corporation is a legal entity but isn’t discussed in this example.
- At least one ledger is required in an implementation in which you record your accounting transactions.
- Business units are also required 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 required because they track your employees.
- Optionally, add an item master organization and inventory organizations if you’re tracking your inventory transactions in Oracle Fusion Applications.
Note: Some Oracle Fusion Human Capital Management implementations don't require recording accounting transactions and therefore, don't require a ledger.

Essbase Character and Word Limitations

The following is a comprehensive list of character and word limitations that apply to Essbase. All of the limitations apply to all of the Oracle General Ledger configurations summarized in the table.

The following table shows how the General Ledger configuration maps to Essbase.

<table>
<thead>
<tr>
<th>General Ledger Configuration</th>
<th>Maps to Essbase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart of Account Name</td>
<td>Cube Name</td>
</tr>
<tr>
<td>Chart of Account Segment Name</td>
<td>Dimension Name</td>
</tr>
<tr>
<td>Chart of Accounts Segment Value</td>
<td>Dimension Member Name</td>
</tr>
<tr>
<td>Chart of Accounts Segment Value Description</td>
<td>Alias for Member</td>
</tr>
<tr>
<td>Tree and Tree Version Name</td>
<td>Dimension Member Name</td>
</tr>
<tr>
<td>Primary Ledger Name</td>
<td>Dimension Member Name in Ledger Dimension</td>
</tr>
<tr>
<td>Secondary Ledger Name</td>
<td>Dimension Member Name in Ledger Dimension</td>
</tr>
<tr>
<td>Reporting Currency</td>
<td>Dimension Member Name in Ledger Dimension</td>
</tr>
<tr>
<td>Ledger Set Name</td>
<td>Dimension Member Name in Ledger Dimension</td>
</tr>
<tr>
<td>Accounting Calendar Period Names</td>
<td>Dimension Member Name in Accounting Period Name</td>
</tr>
<tr>
<td>Scenario Name Defined in Predefined Value Set Called Accounting Scenario</td>
<td>Dimension Member Name in Scenario Dimension</td>
</tr>
</tbody>
</table>

Even if case sensitivity is enabled in an aggregate storage outline for which duplicate member names is enabled, do not use matching dimension names with only case differences. For example, do not:

- Name two dimensions Product and product.
- Use quotation marks or brackets.
- Use tabs in dimension, member, or alias names.
• Use accent characters.
• Use the characters for dimension or member names.

Restricted Characters
The following table lists the characters that are restricted and can’t be used in dimension, member, or alias names.

<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp;</td>
<td>ampersand</td>
</tr>
<tr>
<td>@</td>
<td>at sign</td>
</tr>
<tr>
<td>\</td>
<td>backslash</td>
</tr>
<tr>
<td>()</td>
<td>brace</td>
</tr>
<tr>
<td>,</td>
<td>comma</td>
</tr>
<tr>
<td>-</td>
<td>dash, hyphen, or minus sign</td>
</tr>
<tr>
<td></td>
<td>For the accounting calendar period names, you can use a hyphen or an underscore in the middle of an accounting calendar period name. For example: Jan-15 or Adj_Dec-15 can be used successfully.</td>
</tr>
<tr>
<td>=</td>
<td>equal sign</td>
</tr>
<tr>
<td>&lt;</td>
<td>less than sign</td>
</tr>
<tr>
<td>()</td>
<td>parentheses</td>
</tr>
<tr>
<td>.</td>
<td>period</td>
</tr>
<tr>
<td>+</td>
<td>plus sign</td>
</tr>
<tr>
<td>'</td>
<td>single quotation mark</td>
</tr>
<tr>
<td>_</td>
<td>underscore</td>
</tr>
<tr>
<td></td>
<td>For the accounting calendar period names, you can use a hyphen or an underscore in the middle of an accounting calendar period name. For example: Jan-15 or Adj_Dec-15 can be used successfully.</td>
</tr>
<tr>
<td></td>
<td>vertical bar</td>
</tr>
</tbody>
</table>
Other Restrictions

- Don’t place spaces at the beginning or end of names. Essbase ignores such spaces.
- Don’t use the following types of words as dimension or member names:
  - Calculation script commands, operators, and keywords.
  - Report writer commands.
  - Function names and function arguments.
  - Names of other dimensions and members (unless the member is shared).
  - Generation names, level names, and aliases in the database.

The following table lists additional words that should not be used.

<table>
<thead>
<tr>
<th>List 1</th>
<th>List 2</th>
<th>List 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>AND</td>
<td>ASSIGN</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>CALC</td>
<td>CALCMBR</td>
</tr>
<tr>
<td>COPYFORWARD</td>
<td>CROSSDIM</td>
<td>CURMBRNAME</td>
</tr>
<tr>
<td>DIM</td>
<td>DIMNAME</td>
<td>DIV</td>
</tr>
<tr>
<td>DYNAMIC</td>
<td>EMPTYPARM</td>
<td>EQ</td>
</tr>
<tr>
<td>EQOP</td>
<td>EXCEPT</td>
<td>EXP</td>
</tr>
<tr>
<td>EXPERROR</td>
<td>FLOAT</td>
<td>FUNCTION</td>
</tr>
<tr>
<td>GE</td>
<td>GEN</td>
<td>GENRANGE</td>
</tr>
<tr>
<td>GROUP</td>
<td>GT</td>
<td>ID</td>
</tr>
<tr>
<td>IDERROR</td>
<td>INTEGER</td>
<td>LE</td>
</tr>
<tr>
<td>LEVELRANGE</td>
<td>LOOPBLOCK</td>
<td>LOOPPARMS</td>
</tr>
<tr>
<td>LT</td>
<td>MBR</td>
<td>MBRNAME</td>
</tr>
<tr>
<td>MBRONLY</td>
<td>MINUS</td>
<td>MISSING, #MISSING</td>
</tr>
<tr>
<td>MUL</td>
<td>MULOP</td>
<td>NE</td>
</tr>
</tbody>
</table>
Initial Configuration with the Enterprise Structures Configurator

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 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 don't select this feature, then you must set up your enterprise structure using individual tasks provided elsewhere in the offerings, and you can't create multiple configurations to compare different scenarios.

**Establish Enterprise Structures**

To define your enterprise structures, use the guided flow within the Establish Enterprise Structures task to enter basic information about your enterprise, such as the primary industry. 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 enough information to
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Enterprise Structures

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, you are prompted to set up a descriptive flexfield structure for jobs, and for positions if applicable. Descriptive flexfields enable you to get more information when you create jobs and positions.

Review Configuration

You can view a result of the interview process prior to loading the configuration. The review results, show 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:

Roll Back a Configuration Manually

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.

Roll Back a Configuration Automatically

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.

Design an Enterprise Configuration

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 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 company revenue of 120 million US dollars. Outside the US, InFusion employs 200 people and has revenue of 60 million US dollars.
Analysis

InFusion requires three divisions.

- The US division covers the US locations.
- The Europe division covers UK and France.
- Saudi Arabia and the UAE are 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, 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 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.

Divisions
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 don’t reflect directly the legal structure of the enterprise. The management entities and structure can include:

- Divisions and subdivisions
- Lines of business
- Other strategic business units
- 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 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 achieving business goals including profits. 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 generally reports to a corporate executive.

By definition a division can be represented in the chart of accounts. Companies can use product lines, brands, or geographies as their divisions: their choice represents the primary organizing principle of the enterprise.

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.

**How You Create Legal Entities in the Enterprise Structures Configurator**

Use the Enterprise Structures Configurator, to 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, 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 its enterprise structure. The corporation has 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.

![Enterprise Structure Diagram]

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Enterprise</th>
<th>InFusion Lighting</th>
<th>InFusion Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>US</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>UK</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>India</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
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.

Related Topics

- Examples of HCM Organization Models
- Guidelines for Using Desktop Integrated Excel Workbooks
- How Legal Employers Work with Payroll Statutory Units and Tax Reporting Units

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. A business unit can process transactions on behalf of many legal entities. Normally, it has 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 do the following:

- Assign your business units to one primary ledger. For example, if a business unit is processing payables invoices, then it must post to a particular ledger. This assignment is required for your business units with business functions that produce financial transactions.
- Use a business unit as a securing mechanism for transactions. For example, if you run your export business separately from your domestic sales business, then 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 provides the following advantages:

- Enables flexible implementation
- Provides consistent entity that controls and reports on transactions
- Shares 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 share reference data, such as payment terms and transaction types, across business units, or you can have each business unit manage its own set depending on the level at which you want to enforce common policies.

In summary, use business units for:

- Management reporting
- Transaction processing
• Transactional data security
• Reference data sharing and definition

Brief Overview of Business Unit Security
A number of Oracle Fusion Applications use business units to implement data security. You assign roles like Accounts Payable Manager to users to permit them to perform specific functions, and you assign business units for each role to users to give them access to data in those business units. For example, users who have been assigned a Payables role for a particular business unit, can perform the function of payables invoicing on the data in that business unit. Roles can be assigned to users manually using the Security Console, or automatically using provisioning rules. Business Units can be assigned to users using the Manage Data Access for Users task found in Setup and Maintenance.

Considerations for Creating Business Units in the Enterprise Structures Configurator

Business units are used within Oracle Fusion applications for management reporting, processing of transactions, and security of transactional data. Using the Enterprise Structures Configurator, 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 one of two levels:

• Business function level, such as Sales, Consulting, Product Development, and so on.
• 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 application displays a table listing both components. You select the check boxes at the intersections of the two components.

The business units listed by the application are suggestions only, and are meant to simplify the process to create business units. You aren't required to select all of the business units suggested. When you navigate to the next page in the ESC guided flow, the Manage Business Units page, you can't delete any of the business units 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 its enterprise structure. InFusion has 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.

<table>
<thead>
<tr>
<th>Business Unit Level</th>
<th>Suggested Business Units</th>
</tr>
</thead>
</table>
| Country                      | • US  
• UK  
• Japan  
• India                           |
| Country and Division         | • InFusion Lighting: Japan  
• InFusion Lighting: US           |
## Business Unit Level

<table>
<thead>
<tr>
<th>Suggested Business Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infusion Security: UK</td>
</tr>
<tr>
<td>Infusion Security: India</td>
</tr>
</tbody>
</table>

### 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

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**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.

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**Reference Data Sets and Sharing Methods**

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. As a result, there is a reduction in
the administrative burden and the time to implement new business units. For example, you can share sales methods, or transaction types across business units. You may also share certain 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 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’s being shared. For example, assign separate sets for payment terms, transaction types, and sales methods to your business units.

Your enterprise can determine that certain aspects of your corporate policy can affect all business units. The remaining aspects are at the discretion of the business unit manager to implement. This allows your enterprise to balance autonomy and control for each business unit. For example, your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level. In such a case, you can let managers define their own sales methods, but define payment terms centrally. In this example:

- Each business unit has its own reference data set for sales methods.
- One central reference data set for payment terms is 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 set up 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
Variations exist 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. This method is 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. This method is 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’s available to all the business units. You need not explicitly assign 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 the following:
  - Transaction types from the set assigned to the business unit.
  - Transaction types assigned to the common set that’s 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 assign Net 15 to a set specific only to your business unit. At transaction entry, the list of values for payment terms consists of only the set that’s 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. Also update the data set going forward as you create new reference data items.

How Business Units Work with Reference Data Sets

Reference data sharing enables you to group set-enabled reference data such as jobs or grades to share the data across different parts of the organization. Sets also enable you to filter reference data at the transaction level so that only data assigned to certain sets is available to be selected. 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 assigned to the Common Set is always available, in addition to the reference data assigned to the set that corresponds to the business unit on the transaction.

Other types of reference data can be specific to certain business units, so you can 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 to use 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 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. They 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
The following table describes the default set assignment and the set assignment overrides for each business unit in InFusion:

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Default Set Assignment</th>
<th>Set Assignment Overrides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales_Japan</td>
<td>Sales_Japan_Set for grades, departments, and locations</td>
<td>Jobs set for jobs</td>
</tr>
<tr>
<td>Marketing_Japan</td>
<td>Mktg_Japan_Set for grades, departments, and locations</td>
<td>None</td>
</tr>
<tr>
<td>Sales_US</td>
<td>Sales_US_Set for grades, departments, and locations</td>
<td>Jobs set for jobs</td>
</tr>
<tr>
<td>Sales_UK</td>
<td>Sales_UK_Set for grades, departments, and locations</td>
<td>Jobs set for jobs</td>
</tr>
<tr>
<td>Marketing_India</td>
<td>Mktg_India_Set for grades, departments, and locations</td>
<td>None</td>
</tr>
<tr>
<td>Sales_India</td>
<td>Sales_India_Set for grades, departments, and locations</td>
<td>Jobs set for jobs</td>
</tr>
</tbody>
</table>

When setting up grades, departments, and locations for the business units, InFusion assigns the data to the default set for each business unit. When setting up jobs, they assign the Jobs set and 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 can select data from the set that corresponds to the business unit they enter on the transaction, and any data assigned to the Common Set. For example, for transactions for the Marketing_Japan business unit, grades, locations, and departments from the Mktg_Japan_Set is available to select, as well as from the Common Set.

When using jobs at the transaction level, users can select jobs from the Jobs set and from the Common Set when they enter a sales business unit on the transaction. For example, when a manager hires an employee for the Sales_India business unit, the list of jobs is filtered to show jobs from the Jobs and Common sets.

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 the:

- Common set
- 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 includes grade in the:

- Common set
- Set that is assigned to grades for the business unit in which you creating the assignment

**Considerations for Using Jobs and Positions**

*Jobs* and *positions* represent roles that enable you to distinguish between tasks and the individuals who perform those tasks.

Note the following:

- The key to using jobs or positions depends on how each is used.
- Positions offer a well-defined space independent of the person performing the job.
- Jobs are a space defined by the person.
- A job can be defined globally in the Common Set, whereas a position is defined within one business unit.
- You can update the job and department of a position at any time. For example, if you hire someone into a new role and want to transfer the position to another department.

During implementation, one of the earliest decisions is whether to use jobs or a combination of jobs and positions. The determinants for this decision are:

- The primary industry of your enterprise
- How you manage your people

### Primary Industry of Your Enterprise

The following table outlines information about Primary industries and how they set up their workforce.

<table>
<thead>
<tr>
<th>Primary Industry</th>
<th>Workforce Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>Positions</td>
</tr>
<tr>
<td>Utilities</td>
<td>Positions</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Positions</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>Positions</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>Positions</td>
</tr>
<tr>
<td>Educational Services</td>
<td>Positions</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>Positions</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing, and Hunting</td>
<td>Jobs</td>
</tr>
<tr>
<td>Construction</td>
<td>Jobs</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>Jobs</td>
</tr>
<tr>
<td>Information</td>
<td>Jobs</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>Jobs</td>
</tr>
</tbody>
</table>
Management of People
Consider the following scenarios how industries manage their employee turnover:

- Scenario 1: Replace employees by rehiring to the same role.
- Scenario 2: Replace headcount but the manager uses the headcount in a different job.
- Scenario 3: Rehire employees to the same position, but the manager requests reallocation of budget to a different post.

The following table displays suggestions of what the industry should use, either jobs or positions, in these three scenarios:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project (An industry that supports project-based forms of organization in which teams of specialists from both inside and outside the company report to project managers.)</td>
<td>Positions</td>
<td>Jobs</td>
<td>Jobs</td>
</tr>
<tr>
<td>Controlled (An industry that's highly structured in which all aspects of work and remuneration are well organized and regulated.)</td>
<td>Positions</td>
<td>Positions</td>
<td>Positions</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Positions</td>
<td>Jobs</td>
<td>Positions</td>
</tr>
</tbody>
</table>
### Related Topics

- How Grades and Grade Rates Work with Jobs, Positions, Assignments, Compensation, and Payroll

### Examples of Positions

**Positions** are typically used by industries that use detailed approval rules, which perform detailed budgeting and maintain headcounts, or have high turnover rates.

#### Retail Industry

ABC Corporation has high turnovers. It loses approximately 5% of its cashiers monthly. The job of the cashier includes three positions: front line cashier, service desk cashier, and layaway cashier. Each job is cross-trained to take over another cashier’s position. When one cashier leaves from any of the positions, another existing cashier from the front line, service desk or layaway can assist where needed. But to ensure short lines and customer satisfaction, ABC Corporation must replace each cashier lost to turnover. Since turnover is high in retail it’s better for this industry to use positions.

Note the following:

- An automatic vacancy is created when an employee terminates employment.
- The position exists even when there are no holders. Having the position continue to exist is important if the person who leaves the company is a manager or supervisor with direct reports.
- All direct reports continue reporting to the position even if the position is empty.
- You don’t have to reassign these employees to another manager or supervisor. The replacement manager is assigned to the existing position.

Also, an added advantage to using Positions is when you hire somebody new, many of the attributes are inherited from the position. This speeds up the hiring process.
This figure illustrates the retail position setup.

Health Care Industry

Health care is an industry that must regulate employment, roles, and compensation according to strict policies and procedures. Fixed roles tend to endure over time, surviving multiple incumbents. Industries that manage roles rather than individuals, where roles continue to exist after individuals leave, typically model the workforce using positions.

The hospital has a structured headcount and detailed budgeting. For example, a specific number of surgeons, nurses, and interns of various types are needed. These positions must be filled in order for the hospital to run smoothly. Use jobs and positions when you apply detailed headcount rules.
Examples of Jobs

*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 resigned from the company.
- The director decides to redirect the headcount 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 headcount, 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

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 to identify additional details about the job, such as the nature of the work that is performed or the relative skill level required. 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. A position belongs 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, consider whether 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.

![Position Attributes Diagram](image)

**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 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. 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 can't set up multiple configurations and compare different scenarios. Using the Enterprise Structures Configurator is the recommended process for setting up your enterprise structures.
What's an ultimate holding company?
The legal entity that represents the top level in your organization hierarchy, as defined by the legal name entered for the enterprise. This designation is used only to create an organization tree, with these levels:

- Ultimate holding company as the top level
- Divisions and country holding companies as the second level
- Legal employers as the third level

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.
- Jobs are assigned to the default set, Vision 3 SET.

Reference Data Sharing

Reference Data Sharing

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 common data is shared or partitioned across business entities to avoid duplication and reduce maintenance effort. 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.

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 can't 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 different business units setting up and using the same grades, XYZ Corporation decides to create a set called Grades, which contains the grades. All business units in the organization have the Grades set so that the grades can be shared and used.

Note: For specific information about configuring reference data sharing for a particular object or product, refer to the relevant product documentation.
Reference Data Sets

Reference data sets are logical groups of reference data that various transactional entities can use depending on the business context. You can get started using either the common reference data set or the enterprise set depending on your implementation requirement. You can also 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 only some aspects of corporate policy should affect all business units. The remaining aspects are at the discretion of the business unit manager to implement. This enables your enterprise to balance autonomy and control for each business unit. For example, your enterprise holds business unit managers accountable for their profit and loss, but manages working capital requirements at a corporate level. Then, you can let managers define their own sales methods, but define payment terms centrally. As a result, each business unit has its own reference data set for sales methods and one central reference data set for payment terms assigned to all business units.

Partitioning

Partitioning reference data and creating data sets provide you the flexibility to handle the reference data to fulfill your business requirements. You can share modular information and data processing options among business units with ease. You can create separate sets and subsets for each business unit. Alternatively, you can create common sets or subsets to enable sharing reference data between several business units, without duplicating the reference data.

The following figure illustrates the reference data sharing method. 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

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

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Note: Oracle Fusion Applications contains a reference data set called Enterprise. Define any reference data that affects your entire enterprise in this set. Also update the data set going forward as you create new reference data items.

Assignment of Reference Data Sets to Reference Objects

You can assign the reference data sets to reference objects using 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 the 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 using a business context setting called the determinant type. A determinant type is the point of reference used in the data assignment process. The following table lists the determinant types used in the reference data assignment.

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

The *determinant* (also called determinant value) is a value that corresponds to the selected determinant type. The determinant is one of the criteria for selecting the appropriate reference data set.

Reference Groups

A transactional entity may have multiple reference entities (generally considered to be setup data). However, all reference entities are treated alike because of similarity in implementing business policies and legal rules. Such reference entities in your application are grouped into logical units called reference groups. For example, all tables and views that define Sales Order Type details might be a part of the same reference group. Reference groups are predefined in the reference groups table.

Items and Supplier Site Reference Data Sharing

Some products, such as items and supplier sites, required special logic for reference data sharing and have implemented their own domain-specific ways for sharing 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 want 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
FAQs for Reference Data Sharing

What reference data objects can be shared across business units?
The following table 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.

<table>
<thead>
<tr>
<th>Application Name</th>
<th>Reference Data Object</th>
<th>Method of Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading Community Model</td>
<td>Customer Account Relationship</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
<tr>
<td>Trading Community Model</td>
<td>Customer Account Site</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
<tr>
<td>Trading Community Model</td>
<td>Salesperson</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
<tr>
<td>Opportunity Management</td>
<td>Sales Method Group</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Work Management</td>
<td>Assessment Templates</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Enterprise Contracts</td>
<td>Contract Types</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Sales</td>
<td>Sales Method</td>
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<tr>
<td>Common Components</td>
<td>Activity Templates</td>
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</tr>
<tr>
<td>Payables</td>
<td>Payment Terms</td>
<td>Assignment to multiple sets, no common values allowed</td>
</tr>
<tr>
<td>Receivables</td>
<td>Accounting Rules</td>
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</tr>
<tr>
<td>Receivables</td>
<td>Aging Buckets</td>
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</tr>
<tr>
<td>Receivables</td>
<td>Auto Cash Rules</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Application Name</td>
<td>Reference Data Object</td>
<td>Method of Sharing</td>
</tr>
<tr>
<td>-------------------</td>
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<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Receivables</td>
<td>Collectors</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Receivables</td>
<td>Lockbox</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Receivables</td>
<td>Memo Lines</td>
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</tr>
<tr>
<td>Receivables</td>
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<td>Transaction Source</td>
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<td>Transaction Type</td>
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</tr>
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<td>Advanced Collections</td>
<td>Collections Setups</td>
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<tr>
<td>Advanced Collections</td>
<td>Dunning Plans</td>
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</tr>
<tr>
<td>Tax</td>
<td>Tax Classification Codes</td>
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<td>Departments</td>
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<tr>
<td>Human Resources</td>
<td>Jobs</td>
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</tr>
<tr>
<td>Human Resources</td>
<td>Locations</td>
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</tr>
</tbody>
</table>
### What reference data objects can be shared across asset books?

The following list contains the reference data objects for Oracle Fusion Assets that can be shared across asset books and the method in which the reference data for each is shared.

<table>
<thead>
<tr>
<th>Application Name</th>
<th>Reference Data Object</th>
<th>Method of Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>Bonus Rules</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
<tr>
<td>Assets</td>
<td>Depreciation Ceilings</td>
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</tr>
<tr>
<td>Assets</td>
<td>Depreciation Methods</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Assets</td>
<td>Asset Descriptions</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
<tr>
<td>Assets</td>
<td>Property Types</td>
<td>Assignment to one set only, with common values</td>
</tr>
<tr>
<td>Assets</td>
<td>Prorate Conventions</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
</tbody>
</table>
What reference data objects can be shared across cost organizations?
The following table 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.

<table>
<thead>
<tr>
<th>Application Name</th>
<th>Reference Data Object</th>
<th>Method of Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Management</td>
<td>Cost Structure</td>
<td>Assignment to one set only, no common values allowed</td>
</tr>
</tbody>
</table>

What reference data objects can be shared across project units?
The following table 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.

<table>
<thead>
<tr>
<th>Application Name</th>
<th>Reference Data Object</th>
<th>Method of Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Foundation</td>
<td>Project Definition</td>
<td>Assignment to multiple sets, no common values allowed</td>
</tr>
<tr>
<td>Project Foundation</td>
<td>Project Transaction Types</td>
<td>Assignment to multiple sets, no common values allowed</td>
</tr>
</tbody>
</table>

Enterprise HCM Information
Define Enterprises

An enterprise is a collection of legal entities sharing common control and management.

Enterprise Defined

When implementing Oracle Fusion Applications you operate within the context of an enterprise that has already been created in the application for you. This is either a predefined enterprise or an enterprise that has been created in the application by a system administrator. An enterprise organization captures the name of the deploying enterprise and the location of the headquarters. In Oracle Fusion Applications, an organization classified as an enterprise is defined before defining any other organizations in the HCM Common Organization Model. All other organizations are defined as belonging to an enterprise.

Enterprise Information for Non-HCM Users

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're 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 aren't relevant outside of Oracle Fusion HCM.

Geographies

How Geography Structure, Hierarchy, and Validation 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, in the hierarchy of 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 format 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 to include 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
This topic describes geography structures and the tasks you can perform using geography structures.
A geography structure is a hierarchical grouping of geography types for a country. The following table describes the geography structure for the United States.

<table>
<thead>
<tr>
<th>Level</th>
<th>Geography Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>State</td>
</tr>
<tr>
<td>2</td>
<td>County</td>
</tr>
<tr>
<td>3</td>
<td>City</td>
</tr>
<tr>
<td>4</td>
<td>Postal Code</td>
</tr>
</tbody>
</table>

You can use the geography structure to relate geography types for a country and define geography types for a country.

Relate Geography Types for a Country
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 geography type Country is implicitly at the highest level of the geography structure with level as 1. The subsequent geography types that you add after country are numbered in sequence.

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. To quickly create country structure, you can copy a structure from another country and modify the geography types for the country.

Define Geography Types for a Country
You can use any of the master reference geography types to create your geography structure. If required, you can create a geography type, before adding it to the country structure. Each geography type is added at a lower level to the current lowest level.

Note: You can't delete geography types that have associated geography data. You can only delete the lowest level geography type of the country structure.

You can use a geography type that you create within the country structure for other country structures as well.
Geography Hierarchy

This topic describes geography hierarchy and various aspects of geography hierarchy.

Geography hierarchy is a data model that creates conceptual parent-child relationships between geographies. At the highest level of the geography hierarchy is country, which is the parent, and the hierarchy contains several child geographies. The following table shows sample parent-child relationships in a geography.

<table>
<thead>
<tr>
<th>California</th>
<th>Parent of San Mateo county</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Mateo County</td>
<td>Parent of Redwood City</td>
</tr>
<tr>
<td>Redwood City</td>
<td>Parent of 94065</td>
</tr>
<tr>
<td>94065</td>
<td>Child</td>
</tr>
</tbody>
</table>

When you enter just 94065, the application determines that the postal code is in California and the corresponding city is Redwood City.

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

The geography hierarchy includes:

- Geography: Geography is a physical space with boundaries that's a defined instance of a geography type, such as country, state, province or city. For example, San Jose is a geography of the City geography type.
- Geography type: Geography types are divisional grouping of user defined geographies, for example, Continent, Country Regions, and Tax Regions.
- Geography usage: Geography usage indicates how a geography type or geography is used in the application.
- Master reference geography hierarchy: The geography hierarchy data is considered the single source of reference for all geography related data such as geography types and geographies.

The geography usage for the entire hierarchy is the master reference, and defined geography types and geographies are the master reference geography types and geographies. For example, you can create geography types called State, City, and Postal Code. Then, you can rank the State as the highest level, City as the second level, and Postal Code as the lowest level within the country structure.

- User defined zones: User defined zones are a collection of geographical data, created from master reference data for a specific purpose. For example, while the territory zones are collections of master reference geographies ordered with a hierarchy, the tax and shipping zones are without a hierarchical grouping.

Geography Validation

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

## Attribute Mapping

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. If the setup for master geography data is incomplete, then the geography data is either not imported or created. As a result, the list of values for the address attribute doesn't list any geography data.

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 isn't available in the geography hierarchy, you can't 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 must set up geography validation for those geography elements that you plan to use in your sales territories. Setting up validation also helps users fill in missing address information, and validate addresses during entry. For example, you can have users select states or other address elements from lists to ensure accuracy during entry, and you can have the application fill in missing values. For example, when the user enters a Postal Code, the application can retrieve the city and state.

You can specify whether a geography type will be included in geography validation. 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 are provided for the address element, but the address element isn't be validated.
You need to verify that the default mapping between **Geography Type** and **Map to Attribute** is valid in the Geography Mapping and Validation region and update it if required when you define geography validation. Oracle recommends that you use the following valid mapping for the countries that GBG | Loqate supports:

<table>
<thead>
<tr>
<th>Country Name</th>
<th>Country Code</th>
<th>Geography Type</th>
<th>Map to Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andorra</td>
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<td>• Province</td>
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<td>• County</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Postal Code</td>
<td>• City</td>
</tr>
<tr>
<td>Uruguay</td>
<td>UY</td>
<td>• Country</td>
<td>• Postal code</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Departamento</td>
<td>• Country</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• City</td>
<td>• State</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Postal Code</td>
<td>• City</td>
</tr>
<tr>
<td>Vatican City</td>
<td>VA</td>
<td>• Country</td>
<td>• Postal code</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Municipal</td>
<td>• Country</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlement</td>
<td>• Province</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Postal Code</td>
<td>• City</td>
</tr>
<tr>
<td>Vietnam</td>
<td>VN</td>
<td>• Country</td>
<td>• Postal code</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Region</td>
<td>• Additional address attribute 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tihn</td>
<td>• Province</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Quan</td>
<td>• County</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Thank Pho</td>
<td>• City</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Postal Code</td>
<td>• Postal code</td>
</tr>
</tbody>
</table>

**Note:** For either the tax or geography validation, don’t skip more than one consecutive level unless you’re 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 didn't pass validation during address entry. For example, if the validation level is **Error**, then an address can’t be saved if the values don’t 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's 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.

The Geography Dimension value in territories is derived from sell-to addresses of sales accounts. To use geography dimensions in territories, you must validate the geography elements in the addresses, such as state, city, and postal code. You can validate the address by enabling geography validation for each country using the Manage Geographies task. Perform the following in the Manage Geographies task:

• Enable at least one level in the geography hierarchy for geography validation.
• Enable geography validation for all geography levels that you intend to use for territory definition for each country.
• If needed, 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 set geography validation control to Error in the Manage Geography Validation page. This ensures that users can only use valid geography elements in addresses.

**Note:** If you have already created addresses before setting up geography validation for a country, you must enable geography validation and then execute the Run Maintain Geography Name Referencing task for that country. This validates all your geography elements.

### Manage Geography Structures, Hierarchies, and Validation

This example shows how you can 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.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy an existing country structure?</td>
<td>No, create a new country structure.</td>
</tr>
<tr>
<td>What is the structure of the geography types?</td>
<td>Create geography types with the following ranking structure:</td>
</tr>
<tr>
<td></td>
<td>1. County</td>
</tr>
<tr>
<td></td>
<td>2. Post Town</td>
</tr>
<tr>
<td>What is the geography hierarchy?</td>
<td>Create the following hierarchy:</td>
</tr>
<tr>
<td></td>
<td>1. Country of United Kingdom</td>
</tr>
<tr>
<td></td>
<td>2. County of Berkshire</td>
</tr>
<tr>
<td></td>
<td>3. Post Town of Reading</td>
</tr>
<tr>
<td>Which address style format will you use when mapping geography validations?</td>
<td>The default address style format, called the No Styles Format.</td>
</tr>
</tbody>
</table>
Decisions to Consider | In This Example
--- | ---
Are you using Oracle Fusion Tax for tax purposes? | No, don't select Tax Validation for the geography types.

Define the Geography Structure
You can 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.

Define the Geography Hierarchy
You can add the geographies for the County and Post Town geography types using the geography hierarchy user interfaces to create the geography hierarchy for United Kingdom. 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. In the Geography Hierarchy section, click United Kingdom to highlight the table row, and click Create.
4. In the Create County page, Primary and Alternate Names section, enter Berkshire in the Name field.
5. Click Save and Close.
6. In the Geography Hierarchy section, click Berkshire to highlight the table row, and click Create.
7. In the Create Post Town page, Primary and Alternate Names section, enter Reading in the Name field.
8. Click Save and Close.

Define the Geography Validations
You can define the geography mapping and validation for the United Kingdom default address style format to specify the geography validations for the geography types you added to United Kingdom. You can 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. In the 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. Select the Enable List of Values and Geography Validation options.
5. For the Post Town geography type, click the City list item in the Map to Attribute field.
6. Select the Geography Validation option.
7. In the Geography Validation Control section, select Error in the Geography Validation Level for Country list.
8. Click Save and Close.
Geocoding

This topic explains geocoding and how to enable this option in the application.

Geocoding is the process of finding latitude and longitude coordinates from geographic data such as street addresses or postal codes. Once these coordinates are available, you can use the spatial services feature to identify points of interest, such as customer and contact addresses, in the vicinity. The application integrates the Geocoding feature with eLocation (http://elocation.oracle.com/maps_oracle_dot_com_main.html), which is a Geocoding service provided by Oracle.

By default, the Geocoding option is turned off in the application. You can enable the Geocoding option by going to the Setup and Maintenance work area and performing the following:

- Offering: Customer Data Management
- Functional Area: Enterprise Profile
- Task: Manage Geographies

If the Geocoding feature is enabled, the feature can be scheduled to run at regular time intervals. This ensures that newly created or updated locations are picked up and geocoded whenever you create or update an address using the user interface, web services, bulk import, or file-based import.

Related Topics
- What are Spatial Services

Set Up Geocoding

This procedure lists the steps to set up geocoding in Oracle Cloud applications.

Geocoding is a process that determines the latitude and longitude coordinates for a location. By default, geocoding is turned off in the application. You can use geocoding to display customers in the vicinity of a mobile address.

Enable Geocoding for a Country

To enable geocoding for a country, complete these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Customer Data Management
   - Functional Area: Enterprise Profile
   - Task: Manage Geographies

2. On the Manage Geographies page, search for the country for which you want to enable geocoding. You can either search by the country name or country code.
3. Click Search. The search results for the matching country names are displayed.
4. Select the country for which you want to enable the geocoding option.
5. Select Geocoding Defined for the country.
Populate Location Latitude and Longitude Information

Once geocoding is enabled, you can schedule this feature to run at regular time intervals so that newly created or updated locations are picked up and geocoded. To schedule the geocoding feature to run at regular intervals, complete these steps:

1. Navigate to **Tools > Scheduled Processes** work area.
2. On the Overview page, click **Actions > Schedule New Process**.
3. Click the Name list and search for Populate Location Latitude and Longitude Information, and then click **OK**.
4. Enter the parameters such as Start Date and End Date, and click **Submit**.

How You Import Geographies

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.

**Note:** You must use File-Based data Import in a cloud implementation because you can't populate the interface tables directly in a cloud implementation.

Consider the following when importing geographies:

- Oracle-licensed geography reference data
- File-based import option
- Geography loader process option
- Import object entity, interface table, and destination tables

Oracle-Licensed Geography Reference Data

Oracle Applications Cloud includes third-party master geography data for multiple countries that can be imported. You can import Oracle-licensed data from GBG | Loqate, for those countries where the data is available, such as the U.S. You can import geography data using the **Manage Geographies** task. Search for the country, and select **Import Geography Data** from the **Actions** menu. If the licensed data isn't available or already set up for a particular country, then the **Import Geography Data** action is disabled.

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.

To access the File-Based Data Import functionality, in the Setup and Maintenance work area, go to the following:

- Offering: Customer Data Management
- Functional Area: Enterprise Profile
- Task: Manage Import Activities

For more information, see the Importing Geographies chapter in the Oracle Engagement Cloud Understanding File-Based Data Import and Export guide.
**Geography Loader Process Option**

Populate the interface table with your import data, then to schedule the import of data from the interface table to the destination table, in the Setup and Maintenance work area, use the following:

- **Offering:** Customer Data Management
- **Functional Area:** Enterprise Profile
- **Task:** Run Geography Loader

**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're 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, then, in the Setup and Maintenance work area, use the following to export the information:

- **Offering:** Customer Data Management
- **Functional Area:** Trading Community Foundation
- **Task:** Schedule Export Processes

The following table lists the object entity, the interface table, the destination tables, and the resulting application object.

<table>
<thead>
<tr>
<th>File-Based Import Entities</th>
<th>Interface Tables</th>
<th>Destination Tables</th>
<th>Application Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>ImpGeography</td>
<td>HZ_IMP_GEOGRAPHIES_T</td>
<td>HZ_GEOGRAPHIES</td>
<td>Geography</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HZ_GEOGRAPHY_</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IDENTIFIERS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HZ_GEOGRAPHY_TYPES_B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HZ_HIERARCHY_NODES</td>
<td></td>
</tr>
</tbody>
</table>

**Related Topics**

- Overview of Implementing Customer Data Management

**Nokia Geography Reference Data**

Oracle Applications Cloud provides third-party Nokia master geography data for import. The following table lists the countries for which the Nokia master geography data is available for import.

<table>
<thead>
<tr>
<th>Country Name</th>
<th>Country Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andorra</td>
<td>AD</td>
</tr>
<tr>
<td>Argentina</td>
<td>AR</td>
</tr>
<tr>
<td>Country Name</td>
<td>Country Code</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Austria</td>
<td>AT</td>
</tr>
<tr>
<td>Belgium</td>
<td>BE</td>
</tr>
<tr>
<td>Brazil</td>
<td>BR</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>BG</td>
</tr>
<tr>
<td>Canada</td>
<td>CA</td>
</tr>
<tr>
<td>Cayman Island</td>
<td>KY</td>
</tr>
<tr>
<td>Chile</td>
<td>CL</td>
</tr>
<tr>
<td>Croatia</td>
<td>HR</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>CZ</td>
</tr>
<tr>
<td>Denmark</td>
<td>DK</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>DO</td>
</tr>
<tr>
<td>Estonia</td>
<td>EE</td>
</tr>
<tr>
<td>Finland</td>
<td>FI</td>
</tr>
<tr>
<td>France</td>
<td>FR</td>
</tr>
<tr>
<td>Germany</td>
<td>DE</td>
</tr>
<tr>
<td>Greece</td>
<td>GR</td>
</tr>
<tr>
<td>Guadeloupe</td>
<td>GP</td>
</tr>
<tr>
<td>Hungary</td>
<td>HU</td>
</tr>
<tr>
<td>Iceland</td>
<td>IS</td>
</tr>
<tr>
<td>Country Name</td>
<td>Country Code</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>India</td>
<td>IN</td>
</tr>
<tr>
<td>Indonesia</td>
<td>ID</td>
</tr>
<tr>
<td>Ireland</td>
<td>IE</td>
</tr>
<tr>
<td>Isle of Man</td>
<td>IM</td>
</tr>
<tr>
<td>Israel</td>
<td>IL</td>
</tr>
<tr>
<td>Italy</td>
<td>IT</td>
</tr>
<tr>
<td>Jamaica</td>
<td>JM</td>
</tr>
<tr>
<td>Latvia</td>
<td>LV</td>
</tr>
<tr>
<td>Liechtenstein</td>
<td>LI</td>
</tr>
<tr>
<td>Lithuania</td>
<td>LT</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>LU</td>
</tr>
<tr>
<td>Malaysia</td>
<td>MY</td>
</tr>
<tr>
<td>Malta</td>
<td>MT</td>
</tr>
<tr>
<td>Martinique</td>
<td>MQ</td>
</tr>
<tr>
<td>Mexico</td>
<td>MX</td>
</tr>
<tr>
<td>Netherlands</td>
<td>NL</td>
</tr>
<tr>
<td>New Zealand</td>
<td>NZ</td>
</tr>
<tr>
<td>Norway</td>
<td>NO</td>
</tr>
<tr>
<td>Peru</td>
<td>PE</td>
</tr>
<tr>
<td>Country Name</td>
<td>Country Code</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Poland</td>
<td>PL</td>
</tr>
<tr>
<td>Portugal</td>
<td>PT</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>PR</td>
</tr>
<tr>
<td>Reunion Island</td>
<td>RE</td>
</tr>
<tr>
<td>Romania</td>
<td>RO</td>
</tr>
<tr>
<td>Russian Federation (Russia)</td>
<td>RU</td>
</tr>
<tr>
<td>San Marino</td>
<td>SM</td>
</tr>
<tr>
<td>Singapore</td>
<td>SG</td>
</tr>
<tr>
<td>Slovakia</td>
<td>SK</td>
</tr>
<tr>
<td>Slovenia</td>
<td>SI</td>
</tr>
<tr>
<td>South Africa</td>
<td>ZA</td>
</tr>
<tr>
<td>Spain</td>
<td>ES</td>
</tr>
<tr>
<td>Swaziland</td>
<td>SZ</td>
</tr>
<tr>
<td>Sweden</td>
<td>SE</td>
</tr>
<tr>
<td>Switzerland</td>
<td>CH</td>
</tr>
<tr>
<td>Taiwan</td>
<td>TW</td>
</tr>
<tr>
<td>Turkey</td>
<td>TR</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>AE</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>GB</td>
</tr>
</tbody>
</table>
Replace Existing Master Geography Data with Revised Oracle-Licensed Geography Data

You must import and set up reference geography data for the countries where you do business. Using the Oracle-licensed geography reference data, you no longer have to source geography data from a third party. You can import Oracle-licensed data from GBG | Loqate, including the country structure and hierarchy information, either to create a new geography setup or replace your existing geography data.

You can use the information in this section to replace existing geography data with GBG | Loqate geography data. You can follow these steps if you're using Nokia or any other geography data and now want to move to GBG | Loqate geography data.

Before you begin, perform the following steps:

- Backup existing geography data including customizations, if any.
- Backup territory geographies.
- Perform impact analysis by contacting the support team to identify the use of geography IDs downstream.

**Note:** Before deleting the geography data, make sure that GEOGRAPHY_ID isn't referenced in any downstream applications such as TAX, FIN, Legal, and so on. Geography data is used across Oracle Cloud applications such as Human Capital Management, TAX, and Legal. Global Single Instance POD users share the same geography data and before deleting geography data, the geography usage POD analysis is required. The Oracle Support team can help you identify the downstream impact.

Create an Export File of All Territories

In case you have implemented Customer Data Management along with the sales functionality, you must export all territories before deleting the master geography data because removing the master geography data invalidates the territory definitions that are based on the Geography dimension. You can either export the definitions of all territories to a file or make manual corrections. If there are a large number of territories, export the territories definition to a file for the territories import process. However, if there are very few affected territories, then you can choose to either export the territories definition to a file or make corrections manually.

This procedure is applicable only if there are territories defined using the Geography dimension.

Perform the following steps to create an export file of all territories.

1. From the Territories and Quotas work area, click **View Active Territories** in the Tasks pane.
2. In the View Active Territories page, select the territory at the highest level.
3. Click the Actions list, and select Export, and then Export Selected Territory Hierarchy.
4. In the Warning dialog box, click OK.
5. Click the Actions list and select Export, and then View Export Status.
6. Review the status of the export job and verify if it has completed successfully.
7. In the Exported Data File column, click the .zip file against your export job, and click Save. All the territories are exported to a compressed file on your system.
8. Click OK.
9. Click Done in the View Active Territories page.

Delete the Territory Geography Data

A territory definition has references to the territory geography data and master geography data. Since territory geography data is based on the master geography data, in case you have implemented Customer Data Management along with the sales functionality, you must delete the territory geography data prior to deleting the master geography data. When you delete the territory geography data, all territories that are defined using geography dimension become invalid.

This procedure is applicable only if territory geographies are defined.

Perform the following steps to delete the territory geography data.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Sales
   - Functional Area: Territories
   - Task: Manage Territory Geographies
2. On the Manage Territory Geographies page, click View All Hierarchies.
3. Select the highest level node for the country for which you want to replace the master geography data and click the Delete icon.
4. In the Warning dialog box, click OK.
5. In the Confirmation dialog box, click OK. The parent node of the territory geography data and its children are deleted.
6. Repeat steps 3 to 5 to delete all the higher nodes in the territory geography data.
7. Click Save and Close.

The Territory Management application retains a copy of the dimension members referenced in the territory definitions. This copy is updated when you trigger the Load and Activate process from the Enable Dimensions and Metrics task. Therefore, although the territory geography data is deleted, the territory definitions may appear to remain valid.

Delete the Master Geography Data

Delete the existing geography data one country at a time. Use the Delete Master Geography Data for the Selected Country scheduled process to delete master geography data. We recommend that you raise a service request for assistance in deleting the geography data. For more information about the Delete Master Geography Data for the Selected Country scheduled process, see the related topics section.

Import Oracle-Licensed Geography Reference Data

Use this procedure to import GBG | Loqate geography data in Manage Geographies one country at a time. If the country data you want to import isn't available, then the Import Geography Data action is disabled.

The geography data is provided by GBG | Loqate and is third-party content. As per Oracle policy, this software and documentation may provide access to or information about content and services from third parties. Oracle and its
Perform the following steps to import Oracle-licensed geography reference data.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Customer Data Management
   - Functional Area: Enterprise Profile
   - Task: Manage Geographies

2. On the Manage Geographies page, enter either the country name or the two-letter ISO code (for example, US), and click Search.
3. Select the country in the search results.
4. Click the Actions list, and select Import Geography Data.
5. In the Warning dialog box, click OK.
6. In the Confirmation dialog box, click OK.

The import of larger countries may require several hours to complete.

You can track the progress of the import process by selecting Scheduled Processes from the Navigator.

Note: To access the Scheduled Processes work area, you must be signed in as a user with the Employee abstract role. The initial user doesn’t have this role assigned, but the other users you created do.

After the import is complete, you can search for the country again in the Manage Geographies page. Check marks now appear in the Structure Defined and Hierarchy Defined columns indicating the import completed successfully.

Next, click the Validation Defined icon to define the validations, enable List of Values, and choose address style format for a country as set up before. For more information, see the Geography Validation topic.

The Geocoding Defined and Address Cleansing Defined columns are used for additional features which you must license from Oracle and set up separately.

- Geocoding makes it possible to display customers in the vicinity of a mobile address. You set up Geocoding Enabled for those countries where you’re using Around Me functionality in Engagement Cloud Mobile.
- Cleansing makes it possible to validate addresses down to the street level.

Add any geography customizations.

Run the Geography Name Referencing Process

The Geography Name Referencing (GNR) process validates address elements in location tables, such as HZ_LOCATIONS, against the master geography data.

Perform the following steps to run the GNR process.

1. Navigate to Tools > Scheduled Processes work area.
3. Click the Name list and search for Validate Geographies Against Master Geographies, and then click OK.
4. Click OK in the Schedule New Process dialog box.
5. In the Process Details dialog box, enter the following details:
   - Location Table Name: HZ_LOCATIONS
   - Run Type: ALL
6. Enter the country code in the Country Code field.
7. Click Submit.
8. In the Confirmation dialog box, click OK.
9. Click Close.
10. In the Scheduled Processes page, click the Refresh icon.
11. Verify if the status of the process has completed successfully.

Find the locations failing in Geography Name References using: https://cloudcustomerconnect.oracle.com/posts/b1e16b06ae. Fix Geography Name References failures by updating addresses with the latest geography data.

Recreate and Load the Territory Geography Data

In case you have implemented Customer Data Management along with the sales functionality, you can recreate the territory geography data, after the master geography data is imported, using either of the following methods:

- Import process: If you created the original territory geography data using the import process, then use the same import file to recreate the territory geography structure. For more information about importing the territory geography data using the import file, see "Importing Territory Geography Hierarchies Using File-Based Data Import: Quick Start" in the Oracle Engagement Cloud Understanding File-Based Data Import and Export guide.

- Manual creation process: You can manually recreate the territory geography data structures, as they existed before their deletion, using the Manage Territory Geographies task. For more information about creating zones and adding geographies to a zone, see "Managing Territory Geographies: Worked Example" topic.

After you have recreated the territory geography data, perform the following steps to load the data.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Sales
   - Functional Area: Territories
   - Task: Enable Dimensions and Metrics
2. On the Enable Dimensions and Metrics page, click the Actions list, and select Load and Activate. The process loads the territory geography data to make dimension members available for selection when defining territories.
3. In the Confirmation dialog box, click OK.
4. Click Done.

Restore the Invalid Territory Definitions

After recreating the territory geography hierarchies and running the Load and Activate option from the Enable Dimensions and Metrics task, the geography dimensions are populated with the new geography members. The geography members in the territory appear as invalid because your territories still reference the old copies of the dimension members that were deleted. The new members aren't referenced automatically by the territories. You must re-reference the territory definitions from the old geography dimension members to the new ones.

You can restore the invalid territory definitions by either importing the previously created export file or making manual corrections to the territories.

To restore valid territory definitions using territories import:

1. Open the export file you saved in the "Creating an Export File of All Territories" step. The compressed file contains four CSV files.
2. Open TERR_HEADER.CSV file.
3. Enter **REPLACE** in the Action column for all territories that are based on geography dimension.
4. Save the file in CSV format and compress it together with three other CSV files.
5. From the Territories and Quotas work area, click **View Active Territories** in the Tasks pane.
6. Click the **Actions** list, and select **Import to Proposal**, and then **Import Territories**.
7. Select the newly created compressed file and click **OK**.
8. Click the **Actions** list and select **Import to Proposal**, and then **View Import Status**.
9. Review the status of the export job and verify if it has completed successfully.
10. Click **OK**.
11. From the Tasks pane, click **Manage Territory Proposals**.
12. In the Manage Territory Proposals page, on the Current Territory Proposals table, search for the proposal with your import file name.
13. Click the import file name to open the territory proposal.
14. Click **Edit Coverage** to verify that the territory definitions are valid.
15. Verify that there are no values listed as invalid in the Selected Dimension Members section.
16. Click **Save and Close**.
17. Click **Activate**. The territory proposal of your import file is activated.

To restore valid territory definitions through manual corrections:

1. From the Territories and Quotas work area, click **Manage Territory Proposals** in the Tasks pane.
2. In the Manage Territory Proposals page, click the **Create** icon.
3. In the Create Territory Proposals dialog box, enter a name and click **Save and View**.
4. In the Territory Proposals page, add all the territories with the Geography dimension value other than the value "Any" to the proposal.
5. Select a territory and click **Edit Coverage**.
6. In the Edit Coverage page, select **Geography** from the Dimensions list. The invalid dimension members are displayed in the Selected Dimension Members pane.
7. Expand the values in the Available Dimension Members section or search for the member that has the same name as the one marked invalid in the Selected Dimension Members pane.
8. Select one or more new geography dimension members from Available Dimension Members pane and click **Add** icon to the Selected Dimension Members pane.
9. Click the **Remove** icon to remove the invalid members from the Selected Dimension Members pane.
10. Click **Save and Close**.
11. Repeat steps 4 to 10 for all territories that were based on Geography dimension.
12. Click **Activate**. After the activation process is complete, your territory definitions are valid again and are referencing to the new geography data.

Although this method is always applicable, it's most appropriate when you have to restore territory definitions for a smaller number of territories.

To run the batch assignment process for opportunities:

1. From Navigator, click **Scheduled Processes**.
2. In the Schedule Processes page, click **Schedule New Process**.
3. In the Schedule New Process dialog box, search for the **Revenue Territory Based Assignment** process and select it.
4. Click **OK**.
5. In the Process Details dialog box, enter **OpenOpportunitiesByCreationDate** in the View Criteria Name field.
   This selects all revenue lines belonging to open opportunities that were created in the last 'X' days.
6. Enter **BindOptyCreationDateFrom**= followed by the date.
   For example, if BindOptyCreationDateFrom=2014-01-01, then all open opportunities which were created between 1st January 2014 till the current date, are processed.
7. Click **Submit** to schedule the process.
8. In the Confirmation dialog box, make a note of the process identifier for monitoring the process, and click **OK**.
9. Click **Close**.
10. In the Schedule Processes page, click the **Refresh** icon.
11. Review the status of the process job and verify if it has completed successfully.

    **Note:** Review a small subset of the open opportunities to confirm that the territory assignment is as expected.

To run the batch assignment process for sales accounts:

1. Ensure that the **ZCA_SA_AUTO_ASSIGN_ON_CREATE** and **ZCA_SA_AUTO_ASSIGN_ON_UPDATE** profile options are set to Yes in the **Manage Customer Center Profile Options** task.
2. From Navigator, click **Customers**.
3. In the Customers page, click **Create Account**.
4. In the Create Account page, enter a name and address of the sales account, and select the **Address is sell to** check box.
5. Click **Save and Close**.
6. From Navigator, click **Customers**.
7. In the Search pane, search for the name of the sales account you created and select it.
8. In the section Customer Information, select **Sales Account Team**. The details of the sales account and territories associated with the sales account are displayed.

    This indicates that the sales account was created successfully and the batch assignment was run automatically to assign the matching territories to the sales account.

To run the batch assignment process manually from the Scheduled Processes page, perform the following steps.

1. From Navigator, click **Scheduled Processes**.
2. In the Schedule Processes page, click **Schedule New Process**.
3. In the Schedule New Process dialog box, search for the **Request Sales Account Assignments** process and select it.
4. Click **OK**.
5. Enter **SalesAccount_Work_Object** in the Work Object Code field and **SalesAccountTerritory_Candidate_Object** in the Candidate Object Code field.
6. Select **Territory** in the Assignment Mode list.
7. Enter **AllSalesAccountsVC** in the View Criteria Name field. This selects all sales accounts.
8. Click **Submit** to schedule the process.
9. In the Confirmation dialog box, make a note of the process identifier for monitoring the process, and click **OK**.
10. Click **Close**.
11. In the Schedule Processes page, click the **Refresh** icon.
12. Review the status of the process job and verify if it has completed successfully.

    **Note:** Review a small subset of the accounts to confirm that the territory assignment is as expected.

Verify that the downstream applications using geography data is working fine.

**Related Topics**

- Manage Territory Geographies
- Delete Master Geography Data for the Selected Country
- Validate Geographies of Addresses Against Master Geographies
Create Countries

This procedure lists the steps to create countries in the application.

The countries are seeded in the application. If you’re unable to find a specific country in the Manage Geographies page, then you can add it to the application.

Note: The application provides support for GBG | Loqate geography data for countries. For countries where GBG | Loqate geography data isn’t available, you can purchase the geography data from a third-party data provider and load it into the application using File-Based Data Import. For more information, see the Importing Geographies chapter in the Oracle Engagement Cloud Understanding File-Based Data Import and Export guide. If countries aren’t available in the application, then use the procedure outlined in this topic to create them.

Perform the following steps to create a new country.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Customer Data Management
   - Functional Area: Application Extensions
   - Task: Manage Territories

2. On the Manage Territories page, click the New icon.

3. Enter the following details:
   - Territory Code: Enter a unique code for the territory.
   - Territory Name: Enter a unique name for the territory.
   - Description: Enter a description for the territory.

4. Click Save and Close.

Note: After you have added a new country in the application, if you want to import the geography data for that country, then you must perform Step 5 to 10.

5. In the Setup and Maintenance work area, go to the following:
   - Offering: Customer Data Management
   - Functional Area: Enterprise Profile
   - Task: Manage Geographies


7. In the Create Country dialog box, select the name of the country and click Save.

8. Click Done.

Note: You can now import the geography data for the newly created country using GBG | Loqate geography data available in the application. In case geography data for your country isn’t available from GBG | Loqate, you can purchase the geography data from a third-party data provider and import it using File-Based Import.
Overview of Geography Import

A geography is any region with a boundary around it. 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 company-specific zones and addresses.

You can import geography data from an external data source into Oracle Engagement Cloud using the File-Based Data Import feature.

Consider the following questions when importing your data:

- How does your legacy or source system store and represent the geography information when compared to Oracle Engagement Cloud?
- Do you have to configure values in Oracle Engagement Cloud to map your existing data to the Geography import object?
- Do you have to extend Oracle Engagement Cloud to add attributes?
- What import features are available to import your business data?
- How do I verify my imported data?

**Note:** Oracle Engagement Cloud ships with third-party master geography data for multiple countries. You can import geography data using the Manage Geographies task. Search for the country, and select Import Geography Data from the Actions menu. If the licensed data isn't available for a country, then the Import Geography Data action is disabled. For more information, see the procedure Replacing Existing Master Geography Data with Revised Oracle-Licensed Geography Data.

How Business Objects are Structured

You must understand how your geography data corresponds with the data in Oracle Engagement Cloud to map your legacy data to the data in Oracle Engagement Cloud.

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're importing the country structure of Australia, the country structure might be:

1. Country
2. State
3. County
4. Town
5. ZIP

How Business Objects are Structured

Every import object is a collection of attributes that help to map your data to the Oracle Applications Cloud data and to support one-to-many relationships between the structural components of a geography.

You must know the attribute details of the import objects so that you can prepare your import data. You can use the import reference guide (File-Based Data Import for Engagement) files that contain:

- Attribute descriptions
- Values that populate attributes by default when you don't provide values
- Validation information for each attribute

The validation information includes the navigation path to the task where you can define values in Oracle Application Cloud. For example, if you have values in your data that correlate to a choice list in Oracle Application Cloud, then the
validation information provides the task name where you can define your values. For additional information, such as a list of reference guide file names and locations, see the topic How Geography Import Objects Work Together.

Configurable Attributes
Here is how you can configure the objects to import your legacy or source data:

- Use the Application Composer to design your object model extensions and to generate the required artifacts to register your extensions.
- Make the artifacts available for importing the object.

You can map these configurable attributes to your source file data. You can use the same source file to import both the configurable attributes and the standard import object attributes.

How You Import Geographies Using File-Based Data Import
You must first prepare a source data file to import geographies. The source file can be either an XML file or a text file, such as a CSV files.

You use the file import process to:

1. Read the data in your source file.
2. Populate the interface tables according to your mapping.
3. Import the data into the application destination tables.

The Define File Import Setup and Maintenance task list includes the tasks required to:

- Configure the import objects
- Create source-file mappings
- Schedule the import activities

You can also access these tasks from the Data Import and Export functional area of the Sales offering.

You submit file import activities for each import object. When you're creating a new geography, you use the Geography object to import your data. You must have 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.

How You Verify Your Imported Data
You can use the File Import activity reports to verify imported data. Alternatively, you can also navigate to the Geographies work area to view the geography information that you have imported.

Related Topics
- How File-Based Data Import Works
- About File-Based Import Documentation

How Geography Import Objects Work Together
You use the Geography import object to import geographies and objects related to the geography. This topic describes the Geography import object and introduces:

- Target import objects
• Target import object attributes
• Target import object attribute reference guide files used for evaluating and mapping source file data

Overview of Geography Target Import Objects

Use the Geography import object to import geographies and objects related to geographies. The Geography import object is split into smaller objects to organize the individual attributes of the geography.

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.

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.

Geography Target Import Object Attributes

Compare attributes that you want to import with the available target object attributes and their valid values. Use a reference file to evaluate your source data and Oracle Engagement Cloud attributes for mapping and validation. See the Oracle Engagement Cloud File-Based Data Import for Engagement guide (https://docs.oracle.com/en/cloud/saas/engagement/19b/oefbs/index.html). See the topic for your import object, which includes links to reference files for target import objects. A reference guide file includes:

• Attribute descriptions
• Default values
• Validations for the attributes

Review the validation for each attribute to know if you need to do any setup tasks.

Define and Manage Import Mappings

You must define a mapping between your source data and a combination of the target object and target object attributes to import your source file data. To define and manage import mappings, do one of these:

1. Navigate to the following in the Setup and Maintenance work area:
   • Offering: Sales
   • Functional Area: Data Import and Export
   • Task: Manage File Import Mappings

2. Define the mapping when you define the import activity. Navigate to the following in the Setup and Maintenance work area:
   • Offering: Sales
   • Functional Area: Data Import and Export
   • Task: Manage File Import Activities

Note: If any of your source attributes doesn’t have a corresponding target object attribute, then you can extend the Geography object. Review the Application Composer Extensibility features for the Geography object for more information.
Reference Files for Geography Target Import Objects

To access reference files for this object's target import objects, see the Oracle Engagement Cloud File-Based Data Import for Engagement guide (https://docs.oracle.com/en/cloud/saas/engagement/19b/oefbs/index.html). See the topic for your import object, which includes links to reference files for target import objects.

Here is a list of reference files and their target import objects.

<table>
<thead>
<tr>
<th>Target Import Object</th>
<th>Description</th>
<th>Attribute Reference File Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>ImpGeography</td>
<td>Contains information that saves a country's geography hierarchy details, such as geography type, geography code, and so on.</td>
<td>HZ_IMP_GEOGRAPHIES_T_Reference</td>
</tr>
</tbody>
</table>

**Related Topics**
- How File-Based Data Import Works
- About File-Based Import Documentation

Example of Importing Geographies

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

The following table summarizes the key decisions that you must make in this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>What type of object are you importing?</td>
<td>Geography</td>
</tr>
<tr>
<td>What file type are you using for your source data?</td>
<td>Text file</td>
</tr>
<tr>
<td>Where are you uploading your source data file from?</td>
<td>Your desktop</td>
</tr>
<tr>
<td>What data type is your source data file?</td>
<td>Comma separated</td>
</tr>
<tr>
<td>Which fields are you importing into the application?</td>
<td>All, except for the RecordTypeCode field</td>
</tr>
<tr>
<td>When do you want to process the import?</td>
<td>Immediately</td>
</tr>
</tbody>
</table>
Summary of the Tasks

You perform the following steps to create an import activity and activate the import:

1. Determining what information is in the source file.
2. Creating and scheduling the import activity.
3. Monitoring the import results.

Before You Start

1. Ensure that the combination of the Source ID and Parent Source ID values is unique for each row of data within a single import. However, your source data files don't 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, then the changed IDs will not affect the import.
2. Ensure that all 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 must 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, then your geography import creates 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. The source geography data files must include a unique Source ID value for each row of data and Parent Source ID value for the parent of that row of data. The Source or Parent Source IDs should not be longer than 18 characters.
2. You can structure your geography source data, as shown in the following table.

<table>
<thead>
<tr>
<th>Geography Level</th>
<th>Name</th>
<th>Source ID</th>
<th>Parent Source ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Country)</td>
<td>US</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>2 (State)</td>
<td>CA</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>3 (County)</td>
<td>Alameda</td>
<td>111</td>
<td>11</td>
</tr>
<tr>
<td>4 (City)</td>
<td>Pleasanton</td>
<td>1111</td>
<td>111</td>
</tr>
<tr>
<td>4 (City)</td>
<td>Dublin</td>
<td>1112</td>
<td>111</td>
</tr>
</tbody>
</table>

Create and Schedule the Import Activity

You can create an import activity, enter the import details, and schedule the import. An import activity includes selecting the source file or file location, mapping the source file to the database, and scheduling the import.

1. Navigate to the following in the Setup and Maintenance work area:
   - Offering: Sales
2. In the Manage Import Activities page, click **Create**.
3. In the Create Import Activity: Map Fields page, map each field from your source file to the target object and attribute, as shown in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Master Reference Geographies</td>
</tr>
<tr>
<td>Object</td>
<td>Geography</td>
</tr>
<tr>
<td>File Type</td>
<td>Text File</td>
</tr>
<tr>
<td>File Selection</td>
<td>Specific file</td>
</tr>
<tr>
<td>Upload From</td>
<td>Desktop</td>
</tr>
<tr>
<td>File Name</td>
<td>Choose relevant file from desktop</td>
</tr>
<tr>
<td>Data Type</td>
<td>Comma separated</td>
</tr>
</tbody>
</table>

**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. In the Create Import Activity: Map Fields page, map each field from your source file to the database object and attribute, as shown in the following table.

<table>
<thead>
<tr>
<th>Column Header</th>
<th>Example Value</th>
<th>Ignore</th>
<th>Object</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Geography Name</td>
<td>Primary Geography Name</td>
<td>United States</td>
<td>Imp Geography</td>
<td>Primary Geography Name</td>
</tr>
<tr>
<td>Country Code</td>
<td>US</td>
<td>No</td>
<td>Imp Geography</td>
<td>Country Code</td>
</tr>
<tr>
<td>Record Type Code</td>
<td>0</td>
<td>Yes</td>
<td>Imp Geography</td>
<td>Record Type Code</td>
</tr>
<tr>
<td>Source ID</td>
<td>10265</td>
<td>No</td>
<td>Imp Geography</td>
<td>Source ID</td>
</tr>
<tr>
<td>Parent Source ID</td>
<td>1053</td>
<td>No</td>
<td>Imp Geography</td>
<td>Parent Source ID</td>
</tr>
</tbody>
</table>
If you don’t want to import a column in the text file, then you can select **Ignore**.

**Note:** If you can’t map the fields from your source file to the relevant target object, then see the import object spreadsheets.

6. Click **Next**.
7. In 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 whether the import will be repeated and the frequency of the repeated import.
8. Click **Next**.

### Monitor the Import Results
You can monitor the processing of the import activity and view the completion reports for both successful records and errors.

1. In 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. Confirm your import details, and click **Activate** to submit the import.

After the import activity has finished, the Status field value changes to Completed.

### Overview of Country Structure Import
You can import country structure data from an external data source into Oracle Engagement 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 United States has the geography type of State at the topmost level, followed by the County, the City, and the Postal Code.

You can use the country structure to store information about:
- The relationships between geographies within a country
- The types of geographies for a country

Consider the following questions when importing your data:
- How does your legacy or source system store and represent the country structure information when compared to Oracle Engagement Cloud?
- Do you have to configure values in Oracle Engagement Cloud to map your existing data to the Country Structure import object?
- Do you have to extend Oracle Engagement Cloud to add attributes?
- What import features are available to import your business data?
- How do I verify my imported data?

### How Business Objects Are Structured
You must understand how your country structure data corresponds with the data in Oracle Engagement Cloud to map your legacy data to the data in Oracle Engagement Cloud.
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're importing the country structure of Australia, you need to follow this country structure:

1. Country
2. State
3. County
4. Town
5. ZIP

**Import Object for the Country Structure**

The import object for country structures is GeoStructureLevel.

**How Business Object Attributes are Structured**

Every import object is a collection of attributes that help to map your data to the Oracle Applications Cloud data and to support one-to-many relationships between the structural components of a country structure.

You must know the attribute details of the import objects so that you can prepare your import data. You can use the import reference guide (File-Based Data Import for Engagement) files that contain:

- Attribute descriptions
- Values that populate attributes by default when you don't provide values
- Validation information for each attribute

The validation information includes the navigation path to the task where you can define values in Oracle Application Cloud. For example, if you have values in your data that correlate to a choice list in Oracle Application Cloud, then the validation information provides the task name where you can define your values. For additional information, such as a list of reference guide file names and locations, see the topic How Country Structure Import Objects Work Together.

**Configurable Attributes**

Here is how you can configure the objects to import your legacy or source data:

- Use the Application Composer to design your object model extensions and to generate the required artifacts to register your extensions.
- Make the artifacts available for importing the object.

You can map these configurable attributes to your source file data. You can use the same source file to import both the configurable attributes and the standard import object attributes.

**How You Import Country Structures Using File-Based Data Import**

You must first prepare a source data file to import accounts. The source file can be either an XML file or a text file, such as a CSV file.

You use the file import process to:

1. Read the data in your source file.
2. Populate the interface tables according to your mapping.
3. Import the data into the application destination tables.

The Define File Import Setup and Maintenance task list includes the tasks required to:

- Configure the import objects
• Create source-file mappings
• Schedule the import activities

You can also access these tasks from the Data Import and Export functional area of the Sales offering.

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

How You Verify Your Imported Data
You can use the File Import activity reports to verify imported data. Alternatively, you can also navigate to the Country Structure work area to view the country structure information that you have imported.

Related Topics
• How File-Based Data Import Works
• About File-Based Import Documentation

How Country Structure Import Objects Work Together
You use the Country Structure import object to import country structures and objects related to the country structure. This topic describes the Country Structure import object and introduces:

• Target objects
• Target import object attributes
• Target import object attribute reference guide files used for evaluating and mapping source file data

Overview of Country Structure Target Import Objects
Use the Country Structure import object to import country structures and objects related to country Structures. The Country Structure import object is split into smaller objects to organize the individual attributes of the country structure. The target import objects in the Country Structure import object are grouped into information about the country structure and information about the other objects.

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.

Country Structure Target Import Object Attributes
Compare attributes that you want to import with the available target object attributes and their valid values. Use a reference file to evaluate your source data and Oracle Engagement Cloud attributes for mapping and validation. See the Oracle Engagement Cloud File-Based Data Import for Engagement guide (https://docs.oracle.com/en/cloud/saas/engagement/19b/oefbs/index.html). See the topic for your import object, which includes links to reference files for target import objects. A reference guide file includes:

• Attribute descriptions
• Default values
• Validations for the attributes

Review the validation for each attribute to know if you need to do any setup tasks.
Define and Manage Import Mappings

You must define a mapping between your source data and a combination of the target object and target object attributes to import your source file data. To define and manage import mappings, do one of these:

1. Predefine the mappings in the Setup and Maintenance work area:
   - Offering: Sales
   - Functional Area: Data Import and Export
   - Task: Manage File Import Mappings

2. Define the mapping when creating an import activity in the Setup and Maintenance work area:
   - Offering: Sales
   - Functional Area: Data Import and Export
   - Task: Manage File Import Activities

Note: If any of your source attributes doesn't have a corresponding target object attribute, then you can extend the Country Structure object. Review the Application Composer Extensibility features for the Country Structure object for more information.

Reference Files for Country Structure Target Import Objects

To access reference files for this object's target import objects, see the Oracle Engagement Cloud File-Based Data Import for Engagement guide (https://docs.oracle.com/en/cloud/saas/engagement/19b/oefbs/index.html). See the topic for your import object, which includes links to reference files for target import objects.

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

Here is a list of reference files and their target import objects.

<table>
<thead>
<tr>
<th>Target Import Object</th>
<th>Description</th>
<th>Reference Guide File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ImpGeoStructureLevel</td>
<td>Information that specifies a country's geography structure.</td>
<td>HZ_IMP_GEO_STRUCTURE_LEVELS_Reference</td>
</tr>
</tbody>
</table>

Related Topics

- How File-Based Data Import Works
- About File-Based Import Documentation
- How You Import Country Structures

How You Set up Address Cleansing

Address cleansing validates, corrects, and standardizes address information that you enter in the application. Address cleansing, unlike geography validation, validates both the geography attributes and the address line attributes.
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 of these options:

- **None**: Specifies no real time address cleansing.
- **Optional**: Provides option to cleanse addresses.

Once you have enabled address cleansing for a country, a **Verify Address** icon appears at address entry points in the application. Click the icon to perform address cleansing and receive a corrected, standardized address. If the application doesn't find a matching address, then an alert message is displayed.

**FAQs for Geographies**

**When do I define address cleansing?**

When address data entered into the application must conform to a particular format, 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're 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 can't delete the level. For example, if a state geography has been created for the United States country geography structure, then the State level can't 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's at a lower level to any geography in a geography hierarchy?**

Select the geography that you want to create a geography at lower level, and then click the **Create** icon. This lets you create a geography for a geography type that's one level lower to the geography type you selected. The structure of the country's geography types are defined in the Manage Geography Structure page.

**Legal Jurisdictions and Authorities**
Overview

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 create a legal entity, the Oracle Fusion Legal Entity Configurator automatically creates one legal reporting unit for that legal entity with a registration.

Jurisdictions

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’s more than one jurisdiction that a legal entity must 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 don’t 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’re 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

A legal authority is a government or legal body that’s 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're 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 aren't mandatory in Oracle Fusion Human Capital Management (HCM), but are recommended and are generally referenced on statutory reports.

Create Legal Jurisdictions, Addresses and Authorities

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. **Navigator > Setup and Maintenance > Manage Legal Jurisdictions > 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. **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. **Navigator > Setup and Maintenance > Manage Legal Address > 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 the postal code, 94065.
7. Select **Geography** 94065 and **Parent Geography** Redwood Shores, San Mateo, CA.
9. **OK.**
10. **Save and Close.**

**Legal Authorities**

Create a legal authority by following these steps:

1. **Navigator > Setup and Maintenance > Manage Legal Authorities > 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 the postal code, 94105.
11. Select **Geography** 94105 and **Parent Geography** San Francisco, San Francisco, CA.
12. **OK**.
14. Optionally click the **One-Time Address** check box.
15. The **From Date** displays 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. **OK**.
22. **Save and Close**.

### Create Legal Entities, Registrations, and Reporting Units

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

Create a legal entity by following these steps:

1. **Navigator > Setup and Maintenance > Manage Legal Entity > Go to Task**.
2. Accept the default **Country**, United States.
3. Enter **Name**, InFusion USA West.
4. Enter **Legal Entity Identifier**, US0033.
5. Optionally enter **Start Date**. When the start date is blank the legal entity is effective from the creation date.
6. Optionally enter an **End Date**.
7. Optionally, if your legal entity should be registered to report payroll tax and social insurance, select the **Payroll statutory unit** check box.
8. Optionally, if your legal entity has employees, select the **Legal employer** check box.
9. 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.
10. Enter the **Registration Information**
12. Search for and select a **Legal Address**, 500 Oracle Parkway, Redwood Shores, CA 94065.
The legal address must have been entered previously using the Manage Legal Address task.

13. OK.

14. Optionally enter a Place of Registration.

15. Enter the EIN or TIN.

16. Enter the Legal Reporting Unit Registration Number.

17. Save and Close.

18. Navigator > Setup and Maintenance > Define Legal Entries > Manage Legal Entity > Select to set scope.

19. Select the Manage Legal Entity.

20. In the *Legal Entity list, select Select and Add.

21. Click Apply and Go to Task.

22. Select your legal entity.

23. Save and Close.

This sets the scope for your task list to the selected legal entity.

24. Save and Close.

Legal Entity Registrations

A legal entity registration with the same name as that of the legal entity is 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. Navigator > Setup and Maintenance > Manage Legal Entity Registrations: Verify that the Legal Entity scope value is set correctly.

2. Go to Task.

3. Select Create.

4. Enter Jurisdiction.

5. Enter Registered Address.

6. Enter Registered Name.

7. Optionally enter Alternate Name, Registration Number, Place of Registration, Issuing Legal Authority, and Issuing Legal Authority Address, Start Date, and End Date.

8. 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. Navigator > Setup and Maintenance > Define Legal Reporting Unit. > Manage Legal Reporting Unit. Verify that the Legal Entity scope value is set correctly.

2. Go to Task

3. Select Create.

4. Enter Territory, United States.

5. Enter Name.

6. Optionally enter a Start Date.

7. Enter Registration Information.

8. Search for and select Jurisdiction.

9. Enter Main Legal Reporting Unit information.

10. 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.

11. Enter the Main Effective Start Date, 1/1/11.

12. Save and Close.
Legal Entities

Overview

A legal entity is a recognized party with rights and responsibilities given by legislation. Legal entities have the following rights and responsibilities to:

- Own property
- Trade
- Repay debt
- 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
- Minimizing the enterprise's tax liability
- 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, 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
- 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), which enforces statutory reporting requirements for public corporations.
Individual entities privately held or held by public companies don’t 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.

Model Legal Entities

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. These registers are part of the Oracle Fusion Trading Community Architecture.

When your legal entities are trading with each other, represent them as legal entities and 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.

Several decisions you should consider when you create legal entities.

- The importance of using legal entity on 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 Using Legal Entities on 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, a sales order creates an obligation on the legal entity that books the order and promises to deliver the goods on the acknowledged date. The creation also creates an obligation on the purchaser to receive and pay for those goods. Contract law in most countries contains statutes that state 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.
- 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's processing the transaction. For example, Business Unit ACM UK has a default legal entity of InFusion UK Ltd. When a purchase order is placed in ACM UK, the legal entity InFusion UK Ltd is legally obligated to the supplier. Oracle Fusion Procurement, Oracle Fusion Project Portfolio Management, 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 wanted, 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 one segment 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 with 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. This solution is used 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're disposing of a part of a legal entity and want to isolate the assets and liabilities for that entity.

Implementing multiple balancing segments requires every journal entry that isn't balanced by division or business unit, to generate balancing lines. You can't change to multiple balancing segments after you begin using the ledger because your historical data isn't balanced by the new balancing segments. Restating historical data must be done at that point.
If your enterprise regularly spins off businesses or holds managers accountable for utilization of assets, identify the business with a balancing segment value. If you account for each legal entity in a separate ledger, no requirement exists to identify the legal entity with a balancing segment value.

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 the portion isn't a separate legal entity. If you don't map legal entities sharing the same ledger to balancing segments, you can't distinguish them using intercompany functionality or track 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 feature to create intercompany entries automatically 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.

**Tip:** In the Oracle Fusion Supply Chain applications, you can model intercompany relationships using business units, from which legal entities are derived.

**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 for 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.

**Legal Reporting Units**
Plan Legal Reporting Units

Each of your legal entities has at least one legal reporting unit. Some legal reporting units can also be referred to as establishments. You can define either domestic or foreign establishments. Define legal reporting units by physical location, such as sales offices. For example, set up legal reporting units to represent your company and its offices for tax reporting.

Planning Legal Reporting Units

Plan and define your legal reporting units at both the local and national levels if you operate within the administrative boundaries of a jurisdiction that's more granular than country. For example, your legal entity establishes operations in a country that requires reporting of employment and sales taxes locally as well as nationally. Therefore, you need more than one legally registered location to meet this legal entity's reporting requirements in each area. Additionally, legal entities in Europe operate across national boundaries, and require you to set up legal reporting units for the purposes of local registration in each country. There can be multiple registrations associated with a legal reporting unit. However, only one identifying registration can be defined by the legal authority used for the legal entity or legal reporting unit and associated with the legal reporting unit.

Chart of Accounts Structures and Structure Instances

Chart of Accounts

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.
- Enables delegation of responsibility for cost control, profit attainment, and asset utilization.
- Measures performance against corporate objectives by your managers.

Caution: Once you begin using your chart of accounts, making changes to its fundamental attributes is neither recommended nor supported. This includes your chart of account segments, including the segment labels as well as other characteristics of those segments.

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.
Thick Versus Thin General Ledger

Thick versus thin general ledger is standard terminology used to describe the amount of data populated and analysis performed in your general ledger. Thick and thin are the poles; most implementations are somewhere in between. Here are some variations to consider:

- A general ledger used in conjunction with an enterprise profitability management product, which has data standardized from each operation, is a thin general ledger. Use this variation if your solution is project-based, and Oracle Fusion Project Portfolio Management is implemented. More detailed reporting can be obtained from the Projects system. In the thin general ledger, business units, divisions, and individual departments aren’t represented in the chart of accounts.

- A thick general ledger:
  - Has segments representing all aspects.
  - Captures every detail of your business.
  - Runs frequent posting.
  - Defines many values in each segment.

A thick general ledger is designed to serve as a repository of management data for a certain level of management. For example, a general ledger designed to provide management data to supervise operations, such as daily sales, without invoice details.

- A primary and secondary ledger, with one thick general ledger and the other a thin general ledger, provides dual representation to meet reporting requirements.

Thin General Ledger

With a thin general ledger, you use the general ledger for internal control, statutory reporting, and tracking of asset ownership. You minimize the data stored in your general ledger. A thin general ledger has many of the following characteristics:

- Minimal chart of accounts
  - Short list of cost centers
  - Short list of natural accounts
    - Short list of cost accounts
    - Summary level asset and liability accounts
  - Low number of optional segments
- Infrequent posting schedule

A thin general ledger:

- Has natural accounts at a statutory reporting level, for example, payroll expense, rent, property taxes, and utilities.
- Has cost centers at the functional expense level, such as Research and Development or Selling, General, and Administrative, rather than at department or analytic levels.
- Omits business unit, division, and product detail.
One example of an industry that frequently uses a thin general ledger is retail. In a retail organization, the general ledger tracks overall sales numbers by region. A retail point of sales product tracks sales and inventory by store, product, supplier, markup, and other retail sales measures.

**Thick General Ledger**

With a thick general ledger, you use the general ledger as a detailed, analytic tool, performing analytic functions directly in the general ledger. Data is broken down by many reporting labels, and populated frequently from the subledgers.

You maximize the data stored in the general ledger. A thick general ledger has many of the following characteristics:

- Maximum use of the chart of accounts
  - Long list of natural accounts
  - Long list of cost centers
    - Long list of costing accounts
    - Detailed asset and liability accounts
  - Frequent posting schedule

A thick general ledger had details for cost of goods sold and inventory balances and track property plant and equipment at a granular level. Cost centers represent functional expenses, but also roll up to departmental or other expense analysis levels. Using product and location codes in optional segments can provide reporting by line of business. Posting daily, at the individual transaction level, can maximize the data stored in the general ledger.

One example of an industry that frequently uses a thick general ledger is electronic manufacturers. Detail on the revenue line is tagged by sales channel. Product is structured differently to provide detail on the cost of goods sold line, including your bill of materials costs. The general ledger is used to compare and contrast both revenue and cost of goods sold for margin analysis.

**Other Considerations**

Consider implementing a thick ledger if there are business requirements to do any of the following:

- Track entered currency balances at the level of an operational dimension or segment of your chart of accounts, such as by department or cost center
- Generate financial allocations at the level of an operational dimension or segment
- Report using multiple layered and versions of hierarchies of the operational dimension or segment from your general ledger

Consider implementing a thin ledger in addition to a thick ledger, if there are additional requirements for:

- Minimal disclosure to the authorities in addition to the requirements previously listed. For example, in some European countries, fiscal authorities examine ledgers at the detailed account level.
- Fiscal only adjustments, allocations, and revaluations, which don't impact the thick general ledger.

The important consideration in determining if a thick ledger is the primary or secondary ledger is your reporting needs. Other considerations include how the values for an operational dimension or segment are derived and the amount of resources used in reconciling your different ledgers. If values for an operational dimension or segment are entered by the user, then a thick primary ledger is the better choice.

However, if values for the operational segment are automatically derived from attributes on transactions in your subledger accounting rules, then use a thick secondary ledger. This decision affects the amount of:

- Storage and maintenance needed for both the general ledger and subledger accounting entries
• System resources required to perform additional posting
• In summary, you have:
  o Minimum demand on storage, maintenance, and system resources with the use of a thin ledger
  o Greater demand on storage, maintenance, and system resources with the use of a thick ledger
  o Greatest demand on storage, maintenance and system resources with the use of both thick and thin ledgers

  **Note:** Generally speaking, there is a trade-off between the volume of journals and balances created and maintained versus system resource demands. Actual performance depends on a wide range of factors including hardware and network considerations, transaction volume, and data retention policies.

**Summary**

The factors you should consider in your decision to use a thick or thin general ledger for your organization, are your:

• Downstream EPM system and its capabilities
• Business intelligence system and its capabilities
• Subledger systems and their capabilities and characteristics, including heterogeneity
• General ledger reporting systems and their capabilities
• Maintenance required for the thick or thin distributions and record keeping
• Maintenance required to update value sets for the chart of accounts segments
• Preferences of the product that serves as a source of truth
• Level at which to report profitability including gross margin analysis
• Industry and business complexity

**Chart of Accounts Components**

The important elements in a basic chart of accounts in Oracle Fusion Applications included 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.

This figure illustrates the main components in the chart of account structure and the way they fit together. The chart of accounts consists of segments which have value sets attached to them to determine the values from each used in creating account combinations. Segments also have segment labels attached to them to point to the correct segment...
to use in general ledger processing, such as intercompany balancing or retained earning summarization. Segments are secured by security rules and accounts are secured by cross validation rules.

Chart of Accounts
The chart of accounts defines the number and attributes of various segments, including:

- Order of segments
- Width of segments
- Prompts
- Segment labels, such as balancing, natural account, and cost center.

The chart of accounts further defines:

- Combination of value sets associated with each segment
- Type of segment
- Default values for the segments
- Additional conditions designating the source of the values using database tables
- 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.

Caution: You must use Independent validation only for the Accounting Key Flexfield value sets. Other validations prevent you from using the full chart of accounts functionality, such as data security, reporting, and account hierarchy integration. Dependent values sets aren't supported.

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. The three balancing segment labels are: 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're useful for detailed analysis and reporting. Cost centers are optional, but required if you're accounting for depreciation, additions, and other transactions in Oracle Fusion Assets, and for storing expense approval limits in Oracle Fusion Expense Management. If you're implementing Oracle Fusion Procurement, you can use cost centers for business intelligence reporting and to route transactions for approval.

- **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.

- **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

Represent your enterprise structures in your chart of accounts, ledger, legal entities, and business unit configuration to track and report on financial objectives and meet reporting requirements. These components provide 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
- 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 a financial enterprise and financial reporting structures quickly using sheets in a workbook that upload lists of:

- Companies (legal entities)
- Ledgers by country
- Business units
- Chart of accounts and segment values
- Segment value hierarchies
- Financial sequences
- Required subledger accounts

Once the sheets have been uploaded, the application creates:

- Chart of accounts structure and instance
- Segment value hierarchies
- Key accounts such as retained earnings
- Required subledger accounts
- Accounting calendar
- Primary ledger for each country represented on the legal entities sheet
• Legal entities and their locations
• Business units
• Document and journal sequencing
• Set of Financial Reporting reports
• Three account groups

**Caution:** Once you begin using your chart of accounts, calendar, and ledger, making changes to their fundamental attributes is neither recommended nor supported. This includes your chart of account segments, including the segment labels as well as other characteristics of those segments, and your calendar structure or pattern.

The following figure illustrates the flow of the enterprise structure setup.

Legal entities (companies) incur transactions that are identified by business units with business functions. Transactions that are recorded in subledgers are transferred to the ledger. A ledger is characterized by a calendar, a currency, and a chart of accounts. A chart of accounts consists of segments, some of which are assigned segment labels, such as cost.
center, natural account, and primary balancing segment. Legal entities can be assigned primary balancing segment values.

Additional information for some of the common setup objects depicted in the figure follows:

- **Legal Entity**: Identifies a recognized party with rights and responsibilities given by legislation, which has the right to own property and the responsibility to account for itself.

- **Business Units**: 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. Usually a business unit has a manager, strategic objectives, a level of autonomy, and responsibility for its profit and loss. When created through the spreadsheet, all available business functions are automatically enabled for the business unit.
• **Ledger**: Maintains records and is a required component in your configuration. The rapid implementation process:
  - Creates primary ledgers by combining the chart of accounts, calendar, and currency as well as other required options defined in the rapid implementation workbook.
  - Assigns the standard accrual subledger accounting method to the primary ledger. The subledger accounting method is used to group subledger journal entry rule sets together to define a consistent accounting treatment.
  - Creates a General Ledger balances cube for each ledger with a unique chart of accounts and calendar combination. Each segment is created as a dimension in the balances cube along with the standard cube dimensions.

• **Subledger**: 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.

• **Chart of Accounts**: Configures accounts that consist of components called segments. Accounts are used to record balances and organize financial information and reporting.

• **Segment**: Identifies one of the components of a chart of accounts, which when combined with other segments, creates an account combination for recording transactions and journal entries. A segment is associated with a value set, which provides the set of values for that segment, along with the formatting and validation for those values.

• **Segment Label**: Identifies certain segments in a chart of accounts and assigns special functionality to those segments.
  - **Balancing Segment**: Ensures that all journals balance for each balancing segment value or combination of multiple balancing segment values for financial processes and reports. The three balancing segment labels are: Primary Balancing Segment, Second Balancing Segment, and Third Balancing Segment.
  - **Natural Account**: Determines the account type (asset, liability, expense, revenue, or equity) and specific categorization of the financial activity. Facilitates General Ledger processes, such as closing of the income statement accounts to retained earnings at the beginning of a new fiscal year.
  - **Cost Center**: Facilitates grouping of natural accounts by functional cost types, accommodating tracking of specific business expenses across natural accounts.

With the rapid implementation workbook you can also:

• Create more than one hierarchy for any of your chart of accounts segments during initial setup. You can also create additional hierarchies and hierarchy versions, as well as update existing hierarchy versions, after the initial setup is done by uploading the rapid implementation spreadsheet data.

• Create sequences for each legal entity or ledger based on the predefined country defaults. Document sequences are created for: Payables invoices, Payments, Receivables invoices, Receivables credit memos, Receivables adjustment activities. Reporting and accounting journal sequences are created for subledger journals and General Ledger journals.

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**How Charts of Accounts, Ledgers, Legal Entities, and Business Units Are Created Using Spreadsheets**

The rapid implementation process for setting up the enterprise structure includes the following steps:

1. Downloading the Rapid Implementation for General Ledger workbook.
2. Entering data into the sheets.
3. Verifying the entered data and resolving any errors.
4. Uploading the chart of accounts file.
5. After successful upload of the chart of accounts file, uploading the general ledger, legal entity, and business unit file with the rest of the configuration.

The rapid implementation enterprise structure configuration is meant to be used as a one-time initialization. To the extent that you want to make certain allowed modifications to the configuration, you generally have to make those changes directly in the applications. After initial upload of the ledger, legal entity, and business unit file, the fundamental accounting configuration framework is only created once and is permanently set. This framework includes the ledger and its assigned chart of accounts, calendar and currency assignment, and the associated definitions of those components.

**Workbook Overview**

In the Setup and Maintenance work area, create an implementation project that includes the Define Financials Configuration for Rapid Implementation task list. Download the workbook using the **Create Chart of Accounts, Ledger, Legal Entities, and Business Units in Spreadsheet** task.

The workbook includes the following sheets:

- Instructions
- Chart of Accounts, Calendar, and Ledger
- Business Units
- Companies and Legal Entities
- Natural Accounts
- Financial Sequences

New sheets for entering segment values and hierarchies for additional segments of your chart of accounts can be created automatically. After you enter the segments on the Chart of Accounts, Calendar, and Ledger sheet, click **Add Segment Sheets** or **Generate Additional Hierarchy**.

**Note:** The rapid implementation process creates a standard ledger. You can convert a standard ledger to an average daily balance ledger before the first period is opened by selecting the **Enable average balances** check box on the Specify Ledger Options page.

**Instructions**

Review the Instructions sheet for important information about how to use the workbook and submit the accounting configuration. The sheet includes data preparation requirements, setup object concepts, and best practices and recommendations. Instructions on how to create additional hierarchies or additional hierarchy versions are also included.

Use the sample completed workbook to familiarize yourself with how to enter data, preview the sample report, and generate the required upload files.
Oracle SCM Cloud
Implementing Common Features for SCM

Chapter 5
Enterprise Structures

The following figure shows the section of the Instructions sheet called Rapid Implementation Template with Sample Data. This section includes the sample completed workbook, which you can download.

![Rapid Implementation Template with Sample Data](Sample Data.xlsx)

Chart of Accounts, Calendar, and Ledger
Enter the data to create your chart of accounts, calendar, and ledger.

**Caution:** Once you begin using your chart of accounts, calendar, and ledger, making changes to their fundamental attributes is neither recommended nor supported. This includes your chart of account segments, including the segment labels as well as other characteristics of those segments, and your calendar structure or pattern.

The following figure shows an example of the Chart of Accounts, Calendar and Ledger sheet with sample values.

![Chart of Accounts, Calendar, and Ledger](Chart of Accounts.png)

An explanation of each field on the sheet follows.

- **Name:** Enter the name of your primary ledger.

  A primary ledger is created for each unique country that’s entered in the Companies and Legal Entities sheet. A country code is appended to the name that you specify. For example, one legal entity is based in the United
States and another in Canada. If you enter the ledger name of InFusion Ledger, two primary ledgers are automatically created, InFusion Ledger US and InFusion Ledger CA.

All of the primary ledgers that are created use the same chart of accounts, account hierarchies, and accounting calendar. Legal entities and their primary balancing segment values are assigned to the primary ledger of their respective countries. If the addresses provided for the legal entities on the Companies and Legal Entities sheet are all in the same country, then only one primary ledger is created.

- **Currency**: If you’re not entering legal entities and only a single ledger should be created by the rapid implementation configuration, enter the ledger currency in which you want to maintain accounting for in that ledger. If you’re entering legal entities, leave this field blank. The currency is automatically supplied based on the country.

- **Period Frequency**: Select from among the list of available frequencies for the ledger calendar.

  **Caution**: For the accounting calendar created using the Rapid Implementation Enterprise Structure solution, the choices of patterns are limited to the period frequency and adjusting periods options that are available for selection in the spreadsheet. It is not possible to make alterations to the pattern or specified fiscal year start date once the calendar has already been created. The accounting periods of the calendar are automatically named using a preset format. If you want to change these period names, you have a limited window of time to make those changes. Use the Manage Accounting Calendar page in the application to make the changes before the accounting calendar is being used actively, such as when one of its accounting periods has been set to a status of Open.

- **Adjusting Periods**: Select the number of periods used to segregate closing, auditing, or other adjustments in the General Ledger. The entries are tracked in the adjusting period and not in your monthly activity.

- **Fiscal Year Start Date**: Enter the start date of the accounting calendar. The date can't be changed after the submission of the configuration.

  **Caution**: If you plan to run translations, enter a fiscal year start date for the entire accounting year that's before the first period for which you intend to run translations. You can't run translation in the first defined period of an accounting calendar. For example, if your fiscal year starts on January 1, and you want to start translations for the period of Mar-17, then you should select a fiscal year start date of January 1, 2016. Also when determining the fiscal year start date, you might want to consider whether you plan to load history.

- **Segment**: Enter the names for your segments. The value sets are created from the segments.

- **Segment Label**: Select segment labels to assign special functionality to segments.

  Segment labels specifying the segment's purpose, such as balancing, cost center and natural account, can only be assigned once to a chart of accounts segment. The **Primary Balancing Segment** and **Natural Account Segment** labels must be assigned, while the other segment labels are optional. Segments that are assigned these two particular labels cannot be assigned any other label. However, segments that are assigned the other remaining labels can also be assigned additional labels, provided they're not **Primary Balancing Segment** or **Natural Account Segment**.

  The **Intercompany Segment** label assignment is optional. If assigned, that segment reuses the value set that's created for the segment with the **Primary Balancing Segment** label. Using the same value set ensures that the values for both segments remain synchronized.

  **Note**: For the posting process to apply intercompany balancing, you must select the **Enable intercompany accounting** option on the Specify Ledger Options page.
**Caution:** If you plan to implement segment value security rules for the segment that's assigned the **Primary Balancing Segment** label, then don't assign the **Intercompany Segment** label to a segment on this sheet. Segment value security rules are assigned at the value set level. Sharing the value set between the two segments causes security conflicts because segment value enforcement is simultaneously applied in the same way to both segments. For example, you define a segment value security rule for the Company segment where a user can only access company 01. Since the value set is shared, that user also can't transact with other companies in an intercompany transaction. Instead, follow these steps:

1. Include the intercompany segment in the sheet, but don't assign it the **Intercompany Segment** label.
2. Click the **Add Segment Sheets** button to add a sheet for the intercompany value set.
3. Create the values for your intended intercompany segment on the new sheet. Assign the same values to the intercompany segment as you have for the primary balancing segment and maintain this consistency going forward.
4. Complete the Upload Chart of Accounts task. Before starting the Upload Ledger, Legal Entities, and Business Units task, in the Offerings work area, go to the following:
   - **Offering:** Financials
   - **Functional Area:** Financial Reporting Structures
   - **Task:** Manage Chart of Accounts Structures
5. Assign the **Intercompany Segment** label to the intercompany segment of the chart of accounts on the Edit Key Flexfield Segment page.
6. Redeploy the key flexfield.

- **Short Prompt:** Enter a short name for the segment, which is used on applications pages.
- **Display Width:** Enter the segment size. Select the size 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:** Select this button to create sheets for additional segments. Sheets are provided only for the Company and Natural Accounts segments.

From the new segment sheet, you can click the **Generate Additional Hierarchy** button to create more than one hierarchy for any chart of account segment. A worksheet is then automatically created and populated with the data already entered for that segment. Change this data as required for the new hierarchy. You can create additional hierarchies during initial setup, or after the initial setup is done.

**Caution:** You can't change the chart of accounts, accounting calendar, or currency for your ledgers after the setup is created.

**Business Units**
Enter the name of your business units and related default legal entities.
The following figure shows an example of the Business Units sheet with sample values for the Name and Default Legal Entity Name fields.

<table>
<thead>
<tr>
<th>Name</th>
<th>Default Legal Entity Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Business Unit1</td>
<td>VCC InFusion Cupertino Cherries</td>
</tr>
<tr>
<td>USA Business Unit2</td>
<td>YSCC InFusion San Carlos Chocolates</td>
</tr>
<tr>
<td>Canada Business Unit1</td>
<td>Infusion Core Canada Ltd.</td>
</tr>
</tbody>
</table>

Business units are created with the names that you enter. You can enter more than one business unit per ledger. Based on the default legal entity specified for the business unit in the Business Units sheet, the business unit is assigned the primary ledger to which its default legal entity is assigned.

Companies and Legal Entities

Enter parent and child values for your Company segment, which is the segment that's assigned the Primary Balancing Segment label on the Chart of Accounts, Calendar, and Ledger sheet. You can create up to nine levels of parent values to roll up your companies to meet corporate and local reporting requirements.

Enter your legal entities for the child values with the address, registration number, and reporting unit registration number. The registration number identifies legal entities registered for your company and recognized by law for which you want to record and perform transactions. The reporting unit registration number identifies the lowest level component of a legal structure that requires registrations.
The following figure shows part of the Companies and Legal Entities sheet with sample values. The sheet includes columns for different levels of parent values, the child value, and company description. The Legal Entity columns include name, identifier, country, address information, and registration numbers.

To create additional hierarchies for the company segment for reporting or other purposes, click the **Generate Additional Hierarchy** button. A worksheet is automatically created and populated with the data already entered for that segment. Change this data as required for the new hierarchy. You can create additional hierarchies during initial setup, or after the initial setup is done.

When a new hierarchy sheet is created, the name for that sheet is derived by adding a counter to the sheet name. For example, when you click **Generate Additional Hierarchy** on the Companies and Legal Entities sheet, the new sheet is named Companies and Legal Entities 1. When you click **Generate Additional Hierarchy** again, another sheet is generated with the name Companies and Legal Entities 2.

**Note:** Adding legal entity information isn't supported on a new hierarchy sheet for the Company segment.

### Natural Accounts

Enter account hierarchies, account values, and specify account types.
The following figure shows part of the Natural Accounts sheet with sample parent and child values, descriptions, and account type.

<table>
<thead>
<tr>
<th>Value</th>
<th>Parent1</th>
<th>Parent2</th>
<th>Parent3</th>
<th>Child</th>
<th>*Description</th>
<th>*Account Type</th>
<th>Financial Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>13999</td>
<td>00000</td>
<td>10000</td>
<td>11000</td>
<td>11010</td>
<td>Cash Checking - Others</td>
<td>Asset</td>
<td></td>
</tr>
<tr>
<td>13999</td>
<td>13000</td>
<td>13005</td>
<td></td>
<td></td>
<td>Accounts Receivable</td>
<td>Asset - Accounts Receivable</td>
<td>Accounts receivable</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Parent:** Enter parent account values to define 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.
- **Child:** Enter child account values to define the postable accounts.
- **Description:** Enter descriptions for the segment values.
- **Account Type**: You must assign an account type to each account value. Account types are used in year-end close processes and to correctly categorize account balances for reporting. Select from among general account types and expanded account types. The general account types are: Asset, Liability, Owner's Equity, Revenue, Expense. Expanded account types provide specialized functionality and are used to:
  - Identify the intended usage of your natural account values to facilitate automation and enable completion of other required setup objects. For example, assign the Asset - Intercompany Receivable and Liability - Intercompany Payable expanded account types. The Rapid Implementation process then automatically creates a chart of accounts level intercompany balancing rule, which is a required setup for the application to perform intercompany balancing.
  - Automatically generate fully defined initial Financial Reporting reports and Account Groups based on your enterprise structure.

Examples of expanded account types include:
- **Asset - Accounts Receivable:** For Receivables receipt methods
- **Liability - Accounts Payable:** For Payables common options
- **Owner's Equity - Retained Earnings:** For General Ledger ledger options
- **Revenue - Top Revenues Parent Account:** For sample reports and account groups
- **Expense - Top Operating Expenses Parent Account:** For sample reports and account groups

You must assign the Revenue - Top Revenues Parent Account and Expense - Top Operating Expenses Parent Account account types to the parent accounts that are your highest level and comprehensive revenue and operating expenses accounts. You can optionally assign the account type of Expense - Top Cost of Sales Parent Account, if it’s applicable for your scenario.

The Generate Financial Reports and Account Groups process, which is automatically submitted when the accounting configuration is created in the application, generates a set of Financial Reporting reports and
account groups according to the accounting configuration defined in the workbook. The top parent accounts are used as the basis for deriving the accounts referenced in the reports and in the Account Groups.

The immediate descendants of the top parent accounts are used to define the rows on the reports. Depending on whether both the top operating expense and top cost of sales accounts are tagged, different variations of the income statements are generated. If the optional top cost of sales account is provided, the Financial Reporting reports that are income statements also include a gross margin section.

**Caution:** Assign account types carefully. If you assign an incorrect account type to a natural account segment value, accounting entries are recorded incorrectly and financial statements are inaccurate. Misclassified accounts are also potentially handled incorrectly at year end, with actual balances either getting zeroed out to retained earnings, or accumulating into the next year.

- **Financial Category:** Select a value to identify groups of accounts for reporting with Oracle Transactional Business Intelligence. Accounts that are tagged with expanded account types are automatically assigned a financial category. You can override the default category or leave it out.
- **Generate Additional Hierarchy:** To create additional hierarchies for the natural account segment for reporting or for other purposes, click the Generate Additional Hierarchy button. A worksheet is automatically created and populated with the data already entered for that segment. Change this data as required for the new hierarchy. You can create additional hierarchies during initial setup or after the initial setup is done.

**Financial Sequences**

Enable document or journal sequences to assign unique numbers to transactions to meet legal requirements.

The following figure shows the Financial Sequences sheet with sample values for the **Restart** and **Initial Value** columns.

<table>
<thead>
<tr>
<th>Transactions</th>
<th>*Restart</th>
<th>*Initial Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payables Invoices</td>
<td>Annually</td>
<td>1</td>
</tr>
<tr>
<td>Payments</td>
<td>Annually</td>
<td>1</td>
</tr>
<tr>
<td>Receivables Invoices</td>
<td>Annually</td>
<td>1</td>
</tr>
<tr>
<td>Receivables Credit Memos</td>
<td>Annually</td>
<td>1</td>
</tr>
<tr>
<td>Receivables Adjustment Activities</td>
<td>Monthly</td>
<td>1</td>
</tr>
<tr>
<td>Subledger Journals</td>
<td>Never</td>
<td>100</td>
</tr>
<tr>
<td>General Ledger Journals</td>
<td>Never</td>
<td>100</td>
</tr>
</tbody>
</table>

Document sequences are created for these transactions: Payables invoices, Payments, Receivables invoices, Receivables credit memos, Receivables adjustment activities. Reporting and accounting journal sequences are created for Subledger journals and General Ledger journals.

For each transaction, you can provide values for the following fields:

- **Restart**: Set when to restart the numbering: Annually, Monthly, Never.
- **Initial Value**: Specify the beginning number in the sequence.
How The Worksheets Are Processed

After you complete the worksheets, proceed with validation, sample report preview, and file upload.

1. On the Chart of Accounts, Calendar, and Ledger sheet, click the **Step 1: Validate** button.

   The validation checks the worksheets for missing or inappropriate setups. Errors are marked as actionable items in a validation report sheet that's dynamically generated. You can review the anomalies and make the corrections as indicated. The **Field** column on the validation report notes the issue. Click the text link to navigate to the appropriate field in the sheet that must be updated. When the validation is successful, a message appears with the option of previewing a sample of the reports that are automatically generated as part of the enterprise configuration.

   The following figure shows the message that appears after a successful validation.

   ![Validation Successful](image)

   If you select to preview the sample report, a new sheet is automatically created called Preview Report. The preview incorporates elements of the setup that you provided. The rows on the report are derived based on the top parent revenue and expense account values that you tagged on the Natural Accounts sheet. The preview also reflects the reporting hierarchy for your natural accounts.

   The following figure shows an example of the sample Financial Reporting report.
You can use the preview to validate whether the hierarchy setup aligns to your reporting needs. If the natural account hierarchy requires adjustments, this is your chance to make those corrections before actually creating the account hierarchies in the application. You can modify your enterprise structure setup, validate the spreadsheet, and preview the revised sample reports for as many times as you need. The account hierarchies are created when you finally submit the accounting configuration in the rapid implementation spreadsheet.

2. Click **Step 2: Generate Chart of Accounts File.** The process generates a data file called ChartOfAccounts.xml with the entered chart of accounts and hierarchies setup data. Save the file to a network or local drive.

3. Click **Step 3: Generate Ledger, LE, and BU File.** The process generates a data file called FinancialsCommonEntities.xml with the entered ledger, legal entities, and business unit setup data. Save the file to a network or local drive.

4. From your implementation project, go to the **Upload Chart of Accounts** task. The Upload Enterprise Structures and Hierarchies process is launched.

5. Accept the default selection of the **Upload Enterprise Structure** option.

6. Click **Browse** and select the first file that you saved called ChartOfAccounts.xml.

7. Click **Submit**.

8. Verify that the process completed without errors or warnings.

9. From your implementation project, go to the **Upload Ledger, Legal Entities, and Business Units** task. The Upload Enterprise Structures and Hierarchies process is launched.

10. Accept the default selection of the **Upload Enterprise Structure** option.

11. Click **Browse** and select the second file that you saved called FinancialsCommonEntities.xml.
12. Click Submit.
13. Verify that the process completed without errors or warnings.

An individual set of the following Financial Reporting reports is generated for each ledger that’s defined within the rapid implementation accounting configuration. If multiple primary ledgers are created as part of your configuration, a set of Financial Reporting reports is generated for each ledger.

- Income Statement
- Consolidated Income Statement
- Rolling Quarterly Income Statement
- Rolling Monthly Income Statement
- Trial Balances by Ledger Currency
- Trial Balances by Entered Currency

The process also generates three account groups. These include two for the infolets, Revenues and Expenses, and one for the Close Monitor called Close Monitor Summary Income Statement. A set of these three account groups is generated for the balances cube, to be shared among all the ledgers that are part of that balances cube.

Additional Hierarchies After Initial Setup
To create additional hierarchies and hierarchy versions, or to update existing hierarchy versions after the initial setup:

1. Click the Generate Additional Hierarchy button on the applicable segment sheet. A new worksheet is automatically created and populated with the data already entered for that segment. Change the data as required.
2. Click the Generate File for This Hierarchy Only button. This generates a .zip file for the particular hierarchy.
3. From your implementation project, go to the Upload Chart of Accounts task. The Upload Enterprise Structures and Hierarchies process is launched.
4. Select the Upload Hierarchy option.
5. Select from among the following options and provide values for the required parameters:
   a. Create hierarchy: Select to create another account hierarchy. Specify the value set, tree code, and start date.
   b. Create version: Select to render a new version of an existing account hierarchy. Specify a value set, tree code, tree version, and start date.
   c. Update existing version: Select to edit an existing version of an account hierarchy. Specify a value set, tree code, and tree version.
6. Click Choose File and select the .zip file that you saved earlier.
7. Click Submit.

Related Topics
- Overview of Trees
- How Financial Reporting Reports and Account Groups Are Generated
- Manage Setup Using Implementation Projects

Example of One Chart of Accounts Structure with Many Instances
In Oracle Fusion General Ledger, the chart of accounts model is framed around the concept of a chart of accounts structure, for 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 US dollars. Your product line includes all the components to build and maintain air quality monitoring 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, for 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 for 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 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 account combinations. Well-defined cross-validation rules help prevent the creation of inappropriate account 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.
Create a Chart of Accounts Structure and Instance

In Oracle General Ledger, the chart of accounts model is framed around the concept of a chart of accounts structure, for 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. These attributes include 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 user interfaces and processes. By default, a chart of accounts instance inherits all of 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, you can determine whether to generate new account combinations dynamically instead of creating them manually.

Chart of Accounts Structure

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

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Chart of Accounts Structures
2. Select the General Ledger module and click Search.
3. Click Manage Structures.
4. On the Manage Key Flexfield Structures page, select the General Ledger row and click the Create icon.
5. On the Create Key Flexfield Structure page, enter the unique structure code IN FusIO_n_AM_COA_STRUCTURE and name InFusion America COA Structure. Provide an optional description of InFusion America Inc. chart of accounts structure.
6. Select a delimiter to visually separate the segment values.
7. Click Save.
8. To create a segment, click the Create icon to open the Create Key Flexfield Segment page.
   a. Complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment Code</td>
<td>INFUSION_AM_CO</td>
</tr>
<tr>
<td>Name</td>
<td>InFusion America Company</td>
</tr>
<tr>
<td>Description</td>
<td>InFusion America Inc.</td>
</tr>
<tr>
<td>Sequence Number</td>
<td>1</td>
</tr>
</tbody>
</table>
Chart of Account Instance

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

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Chart of Accounts Structure Instances

2. On the Manage Chart of Accounts Structure Instances page, select the **General Ledger** module and click **Search**.

3. Select the General Ledger row and click **Manage Structure Instances**.

4. On the Manage Key Flexfield Structure Instances page, click the **Create** icon.

5. On the Create Key Flexfield Structure Instance page, enter the 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 the **Dynamic combination creation allowed** option to indicate that you want to dynamically generate account combinations.

7. Associate your instance with the structure 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. To modify an instance segment, select the segment row and click **Edit**.

---

### Field Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prompt</td>
<td>Company</td>
</tr>
<tr>
<td>Short Prompt</td>
<td>CO</td>
</tr>
<tr>
<td>Display Width</td>
<td>2</td>
</tr>
<tr>
<td>Column Name</td>
<td>Segment1</td>
</tr>
<tr>
<td>Default Value Set Code</td>
<td>INFUSION_AM_COMPANY</td>
</tr>
</tbody>
</table>

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 aren't 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 steps.
10. Select the **Required**, **Displayed**, and **BI enabled** options.

**Note:** Select 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 account combinations. Select the **BI enabled** option to use key flexfield segments in Oracle Fusion Transactional Business Intelligence. The business intelligence option 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 on the Manage Segment Label page, which you open 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**.

**Related Topics**
- Considerations for Enabling Key Flexfield Segments for Business Intelligence
- Update Existing Setup Data

**Overview of Balancing Segments**

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.

The three balancing segment labels are:

- Primary
- Second
- Third

**Note:** The primary balancing segment label is required.

By enabling multiple balancing segments for your chart of accounts, you can produce financial statements for each unique combination of segment values across one, two, or 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 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:
  o Suspense
  o Rounding
  o Net income
  o Retained earnings
  o 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:
  o Retained earnings: Calculated translated retained earnings are post to the retained earnings accounts by balancing segment. Retained earnings accounts represent the summing of the translated revenue and expense accounts across multiple balancing segment values.
  o 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.

Considerations for Multiple Balancing Segments

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.

Several points must be consider when 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. 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 using optional second and third balancing segments, remember that these chart of accounts segment labels are set from the beginning of time. Ensure that balances are immediately maintained in accordance with the necessary balancing actions to produce consistent financial reporting for the wanted business dimensions. Multiple balancing segment ledgers that aren't maintained from the beginning of time, require extensive manual balance adjustments to catch up and realign the balances.

Note: Do not set a segment already qualified as a natural account or intercompany segment as any of the three balancing segments. Validations aren't 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 uses a second and third balance segments, steps must be taken to ensure the proper transition. The required adjustments are extensive.

For ledgers associated with a migrated chart of accounts, the balances must be adjusted manually. The manual adjustment is to ensure that the second and third balancing segments are consistent as though these segment labels have been in place since the beginning of entries for these ledgers. Recomputing and updating of the following processes is required to reflect the correct balancing for each account using the 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. New translations must be run to properly account for translated retained earnings and cumulative translation adjustments with the correct level of balancing.

Related Topics
- How can I change segments in an existing chart of accounts structure

Example of Using Multiple Balancing Segments
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 table shows a journal that was entered to transfer advertising and phone expense from company 1, cost center A to company 2, cost center B.

<table>
<thead>
<tr>
<th>Line</th>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Company 1-Cost Center A-Advertising Expense Account</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Company 2-Cost Center B-Advertising Expense Account</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>3</td>
<td>Company 1-Cost Center A-Phone Expense Account</td>
<td></td>
<td>800</td>
</tr>
<tr>
<td>4</td>
<td>Company 2-Cost Center B-Phone Expense Account</td>
<td></td>
<td>800</td>
</tr>
</tbody>
</table>

The posting process creates journal lines to balance the entry across the primary and second balancing segments, company and cost center. The following table shows all of the journal lines, including balancing lines 5 through 8, which were automatically created.

<table>
<thead>
<tr>
<th>Line</th>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Company 1-Cost Center A-Advertising Expense Account</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Company 2-Cost Center B-Advertising Expense Account</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>3</td>
<td>Company 1-Cost Center A-Phone Expense Account</td>
<td></td>
<td>800</td>
</tr>
<tr>
<td>4</td>
<td>Company 2-Cost Center B-Phone Expense Account</td>
<td></td>
<td>800</td>
</tr>
<tr>
<td>5</td>
<td>Company 1-Cost Center A-Balancing Account</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>6</td>
<td>Company 2-Cost Center B-Balancing Account</td>
<td></td>
<td>600</td>
</tr>
</tbody>
</table>
FAQs for Chart of Accounts Structures and Structure Instances

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. All segments of the chart of accounts are required and have to be enabled. The unused segments can be assigned value sets that have a single value in the chart of accounts structure instance. The value is set as a default for that segment so that the extra segments are automatically populated when an account account combination is used.

Chart of Accounts Value Sets and Value Set Values

Value Sets for Charts of Accounts
A value set is a 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
• Value Definition

Module Designation
The module designation is used to tag value sets and sets the value sets apart during upgrades and other processes. When creating value sets for a chart of accounts, the module can be specified as 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 segments in an account combination.
• Table: The values are stored in an external table to facilitate maintenance and sharing of reference data.

<table>
<thead>
<tr>
<th>Line</th>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Company 1-Cost Center A-Balancing Account</td>
<td></td>
<td>800</td>
</tr>
<tr>
<td>8</td>
<td>Company 2-Cost Center B-Balancing Account</td>
<td>800</td>
<td></td>
</tr>
</tbody>
</table>
**Caution:** You must use Independent validation only for the Accounting Key Flexfield value sets. Other validations prevent you from using the full chart of accounts functionality, such as data security, reporting, and account hierarchy integration. Dependent values sets are not supported.

**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** option for the assigned value set must be selected. 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 on the Manage Values page.

1. Enter the value and description. Set the value to conform to the value set length and type.
2. Indicate whether the value is enabled and specify the start and end dates.
3. Assign the following attributes: **Summary**, **Allow Posting**, **Allow Budgeting**.
4. If the value set is used with a natural account segment, you must set the **Account Type** attribute. Select one of the following options: **Asset**, **Liability**, **Owner's Equity**, **Revenue**, or **Expense**.

   **Caution:** Assign account types carefully. If you assign an incorrect account type to a natural account segment value, accounting entries are recorded incorrectly and financial statements are inaccurate. Misclassified accounts are also potentially handled incorrectly at year end, with actual balances either getting zeroed out to retained earnings, or accumulating into the next year.

5. Other attributes that you can set are **Third-Party Control Account**, **Reconcile**, and **Financial Category**, which is used with Oracle Transactional Business Intelligence reporting.

   The **Third-Party Control Account** attribute enables you to maintain detailed balances by third party for an account combination. Valid third-party information must be associated with the journal line if the account is a third-party control account. General Ledger prevents manual journal entries from posting to third-party control accounts. This ensures that journal lines that post to control accounts such as the supplier liability account and the customer receivables account, are associated with valid third-party information in the respective subledgers.

   You can select one of the following options:

   - **Customer Control Account**: Customer information is required when such accounts are used in subledger transactions or subledger journals.
   - **Supplier Control Account**: Supplier information is required when such accounts are used in subledger transactions or subledger journals.
   - **Third-Party Control Account**: Third-party information is required when such accounts are used in subledger transactions or subledger journals.
   - **Restrict GL Manual Journals**: Third-party information isn't required when such accounts are used in subledger transactions or subledger journals.
General Ledger prevents manual journal entries to all of the accounts whose **Third-Party Control Account** attribute is set to a value other than **No**.

**Tip:** Best practice is to define value set values after the value set has been assigned to a chart of accounts structure instance. Otherwise you can't define the mandatory value attributes, such as the summary indicator, the posting allowed indicator, and the account type for natural account segments. The attributes must be added after the value set is assigned to a chart of accounts structure instance.

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**Create a Value Set for Your Chart of Accounts**

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, Vision Corporation. Follow these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Chart of Accounts Value Sets
2. Click the **Create** icon in the Search Results section.
3. On the Create Value Set page, enter a unique value set code, **Vision Corporation**, and an optional description, **Company values for Vision Corporation**
4. Select **General Ledger** from the list in the **Module** field.
5. Select **Independent** as the validation type.

**Note:** You must use Independent validation only for Accounting Key Flexfield value sets. Other validations prevent you from using the full chart of accounts functionality, such as data security, reporting, and account hierarchy integration. Dependent values sets aren’t supported.

6. Select **Character** for the validation data type.
7. Click **Save and Close**.

**Related Topics**

- Update Existing Setup Data

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**Configure Chart of Account Segments for Business Intelligence**

To map the Oracle General Ledger accounting flexfield in the Oracle Fusion 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. The values also provide the mapping with BI Object names that are used as dimensions for each of the chart of accounts segments.
Follow these steps to select the **BI enabled** option for all chart of account segments that you intend to map in the RPD.

1. In the Setup and Maintenance work area, use the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Chart of Accounts Structures
2. Enter GL# in the **Key Flexfield Code** field.
3. Click **Search**.
4. Click **Manage Structure Instances**.
5. Click **Search**.
6. Click the specific chart of accounts and click the **Edit** icon.
7. Click the specific segment and click the **Edit** icon.
8. Select the **BI enabled** option.
9. Click **Save**. This should be done for all segments in every chart of accounts structure instance that you intend to be mapped in the RPD.
10. Click **Save and Close**.
11. Click **Done**.

Follow these steps to specify a BI object name for each segment label. This name is the logical table name in the RPD that’s used as the dimension for the corresponding segment.

1. In the Setup and Maintenance work area, use the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Chart of Accounts Structures
2. Enter GL# in the **Key Flexfield Code** field.
3. Click **Search**.
4. Select the **Actions** menu and click **Manage Segment Labels**.
5. Populate the **BI Object Name** field for all of the segment labels that must be mapped in the RPD. Complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Segment Label Code</th>
<th>BI Object Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA_COST_CTR</td>
<td>Dim - Cost Center</td>
</tr>
<tr>
<td>GL_BALANCING</td>
<td>Dim - Balancing Segment</td>
</tr>
<tr>
<td>GL_ACCOUNT</td>
<td>Dim - Natural Account</td>
</tr>
</tbody>
</table>

6. Click **Save**.

   **Note:** For all the nonqualified segment labels, populate the **BI Object Name** with one of the following values:

   - Dim - GL Segment1
   - Dim - GL Segment2
   - Dim - GL Segment3
Deploy the flexfield using the **Deploy Flexfield** button on the **Manage Key Flexfields** page. For more information about using both key and descriptive flexfields in Oracle Fusion Transactional BI, refer to the Oracle Fusion Transactional Business Intelligence Administrator’s Guide.

### Related Topics

- Update Existing Setup Data

## Accounting Calendars

### Create the Accounting Calendar

The accounting calendar defines the time periods used in the applications. When you create the calendar, you specify the exact dates for each period. These defined periods, often called enterprise periods, are used for many purposes in the applications. Examples include:

- Reports that provide amounts by enterprise period, such as a sales pipeline analysis
- Metrics calculations by period for territory analysis
- The ability to adjust forecast amounts by time period
- Distribution of quota amounts by time period

Typically, you create a single accounting calendar as part of your implementation. Setting up your accounting calendar requires the following steps, all of which are covered in this topic:

1. Plan your calendar periods and start year. Refer to the Implementation Considerations section for more information.
2. Create the first-year calendar periods and generate the periods for each additional year. Refer to the Creating the Calendar section for more information.
3. Set the accounting calendar profile option. Refer to the Setting the Calendar Profile Option section for more information.
4. Run a scheduled process. Refer to the Running the Time Dimension Process section for more information.

Note that after your calendar is in use, you cannot change the calendar options. For example, after you have generated forecasts, you can’t change the calendar options.

### Implementation Considerations

Since you cannot change the calendar after it’s in use, you should plan which periods your calendar will use, and decide which year you want the calendar to start. The period frequency set in your fiscal calendar is the shortest period you can use. Therefore, if you set the period frequency to yearly, then your reports and activities can be for each year, but can’t be broken down by month. If you set the period frequency to monthly, then you can break down activities and reports by month and summarize by quarter and year. However, if you set the period frequency to weekly, then you can...
perform activities and reports by week, quarter, and year, but not by month because the number of weeks per month varies. In terms of the first year to use for your calendar, consider setting the date to the first date that your company was created. Then you can upload historical data later, if necessary.

Create the Calendar
When you create the accounting calendar, you are establishing the exact start and end dates for each period, for each year. The following procedure uses the use case from the fictitious Vision Corporation to guide you through the steps.

1. Sign in as a setup user.
2. In Setup and Maintenance, go to the following:
   - Offering: Sales
   - Functional Area: Company Profile
   - Task: Manage Accounting Calendars
3. On the Manage Accounting Calendars page, click Create.
4. The Create Accounting Calendar: Calendar Options page:
   - a. Name your calendar, for example, Sales Calendar.
   - b. Leave the Adjusting Period Frequency set to None.
   - c. For Start Date, Vision Corporation uses 1/1/10.
   - d. For Period Frequency, select the shortest time period you want to use for reports and activities. Vision Corporation is using Monthly. The period starts on the first of the month and ends on the last day of the month, regardless of the number of days or weeks in each month.
   - e. Vision Corporation selects None for the Separator.
   - f. Select the Format to use for period names.
5. Click Next. The Create Accounting Calendar: Period Details page appears, showing the generated periods. The image shows multiple columns, including:
   - o Period name, which is month name, one for each month of the year
   - o Year, which is 2010
   - o Period number, one for each month
   - o Quarter number for each period, assuming four quarters in the year
   - o Start and end dates for the periods
   - o A check box used to indicate whether a period is an adjusting period
The following figure shows an example of the Create Accounting Calendar: Period Details page.

6. If needed, manually change the details for each period.
7. Click **Save and Close**.
8. Now you need to generate the periods for each additional year, including the current, or coming year. Open the calendar.
9. Click **Add Year**.
10. Click **Save and Close**.
11. Repeat the last three steps for each year you want to add.
12. Click **Done**.

**Note:** You cannot change your calendar options after you start using the calendar, such as by generating forecasts.

### Set the Calendar Profile Option

After your calendar is created, you next set the accounting calendar profile option. This profile option setting tells the applications which calendar to use. Use the following procedure:

1. Sign in as a setup user.
2. In Setup and Maintenance, go to the following:
   - Offering: Sales
   - Functional Area: Company Profile
   - Task: Manage Calendar Profile Option
Option: Manage Calendar Profile Option

3. Select the Accounting Calendar Default profile option.
4. In the Profile Values table, click New.
5. For Profile Value, select Site.
6. Click the Profile Value list, and select the name of the calendar you created.
7. Click Save and Close.

Run the Time Dimension Process
You must run the Refresh Denormalized Time Dimension Table for BI process to make calendar time periods available for analytics and reports. Use the following procedure.

1. Sign in as the sales administrator or as a setup user.
2. Click Navigator > Scheduled Processes.

   The Scheduled Processes page appears.
4. In the Schedule New Process dialog box, click the menu next to the Name field and click Search.
5. In the Search dialog box, enter %Refresh%, and click Search.
6. Select the Refresh Denormalized Time Dimension Table for BI process in the results that are returned and click OK.
7. Click Ok again, if needed.

   The Process Details window appears.
8. In the Process Details window, click Submit.

Accounting Calendar Options
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.

Caution: The choices you make when specifying the following options are critical, because it's difficult to change your accounting calendar after a period status is set to open or future enterable.

- Budgetary control only
- Start Date
- Period Frequency
- Adjusting Period Frequency
- Period Name Format

Note: To help create and maintain accounting calendars, the common calendar types of monthly, weekly, 4-4-5, 4-5-4, 5-4-4, 4-week, quarterly, and yearly, are automatically generated. By using the period frequency option, you no longer have to go through the tedious task of defining each period manually.

Budgetary Control Only Check Box
Select the check box for Budgetary control only to use the calendar for budgetary control only. Budgetary Control refers to the group of system options and the validation process of determining which transactions are subject to validation against budgets and budget consumption to prevent overspending.
Start Date
If you plan to run translation, specify a calendar start date that’s a full year before the start date of the year of the first translation period for your ledger. Translation can’t be run in the first period of a calendar. Consider how many years of history you’re going to load from your previous application and back up the start date for those years plus one more. You can’t add previous years once the first calendar period has been opened.

Period Frequency
Use the 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: A calendar can have only 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 adjusting periods you want, and then manually define them.

Period Name Format Region
In the Period Name Format section, enter the following fields:

- **User-Defined Prefix:** An optional feature that lets you 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.

- **Format:** A predefined list of values filtered on the selected separator, only displaying the options that match the selected separator.

- **Year:** 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, 2016 to May 9, 2016 has the period name of Apr-16 and December 10, 2016 to January 9, 2017 has the name of Dec-16.
  
  - If period frequency is Other, then the period format section 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 period names.

  Note: For an accounting calendar that’s associated with a ledger, changing period names or adding a year updates the accounting period dimension in the balances cubes.
How Accounting Calendars Are Validated

Calendar validation is automatic and prevents serious problems when you begin using a calendar. Once you set a calendar period status to open or future enterable, you can’t edit the period.

Settings That Affect Calendar Validation

Calendar validation runs automatically after you save the calendar.

How a Calendar Is Validated

The following table lists the validation checks that are performed when an accounting calendar is saved.

<table>
<thead>
<tr>
<th>Validation</th>
<th>Data Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique period number</td>
<td>2 assigned for two periods</td>
</tr>
<tr>
<td>Unique period name</td>
<td>Jan-17 entered twice</td>
</tr>
<tr>
<td>Period number beyond the maximum</td>
<td>13 for a 12 period calendar with no adjusting periods</td>
</tr>
<tr>
<td>number of periods per year</td>
<td></td>
</tr>
<tr>
<td>Entered period name contains spaces</td>
<td>Jan 17</td>
</tr>
<tr>
<td>Single or double quotes in the period name</td>
<td>Jan '17</td>
</tr>
<tr>
<td>Nonadadjusting periods with overlapping dates</td>
<td>01-Jan-2017 to 31-Jan-2017 and 30-Jan-2017 to 28-Feb-2017</td>
</tr>
<tr>
<td>Period date gaps</td>
<td>01-Jan-2017 to 28-Jan-2017 and 31-Jan-2017 to 28-Feb-2017</td>
</tr>
<tr>
<td>Missing period numbers</td>
<td>Periods 1 through 6 are defined for a calendar with 12 months</td>
</tr>
<tr>
<td>Period number gaps</td>
<td>1, 3, 5</td>
</tr>
<tr>
<td>Period numbers not in sequential</td>
<td>Period 1 covers 01-Jan-2017 to 31-Jan-2017 and period 2 covers 01-Mar-2017 to</td>
</tr>
<tr>
<td>Quarter number gaps</td>
<td>1, 3, 4</td>
</tr>
<tr>
<td>Quarters not in sequential order by period</td>
<td>1, 3, 2, 4</td>
</tr>
</tbody>
</table>
FAQs for 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:

- Start date of September 1, 2014.
- End date is August 31, 2015.
- 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, 2014 to December 31, 2014, then 2014 or just 14, depending on the period format selected, is appended to each period's name. For the remaining periods covering January 1, 2015 to August 31, 2015, then 2015 or 15, 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 2015, then 2015 or just 15, 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 cannot 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 are generated automatically based on the latest calendar options. You can also manually update the calendar. The modified calendar options affect future years only.
Primary or Secondary Ledgers

Overview of Accounting Configuration Offerings

Use the Setup and Maintenance work area in Oracle Applications to manage the configuration of legal entities, ledgers, and reporting currencies. To create a legal entity or ledger, first 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 setup tasks are opened from either an implementation project or directly from the Setup and Maintenance work area.

The financial applications have two predefined implementations:

- The Oracle Accounting Hub Cloud offering is used to add the General Ledger and Subledger Accounting application features to an existing Enterprise Resource Planning (ERP) source system to enhance reporting and analysis.
- The Financials offering includes the General Ledger and Subledger Accounting application features and one or more subledger financial applications.

When adding an offering to an implementation project, update the tasks displayed by adding additional tasks.

Ledgers and Subledgers

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.

Primary Ledgers, Secondary Ledgers, and Reporting Currencies
Companies account for themselves in primary ledgers, and, if necessary, secondary ledgers and reporting currencies. Transactions from your subledgers are posted to your primary ledgers and possibly, secondary ledgers or reporting currencies based on balance, subledger, or journal level settings. Local and corporate compliance can be achieved through an optional secondary ledger. Provide 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. 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.
- Records transactional balances by using a chart of accounts with a consistent calendar and currency, and accounting rules implemented in an accounting method.
- 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 that affect the number of primary ledgers required are:
- Corporate year end
- Ownership percentages
- Local government regulations and taxation
- Secondary ledgers
Secondary Ledgers

A secondary ledger:

- Is an optional ledger linked to a primary ledger for the purpose of tracking alternative accounting.
- Can differ from its primary ledger by using a different accounting method, chart of accounts, accounting calendar, currency, or processing options.

When you set up a secondary ledger using the Manage Secondary Ledger task, you select a data conversion level. The data conversion level determines what level of information is copied to the secondary ledger. You can select one of the following levels: **Balance, Journal, Subledger, or Adjustment Only**.

- **Balance**: When you run the Transfer Balances to Secondary Ledger process, balances are transferred from the primary ledger to the secondary ledger.
- **Journal**: When you post journals in the primary ledger, the posting process copies the journals to the secondary ledger for the sources and categories that you specify in the Journal Conversion Rules section on the Map Primary to Secondary Ledger page.

  In the Journal Conversion Rules section, you can do one of the following:
  
  - Accept the default setting of **Yes** for the journal source and category combination of **Other**, and then specify the source and category combinations to exclude from the conversion.
  - Set the journal source and category combination of **Other** to **No**, and then specify the source and category combinations to include in the conversion.

- **Subledger**: When you run the Create Accounting process in the primary ledger, the process creates subledger journals for both the primary and secondary ledgers. When you run the Post Journals process in the primary ledger for journals that are created through methods other than the Create Accounting process, the posting process copies the primary ledger journals to the secondary ledger. For any journals that you don't want copied by posting, you can change the settings in the Journal Conversion Rules section on the Map Primary to Secondary Ledger page. To prevent duplication, posting doesn't copy any journal that originated from subledgers, regardless of the settings in the Journal Conversion Rules section.

  **Caution**: You don't have to specify journal conversion rules for your subledgers because journal conversion rules are applicable only to postings from Oracle Fusion General Ledger. The Create Accounting process automatically produces accounting for both the primary and the secondary ledger, regardless of the journal conversion rule settings.

- **Adjustment Only**: This level is an incomplete accounting representation that holds only adjustments. The adjustments can be entered as manual journals in General Ledger. This type of secondary ledger must share the same chart of accounts, accounting calendar, period type, and currency as the associated primary ledger.

  **Tip**: To obtain a complete secondary accounting representation that includes both transactional data and adjustments, use ledger sets to combine the ledgers when running reports.

Example

Your primary ledger uses US Generally Accepted Accounting Principles (GAAP) and you maintain a secondary ledger for International Financial Reporting Standards (IFRS) accounting requirements. You first decide to use the subledger conversion level for the IFRS secondary ledger. However, since most of the accounting between US GAAP and IFRS is identical, the adjustment only level is the better solution for the secondary ledger. The subledger level requires duplication of most subledger and general ledger journal entries and general ledger balances. The adjustment only level transfers only the adjustment journal entries and balances necessary to convert your US GAAP accounting to the IFRS accounting. Thus, requiring less processing resources.
Tip: To avoid difficult reconciliations, use the same currency for primary and secondary ledgers. Use reporting currencies or translations to generate the different currency views to comply with internal reporting needs and consolidations.

Reporting Currencies

Reporting currencies maintain and report accounting transactions in additional currencies. Consider the following before deciding to use reporting 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.
- Best practices recommend that you 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 maintain and report accounting records in different currencies, you do this by defining one or more reporting currencies for the ledger. When you set up a reporting currency using the Manage Reporting Currency task, you select a currency conversion level. The currency conversion level determines what level of information is copied to the reporting currency.

You can select one of the following levels: **Balance, Journal, Subledger**.

- **Balance**: When you run the Translate General Ledger Account Balances process, balances are transferred from the specified ledger to the reporting currency and converted.
- **Journal**: When you post journals, the posting process copies the journals to the reporting currency for the sources and categories that you specify in the Journal Conversion Rules section on the Create or Edit Reporting Currency pages.

In the Journal Conversion Rules section, you can do one of the following:

  - Accept the default setting of **Yes** for the journal source and category combination of **Other**, and then specify the source and category combinations to exclude from the conversion.
  - Set the journal source and category combination of **Other** to **No**, and then specify the source and category combinations to include in the conversion.

- **Subledger**: When you run the Create Accounting process in the primary ledger, the process creates subledger journals for both the primary ledger and the reporting currency. When you run the Post Journals process in the primary ledger for journals that are created through methods other than the Create Accounting process, the posting process copies the primary ledger journals to the reporting currency. For any journals that you don’t want copied by posting, you can change the settings in the Journal Conversion Rules section on the Edit Reporting Currency page. To prevent duplication, posting doesn’t copy any journal that originated from subledgers, regardless of the settings in the Journal Conversion Rules section.

**Caution**: You don’t have to specify journal conversion rules for your subledgers because journal conversion rules are applicable only to postings from Oracle Fusion General Ledger. The Create Accounting process automatically produces accounting for both the primary ledger and the reporting currency, regardless of the journal conversion rule settings.

**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.
Do not use journal or subledger level reporting currencies if your organization translates your financial statements to your parent company's currency for consolidation purposes infrequently. 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 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 select to account and report in both the European Union currency and your National Currency Unit.

**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.

**Related Topics**

- What’s the difference between mapping with segment rules and mapping with account rules
- When do account rules override segment rules in a chart of accounts mapping

**Ledgers, Legal Entities, Balancing Segments, and Business Units**

The process of designing an 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.

Primary ledgers are connected to reporting currencies and secondary ledgers to provide complete reporting options. You map the chart of accounts for the primary ledger to the chart of accounts for the secondary ledger. 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.
The following figure provides an example of an enterprise structure with primary ledgers, secondary ledgers, a reporting currency, legal entities, business units, and balancing segments, and shows their relationships to one another.

**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 isn’t 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.

If the primary and secondary ledgers use different:

- Charts of accounts, a chart of accounts mapping is required to instruct the application on how to propagate journals from the source chart of accounts to the target chart of accounts.
- Accounting calendars, the accounting date, and the general ledger date mapping table are used to determine the corresponding nonadjusting period in the secondary ledger. The date mapping table also provides the correlation between dates and nonadjusting periods for each accounting calendar.
- Ledger currencies, currency conversion rules are required to instruct the application 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 isn't 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 application 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 hasn't 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 lets you 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 has 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.

Create a Primary Ledger

Create a primary ledger as your main record-keeping 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

You have been assigned the task of creating a primary ledger for your company Vision Corporation.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: General Ledger
   - Task: Manage Primary Ledger
2. Click the Create icon.
3. Complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Vision Corporation</td>
</tr>
<tr>
<td>Description</td>
<td>Vision Corporation primary ledger for recording transactions.</td>
</tr>
<tr>
<td>Chart of Accounts</td>
<td>Vision Corporation Chart of Accounts</td>
</tr>
<tr>
<td>Accounting Calendar</td>
<td>Standard Monthly</td>
</tr>
<tr>
<td>Currency</td>
<td>USD</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Method</td>
<td>Standard Accrual</td>
</tr>
</tbody>
</table>

4. Click **Save and Close**.

**Note:** You can’t change the chart of accounts, accounting calendar, or currency for your ledger after you save the ledger.

**Related Topics**
- Update Existing Setup Data

## Ledger Options

Specify Ledger Options

This example demonstrates specifying the ledger options for a 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 defining your InFusion America Primary Ledger, in the Setup and Maintenance work area, go to the following:

- Offering: Financials
- Functional Area: General Ledger
- Task: Specify Ledger Options, with the ledger scope set

**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 Options

1. Accept the default name and description for the selected ledger.
2. Review the currency and chart of accounts for the specified ledger, which are automatically provided.

### Setting Accounting Calendar Options

1. Review the accounting calendar that defaults from your ledger.
2. Select **Jan-2017** as the first open period for your ledger.
   - Select a period after the first defined period in the ledger calendar to enable running translation. You can’t run translation in the first defined period of a ledger calendar. In this example, your calendar began with Jan-2016.
3. Enter **3** in the **Number of Future Enterable Periods** field.
   - 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 entries in the wrong period.

### Selecting Subledger Accounting Options

1. Accept the default accounting method from your ledger.
2. Select **US American English** as your journal language.

**Completing the Period Close Options**

1. Enter your retained earnings account: 101-00-31330000-0000-0000-0000-0000.
   
   This account is required. General Ledger moves the revenue and expense account balances to this account at
   the end of the accounting year.
2. Enter your cumulative translation adjustment account: 101-00-31350000-0000-0000-0000-0000.
   
   The Cumulative Translation Adjustment (CTA) account is required for ledgers running translation.
3. Don’t enter a value for the **Default Period End Rate Type** or **Default Period Average Rate Type** fields.
   
   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 Journal Processing Options**

1. Complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Suspense</td>
<td>General Ledger</td>
</tr>
<tr>
<td>Default Suspense Account</td>
<td>101-00-98199999-0000-0000-0000-0000</td>
</tr>
<tr>
<td>Rounding Account</td>
<td>101-10-98189999-0000-0000-0000-0000</td>
</tr>
<tr>
<td>Entered Currency Balancing Account</td>
<td>101-10-98179999-0000-0000-0000-0000</td>
</tr>
<tr>
<td>Balancing Threshold Percent</td>
<td>10</td>
</tr>
</tbody>
</table>

2. Enable the following entry and import options:
   - Enable journal approval: Enable the journal approval functionality.
   - Notify when prior period journal is entered: 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: Require a reference date in an open or future enterable period.
   - Separate journals by accounting date during journal import: Create individual journal entries for each accounting date.

3. Select InFusion America Accrual Set from the list of values in the **Journal Reversal Criteria Set** field and click the **Run AutoReverse after open period** option to reverse accrual journal entries automatically when a new period is opened.

4. Click the **Enable intercompany accounting** option to enable automatic balancing for primary, second, and third balancing segments on intercompany journals and transactions.

To complete the intercompany accounting functionality, you must define intercompany rules.
Note:

- This example describes setting options for a standard ledger. You can convert a standard ledger to an average daily balance ledger before the first period is opened by selecting the Enable average balances check box on the Specify Ledger Options page.
- You can also convert an average daily balance ledger to a standard ledger before submitting the Review and Submit Accounting Configuration task, provided the average daily balance ledger wasn't created through the rapid implementation process.

Related Topics

- How Single Currency Journals Are Balanced
- How MultiCurrency Journals Are Balanced

Assign Legal Entities and Balancing Segments

Optionally, assign legal entities and balancing segments to your accounting configuration.

Assign Legal Entities

Assign one or more legal entities to your accounting configuration by following these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: General Ledger
   - Task: Assign Legal Entities, with the ledger scope set
2. Click the Select and Add icon.
3. Enter your legal entity information.
4. Click Apply.
5. Click Done.
6. Click Save and Close.

Assign Balancing Segments to Legal Entities

Assign balancing segment values to your legal entities by following these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: General Ledger
   - Task: Assign Balancing Segment Values to Legal Entities, with the ledger scope set
2. Click the Create icon.
3. Select the balancing segment value. Optionally, add a start date.
4. Click Save and Close to close the Assign Company Values window.
5. Click Save and Close.
Assign Balancing Segments to Ledgers
Assign balancing segment values directly to your ledger by following these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: General Ledger
   - Task: Assign Balancing Segment Value to Ledger, with the ledger scope set
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.

Related Topics
- Update Existing Setup Data

FAQs for Ledger Options

What happens if I change the cumulative translation adjustment account?
Changing the cumulative translation adjustment (CTA) account is a very significant revision to your accounting configuration and should be avoided if possible. To prevent data corruption, your CTA can only be changed if you delete translated balances.

Related Topics
- How Translated Balances Are Deleted

What happens if I change the retained earnings account?
Changing the retained earnings account is a very significant revision to your accounting configuration and should be avoided if possible. To prevent data corruption, your retained earnings account can only be changed if you first perform the following set of steps:

1. To reverse what was closed out to the incorrect retained earnings account, enter and post journals to bring the ending balances for your income statement accounts to zero at the end of each accounting year. Use a temporary account, such as a suspense account, for the offsetting amount.
2. Update the retained earnings account.
3. Reverse the journal entries used to bring the income statement accounts' ending account balances to zero to reinstate each accounting year's profit and loss, and now close these out to the new retained earning's account in the following accounting year.

**Note:** The recommended reversal method for the journals is **Change Sign**.

4. If you have translated balances for the ledger, follow the process of deleting translated balances for a change in the retained earnings account.
Related Topics

• How Translated Balances Are Deleted

Reporting Currencies

How Balances for Reporting Currencies Are Calculated

Reporting currency balances, set at the journal or subledger level, are updated when General Ledger journals are posted and converted to your reporting currencies. This process includes:

• General Ledger manual journals, periodic journals, and allocations.
• At the subledger level, journals from Oracle Fusion Subledger Accounting.
• Other journals imported from sources other than your Oracle Fusion subledgers.

When you post a journal in a ledger that has one or more reporting currencies defined, the posting process:

• Creates journals converted to each of your reporting currencies.
• Includes them in the same batch as the original journal with a status of Posted.

Settings That Affect Reporting Currency Balances

Reporting currencies share a majority of the ledger options with their source ledger. For example, the reporting currency uses the same suspense account and retained earnings accounts as its source ledger. However, there are certain options that must be set specifically for reporting currencies, such as the currency conversion level. The currency conversion levels are Balance, Journal, and Subledger.

**Note:** Secondary ledgers can't use subledger level reporting currencies.

Multiple dependencies exist between a reporting currency and its source ledger. Therefore, complete your period opening tasks, daily journal or subledger level reporting currencies accounting tasks, and period closing tasks in the correct order. The following table describes some of the tasks for each task type.

<table>
<thead>
<tr>
<th>Type</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period Opening</td>
<td>Open the accounting period in both your ledger and reporting currencies before you create or import journals for the period. Converted journals are only generated in your reporting currency if the period is open or future enterable.</td>
</tr>
<tr>
<td>Daily</td>
<td>Enter daily conversion rates to convert journals to each of the reporting currencies.</td>
</tr>
<tr>
<td>Period Closing</td>
<td>• Finish entering all regular and adjusting journals for the period in your ledger.</td>
</tr>
<tr>
<td></td>
<td>• Post all unposted journals in your ledger if not already done in the previous step.</td>
</tr>
<tr>
<td></td>
<td>• Post all unposted journals in your reporting currencies if not already done in the previous step.</td>
</tr>
<tr>
<td></td>
<td>• Run revaluation in both your ledger and reporting currencies. Post the resulting revaluation batches in each ledger.</td>
</tr>
<tr>
<td></td>
<td>• As needed, translate balances in your ledger.</td>
</tr>
</tbody>
</table>
### How Reporting Currencies Are Calculated

If you use reporting currencies at the journal or subledger level, journals are posted in your reporting currency when you:

- Create accounting.
- Post journal entries.
- Translate balances.

General Ledger and Subledger Accounting automatically generate journals in your reporting currencies where the entered currency amounts are converted to the reporting currency amounts. Other factors used in the calculation of reporting currency balances are listed:

- **Manual Journals**: Enter a manual journal batch in your reporting currency at the journal or subledger level by using the Create Journals page. Select the journal or subledger level reporting currency from the ledger's list of values. Continue in the same manner as entering any other manual journal.
- **Conversion Rounding**: Use the reporting currency functionality to round converted and accounted amounts using the same rounding rules used throughout your Oracle Fusion Applications. The reporting currency functionality considers several factors that are a part of the currencies predefined in your applications, including:
  - Currency Precision: Number of digits after the decimal point used in currency transactions.
  - Minimum Accountable Unit: Smallest denomination used in the currency. This might not correspond to the precision.
- **Converted Journals**: Generate and post automatically journals in your reporting currencies when you post the original journals in the source ledger for the following types of journals:
  - Manual journals
  - Periodic and allocation journals
  - Unposted journals from non-Oracle subledger applications
  - Unposted journals from any Oracle Fusion subledger that does not support reporting currency transfer and import
  - Optionally, revaluation journals
- **Unconverted Journals**: Rely on the subledger accounting functionality to convert and transfer Oracle Fusion subledger journals, for both the original journal and the reporting currency journal, to the General Ledger for import and posting. The reporting currency conversion for these journals is not performed by the General Ledger.
- **Approving Journals**: Use the journal approval feature to process reporting currency journals through your organization's approval hierarchy. You can enable journal approval functionality separately in your source ledger and reporting currencies.
- **Document Numbers**: Accept the default document numbers assigned by the General Ledger application to your journal when you enter a journal in your ledger. The converted journal in the reporting currency is assigned the same document number. However, if you enter a journal in the reporting currency, the document number assigned to the journal is determined by the reporting currency.
• Sequential Numbering: Enable sequential numbering to maintain the same numbering in your reporting currency and source ledger for journals, other than those journals for Oracle Fusion subledgers. Do not create separate sequences for your reporting currencies. If you do, the sequence defined for the reporting currencies is used. The sequences can cause the document numbers not to be synchronized between the ledger and reporting currencies.

  Note: General Ledger enters a document number automatically when you save your journal if:
  o The Sequential Numbering profile option is set to Always Used or Partially Used.
  o Automatic document numbering sequence is defined.

  If you use manual numbering, you can enter a unique document number.

• Revaluation: Run periodically revaluation in your ledger and reporting currencies as necessary to satisfy the accounting regulations of the country in which your organization operates.

• Account Inquiries: Perform inquires in the reporting currency. You can:
  o Drill down to the journal detail for the reporting currency balance.
  o Drill down to see the source ledger currency journal amounts from any automatically converted journal that was created when the original journal posted.

  Note: Be careful when changing amounts in a reporting currency, since the changes are not reflected in your source ledger. Making journal entry changes to a reporting currency makes it more difficult to reconcile your reporting currency to your source ledger. In general, enter or change your journals in your source ledger, and then allow posting to update the reporting currency.

  Note: If you use journal or subledger level reporting currencies, statistical journals are generated for your reporting currencies, but the journals are not converted.

Business Units

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. A business unit can process transactions on behalf of many legal entities. Normally, it has 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 do the following:

• Assign your business units to one primary ledger. For example, if a business unit is processing payables invoices, then it must post to a particular ledger. This assignment is required for your business units with business functions that produce financial transactions.

• Use a business unit as a securing mechanism for transactions. For example, if you run your export business separately from your domestic sales business, then 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 provides the following advantages:

• Enables flexible implementation
• Provides consistent entity that controls and reports on transactions
• Shares 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 share reference data, such as payment terms and transaction types, across business units, or you can have each business unit manage its own set depending on the level at which you want to enforce common policies.

In summary, use business units for:
• Management reporting
• Transaction processing
• Transactional data security
• Reference data sharing and definition

Brief Overview of Business Unit Security
A number of Oracle Fusion Applications use business units to implement data security. You assign roles like Accounts Payable Manager to users to permit them to perform specific functions, and you assign business units for each role to users to give them access to data in those business units. For example, users who have been assigned a Payables role for a particular business unit, can perform the function of payables invoicing on the data in that business unit. Roles can be assigned to users manually using the Security Console, or automatically using provisioning rules. Business Units can be assigned to users using the Manage Data Access for Users task found in Setup and Maintenance.

Business Functions

A business unit can perform many business functions in Oracle Fusion Applications.

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
• Order fulfillment orchestration
• Payables invoicing
• Payables payments
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 isn't 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. In such cases, any segment that allows the identification of associated revenue and costs can be used as a profit center identification. The segment can be qualified as the Cost Center Segment.

However, there are 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 doesn't 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

The following figure shows an example of a business unit hierarchy.

Oracle Fusion applications facilitates independent balance sheet rollups for legal and management reporting by offering up to three balancing segments. Hierarchies created using a second or third balancing segment can provide the divisional results. For example, it's possible to define second or third balancing 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.

Source Systems
How You Set up Source Systems

This topic explains source systems and how to set up a source system.

You can set up source systems to enable users to identify the source of the data they are importing. You can specify whether the source system is a spoke system, such as a legacy system, or a purchased system, such as data from a third party provider. You can also specify what types of entities the source system contains. For example, you can specify that a source system will contain customer data.

You can configure the following for a source system:

- Source system code, name, and description
- Source system type
- Enable for Items, Trading Community Members, Order Orchestration and Planning, and Assets

Source System Code, Name, and Description

You can create a source system code to uniquely identify the source system. Source system codes are used by the application to create references between source IDs and the Oracle Engagement Cloud database IDs.

Note: Ensure you update the source system code before you create the source system.

Source System Type

You must set up a source system as either a spoke system or a purchased system.

Enable for Items, Trading Community Members, Order Orchestration and Planning, and Assets

You can select one or more of the following entity types to import from the source system into the Oracle Engagement Cloud database:

- Items
- Trading Community Members
- Order Orchestration and Planning
- Assets

You must enable the correct entity types because each import UI filters source systems based on their entity type. For example, if you set up a source system for Trading Community Members, Items, and Assets, then the source system can be selected as a data source only in this UI and not in different UI.

Source System Entities

Source system entities are entities that you can import using a specified source system, such as addresses and parties. When you import data from a source system, all the entities in the source system data are also imported. You can select multiple source references in the Manage Source System Entities task to allow multiple source system records to map to a single record.
FAQs for Source Systems

What happens if I allow multiple source system references?
When you import data from a source system, you can merge multiple or duplicate source system records and create one record in the Oracle Engagement Cloud. This is referred to as allowing multiple source system reference.
If you don't allow multiple source system references, then for every source system record, a duplicate record is created in Oracle Engagement Cloud.

Import Person and Organization

Data Import Objects: Explained
Data import objects are business entities, such as competitors, partners, or resource teams that can be imported into the registry. You select the business entity or data import object when creating a data import batch.

Data import process
The data import batch process changes depending on the import object selected. The following sets of business objects have the same import process flow:

1. Customer, reference, competitor, and custom party: You can check for duplicates, or deduplicate the batch, before importing the batch. You can deduplicate within the import batch as well as between the import batch and the registry.
2. Employee resource, resource team, partner, and partner contact: You cannot deduplicate within the import batch or registry data.

When creating the data import batch, you can:

- Preview data before it is import.
- Specify if addresses will be cleansed before import.
- Set how many errors are allowed before the import is terminated.

Supplier Definition

Create a Supplier and Supplier Site
Creating suppliers and supplier sites is an essential part of the procurement process. A supplier is modeled as a global entity. It is not created within a business unit or any other organizational context. A procurement business unit establishes a relationship with a supplier through the creation of a site which maintains internal controls for how to procure to pay transactions are executed with the supplier.

1. Within the application, navigate to the Suppliers > Create Supplier task.
2. On the Create Supplier dialog box, enter:
   - Name
   - Tax Country
   - Tax Registration Number
3. Click **Create**.
4. On the Edit Supplier page, Profile tab, enter:
   - Supplier Type
5. On the Edit Supplier page, Addresses tab, click the **Create** icon.
6. On the Create Address page, enter:
   - Address Name
   - Country
   - Address Line 1
   - City
   - County
   - State
   - Postal Code
   - Language
   - Address Purpose
     Select all applicable boxes. At a minimum select Purchasing.
7. Click **Save and Close**.
8. With your supplier selected, open the Sites tab and click the **Create** icon.
9. On the Create Site page, enter:
   - Address Name
     Select the address for this supplier site.
10. Click **Save**.
11. Click the Receiving subtab and enter:
    - Receipt Routing
12. Click the Site Assignments subtab and click **Autocreate Assignments**. This may only be appropriate for your first site. Other sites may require manual creation.
13. Click **Save and Close**.
14. With your supplier selected open the Contacts tab and click the **Create** icon.
15. On the Create Contact page, enter:
   - First Name
   - Last Name

**Note:** The Country field automatically defaults to the country set in your Work Location, as seen in the Personal Information page, Employment Details tab.
Email
Select Administrative contact check box
16. Click the Create icon.
17. In the Contact Addresses region, click the Select and Add icon:
   Select the contact address.
   Click Apply.
   Click OK.
18. In the User Account region, click the Create user account check box. Accept all the applicable roles for this contact.
19. Click Save and Close.
20. Click Save and Close.

Supplier Numbering

The Procurement Application Administrator configures supplier numbering. Suppliers created through the Create Supplier task flow, through the supplier registration process, or through supplier import, are automatically numbered. The starting supplier number is defined in the Specify Supplier Numbering Setup page. The predefined default number is 1. The supplier number increments with each additional supplier created.

The next supplier number can be updated at any time, not just during initial setup. This can be used, for example, to skip a range of supplier numbers. The application validates that the next supplier number specified is not already used.

Related Topics
- Create Suppliers with the Import Suppliers Process

Define Procurement Agents

Configure procurement agents to enable access to information such as purchasing documents, suppliers, approved supplier list entries, and business intelligence spend data.

1. Navigate to the Manage Procurement Agents task and click the Go To Task icon.
2. The Manage Procurement Agents page opens. Click the Create icon.
3. The Create Procurement Agents page opens: Select your Procurement BU.
4. Enter the user ID of the agent into the Agent field.
5. Select your Requisitioning BU.
6. In the Agent Access region, enable your choice of access rights for this agent:
   a. Manage Requisitions
   b. Manage Purchase Orders
   c. Manage Purchase Agreements
      Enable access to blanket purchase agreements and contract agreements.
   d. Manage Negotiations
      Enable access to Sourcing negotiations, if implemented by your organization.
7. Verify that Allowed is checked for all Actions that you intend for this agent:
   a. Manage Catalog Content
Enable access to catalog content. This action allows an agent to add or update blanket purchase agreement line information as part of the collaborative catalog authoring.

b. Manage Suppliers

Enable access to create and update supplier information.

c. Manage Approved Supplier List Entries

Enable access to create and update approved supplier lists.

8. Click **Save and Close**.
9. Click **Done**.

**Note:** For more details on Define Procurement Agents, see the Define Purchasing Configuration chapter of the “Oracle Procurement Cloud Implementing Procurement Guide.”

### Procurement Agents

Use the Manage Procurement Agents task to manage procurement agents, including defining an agent’s access to procurement functionality within a procurement business unit.

Find the task in the Procurement Foundation and Payables functional areas.

The following predefined procurement roles are controlled by procurement agent access configuration:

- Buyer
- Catalog Administrator
- Category Manager
- Procurement Contracts Administrator
- Procurement Manager
- Supplier Administrator
- Supplier Manager
- Supplier Qualification

### Procurement BU

Assign the agent to one or more procurement business units (BU).

### Action

Enable the agent with access to one or more procurement actions for each procurement business unit.

- Manage Requisitions: Enable access to purchase requisitions.
- Manage Purchase Orders: Enable access to purchase orders.
- Manage Purchase Agreements: Enable access to blanket purchase agreements and contract agreements.
- Manage Negotiations: Enable access to Sourcing negotiations, if implemented by your organization.
- Manage Sourcing Programs: Enable access to track and manage sourcing programs.
- Manage Catalog Content: Enable access to catalog content. This includes local catalogs, punchout catalogs, content zones, smart forms, information templates, and collaborative authoring.
- Manage Suppliers: Enable access to create and update supplier information.
• Manage Supplier Qualifications: Enable access to initiatives, qualifications, and assessments, if Supplier Qualification is implemented by your organization.
• Manage Approved Supplier List Entries: Enable access to create and update approved supplier lists.
• Analyze Spend: Used by the business intelligence functionality to enable access to view invoice spend information.

Access to Other Agents’ Documents
Assign an access level to documents owned by other procurement agents for each procurement business unit.

>Note: An agent can perform all actions on their own documents as long as they have procurement BU access.

• None: The agent has no access to documents owned by other agents.
• View: Permits the agent to search and view other agents’ documents.
• Modify: Permits the agent to view, modify, delete, and withdraw other agents’ documents.
• Full: Permits the agent full control of other agents’ documents. This includes the view, modify, delete, withdraw, freeze, hold, close, cancel, and finally close actions.

Related Topics
• How You Manage Procurement Agent Security

Set Up a Supplier for Contract Manufacturing
In contract manufacturing, the contract manufacturer is modeled as a regular supplier. The original equipment manufacturer (OEM) must define the following to set up the supplier:

• A contract manufacturer must be defined as a **Supplier**. To do this, in the Setup and Maintenance work area, use the following:
  o Offering: Manufacturing and Supply Chain Materials Management
  o Functional Area: Manufacturing Master Data
  o Task: Manage Suppliers

• Each contract manufacturer’s manufacturing site must be defined as a supplier site. You must assign a procurement business unit to each site. This is the organization authorized to provide procurement services for the site.

For general details about supplier setup and setup steps common to all SCM offerings, refer to the Implementing Common Features for SCM guide.

Locations

A location identifies physical addresses of a workforce structure, such as a department or a job. You create and manage locations using the Manage Locations task in the Workforce Structures work area.
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 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.

Note the following:

- 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:

- Download a spreadsheet template
- Add your location information to the spreadsheet
- Upload directly to your enterprise configuration

You can upload the spreadsheet multiple times to accommodate revisions.

**Related Topics**

- Upload Workforce Structures Using a Spreadsheet

## FAQs for 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 create or edit a location?

The calendar events that you created for the geographic node start to apply for the location and may impact the availability of worker assignments at that location. You manage locations using the Manage Locations task in the Workforce Structures work area.

The geographical hierarchy nodes available for selection on the Locations page display from a predefined geographic hierarchy.

**Related Topics**

- How an Employee’s Schedule Is Determined

### What happens if I select an inventory organization when I am creating or editing a location?
The location is available for selection in purchase documents of that inventory organization in Oracle Fusion Inventory Management. If you don’t select an inventory organization, then the location is available in purchase documents across all inventory organizations.

### 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.

### How can I associate a location with an inventory organization?
From the Oracle Fusion Global Human Resources, go to the Manage Locations page. Use the Manage Locations task in the Workforce Structures work area.

To appear on the Create or Edit Location pages, your inventory organization must be effective on today’s date and must exist in the location set that you selected.
Facilities

Quick Setup

Prerequisites to Running Quick Setup for the Facilities Functional Area

Before you can run Quick Setup to set up the SCM common components like calendars, UOM classes and inventory organizations, you must ensure the following:

- There is at least one Financials business unit with the Materials Management function assigned.
- You have at least one organization location in Oracle Fusion HCM. You can use the Manage Inventory Locations task in Setup and Maintenance work area to set this up.

Why can't I select some UOM classes using Quick Setup?

In the Quick Setup flow, you can't select Unit of Measure (UOM) classes that already exist in your Oracle Fusion instance. Existing UOM classes are disabled to avoid data being overwritten. If the UOM class data already exists in your Oracle Fusion instance, then you can't perform setup on this existing data using Quick Setup. The flow also checks whether any of the units already exist in another class. If so, the UOM class in Quick Setup is disabled to prevent you from selecting a class that would result in overwriting existing units.

If no units exist in the Oracle Fusion instance, you can select the UOM classes in the second train stop of the Quick Setup flow.

Why can't I start or run Quick Setup?

You can't run Quick Setup if you haven't completed the prerequisite steps required to run the flow.

Here are the prerequisites:

- Create at least one business unit with the Materials Management function assigned.
- Create at least one organization location in Oracle Fusion HCM. You use the Manage Inventory Locations task in the Setup and Maintenance work area.

Facility Shifts, Workday Patterns, and Schedules
Schedule Components: How They Fit Together

Schedules are comprised of workday patterns and exceptions. Workday patterns are comprised of shifts. You can also create exceptions, nonworking days, to the schedules.

Begin by creating shifts and then assigning those shifts to workday patterns. Next, create a schedule that is a collection of workday patterns and any exception dates.
Shift
A shift is a period of time, typically expressed in hours, and it can be defined by a start time and an end time, or a duration. A shift can be for a work period or an off period. You can create time, duration, and elapsed shifts.

Workday Pattern
A workday pattern is a collection of shifts for a specific number of days. You can create time, duration, and elapsed workday patterns.

Exception
An exception is a record of a date that overrides the availability of a resource to which a schedule has been assigned. For example, a resource is assigned a schedule that includes December 25 as a working day. An exception can be created for December 25 and applied to that schedule to override resource availability for that date. Exceptions can also be for a date time period such as 9 a.m. to 11 a.m. on December 25th.

Schedule
A schedule is defined by a start date, an end date, and a sequence of workday patterns to be followed between those dates. A schedule can also contain exception dates that override the availability of resources to which the schedule is assigned. Quarter types such as 4-4-5, 4-5-4 are supported.

Managing Shifts: Examples
A shift is a period of time, typically expressed in hours, that is used to build workday patterns. Workday patterns are used to build schedules. You should model only the dates you need because you can always extend the end date. This allows for smaller volumes of initial data and improved performance. There are multiple types of shifts you can create. The following scenarios illustrate each type.

Managing Time Shifts
Next month you are adding a second shift for your manufacturing operations. This new shift will start just after your regular first shift. You can create a time shift that starts at 4:00 p.m. and ends at 12:00 a.m. There are restrictions in updating existing shifts and patterns. Shifts and patterns cannot be updated if the change affects a schedule, that is they are associated to a schedule. If a shift is created but not assigned to a pattern (or assigned to a pattern but the pattern is not assigned to a schedule) it can be updated. If a pattern is created and not assigned to a schedule it can be updated.

Managing Time Shifts with Punch Details
Your division has decided that the employees in the office must clock in and out for lunch starting next week. All employees will take the same lunch hour. Add punch shift details to the existing shift so that employees punch in at 8:00 a.m.; they punch out for lunch from 11:30 a.m. to 12:30 p.m.; they punch back in at 12:30 p.m.; and they punch out for the day at 5:00 p.m.

Managing Time Shifts with Flexible Details
Jorge Sanchez is a contractor who is starting work in your department next week. His hours will be flexible, so you need to create a new time shift with flexible details that he can use to record his time. He will have a flexible start time from 7:00 a.m. to 9:00 a.m. and a flexible end time from 4:00 p.m. to 6:00 p.m. His core work hours will be from 9:00 a.m. to 4:00 p.m.
Managing Duration Shifts

One of the divisions in your organization does not use fixed start and end times for its daily shifts; the division only records the total duration of the shift and indicates if resources are available or not during that time. All of the employees in the division are available for 24 hours straight, and then they are not available for the next 24 hours. You should create a duration shift that indicates that resources are available for 24 hours, and create a second duration shift that indicates that resources are not available for 24 hours.

Managing Elapsed Shifts

The employees in the Human Resources department all work 8 hours a day, but the start and end times vary by employee. Some employees start at early as 6:00 a.m., while others don’t start until 9:00 a.m. Create an elapsed shift with a duration of 8 hours, where all employees are assumed to be available for the number of hours in the shift at any time during the day.

Managing Workday Patterns: Examples

A workday pattern is a collection of shifts for a specific number of days. There are multiple types of workday patterns you can create. The following scenarios illustrate each type.

Managing Time Workday Patterns

Your department works a Monday through Friday workweek with 8 hour shifts each day. Time patterns always have time shifts. That is, the shift will have start time and end time. You can create a time workday pattern with a length of 7 days and details of an 8 hour time shift for days 1 through 5. Days 6 and 7 are considered nonworking days.

Managing Duration Workday Patterns

A new group of employees starts next month, and each employee will work a schedule where he or she is available for 10 hours, and then not available for the next 16 hours, and then available for 10 hours again, and so on. This pattern starts on midnight of the first day of the next month. Create a duration workday pattern with a 10-hour available duration shift, followed by a 16-hour not available duration shift. Do not specify the pattern length or start and end days, and the pattern will repeat for the length of the schedule to which it is associated.

Managing Elapsed Workday Patterns

In the summer, several divisions in your organization work only 4 hours on Fridays. They work extended hours on Wednesdays and Thursdays to cover the 4 hours they will not work on Fridays. Create an elapsed workday pattern with a length of 7 days. Days 1 and 2 will have an 8-hour shift assigned, while days 3 and 4 will have a 10-hour shift assigned. Finally, day 5 will have a 4-hour shift assigned. As in the time workday pattern, days 6 and 7 are considered nonworking days.

Inventory Organizations

An inventory organization is a logical or physical entity in the enterprise that's used to store definitions of items or store and transact items.
You can select these usages in the inventory organization's properties:

- Item management
- Item and inventory management

**Item Management**

Inventory organizations used for item management, which are the same as item organizations, store only definitions of items. Use inventory organizations for item management when the storage or movement of inventory doesn't need to be physically or financially tracked. For example, in a retail implementation you can create an inventory organization for item management to store the names of items that are listed by and sold through each retail outlet, while a different system tracks physical inventory and transactions. If it's necessary in the future, you can change an inventory organization's usage from item management to item and inventory management in the inventory organization's properties.

**Item and Inventory Management**

Inventory organizations used for item and inventory management store and transact items, in addition to item definitions. An inventory organization used for item and inventory management is associated with one business unit, one legal entity, and one primary ledger. Use inventory organizations for item and inventory management when the storage or movement of inventory needs to be physically and financially tracked. Inventory organizations used for item and inventory management can represent facilities such as manufacturing centers, warehouses, or distribution centers. You can't change an inventory organization's use from item and inventory management to item management.

**Guidelines for Using Inventory Organization**

In Oracle Fusion, storage facilities, warehouses, and distribution centers are implemented as *inventory organizations*. Inventory organizations are:

- Managed by a *business unit*, with the materials management business function enabled.
- Mapped to a *legal entity* and a primary ledger.

Two types of inventory organizations exist.

- *Manufacturing facilities*
- *Storage facilities*

Storage and manufacturing facilities are related to other organizational entities through a business unit that stores, manufactures, and distributes goods through many factories, warehouses, and distribution centers. The material parameters are set for both the facilities, enabling movement of material in the organization. This business unit has the business function of Materials Management enabled. Oracle Fusion Applications permit many inventory organizations to be assigned to one business unit.

**Distribution Center as an Inventory Organization**

A distribution center can store inventory that's the responsibility of different business units. In this situation, assign an inventory organization to each business unit as a representation of the inventory in the distribution center. The multiple inventory organizations representing the inventory are defined with the same location to show that they're a part of the same distribution center.
In the following figure the two business units, Air Compressors and Air Transmission, share one distribution center in Atlanta. The two inventory organizations, Air Compressors and Air Transmission represent the inventory for each business unit in the Atlanta distribution center and are both assigned the Atlanta location.

Legal Entities Own Inventory Organizations

A legal entity owns the inventory located in a storage or manufacturing facility. This ownership is assigned through the relationship of the inventory organization representing the inventory and the legal entity assigned to the inventory organization. The legal entity assigned to the inventory organization shares the same primary ledger as the inventory organization’s business unit.

The inventory is tracked in the inventory organization owned by the legal entity of which the business unit is part. All transactions are accounted for in the primary ledger of the legal entity that owns the inventory.

This figure illustrates the inventory owned by InFusion Air Quality legal entity. The InFusion Air Quality legal entity is associated with the Air Compressors business unit, which is associated with the two Air Compressors inventory
organizations. Therefore, InFusion Air Quality legal entity owns the entire inventory in both the Dallas and Atlanta locations.

The default legal entity assigned to the business unit must be the same as the legal entity assigned to the inventory organization.

Facility Schedules Are Associated with Inventory Organizations
A prerequisite to defining an inventory organization is to define a facility schedule. Oracle Fusion Applications permit you to associate an inventory organization with a schedule.

Facility schedules permit creating workday calendars for inventory organizations that are used in the Oracle Fusion Supply Chain Management product family. For example, use workday calendars in the scheduling of cycle counts and calculating transit time.

Considerations for Inventory Organization Prerequisites
You can create a new inventory organization, or select an existing organization to define as an inventory organization.

Before creating inventory organizations:
- Set up inventory organization dependencies
- Plan inventory organization parameters

Setting Up Inventory Organization Dependencies
When you create an inventory organization, you must associate it to dependencies, such as business units and legal entities. For this reason, create these dependencies before creating an inventory organization.

Planning Inventory Organization Parameters
Before creating an inventory organization, plan the inventory organization's parameters
Consider the following when planning to configure an inventory organization's parameters
- Which schedule to use
- Which inventory organization to serve as the item master organization
• Whether to configure locator control and if so, the level at which to enforce the locator control
• How you want to configure movement request settings such as pick slip batch size and replenishment movement request grouping

Consider the size of your operation, your usage of subinventories, and the type of labor or equipment required when considering whether you want to use organization- or subinventory-level replenishment movement request grouping.

• How you want to configure lot, serial, and packing unit generation settings

To make appropriate choices for these settings, you should be familiar with:

  o Your company's guidelines for creating lot names, serial numbers, and packing unit numbers
  o Whether your company requires you to assign the same lot number to multiple items in the same organization, or a specific lot number to only one item in the same organization
  o Whether your company requires you to place purchase order or shipping order material under lot control

• How you want to configure item sourcing details, such as the picking rule to use, and whether to specify the inventory organization as a logistics services organization

How Rounding the Reorder Quantity Affects Min-Max Planning Reorder Calculations

When you specify to round reorder quantities, min-max planning reorders for item subinventories are automatically rounded up or down.

Settings That Affect Rounding the Reorder Quantity

Reorder quantities for an item subinventory are calculated based on:

• The setting that you select for the Round Order Quantity parameter on the Manage Inventory Organization Parameters page, General tab, of the inventory organization containing the item subinventory

• The value that you specify for the Fixed Lot Multiple text box on the Add Item to Subinventory window

How Rounding the Reorder Quantity Affects Min-Max Planning Reorder Quantity Calculations

If you enable rounding the reorder quantity for the inventory organization, and specify the fixed lot multiple for the item subinventory, the reorder quantity is rounded up. If you disable rounding the reorder quantity for the inventory organization, and specify the fixed lot multiple for the item subinventory, the reorder quantity is rounded down.

Note: To round reorder quantities, you must specify a fixed lot multiple.

Example: Rounding the Reorder Quantity

Assume that the reorder quantity is 24. If you enable rounding the reorder quantity and specify 10 for the fixed lot multiple, the reorder quantity is rounded up to 30. If you disable rounding the reorder quantity and keep the fixed lot multiple at 10, the reorder quantity is rounded down to 20.
Considerations for Selecting Lot Number Uniqueness Control

Use the Inventory Organization Parameters page to specify if lot numbers should be unique for an item.

Select one of these lot number uniqueness control options to apply to the items in your inventory organization:

- No uniqueness control
- Across items

When you perform transactions, Oracle Fusion Inventory Management checks the lot number uniqueness control to generate lot numbers.

**No Uniqueness Control**

Choose this option if you don’t want to establish lot number uniqueness. When selected, you can assign the same lot number to multiple items in the same organization and across organizations. Organizations that choose No uniqueness control can enter any lot as long as the lot doesn’t exist in any organization that’s set to Across items.

**Across Items**

Choose this option to control lot number uniqueness across items. With this option, you can assign a specific lot number to only one item in the same organization and across organizations. The application verifies that the lot number doesn’t exist for any other item in any other organization.

This table shows what’s allowed:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Uniqueness Setting</th>
<th>Item</th>
<th>Lot Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>No control</td>
<td>INV-101</td>
<td>LOT2</td>
</tr>
<tr>
<td>M3</td>
<td>No control</td>
<td>INV-102</td>
<td>LOT2</td>
</tr>
<tr>
<td>M4</td>
<td>No control</td>
<td>INV-103</td>
<td>LOT2</td>
</tr>
<tr>
<td>M5</td>
<td>No control</td>
<td>INV-104</td>
<td>LOT2</td>
</tr>
</tbody>
</table>

This table shows what’s not allowed:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Uniqueness Setting</th>
<th>Item</th>
<th>Lot Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>No control</td>
<td>INV-101</td>
<td>LOT1</td>
</tr>
<tr>
<td>M3</td>
<td>No control</td>
<td>INV-102</td>
<td>LOT1</td>
</tr>
<tr>
<td>M4</td>
<td>No control</td>
<td>INV-103</td>
<td>LOT1</td>
</tr>
<tr>
<td>Organization</td>
<td>Uniqueness Setting</td>
<td>Item</td>
<td>Lot Number</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------</td>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>M5</td>
<td>No control</td>
<td>INV-104</td>
<td>LOT1</td>
</tr>
</tbody>
</table>

It is important to understand that when you use this setting for an organization, the same lot number can't exist for any other item in any other organization. However, it's possible to have the same item with the same lot number in multiple organizations.

**Set Up a Supplier for Contract Manufacturing**

In contract manufacturing, the contract manufacturer is modeled as a regular supplier. The original equipment manufacturer (OEM) must define the following to set up the supplier:

- A contract manufacturer must be defined as a **Supplier**. To do this, in the Setup and Maintenance work area, use the following:
  - Offering: Manufacturing and Supply Chain Materials Management
  - Functional Area: Manufacturing Master Data
  - Task: Manage Suppliers

- Each contract manufacturer's manufacturing site must be defined as a supplier site. You must assign a procurement business unit to each site. This is the organization authorized to provide procurement services for the site.

For general details about supplier setup and setup steps common to all SCM offerings, refer to the [Implementing Common Features for SCM](#) guide.

**FAQs for Inventory Organizations**

**What's an item subinventory?**

An item subinventory is an association of an item with a subinventory that's created when you add an item to a subinventory. You might want to restrict an item to a subinventory to store it with other items that have a similar size, volume, weight, specific storage requirement such as refrigeration, or the type of labor and equipment used to create the item. You also add an item to a subinventory to either perform min-max planning on the item, or include the item in an ABC classification set for ABC analysis.

**What happens if I select the supplier item sourcing type for replenishment?**

Items are replenished from an external supplier.

**What happens if I create an inventory organization as a logistics services organization?**

The inventory organization is not costed, and shipment lines from different logistics service provider customers cannot be packed in the same packing unit.
Item Organizations

An **item organization** defines an item when inventory balances aren't stored and inventory storage or inventory movement isn't reflected in the Oracle Fusion Applications. For example, you would use an item organization in a retail scenario, if you need to know the items that are listed by and sold through each retail outlet even though inventory and transactions are recorded in another system. In sales applications, item organizations are used to define sales catalogs.

**Note:**
- Items belong to an item organization.
- Item attributes that are associated with financial and accounting information are hidden from the item if it exists within the item organization.
- Item organizations can be changed by administrators to an inventory organization by updating the necessary attributes. There's no difference in the way items are treated in these two types of organizations except that there can't be any financial transactions in the downstream applications for items that are assigned to an item organization.

Item Master Organizations

An item master organization lists and describes items that are shared across several **inventory organizations** or **item organizations**.
The following example shows the choice between inventory organizations that track inventory transactions, stored in two warehouses, and item organizations that just track items, listed in two sales catalogs.

For the most efficient processing, you should:

- Have a single item master.
- Include an item and its definition of form, fit, and function only once in the item master.
- Separate the item master organization from organizations that store and transact items.

**Note:** Oracle Fusion permits multiple item masters, however, use this capability cautiously. If you acquire a company, there may be value in keeping the old item master for a transition period. If you manage your subsidiaries as separate businesses, there may be reduced value in a single item master.
FAQs for Item Organizations

How can I change an item organization to an inventory organization?  
Change the value in the **Usage** field to **Inventory Organization** on the Edit Item Organization page. Upgrading an item organization into an inventory organization does not require a profit center business unit.

How can I define a profit center business unit for an item organization?  
On the **Edit Item Organization** page, change the value in the **Usage** field to an inventory organization.
6 Security

Overview of Security

Oracle Enterprise Resource Planning Cloud (Oracle ERP Cloud) and Oracle Supply Chain Management Cloud (Oracle SCM Cloud) are secure as delivered; they limit access to one initial setup user. To enable application users to access application functions and data, you perform tasks in these task lists, as appropriate:

- Define Security for Financials
- Define Security for Procurement
- Define Users and Security for Product Management
- Define Security for Project Execution Management
- Define Security for Supply Chain Management
- Manage Data Access for Users
- Manage Job Roles
- Manage Duties

This topic introduces the tasks in these task lists. For more information on ERP and SCM security setup and task instructions, see these guides:


Note: You can perform most tasks in these task lists both during implementation, and later as requirements emerge.

Manage Job Roles

The Oracle ERP Cloud and Oracle SCM Cloud security reference implementations provide many predefined job roles. You can perform the Manage Job Roles task to:

- Review the role hierarchy and other properties of a job or abstract role.
- Create custom job and abstract roles.
- View the roles assigned to a user.
- View the users who have a specific role.

A user with the IT Security Manager or Application Implementation Consultant job role performs the Manage Job Roles task.

Manage Duties

The Oracle ERP Cloud and Oracle SCM Cloud security reference implementations provide many predefined duty roles. You can perform the Manage Duties task to:

- Review the duties of a job or abstract role.
- Manage the duties of a custom job or abstract role.


• Create custom duty roles.

A user with the IT Security Manager job role performs the Manage Duties task.

Define Data Security

You can manage Oracle ERP Cloud and Oracle SCM Cloud application data by performing tasks in these task lists:

• Define Data Security for Financials
• Define Data Security for Procurement
• Define Data Security for Product Management
• Define Data Security for Project Financial Management
• Define Data Security for Supply Chain Management

You can perform the tasks in these task lists to:

• Manage data access sets that secure ledgers.
• Manage Human Capital Management (HCM) security profiles that facilitate data role assignment for application users.
• Manage data security policies that determine grants of entitlement to a user or role on an object or attribute group.

A user with the IT Security Manager job role performs the tasks in the Define Data Security task lists.

Manage Role Provisioning Rules

You create role mappings to control the provisioning of all types of roles to application users by performing this task. For example, you can create a role mapping to provision the Accounts Payable Specialist role automatically to users that meet criteria specific to accounts payable users.

A user with the IT Security Manager job role performs the Manage Role Provisioning Rules task.

Manage Oracle Social Network Objects

You can determine which business objects in Oracle ERP Cloud are available for social collaboration by performing this task. For example, use this task to enable discussion among Oracle Social Network users about requisitions, purchase orders, invoices, payments, receipts, and other transactions.

A user with the IT Security Manager or Application Implementation Consultant job role performs the Manage Oracle Social Network Objects task.

Note: You can perform this task after you set up and configure Oracle Social Network. If you don’t use Oracle Social Network, you can skip this task.
Securing Oracle SCM Cloud: Highlights

Oracle SCM Cloud is secure as delivered. Securing Oracle SCM Cloud application involves completing the security-related tasks during implementation. You must ensure function security as well as data security for an application.

Implementing Security-Related Tasks

The following guide provides more information about how to implement the various security aspects for Oracle SCM Cloud applications:

- Oracle SCM Cloud Securing Oracle SCM Cloud
7 Approval Management

Overview of Approval Management

Use approval management to define policies that apply to approval workflows. For example, to reflect your own corporate policies, you can specify levels of approval for transactions over a particular amount and determine how the approvals are routed.

Approval management:

- Controls workflows for business objects such as expense reports.
- Enables you to define complex, multistage task routing rules.
- Integrates with the setup in Human Capital Management (HCM) to derive approvers based on the supervisory hierarchy.

To define approval management:

- In the Offerings work area, enable the Approval Routing Administration feature at the offering level so that relevant setup tasks are available.
- In the Setup and Maintenance work area, use the following setup tasks in the Application Extensions or another functional area.
  - Manage Task Configurations
  - Manage Approval Groups

Task Configuration

Manage rule sets and rules that control approval flows.

- To configure a predefined approval policy, select the predefined rule set and click the Edit Task icon.
- To disable a predefined rule set, select the Ignore participant check box for that rule set.
- To edit the rules within a predefined rule set, you can insert, update, or delete while in edit mode.
- You can configure a specific rule to automatically approve a task without sending it 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.
  - Enter APPROVE in the Auto Action field.

Approval Groups

Each approval group includes a set of users that you configure to act on tasks in a certain pattern. Tasks can be defined to get routed to an approval group instead of an individual user.

- You can nest approval groups within approval groups.
- You have two options for defining the group:
o Static: Select the specific users to include in the group.

o Dynamic: Provide the logic to use to determine the users in the group.

Related Topics
- Configure Offerings
- Update Existing Setup Data

Access for Workflow Administrators

Predefined roles provide workflow administration access for specific product families. These roles are assigned by default to predefined job roles. Administrators with these roles can, for example, set up approval rules and manage submitted approval tasks for corresponding product families. One predefined role gives access for all families and isn't assigned by default to any predefined job role.

Predefined Roles

This table lists the predefined roles for workflow administration access and the predefined job roles that they're assigned to.

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Role Name</th>
<th>Role Code</th>
<th>Predefined Job Roles Assigned To</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>BPM Workflow All Domains Administrator Role</td>
<td>BPMWorkflowAllDomainsAdmin</td>
<td>None</td>
</tr>
<tr>
<td>Financials</td>
<td>BPM Workflow Financials Administrator</td>
<td>BPMWorkflowFINAdmin</td>
<td>Financial Application Administrator (ORA_FUN_FINANCIAL_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Higher Education</td>
<td>BPM Workflow Higher Education Administrator</td>
<td>BPMWorkflowHEDAdmin</td>
<td>Higher Education Application Administrator (ORA_HEY_HIGHER_EDUCATION_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Human Capital Management</td>
<td>BPM Workflow Human Capital Management</td>
<td>BPMWorkflowHCMAadmin</td>
<td>Human Capital Management Application Administrator (ORA_HRC_HUMAN_CAPITAL_MANAGEMENT_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Incentive Compensation</td>
<td>BPM Workflow Incentive Compensation Administrator</td>
<td>BPMWorkflowOICAdmin</td>
<td>Customer Relationship Management Application Administrator (ORA_ZCA_CUSTOMER_RELATIONSHIP_MANAGEMENT_)</td>
</tr>
<tr>
<td>Product Family</td>
<td>Role Name</td>
<td>Role Code</td>
<td>Predefined Job Roles Assigned To</td>
</tr>
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<td>-----------------------------------------------</td>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Incentive Compensation Application Administrator (ORA_CN_INCENTIVE_COMPENSATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Procurement</td>
<td>BPM Workflow Procurement Administrator</td>
<td>BPMWorkflowPRCAAdmin</td>
<td>Procurement Application Administrator (ORA_PO_PROCUREMENT_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Project Portfolio Management</td>
<td>BPM Workflow Project Administrator</td>
<td>BPMWorkflowPRJAdmin</td>
<td>Project Application Administrator (ORA_PJF_PROJECTS_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td>Sales</td>
<td>BPM Workflow Customer Relationship Management Administrator</td>
<td>BPMWorkflowCRMAadmin</td>
<td>Corporate Marketing Manager (ORA_MKT_CORPORATE_MARKETING_MANAGER_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Customer Relationship Management Application Administrator (ORA_ZCA_CUSTOMER_RELATIONSHIP_MANAGEMENT_APPLICATION_ADMINISTRATOR_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marketing Analyst (ORA_MKT_MARKETING_ANALYST_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marketing Manager (ORA_MKT_MARKETING_MANAGER_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marketing Operations Manager (ORA_MKT_MARKETING_OPERATIONS_MANAGER_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marketing VP (ORA_MKT_MARKETING_VP_JOB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sales Lead Qualifier (ORA_MKL_SALES_LEAD_QUALIFIER_JOB)</td>
</tr>
<tr>
<td>Supply Chain Management</td>
<td>BPM Workflow Supply Chain Administrator</td>
<td>BPMWorkflowSCMAdmin</td>
<td>Supply Chain Application Administrator (ORA_RCS_SUPPLY_CHAIN...)</td>
</tr>
</tbody>
</table>
Usage of the Roles

If your administrators manage workflow for more than one product family, then you or your security administrator can add the appropriate family-specific roles to custom roles for those users. If your administrators manage workflow for all product families, then add BPM Workflow All Domains Administrator Role to a custom role for those users.

Note:
- Assign BPM Workflow All Domains Administrator Role only if your administrators truly need access for all product families. For multiple product families, but not all, assign instead the roles for the corresponding families.
- To-do tasks are visible to all administrators no matter which role they have for workflow administration access.

Related Topics
- Assign Roles to an Existing User
- Edit Job and Abstract Roles
- Role Copying or Editing

Workflow Notifications

Disable or Enable Workflow Notifications

When workflow tasks are assigned to users, they get notifications through email and the Notifications icon in the global header. Workflow tasks are managed in the Worklist: Notifications and Approvals work area and configured in the Setup and Maintenance work area using the Manage Task Configurations or other approval setup task. If you have the BPM Workflow System Admin Role (BPMWorkflowAdmin) role, you can disable or enable these notifications for all users. For example, you can disable notifications during testing, to avoid sending test notifications to users, and then enable notifications when ready.

When you disable workflow notifications:
- The setting applies only to email notifications that are sent as part of workflow tasks, not to all emails in general.
- Users can still find their workflow tasks in the Worklist: Notifications and Approvals work area.

Setting Notification Mode

To disable or enable workflow notifications:

1. Click the Notifications icon on the global header.
2. Click More Details.
3. In BPM Worklist, click your user name and select Administration.
4. On the Application Preferences page that's on the Administration tab, select a value from the Notification Mode list:
   - All: Email notifications are enabled. Workflow notifications are included in the global header. This is the default value.
   - None: Email notifications and workflow notifications in the global header are disabled.
   - Email: Only email notifications are enabled. New workflow notifications won't appear in the global header.
   - In-app: Workflow notifications in the global header are enabled. Email notifications are no longer sent.

**Note:** If you or another administrator has selected news feed as the default home page layout, then users also get notifications in the Things to Finish section on the home page, as well as the Notifications page. The same mode setting that applies to the notifications in the global header also applies to the Things to Finish section and the Notifications page.

5. Click Save.

### Synchronize Notifications in the Global Header with Workflow Tasks

When workflow tasks are assigned to users, they get an email as well as a notification in the global header. They can also find all of their workflow tasks in the Worklist: Notifications and Approvals work area. The notifications in the global header don't immediately reflect changes to the task status due to actions taken through email, the Worklist: Notifications and Approvals work area, or BPM Worklist. Use the Synchronize Notifications in Global Header scheduled process to update the notifications with the latest task statuses, which are always reflected in the Worklist: Notifications and Approvals work area.

**Note:** If you or another administrator has selected news feed as the default home page layout, then users also get notifications in the Things to Finish section on the home page, as well as the Notifications page. The scheduled process also applies to notifications in these UIs. For example, the Things to Finish section automatically reflects changes made in the global header, but not changes made through email until the scheduled process runs.

### Scheduling the Process

In the Scheduled Processes work area, submit the Synchronize Notifications in Global Header process with a defined schedule. For example, schedule the process to run every two hours.

### Effects of the Synchronization

After the scheduled process runs, notifications in the global header might move from the Pending Notifications list to the All Notifications list. For example:

1. A notification is pending a user’s approval.
2. The user approves the task using the Worklist: Notifications and Approvals work area. The task status changes, but the notification in the global header is still in the Pending Notifications list.
3. After synchronization, the notification moves to the All Notifications list because the user has changed the task status to Approved, and the notification is no longer pending action.

   If the news feed home page layout is selected, then after synchronization, the notification:
   - Is removed from the list in the global header
Is no longer a card in the Things to Finish section
- Moves from the Assigned to Me tab on the Notifications page to the All tab

The scheduled process doesn’t update the title of notifications in the global header. Similar to email subjects, the notification titles are static.

Related Topics
- Submit Scheduled Processes and Process Sets

Workflow Email Notification Setup

Overview of Setting Up Workflow Email Notifications

Email notifications are enabled by default and sent to appropriate users as part of a workflow process. Each workflow task has default email setup, for example, to send emails to assignees whenever they’re assigned a task. You don’t need to do anything for the email notifications to work. To adjust the predefined setup, you generally use the Manage Task Configurations or other approval setup task in the Setup and Maintenance Work Area.

Access to Email Notifications Setup

You do most of the setup for email notifications in the Notifications subtab for the specific workflow task that you’re configuring. All setup on the Notifications subtab applies to email notifications. A few settings also apply to workflow notifications that appear in the global header or are sent through any other configured channels, such as instant messaging.

1. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions or another functional area
   - Task: Manage Task Configurations or another approval setup task
2. In BPM Worklist, on the Task Configuration tab, select the workflow task to configure and click the Edit task icon in the Tasks to be configured toolbar.
3. Open the Notifications subtab and make your changes.
4. Click the Commit task icon in the Tasks to be configured toolbar when you’re ready to deploy your changes.

The following figure shows the Task Configuration tab, with the first task in the Tasks to be configured pane selected, the Edit task icon clicked, and the Notifications subtab open. In this example, the Task Status column indicates that
email notifications are sent whenever the selected task is assigned to anyone, and when the task is complete or results in error.

What You Can Set Up

You can, for example:

- Define when email notifications are sent, and to whom
- Add content to email headers
- Define what appears in the From field for the emails
- Set an address to send all email notifications to during testing

You can click the Expand More icon on the Notifications subtab to open the More section and see other setup options for email notifications. In general, leave the default settings in this section for every workflow task. Settings in this section include the following check boxes, which, if selected, would:

- **Make notification secure (exclude details):** Exclude business transaction details in email notifications.
- **Hide End User Web URL in notifications:** Remove the default first line in the email body: Access this task in the Workspace Application or take direct action using the links in this email. This line includes a link that opens BPM Worklist. It is recommended to select this check box.
- **Make notification actionable:** Include links in email notifications that users can click to directly take action, for example to approve or reject.
• Send task attachments with email notifications: Include files attached to the task as attachments in the email notifications.

Define When to Send Workflow Email Notifications

By default, each workflow task is set up to send email notifications as part of the approval process. For any workflow task, you can change the setup to determine when email notifications are sent, and to whom.

Setting Up Notification Scenarios

To define the scenarios for sending email notifications:

1. Navigate to the Notifications subtab in BPM Worklist for the task you want to edit.
2. Click the Add Notification icon to enable additional notification scenarios, or edit existing rows directly.

   a. In the Task Status column, select when to send the email, for example when the task has expired. Aside from the actions or statuses available to end users, you can also select any of the following:

      • Alerted: Usually, an error condition that can be fixed. The task is assigned to the error assignee, or someone else if the task doesn't have error assignees.
      • Update: Whenever the task is updated, for example by adding a comment or attachment, without affecting the approval status or routing.
      • Update Outcome: Whenever the outcome of the task is updated, for example approved or rejected.
      • All other actions: Any action that's not already in the list of values.

   b. In the Recipient column, select whom to send the email to.

      • Assignees: The users or groups whom the task is currently assigned to.
      • Initiator: The user who created the task.
      • Approvers: The users who already approved the task as part of a sequential approval chain.
      • Owner: The task owner, who’s responsible for the business process that the task is related to.
      • Reviewer: The user who can only add comments and attachments to a task.

3. To disable specific notification scenarios, select a row and click the Delete Notification icon.
4. Click the Save icon in the Tasks to be configured toolbar.
The following figure shows the table on the Notifications subtab with predefined scenarios for a workflow task. In this example, email notifications are sent to assignees whenever the task is assigned to them. The task initiator also gets a notification when the task is complete, and administrators are notified if the task results in error.

<table>
<thead>
<tr>
<th>Task Status</th>
<th>Recipient</th>
<th>Notification Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign</td>
<td>Assignees</td>
<td></td>
</tr>
<tr>
<td>Complete</td>
<td>Initiator</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>Owner</td>
<td></td>
</tr>
</tbody>
</table>

Setting Up Email Reminders

To send email reminders in addition to the defined notification scenarios:

1. Select the **Enable Reminder** check box.
2. From the **Repeat** list, select the number of reminders to send, for example 2.
3. From the **Initiating Action** list, specify if the reminder is sent based on when the task is assigned to a user or when the task expires.
4. Define a frequency for the time between reminders, for example 3 days.
5. Click the **Save** icon in the **Tasks to be configured** toolbar.

The following figure shows the reminder setup with the given sample settings, along with After Assignment selected as the initiating action. For this example, an email reminder is sent three days after the user is assigned the task. One more reminder is sent three days after that, if the user still hasn't acted on the assigned task.

**Related Topics**

- Actions and Statuses for Workflow Tasks
- Define People to Support Workflow Tasks
Add Header Content to Workflow Email Notifications

Each workflow task is configured with scenarios for sending email notifications as part of the approval process. For each notification scenario in the Notifications subtab, the Notification Header column determines what’s in the email header, a region that appears before the email body.

- By default, all predefined notification scenarios have emails with blank headers.
- Any notification scenarios you add in the Notifications subtab would have the following header value:
  \[ \text{concat(string('Task '), /task:task/task:title, string(' requires your attention.'))} \]. It is recommended to change that value to `null`.

For some workflow tasks, you can enable configurable email notifications based on report layouts to be used instead of the standard email notifications. The Notification Header setting doesn’t apply to those configurable email notifications.

Adding Company Name or Logo

If you do want to add, for example, your company name or logo to the email header:

1. Navigate to the Notifications subtab in BPM Worklist for the task you want to edit.
2. For the specific notification scenario on the Notifications subtab, click the icon in the Notification Header column.
3. In the Edit Notification Message dialog box, delete any existing content and enter the following in the Notification Message field.
   - **For company name:** Enter text in single quotes, for example ‘Oracle’. You can also use HTML formatting, for example ‘<h2>Oracle</h2>’.
   - **For company logo:** Enter the URL to your logo, following this syntax: ‘<img src="https://cloud.oracle.com/res/images/header/oracle-cloud-logo.png" width="230" height="69" alt="Oracle Logo">’. Replace the URL and alternative text with your own.
4. Click the Save icon in the Tasks to be configured toolbar.

Related Topics

- Add a Branding Logo and Change Other Shared Components in Workflow Notifications

Set Up the From Field in Workflow Email Notifications

By default, the From field in workflow email notifications shows an email address without a sender name. You can’t change the email address, but you can specify the sender name. For example, if you indicate that Your Company is the text to display, then the From field shows: `Your Company <<your pod>.fa.sender@workflow.mail.<your data center>.cloud.oracle.com>`.

You can set up the sender name in application preferences for all workflow tasks, or have different setup for specific workflow tasks. If not specified at the task level, the sender name setting defaults from the preferences.
Setting Up for All Workflow Tasks

To define the sender name for all workflow tasks that have no other applicable setup:

1. Open the Administration tab. If you're not in BPM Worklist:
   a. Click the Notifications icon in the global header.
   b. Click More Details.
   c. Click your user name and select Administration.

2. On the Application Preferences page that’s on the Administration tab, select one of the Email "From:" Display Name options.
   - Select to specify the text to display. Enter your value or leave blank if you want nothing to appear in the From field.
   - Select Submitter to show the person who created the task.
   - Select Previous Approver to show the previous assignee in the approval chain. When the notification is sent to the first assignee in the approval chain, the From field shows the person who created the task.

3. Click Save.
Setting Up for a Specific Workflow Task
To specify the sender name for a specific workflow task:

1. Navigate to the Notifications subtab in BPM Worklist for the task you want to edit.
2. On the Notifications subtab, click the Expand More icon.
3. Select one of the Email "From:" Display Name options.
   - Select Not Applicable so that what appears in the From field depends on the application preferences that apply to all workflow tasks.
   - Select to specify the text to display. Enter your value in quotes, for example "Oracle", or leave blank if you want nothing to appear in the From field.
   - Select Previous Approver to show the previous assignee in the approval chain. When the notification is sent to the first assignee in the approval chain, the From field shows the person who created the task.
4. Click the Save icon in the Tasks to be configured toolbar.

Send Test Workflow Email Notifications to One Address
While you're testing workflow setup, you can send all email notifications to a single address so that your users don't receive any test emails. The test emails are still sent based on the notification scenarios defined for the particular workflow task.

Specifying the Email Address
To enter the email address to send test emails to:

1. Click the Notifications icon in the global header.
2. Click More Details.
3. Click your user name and select Administration.
On the Application Preferences page that’s on the Administration tab, click the Test Notification Email Address icon.

In the dialog box, enter an email address in the Test Notification Email Address field.

Click OK and then Save.

After you’re done testing, go back and delete the email address that you entered.

Workflow Task Life Cycle Setup

Define When to Automatically Dismiss or Withdraw Workflow Tasks

Only workflow tasks with a final status, such as Completed or Withdrawn, can be purged and removed from users’ worklists. Tasks go from the Assigned status to the Completed status when the final assignee approves or rejects the tasks, or, with for your information (FYI) tasks, when assignees explicitly dismiss the tasks. If assignees don’t take actions that result in a final task status, within a certain period of time, then the tasks are automatically dismissed (FYI tasks) or withdrawn (all other tasks).

When Tasks are Eligible for Automatic Dismissal or Withdrawal

The FYI Notifications Expiration Period profile option determines when FYI tasks are eligible for automatic dismissal. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions
- Task: Manage Applications Core Administrator Profile Values

On the Manage Applications Core Administrator Profile Values page:

- Leave the profile option with the default value of 7, or replace it with a different number.
- The profile value represents the number of days after the FYI task is created.

When assignees don’t read or dismiss an FYI task within the specified number of days after the task was created, the task is then eligible to be automatically dismissed. All other tasks are eligible for automatic withdrawal when assignees don’t take action to send the task to a final status within six months after the task was created.

When Eligible Tasks Are Automatically Dismissed or Withdrawn

Different processes run to automatically dismiss eligible FYI tasks or withdraw all other eligible tasks.

- **FYI Tasks**: The process runs every three days, starting the first day of each month. For example, it runs on May 1, 4, 7, and so on, and again on June 1 and every three days after. So, if you leave the FYI Notifications Expiration Period profile value at 7, then depending on when the process runs, an FYI task can be automatically dismissed within seven to ten days after it’s created. The process changes the FYI task status from Assigned to Completed.

- **All Other Tasks**: The process runs every three days, starting the second day of each month. For example, it runs on May 2, 5, 8, and so on, and again on June 2 and every three days after. The process changes the status of eligible tasks to Withdrawn.

Related Topics

- Set Profile Option Values
- Update Existing Setup Data
How Workflow Tasks Are Archived and Purged

**Workflow** tasks with a final status, such as Completed or Expired, can be archived and purged. Archiving keeps a copy of the task data for audit, data retention or analysis, and other purposes. Purging removes the completed tasks from users' worklists and permanently deletes the original data.

**Archive**

Tasks are automatically archived once a month without you doing any setup. You can't change or stop this automatic archive. You can, however, also run the Archive Workflow Tasks scheduled process as needed; for example, you need the latest data archived immediately for reporting purposes. The process includes all eligible tasks that aren't yet archived.

Archived data includes task details, approval history, comments, and attachments. How you view or use the archived data depends on the products you're using. For example, the data might be displayed in a table on a page, or available through a business intelligence subject area that you can select to create an analysis.

**Purge**

Archived tasks that were last updated over 30 days ago are immediately purged after the monthly automatic archive, without you doing any setup. You can't change or stop this automatic purge.

**Related Topics**

- Submit Scheduled Processes and Process Sets

Set Up the Worklist Region on My Dashboard

You can add the Worklist: Notifications and Approvals region to My Dashboard, which is a blank dashboard by default. This region displays the **workflow** tasks assigned to the person using My Dashboard. After you add the Worklist region, select a value for the Welcome Dashboard Worklist Timeout Interval (ATK_HOME_PAGE_WORKLIST_TIMEOUT) profile option.

**Adding the Region**

To add the Worklist: Notifications and Approvals region to My Dashboard:

1. Click **Navigator > My Dashboard**.
2. Click your user image or name in the **global header**, and select **Edit Pages** in the Administration menu group.
3. Click the **Add Content** button where you want to place the region.
4. Open the Application Content folder in the Add Content dialog box.
5. Click **Add** for the Worklist: Notifications and Approvals item.
6. Click **Close**.
7. Save your work, and then click the **Close** button.

**Defining the Timeout Interval**

When users open My Dashboard and it contains the Worklist: Notifications and Approvals region, data for the region is retrieved. The Welcome Dashboard Worklist Timeout Interval profile option determines how long to continue retrieving before timing out and displaying no data. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions
- Task: Manage Application Toolkit Administrator Profile Values

Note: If you don't see this task, then make sure that the Application Toolkit Component Maintenance feature is enabled at the offering level in the Offerings work area.

On the Manage Application Toolkit Administrator Profile Values page, set the Welcome Dashboard Worklist Timeout Interval profile option.

- If you don't set a value for this profile option, which is blank by default, then the region doesn't time out.
- Retrieving data for the Worklist region affects the performance of My Dashboard as a whole. So, select a value for this profile option if your users have the Worklist region on My Dashboard and notice performance issues.

After the timeout, users can refresh the region to try retrieving the data again.

Related Topics

- Set Profile Option Values
- Configure Offerings
- Update Existing Setup Data
8 Help Configuration

Set Up Help

You don’t have to set anything up for help to work. But you can do optional setup, for example to make help icons visible to everyone, or to give people access to add help content. First enable help features, then do some tasks in the Application Extensions functional area.

Enable Features

In the Offerings work area, review these features at the offering level.

- Local Installation of Help: Make sure to leave this enabled.
- Access to Internet-Based Help Features: This feature isn’t used, so it doesn’t matter if you enable it or not.
- Help Content Management: Enable this feature if you want some people to be able to add company-specific help to help windows or the Getting Started work area.
- Security for Added Help: Enable this feature if you want certain help to be available only to a restricted set of user roles.

Caution: Enable this feature only if you have this requirement, because the feature can affect performance.

Related Topics
- Configure Offerings
- How You Manage Different Types of Help

Show Help Icons by Default

Watch video

By default, help icons that open help windows are hidden. You can set it up so that users do see the icons every time they sign in, on any page that has help icons.

1. In the Setup and Maintenance work area, go to the Set Help Options task in the Application Extensions functional area.
2. On the Set Help Options page, select the Show help icons by default check box. You just need to do this for one offering, and the setting applies to everyone.

To hide the icons, people can still click their user image or name in the global header and select Hide Help Icons, and later select Show Help Icons to see the icons again.

Related Topics
- Update Existing Setup Data
Give People Access to Create and Edit Help

If you enabled the Help Content Management feature, check who has the Manage Help Content (ATK_CUSTOMIZE_HELP_TOPICS_PRIV) privilege. Here's what these users can do:

- Add help in any help window, and also edit and manage the help that anyone added.
- Edit existing pages in the Getting Started work area and also add new pages.

By default, the administrators for product families have this privilege. Your security administrator can assign job roles with this privilege to other users. The Assign Help Text Administration Duty task is a reminder for you to follow up with your security administrator. Make sure that people who want to create and edit help have the access to do so.

Related Topics
- How You Manage Different Types of Help

Enable Global Search for Added Help

If your company adds help, you might want to enable global search and make sure it includes the Help category. People can then search for any added help using the search in the global area.

Related Topics
- Overview of Global Search Setup

Create Groups to Limit Access to Added Help

In this example, you want to add company policies as help in a help window. But, at all times, only human resources (HR) specialists should be able to see those policies. Let's look at the steps to create a help security group that includes only the job role for HR specialists. You can then secure your company policies with this help security group so that only people with that job role can see the help.

Before You Start

In the Offerings work area, make sure that these features are enabled at the offering level:

- Local Installation of Help
- Help Content Management
- Security for Added Help
Create the Help Security Group

1. In the Setup and Maintenance work area, go to the **Manage Help Security Groups** task in the Application Extensions functional area.
3. Enter these values, but leave the start and end dates blank.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help Security Group</td>
<td>HR</td>
</tr>
<tr>
<td>Display Name</td>
<td>HR Only</td>
</tr>
<tr>
<td>Description</td>
<td>Viewing by HR specialists only</td>
</tr>
</tbody>
</table>

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**.

**Related Topics**

- Configure Offerings
- Update Existing Setup Data
- Add Your Content to Help Windows
9 Application Toolkit Configuration

Overview of Application Toolkit Configuration

Oracle Fusion Application Toolkit (ATK) provides many components that are available to users of all product families. These components include Applications Help, the Reports and Analytics pane, and the Watchlist. In the Setup and Maintenance work area, use the Application Toolkit tasks in the Application Extensions functional area to set up some of these components.

Note: The tasks are available only if the Application Toolkit Component Maintenance feature is enabled.

Tasks

Use these tasks in the Application Extensions functional area:

- **Map Reports to Work Areas**: Determine what’s available in the Reports and Analytics pane for specific work areas.
- **Set Watchlist Options**: Define settings that affect what’s displayed in the Watchlist and how often items are refreshed.
- **Manage Application Toolkit Administrator Profile Values**: Set profile options to affect how some Application Toolkit components work.
- Use other Application Toolkit tasks in this functional area to set up help:
  - Set Help Options
  - Assign Help Text Administration Duty
  - Manage Help Security Groups

Related Topics

- Set Up the Worklist Region on My Dashboard
- Set Up Help

Map Reports to Work Areas

Set Up the Reports and Analytics Panel Tab

You can find the Reports and Analytics panel tab in many work areas, and the analytics and reports you see in it depend on the work area. You can define what’s available for a specific work area, by mapping reports from the business intelligence (BI) catalog to that work area. In this mapping context, reports refer to both analytics and reports. Your changes apply to all users who have access to the work area you’re mapping.
Mapping Reports from Your Work Area
To map reports to the work area that you’re in:
1. Expand the Reports and Analytics panel tab.
2. Click the **Edit Settings** icon in the panel tab.
   You see all the reports that are currently mapped to your work area.
3. Click **Select and Add**.
4. Find the report in the catalog and select it.
5. Click **OK**.
6. To remove any mapping, select the report and click **Remove**.
7. Save your work.

Mapping Reports to Any Work Area
To map reports to any work area that you have access to:
1. In the Setup and Maintenance work area use the Map Reports to Work Areas task.
2. Select the application of the work area you want to map to.
3. Select the work area.
4. Click **Search** and see all the reports that are currently mapped to that work area.
5. Click **Select and Add**.
6. Find the report in the catalog and select it.
7. Click **OK**.
8. To remove any mapping, select the report and click **Remove**.

   **Tip:** Click **Synchronize** to remove all mappings to any reports that are no longer in the catalog. You synchronize all work areas, not just the one you’re mapping.
9. Save your work.

Related Topics
- Reports and Analytics Work Area and Panel Tab

Set Up Reports for Scheduling
You can set up reports as scheduled processes, which means users can submit them from the Scheduled Processes and other work areas. If you want users to also submit these scheduled processes from the Reports and Analytics work area and panel tab, then you must configure properties for the corresponding reports.

Enabling a Report for Scheduling
To enable scheduling in the Reports and Analytics work area and panel tab:
1. In the Reports and Analytics work area or panel tab, edit the report in the **business intelligence catalog**.
2. Click **Properties**.
3. On the General tab in the Properties dialog box, enter the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Scheduler Job Package Name</td>
<td>The path for the job definition, for example: / oracle/ apps/ ess/&lt;product family&gt;/ &lt;product&gt;/ &lt;business area&gt;/ Jobs</td>
</tr>
</tbody>
</table>
Related Topics

- How You Set Up Reports to Run as Scheduled Processes
- How You Access and Modify Report Components

FAQs for Map Reports to Work Areas

Why can't I see reports when mapping reports to work areas for the Reports and Analytics panel tab?

Either no reports are currently mapped to the work area you select on the Map Reports to Work Areas page, or you don't have access to the reports that are mapped.

Similarly, when you're selecting a report to map, you can see only the reports that you have access to. Ask your administrator to either:

- Assign you roles that have access to the reports you want to map to work areas.
- Grant the Reports and Analytics Region Administration Duty to someone who already has access to those reports.

Why can't I see reports when I edit settings for the Reports and Analytics panel tab?

In the Edit Settings window, you might not see a currently mapped report because you don't have access to it.

Similarly, when you're selecting a report to map, you can see only the reports that you have access to. Ask your administrator to either:

- Assign you roles that have access to the reports you want to map to work areas.
- Grant the Reports and Analytics Region Administration Duty to someone who already has access to those reports.

Watchlist Options

Disable or Enable Watchlist Categories and Items

To disable or enable predefined Watchlist categories and items for all users, use the following in the Setup and Maintenance work area:

- Functional Area: Application Extensions
- Task: Set Watchlist Options
Ultimately, what users see in their own Watchlist would be the categories and predefined items that you enable in the Set Watchlist Options page:

- Plus any saved searches that the user is using as Watchlist items
- Minus any categories or items that the user decides to hide using Watchlist preferences
- Minus any items with no results found, if the user decides to hide such items using Watchlist preferences

**Any Category or Item**

When you disable any category or item, you also disable the processes that calculate the Watchlist item counts. These processes include creating data caches, performing security checks, calling services across domains, running queries, and so on.

**Predefined Watchlist Items**

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 isn't available for users to display in their Watchlist.
- The item is removed from any Watchlist where it's currently displayed.

If you disable a Watchlist category, then the category isn't available for users to include in their Watchlist. All Watchlist items within the category are also disabled.

**User-Created Saved Search Watchlist Items**

A Watchlist item with the User-Created Saved Search type doesn't appear in the Watchlist. It controls the display of the Manage Watchlist button on pages with saved searches. If you disable this type of Watchlist item, then:

- The Manage Watchlist option isn't available on the corresponding page, so users can't use their own saved searches as Watchlist items.
- Any user-defined saved searches (from that page) already used as Watchlist items are removed from the users' Watchlist. The saved searches are still available for searching, but not for the Watchlist.

**Watchlist Category**

If you disable a Watchlist category, then:

- The category isn't available for users to include in their Watchlist.
- All Watchlist items within the category are also disabled.

**Note:** You can see the Watchlist icon in the global header only if your default home page layout is Panel or Banner.

**Related Topics**

- Create Watchlist Items
- Show or Hide Watchlist Items
- Why can't I see some icons in the global header
Refresh Intervals for Watchlist Items

All Watchlist items have a predefined refresh interval, which controls how often the query that calculates the count for a Watchlist item can run. You can use the Set Watchlist Options page to edit the interval values. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions
- Task: Set Watchlist Options

How the Refresh Works

The count for any Watchlist item gets refreshed as follows.

- When users open the Watchlist in the global header for the first time after signing in, the item is refreshed if five minutes have passed since its last refresh in an earlier session.
- When users open the Watchlist again, the item is refreshed only if the time since its last refresh is equal to or greater than the refresh interval.

User-Created Saved Search Watchlist Items

What you enter as the refresh interval for a Watchlist item of type User-Created Saved Search applies to all Watchlist items based on saved searches that users create for that item. For example, you set the refresh interval for the Corporate Card Transactions item to five minutes. Multiple users create saved searches for corporate card transactions and use those saved searches as Watchlist items in their own Watchlist. All of these Watchlist items would have a refresh interval of five minutes.

Related Topics

- Create Watchlist Items

FAQs for Watchlist Options

How can I change predefined Watchlist category and item names?

Edit the standard lookup type that stores the predefined Watchlist category and item names.

1. Click **Navigator > Setup and Maintenance**.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions or a product-specific functional area
   - Task: Manage Standard Lookups
3. On the Manage Standard Lookups page, find the lookup type for the Watchlist category you want to edit. The lookup types for predefined categories end with WATCHLIST, for example EXM_EXPENSES_WATCHLIST.
4. Edit the lookup type meaning to change the category name.
5. To change item names, edit lookup code meanings.
6. Save your work.

Related Topics

- Overview of Lookups
Application Toolkit Administrator Profile Values

Set Up the Mapping Service for Contextual Addresses

A contextual address is marked with an orange triangle, the More icon. When users hover over the triangle, an icon appears that they can click to display the address on a map. The Mapping Service for Contextual Addresses profile option determines the mapping service which you must use to display the map. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Application Toolkit Administrator Profile Values

Profile Option Default

By default, the Mapping Service for Contextual Addresses profile option has no value.

Caution: Until you enter a valid value for this profile option, users continue to get an error when they try to open a map for any contextual address.

Profile Option Value

After you find and select the Mapping Service for Contextual Addresses profile option, enter a mapping service URL in the Profile Value column, for example:

- http://bing.com/maps/?v=2&encType=1&where1=

You can include parameters in the URL. For example, to avoid a locator box in Google Maps, add &iwloc=&amp; to the URL. So, you would enter http://maps.google.com/maps?iwloc=&amp;&output=embed&q= as the profile value.

Related Topics

- Set Profile Option Values
- Why can't I see the map for contextual addresses
Overview of Common Reference Objects

The Maintain Common Reference Objects task list contains tasks that support implementation of common functionality, such as data security, reference data sets, or general preferences. Use this task list to manage common reference objects that are defined centrally and shared across applications. You can search for and access this task list in the Setup and Maintenance work area.

To make the Maintain Common Reference Objects task list available in your implementation project, go to the Offerings work area and enable the Maintain Common Reference Objects feature.

Related Topics
- Overview of Moving Common Reference Objects

Why can't I edit setup data?

The configuration of your setup data may be protected. Application developers mark some configurations as protected, indicating that you can't edit them.

Some examples of configurations that may be protected are:
- Descriptive flexfields
- Extensible flexfield contexts
- Extensible flexfield pages
- Value sets
- Tree structures

How can I set general preferences for all users?

Use the Global Admin Preferences page to set general preferences such as language, currency, and time zone that affect all users. In the Setup and Maintenance work area, use the following:
- Functional Area: Application Extensions
- Task: Set User General Preferences

Caution: Use this task only if you want to update preferences for all users. To update preferences for a specific user, use the General Preferences page.

If you want to set the preferences for new users whose preferences haven't been set at all, select the Reset preferences for new users only check box. Selecting this option excludes all users whose preferences were set at some point in time.
Related Topics

- How can I set general preferences for myself

Application Taxonomy

Overview of Application Taxonomy

Oracle application components and functions are organized in a hierarchy, ranging from product lines to logical business areas. The hierarchy represents a breakdown of products into units based on how applications are installed and supported.

In the Application Extensions functional area within your offering, search for the Manage Taxonomy Hierarchy task and view the hierarchy on the Manage Taxonomy Hierarchy page.

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 life cycle.

  See: How to Manage the Life cycle

Modules in Application Taxonomy

The highest level of the hierarchy is product line, followed by the 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. A module is a node at any of these levels. Each level is briefly described here.

- Product Line: A collection of products associated with a single brand name, for example, Oracle Fusion.
- Product Family: A collection of products associated with a functional area that may or may not be licensed together as a single unit, for example Oracle Fusion Financials.
- Application: A single product within a product family, containing closely related features for a specific business solution, for example General Ledger.
- Logical Business Area: 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 up to two or three levels deep.
Guidelines for Managing Modules in Application Taxonomy

In the application taxonomy hierarchy, when you create a module, it becomes a child of the currently selected node. Once created, you can't delete the module or move it elsewhere in the hierarchy.

From the Manage Taxonomy Hierarchy page, navigate to the Create Child Module or Edit Module page to manage the modules. 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, a unique read-only ID is automatically generated. The module contains two other identifiers: Module key and alternative 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 additional identifiers are provided for the product line, product family, and application modules. However, you can optionally add them for logical business areas and new modules.

Note: Don't 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 Fusion Middleware Extensions for Oracle Application.

Names
Module name is the logical name for the module. The name must be unique among nodes within the hierarchy level with the same parent, but Oracle recommends keeping it unique in the entire hierarchy. The user name and description can appear to users in other parts of Oracle Applications Cloud.

Usage Types
Though you can update the usage type to reflect the current state of the module, just doing so doesn't affect the actual state. For example, setting a module as installed doesn't mean the module is actually installed if the installation itself didn't take place. Installation refers to operations related to laying down all the components required to create an Oracle Applications Cloud environment. 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 data residing in 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 the 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 Applications Cloud Functional Core (ASK) tables.

ISO Reference Data
Considerations for Natural Languages

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 can't be deleted, but 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 must be the language name with territory name in parenthesis where needed, for example English (Australia) and English (Canada).

FAQs for ISO Reference Data

When do I create or edit territories?
The predefined territories are countries from the International Organization for Standardization (ISO) 3166 standard. Edit territory descriptions to determine how they are displayed in lists of country values in an application. You don't have to edit territory names or codes unless there is a specific requirement. Create territories if new countries emerge and the application isn't yet patched with the latest ISO country values.

Note: The National Language Support (NLS) territory codes are territory identifiers used in the application. Don't edit the codes unless you must change the association between ISO and the application territory.

When do I create or edit industries?
To meet a specific business need, you may edit industry names or descriptions of industries except for those belonging to the North American Industry Classification System (NAICS). Edit the industry descriptions also to determine how they appear in an application.

You may also create industries with specifications not included in the NAICS standards.

When do I associate industries with territories?
To meet specific business needs, you can associate industries with territories. For example, administrators can configure a page in different ways for different sets of users of the same industry, but residing in different countries.

When do I create or edit ISO languages?
Edit the names and descriptions of International Organization for Standardization (ISO) languages to determine how they appear in the application. The ISO languages are a part of the ISO 639 standard. If any change to the ISO standard doesn't reflect in the application, you can update the ISO alpha-2 code or add languages to provide up-to-date information.
When do I edit languages?
Installed languages automatically appear on the Manage Languages page. This page also displays all languages that are available for installation and translation. Each dialect is treated as a separate language. Generally, you don't need to edit any of the detailed fields unless absolutely necessary.

Can I add or edit time zones?
You usually don't add or edit time zones because all standard time zones are provided. However, you may create time zones if new zones become standard and the application isn't yet updated with the latest values. You can rename existing time zones and enable them. Only the enabled time zones are available for all users to select while setting their regional general preferences.

To add or edit time zones, use the following in the Setup Maintenance work area:
- Functional Area: Application Extensions
- Task: Manage Time Zones

Audit Policies

Audit Policies
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 required for reporting.

Enabling Audit Functionality
For Oracle Applications Cloud, 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 and manage audit, ensure that you have a role with the assigned privilege Manage Audit Policies (FND_MANAGE_AUDIT_POLICIES_PRIV). For appropriate assignment of roles and privileges, check with your security administrator.

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, see Audit Events for Oracle Applications Cloud Middleware (Doc ID 2114143.1) on My Oracle Support at https://support.oracle.com.

If you don't want an application to be audited, you can stop the audit process by setting the Audit Level option to None.

Related Topics
- Audit Events for Oracle Applications Cloud Middleware
Audit Configuration for Business Object Attributes

Audit enables tracking 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 operations performed on an object and its attributes, such as create, update, and delete. To configure audit business object attributes, use the Manage Audit Policies task 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 objects 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. 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.

Tip: For business objects based on flexfields, select the Flexfields (Additional Attributes) check box to view and add or remove flexfield attributes, to include or exclude them from the audit.

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 Applications Cloud 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 aren't audited. To continue to audit the business object with selected attributes, deselect those attributes that aren't to be audited. When users view the audit history for an application, they can specify the period for which they want the results. Therefore, make a note of when you start and stop auditing an application.

For example, users intend to view the audit history of an object for the previous week, but auditing for that object was stopped last month. They wouldn't get any audit results for that week, because during the entire month that object wasn’t audited. Even if you enable audit for that object today, users can’t get the wanted results because audit data until today isn’t available.

Overview of Audit Configuration
To set up auditing for Oracle Applications Cloud, select the Manage Audit Policies task from the Setup and Maintenance work area within your offering. To set up auditing for Oracle Fusion Middleware products, select the level of auditing mapped to a predefined set of metadata and the events that have to be audited. Information about 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 as audit-specific assets that you can use to
create the config.xml configuration file. To get a list of audit-specific assets, see Audit Events for Oracle Applications Cloud Middleware (Doc ID 2114143.1) on My Oracle Support at https://support.oracle.com.

Oracle Fusion Middleware Products
  
  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

Related Topics
- Audit Events for Oracle Applications Cloud Middleware

Business Objects with Auditing allowed in SCM
This is a list of some of the business objects that are available for auditing. See the related product documentation for more information on the impact of enabling any of these objects for auditing.

<table>
<thead>
<tr>
<th>SCM Product Area</th>
<th>Available Business Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Management</td>
<td>Planning Measures</td>
</tr>
<tr>
<td>E-Signatures and E-Records</td>
<td>Electronic Signature Preferences</td>
</tr>
<tr>
<td>Innovation Management</td>
<td>Requirements</td>
</tr>
<tr>
<td>Product Development</td>
<td>Items and Change Orders</td>
</tr>
<tr>
<td>Product Hub</td>
<td>Item Classes, Trading Partner Items, Competitor Items, Customer Items, Manufacturer Items, Supplier Items, Rule Sets, Items, Item Structures, Packs and Catalogs</td>
</tr>
<tr>
<td>Receiving</td>
<td>Receiving Parameters</td>
</tr>
</tbody>
</table>

Impersonation Audit
Users can temporarily designate other users to impersonate their profiles and perform application tasks on their behalf. Impersonation auditing is active even when auditing is disabled for an application. At run time, the audit setup tracks and stores information about attributes, even when auditing isn't enabled for the attributes. Impersonation auditing is
enabled by default so that all actions performed by the impersonator are audited. Therefore, while viewing audit history, users can retrieve the audited information, filtered by an impersonated user.

However, impersonation auditing is limited in scope and applies only to the business objects in the Manage Audit Policies task. While impersonation auditing is enabled, updates are permitted only to the business objects in the Manage Audit Policies task. The impersonator can't update business objects in other tasks. If updates to business objects in other tasks are required, the impersonation auditing must be disabled.

**Caution:** If impersonation auditing is disabled, impersonation information won't be audited. The activities are audited as if the actual user performed them.

Impersonation auditing is controlled through the **Audit Impersonation Transaction Enabled** profile option. By default it's enabled. To disable it, set the profile value to **No**.

**Related Topics**
- Designate Proxies

## Oracle Social Network Objects

### Management of Oracle Social Network Objects

Use the Manage Oracle Social Network Objects task for managing the Oracle Social Network Objects. The integration of Oracle Social Network 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 Applications Cloud

To open the Manage Oracle Social Network Objects page, use the following in the Set and Maintenance work area:

- Functional Area: Application Extensions
- Task: Manage Oracle Social Network Objects

Use Oracle Social Network to:

- Discuss projects and plans in public forums
- Maintain:
  - Membership groups
  - Activity feeds of the people you select
- Facilitate:
  - One-on-one Conversations
  - Reviews
  - Document sharing

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 Applications Cloud
- Enables the business object for social network integration

Considerations for Enabling Social Networking on Objects

You can determine whether information about a business object, such as benefit plans or sales accounts, displays in Oracle Social Network. If you enable an object for sharing, you allow users to collaborate on the object through social networking. You can choose whether all instances of an object are shared, or only at the user’s discretion. You can also choose which attributes are shared, such as names, details, and who made the last update.

In addition to a wide range of predefined objects, you can share:

- Objects and attributes that you created in Application Composer
- Fields that you created in descriptive flexfields

In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions
- Task: Manage Oracle Social Network Objects

After you click **Enable Object**, select one of the following enablement options:

- Manual
- Automatic
- No

**Manual**

If you select this option, which is recommended, you let users decide whether to share each instance of the object with the social network. Once shared, all updates to the enabled attributes of the instance appear on the social network. If the instance is deleted, that information is also shared.

Click **Enable All** to enable all objects for all applications. Enable All automatically applies the Manual option, which means that the user can choose whether to share an object instance.

**Automatic**

With this option, news about all instances of the object appears on the social network, including:

- Every newly created instance
- All subsequent updates to the enabled attributes
- Deletion of any instances

**No**

With this option, which is the default value, no news about the object appears on the social network.

| Note: | When you click **Disable Object**, the enabled setting of the selected business object is automatically changed to No. |
After you enable a business object, you must enable one or more attributes of the object. Only the enabled attributes are shared. The Status column in the Business Objects table indicates which enabled business objects don't yet have an enabled attribute. For these objects, only the following information appear on the social network:

- Internal bookkeeping information, when creating or updating an instance of the object.
- News that an instance is deleted.

**Update Translations**

The Update Translations process sends attribute labels and business object names to Oracle Social Network for use in the user interface.

In social network, attributes 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 **Update Translations** on the Manage Oracle Social Network Objects page sends translations for business objects with the option to enable as **Manual** or **Automatic**.

**Synchronization of Business Objects**

Use **Synchronize** on the Manage Oracle Social Network Objects page to synchronize business objects. This resends the definitions of business objects having the enablement option as **Manual** or **Automatic** to Oracle Social Network.

Use the Synchronize button at the:

- **Business Objects table level**: To resend 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 resend 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 **Synchronize**, 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 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.
On updating translations, you also:

- Synchronize the newly translated text from Oracle Applications Cloud 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 **Update Translations** 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. 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 **Update Translations** after saving the enablement.

**When do I update translations?**

Run the **Update Translations** process only after you install a new language pack of Oracle Applications Cloud.

Updating translations synchronizes the newly translated text to Oracle Social Network for integration with Oracle Applications Cloud.

Note: When you save the enablement of a business object to social network, it sends the translations as well. Hence, you need not click **Update Translations** after saving the enablement.

**What happens if I synchronize business objects?**

When you synchronize business objects, you resend the definitions of business objects having the enablement option as Manual or Automatic to Oracle Social Network.

**When do I synchronize business objects?**

Run the Synchronize process after you use configuration sets to import the setup from the Manage Oracle Social Network Objects page in another environment.

You can also run the process whenever you want to synchronize the settings of business objects with social network without making changes in the Manage Oracle Social Network Objects page.

**Related Topics**

- Contents of the Configuration Set

**Applications Core Common Reference Objects**
Manage Applications Core Messages

Common Messages
Message names that begin with FND_CMN are common messages. Each common message can appear in multiple places in any product family across Oracle Applications Cloud. For example, the FND_CMN_NEW_SRCH message can be used for any search to indicate that no results were found. Common messages of type error or warning are part of the message dictionary.

Creating and Editing Common Messages
You can create common messages for use in multiple places. However, ensure that you follow the predefined naming convention and numbering series associated with the application or module.

Note: Don't use FND_CMN as the prefix for the messages you create because all the predefined common messages begin with it.

Common messages can be used in any application. Therefore, 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, ensure that the text is generic and applies to the entire site of Oracle Applications Cloud implementation.

Manage Applications Core Administrator Profile Values

How Profile Options and Related General Preferences Work Together
The general preferences such as Language, Territory, or Date Format that you access from the global header have corresponding predefined profile options.

General Preferences
When users define their preferred Date Format, Language, or Currency, they are setting the value of a profile option at the user level.

Profile Options
When users don't specify anything as their preferences, the Site level profile option takes effect.

Guidelines for Setting Up General Troubleshooting
To help the help desk troubleshoot issues that users encounter in the application, users can record the issue while they reproduce it. Some advanced users might also need detailed information in the About This Page dialog box. Setting up for troubleshooting involves making sure that users have the right access, and determining how many users can record at the same time.

Access
Check with your security administrator that the appropriate users are assigned roles that inherit the following privileges:

- **Record and View Issue (FND_RECORD_AND_VIEW_ISSUE_PRIV):** To create a basic recording
- **Set Issue Recording Advanced Options (FND_SET_ISSUE_RECORDING_ADVANCED_OPTIONS_PRIV):** To set advanced options before starting the recording
- **View Version Information (FND_VIEW_VERSION_INFORMATION_PRIV):** To see the versions that technical components of the application are on
Number of Users
Recordings are stored on servers, and by default, up to five users can record at the same time on each server. For performance reasons, you can set the Maximum Number of Users Allowed to Record Issues (ORA_FND_RECORD_ISSUE_MAX_USERS) profile option to a number lower than five.

Related Topics
- Record Issues to Troubleshoot
- How can I view the version information of an application
- Set Profile Option Values

Profile Option Values for CORS Headers
You can set profile option values for the CORS headers using the Manage Administrator Profile Values task in the Setup and Maintenance work area.

CORS Headers
This table lists the CORS headers that you can set profile option values for.

<table>
<thead>
<tr>
<th>CORS Header</th>
<th>Profile Option Name (Profile Option Code)</th>
<th>Profile Option Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access-Control-Allow-Origin</td>
<td>Allowed Domains (ORACLE. ADF. VIEW. ALLOWEDORIGINS)</td>
<td>Valid values for allowed origins:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• URL of the specific origin, for example, <a href="http://www.examledomain.com">http://www.examledomain.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• * to allow access to resources from all origins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Empty (no value set) to prevent access to resources from any origin</td>
</tr>
<tr>
<td>Note: You must set a value for this header to enable CORS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access-Control-Max-Age</td>
<td>CORS: Access-Control-Max-Age (CORS_ACCESS_CONTROL_MAX_AGE)</td>
<td>Default value for caching preflight request is 3600 seconds.</td>
</tr>
<tr>
<td>Access-Control-Allow-Methods</td>
<td>CORS: Access-Control-Allow-Methods (CORS_ACCESS_CONTROL_ALLOW_METHODS)</td>
<td>Default values for allowed methods are OPTIONS, HEAD, GET, POST, PUT, PATCH, and DELETE.</td>
</tr>
<tr>
<td>Access-Control-Allow-Headers</td>
<td>CORS: Access-Control-Allow-Headers (CORS_ACCESS_CONTROL_ALLOW_HEADERS)</td>
<td>Default values for allowed headers are Accept, Accept-Encoding, Authorization, Cache-Control, Content-Encoding, Content-MD5, Content-Type,</td>
</tr>
<tr>
<td>CORS Header</td>
<td>Profile Option Name (Profile Option Code)</td>
<td>Profile Option Values</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Access-Control-Allow-Credentials</td>
<td>CORS: Access-Control-Allow-Credentials (CORS_ACCESS_CONTROL_ALLOW_CREDENTIALS)</td>
<td>• <strong>True</strong> to enable sending credentials with the request</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>False</strong>, which is the default value, to disable sending credentials with the request</td>
</tr>
</tbody>
</table>

**Related Topics**
- Set Profile Option Values
- CORS

**How can I make message components visible only to specific users?**
Use the Manage Administrator Profile Values task to determine the visibility of the message components. For the **Message Mode** profile option, set the profile value to either User or Administrator. Based on the set value, the administrator or user actions and details appear for the intended audience.

However, the message components are visible to the audience based on their predefined access rights. Anyone having a user level access can't view the Administrator message components. If you set the profile value to the administrators of a specific product, the message components are visible only to that specific audience.

**Note:** If you don't set any value to the profile option, the visibility of the message component is determined by the default profile option settings.

**Related Topics**
- Set Profile Option Values

**How do I define whether the user image, name, or initials display in the global header?**
Set the **User Image Display Enabled (FND_USER_PHOTO_ENABLED)** profile option. If you select:
- Yes, then the user image is displayed in the **global header** only if the user uploaded a photo. Otherwise, the user's initials are displayed. By default, this profile option is set to Yes.
- No, then only the user name is displayed in the global header.

**Related Topics**
- Change Your Photo
How can I determine which languages appear in the Translation Editor?

Use the Translation Editor Languages profile option to specify the languages as the profile values, so that they are available as options for the user on the Translated Editor dialog box.

1. In the Setup and Maintenance work area, open the Manage Administrator Profile Values task.
2. Search for the Translation Editor Languages profile option.
3. In the Profile Values section, specify the required languages as its profile values, separated by comma. You can either list the complete names of the languages or just the language codes specified on the Manage Languages page, for example, F for French, KO for Korean.

   Note: You can specify only those languages that are available in the supported language pack. If you don't specify any value, all available language packs are supported.

4. Click Save and Close. The language entries will take effect for the user in the next sign in.

Related Topics
- Enter or Edit Translated Text

Global Search

Overview of Global Search Setup

You have many options for setting up the global search, from enabling or disabling it completely to controlling what appears in the autosuggest. For most of the steps, use setup tasks in the Setup and Maintenance work area.

Enable Global Search

A predefined set of business objects, for example help files in Applications Help, are available for global search. These objects are grouped into categories. The search gives you results from indexed data, for example the help files with text that matches your search term.

Enabling global search includes setting up the predefined objects and categories, and starting a schedule to refresh the index so that users get the latest results.

1. Check with your help desk to make sure that objects, categories, and schedules are already set up.
2. Set the Global Search Enabled (FUSION_APPS_SEARCH_ENABLED) profile option to Yes at the Site level.
   - Otherwise, the Search field isn't available in the global header for any user.
   - After you set the profile option, users must sign out and sign back in to see the global search.

   Note: Enabling global search is the only mandatory setup. You can skip the following setup steps, and just use the default configuration for the global search.
Define Global Search

Use the following tasks in the Application Extensions functional area to control how the global search works:

- **Manage Applications Core Global Search Configurations**: Define configurations that capture a collection of settings, and determine which configurations are enabled or used as default. Each configuration applies to the global search on all or specific applications or pages.

- **Manage Applications Core Suggestion Groups**: Define suggestion groups, which represent categories of suggestions in the autosuggest.

- **Manage Applications Core Alternate Words**: Define alternates for search terms that users enter, so that the search can also find matches based on the alternate terms.

Retain Recent Items

You can set the Recent Items Retention (FND_PURGE_RECENT_ITEMS) profile option to determine how long to retain recent items for the global search autosuggest. A page that the user opened can appear in the user’s autosuggest until the specified number of days passes. Aside from the autosuggest, this profile option also applies to the recent items tracked in **Favorites and Recent Items** in the global header. The **Favorites and Recent Items** icon is available in the global header only if your default home page layout is panel or banner.

Related Topics

- Set Profile Option Values

Manage Global Search Configurations

Examples of Global Search Configurations Set as Enabled or Default

Each global search configuration contains settings for the *global search*, and a configuration can apply to specific pages or applications. Use the Manage Global Search Configurations page to enable or disable configurations, and select the one to use as the default. The following scenarios explain which configurations actually apply to the global search, depending on the configurations that you enable or set as default.

Predefined Default

The predefined Default configuration is always enabled and set as a default. This configuration is the working default unless a custom global search configuration is also set as a default. In this scenario, you don’t enable any other configuration, so this Default configuration applies to the global search on all pages, in all applications.

Custom Default

You create a global search configuration that applies to page A and application B. Later, you set your configuration as the default. Only this configuration and the predefined Default configuration are enabled. Both are set as default.

The result is that:

- Your configuration overrides the predefined Default one and becomes the working default.

- Even though you defined your configuration to apply to page A and application B, it now actually applies to all pages and all applications. This is because your configuration is the working default, and no other configuration is enabled.
Specific Pages or Applications
You’re using either the predefined Default configuration or a custom configuration as the default. You also enable:

- **Configuration 1**: Applies to application A
- **Configuration 2**: Applies to application B and a few pages in application A

The result is that:

- Configuration 1 applies to all pages in application A, except the few pages that use configuration 2.
- Configuration 2 applies to all pages in application B, plus the few pages in application A.
- The default configuration applies to all other applications and pages.

Create Global Search Configurations
Predefined global search configurations control how the global search behaves and looks. You can’t edit these configurations, but you can duplicate them and edit the copies, or create your own from scratch.

Creating a Configuration
Follow these steps:

1. Click Navigator > Setup and Maintenance.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions
   - Task: Manage Applications Core Global Search Configurations
3. On the Manage Applications Core Global Search Configurations page, click the Create icon, or select a row and click the Duplicate icon.
   - **Note**: You can’t delete a configuration after you create it, but you can disable it.
4. For the short name (identifier for your configuration), enter an alphanumeric code with uppercase letters and no spaces.
5. Enter a user-friendly name and description for the configuration.
6. Select the Default check box to use your configuration as the default instead of the predefined Default configuration. If another custom configuration was already set as the default, then your configuration becomes the new custom default.
7. Select a product family if the configuration is for applications or pages within a specific family. Otherwise, select Common.
8. If you’re creating a duplicate, click Save and Close. To go on to the next steps and define more settings, select your configuration and click Edit.
9. Enter a module within the product family you selected. If you selected the Common family, then select the Oracle Middleware Extensions for Applications module.
10. Use the tabs to define your configuration:
    - **Autosuggest**: Determine what’s available to users in the global search autosuggest, as well as how the autosuggest looks and behaves.
    - **Search Field**: Control the Search field in the global header and in the search results dialog box.
    - **Search Results**: Enable or disable saved and recent searches, select the search categories available to users, and define settings for filters.
    - **Pages**: Indicate the applications or pages that this global search configuration applies to.
11. Save your work.

Set Up Autosuggest for Global Search

Use global search configurations to determine what's available to users in the autosuggest. You select the suggestion groups to include in configurations. The configurations also determine how the autosuggest looks and behaves.

Prerequisite

Create a global search configuration or edit an existing one. Follow these steps:

1. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions
   - Task: Manage Applications Core Global Search Configurations
2. On the Manage Applications Core Global Search Configurations page, click the Create icon to create a global search configuration, or select an existing row and click the Edit icon to change it.

Defining the Content

To define synonyms, select suggestion groups and determine how they're displayed in the autosuggest:

1. On the page to create or edit global search configuration, click the Autosuggest tab.
2. In the Synonyms section on the Autosuggest tab, select Enable Synonyms to let users search using synonyms.
3. Optionally, enter the following:
   - Synonym Context Code: A logical grouping such as a product family, navigation group, or work area that determines the subset of synonyms to search on. For example, if you enter Academics, every time the user enters a term and clicks the Search icon, the search runs on all terms related to Academics and their synonyms.
   - Synonym Object Type: A business object name that would determine the subset of synonyms to search on. For example, if you enter Curriculum, every time the user enters a term and clicks the Search icon, the search runs on all terms related to Curriculum and their synonyms.
4. Click Manage Synonyms.
5. To add search terms and create synonyms for them, on the Manage Synonyms page:
   a. Click the New icon and do the following:
      - Enter a short name in uppercase, with no spaces. This name is required as an identifier.
      - Select a module name, which is required to map the data with a specific product or area. There are no restrictions on where the synonyms can be used.
      - Optionally, enter a context code and object type. This information can be used to ensure that certain synonyms are only used when a global search configuration having the same values is in effect.
      - Enter the primary synonym, which is the main term or business object to which other synonyms are to be matched.
      - Enter at least one synonym that matches the primary synonym.
   b. Click Save and Close.
6. Select the Enable personalization of search groups check box to allow users to override your configuration. Users can hide, show, and reorder suggestion groups for their autosuggest.
7. In the Suggestion Group section on the Autosuggest tab, move the groups you want to include into the Selected Groups pane. Use the Move, Move All, Remove, and Remove All icons to move the groups.
   The Enabled column in the Available Groups pane indicates if the group is defined (on the Manage Suggestion Groups page) to be displayed by default or not in the autosuggest.
8. In the **Enabled** column in the Selected Groups pane, select one of the following values:
   - **Inherit**: In the autosuggest, the group is displayed or hidden by default depending on what's defined for the group.
   - **Yes**: The group is displayed by default, no matter what's defined for the group.
   - **No**: The group is hidden by default, no matter what's defined for the group.

   **Note**: The **Displayed by Default** column shows the resulting behavior in the autosuggest, based on what you select in the **Enabled** column.

9. Using the **Move to Top**, **Move Up**, **Move Down**, and **Move to Bottom** icons, order the selected groups as you want them to appear in the autosuggest.

   **Tip**: Click **Manage Suggestion Groups** at any time to edit or create suggestion groups. When you return to the Autosuggest tab, click **Refresh** to reflect the changes you made to suggestion groups.

**Defining the Appearance**

Optionally define settings in the Appearance section on the Autosuggest tab:

- **Show Suggestion Group Headings**: Select this option to display suggestion group headings (text and icon) in the autosuggest. Even if you do so, if a group is defined on the Manage Suggestion Groups page to not show headings, then its heading won't be displayed.
- **Show Icons**: Select this option to display icons next to suggestions in the autosuggest.
- **No Suggestions Message**: Enter the message that appears when no suggestions match the user's search term. If you leave this field blank, then no autosuggest or anything at all appears when there are no matches.

**Defining the Behavior**

Optionally define settings in the Behavior section on the Autosuggest tab:

- **Show Top Suggestions**: Enable this option to display suggestions in the autosuggest as soon as the user clicks in the search field, even without entering a search term. For example, the last few pages the user opened would appear as suggestions in the Recent Items group.
- **Minimum Characters for Autosuggest**: Enter the number of characters that users must enter in the search field before matching suggestions appear in the autosuggest.
- **Maximum Number of Suggestions**: Enter the maximum number of suggestions to be displayed across all suggestion groups. This total is distributed as equally as possible among the groups.

**Considerations for Disabling Saved Searches and Recent Searches for the Global Search**

Global search configurations determine if saved searches and recent searches are enabled in the **global search**. Consider the following points when you disable either. In the Create or Edit Global Search Configuration page, open the Search Results tab and use the Saved and Recent Searches section.

**Disabling Saved Searches**

If you disable saved searches:

- You disable the Save button in the search results dialog box, so users can't create or edit saved searches for global search.
- You're not disabling the Saved Searches **suggestion group**. Users can still see any applicable saved searches in the global search **autosuggest**.
Disabling Recent Searches
If you disable recent searches:
- The application isn’t saving recent searches.
- You’re not disabling the Recent Searches suggestion group. Users can still see in the autosuggest any applicable searches that they recently ran before you disabled recent searches.

Set Up Filters for Global Search
To determine how users can filter their search results, define the appropriate settings when you create or edit global search configurations. You can set up search categories so that users can limit the scope of their search to begin with, or refine their search results.

Prerequisite
Create a global search configuration or edit an existing one. Follow these steps:
1. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions
   - Task: Manage Applications Core Global Search Configurations
2. Click the Create icon to create a global search configuration, or select an existing one and click the Edit icon to change it.

Setting Up Categories to Narrow Search Scope
To let users select the categories to search on before running the search:
1. On the page to create or edit global search configuration, click the Search Results tab.
2. In the Saved and Recent Searches section, select the check boxes to enable saved searches and recent searches.
3. In the Filters section, enable personalization of search categories.
4. In the Search Categories section, select the categories that users can search on. If you don’t select any, then every category is available to users.
5. For each of your selected categories, select Yes or No in the Enabled column to have it enabled or disabled by default.

Setting Up Categories as Search Result Filters
To let users filter search results based on category:
1. In the Filters section, select a filter display style so that the list of all available category names are displayed:
   - Inline: In the Filters pane in the search results
   - LOV: In a Categories dialog box that users can open from the Filters pane
2. Select the check boxes to show subcategories, facets, or both. Categories are always displayed. Subcategories are an additional level of filters that appear after categories, and facets are a level after categories.
3. In the Search Categories section, select the categories to use as filters. This is the same set of categories to be used for personalization. If you don’t select any, then every category is available to users.

Setting Other Options for Filters
You can also use the Filters section to:
- Show hit counts: Show the number of search results that match each filter value
• Enable clear all filters: Allow users to clear all filters with one click of a button
• Show applied filters: Show all the filters that have been applied

In the Last Updated Date Filters section, select the criteria to use as filters, based on the last update date. If you don’t select any, then every date filter is available to users.

In the Appearance section, set the Show Icons option Off if you don’t want to display the icons.

Specify the Pages or Applications That a Global Search Configuration Applies To
As part of defining your global search configuration, you can specify the pages or applications (or both) that your configuration applies to. If you want your configuration to apply to all pages in all applications, then skip these steps.

Before You Start
If you want the global search configuration to apply to specific applications, you need to find the application short name.

1. Click Navigator > Setup and Maintenance.
2. In the Setup and Maintenance work area, go to the following:
   o Functional Area: Application Extensions
   o Task: Manage Taxonomy Hierarchy
3. On the Manage Taxonomy Hierarchy page, expand the Oracle Fusion node.
4. Select the row (with the Application module type) for your application, and click Edit Module.
5. In the Application Details section, see the Application Short Name column and note down the value to use as the application short name.

Add Pages or Applications
Follow these steps:

1. On the Create or Edit Global Search Configurations page, open the Pages tab.
2. Click the Create icon.
3. In the View Type column, indicate if the configuration applies to a specific page or application.
4. Enter a view ID to identify the page or application:
   o Tip: You can use % as a wildcard for the page or application value, such as Example% for all pages that start with Example.
   o Page: Enter the last part of the URL you get when you open that page. For example, enter ExamplePage from the URL http://exampleServer/homePage.faces/ExamplePage.
   o Application: Enter the application short name with a wildcard at the end, for example HomePageApp%.
5. Add more pages or applications as needed.

Manage Suggestion Groups

Suggestion Groups for Global Search
A suggestion group is a category of suggestions that users see in the autosuggest for the global search. For example, if the user enters Report in the Search field, then the Navigator suggestion group in the autosuggest shows any Navigator menu names with Report.
Managing Suggestion Groups

Each suggestion group can have a heading, for example Recent Items, as well as an icon that appears before the heading text. The icon helps users identify what the group is all about.

You can manage suggestion groups to:

- Show or hide the group by default in the autosuggest
- Enter the heading text
- Define if the heading text appears in the autosuggest or not
- Identify the image file to use as the icon

Tip: You can copy predefined suggestion groups and edit them to create your own versions.

To manage suggestion groups, open the Setup and Maintenance work area and use either the:

- Manage Suggestion Groups task
- Autosuggest tab when you create or edit global search configurations using the Manage Global Search Configurations task

Using in Global Search Configurations

Just because a suggestion group is defined to be displayed by default doesn't necessarily mean that it in fact appears in the autosuggest. Global search configurations determine which groups are included for the autosuggest, whether icons appear for the headings, and so on.

You can use a suggestion group in many or all global search configurations. And ultimately, if personalizing suggestion groups is enabled, then users can show, hide, and reorder the suggestion groups included in the global search configuration.

Change Heading Text and Icons for Suggestion Groups

This example shows how to change the icon and text for a suggestion group heading in the global search autosuggest. In this example, you start out with the predefined Default global search configuration enabled, and no custom configurations.

The following table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which predefined suggestion group do you want to change?</td>
<td>Recent Items</td>
</tr>
<tr>
<td>What do you want the new heading text to be?</td>
<td>Recently Visited Pages</td>
</tr>
<tr>
<td>Which image do you want to use as the icon?</td>
<td>A .png file (16 by 16 pixels) that's used on your company Web site</td>
</tr>
<tr>
<td>Do you want the new suggestion group to appear in the autosuggest by default?</td>
<td>Yes</td>
</tr>
<tr>
<td>Which pages should the changes apply to?</td>
<td>All pages</td>
</tr>
</tbody>
</table>
To use a new icon and heading text for the suggestion group:

- Make a copy of the predefined Recent Items suggestion group.
- Update global search configurations to use your suggestion group.

**Duplicate the Predefined Suggestion Group**

1. Click **Navigator > Setup and Maintenance**.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions
   - Task: Manage Applications Core Suggestion Groups
3. On the Manage Applications Core Suggestion Groups page, select the Recent Items group and click **Duplicate**.
4. In the new row, enter **RECENTPAGES** as the short name.
5. Change the display name to **Recent Pages**.
6. Change the description to **Version of Recent Items with revised heading and icon**.
7. With your new row still selected, click **Edit**.
8. In the Heading section, enter **Recently Visited Pages** in the **Text** field.
9. In the **Icon** field, enter the full URL to your .png file.
10. Click **Save and Close**.

**Update Global Search Configurations**

1. Back in the Setup and Maintenance work area, go to the following:
   - Functional area: Application Extensions
   - Task: Manage Applications Core Global Search Configurations
2. Select the Default configuration and click **Duplicate**.
3. Fill out the row for your new configuration, selecting the **Default** check box.
4. With the row still selected, click the **Edit** icon.
5. In the Autosuggest tab, click the **Refresh** button in the Suggestion Group section if you don’t see your suggestion group.
6. Move the Recent Pages group into the **Selected Groups** list, and move the Recent Items group out.
7. In the **Enabled** column for the Recent Pages group, select **Yes**.
8. In the **Appearance** section, make sure that headings are set to be displayed.
9. Click **Save and Close**.

**Considerations for Managing Alternate Words for Global Search**

Use the Manage Applications Core Alternate Words task in the Setup and Maintenance work area to maintain a list of search terms that users might use for the **global search**. For each user keyword, define a possible alternate to also search on. Consider various reasons for defining these word pairs, and also decide whether to automatically search on both terms or not.
Reasons for Word Pairs
This table provides some reasons and examples for managing alternate words.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>What You Enter</th>
<th>User Input Keyword Example</th>
<th>Alternate Keyword Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct user typos</td>
<td>A possible typo as the user input keyword, and the correctly spelled term as the alternate keyword</td>
<td>Oracle</td>
<td>Oracle</td>
</tr>
<tr>
<td>Account for abbreviations and acronyms</td>
<td>An abbreviation or acronym and what it stands for</td>
<td>BI</td>
<td>business intelligence</td>
</tr>
<tr>
<td>Account for common variations in spelling</td>
<td>Two different ways to spell the same term</td>
<td>email</td>
<td>e-mail</td>
</tr>
<tr>
<td>Enable matches on synonyms</td>
<td>A pair of terms that are functionally similar</td>
<td>hyperlink</td>
<td>link</td>
</tr>
<tr>
<td>Help new users who are not familiar with what things are called in the application</td>
<td>The term that your users might search on as the user input keyword, and the equivalent in the application as the alternate keyword</td>
<td>concurrent program</td>
<td>scheduled process</td>
</tr>
</tbody>
</table>

**Note:** You don’t have to account for plurals or case sensitivity. For example, if you have email as a user input word, you don’t have to also add Email or emails as an input word.

Automatically Search Both Terms
For each pair of terms, use the Automatically Search Both check box to determine what happens when the user enters the input word and starts the search:

- **Yes:** The search runs and displays results based on both terms.

  Before you select this check box, carefully consider possible impact. For example, would users get a lot of unnecessary search results, making it harder to find what they want?

- **No:** The user sees a message and can decide to continue searching on just the input term, or to search on just the alternate term instead.
11 Enterprise Scheduler Job Definitions and Job Sets

Home Page Setup

Overview of Managing Job Definitions and Job Sets

Users run scheduled processes based on Oracle Enterprise Scheduler Services to process data and, in some cases, to provide report output. Using the Enterprise Scheduler Jobs tasks, you can define job definitions, list of values sources, and job sets.

The various Enterprise Scheduler Jobs tasks are:

- Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications
- Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications
- Manage Enterprise Scheduler Job Definitions and Job Sets for Customer Relationship Management and Related Applications

Each task includes:

- **Job Definitions**: Contain the metadata about the job and the options available to users. A job definition is defined by a job type, such as Oracle Business Intelligence Publisher or PL/SQL Job type or others.
- **List of Values Sources**: Determine where a list of values for the parameters in a job definition comes from and what the specific values are.
- **Job Sets**: Collections of several jobs in a single process set that the users submit instead of running separate jobs.

To access the Manage Enterprise Scheduler Job Definitions and Job Sets tasks, use the following in the Setup and Maintenance work area:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

**Related Topics**

- Overview of Scheduled Processes

Manage List of Values Sources

A list of values source determines where a list of values comes from and what the specific values are. Use these lists to display values for the parameters and application defined properties in job definitions which the user can select. For
example, a list of countries for a Country parameter. To manage list of values sources, open the Manage List of Values Sources tab using the Manage Enterprise Scheduler Job Definitions and Job Sets page. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

**Editing and Deleting List of Values Source**

You can edit and delete list of values sources using the Manage List of Values Sources tab. While the List of Values Source Definition Name is a fully qualified name of the view object, the User List of Values Source Name doesn't have validation. So, you can edit the **User List of Values Source Name** field and enter a name according to your preference.

**Note:** You can edit list of values sources for use only in job definitions that are not predefined.

**Job Definitions**

**Define Parameters for Job Definitions**

A parameter controls which records are included or how they are affected when a job runs. **Job definitions** can have one or more parameters or none at all. You define parameters while creating or editing job definitions using the Manage Enterprise Scheduler Job Definitions and Job Sets page. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

When users run the scheduled process, the values they enter for the parameters determine the data to be included in the report. Also, the values are passed to the data model that the report is using.

The parameters that you define must be in the same order as parameters in the data model. For example, the data model has parameters in this order:

- **P_START_DATE**
- **P_END_DATE**
- **P_CURRENCY**

You create parameters as follows:

- Start Date
- End Date
- Currency

**Defining Parameters: Job Definitions**

To define parameters while creating or editing job definitions:

1. On the Manage Job Definitions page, open the Parameters sub tab.
2. Click **Create**.
3. Enter the parameter prompt that users see when they submit the scheduled process.
4. Select a data type and configure how the parameter and the data entered are displayed, as described in this table.

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boolean</td>
<td>Select this if you want the parameter to be a check box.</td>
</tr>
<tr>
<td></td>
<td>Select <strong>True</strong> or <strong>False</strong> to determine if the check box is selected or not.</td>
</tr>
<tr>
<td>Date or time</td>
<td>Select <strong>Date and time</strong> or <strong>Date only</strong> option.</td>
</tr>
<tr>
<td></td>
<td>Select a value from the <strong>Default Date Format</strong>.</td>
</tr>
<tr>
<td>Number</td>
<td>Select a <strong>Number Format</strong>.</td>
</tr>
<tr>
<td></td>
<td>Select <strong>Left</strong> or <strong>Right</strong> for data alignment.</td>
</tr>
<tr>
<td>String</td>
<td>Select a <strong>Page Element</strong>.</td>
</tr>
<tr>
<td></td>
<td>Select <strong>Text box</strong> if you want the user to provide a text.</td>
</tr>
<tr>
<td></td>
<td>Select <strong>Choice list</strong> if you want a list with limited options (maximum 10).</td>
</tr>
<tr>
<td></td>
<td>Select <strong>List of values</strong> if you want a list with unlimited options with a search facility.</td>
</tr>
</tbody>
</table>

5. Select the **Read Only** check box if you don’t want to enable users to set this parameter. When a parameter is set as read only, the user is required to provide a default value to be passed to the job definition.
6. If you select list of values or choice list page element, select a **List of Values Source** and an **Attribute**.
7. From the list of available attributes, select the attributes you want to appear in the list and move them to the selected attributes section. These attributes determine the values that the user can see.
8. Define a **Default Value** for the parameter.
9. In the **Tooltip Text** field, provide additional information for the user to follow.
10. Select the **Required** check box if users must set this parameter to submit the scheduled process.
11. Select the **Do not Display** check box if users should not see this parameter while submitting the process.
12. Click **Save and Create Another** or **Save and Close**.

**Dependent Parameters**

The attributes of some parameters depend on the attributes or values of certain other parameters. The attributes of a parameter would change if the value of its dependent parameter changes.

For example, you have three parameters, namely Country, State and, City. In this case, the value of the Country parameter would determine the values available in the State parameter. The values in the State parameter would determine the values available in the City parameter.
Edit Job Definitions

You can only edit certain fields in predefined job definitions, as some of the fields are read only. However, you can edit all aspects of job definitions that are not predefined.

Editing Job Definitions

Follow these steps:

1. Click Navigator > Setup and Maintenance.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions or a product-specific functional area
   - Task: Manage Enterprise Scheduler Job Definitions and Job Sets
3. On the Manage Enterprise Scheduler Job Definitions and Job Sets page, open the Manage Job Definitions tab.
4. Select the job definition you want to edit.
5. Click Edit.
6. Make the changes that you want, for example:
   - You can edit the display name of the job definition to use terms that are more familiar to your users.
   - You can use the Prompt field to edit parameter display names.
7. Click Save and Close.

Predefined Job Definitions

You cannot update parameters in predefined job definitions, but this table lists some of the other fields that you can edit.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retries</td>
<td>The number of times to automatically run this job again if the scheduled process fails.</td>
</tr>
<tr>
<td>Job Category</td>
<td>Specific to the application of the job definition, it's used to group definitions according to your requirements.</td>
</tr>
<tr>
<td>Timeout Period</td>
<td>The amount of time before stopping a scheduled process that couldn't complete.</td>
</tr>
<tr>
<td>Priority</td>
<td>Priority of scheduled processes submitted, with 0 as lowest. If other processes, based on the same or another job, are scheduled to run at the same time, then priority determines the run order.</td>
</tr>
</tbody>
</table>
Create Job Definitions

A *job definition* is defined by a Job type, such as Java or Oracle Business Intelligence (BI) Publisher reports. You can only create or duplicate job definitions which are based on BI Publisher reports, so that users can run the reports as scheduled processes. For more information about reports, see the Creating and Administering Analytics and Reports guides for your products.

Creating Job Definitions

Follow these steps:

1. Click **Navigator > Setup and Maintenance**.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions or a product-specific functional area
   - Task: Manage Enterprise Scheduler Job Definitions and Job Sets
3. On the Manage Enterprise Scheduler Job Definitions and Job Sets page, open the Manage Job Definitions tab.
4. Click the **Create** icon.
5. In the Job Definition section, complete the fields, some of which are shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>What You Enter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Name</td>
<td>Provide a name that the users see while submitting the scheduled process.</td>
</tr>
<tr>
<td>Name</td>
<td>Provide a name with only alphanumeric characters, for example, AtkEssPrograms1. A job definition name can't contain space or any special characters.</td>
</tr>
<tr>
<td>Job Application Name</td>
<td>Select the name of the application to associate the job definition with.</td>
</tr>
<tr>
<td>Job Type</td>
<td>Select BIPJobType only.</td>
</tr>
<tr>
<td>Report ID</td>
<td>Specify the path to the report in the catalog, starting with the folder within Shared Folders, for example: User-Defined/ &lt;Family Name&gt;/ &lt;Product Name&gt;/ &lt;Report File Name&gt;.xdo. Make sure to include the .xdo file extension for the report definition.</td>
</tr>
<tr>
<td>Default Output Format</td>
<td>Select the format of the output.</td>
</tr>
</tbody>
</table>

**Note:** Don’t select the **Enable submission from Enterprise Manager** check box.

6. Use the Parameters tab to define parameters as required.
7. The only user property you need to define is `EXT_PortletContainerWebModule` and this user property is automatically created.
Caution: You must not create or edit a user property unless you have the accurate information that is required to create or edit one.

8. Click **Save and Close**.

When you create a job definition, the *privilege* with the same name as the job definition is automatically created. For example, for a job definition named *AtkEssPrograms*, the privilege is named *RUN_ATKESSPROGRAMS*.

**Duplicating Job Definitions**

Users can also create job definitions by duplicating existing job definitions, including parameters. To duplicate a job definition:

1. On the Manage Job Definitions tab, select the job definition you want to duplicate.
2. Click **Duplicate** to get another row in the table with the duplicate job definition.
3. Select the duplicate job definition and click **Edit**.
4. Enter the name and path.
5. You can update the parameters as needed.
6. Click **Save and Close**.

When you duplicate a job definition, you automatically create a view object of the same name in the list of values sources.

**Note:** The attribute validations present on the attributes in the parameters view object are not copied over.

**Job Definitions**

Scheduled processes are based on jobs that process data and, in some cases, provide output. Each job requires a *job definition*. A job definition can also include parameters and user properties that the user defines while submitting the scheduled process.

You can view, create, edit and duplicate job definitions on the Manage Job Definitions tab using the Manage Enterprise Scheduler Job Definitions and Job Sets page. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

**Viewing Job Definitions**

Use the table on the Manage Job Definitions tab to view the job definitions created for the application. An asterisk in the name column indicates a predefined job definition.

This table describes the columns in the table on the Manage Job Definitions tab.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the job definition.</td>
</tr>
</tbody>
</table>
### Column Name | Description
--- | ---
Display Name | Name of the job definition as available to users while submitting scheduled processes.
Description | Description for the job definition.
Path | The full directory path where the job definition is saved.
Execution Type | The type of job request for the given job definition, such as a Java, C, PL/SQL, Perl, or hosted script job.
Job Type | The name of the job type upon which the job definition is based.

**Tip:** The table of job definitions shows only 10 to 20 items by default but you can use Query by Example to view other items.

### Parameters
A parameter controls which records are included or how they are affected when the job runs. Parameters are available to users when they submit scheduled processes based on your job definitions. For example, a job updates only the records that are effective after the date that users enter in a Start Date parameter. You can create, edit and delete parameters for job definitions that are not predefined.

### User Property
A user property is set in the job definition to attain some specific results.

**Related Topics**
- Overview of Scheduled Processes

## Define Dependent Parameters in Job Definitions
This example demonstrates how to define dependent parameters.

This table summarizes key decisions for this scenario.

| Decisions to Consider | In this Example |
--- | ---
Which parameters do I want to make dependent? | Region, Country and City.

**Region** list of values includes the names of the regions like North America, EMEA, JAPAC and so on. The **Country** list of values includes the names of countries like USA, Canada, France, England, India, Japan and so on. Similarly **City** list of values includes the names of different cities like New York, Washington,
## Decisions to Consider

<table>
<thead>
<tr>
<th>In this Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>London, Paris, Mumbai, Tokyo and so on. The <strong>Country</strong> parameter list of values includes only the countries like USA, Canada and so on, if user selects North America. The <strong>City</strong> parameter list of values includes the names of the cities in the country that the user has selected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are view criteria?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The view criteria determine the values that appear in the dependent parameter list of values for the users to see. The view criteria are used to filter the list and pass the required bind variables based on the user’s selection.</td>
</tr>
<tr>
<td>To filter countries based on the selected region, you must select <code>getCountriesByRegion</code> and pass <code>Region</code> as a bind variable.</td>
</tr>
</tbody>
</table>

## Prerequisites

Create the parameters **Region**, **Country** and **City**. The values available to the users in the Country parameter list of values depends on the value selected for the Region parameter. City parameter list of values depends on the value that the user selects for the Country parameter.

## Defining Dependent Parameters

To define parameters with dependent lists of values:

1. On the Manage Job Definitions tab, open the Parameters sub tab.
2. Select the **Region** parameter.
3. Click the **Manage Dependencies** button located next to the **Delete** button.
4. From **Available View Criteria**, select `getCountriesByRegion` and move it to **Selected View Criteria** using the move icons.
   - The selected view criteria appears in the Bind Variables section.
5. In the Bind Variables section, for the `getCountriesByRegion` view criteria, select **Country** from the mapped parameters list of values.
   - The Country parameter list of values is now dependent on the value selected for the Region parameter.
6. Click **OK**.
7. Repeat the steps with **Country** parameter. Select `getCitiesByCountries` from the available view criteria and pass **City** as a bind variable.

## Job Sets
Job Sets

A job set is a collection of several jobs in a single process set that the users can submit instead of running individual jobs separately. The job set definition also determines if the jobs run in serial or parallel, or based on some other predetermined logic. In the Setup and Maintenance work area, go to the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

Use the Manage Enterprise Scheduler Job Definitions and Job Sets page to open the Manage Job Sets tab.

- On this tab, you can view and define job sets, and use *Query By Example* to find a specific job set.
- You can't edit or delete the predefined job sets which are indicated by an asterisk. You can create job sets, and also edit and delete job sets that are not predefined.

Job Set Steps

A job set can contain any number of individual jobs as well as other job sets. There can also be multiple levels of nested job sets within a single job set. For example, a job set can include three jobs and two job sets, one of which contains another job set. Each individual job or job set that's included within a job set is called a job set step. A job set and each of its job set steps can have additional parameters. Users provide the values for these parameters when they submit the process set.

Application Defined Properties

Some Job Sets require the user to enter certain additional properties before submitting a job request. Application Defined Properties are the additional properties that the user has to enter during runtime. For example, when *enableDuplicateJobWithParamTaskflow* property is set to *True*, it can be used to run a single job multiple times with different parameter values, within a job set.

System Properties

System Properties are the additional settings that determine how a job set runs. For example, you can use a system property to determine the number of retries for a job set that fails to execute. On this tab, you can view and define job sets, and use Query By Example to find a specific job set.

Create Job Sets

Create a job set so that users can run multiple jobs with a single submission. Before you create the job set, plan the sequence and hierarchy of the job steps within the job set. You can create job sets using the Manage JobSets tab. You can also edit and delete job sets that are not predefined.

Steps to create Job Sets

Follow these steps:

1. Click **Navigator > Setup and Maintenance**.
2. In the Setup and Maintenance work area, go to the following:
   - Functional Area: Application Extensions a product-specific functional area
   - Task: Manage Enterprise Scheduler Job Definitions and Job Sets

3. On the Manage Enterprise Scheduler Job Definitions and Job Sets page, open the Manage Job Sets tab.

4. Click Create.

5. Complete the fields as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Provide a name with only alphanumeric characters, for example, ExportMetadataTables1.</td>
</tr>
<tr>
<td>Display Name</td>
<td>Provide a name that the users see while submitting the scheduled process.</td>
</tr>
<tr>
<td>Description</td>
<td>Provide more information about what the job set does.</td>
</tr>
<tr>
<td>Package</td>
<td>Specify the path where you want to save the job set.</td>
</tr>
</tbody>
</table>

6. In the Job Set Steps section, select Serial or Parallel to define the sequence of the job set.

7. Click Add Job Set Step to open the Add Step dialog box.

8. In the Step tab:
   a. Enter a Step ID to easily identify the steps.
   b. Search for and select a job or job set to include in your job set.
   c. Select Job definition or Job set.
   d. Type a valid name or package, or both of the Job or Job Set you are looking for and click search.
   e. Select the required job definition or job set and click OK.
   f. If you selected Parallel in step 4:
      - Select Insert into main diagram if you want the step to be executed independently.
      - Select Add to list of available steps if you want the step to be one of the outcomes in the available steps.
      - If you choose to add the step to the list of available steps, select an option for the possible job outcomes. For example, you can determine whether the process must stop or another step must be executed if the step fails to run successfully.

9. In the Application Defined Properties tab:
   a. Click Add Application Defined Property icon and select a data type.
   b. Enter a name and an initial value.
   c. Select the Read Only check box if you don’t want users to update this property when they submit the process set.
   d. Click OK.
10. In the **System Properties** tab:
   a. Click **Add System Property**.
   b. From the name list, select a system property.
   c. Enter a value in the **Initial Value** field.
   d. Select **Read Only** check box if you don’t want users to update this property when they submit the process set.
   e. Click **OK**.

   **Note:** You can also add and edit the Application Defined Properties and System Properties in the respective sections on the Create Job Set page.

11. Click **OK** to add the Job Set Step.
12. Add jobs and job sets as required. You can select job steps in the Job Set Steps section and edit, remove, or reorder (for Serial only). You can also switch between **Serial** and **Parallel**.
13. Click **Save and Close**.

   **Note:** When you create a Job Set, the **privilege** of the same name as the Job Set is automatically created. For example, for a Job Set named **ExportAppsData**, the privilege is named **RUN_EXPORTAPPSDATA**.

### System Properties for Job Sets

System Properties are the additional settings that determine how a job set runs. For example, you can use a system property to determine the number of retries for a job set that fails to execute. You can open the Manage Job Sets tab using the Manage Enterprise Scheduler Job Definitions and Job Sets page. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

### System Properties

This table lists some system properties with description.

<table>
<thead>
<tr>
<th>System Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS_allowMultPending</td>
<td>Specifies if the same job definition can have multiple pending requests.</td>
</tr>
<tr>
<td>SYS_application</td>
<td>Specifies the logical name of the Scheduling Services folder application used for request processing. Oracle Enterprise Scheduler automatically sets this property during request submission.</td>
</tr>
<tr>
<td>SYS_effectiveApplication</td>
<td>Specifies the logical name of the Scheduling Services folder application that is the effective application used to process the request. You can associate a job definition, job type, or a job set step with a different application by defining the EFFECTIVE_ APPLICATION system property. This property can only be specified through metadata and cannot be specified as a submission parameter.</td>
</tr>
<tr>
<td>System Property Name</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>SYS_priority</td>
<td>Specifies the request processing priority. The priority interval is 0 to 9, where 0 is the lowest priority and 9 is the highest. If this property is not specified, the default value used is 4.</td>
</tr>
<tr>
<td>SYS_product</td>
<td>Specifies the product used for submitting the request.</td>
</tr>
<tr>
<td>SYS_request_timeout</td>
<td>Enables the job request to time out.</td>
</tr>
<tr>
<td>SYS_requestExpiration</td>
<td>Specifies the expiration time for a request. This represents the time (in minutes) that a request will expire after its scheduled execution time. An expiration value of zero (0) means that the request never expires. If this property is not specified, the default value used is 0. Request expiration only applies to requests that are waiting to run. If a request waits longer than the specified expiration period, it does not run. After a request starts running, the request expiration no longer applies.</td>
</tr>
<tr>
<td>SYS_retries</td>
<td>Specifies the retry limit for a failed request. If request execution fails, the request is retried up to the number of times specified by this property until the request succeeds. If the retry limit is zero (0), a failed request is not retried. If this property is not specified, the default value used is 0.</td>
</tr>
</tbody>
</table>
12 Applications Core Configuration

Overview of Applications Core Configuration

The Define Applications Core Configurations task list contains the Oracle Middleware Extensions for Oracle Application (Applications Core) tasks that support implementation of common functionality such as lookups, profile options, document sequences, and so on. Some of the tasks are also available in the Application Extensions functional area. You may also find specific versions of this task list depending upon the product family or the offering that uptakes those tasks.

Use this task list to manage configuration objects that are defined centrally and shared across applications, in addition to tasks classified in the Maintain Common Reference Objects task list. You can search for this task list in the Setup and Maintenance work area.

Related Topics

- Overview of Common Reference Objects

Lookups

Overview of Lookups

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.

The following table contains an example of a lookup type for marital status (MAR_STATUS) that has lookup codes for users to specify married, single, or available legal partnerships.

<table>
<thead>
<tr>
<th>Lookup Code</th>
<th>Meaning</th>
<th>Tag</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Married</td>
<td>Not applicable</td>
</tr>
<tr>
<td>S</td>
<td>Single</td>
<td>Not applicable</td>
</tr>
<tr>
<td>R</td>
<td>Registered Partner</td>
<td>+NL</td>
</tr>
<tr>
<td>DP</td>
<td>Domestic Partner</td>
<td>-FR, AU</td>
</tr>
</tbody>
</table>
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
- Configuration 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.

**Configuration Level**

The configuration 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 configuration 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 predefined lookup codes can’t be modified. Some predefined lookup codes can be changed during implementation or later, as needed.

The configuration levels are user, extensible, and system. The following table shows the lookup management tasks permitted at each configuration level.
Predefined data means LAST_UPDATED_BY = SEED_DATA_FROM_APPLICATION.

If a product depends on a lookup, the configuration level must be system or extensible to prevent deletion.

Once the configuration level is set for a lookup type, it can't be modified. The configuration level for newly created lookup types is by default set at the User level.

### Standard, Common, and Set-Enabled Lookups

The following table shows the available types of lookups.

<table>
<thead>
<tr>
<th>Lookup Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Lists the available codes and translated meanings.</td>
</tr>
<tr>
<td>Set-enabled</td>
<td>Associates a reference data set with the lookup codes.</td>
</tr>
<tr>
<td>Common</td>
<td>Legacy lookups or lookups that have attributes.</td>
</tr>
</tbody>
</table>

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. These can also be lookups having attribute columns. 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 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.

To view the predefined lookups and their lookup codes, use the following tasks in the Setup and Maintenance work area:

• Manage Standard Lookups
• Manage Common Lookups
• Manage Set-Enabled Lookups

Translating Lookups

You can translate the lookups that you defined to the preferred language(s) without changing the language session of the application. Use the translation option available on the lookup code table. By default, for each lookup, all the permitted language rows in the translator dialog box appear in the source language (the current session language). When you edit a particular language entry, you can modify the translated meaning and description to the language in which you want the lookup to appear. Once the updates are made, the end-users can view the lookup in the translated text.

Note: You can add the translation for only as many languages as are permitted by the administrator. The functionality to limit the number of languages displayed on the dialog box is controlled through the Translation Editor Languages profile option. It can be set at the SITE or USER level. If nothing is specified, all active languages are displayed.

Related Topics
• Enter or Edit Translated Text

Example of a Standard Lookup

Creating a new standard lookup involves creating or selecting a lookup type containing the lookup code. The task also involves determining appropriate values for the lookup codes and their meanings. You can only create or edit lookup codes for a particular lookup type if its configuration level supports it.

Creating a Lookup Type Called COLORS

Your enterprise needs a list of values to be used as different statuses on a process. Each status is indicated using a color. Therefore, you create a lookup type called COLORS. The following table lists a mapping between the lookup type parameters and the actual values assigned to those parameters to create the required list of values.

<table>
<thead>
<tr>
<th>Lookup type parameters</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lookup type name</td>
<td>COLORS</td>
</tr>
<tr>
<td>Meaning</td>
<td>Status</td>
</tr>
<tr>
<td>Description</td>
<td>Status by color</td>
</tr>
</tbody>
</table>
After you define the lookup type, you need to define the lookup codes and their related details. The following table lists the lookup codes you define for the COLORS lookup type.

<table>
<thead>
<tr>
<th>Lookup Code</th>
<th>Meaning</th>
<th>Enabled</th>
<th>Display Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE</td>
<td>Urgent</td>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>RED</td>
<td>Stop</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>GREEN</td>
<td>Proceed</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>YELLOW</td>
<td>Check</td>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

The Resulting Data Entry List of Values

Only the enabled lookup codes appear in the list of values for the COLORS lookup type. You must select one of them to complete the activity.

The following table lists the meanings and the codes that were enabled. They appear in the order of the defined display sequence.

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Lookup Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>RED</td>
</tr>
<tr>
<td>Check</td>
<td>YELLOW</td>
</tr>
<tr>
<td>Proceed</td>
<td>GREEN</td>
</tr>
</tbody>
</table>

Analysis

The BLUE lookup code wasn't enabled and doesn't appear in the list of values. The display sequence of values in the list of values is alphabetic, unless you enter a number manually to determine the order of appearance. Number 1 indicates the first value that appears in the list. Only lookups that are enabled and active between start and end dates are visible.
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. The following table contains an example, where the lookup code is stored in the Status column of the transaction table.

<table>
<thead>
<tr>
<th>Transaction number</th>
<th>User name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jane</td>
<td>RED</td>
</tr>
<tr>
<td>2</td>
<td>Bob</td>
<td>YELLOW</td>
</tr>
<tr>
<td>3</td>
<td>Alice</td>
<td>BLUE</td>
</tr>
</tbody>
</table>

The status for one user is BLUE because at the time they entered a value, BLUE was enabled. Disabling a lookup code doesn't affect transaction records in which that code is stored. Data querying and reporting have access to disabled lookup codes in transaction tables.

Example of a Set-Enabled Lookup

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. You can only create or edit lookup codes for a particular lookup type if its configuration 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. Use the Manage Set Assignments task to define and manage reference data set assignments.

Selecting a Reference Group for a Set-Enabled Lookup Type

Specify a reference group for a set-enabled lookup type to 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. For example, there are two references data sets - one for the US and the other for EU. If a COLORS lookup type contains RED, YELLOW, ORANGE, and GREEN lookup codes, you can enable one RED lookup code from the US reference data set and another RED lookup from the EU reference data, each lookup code having different meanings.

The following table elaborates the example, how these two reference data sets (US and EU) contain one lookup code that's common, but each differing in its lookup meaning.

<table>
<thead>
<tr>
<th>Reference Data Set</th>
<th>Lookup Code</th>
<th>Lookup Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>RED</td>
<td>Red</td>
</tr>
<tr>
<td>Reference Data Set</td>
<td>Lookup Code</td>
<td>Lookup Meaning</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>US</td>
<td>YELLOW</td>
<td>Yellow</td>
</tr>
<tr>
<td>US</td>
<td>GREEN</td>
<td>Green</td>
</tr>
<tr>
<td>EU</td>
<td>RED</td>
<td>Rouge</td>
</tr>
<tr>
<td>EU</td>
<td>ORANGE</td>
<td>Orange</td>
</tr>
</tbody>
</table>

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 the example.

In another example in the following table, a lookup type called HOLD_REASON provides a list of reasons for putting a contract renewal on hold. Reference data sets determine which codes are included in the Hold Reason list of values.

<table>
<thead>
<tr>
<th>Reference Data Set</th>
<th>Lookup Code</th>
<th>Lookup Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>SEC</td>
<td>SEC Compliance Review</td>
</tr>
<tr>
<td>US</td>
<td>DIR</td>
<td>Needs Director’s Approval</td>
</tr>
<tr>
<td>US</td>
<td>VP</td>
<td>Needs Vice President’s Approval</td>
</tr>
<tr>
<td>CHINA</td>
<td>CSRC</td>
<td>Pending China Securities Regulatory Commission Review</td>
</tr>
<tr>
<td>CHINA</td>
<td>PR</td>
<td>Needs President’s Approval</td>
</tr>
<tr>
<td>COMMON</td>
<td>REQUESTED</td>
<td>Customer Request</td>
</tr>
</tbody>
</table>

Referring to the example in the table, when end-users place a contract on hold in the US business unit, the three reason codes in the US set are available. When placing a contract on hold in the China business unit, the two codes in the China set are available.
FAQs for Lookups

How can I access predefined lookups?
Search for predefined lookups using any of the manage lookups tasks.

1. In the Setup and Maintenance work area, go to any of the following tasks that contains the lookups you're looking for:
   - Manage Standard Lookups
   - Manage Common Lookups
   - Manage Set-enabled Lookups

2. Enter any of the search parameters and click Search. If you don't know the lookup type or the meaning, use the Module field to filter search results.
3. Click a lookup type to view its lookup codes.
   - Tip: Click the Query By Example icon to filter the lookup codes.

Related Topics
- Use Query By Example

How can I edit lookups?
On any of the Manage Lookups pages, you can edit the existing lookup codes of a lookup type or add new lookup codes. You can edit lookups using the following tasks in the Setup and Maintenance work area:
- Manage Standard Lookups
- Manage Common Lookups
- Manage Set-enabled Lookups

Each task contains a predefined set of lookup types that are classified and stored. Open a task to search and edit the required lookup. However, you may not be able to edit a lookup if its configuration level doesn't support editing.

Why can't I see my lookup types?
Lookup types are classified using tasks that involve a group of related lookups, such as Manage Geography Lookups. Each task gives you access only to certain lookup types. However, the generic tasks provide access to all lookup types of a kind, such as common lookups associated with the Manage Common Lookups task.

If the lookup types in an application are available in the standard, common, or set-enabled lookups view, they're are central to an application. However, lookup types defined for a specific application are managed using the task for that application.

What's the difference between a lookup type and a value set?
A lookup type consists of lookups that are static values in a list of values. Lookup code validation is a one to one match.
A table-validated value set may consist of values that are validated through a SQL statement, which allows the list of values to be dynamic. The following table brings out the differences between a lookup type and a value set.

- Tip: You can define a table-validated value set on any table, including the lookups table. Thus, you can change a lookup type 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 the list is table-validated
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 | Validation 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 | Both administrators and end-users manage these, except system lookups or predefined lookups at the system configuration level, which can't be modified. | Usually administrators maintain these, except some product flexfield codes, such as GL for Oracle Fusion General Ledger that the end-users maintain.

Both lookup types and value sets are used to create lists of values from which users select values.

A lookup type can't use a value from a value set. However, value sets can use standard, common, or set-enabled lookups.

**What's a lookup tag used for?**

A tag is an additional label attached to the lookup. Tags are user defined and can be grouped depending on the user's requirement to make search convenient and effective.

The same tag may be used across lookup categories. In such cases, tags are used as a refined search criterion to filter information across several groups and get the search result.

**How can I search for a specific lookup code?**

Use the Query By Example functionality to sort through hundreds of lookup codes for a lookup type, and display a specific lookup code. Enter the first few characters of the lookup code value in any of the relevant fields to filter the records.

**Note:** The search functionality is case sensitive.

---

**Document Sequences**
Document Sequences

You can assign a document sequence number to each business document or business event to uniquely identify it. For example, you can assign a document sequence number to an invoice that gets generated in response to a purchase order. However, you must enable the document sequencing option for that business document or event to start assigning the number. A document sequence number is useful in tracking completed or failed transactions.

You can set up document sequencing in three different modes:

- Automatic
- Manual
- Gapless

Note: Plan your document sequencing carefully before you start applying sequence numbers. Avoid switching to a different mode 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 automatically when the document is generated. That unique number is stored in the database. You can set an initial value for the numbering sequence. Thereafter, the numbering is sequential by date and time of creation. If you don't provide an initial value, the application sets the default initial value as 1.

Manual Sequencing

Use the manual sequencing mode to assign a unique number to each document before the document is generated. In manual sequencing, the numeric ordering and completeness of a transaction isn't automatically enforced. As a result, users can skip or omit numbers when entering the sequence value. However, each time a user assigns a number, 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. Sequence numbers aren't assigned to incomplete or failed documents. As a result, the sequence is maintained for all the successfully generated documents.

Additionally, you can control the gapless document sequencing by enforcing the Transaction Date Validation option. When enabled, this option checks for the transaction date of a particular document and assigns the sequence number accordingly, to chronologically maintain the documents. The sequence numbers and the transaction dates are chronologically correlated to prevent any mismatch of a new document sequence assigned to an older document or an older document sequence assigned to a new document.

Note: Use this type of sequencing only if necessary because it may affect the performance of the application and slow down transaction processing.

Related Topics

- Modules in Application Taxonomy
Document Sequence Categories

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.

Note: Once a document sequence category is created, you can't 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’s available for use in 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.

Guidelines for Managing Document Sequences

Sequencing documents is an important business and legal requirement. Therefore, you must first decide the appropriate document sequence to use for a set of documents. Before you begin, here are a few prerequisites:

- Determine beforehand the mode of document sequencing, because you can't switch to other types once a sequence is in use.
- Note details such as the document sequence and document sequence category, for later reference.
- Identify if there are any restrictions or configuration prerequisites.

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. The sequence definition never expires if you don't provide an end date. Among the several options used in creating and editing document sequences, the following options are functionally more important and therefore must 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 must 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 can't 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. 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.
- Select only those tables that belong to the application associated with the category.
- Once a category is defined, you can’t switch to another 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, 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 don’t 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 determinant type.

At run time, when users create documents, the document sequence to be assigned is determined based on the following:

- An active assignment that matches the correct combination of category
- The numbering method
- 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 can’t 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.

Related Topics

- Guidelines for Managing Modules in Application Taxonomy

Profile Options

Overview of Profile Options

Profile options are a set of preferences that you use to centrally manage the user interface settings and application behavior.
You can use the profile options to manage, for example:

- User preferences to specify language or currency.
- Configuration choices to change the user interface skin or appearance of fonts.
- Processing options to determine how much of an activity needs to be logged and at which level.

In the Setup and Maintenance work area, use any of the following tasks:

- Manage Profile Options
- Manage Profile Categories
- Manage Administrator Profile Values

The following table contains a functional description of each task.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Profile Options</td>
<td>Create new profile options or modify existing profile options, except some which are predefined and restricted to prevent any modifications.</td>
</tr>
<tr>
<td>Manage Profile Categories</td>
<td>Group the profile options based on their functional similarities.</td>
</tr>
<tr>
<td>Manage Administrator Profile Values</td>
<td>Set the profile values for the enabled profile options to control application behavior.</td>
</tr>
</tbody>
</table>

**Hierarchy in Profile Levels**

The hierarchy in profile levels determines the context for making a profile option effective.

You can enable a profile option at the following levels:

- Site level (lowest): The entire site of deployment
- User level (highest): A specific user

After you create or edit a profile option on the Manage Profile Options page, you must enable it. You can enable it at multiple levels. The setting at the highest enabled level takes precedence over the lower levels. User level is the highest in the hierarchy and always takes precedence over the settings at the site level.

On the Manage Administrative Profile Values page, set the profile value at any of the enabled levels of the profile option.

**Example of Profile Option Hierarchy**

The following table shows an example of setting the currency profile option at different levels.

<table>
<thead>
<tr>
<th>Profile Level</th>
<th>Hierarchy</th>
<th>Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Lowest</td>
<td>Euro</td>
</tr>
<tr>
<td>User</td>
<td>Highest</td>
<td>US Dollar</td>
</tr>
</tbody>
</table>
For this example, there are two users, John and Lisa. For John, the user-level profile value currency is set to US Dollar. If the Currency profile option is enabled only at the site level, both John and Lisa would see Euro as the default currency. If the profile option is enabled at the user level, users having a different currency set as their currency profile value would see only that currency. In this case, John would see US Dollar as the default currency. If the Currency profile option is enabled at the user level and there is no user level currency defined, the site level setting takes effect. When both site and user levels are enabled, the value for the user level takes precedence over the site level value.

Set Profile Option Values

Each profile option contains specific values that determine how it affects the application. You can add or modify the values for each profile option. Select or enter the value for one or more of the available levels (site, product, and user) so that each setting takes effect at the intended level.

Setting the Profile Value

1. In the Setup and Maintenance work area, go to the Manage Administrator Profile Values task.
2. On the Manage Administrator Profile Values page, search for and select the profile option.
3. In the Profile Values section, click Add. A new row is added for you to specify the following conditions:

   - Profile Level: Specify the level at which the profile value is to be set. If the profile value applies to the entire site, select Site.
   - Product Name: If you select Product as the profile level, select a product and specify the associated profile value.
   - User Name: If you select User as the profile level, select the user name and specify the associated profile value.
   - Profile Value: Select or enter the value corresponding to the selected profile level.

   **Note:** For an existing entry, you can modify only the profile value.

4. Repeat step 3 to add more rows and set the profile values.
5. Click Save and Close.

   **Note:** Changes in the profile values take effect for a user on the next sign in.

Create and Edit Profile Options

Use profile options to manage user preferences and control the general function of applications. For example, you can control user preferences involving language, date, time, currency, and other similar general settings.

You can create a profile option and also determine the level at which that profile option takes effect. You can also define the profile values for the profile option. The profile values appear on the Manage Administrator Profile Values page when you select the profile option.
Creating a Profile Option

1. In the Setup and Maintenance work area, go to the Manage Profile Options task.
2. On the page, click Actions > New.
3. On the Create Profile Option page, fill all the fields with relevant details with specific attention to the following:
   - Use the SQL Validation field to provide an SQL statement that displays the permissible profile values to be used. Using an SQL statement, you can select the values from another table and display them as a list of values.
     
     For example, to display the values Yes and No from a lookup table, you can use the following SQL statement:

     ```sql
     select MEANING, LOOKUP_CODE from FND_LOOKUPS where LOOKUP_TYPE='YES_NO'
     ```
     
     As a result, on the Manage Administrator Profile Values page, the profile values Yes and No are available for selection for that profile option.
   - You can specify a date range to keep the profile option active during that period. Beyond the specified duration, the profile option automatically becomes inactive. If you no longer require the profile option, you must manually delete it from the Manage Profile Options page.
4. Click Save and Close.
5. On the Manage Profile Options page, search for the newly created profile option and from the results, select it.
6. In the Profile Option Levels section, do the following:
   - In Enabled, select the levels at which you want to enable the profile option.
     
     **Note:** You can enable a profile option at multiple levels, but a higher-level profile value overrides a lower-level value. Therefore, enable them only at the required levels.
   - In Updatable, select the profile level at which you want implementors to have update privileges. Leave the check box deselected if you don’t want the implementors to modify the profile values (they appear in read-only mode).
7. Click Save and Close.

To edit a profile option that you created, search for it and edit the necessary details.

**Note:** While creating and editing profile options and profile categories, you can translate the details to the preferred languages without changing the language session of the application. To specify the translations in all the enabled language rows, use the Translation Editor option. Once the updates are made, users can view the translated text for the specific details.

**Related Topics**
- Enter or Edit Translated Text

Profile Categories

You can create profile categories to group profile options based on their functional similarities and their use. In the Setup and Maintenance work area, use the Manage Profile Categories task.

Profile categories help administrators or implementors in retrieving profile options using a search criterion on the Manage Administrator Profile Values page.
Managing Profile Categories
Consider the following options while managing profile categories:

- Create profile categories and add existing profile options to them
- Add newly created profile options to existing user-defined profile categories

**Note:** While you can add a profile option to more than one category, some profile categories are predefined and restricted from any modifications. So, you can't edit them or add profile options to them.

Setting Display Sequence for the Profile Options
You must set the display sequence for each profile option that you add to a profile category. Display sequence determines the order in which the profile options appear in a search result, based on the profile category. You can set the sequence beginning with zero or one for the first profile option to display, and proceed sequentially to assign the values to the remaining profile options.

The following table demonstrates the effect of the display sequence on the profile options when they're retrieved as search results.

<table>
<thead>
<tr>
<th>Profile Category</th>
<th>Included Profile Option - Assigned Display Sequence</th>
<th>Display Sequence of Profile Options in the Search Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachments</td>
<td>• Attachment File Directory - 2</td>
<td>1. Indicate Attachments</td>
</tr>
<tr>
<td></td>
<td>• Indicate Attachments - 1</td>
<td>2. Attachment File Directory</td>
</tr>
</tbody>
</table>

How can I access predefined profile options?
Search for predefined profile options using the Manage Profile Options task.

1. In the Setup and Maintenance work area, go to the **Manage Profile Options** task.
2. On the page, enter any of the search parameters and click **Search**.

**Tip:** If you don’t know the profile option code or the display name, use the **Application** or **Module** fields to filter search results.

3. Click a profile option to view its details.

Flexfields

Overview of Flexfields

A **flexfield** is a set of placeholder fields associated with business objects and placed on the application pages to contain additional data. You can use flexfields to modify the business objects and meet enterprise data management requirements without changing the data model or performing any database programming. Flexfields help you to capture different data on the same database table and provide a means to modify the applications features.
For example, an airline manufacturer may require specific attributes for its orders that aren’t predefined. Using a flexfield for the order business object, you can create and configure the required attribute.

Types of Flexfields

Flexfields that you see on the application pages are predefined. However, you can configure the flexfields or modify their properties. Users see these flexfields as field or information attributes on the UI pages. To manage flexfields, use any of the following tasks in the Setup and Maintenance work area:

- **Manage Descriptive Flexfields**: Expand the forms on the application page to accommodate additional information that is important and unique to your business. You can use a descriptive flexfield to collect invoice details on a page displaying invoices.

- **Manage Extensible Flexfields**: Establish one-to-many data relationships and make application data context-sensitive. The flexfields appear only when the contextual data conditions are fulfilled. Thus, extensible flexfields provide more flexibility than the descriptive flexfields.

- **Manage Key Flexfields**: Store information combining several values, such as a number combination. The key flexfields represent objects such as accounting codes and asset categories.

- **Manage Value Sets**: Use a group of values to validate the data entered in the flexfields.

  **Note**: You can manage value sets within the Manage Descriptive Flexfields or Manage Extensible Flexfields tasks.

Related Topics

- Modules in Application Taxonomy

Flexfield Components

A flexfield is made up of several data entities that store and render information pertaining to flexfield configuration. Flexfields are made up of the following components:

- Segments
- Value Sets
- Contexts
- Structures

Segments

A segment is a field within a flexfield and represents a single table column of your database. When configuring a flexfield, define the appearance and meaning of individual segments. Segments represent attributes of information. Segments can appear globally wherever the flexfield is implemented, or based on a structure or context. Each segment captures a single atomic value and represents an attribute of information.

The characteristics of a segment vary based on the type of flexfield in which it’s used.

- In key flexfields, a segment describes a characteristic of the entity. For example, a part number that contains details about the type, color, and size of an item.

- In a descriptive or extensible flexfield, a segment represents an information attribute on the application page. For example, details about a device containing components, some of which are global while the remaining are contextually dependent on the category of the device.
Value Sets

Users enter values into segments while using an application. A value set is a named group of values that validate the content of a flexfield segment. You configure a flexfield segment with a value set to enforce entries of only valid values for that segment.

The configuration involves the following tasks:

- Defining the values in a value set, including characteristics such as the length and format of the values.
- Specifying formatting rules or values from an application table or predefined list.

Multiple segments within a flexfield, or multiple flexfields, can share a single value set.

Contexts

Context-sensitive flexfield segments are available to an application based on a context value. You define contexts as part of configuring a flexfield. Users see global segments as well as any context-sensitive segments that apply to the selected context value.

In descriptive flexfields and extensible flexfields, you can reuse the context-sensitive segments that are based on the database columns, in multiple contexts.

Structures

Key flexfields have structures. Each key flexfield structure is a specific configuration of segments. Adding or removing segments, or rearranging their order, produces a different structure. You can reuse the segments that are based on the database columns, in multiple structures.

Note: You can translate all these flexfield components to the preferred languages without changing the language session of the application. To specify the translations in all the enabled language rows, use the Translation Editor option on the respective edit pages. Once the updates are made, users can view the translated text for the specific flexfield components at runtime.

Related Topics

- Enter or Edit Translated Text

Overview of Flexfield Configuration

Configuring a flexfield involves identifying the need for enhancing a business object with user-defined attributes and then integrating the attributes into deployment. In the case of key flexfields, configuring the flexfield involves identifying value set assignments and determining segment structures.

Overall Process for Configuring User-Defined Attributes

Before using flexfields to create attributes, familiarize yourself with the context layers and the configuration life cycle of the application. You can add attributes to a business object using a flexfield, if developers have registered that object to a flexfield. 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 Flexfield` 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 metadata` to display the 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 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 User-Defined Keys

Using key flexfields, you can configure intelligent key codes containing 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 Flexfield` 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 metadata 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.

Related Topics

- Overview of Context Layers
- Overview of Configuration Life Cycle

**Flexfields at Runtime**

Business objects have an associated descriptive or extensible flexfield. Using these, you can create attributes for the business object at run time. Some business objects have an associated key flexfield for configuring flexible multiple part keys.

**Finding Flexfields on a Page**

At run time, the attributes you define as flexfield segments appear in the application page just like any other attribute. However, each type of flexfield appears in a different way.
The following characteristics help you determine the type of flexfield on the application page:

- Descriptive flexfield segments appear as label and field pairs or as a table of fields that correspond to the column headers. The fields represent the flexfield segments and accept values that derive from 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.
- Key flexfields appear in the application page as a field with a key flexfield icon, where the field’s value is a collection of segments.

To locate flexfields on a page, in the global header, select your user name and in the Settings and Actions menu, select Highlight Flexfields. The page renders in a special mode, displaying the location of flexfields, if any, on the page. Do the following:

- Hover over the Information icon to view flexfield details.
- Click the Configure Flexfield icon to manage the flexfield using the Manage Flexfields task.
- Click the Add Context Value, Add Segment, or Edit Segment icons to add a context value or edit a global or context-sensitive flexfield segment. This applies to both descriptive and extensible flexfields.

Note: You can’t create attributes on all flexfields. For example, some flexfields are protected, and you either can’t edit their configurations at all, or can do only limited changes to them. Consult the product-specific documentation to verify whether there are any restrictions on using the flexfield.

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 a dialog box. You can use Oracle Composer to edit the layout, position, or other display features of the flexfield segments.

When you no longer want to view the flexfields on a page, select Unhighlight Flexfields from the Administration menu.

**Flexfield Modification Using Page Composer**

You can use Page Composer to modify flexfields specific to a page.

**Extensible Flexfield Modification**

In Page Composer, open the page with the flexfield you want to modify. Switch to 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 modify any component within the region, select the desired tag and click Edit.

**Descriptive Flexfield Modification**

In Page Composer, open the page with the flexfield you want to modify. Switch to Source view, and look for the <descriptiveFlexfield> element of that flexfield. Open the properties panel for this element to view the flexfield code and identifying information. Within the properties panel, you may modify properties for the global and context-sensitive segments or re-order the segments on the page.
Note: Flexfield segments can’t be edited using their individual component elements. They can only be edited from the properties panel of the `<descriptiveFlexfield>` element they belong to. To find these components, open the properties panel of the descriptive flexfield, switch to the relevant tab, and search using the unique identifying information. For instance, if you need to find a context sensitive segment, open the properties panel for the flexfield, go to the Flexfield Context Segments tab, and search for the segment using its Context Value and Segment Code.

How Flexfields Work with Oracle Application Cloud Architecture

To capture additional data, administrators or implementors configure flexfield segments that represent attributes of business objects. Business objects are enabled for both descriptive flexfields and extensible flexfields.

The following figure shows the layers involved in configuring a flexfield:

- The business entity table and metadata in the database.
- The ADF business component objects. These are derived from the metadata and stored in Oracle Metadata Services (MDS) repository.
- The user interface where fields defined by the flexfield segments are rendered.
The following figure illustrates that 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's 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 Applications Cloud 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. You can use the flexfield segment’s Application Programming Interface (API) to identify segments and integrate the flexfields in the following:

• User interface pages
• Service-oriented Architecture (SOA) infrastructure
• Oracle Business Intelligence
• Extended Spread Sheet Database (ESSbase)

Flexfield configurations are preserved across application 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 flexfield definition in the metadata.

Importing and Exporting
Using the Setup and Maintenance work area, you can import and export flexfields across the implementation site. The deployment status must be either Deployed or Deployed to sandbox. Therefore, before you attempt migration, verify and ensure that a flexfield is successfully deployed.

Run Time
The latest definitions of a flexfield reflect on the user interface at run time only if the flexfield is deployed. When the user interface accesses a business object, the deployed flexfield definition identifies the attributes associated with the captured values. On a page, if you add display configurations for a flexfield using Oracle Composer, the same flexfield segments can appear differently on different pages.

Patching
Flexfield configurations are preserved during patching and upgrading.

Flexfield Management

Considerations for Managing Flexfields
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 users. Optionally, you can modify the UI page to change how the flexfield segments appear to users on that page.
The following figure shows the processes involved in making flexfields available to users. The tasks in the Define Flexfields activity let administrators configure and deploy flexfields. After you configure and deploy a flexfield to a sandbox, deploy it again to the mainline metadata so that it's available to the 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
A flexfield must be registered before it can be configured. Therefore, application development registers flexfields so that they are available to administrators and implementation consultants for configuration. The registration involves reserving columns of entity tables for use in flexfields. For more information about 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 modifying flexfields. All flexfields consist of segments which represent attributes of an entity. The value a user enters for an attribute is 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 their configuration. Note the code name of the flexfield you intend to configure so that you can find it easily in the Define Flexfield activity. In some cases you can determine and configure how the flexfield appears on the page. See Oracle Applications Cloud Help for specific products to determine any restrictions on using product-specific flexfields.

Configuring Flexfields
Administrators or implementors 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:

- Use 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 all aspects of a flexfield, such as change a segment’s sequence number or configure a flexfield segment's business intelligence label.
  - Use the **Add Segment** and **Edit Segment** icon buttons to add and edit descriptive or extensible flexfield segments with simple configurations.
  - Use the **Add Context** icon button to add descriptive or extensible flexfield context values.

Configuring a flexfield includes the following:

- Defining **value sets** against which the values entered by 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 next to 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. Therefore, you may 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 must 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 about enabling segments for business intelligence, see points to consider when enabling descriptive, extensible, and key flexfield segments for business intelligence.

For extensible flexfield segments, you can’t assign labels to equalize segments across contexts that are semantically equivalent.

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 deploys a flexfield to the mainline metadata. This command is for general use in a test or production environment.
- The Deploy to Sandbox command deploys a flexfield to sandbox. This command is for confirming that the flexfield is correctly configured before deploying it to the mainline metadata.

In Highlight Flexfields mode, when using the:

- **Add Context, Add Segment, and Edit Segment** tools for extensible flexfields, use the Save command to save your changes. Then use the Deploy command to deploy the flexfield to the mainline metadata
- **Add Segment and Edit Segment** tools for descriptive flexfields, use the Save and Deploy command to save your changes. Then deploy the flexfield to the mainline metadata

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 the mainline MDS repository so that it appears on application pages, you can modify 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 user-defined global attributes so that they are interspersed with the core attributes in the same parent layout. You can modify the appearance of descriptive and extensible flexfield segments in the UI page using Page Composer, once the flexfield is deployed to the mainline metadata.

If the applications are running in different locales, you can provide different translations for translatable text, such as prompts and descriptions. Enter translations using the locale that requires the translated text. In the global header, click your user name and from the **Settings and Actions** menu, select **Set Preferences**. Then change the text to the translated text for that locale.

Identifying Flexfields on a Run Time Page
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 isn’t yet deployed and no segments appear on the run time page in normal view, the flexfield appears in the Highlight Flexfield view for that page. For descriptive flexfields, the segments as of the
last deployment appear. For extensible flexfields, any segments and contexts that have been saved but not yet deployed also appear as disabled.

**Highlight Flexfields** accesses the current flexfield metadata definition. Use the highlighted flexfield's **Configure Flexfield** icon button to manage flexfields directly. Alternatively, note a highlighted flexfield's name to search for it in the tasks for managing flexfields.

For more information about creating flexfields and adding them to a UI page, see the Oracle Fusion Applications Developer's Guide. For more information about modifying flexfield segment appearance with Page Composer, see guidance on modifying existing pages in the Oracle Applications Cloud Configuring and Extending Applications guide.

**Flexfield Segment Properties**

Independent of the **value set** assigned to a **segment**, segments may have properties that affect how they're displayed and how they function.

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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>Whether the segment can be used.</td>
</tr>
<tr>
<td>Sequence</td>
<td>The order the segment appears in relation to the other configured segments.</td>
</tr>
<tr>
<td>Prompt</td>
<td>The string to be used for the segment's label in the user interface.</td>
</tr>
<tr>
<td>Display type</td>
<td>The type of field in which to display the segment.</td>
</tr>
<tr>
<td>Selected and deselected values</td>
<td>If the display type is check box, the actual values to save. For example, Y and N or 0 and 1.</td>
</tr>
<tr>
<td>Display size</td>
<td>The character width of the field.</td>
</tr>
<tr>
<td>Display height</td>
<td>The height of the field as measured in visible number of lines when the display type is a text area.</td>
</tr>
<tr>
<td>Read only</td>
<td>Whether the field should display as read-only, not editable text.</td>
</tr>
</tbody>
</table>
### Properties Related to Search

Extensible flexfield segments can be marked as selectively required in search using the indexed property. The indexed property requires 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. Also, 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.
- The low value segment must have a sequence number that's lesser than that of the high value segment.
- Non-range validated segments can exist between a range validated pair, but range validated pairs can't 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 detect a low value segment first, and the next range validated segment that it detects 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 must match a specified format or be restricted to a list of values. You can use a value set or a Groovy validator 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 a value instead of the value set validating the value against the context segment. However, the application entered 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.
You can also use Groovy validation to set additional restrictions or requirements for what values are allowed for certain attributes of business objects. This is useful when you need to use the same value set to validate multiple segments, but the exact validation requirement changes with each case. These validators can be defined at the global segment level, or at the context level, based on your business needs. They have a validator code, validation expression, error message, and description. After adding a new validator, click the Groovy Expression Builder icon to open the expression builder window where you define your validation expression. Groovy validation is done when a user tries to save their values to an attribute that has a Groovy validator. If the value for this attribute fails validation against the Groovy expression, the text defined in the Error Message column is displayed as an error message.

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 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.

How Flexfields Segments 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 at run time.

How Display Type Values Appear
The following series of figures (A to K) represent how the display types render on the UI at run time. Each display type screenshot is assigned an alphabet that maps to the display type and its description in the table.
The following figure contains the representation of a check box, a drop-down list, a list of values, and a search enabled list of values.

A. Check Box

B. Drop-down List

C. List of Values

D. Search Enabled List of Values

The following figure contains the representation of a radio button group, text area, text box, date and time, and rich text editor.
E. Radio Button Group

F. Text Area

G. Text Box

H. Date/Time

I. Rich Text Editor

This figure contains the representation of a color palette and a static URL field.
The following table describes each display type.

<table>
<thead>
<tr>
<th>Figure Reference</th>
<th>Display Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Check Box</td>
<td>The field appears as a check box. If the user selects the check box, the checked value is used. Otherwise, the deselected value is used.</td>
</tr>
<tr>
<td>B</td>
<td>Drop-down List</td>
<td>The field appears as a list of values available to the user for selection.</td>
</tr>
<tr>
<td>C</td>
<td>List of Values</td>
<td>The field appears as a list of values available to the user for selection. The user can also click Search to find more values.</td>
</tr>
<tr>
<td>D</td>
<td>Search Enabled List of Values</td>
<td>The field appears as a text field with a Search icon button. The users can type a value in the text field or they can click</td>
</tr>
<tr>
<td>Figure Reference</td>
<td>Display Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the Search icon button to open another window for searching.</td>
</tr>
<tr>
<td>E</td>
<td>Radio Button Group</td>
<td>The field appears as a set of radio buttons. The user can select one button. Selecting a button deselects any previously selected button in the set.</td>
</tr>
<tr>
<td>F</td>
<td>Text Area</td>
<td>The field appears as a text area in which the 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.</td>
</tr>
<tr>
<td>G</td>
<td>Text Box</td>
<td>The field appears as a text field in which the user can type a single line of text. The display width controls the width of the text box.</td>
</tr>
<tr>
<td>H</td>
<td>Date Time</td>
<td>The field enables the 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 in 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.</td>
</tr>
<tr>
<td>I</td>
<td>Rich Text Editor</td>
<td>The field appears as a text area in which the user can enter and edit multiple lines of formatted text. The display width and height specify the visible width and number of lines in the rich text editor, respectively.</td>
</tr>
<tr>
<td>I</td>
<td>Rich Text Editor</td>
<td>Note: This display type is available for extensible flexfields only.</td>
</tr>
<tr>
<td>J</td>
<td>Color</td>
<td>The field displays a color palette for the user to select a color at run time and assign it to the segment. During setup, this display type appears in the list for selection only if:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• You are working on an extensible flexfield segment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The value set for the segment is set to ORA_FND_COLOR_#RRGGBB.</td>
</tr>
<tr>
<td>K</td>
<td>Static URL</td>
<td>The field appears as a text field in which users can enter a fixed URL that opens the web page when clicked.</td>
</tr>
</tbody>
</table>
How Flexfields and Value Sets 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.

| Note: Ensure 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 user-defined attributes to be captured on the value set values 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 are shown for the values of that value set. By default, the context segment is hidden since it maps to the value set code and is not expected to be changed.

You can also define global segments that are 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 users with the valid values for the attributes represented by the segments.
Default Segment Values

To populate a flexfield segment with a default value when a row is created, specify a default type of constant, parameter, or Groovy, and a default value or expression.

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 setting a default value or deriving a default value from a parameter, only those attributes designated by development as parameters are available for selection. Different combinations of making the segments read only or editable in combination with the default or derivation value or both, have different effects.

If your segment's default type is Groovy, you can set the Groovy expression you need using the expression builder. To open the expression builder, select Groovy Expression as your Default Type and click the Groovy Expression Builder icon. But you should know that Groovy defaulting doesn't support derivation when a dependent parameter changes. The expression is evaluated only at segment creation.

The following table maps these different combinations. Initial runtime action corresponds to the row for the attribute value being created in the entity table. If the default value is read only, it can't 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.

<table>
<thead>
<tr>
<th>Default Type</th>
<th>Default value specified?</th>
<th>Derivation value specified?</th>
<th>Initial runtime action</th>
<th>Runtime action after parameter changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>No</td>
<td>Yes</td>
<td>No initial segment value</td>
<td>The changed parameter derivation value updates segment value</td>
</tr>
<tr>
<td>Constant</td>
<td>Yes</td>
<td>No</td>
<td>Default segment value</td>
<td>N/A</td>
</tr>
<tr>
<td>Parameter</td>
<td>Yes</td>
<td>Yes, and same as default value</td>
<td>The default segment value is the parameter's default value</td>
<td>The changed parameter derivation value updates segment value</td>
</tr>
<tr>
<td>Parameter</td>
<td>Yes</td>
<td>Yes, and different from default value</td>
<td>The default segment value is the parameter's default and derivation value</td>
<td>The changed parameter default value doesn't update segment value. Only the changed derivation updates segment value</td>
</tr>
</tbody>
</table>
---

**Default Type** | **Default value specified?** | **Derivation value specified?** | **Initial runtime action** | **Runtime action after parameter changes**
---|---|---|---|---

| Groovy Expression | Yes | N/A | The default value of the segment is determined by evaluating the groovy expression. | Groovy expressions are evaluated only at segment creation. They're not evaluated when a dependent parameter is modified. |
| SQL | Yes | No | The default segment value is the value returned by executing SQL statement | N/A |
| SQL | Yes | Yes | The default segment value is the value returned by executing SQL statement | The changed parameter derivation value updates segment value |

**Flexfield Usages**

The flexfield usage specifies the table with which the flexfield and its segments are associated. A flexfield can have multiple usages. However, the first table registered for a flexfield indicates the master usage. Segments are based on the master usage. Other usages of the same table for the same flexfield use the same segment setup, though the column names may have a differentiating prefix.

On the Manage Descriptive Flexfields and Manage Extensible Flexfields pages, click the **Show Entity Usages** icon for a specific flexfield to view its entity usage. On the Manage Value Sets page, you can view the flexfield usages for a selected value set.

**Extensible Flexfields**

For extensible flexfield contexts, you can configure a different usage. The use of an extensible flexfield context determines the scenarios or user interfaces in which the segments of a context appear to users. For example, the Supplier page displays an extensible flexfield's supplier usage and the Buyer page for the same flexfield displays the buyer usage. Then, a context that is associated only with the supplier usage appears only on the Supplier page and not on the Buyer page.

**Value Sets**

The use of value sets specifies the flexfields having segments where the identified value set is assigned.
FAQs for Flexfield Management

How can I access predefined flexfields?
Search for predefined flexfields using the manage flexfields tasks.

1. In the Setup and Maintenance work area, go to any of the following tasks:
   - Manage Descriptive Flexfields
   - Manage Extensible Flexfields
   - Manage Key Flexfields

2. On the page for the type of flexfield you're looking for, enter any of the search parameters and click Search.
   
   Tip: If you don't know the flexfield name or the code, use the Module field to filter search results.

3. Click a flexfield to view its details.

For configuration that's not available through the manage flexfields tasks and the UI, contact My Oracle Support at https://support.oracle.com.

Related Topics
- Update Existing Setup Data

Why can't I edit my flexfield or value set configuration?
Your flexfield or value set configuration may be protected. Application developers mark some configurations as protected, indicating that you can't edit them.

Some examples of configurations that may be protected are:
- Descriptive flexfields
- Extensible flexfield contexts
- Extensible flexfield pages
- Value sets

Why did my page not display any flexfield?
For a flexfield to be available on the page, it must be registered by developers and also deployed. The segments appear on the page only after you have successfully deployed the flexfield.

A flexfield's deployment status indicates whether the flexfield segments are available to users. The flexfield segments that users see at run time correspond to the flexfield definition last deployed successfully.

For information about registering flexfields, see the Oracle Fusion Applications Developer's Guide. Some business objects aren't 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: Oracle Engagement Cloud doesn’t support flexfields.

To add attributes to these applications, you may use Application Composer. For more information, see the product-specific documentation.
Why did my flexfield changes not appear in the runtime UI?
The ADF business components or artifacts of a flexfield, which are generated into an Oracle 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 runtime application user interface page.

How can I enable flexfield segments for 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. Select the attributes that are defined as flexfield segments and enable them.

Flexfield Deployment

Overview of Flexfield Deployment
Deployment generates or refreshes the Application Development Framework (ADF) business component objects that render the flexfield in a user interface. The deployment process adds user-defined attributes to the Web Services Description Language (WSDL) schemas exposed by Oracle ADF services and 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 users.

If a descriptive flexfield is enabled for business intelligence, the deployment process redeployes the flexfield's business intelligence artifacts.

You can deploy a flexfield to a sandbox for testing or to the mainline metadata for use in a test or production run time environment. You can deploy extensible flexfields as a background process.

After deployment, the user-defined 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 user-defined attributes. You must sign out and sign back in to Oracle Applications Cloud to see the changes you deployed at 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
- Export of Artifacts from Flexfield MDS

Deployment Status
Every flexfield has a deployment status. Check the deployment status of your flexfield after patching. The following table lists the different deployment statuses a flexfield can have.

<table>
<thead>
<tr>
<th>Deployment Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edited</td>
<td>The flexfield metadata definition hasn't been deployed yet. Updates of the metadata definition aren't applied in the run time environment yet.</td>
</tr>
<tr>
<td>Deployment Status</td>
<td>Meaning</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Patched</td>
<td>The flexfield metadata definition has been modified through a patch or a data migration action, but the flexfield hasn't yet been deployed. So, the updated definition isn't reflected in the run time environment.</td>
</tr>
<tr>
<td>Deployed to Sandbox</td>
<td>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 dialog box available in the Settings and Actions menu.</td>
</tr>
<tr>
<td>Deployed</td>
<td>The current metadata for the flexfield is deployed in ADF artifacts and available to users. No changes have been made to the flexfield after being deployed to the mainline metadata.</td>
</tr>
<tr>
<td>Error</td>
<td>The deployment attempt in the mainline metadata failed.</td>
</tr>
</tbody>
</table>

**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 Applications Cloud implementation loads flexfield metadata into the database. This initial load sets the flexfield status to Edited. During installation, the application provisioning process deploys the flexfields of the provisioned applications, setting their status to Deployed if no errors occur.

In 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 ends if an error occurs 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). As a result, the user-defined attributes are 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 offline as a background process and continue working in the session without having to wait for the deployment to complete. You can queue up several extensible flexfields and deploy as a background process. The flexfields are deployed, one at a time, in the order that you deploy them to the queue. You must deploy extensible flexfields with more than 30 categories as a background process.
You can remove an extensible flexfield from the deployment queue with the Cancel Background Deployment command. When an extensible flexfield is deployed in a background process, its offline status indicates that the flexfield is in a background deployment process. A flexfield's offline status is cleared and its deployment status updated when the background deployment process has completed.

Export of Artifacts from Flexfield MDS
You can export business components from MDS for descriptive, extensible, or key flexfields, mainly for use in troubleshooting issues with flexfields. Use Download Flexfield Archive on the Manage Flexfields page to export MDS artifacts of the selected flexfield, and import them to an archive on your local computer. You can use these archived business components of flexfields for troubleshooting purposes.
Alternatively, export the deployed artifacts using exportMetadata WLST.

How Flexfield Deployment Status is Calculated
Flexfield deployment status indicates how the flexfield metadata definition in the Oracle Applications Cloud database relates to the Application Development Framework (ADF) business components residing in an Oracle 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, ensure that 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 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 application matches with 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 metadata 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 metadata, the status is Deployed. The latest flexfield metadata definition in the 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 metadata. If either type of deployment fails and 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 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 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 remains 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.

How Deploying a Flexfield-Enabled Sandbox Works with Mainline Metadata
The flexfield definition in a sandbox corresponds to the flexfield metadata definition in the Oracle Applications Cloud 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 metadata.

A flexfield-enabled sandbox uses the following components.

- Flexfield metadata in the Oracle Applications Cloud database
- Flexfield business components in a sandbox Oracle Metadata Services (MDS) repository
- User interface modifications for the flexfield in the mainline MDS repository

The following 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 metadata applies the flexfield definition to the mainline MDS Repository where it is available to end users. After deploying the flexfield to the mainline metadata, modify the page where the flexfield
segments appear. Modifications done to 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.

⚠️ Caution: Don’t modify 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 metadata.
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 runtime user interface are generated in the mainline MDS Repository from this source.

Related Topics
- How You Manage Configurations in Classic Sandboxes

Considerations for Deploying a Flexfield to a Sandbox
Deploying a flexfield to a sandbox creates a flexfield-enabled sandbox. Each flexfield-enabled sandbox contains only one flexfield.

You can test the runtime 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 Applications Cloud global header displays your current session sandbox.

Note: Unlike a standalone sandbox created using the Manage Sandboxes dialog box, 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 dialog box.

When you deploy a flexfield to the mainline metadata 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 metadata where it could be accessed by users.

Caution: Don’t modify 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 metadata.

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 dialog box in the Administrator 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 runtime.

You cannot publish the flexfield from the sandbox to the mainline metadata. You must use the Define Flexfields task flow pages to deploy the flexfield for access by users of the mainline metadata because the flexfield configuration in the mainline metadata is the single source of truth.
Value Sets

Overview of Value Sets

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.

A 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.

Note: Ensure that changes to a shared value set are compatible with all flexfield 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
- Protected value set data

Managing Value Sets

To open the Manage Value Sets page, use the Manage Value Sets task. You can also use the Manage Descriptive Flexfields and Manage Extensible Flexfields tasks for configuring a segment, including its value set. To open 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 users enter data instead of 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. If required, you may add table validated value sets to the list of available value sets available for configuration.
**Note:** For the Accounting Key Flexfield value sets, you must use independent validation only. If you use other validations, you can't use the full chart of accounts functionality, such as data security, reporting, and account hierarchy integration.

**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 users can view or modify.

The application of value set security has the following conditions:

- 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. Disabling security for individual usages of the same value set isn't possible.
- Applies to independent, dependent, or table-validated value sets.
- 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 corresponding to the account combination ID, structure instance number (SIN), and data set number (DSN) can't be transient. They must exist in the database table. For key flexfields, the SIN segment is the discriminator attribute, and the account combination 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 following 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.

Protected Value Set Data
Application developers may mark some value sets as protected, indicating that you can't edit them.

You can edit only value sets that are not marked as protected. You can't edit or delete protected value sets. If the value set type supports values (such as independent, dependent or subset value sets), then you can't add, edit, or delete values.
Note: References to protected value sets aren't restricted. Value sets, protected or not, may be assigned to any flexfield segment. Likewise, other value sets may reference protected value sets; for example, an unprotected dependent value set may reference a protected independent value set.

Related Topics
- Chart of Accounts Components

Validation Type Options for Value Sets
Validation and usage of value sets determine where and how 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 runtime 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 can't 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 users to enter any value, as long as it meets your specified formatting rules. 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 permits 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 data against a list that isn't stored in an application table, and not dependent on a subset of another independent value set. You can't 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 user has defined 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 the states in the USA with values such as CA, NY, and so on. Then you define a dependent value set of cities in the USA with values such as San Francisco and Los Angeles that are valid for the independent value CA. Similarly, New York City and Albany 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. Users don't have to select a value for another segment first to have access to the subset value set.

Independent, dependent, and subset value sets require a user-defined 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 configure 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 supplier 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's 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. The run time displays the corresponding translated text from the value column for the run time session's locale.

Table validation lets you enable a segment to depend on multiple prior segments in the same context structure. You can't reference other flexfield segments in the table-validated value set's WHERE clause. Which means, the WHERE clause can't 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. If you use table validated value sets for key flexfields, then you can't use all integration options supported for key flexfields, such as:

- Data security
- Oracle Transactional Business Intelligence (OTBI)
- Extended Spread Sheet Database (ESSbase)
- Tree or hierarchy integration

To use these integration options for key flexfields, you must use independent value sets only.

Range
In the case of format, independent, or dependent value sets, you can specify a range to 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 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 users. You can't specify any other action.
- When defining a condition that's 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's 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, x̂, ŷ, ẑ. The data security rule or filter written against the value set must not assume anything about the bind variables. Instead the whole list of values must be available and you write the rule, for example, to permit x, or to permit 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
You don't have 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 can't 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 can't change this option if you decide to provide them later.

Considerations for Planning Value Sets
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
- 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
- User-defined list. Also include a sub list.
- Dependent user-defined 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 user-defined 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 comprise 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 applications are running in different locales, you might need to provide different translations for the values and descriptions.

Plain Text
Use a format-only value set when you want to allow 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 align the text to either side, 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.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value data type</td>
<td>Character, Number, Date, Date Time.</td>
</tr>
<tr>
<td>Value subtype</td>
<td>Text, Translated text, Numeric digits only, Time (20:08), Time (20:08:08).</td>
</tr>
<tr>
<td></td>
<td>An additional data type specification for the Character data type for the Dependent, Independent, and Format validation types.</td>
</tr>
<tr>
<td>Maximum length</td>
<td>Maximum number of characters or digits for Character data type.</td>
</tr>
<tr>
<td>Precision</td>
<td>Maximum number of digits the user can enter.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scale</td>
<td>Maximum number of digits that can follow the decimal point.</td>
</tr>
<tr>
<td>Uppercase only</td>
<td>Lowercase characters automatically changed to uppercase.</td>
</tr>
<tr>
<td>Zero fill</td>
<td>Automatic text alignment and zero-filling of entered numbers (affects values that include only the digits 0-9).</td>
</tr>
</tbody>
</table>

**Note:** 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. You cannot edit the data security resource name after you save your changes.

### Considerations for Bind Variables in Table-Validated Value Sets
After you assign a value set to a flexfield, you can use bind variables in the WHERE clause.

These 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's 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's 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 can't 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.

**Note:** 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.

The framework of extensible flexfields doesn't perform any additional validation related to mismatched values for segments defined with cross context bind parameters. Administrators must populate the correct pair of segment values.

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's assigned to the value set that's 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's 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 can't assign a table value set to a context segment if the WHERE clause uses VALUESET.value_set_code or SEGMENT.segment_code bind variables.

### Create Table-Validated Value Sets Based on Lookups

In an application user interface, you want to display a list of values that customers use 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 select 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 following table lists the properties of the value set.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM clause</td>
<td>FND_LOOKUPS</td>
</tr>
<tr>
<td>WHERE clause</td>
<td>lookup_type = 'CN_XX_CUST_SATISFACT_SCORE'</td>
</tr>
<tr>
<td>ID column</td>
<td>lookup_code</td>
</tr>
<tr>
<td>Value column</td>
<td>meaning</td>
</tr>
<tr>
<td>Description column</td>
<td>description</td>
</tr>
<tr>
<td>Enable column</td>
<td>enabled_flag</td>
</tr>
</tbody>
</table>
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, open 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 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.

Add Attributes to the Manage Value Sets Page

You can add attributes to independent, dependent, and subset value sets. The attributes appear on the Manage Value Sets page where you can store additional information about each valid value. To display attributes on an application page, you must programmatically modify the application.

To add attributes and subsequently view them on the Manage Value Sets page, perform the following steps:

1. Using the Manage Descriptive Flexfields task, find the FND_VS_VALUES_B flexfield and open it for editing.
2. Click Manage Contexts.
3. Create a new context and use the value set code for the context code.
4. Add new attributes as context-sensitive segments and save the changes.
5. Deploy FND_VS_VALUES_B to run time.
6. Sign out and sign back in.
7. Open the Manage Value Sets page to view the new attributes.

Import Value Set Values
You can import a file containing values that you want to edit or add to a given independent or dependent value set. For example, uploading a hundred values may be more efficient than creating them individually using the Manage Value Sets task. However, for just a few values, it may be quicker to perform the relevant tasks.

Importing Value Set Values
To import value set values:

1. Create a flat file containing the values in the value set that you want to add or update.

   **Note:**
   - When creating the file, you must specify an existing value set code to which you want to add values or edit existing values. If the value set does not exist, add the value set using the appropriate Manage Value Sets setup task in the Setup and Maintenance work area.
   - The file that you create must adhere to the formatting and content requirements for creating flat files containing value set values.

2. Upload the flat file to the content repository using the File Import and Export page.
3. Import the file using the appropriate Manage Value Sets setup task in the Setup and Maintenance work area. To import the file:
   a. Click **Actions > Import** in the Manage Value Sets page.
   b. In the File Name field, enter the name of the flat file you uploaded using the File Import and Export page.
   c. In the Account field, select the user account containing the flat file.
   d. Click **Upload**.

   **Note:** Alternatively, you can import the file using either of the following methods:
   - Run the Upload Value Set Values scheduled process.
   - Use the Applications Core Metadata Import web service. For more information on the Applications Core Metadata Import web service, see the SOAP Web Services guide for your cloud services.

Related Topics
- Overview of Files for Import and Export

Requirements for Flat Files to Upload Value Set Values
You can import large volumes of value set value data from the content repository. To upload value set values to the content repository, create a flat file containing the values in the value set that you want to add or update. You upload these flat files to the content repository using the File Import and Export page.

General Requirements
The first line of the flat file must contain the column names for the value set value data, including all mandatory columns, and separated by the '|' (pipe) character. Each subsequent line should contain a row of data specified in the same order as the column names, also separated by the '|' character.
The requirements for creating flat files vary with the type of value sets:

- Independent value sets
- Dependent value sets

### Independent Value Set

A flat file for uploading values for independent value sets must contain the mandatory columns. The following table lists the three mandatory columns and their data types.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ValueSetCode</td>
<td>VARCHAR2(60)</td>
</tr>
<tr>
<td>Value</td>
<td>VARCHAR2(150)</td>
</tr>
<tr>
<td>Enabled Flag</td>
<td>VARCHAR2(1), Y or N</td>
</tr>
</tbody>
</table>

**Note:** You can also specify optional columns.

Examples:

- To upload values to a COLORS independent value set with the minimum columns, you can use the following flat file:

  ValueSetCode | Value | EnabledFlag
  ----------- | ----- | -----------
  COLORS     | Red   | Y
  COLORS     | Orange| Y
  COLORS     | Yellow| Y

- To upload values to a STATES independent value set with more (optional) columns, you can use the following flat file:

  ValueSetCode | Value | Description | EnabledFlag
  ----------- | ----- | ----------- | -----------
  STATES      | AK    | Alaska      | Y
  STATES      | CA    | California  | Y
  STATES      | WA    | Washington  | Y

### Dependent Value Sets

A flat file for uploading values for dependent value sets must contain the mandatory columns. The following table lists the four mandatory columns and their data types.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Set Code</td>
<td>VARCHAR2(60)</td>
</tr>
<tr>
<td>Independent Value</td>
<td>VARCHAR2(150)</td>
</tr>
<tr>
<td>Column Name</td>
<td>Data Type</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Value</td>
<td>VARCHAR2(150)</td>
</tr>
<tr>
<td>Enabled Flag</td>
<td>VARCHAR2(1), Y or N</td>
</tr>
</tbody>
</table>

Note: You can also specify optional columns.

Example:

To upload values to a CITIES dependent value set (dependent on the STATES independent value set), you can use the following flat file:

<table>
<thead>
<tr>
<th>ValueSetCode</th>
<th>IndependentValue</th>
<th>Value</th>
<th>EnabledFlag</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITIES</td>
<td>AK</td>
<td>Juneau</td>
<td>Y</td>
</tr>
<tr>
<td>CITIES</td>
<td>AK</td>
<td>Anchorage</td>
<td>Y</td>
</tr>
<tr>
<td>CITIES</td>
<td>CA</td>
<td>San Francisco</td>
<td>Y</td>
</tr>
<tr>
<td>CITIES</td>
<td>CA</td>
<td>Sacramento</td>
<td>Y</td>
</tr>
<tr>
<td>CITIES</td>
<td>CA</td>
<td>Los Angeles</td>
<td>Y</td>
</tr>
<tr>
<td>CITIES</td>
<td>CA</td>
<td>Oakland</td>
<td>Y</td>
</tr>
</tbody>
</table>

Additional Optional Columns

In addition to the mandatory columns, you can add optional columns. The following table lists the optional columns for both dependent and independent value sets.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translated Value</td>
<td>VARCHAR2(150), for use in value sets that are translatable</td>
</tr>
<tr>
<td>Description</td>
<td>VARCHAR2(240)</td>
</tr>
<tr>
<td>Start Date Active</td>
<td>DATE, formatted as YYYY-MM-DD</td>
</tr>
<tr>
<td>End Date Active</td>
<td>DATE, formatted as YYYY-MM-DD</td>
</tr>
<tr>
<td>Sort Order</td>
<td>NUMBER(18)</td>
</tr>
<tr>
<td>Summary Flag</td>
<td>VARCHAR2(30)</td>
</tr>
<tr>
<td>Flex Value Attribute1 ... Flex Value</td>
<td>VARCHAR2(30)</td>
</tr>
<tr>
<td>Attribute20</td>
<td></td>
</tr>
<tr>
<td>User-defined Value Attribute1 ...</td>
<td>VARCHAR2(30)</td>
</tr>
<tr>
<td>User-defined Value Attribute10</td>
<td></td>
</tr>
</tbody>
</table>
Upload Value Set Values Process
This process uploads a flat file containing value set values for *flexfields*. You can use the *scheduled process* to upload a file containing values you want to edit or add to an existing independent or dependent value set. This process is useful for adding or updating large volumes of value set value data in an automated or recurring fashion. For example, you can upload a hundred values on a recurring basis when scheduled as a recurring process. This method could be more efficient than using the Import action in the Manage Value Sets tasks in the Setup and Maintenance work area. However, for a task of uploading a hundred values, it may be quicker to use the Import action in the relevant tasks.

Run this process from the Scheduled Processes Overview page. You can run it on a recurring basis whenever the flat file in the content repository account is updated.

You must create the flat file containing the values data, and upload the flat file to the content repository using the File Import and Export page.

Parameters

**Flat File Name**
Enter the name of the flat file you uploaded using the File Import and Export page.

**Account**
Select the user account containing the flat file in the content repository to upload.

Translation of Flexfield and Value Set Configurations
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, sign in with that locale, or in the global header, select *Settings and Actions > Personalization > Set Preferences* and specify the locale. 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 the value set is of type Character with a subtype Translated text. You define the translations by setting the current session to the locale for which you want to define the translation. Then use the Manage Value Sets task to enter the translated values and descriptions for that locale.

You can define translated values for a table value set for which multiple languages are supported and that the value set's value column is based on a translated attribute of the underlying table. For more information about using multilanguage support features, see the Oracle Fusion Applications Developer's Guide.
FAQs for 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 *role* of the user in the application.

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 application.

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 Applications Cloud *data security*.

How can I set a default value for a flexfield segment?

When you define or edit a *flexfield segment*, you pick a value from the assigned *value set* and set it as default.

You can set the default value for a descriptive flexfield segment to be a parameter. The mapped entity object attribute 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 select 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.

Descriptive Flexfields

Overview of Descriptive Flexfields

Use *descriptive flexfields* to add attributes to business object entities, and define validation for them.

All the business object entities that you can use in the application are enabled for descriptive flexfields. However, configuring descriptive flexfields is an optional task.

Context

A descriptive flexfield can have only one context segment to provide context sensitivity. The same underlying database column can be used by different segments in different contexts.

For example, you can define a Dimensions context that uses the following attributes:

- ATTRIBUTE1 column for height
- ATTRIBUTE2 column for width
• ATTRIBUTE3 column for depth

You can also define a Measurements context that uses the same columns for other attributes:

• ATTRIBUTE1 column for weight
• ATTRIBUTE2 column for volume
• ATTRIBUTE3 column for density

Segments and Contexts
The following table lists the different types of descriptive flexfield segments.

<table>
<thead>
<tr>
<th>Segment Type</th>
<th>Run Time Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global segment</td>
<td>Always available</td>
</tr>
<tr>
<td>Context segment</td>
<td>Determines which context-sensitive segments are displayed</td>
</tr>
<tr>
<td>Context-sensitive segment</td>
<td>Displayed depending on the value of the context segment</td>
</tr>
</tbody>
</table>
The following figure displays a descriptive flexfield having one context segment called Category for which there are three values: Resistor, Battery, and Capacitor. Additionally, the descriptive flexfield comprises two global segments that appear in each context, and three context-sensitive segments that only appear in the specific context.

Application development determines the number of segments available for configuring. During implementation, configure the flexfield by determining the following:

- Attributes to add using the available segments
- Context values
- The combination of attributes in each context

Value Sets
For each global and context-sensitive segment, you configure the values permitted for the segment. Based on it, the values that end users enter are validated, including interdependent validation among the segments.

Protected Descriptive Flexfield Data
Application developers may mark some data configurations in a descriptive flexfield as protected, indicating that you can't edit them.
Considerations for Planning Descriptive Flexfields

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 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 user-defined attributes and plan the descriptive flexfield segments, segment properties, and structure.
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 Applications Cloud Help for product-specific information about the use of those values.

Plan the Segments, Segment Properties, and Structure

Identify the user-defined 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 user-defined 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 user-defined 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 numeric 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 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 user-defined attribute.

Plan How Segments Map to Oracle Business Intelligence Objects
You can extend descriptive flexfields into Oracle Transactional Business Intelligence (OTBI) for ad hoc reporting purposes. Determine the descriptive flexfield segments to be made available for reporting, and select the BI Enabled check box accordingly on the Manage Descriptive Flexfields page. You must run a process to extend the BI enabled segments into OTBI. For more information about extending the BI enabled segments into OTBI, see the Flexfields chapter in the Oracle Applications Cloud Creating and Administering Analytics and Reports guide.

Depending on the reporting needs, you may map similar context-sensitive attributes from different contexts to the same attribute in OTBI. For example, there may be a segment tracking the Product Color attribute in different contexts of a context sensitive descriptive flexfield. You can use segment labels to map these context-sensitive attributes together by defining a segment label and updating the BI Label list accordingly.

Related Topics
- Overview of Transactional Business Intelligence Configuration of Descriptive Flexfields

Considerations for Managing Descriptive Flexfields
Configuring descriptive flexfields involves managing the available flexfields registered with your Oracle Applications Cloud 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 highlighted descriptive flexfields
- 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 can't enter a number for a segment if that number is already in use for a different segment.

Value sets are optional for context segments and follow specific guidelines:

- The value set that you specify for a context segment consists of a set of context codes.
- Each context code corresponds to a context that’s 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 can't 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're configured on application pages that use most of the same properties.

Adding Segments to Highlighted Descriptive Flexfields

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 can't 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 using the Add Segment icon button is either an independent value set or a format-only value set. The following table shows which type of value set is created depending on the segment display component you select.

<table>
<thead>
<tr>
<th>Display Component</th>
<th>Value Set Created Using Add Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Box</td>
<td>Independent</td>
</tr>
<tr>
<td>Drop-down List</td>
<td>Independent</td>
</tr>
<tr>
<td>List of Values</td>
<td>Independent</td>
</tr>
<tr>
<td>Radio Button Group</td>
<td>Independent</td>
</tr>
<tr>
<td>Text Field With Search</td>
<td>Independent</td>
</tr>
<tr>
<td>Text box</td>
<td>Format Only</td>
</tr>
<tr>
<td>Text area</td>
<td>Format Only</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Format Only</td>
</tr>
</tbody>
</table>

**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 these bind variables in the WHERE clause of the SQL statement.

  - `@{SEGMENT.<segment_code>`: Identifies a segment in the same context.
  - `@{PARAMETER.<parameter_code>`: Identifies a parameter.
  - `@{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 can't be a multiple-row context.
  - `@{VALUESET.<value_set_code>`: Identifies the closest prior segment in the same context that's assigned to the specified value set.
  - `@{FLEXFIELD.<internal_code>`: Identifies a flexfield.

Business Intelligence

Selecting a global, context, or context-sensitive segment's BI Enabled check box 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 drop-down list equalizes the segment with segments in other contexts, and maps the segment to the logical object represented by the label.

Considerations for Enabling Descriptive Flexfield Segments for Business Intelligence

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 user-defined 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. 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.

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.
Note: 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.

Extensible Flexfields

Overview of Extensible Flexfields

Extensible flexfields are like descriptive flexfields, with some additional features.

- You can add as many context-sensitive segments to the flexfield as you need. You aren't restricted by the number of columns predefined and registered for the flexfield.
- You can configure a one-to-many relationship between the entity and its extended attribute rows.
  - A row of data can have multiple contexts associated with it.
  - A row of data can have multiple occurrences of the same context.
- You can configure attributes in groups to form a context so that the attributes in the context always appear together in the user interface.
- You can use existing hierarchical categories so that entities inherit the contexts that are configured for their parents. Contexts are reusable throughout categories.
- Application development has registered some extensible flexfields to support view and edit privileges. For such flexfields, you can specify view and edit privileges at the context level to control who sees the attributes and who can change the attributes' values.

When you configure a context for multiple rows per entity, the segments are displayed as a table.

Unlike descriptive flexfields, the extension columns corresponding to extensible flexfields segments are part of extension tables, separate from the base application table. Unlike descriptive flexfield contexts, the set of attributes in an extensible flexfield context remains constant and doesn't differ by context value. An extensible flexfield describes an application entity, with the run time ability to expand the database that implementation consultants can use to define the data structure that appears in the application. Extensible flexfields support one-to-many relationships between the entity and the extended attribute rows. To get a list of predefined extensible flexfields, use the Manage Extensible Flexfields task in the Setup and Maintenance work area.

The following aspects are important in understanding extensible flexfields:

- Usages
- Categories
- Pages
- Security
- Protected Extensible Flexfield Data

Usages

Similar to the descriptive flexfields, you can define multiple usages for an extensible flexfield, which enables several application tables to share the same flexfield.

For example, a flexfield for shipping options can be used by both a Supplier table and a Buyer table. In addition, you can associate a context with one, some, or all of the flexfield's usages. Thus, with the shipping information example, you can...
associate a warehouse context with the Supplier usage, a delivery location context with the Buyer usage, and a ship-via context with all usages.

Usages include security information for applying no security to user access or enforcing view and edit privileges. Some product-specific extensible flexfields have specialized usage fields beyond those for security.

Categories
You can configure multiple extensible flexfield contexts and group the contexts into categories. All extensible flexfields have at least one category. For some extensible flexfields, you can configure a hierarchy of categories. A child category in the hierarchy can inherit contexts from its parent category.

You can define categories for extensible flexfields, and you can associate any combination of contexts with a given category.

For example, the Electronics and Computers category hierarchy might include a Home Entertainment category, which in turn might include an Audio category and a TV category, and so on. The Home Entertainment product might have contexts that specify voltage, dimensions, inputs and outputs. Contexts are reusable within a given extensible flexfield. For example, the dimensions context could be assigned to any category that needs to include dimensional information.

Pages
Extensible flexfields let you combine contexts into groups known as pages, which serve to connect the contexts so they will always be presented together in the application user interface.

Each application page corresponds to one extensible flexfield category, with a separate region of the page for each associated context.

Security
When you configure a flexfield, you set the privileges for a context at the usage level by selecting actions for the view and edit privileges of a context usage.

When an end user performs a search, the user interface displays only the attribute values of the contexts for which the user has view privileges. The user can perform a search using all attributes for all contexts, regardless of view privileges.

If end users access a context through a web service, an exception is thrown if they perform an action for which they don't have privileges.

All extensible flexfields have a base data security resource. Some data security resources for extensible flexfields are preconfigured with actions that you can use to specify access privileges. If no action is preconfigured, a security administrator can create actions and policies to support access control on the extensible flexfield attributes.

Some extensible flexfields have a translatable option; these flexfields also have a translation data security resource.

Protected Extensible Flexfield Data
Application developers may mark some data configurations in an extensible flexfield as protected, indicating that you can't edit them.

If an extensible flexfield is partially protected, then you can't edit the protected portions of the flexfield's configuration. For example:

- If an extensible flexfield context is protected, you can't edit its:
  - Context details
  - Context segments
Context usages

- If an extensible flexfield page is protected, you can’t:
  - Edit the page details or delete the page
  - Edit the contexts associated with the page

Note:
- There is no restriction on page references to protected contexts. The pages you create may contain any context, whether protected or not.
- There is a restriction on category references to protected contexts. If a context is protected, you can’t add it to or delete it from any category.

Related Topics
- Update Existing Setup Data

Considerations for Planning Extensible Flexfields

Once you have identified a flexfield, plan its 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 required to view and configure the flexfield. View the flexfield using the Highlight Flexfields option in the Administration menu while viewing the run time page where the flexfield appears. Plan how to deploy the flexfield for test and production users. Review the tools and tasks available for managing flexfields for adding and editing flexfield segments.

Planning an extensible flexfield involves:

1. Identifying the following:
   - A hierarchical structure of categories
   - Existing context values
   - User-defined attributes, the relevant extensible flexfield segments, segment properties, and the structure

2. Planning the following:
   - Validation rules
   - Initial values
   - Security
   - Attribute mapping to Oracle Business Intelligence objects.

Category Hierarchy Structure

Existing category hierarchy structures provide the framework for planning what segments to add to an extensible flexfield as user-defined attributes of an entity. Some applications provide user interfaces to create and manage an extensible flexfield’s category hierarchy.

Contexts and Existing Context Values

If related attributes can be grouped together, plan adding the attributes as a context of segments, and plan the order in which the attributes should appear. Some extensible flexfields have preconfigured context values. Region headers displayed in the user interface page or pages that contain the flexfield segments identify existing contexts. Using the Manage Extensible Flexfields task, find and open the flexfield for editing to view the list of configured context values.

See product-specific information for guidance in using preconfigured context values.
Plan the Segments and Segment Properties
List all the user-defined attributes that you want to add as extensible flexfield segments. For each segment, define properties, including the indexed property.

Plan Validation Rules
Define each segment's validation rules and check if value sets exist for those rules or you must create. If you must create a value set, you can create it either before you configure the flexfield or at the same time that you create or edit 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 permitted?
- 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 numeric systems, the radix separator is a decimal point.
- Should the value be within a range?
- Should the value be selected from a list of valid values? If yes, consider the following questions:
  - Can you use an existing application table from which to obtain the list of valid values, or do you have to create a list?
  - If you are using an existing table, do you have 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 user-defined attribute.

Plan Security
Determine what privileges to set for view and edit access to context attributes, such as providing all users with view access but only managers with edit access.

If your security restrictions apply to several contexts, you can create generic actions. At a minimum, create the generic actions for the base data security resource. If the flexfield has a translatable option and you plan to use translatable contexts, then also create the generic actions for the translation data security resource. For example, the Item flexfield supports the translatable option and has a data security resource ITEM_EFF_VL in addition to the base data security resource ITEM_EFF_B. Then, create actions for both data security resources, such as EDIT_NONTRANS_ATTRS for ITEM_EFF_B and EDIT_TRANS_ATTRS for ITEM_EFF_VL.

If your security restrictions are more fine-grained, such as having to secure each context with a different privilege, then you can create more fine-grained actions.

Plan Which Segments Map to Oracle Business Intelligence Objects
If an extensible flexfield has been enabled for Oracle Business Intelligence, you can make the attributes available for use in Oracle Business Intelligence Applications.
Considerations for Managing Extensible Flexfields

Configuring extensible flexfields involves managing the available flexfields registered with your application database.

The following sequence describes how to configure extensible flexfields:

1. Configuring contexts by creating each context segment and the context-sensitive segments for each context segment, and providing the following for each segments:
   a. Identifying information
   b. Column assignment
   c. Initial default value
   d. Display properties
2. Configuring context usages and usage security by selecting actions to which users should have access:
   ◦ View
   ◦ Edit
   ◦ None, if no special privileges should be enforced.
3. Configuring categories and category details.
4. Associating contexts with a category.
5. Creating logical pages for a category.

The following aspects are important in understanding extensible flexfield management:

- Contexts and pages
- Categories
- Initial values
- Adding segments to highlighted extensible flexfields
- Indexed segments
- Security
- Deployment

Contexts and Pages

Each context is displayed to end users as a region containing its context-sensitive segments. You can specify instruction help text to display instructions that explain how to use the region and its attributes to end users. Instruction help text is displayed at the beginning of the context region. A context can be defined as single row or multi-row. Single row contexts are the same as descriptive flexfields contexts. A single row context has only one set of context-sensitive segments. A multi-row context enables you to associate multiple sets of values with the same object instance.

For example, for a BOOK table, you could create a multi-row context named chapters that contains a segment for chapter and a segment for number of pages. Multiple chapters can then be associated with each book in the BOOK table.

For contexts that store multiple rows, you can uniquely identify each row by having the values in each row form a unique key.

If flexfield has a category hierarchy, then you can leverage the hierarchy to reuse contexts for similar entities, such as similar items in a product catalog.

Set the context to translatable so that free-form text entered by end users is stored in the language of the user’s locale, and different translations of that text can be stored in other languages. Segments in the translated contexts should use format-only value sets for storing free-form, user-entered text.
Set the context security to give an end user view or edit access to a context. The context's task flow and region appear in the user interface only for users with view access. With edit access, an end user can edit the context's attribute values. With no action specified for a usage, no special privileges are enforced through the context's configuration.

Define logical pages to group contexts together in the user interface. For a given category, you may create one or more logical pages. You may add one or more of the category's associated contexts to each of the category's logical pages.

You can specify:

- The sequence of the contexts within each page.
- The sequence in which the logical pages appear.
- Instruction help text to display instructions that explain how to use the page to end users. Instruction help text is displayed at the beginning of the logical page, preceding all of its context regions.

Categories
A category is a grouping of related data items that can be considered to belong together. You can associate any combination of contexts with a given category. Extensible flexfields with more than 30 categories must be deployed as a background process.

A category hierarchy logically organizes a set of categories. For example, the Electronics and Computers category hierarchy might include a Computer category and a Home Entertainment category, which in turn might include an Audio category and a TV category, and so on.

A category can be a child or sibling of an existing category. The hierarchy can be as simple or as complex as desired, with any combination of zero or more sibling categories and zero or more child categories. If no category is defined, the data items are grouped in a single predefined default category.

Each category has associated contexts that store relevant information about a data item in that category. For example, a Home Entertainment product has contexts that specify Voltage, Dimensions, Inputs and Outputs. Contexts are reusable within a given extensible flexfield. Then, the Dimensions context could be assigned to any category that needs to include dimensional information.

If a hierarchy includes child categories, each child category inherits the contexts from its parent category; for example, the Home Entertainment category inherits Voltage and Dimensions from the Electronics and Computers category.

Each extensible flexfield is associated with a particular category hierarchy. Consider category hierarchies to be defining framework for extensible flexfields and their contexts. A category hierarchy specifies which contexts are valid for each category.

An extensible flexfield can include multiple contexts which you define to support a given category. These contexts can be suitable for various purposes, but within a particular category, some contexts might be considered to be related to, or dependent on, each other. You can combine these contexts into groups known as logical pages, and determine the sequence in which the pages appear. This serves to connect the contexts so they will always be presented together and in a particular order in the application user interface.

For example, the Home Entertainment category might have an Electrical Specifications page that contains the Voltage, Inputs and Outputs contexts, and a Physical Specifications page that contains the Dimensions and Form Factor contexts.

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 these bind variables in the WHERE clause of the SQL statement.

  o :{SEGMENT.<segment_code>}: Identifies a segment in the same context.
  o :{PARAMETER.<parameter_code>}: Identifies a parameter.
  o :{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 can't be a multiple-row context.
  o :{VALUESET.<value_set_code>}: Identifies the closest prior segment in the same context that's assigned to the specified value set.
  o :{FLEXFIELD.<internal_code>}: Identifies a flexfield.

Adding Segments to Highlighted Extensible Flexfields
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 extensible flexfield segments, you can't use an existing value set. Value sets are created automatically when you add 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 following table shows which type of value set is created depending on the segment display component you select.

<table>
<thead>
<tr>
<th>Display Component</th>
<th>Value Set Created Using Add Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Box</td>
<td>Independent</td>
</tr>
<tr>
<td>Drop-down List</td>
<td>Independent</td>
</tr>
<tr>
<td>List of Values</td>
<td>Independent</td>
</tr>
<tr>
<td>Radio Button Group</td>
<td>Independent</td>
</tr>
<tr>
<td>Text Field With Search</td>
<td>Independent</td>
</tr>
<tr>
<td>Text box</td>
<td>Format Only</td>
</tr>
<tr>
<td>Text area</td>
<td>Format Only</td>
</tr>
<tr>
<td>Rich Text Editor</td>
<td>Format Only</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Format Only</td>
</tr>
</tbody>
</table>
Indexed Segments
You can designate an extensible flexfield segment as indexed so that it's one of the selectively required attributes a user can use in an attribute search. If you indicate in the Manage Extensible Flexfield UI page that a segment should be indexed, the column representing the segment must be added to the database index. Commonly, a database administrator (DBA) adds columns to the database index.

When an extensible flexfield with indexed segments is deployed, search task flows are generated along with the other flexfield artifacts and specify the indexed attributes as selectively required. In the deployed extensible flexfield's search task flow, an end user must specify at least one of the indexed attributes in the search criteria. This prevents non-selective searches, which could cause performance issues.

For example, if you index the memory and processor attributes and ensure that the corresponding columns in the database are indexed, a user can search an item catalog for computers by entering processor or memory or both as a search criteria. No search is performed if an end user enters an attribute that isn't indexed as a search criterion.

Security
An extensible flexfield's base data security resource typically has a name with an _B suffix. The translation data security resource is a view of a translation table that typically has a name with an _VL suffix.

If a flexfield supports the translatable option and has a translation data security resource, make sure that you create the action for the appropriate data security resource.

- If you create a context-specific action for a nontranslatable context, add it to the base data security resource.
- If you create a context-specific action for a translatable context, add it to the translation data security resource.

Deployment
You can only deploy extensible flexfields using the Manage Extensible Flexfields task. You can deploy extensible flexfields offline as a background process and continue working in the session without having to wait for the deployment to complete. You can queue up several extensible flexfields and deploy as a background process. The flexfields are deployed, one at a time, in the order that you deploy them to the queue. You must deploy extensible flexfields with more than 30 categories as a background process.

You can remove an extensible flexfield from the deployment queue with the Cancel Background Deployment command. When an extensible flexfield is deployed in a background process, its offline status indicates that the flexfield is in a background deployment process. A flexfield's offline status is cleared and it's deployment status updated when the background deployment process has completed.

Considerations for Enabling Extensible Flexfield Segments for Business Intelligence
An extensible flexfield that is registered in the database as enabled for Oracle Business Intelligence (BI) includes a BI Enabled setting for each of its segment instances. When a segment instance is BI-enabled, it's available for use in Oracle Business Intelligence.

The following aspects are important in understanding BI-enabled extensible flexfield segments.

- Flattening business components to use BI-enabled segments in Oracle BI
- Mapping attributes of flattened business components 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 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 extensible flexfield, the deployment process generates an additional set of flattened business components for use in business intelligence. The flattened business components include attributes for business intelligence-enabled segment instances only.

If you assigned a label to a segment, the flattened components include a single attribute representing all segment instances with that label. If you didn’t assign a label, the flattened components include a discrete attribute for each BI-enabled segment instance in each structure.

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. 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.

Considerations for Managing Extensible Flexfield Categories
Categories are a way of extending the number of context-sensitive segments for a flexfield beyond the columns reserved for flexfield segments.

For example, an Items extensible flexfield has a category for each item and each category can have one or more contexts. The laptop item belongs to the Computers category. Since extensible flexfields are mapped to separate extension tables, not just to columns as with descriptive flexfields, the thirty reserved columns on the extensible flexfield table let you define up to thirty context-sensitive segments for each context.

If you add a Dimensions context to the Computers category, thirty segments are available. But if you need to add more than thirty attributes, create another context and associate it to the same category. You could now add an Electronics Attributes context to the same Computers category in which you create another thirty segments. You can continue creating more contexts and adding them to the Computers category. In this way your laptop computer item can be extended with as many attributes as you need, because it is mapped to a category and you can keep adding contexts to that category.

A descriptive flexfield on an items table with thirty columns reserved for segments can only have a single context. Once you configure the columns for that one context, you cannot create any more segments.

Predefined and Preconfigured Categories
How you structure the flexfield configuration depends on how categories are defined for the flexfield. If the extensible flexfield is preconfigured with one category, associate all your contexts and pages with that category. If a product-specific extensible flexfield is preconfigured with several categories, associate your contexts and pages with those categories. If the extensible flexfields provide user interfaces for configuring multiple categories, associate a context with more than one category using inheritance.
Some products provide an activity or task for creating and maintaining categories for an extensible flexfield. See product-specific information to determine if you can create categories for the flexfield.

You can view a flexfield’s category hierarchies by using either the Highlight Flexfields feature or the Manage Extensible Flexfields task to find and open the flexfield for editing.

Disabling Categories
While configuring an extensible flexfield, you can disable a category. The Enabled column in the Category table of the Edit Extensible Flexfield page, indicates which categories are enabled.

**Note:** When you deploy an extensible flexfield that has a disabled category, that category and its descendant categories aren’t deployed. Contexts and their segments are deployed only if they belong to at least one enabled category.

Contexts
Group similar attributes into contexts. The group is displayed together in a region. The region’s header is the context value.

If a category hierarchy exists for the flexfield, then you can leverage the hierarchy to reuse contexts for similar entities, such as similar items in a product catalog.

The following figure shows the Item Extended Attributes flexfield, which uses the category hierarchy feature to reuse contexts. The flexfield’s Electronics and Computers category contains contexts for compliance and certification, voltage, and materials and substances. The TV and Video subcategory and the Computer Products subcategory inherit the Electronics and Computer contexts in addition to having their own contexts. The Materials and Substances context belongs to both the Electronics and Computer Products category and the Tools, Auto, and Industrial Products category.

The following table shows an example of category hierarchy for an extensible flexfield. To store voltage information for all electronic and computer items, associate a Voltage context with the Electronics and Computers category. Both the TV and Video subcategory and the Computers subcategory then inherit the Voltage context from the parent Electronics and Computers category.
### Display Name | Code | Description
---|---|---
Electronics and Computers | PROD_ELECTRONICS | Electronics and Computers
  • TV and Video | PROD_TV_VIDEO | Television and Video
  • Computers | PROD_COMPUTERS | Computers
Office Products and Supplies | PROD_OFFICE_PRODUCTS_SUPPLIES | Office Products and Supplies
Tools, Auto, and Industrial | PROD_TOOLS_AUTO_INDUSTRIAL | Tools, Automotive, and Industrial
Sports and Outdoors | PROD_SPORTS_OUTDOORS | Sports and Outdoors

#### Example of Configuring an Item Extended Attributes Flexfield

The Item Extended Attributes flexfield provides segments for extending the Item business object. In the Manage Extensible Flexfields task, configure your product business object to include a technical specifications logical page on the user interface for the Electronics and Computers category of items.

In this example, your configuration of this flexfield groups attributes into the following contexts:

- **Materials and Substances**
- **Compliance and Certification**
- **Voltage**

#### Scenario

The following list shows an example plan for computer attributes for the Item Extended Attributes flexfield. In this example, the Electronics Information page is inherited from the parent Electronics and Computers category.

- **Page: Electronics Information**
  - Context: Compliance and Certification, single row
    - ISO 14001 (International Organization for Standardization for an Environmental Management System)
    - ENERGY STAR (energy efficiency guidelines)
    - ROHS (Restriction of the use of certain hazardous substances in electrical and electronic equipment)
  - Context: Voltage, single row
    - Minimum voltage
    - Maximum voltage
    - Current type
  - Context: Materials and Substances, multiple rows
    - Material
• Contain recyclate
• Percent unit mass

• Page: Computer Information
  - Context: Processor Specifications, single row
    - Manufacturer
    - CPU type
    - Processor interface
    - Processor class
    - Processor speed
    - Cores

The following table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which extensible flexfield is available for configuring a hierarchy of categories?</td>
<td>Item Extended Attributes flexfield</td>
</tr>
</tbody>
</table>

Collecting Technical Specifications

Your product inventory pages for electronics and computers require a technical specifications page. Your product inventory pages for furniture require a furniture specifications page and an assembly instructions page. Items in both the electronics and computer category, and in the furniture category, share attributes for specifying materials and substances.

The following figure shows a technical specifications logical page in the user interface for the Electronics and Computers category. It contains attributes in the context of Recovery and Recycling, Compliance and Certification,
Operating Conditions, and Materials and Substances. The Materials and Substances context is configured for multiple rows. Your users can select all the materials and substances required to make a single product.

Analysis

Use logical pages to determine how the contexts appear on the user interface. Use a context to store all the materials and substances required to make a single product. You can configure a context to store multiple rows per entity. The multiple rows are displayed in a table, like the Materials and Substances context.

The Technical Specifications logical page contains the attributes for the four contexts.

- Recovery and Recycling
- Compliance and Certification
- Operating Conditions
- Materials and Substances
The following figure is an example, where the Furniture category is configured to include a Furniture Specifications logical page and an Assembly Instructions logical page. The two categories (Electronics and Computers and Furniture) share the Materials and Substances context.

![Diagram of Oracle SCM Cloud Configuration](image)

**Configure Security for the Item Flexfield Configuration**

The following table shows an example of data security policies for the Item flexfield.

<table>
<thead>
<tr>
<th>Data Security Resource</th>
<th>Policy</th>
<th>Role</th>
<th>Action</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM_EFF_B</td>
<td>A</td>
<td>VOLTAGE_SPEC</td>
<td>edit_nontrans_voltage_ctx</td>
<td>All values</td>
</tr>
<tr>
<td>ITEM_EFF_VL</td>
<td>B</td>
<td>COMPLIANCE_SPEC</td>
<td>edit_trans_compliance_ctx</td>
<td>All values</td>
</tr>
<tr>
<td>ITEM_EFF_VL</td>
<td>C</td>
<td>COMPUTER_SPEC</td>
<td>edit_trans_attrs</td>
<td>ComputerCategoryFilter</td>
</tr>
<tr>
<td>ITEM_EFF_VL</td>
<td>D</td>
<td>TELEVISION_SPEC</td>
<td>edit_trans_attrs</td>
<td>TVCategoryFilter</td>
</tr>
</tbody>
</table>

The following table shows the privileges for the three flexfield contexts.
### Context

<table>
<thead>
<tr>
<th>Context</th>
<th>Edit Privilege</th>
<th>View Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>edit_nontrans_voltage_ctx</td>
<td>NONE</td>
</tr>
<tr>
<td>Compliance and Certification</td>
<td>edit_trans_compliance_ctx</td>
<td>NONE</td>
</tr>
<tr>
<td>Materials and Substances</td>
<td>edit_trans_attrs</td>
<td>NONE</td>
</tr>
</tbody>
</table>

In this example, anyone can view the contexts' attributes, but the edit privileges are restricted as follows:

- **Voltage**: Only voltage specialists can edit this value.
- **Compliance and Certification**: Only compliance specialists can edit this value.
- **Materials and Substances**: Only computer specialists can edit these attributes for items in the computer category. Only television specialists can edit these attributes for items in the TV category.

To sum up, in this entire example, the Materials and Substances context is secured by a generic action with a condition applied to restrict access by category. Voltage and Compliance and Certification are secured by actions specific to each context.

### FAQs for Extensible Flexfields

**Why did the extensible flexfield context not appear at run time?**

If a deployed extensible flexfield context doesn't appear in the user interface, verify that the context is associated with one of the category's pages defined for the extensible flexfield.

### Key Flexfields

**Overview of Key Flexfields**

*Key flexfields* provide a means to capture a key such as a part number, a job code, or an account code. A key flexfield consists of one or more *segments*, where each segment can have a meaning.

For example, a part number 10-PEN-BLA-450 might correspond to a black pen from supplier #450 sold by division #10 (office supplies). Behind the scenes, the application uses a unique number, 13452, for this part, but the user always sees the 10-PEN-BLA-450 part number.

The following aspects are important to understanding key flexfields:

- Architecture
- Segments and segment labels
- *Structures*
- *Segment* and *structure instances*
- Combinations
- Dynamic combination creation
Key flexfields aren’t optional. You must configure key flexfields to ensure that your applications operate correctly. You configure and maintain key flexfield definitions with the Manage Key Flexfields task. To get a list of predefined key flexfields, use the Manage Key Flexfields task in the Setup and Maintenance work area. For information about specific key flexfields, see the help for the product where the associated business component is implemented.

Architecture
Flexfield metadata is stored in the flexfield metadata tables. When you configure a key flexfield, you define metadata about the key flexfield covering aspects such as:

- Segments are in a structure
- Structures in the flexfield
- Value sets in each segment

Based on the flexfield metadata, actual part numbers are captured at run time as a combination of segment values and stored in a combinations table. A combinations table contains all the segment columns for a flexfield, a unique ID column, and a structure instance number column. The structure instance number column differentiates multiple arrangements of the segment columns. For example, a part number containing multiple segments can be represented by a key flexfield. A part number key flexfield has a corresponding combinations table. In that table, the flexfield stores a list of the complete codes, with each segment of the code in a column, with the corresponding unique ID and structure instance number for the code. When users define a new part number or maintain existing part numbers in the parts catalog, they directly maintain rows in the combinations table.

The foreign key table contains a different business entity than the combinations table. For example, the business entity in the foreign key table is order lines or invoice lines that contain foreign key references to parts for ordering. Any number of foreign key tables can reference a particular entity represented by a key flexfield.

Segments and Segment Labels
A key flexfield contains segments and a segment label identifies a particular segment within a key flexfield. Segment labels are defined and made available by the product development. A segment contains the following details:

- A prompt
- A short prompt
- Display width
- The sequential position of the segment within the key flexfield structure
- The range type
- Column name of the attribute being stored by the segment
- A default value set
- A label for the segment

Applications identify a particular segment for some purpose such as security or computations. Segment name or segment order cannot reliably identify a segment because key flexfield segments can be configured to appear in any order with any prompts. A segment label functions as a tag for a segment.

For example, the requirement is to identify which segment in the accounting flexfield contains balancing information and which segment contains natural account information. A segment label determines which segment you are using for natural account information. When you define your accounting flexfield, you must specify which segment labels apply to which segments. Some labels must be unique, and cannot be applied to more than one segment in each structure. Other labels are required, and must be applied to at least one segment in each structure.
A segment label helps a user searching for segments, such as the Cost Center label for all segments across key flexfields that store a value for the cost center.

Structures
A key flexfield structure definition includes the number of segments and their order.

In some applications, different users like to see different segment structures for the same flexfield. A key flexfield can have multiple structures if registered to support more than one structure.

The flexfield can display different fields for different users based on a data condition in your application data, such as the value of another field entered by the user or the user’s role. For example, the correctly formatted local postal address for customer service inquiries differs based on locale. A postal address key flexfield could display different segments and prompts for different users based on a location condition in your application data, such as the user’s role or a value entered by the user.

Each structure can have one or more segments. Thus a segment is a child of a structure. To store a particular segment, such as Cost Center, in two different structures, you must define the segment separately in each structure. Each structure may have one or more structure instances. Each instance of a structure shares the same number and order of segments, but differs in the values or value sets used in validating the segments.

Structure and Segment Instances
You can define multiple configurations of a key flexfield structure. These structure instances have the same segment structure, in the same sequence order. They differ primarily in how each segment is validated. You define a structure instance for each key flexfield and each key flexfield structure instance.

The segments in a key flexfield structure instance are segment instances. A segment instance is a segment with a specific value set assigned to it. If a key flexfield is registered with a tree structure, you can specify a tree code for a segment instance.

Combinations
A combination is a complete code, or combination of segment values that makes up the code, that uniquely identifies an object.

For example, each part number is a single combination, such as PAD-YEL-11x14 or 01-COM-876-7BG-LTN. In these combinations, the hyphen is the segment separator. If you have ten parts, define ten combinations. A valid combination is an existing or new combination that can be used because it’s currently active and doesn’t violate cross-validation or security rules. A combination has different segments depending on the flexfield structure being used for that combination. Any combination is associated with only one particular flexfield structure.

Many applications refer to a key flexfield combination by using the name of the entity or the key flexfield itself. For example, Assets uses the asset key flexfield and refers to one of its combinations as an asset key or asset key flexfield. In another example, Oracle Fusion General Ledger refers to combinations of the accounting flexfield as account or GL account.

Each key flexfield has one corresponding table, known as the combinations table, where the flexfield stores a list of the complete codes, with one column for each segment of the code, together with the corresponding unique ID number (an account combination ID) for that code. Then, other tables in the application have a column that stores just the unique ID for the code. For example, you may have a part number code, such as PAD-YEL-11x14. The Parts combinations table stores that code along with its ID, 57494. If your application lets you take orders for parts, you might then have an Orders table that stores orders for parts. That Orders table would contain a single column that contains the part ID, 57494, instead of several columns for the complete code PAD-YEL-11x14. Typically, one combinations page maintains the key flexfield, where the key flexfield is the representation of an entity in your application. Maintain individual combinations, such as part numbers in the combinations page.
Dynamic Combination Creation

Dynamic combination creation is the insertion of a new valid combination into a combinations table from a page other than the combinations page. The following table lists the levels at which dynamic combination creation may be enabled.

<table>
<thead>
<tr>
<th>Level Of Dynamic Combination Creation</th>
<th>Controlled By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexfield</td>
<td>Application development</td>
</tr>
<tr>
<td>Each usage or reference to the key flexfield</td>
<td>Application development</td>
</tr>
<tr>
<td>Structure instance</td>
<td>Administrators and implementation consultants</td>
</tr>
<tr>
<td>Other</td>
<td>Administrators and implementation consultants</td>
</tr>
</tbody>
</table>

If your key flexfield or certain usages or references of the key flexfield don’t permit dynamic combination creation, you may control whether dynamic combination creation is enabled for each structure instance. If enabled, a user can enter a new combination of segment values using the flexfield window from a foreign key page. For example, when entering a transaction, a GL user can enter a new expense account combination for an account that doesn’t yet exist. Your application creates the new account by inserting the new combination into the combinations table behind the scenes. Assuming that the new combination satisfies any existing cross-validation rules, the flexfield inserts the new combination into the combinations table, even though the combinations table isn’t the underlying table for the foreign key page.

Related Topics
- Update Existing Setup Data

Considerations for Planning Key Flexfields

Your first step in planning your key flexfields is to determine which key flexfields your application requires. Your plan should include:
- The purpose of the key flexfield
- The number and length of its available segment columns
- Whether your key flexfield permits more than one structure
- Whether more than one structure must be defined
- The number, order and length of your segments for each structure

Before You Begin

Once you have identified a flexfield, plan its 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 required to view and configure the flexfield. Use the Highlight Flexfields command in the Administration menu to view the runtime page where the flexfield appears. Plan how you deploy the flexfield for test and production users and review the tools and tasks available for managing flexfields.

If you plan to use value sets, create them before configuring the key flexfield. You cannot create value sets for key flexfields at the time that you add and configure key flexfield segments.
Access to Flexfield-Related Tasks
To configure flexfields and value sets, you must have access to the tasks for managing flexfields. Contact your security administrator for details. For information about product-specific flexfield tasks, such as Manage Fixed Assets Key Flexfields, refer to the product-specific documentation.

Restrictions
If you plan to use value sets, create them before configuring the flexfield. Plan your key flexfield configuration to scale to your enterprise needs. For example, if you expect to disable old cost centers and enable new ones frequently, plan a larger maximum size for your cost center value set so that you can have more available values. A 3-character value set with one thousand available values provides more room for changes than a 2-character value set with 100 available values.

Note the code name of the flexfield you intend to configure so that you find it easily in the tasks for managing key flexfields. In some cases you can configure how the flexfield appears on the page. See product-specific documentation to determine any restrictions on using product-specific key flexfields.

Reporting
To report on your data by certain criteria or sub-entities, such as account number or project or region, consider making that sub-entity a distinct segment, rather than combining it with another sub-entity. You can categorize and report on smaller discrete units of information.

Considerations for Managing Key Flexfields
Consider the plans for a key flexfield, security, and resulting run time pages when configuring key flexfields.

Planning
Plan structures carefully and enable them for future needs. Don't change the number, order, and maximum length of segments once you have acquired flexfield data.

Structure Delimiters
A delimiter separates the segments when they appear to users. The delimiter value of a structure specifies the character used to visually separate segment values when the key flexfield is displayed as a string of concatenated segments in the UI.

Identify the delimiter value of your key flexfield carefully so that it doesn't conflict with the flexfield data. For example, if your data frequently contains periods, such as in monetary or numeric values, don't use a period as your segment separator. Any character you expect to appear frequently in your segment values or descriptions isn't a good choice for the delimiter. If you change the configuration of a key flexfield, such as the delimiter, the change affects the previously stored key flexfields with that structure.

Security
Oracle Fusion data security enforces value set security.

Within key flexfields, value set security applies to the selection of the individual segment values in the segment list of values. When selecting a key flexfield segment value from the combinations table, data security permits display of only the combinations whose segment values you have access to. Applications development controls whether or not value set security rules propagate to the foreign key table. By default they do.
Run Time Pages

Application development determines the user interface (UI) pages used to render flexfields. The types of key flexfield UI pages are as follows:

- Combinations pages where the underlying entity objects use the combinations table itself
- Foreign key pages where the underlying entity objects contain a foreign key reference to the combinations table
- Partial usage pages where some or all of the key flexfield’s segment columns are in a product table

The same key flexfield can be used in different ways on different pages.

A page with a foreign key reference has a base table or view that contains a foreign key reference to a combinations table with the actual flexfield segment columns. This lets you manipulate rows containing account combination IDs (account combination).

A page with partial usage of a key flexfield presents segments that are defined on a product’s transactional table in addition to being defined on a combinations table. In the case of a partial usage page, only a part of the configuration is likely to be visible. This enables the key flexfield to act more like a descriptive flexfield.

An account combination maintenance page or combinations page presents the combinations table. This enables directly creating and maintaining account combinations. The combinations table contains all key flexfield segment columns and a unique ID column.

A typical application has only one combinations page. An application might not have a combinations page if it doesn't support maintenance by administrators.

A page containing a search region enables users to select which attributes of the key flexfield view object to use as criteria to search for flexfield metadata.

For example, you can configure seven segments for the Account key flexfield. In a foreign key reference page, users see the typical key flexfield picker with all seven segments where they can search for combinations. In a partial usage page using the same key flexfield, users potentially could see only a single segment such as the Cost Center labeled segment, or they might see multiple segments but displayed as individual segments rather than options for selecting combinations.

For more information about key flexfield pages, see the Oracle Fusion Applications Developer’s Guide.

Key Flexfield Structures

A key flexfield structure arranges the segments of a key so that you can reuse a single key flexfield in multiple combinations of the same segments or a subset of those segments. Multiple instances of a single structure can accommodate differences in the value sets assigned to the structure’s segments.

The structure determines the following aspects of a key flexfield:

- The segments to include
- The order of the segments
- Segment labels on the included segments
- Properties for each segment applied to the instances of the segments in an instance of the structure
Managing Key Flexfield Structures
All the segments defined for a key flexfield are available to be included in a key flexfield structure.

You can define as many segments as there are defined segment columns in your key flexfield combinations table. Ensure that you add segments in the order that your key requires. Once deployed, the order cannot be changed.

Enable segments to indicate that they are in use. A flexfield doesn't display disabled segments in run time. To protect the integrity of your data, disable a segment if you have already used it to enter data.

Key Flexfield Structure Instances and Segment Instances
A key flexfield structure can have one or more alternate structure instances. The instances of a key flexfield structure share the following aspects of the structure:

- The same set of segments
- The same arrangement of segments
- The same properties at the segment and structure levels

The differences among structure instances include whether dynamic combination creation is permitted. Likewise, at the structure instance level, differences among segment instances are based on the following:

- Value set
- Default type and default value
- Tree code
- Whether the segment is any of the following:
  - Required
  - Displayed
  - Enabled for business intelligence
  - Optional or required as a query criterion

For example, you can use one group of value sets for the US and another for France.
The following figure shows two structures instances for a part number structure.

The structures differ in the number of segments and the segment separators used. The structure instances share all the properties defined for that structure. However, the structure instances may vary if the properties are defined at the structure instance or segment instance level. For example, the value set assigned to the segment instances.

**Query Required Segment Instances**

You can designate a key flexfield segment instance as a query for making it a selectively required attribute. A user can use it as a key flexfield combination search. On the Manage Key Flexfields UI page, if you indicate that a segment instance requires indexing, add the column representing the segment to the database index. Commonly, a database administrator (DBA) adds columns to the database index.
Following deployment, the combination picker of the key flexfield displays the query required attributes as selectively required. A user must specify at least one of the query required attributes in the search criteria. This prevents unnecessary searches that could cause performance issues.

For example, you mark the cost center and account attributes as query required and ensure that the corresponding columns in the database are indexed. A user can search for combinations by entering cost center or account or both as search criteria. No search is performed if a user doesn't enter at least one query required attribute as search criteria.

**Tip:** Index the Structure Instance Number column on your combinations table to improve run time performance.

**Dynamic Combinations**

If a key flexfield supports dynamic combination creation, you can select to enable this feature by selecting Dynamic Combination Creation Allowed. As a result, users enter values at run time that produce new account combinations for the flexfield. If Dynamic Combination Creation Allowed isn't enabled, new valid combinations can only be entered using the combinations table for the flexfield.

**Trees**

You may define a tree code for the value set assigned to the segment instance. When you assign the tree code to the segment instance, tree hierarchy search operations are available on the segment values.

For a segment instance to be based on a tree, the following must be true.

- Application development registered the key flexfield with a tree structure. The tree structure may be fixed across all segments in the flexfield, or may vary across segments.
- A tree code for that tree structure exists.
- The tree code includes tree versions containing the values of the value set assigned to the segment instance.
- You assign the required tree code directly to the segment instance.

If these conditions are satisfied, you can assign the same or different tree codes to the different segment instances that use the same value set.

**Cross-Validation Rules**

You can control the creation of new key flexfield code combinations by defining cross-validation rules. A cross-validation rule defines validation across segments and enforces whether a value of a particular segment can be combined with specific values of other segments to form a new combination.

The following table compares segment validation to cross-segment validation:

<table>
<thead>
<tr>
<th>Type of validation</th>
<th>Type of control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment validation</td>
<td>Controls the values you can enter for a particular segment</td>
</tr>
<tr>
<td>Cross-segment validation</td>
<td>Controls the combinations of values that administrators and end users can create for key flexfields</td>
</tr>
</tbody>
</table>

**Note:** You can use cross-validation rules for any key flexfield that has cross-validation enabled. See the documentation for your key flexfield to determine if it supports cross validation.
Cross-validation rules prevent the creation of combinations with values that can’t coexist in the same combination. For example, your company requires that all revenue accounts must have a specific department. Therefore, account combinations that have revenue account values, such as all values between 4000 and 5999, must have a corresponding department value other than 000, which indicates no department is specified. You can define cross-validation rules that disallow creation of combinations with incompatible segments, such as 4100-000 or 5000-000.

Alternatively, suppose your accounting key flexfield has an Organization segment with two possible values, 01 and 02. You also have a Natural Account segment with many possible values, but company policy requires that Organization 01 uses the natural account values 001 to 499 and Organization 02 uses the natural account values 500 to 999. You can create cross-validation rules to ensure that users cannot create a general ledger account with combinations of values such as 02-342 or 01-750.

The following aspects are important to understanding cross-validation rules:

- Rule Definitions
- Enforcement
- Timing

Rule Definitions
The following table contains definitions used in cross-validation rules:

<table>
<thead>
<tr>
<th>Rule Definition</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Uniquely identifies cross-validation rules in a deployment.</td>
</tr>
<tr>
<td>Description</td>
<td>Helps administrators identify the purpose of the rule.</td>
</tr>
<tr>
<td>Error message</td>
<td>Explains why the attempted combination violates the rule.</td>
</tr>
<tr>
<td>Start Date, End Date</td>
<td>Indicates the period of time when the rule is in effect.</td>
</tr>
<tr>
<td>Enabled</td>
<td>Determines whether the rule is enforced.</td>
</tr>
<tr>
<td>Condition filter</td>
<td>Determines the conditions in which an enabled cross-validation rule should be evaluated.</td>
</tr>
<tr>
<td>Validation filter</td>
<td>Determines the validation that the rule enforces when that condition is met.</td>
</tr>
</tbody>
</table>

When the event specified in the condition filter is applicable, the validation filter condition must be satisfied before the combination can be created. If the event specified in the condition filter isn’t applicable, then the combination is considered to pass the rule and the rule won’t be evaluated even if it is enabled.

**Note:** If you don’t specify any statement in the condition filter, then the condition is always true and the rule is always evaluated.
Enforcement
Cross-validation prevents creation of invalid combinations by administrators using maintenance pages and end users using dynamic insertion in foreign key pages.

Enabled rules are enforced when there is an attempt to create a new combination of segment values. Disabled rules are ignored. Deleting the rule has the same effect, but you can re-enable a disabled rule.

Timing
When users attempt to create a new combination, the key flexfield evaluates any cross-validation rules that are enabled and in effect.

Note: Cross-validation rules have no effect on combinations that already exist. The flexfield treats any existing invalid combinations that pre-date the rule as valid.

If you want to prevent users from using previously existing combinations that are no longer valid according to your cross-validation rules, manually disable those combinations using the combinations page for that key flexfield.

When defining a cross-validation rule, specify a start and end date to limit the time when the rule is in effect. The rule is valid for the time including the From and To dates.

Considerations for Cross-Validation Rules
To validate the key flexfield combinations of segment values across segments, optimize your cross-validation rules to improve the experience of administrators and users.

Consider the following when defining cross-validation rules:

- Filters
- Rule Complexity
- Maintenance

Filters
A cross-validation rule includes a condition filter and a validation filter. The rule is evaluated using the following logical order: If the condition filter is satisfied, then apply the validation filter.

The condition filter describes the event when the rule is evaluated. If the event specified in the condition filter isn't applicable, then the rule isn't evaluated, even if enabled. When the event specified in the condition filter is applicable, the validation filter condition must be satisfied before the combination can be created.

For example, your organization has determined that a certain company value called Operations can't use a specific cost center called Marketing. You can define a cross-validation rule to validate your combinations.

1. The rule evaluates the company condition filter.
2. When company is equal to Operations, the rule evaluates the cost center validation filter.
3. When cost center is equal to Marketing, the rule prevents a combination from being created.
4. The error message you defined for the rule displays to inform the user that the attempted combination violates the rule.

Such a rule doesn't affect the creation of combinations with Marketing cost center and company values other than Operations.

Rule Complexity
For optimal performance and ease of understanding, define several simple validation rules instead of using one complex rule. Simple validation rules let you provide a more specific error message and are easier to maintain over time.
Avoid rules that control validation across more than two segments, where possible. While you can define cross-validation rules that span two or more segments, it becomes difficult to interpret cross-validation error messages and rectify invalid key flexfield combinations.

Maintenance
To maintain consistent validation, review existing key flexfields when you update your cross-validation rules. Regardless of your current validation rules, you can use an existing key flexfield combination if it's enabled. Therefore, to ensure accurate validation, you must review your existing combinations and disable any combinations that don't match the criteria of your new rules.

**Tip:** To keep this type of key flexfield maintenance to a minimum, decide upon your cross-validation rules when you first set up your key flexfield structure. Define cross-validation rules before creating combinations and before combinations are used in transactions.

To prevent users from using existing combinations that are no longer valid according to your cross-validation rules, disable them using the combinations page.

**Edit a Cross-Validation Rule**
Cross-validation rules prevent specific combinations of segment values in account combinations. You can use the Manage Cross-Validation Rules task to edit existing rules or to create one-off rules.

**Scenario**
Your organization has a cross-validation rule called Companies 131 and 151, which restricts account combinations for those companies to department 40 and product 211. Account combinations for both companies should now include department 30. To edit the cross-validation rule, perform these steps.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Financials
   - Functional Area: Financial Reporting Structures
   - Task: Manage Cross-Validation Rules
2. Select the chart of accounts for your organization and select the **Companies 131 and 151** cross-validation rule.
   
   The following figure shows the section of the Edit Cross-Validation Rules page with the condition and validation filter details for companies 131 and 151. A condition is defined for company values equal to 131 or 151, and the validation specifies the department value equals 40 and the product value equals 211.

3. Click the **Validation Filter** icon.
4. Click Add Fields and select the Department segment.
5. Accept the default operator, which is Equals, and select department 30.

The following figure shows the Validation Filter window with three validations: department equals 40, department equals 30, and product equals 211.

6. Click OK.
7. Click Save.

The following figure shows the details for the updated validation on the Edit Cross-Validation Rules page. The validation specifies departments equal to 30 or 40, and the product equal to 211.

8. To update the error message, search for and select the Manage Messages for General Ledger task. Query the error message name for the cross-validation rule and edit the message to include department 30.

Related Topics
- Update Existing Setup Data

Considerations for Enabling Key Flexfield Segments for Business Intelligence
A key flexfield registered in the database as enabled for Oracle Business Intelligence (BI) includes a BI Enabled setting for each of its segment instances. When a segment instance is BI-enabled, it’s available for use in Oracle Business Intelligence.
The following aspects are important in understanding BI-enabled key 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 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 key flexfield, the deployment process generates an additional set of flattened business components for use in business intelligence. The flattened business components include attributes for business intelligence-enabled segment instances only.

If you assigned a label to a segment, the flattened components include a single attribute representing all segment instances with that label. If you didn’t assign a label, the flattened components include a discrete attribute for each BI-enabled segment instance in each structure.

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 segments that serve the same purpose in different structures, you can consolidate the segments into a single attribute. This prevents duplication and the extra workload and complexity that result from the flattening process. For example, an organization may have more than one definition of its key accounting flexfield to support different requirements for accounting reporting. A US Accounting Flexfield structure may have a segment called Subaccount to track project expenditures. The same type of information may be tracked in a UK accounting flexfield structure with a segment called Project. Equalize these two segments to create a single list of values for reporting.

Non-labeled segments aren’t equalized across context values, so the flattened components include a separate attribute for each segment for each structure. 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 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. Assigning a label to a segment serves to equalize the attribute across structures, as well as map the equalized attribute to business intelligence.

Managing Labels

You may assign a predefined label (if available) to segments or create 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 structures.

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 required logical object when importing into Oracle Business Intelligence. In addition, segments without labels cannot be equalized across structures. The flattened components include a separate attribute for each non-labeled segment in each structure.
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. 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.

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.

Note: 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.

Example of a Key Flexfields

A key flexfield can capture expense account information.

Scenario

When entering details for each expense, the user specifies an account to which the expense is charged.

Entering Expense Accounts

A user interface for entering expenses helps the user select an expense account that identifies the cost center and other details needed for processing the expense.

Analysis

The expense account field is a foreign key reference to a account combination (EXPENSE_LINES.EXPENSE_ACCOUNT = ACCOUNT.COMBINATION).

Account combinations Table for Entering Accounts and Employees

The account combinations table supports entering account information, such as for expense accounts.
The following figure shows the origin in the account combinations table of the account specified by the user. The account combination ID record stores the information of the key flexfield segments used to assemble the expense account based on the key flexfield configuration.

The combinations page, which is the maintenance page for the key flexfield, is for managing rows in the combinations table. In this example, managing the combinations means adding or editing account numbers that adhere to the key flexfield metadata rules.

The following figure shows the account combination details for the example expense account reflected in the flexfield configuration and the account combinations table.
If dynamic combination creation isn't enabled, then when entering an expense line, the user can only select an account that already exists in the ACCOUNTS (combinations) table. If they require an account that doesn't exist, they must consult with the appropriate application administrator who can add the account to the combinations table.

If dynamic combination creation is enabled, then when entering an expense line, the user can either select a preexisting account, or type in a new account that is created dynamically on the fly in the ACCOUNTS (combinations) table. Once the new combination is created, the same user can refer to it on the expense line.

When managing employee information, the user specifies the cost center that the employee belongs to. The cost center field corresponds to a single, labeled segment of the Account Key Flexfield and has metadata defined such as the allowable value set for that segment.

In the following figure, instead of specifying a cost center ID reference to an account, only the cost center segment is used and the value is stored directly on the employee table.
Attachments

Attachments

You can use attachments to provide supplementary information to specific business objects. Attachments can be URLs, desktop files, text, or repository folders. For a business object you may view, create, delete, or edit attachments, depending on your role and granted privileges. For more information on 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 can't interact with the repository unless the repository mode is enabled. When enabled, users can share attachments among objects, update attachments, and perform other tasks. Access to the attachment files is controlled by a digital signing mechanism.

Security

Data security applicable to a specific business object also applies to its attachments For example, if a user has no access to a specific expense report, then that user can't access its attachments. You can also use attachment categories to control access and actions on attachments, based on roles associated with that category. For more information on securing attachments, see the Oracle Fusion Applications Developer's Guide.

Attachment Entities

An attachment entity is usually a database entity, for example a table or view, that represents a business object with which attachments can be associated. Each attachment UI must be defined with a corresponding attachment entity.
Attachment entities are used only in the context of attachments and exist separately from the database entities that they’re based on.

In the Setup and Maintenance work area, use the Manage Attachment Entities task to edit and create attachment entities. You can either use the predefined attachment entities with attachment UIs or create entities, for example when developing your own UIs.

The entity name should match the name of the table or view that represents the business object used for attachment. The name is also used in the repository folder that’s automatically created to store attachments for the entity.

The data security policies associated with the database resource defined for the attachment entity apply to attachments for that entity. However, the security setting must be enabled for that entity. 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.

Related Topics
- Modules in Application Taxonomy
- How Database Resources and Data Security Policies Work Together

How Attachment Entities and Attachment Categories Work Together

The association between attachment entities and categories determines the use of categories for an entity. For example, categories associated with the expense report attachment entity are available in the attachment UIs for expense reports. You can configure the associations when managing either entities or categories. Between the Manage Attachment Entities and Manage Attachment Categories pages, any change in association on one page automatically reflects on the other page. You can open either page by starting in the Setup and Maintenance work area and searching for the attachment tasks.

Managing Entities

On the Manage Attachment Entities page, you determine which attachment categories are relevant to a particular entity. Each entity must have at least one category. For a particular expense report page with attachments functionality, you can specify which category to use for the attachment. Accordingly, the data security defined for each category is applied to the attachments on that page if security is enabled.

Managing Categories

If you create an attachment category and must assign it to multiple attachment entities, use the Manage Attachment Categories page. The association is the same as that on the Manage Attachment Entities page.

Attachments Troubleshooting

Attachments UIs are very user-friendly and easy to work with. You may encounter issues in certain cases such as you modify the attachments, for example create additional attachment categories, or implement data security on them.

Issue: Can't View, Add, Update, or Delete Attachments

You may encounter the following issues when trying to view attachments or perform actions such as adding attachments.

- You can no longer see specific attachments that were earlier visible.
You can no longer update or delete attachments.
You get an error stating that you don't have permission to add attachments.

Resolution
Use the Manage Attachment Entities page to ensure that attachment categories are associated to the relevant attachment entity. 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, verify that the Enable Security check box is selected in the Manage Attachment Entities page for that entity. Also, make sure that users have a role that has the necessary privileges. The following table lists the privileges required to view, add, update, or delete attachments with a specific attachment category.

<table>
<thead>
<tr>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>Read Application Attachment (FND_READ_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
<tr>
<td>Add or Update</td>
<td>Update Application Attachment (FND_UPDATE_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
<tr>
<td>Delete</td>
<td>Delete Application Attachment (FND_DELETE_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
</tbody>
</table>

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 don't have the Update Application Attachment privilege for any attachment categories tied to the expense report attachment entity, then they can't create any attachments for the expense reports.

For more information on attachment category data security, see the Oracle Fusion Applications Developer's Guide.

Certain attachments UI have predefined restrictions for users on categories. 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
You can view existing attachments but the attachments no longer have an attachment category associated with them.

Resolution
When the attachment was added, at least one category existed for the corresponding attachment entity. Since then, the entity was edited so that it no longer has any assigned categories, so the user can't 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 may need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or any additional categories to assign.
Certain attachments UI have predefined restrictions for users on categories. 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 Attachments

What's an attachment category?
You must use an attachment category to classify and secure an attachment. While adding attachments, you can view the available attachment categories and add the attachment to one of them. For example, attachments for an expense report can be categorized as receipts, scanned invoice images, and so on.

In the Setup and Maintenance work area, use the Manage Attachment Categories task. You can associate roles with categories to restrict user access and actions for an attachment entity. You can also create and manage categories for your own purpose, involving specific attachments with specific security requirements. For more information on attachment category data security, see the Oracle Fusion Applications Developer’s Guide.

Related Topics

- Modules in Application Taxonomy
13 Collaboration Messaging

Overview of Collaboration Messaging

Use Oracle Fusion Collaboration Messaging Framework to enable Oracle Applications Cloud establish business-to-business (B2B) messaging capabilities with trading partners.

Using this framework, you can send and receive real-time transactional messages without building new SOA components. You can use the existing B2B functionality to exchange messages with collaborators such as suppliers either directly or using an intermediary agency such as a B2B Service Provider.

The framework supports transformation of a B2B document, such as a purchase order, between the Oracle Applications Cloud format and an external message format supported by the trading partner. When you send messages to partners or receive messages from them, the framework performs the required transformation.
The following figure illustrates how Collaboration Messaging Framework delivers a message to the intended recipient.

Using collaboration messaging involves performing the following high-level tasks:

- Setting up external (B2B) trading partners and their messaging capabilities.
- Cross-referencing the Oracle Applications Cloud definition of a trading partner (such as a supplier) with the external trading partner definition setup earlier. Also, selecting the messages that must be enabled with the partner.
- Configuring the message delivery method for the partner.
To open the Collaboration Messaging Framework Overview page, click the Navigator menu and select Collaboration Messaging.

Use the Collaboration Messaging Framework Overview page to:

- Manage undelivered collaboration messages
- Reprocess failed collaboration messages
- Manage collaboration messaging history
- Validate inbound and outbound collaboration messaging setup

Collaboration Messaging Configuration

Define Message Processing and Delivery Method Parameters

By default, Collaboration Messaging Framework stores all source and transformed outbound and inbound documents. This facilitates auditing the documents and reprocessing or resending them when required. So you need to configure how to process outbound messages and types of delivery methods:

1. In the Setup and Maintenance work area, go to the Manage Collaboration Messaging Configuration task.
2. In the General Setup tab's Outbound Message Processing section, specify values for:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Sender ID</td>
<td>Identifies the sender of all outbound messages.</td>
</tr>
<tr>
<td>Global Sender ID Type</td>
<td>Type of identifier of the Global Sender ID, for example D-U-N-S.</td>
</tr>
<tr>
<td>Maximum attachment size</td>
<td>Determines the maximum size of embedded attachments that can be included in a message.</td>
</tr>
</tbody>
</table>

**Note:** You can set up only invoice and purchase orders to send attachments. Collaboration Messaging Framework takes into account only the size of the attachments, not the size of the message.

When Collaboration Messaging Framework doesn't send attachments because they exceed the maximum size, the buyer associated with the purchase order is notified that all attachments weren't sent.

3. In the Delivery Method Types section, specify a value for **Maximum Message Size MB** for your **Delivery Method Type**.

   Here, the maximum value specified refers to the size of the message plus the size of the attachment. Collaboration Messaging Framework doesn't process messages that exceed the maximum size for a delivery method. It logs the status as Error/Failed.

4. Click **Save and Close**.

   If you need to stop storing the source and transformed outbound and inbound documents according to your business requirements, disable the options that you do not need in the Message Storage section in the General Setup tab.
Note that if you disable the Store outbound source document check box, you can't reprocess existing messages.

### Set Up a Business Process

You can enable Oracle Fusion Collaboration Messaging Framework for these business processes:

- Procure to Pay
- Supply Chain Operations
- Order to Cash
- Brazil Electronic Invoicing

The collaboration business processes are enabled by default and have collaboration documents associated with them. For the collaboration documents, you can configure additional details. For example, you can enable embedding attachments in an XML message for a purchase order outbound message.

**a.** In the Setup and Maintenance work area, go to the Manage Collaboration Messaging Configuration task in the Suppliers or Customers functional area, and then to the Business Process Setup tab.

**b.** Select a collaboration business process and an associated collaboration document and, in the Configure Collaboration Documents section, click **Configure Additional Details**.

**Note:** If you disable a business process then the application does not send or receive outbound and inbound messages.

### Inbound Collaboration Messages

#### Validate Inbound Collaboration Messaging

After you set up an application partner, such as a supplier site, you can send a test inbound message to verify if the setup is appropriate for messaging. Use the Validate Inbound Collaboration Messaging Setup task on the Collaboration Messaging Overview page to validate an inbound message.

All messages that go through the validation process queue up and appear on the Collaboration Messaging History page. There you can examine the details of each processed message to check if it was transformed and processed as intended.

1. On the Overview page, click the tasks icon to view the tasks, and select the **Validate Inbound Collaboration Messaging Setup** task.
2. Select the service provider and the partner ID from whom you expect to receive the collaboration message.
3. Click **Next**.
4. On the Validate Inbound Collaboration Messaging Setup page, enter the required details.
   - For Processing Service, if your external message standard is OAGIS, select any processing service from the drop-down list per your requirement. If the standard is not OAGIS, select CollaborationMessageV2.Process or CollaborationMessageV2.ProcessAsync per your requirement.
5. Click **Next**.
6. Click **Create Message Payload**. The message payload is generated in XML format and appears in the text box.
7. Update the generated payload or replace it with the XML payload that you want to test.
8. Examine the elements of the message payload. The following table contains an example of the mapping between the elements and actual data for OAGIS messages.

<table>
<thead>
<tr>
<th>XML Element</th>
<th>Corresponding Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Sender&gt;</td>
<td>The ID of the partner who sent the document.</td>
</tr>
<tr>
<td>&lt;Intermediary&gt;</td>
<td>Contains the ID of the service provider.</td>
</tr>
<tr>
<td>&lt;Receiver&gt;</td>
<td>Contains the ID of the recipient.</td>
</tr>
<tr>
<td>&lt;BODID&gt;</td>
<td>An ID that the sender assigns to the message.</td>
</tr>
</tbody>
</table>

9. Click **Process**. A confirmation message appears. Click **Next**.
10. The Collaboration Message page appears. Click Refresh, if the required.
11. Click **Done**.

To view the processed message again, search for it on the Manage Collaboration Messaging History page. In the search results, click the generated message ID to view its details.

### Outbound Collaboration Messages

#### Validate Outbound Collaboration Messaging

After you set up an application partner, such as a supplier site, you can send a test outbound message to verify if the setup is appropriate for messaging. Use the **Validate Outbound Collaboration Messaging Setup** task on the Collaboration Messaging Framework Overview page to validate an outbound collaboration message.

All messages that go through the validation process queue up and appear on the Collaboration Messaging History page. There you can examine the details of each processed message to check if it was transformed and processed as intended.

1. On the Collaboration Messaging Framework Overview page, click the tasks icon to view the tasks, and select the **Validate Outbound Collaboration Messaging Setup** task.
3. Select the supplier. The related details, such as the supplier site and service provider appear.
4. Click **Create Message Payload**. The message payload is generated in XML format and appears in the text box.
5. Update the generated payload or replace it with the XML payload that you want to test.
6. Click **Process**. The generated message ID appears on the page.
7. Click **View Collaboration Message** to view the processed message.
8. Click **Done**.

To view the processed message again, search for it on the **Manage Collaboration Messaging History** page. In the search results, click the message ID to view its details.
Tip: If the message processing fails, you can view the reason for it on the Manage Failed Collaboration Messages page.

Reprocess Undelivered Messages

Any inbound or outbound message that isn't processed because of some error, remains undelivered. You can view the undelivered messages on the Collaboration Messaging Framework Overview page. For each undelivered message, you can diagnose the errors, take corrective action, and resubmit a request to deliver it again.

To reprocess an undelivered messages:

1. On the Collaboration Messaging Framework Overview page, click the tasks icon to view the tasks, and select the Manage Undelivered Collaboration Messages task.
2. On the Manage Undelivered Collaboration Messages page, search for the undelivered message. The message is listed in a table.
3. Click the message row to view the reason for delivery failure. The details appear in Processing History.
   Tip: Click the message ID link to view the setup details of the message.
4. Take the required corrective action and return to the Collaboration Messaging Framework Overview page.
5. Select the specific message and click Reprocess. If there are no further problems, the message is submitted for delivery.

Collaboration Messages

Configure Messages for a Predefined Service Provider

To configure a message for a predefined service provider, do the following:

1. Open the Manage Collaboration Messaging Service Providers page and search for a predefined service provider.
2. Click Actions > Edit.
3. On the Edit Collaboration Messaging Service Provider page, do one of the following:
   o On the Outbound Collaboration Messages tab, click Duplicate Outbound Collaboration Message.
   o On the Inbound Collaboration Messages tab, click Duplicate Inbound Collaboration Message.
4. Change the status of the pre-seeded message to Inactive so that you can make active or loopback the duplicate message.
5. Change the duplicate message's status to Active or Loopback, based on business rule.
6. Click Save and Close.
7. Click the Manage B2B Trading Partners task.
8. Create or edit a trading partner.
9. Set up the document corresponding to the pre-seeded message that you duplicated.
10. Click the Manage Customer Collaboration Configuration or the Manage Supplier Collaboration Configuration task.
11. Search for the relevant customer or supplier and associate the service provider with your trading partner.

12. Associate the document with your customer or supplier.

13. Validate the configuration.

After validating the configuration, go to Manage Collaboration Messaging History > Configuration > Transformation and confirm that User Defined is selected in Collaboration Definition in the Transformation section.

**Configure Messages for a User-Defined Service Provider**

To configure a message for a predefined service provider, do the following:

1. In the Collaboration Messaging Framework work area, click **Manage Collaboration Messaging Service Providers** in the Tasks panel.

2. Open the Manage Collaboration Messaging Service Providers page and click **Actions > Create**.

3. On the Create Collaboration Messaging Service Provider dialog box, enter the required details, and click **Save and Close**.

4. Search for the service provider that you created, select it, and click **Actions > Edit**.

5. On the Edit Collaboration Messaging Service Provider page, in the delivery Methods tab, click **Actions > Add Row**.

6. Enter the name of the delivery method, select the delivery method type, and enter the other required details. Optionally, specify an alternate delivery method to be used if the maximum size for the primary delivery method type may exceed its limit.

7. If the Delivery Method Type is Web Service, do the following:
   - Select the Security Policy.

8. On the Outbound Collaboration Messages tab, click **Actions > Add Row**, and add the outbound collaboration message details.


10. Click **Save and Close**.

11. Click the **Manage B2B Trading Partners** task.

12. Create or edit a trading partner.

13. Set up the document corresponding to the message that you created.

14. Click the **Manage Customer Collaboration Configuration** or the **Manage Supplier Collaboration Configuration** task.

15. Search for the relevant customer or supplier and associate the service provider with your trading partner.

16. Associate the document with your customer or supplier.

17. Validate the configuration.

After validating the configuration, go to Manage Collaboration Messaging History > Configuration > Transformation and confirm that User Defined is selected in Collaboration Definition in the Transformation section.

**Create a Trading Partner**

A service provider is an intermediary for exchanging messages between Oracle Applications Cloud and **trading partner**. Whenever you set up a trading partner, you can link it with a service provider.
Note: You must be signed in as a supplier and must have access to the Supplier task.

1. In the Procurement work area, go to Suppliers.
2. On the Supplier Overview page, navigate to the Supplier Business Classifications section and click the supplier.
3. On the Edit Supplier page, switch to the Sites tab and click the required site.
5. In Associated Collaboration Documents, click Manage Trading Partners.
6. On the Manage Trading Partners dialog box, click Create > Create Trading Partner with Service Provider.
7. On the Create Trading Partner dialog box, fill the details to associate collaboration documents with the trading partner. You may add multiple documents.

Note: To enable exchange of messages, you must set the collaboration document status to Active.

9. Click Save and Close.
10. On the Manage Trading Partners dialog box, click OK.
11. On the Edit Site page, click Save and Close.
12. On the Edit Supplier page, click Save and Close.

To update the details for a trading partner, use the edit option on the Manage Trading Partners dialog box.

Create a Trading Partner Without a Service Provider

You can exchange messages with a trading partner directly, without using a service provider.

Note: You must be signed in as a supplier and must have access to the Supplier task.

1. On the Supplier Overview page, navigate to the Supplier Business Classifications section and click the supplier.
2. On the Edit Supplier page, switch to the Sites tab and click the required site.
4. In Associated Collaboration Documents, click Manage Trading Partners.
5. On the Manage Trading Partners dialog box, click Create > Create Trading Partner without Service Provider.
6. On the Create Trading Partner dialog box, fill the required details.

Note: By default, the Service Provider is set to None because this setup doesn’t involve a service provider.

7. Click Actions > Add Row and fill the delivery method, outbound collaboration message, and inbound collaboration message details on the respective tabs.

Note: The following table contains some tips on filling the important information on each tab.

<table>
<thead>
<tr>
<th>Tab</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery Methods</td>
<td>◦ Provide the endpoint URL and the associated authentication credentials to initiate the collaboration messaging web service. It must be in the format http://</td>
</tr>
</tbody>
</table>
Tab | Details
---|---
**<server>:<port>/<context>, where <context> contains the name of the web service as defined in the application.**

**Outbound Collaboration Messages**
- Specify a unique name and select the collaboration message. The associated details automatically appear in the row.
  - Select a delivery method.
  - Set the outbound collaboration document status to **Active** or **Loopback**.

**Inbound Collaboration Messages**
- Specify a unique name and select the collaboration message. The associated details automatically appear in the row.
  - Specify an XPath that identifies the **application partner** in the inbound collaboration document.
  - Set the inbound collaboration document status to **Active** or **Loopback**.

8. Click **Save and Close**.
9. On the Manage Trading Partners dialog box, click **OK**.
10. On the Edit Site page, click **Save and Close**.
11. On the Edit Supplier page, click **Save and Close**.

To update the details for a trading partner, use the edit option on the Manage Trading Partners dialog box.

### User-Defined Messages

You can use the collaboration message service, `CollaborationMessageV2.Process`, to process user-defined inbound messages.

#### Process User-Defined Messages

Here's what you need to do to process user-defined inbound messages:

1. Create an external message type definition.
2. Create a collaboration message definition.
3. Create a trading partner.
4. Set up an application partner.

### Manage Associated Collaboration Documents

To set up collaboration messaging, you must associate the supplier site with a trading partner, and select the documents you want to exchange with that partner. The documents that you set up here are associated with trading partners or the service providers of those trading partners.

**Note:** You must be signed in as a supplier and must have access to the Supplier task.

1. On the Supplier Overview page, navigate to the Supplier Business Classifications section and click the supplier link.
2. On the Edit Supplier page, switch to the Sites tab and click the required site.
4. In Associated Collaboration Documents, click **Edit**.
5. On the Edit Associated Collaboration Documents dialog box, click **Add Row** and fill the details required to set up the document. The read-only particulars appear based on the selected details.
6. Click **Save** and repeat the steps to add more documents or click **Save and Close** to return to the previous page.
7. On the Edit Site page, click **Save and Close**.
8. On the Edit Supplier page, click **Save and Close**.

### Enable or Disable Processing of Attached Documents

You can globally enable or disable processing of documents attached to emails that can be sent to or received by trading partners. Do the following:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Suppliers
   - Task: Manage Collaboration Messaging Configuration

2. On the Manage Collaboration Messaging Configuration page, click the **Business Process Setup** tab.

3. Select the relevant collaboration business process, for example, Procure to Pay or Order to Cash.

4. On the same page, in the Configure Collaboration Documents section, select the relevant document and click **Configure Additional Details**.
   - The document must be enabled for additional configuration.

5. In the window that appears, enable the Embed Attachments in the XML Message check box and click **OK**.

6. The application returns to the Manage Collaboration Messaging Configuration page. Click **Save and Close**.

7. Create or edit a trading partner and associate the trading partner with a supplier site.

8. Validate the outbound collaboration messaging setup.

### Set Up a User-Defined External Message Type Definition

This is how you can set up a user-defined external message type definition:

1. Create an external message definition.
2. Add a message standard lookup code.
3. Create a collaboration message definition for your trading partner.
4. Create a generic XSLT file for message transformation.

### Create an External Message Type Definition

Here's what you can do to create an external message type definition:

1. In the Collaboration Messaging Framework work area, click **Manage External Message Definitions** from the Tasks pane.
2. On the Manage External Message Definitions page, click **Actions** > **Add Row** and enter the required details, which are described in the next table.
   - Select an existing messaging standard or, if you want to use a different one, you can add it.
   - If you leave the Identification XPath field blank, when the root element is the same for more than one message, Collaboration Messaging Framework searches for the Identification XPath for the location of...
the document subtype in the payload to process the message. If the XPath is blank, the message isn’t processed and an error is logged.

- If you leave the Message Identifier XPath field blank, Collaboration Messaging Framework doesn’t log the value for the sender’s message identifier.

3. Click **Save and Close**.

**Note:** After you create an external message type definition, you create a collaboration message definition and upload an XSLT file for message transformation from the new external message type definition to the collaboration document. You can do this using the Manage Collaboration Message Definition task.

This table describes the fields you use to create an external message type definition.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of your external message type definition.</td>
</tr>
<tr>
<td>User Defined</td>
<td>Indicates that you created the external message definition.</td>
</tr>
<tr>
<td>Document Type</td>
<td>Standards-neutral representation of a message, for example, the document created or received by Oracle Fusion applications such as Process Purchase Order.</td>
</tr>
<tr>
<td>Message Type</td>
<td>The root element of the XML payload. It’s associated with a messaging standard and version.</td>
</tr>
<tr>
<td>Messaging Standard</td>
<td>List of accepted message formats. You can add your own standards.</td>
</tr>
<tr>
<td></td>
<td>• OAGiS (Open Applications Group Integration Specification)</td>
</tr>
<tr>
<td></td>
<td>• OAG (Open Applications Group)</td>
</tr>
<tr>
<td></td>
<td>• Oracle Collaboration Messaging (to send and receive messages using a standard web service)</td>
</tr>
<tr>
<td></td>
<td>• SEFAZ (standard format defined by the Brazil tax authority for tax compliance)</td>
</tr>
<tr>
<td></td>
<td>• UBL</td>
</tr>
<tr>
<td></td>
<td>• cXML</td>
</tr>
<tr>
<td>Document Subtype</td>
<td>The type of the root element that defines the XML format of the message, for example, the root element of the payload could be Collaboration Message and the document subtype could be ProcessPurchaseOrder.</td>
</tr>
<tr>
<td>Version</td>
<td>The version of the messaging standard.</td>
</tr>
<tr>
<td>Identification XPath</td>
<td>The XPath to navigate to the document subtype specified in the XML payload. You need to specify this when the message type or root element of the XML payload is the same for more than one message.</td>
</tr>
<tr>
<td>Message Identifier XPath</td>
<td>The XPath to navigate to the sender’s message ID in the XML payload. Collaboration Messaging Framework logs the sender’s message ID, which appears on the Manage Collaboration Messaging History page.</td>
</tr>
</tbody>
</table>
Add a Message Standard Lookup Code

Here's how you add a message standard lookup code:

1. In the Setup and Maintenance work area, go to the Manage Standard Lookups page and search for the Lookup Type ORA_CMK_EXT_MESSAGE_STANDARD.
2. In the ORA_CMK_EXT_MESSAGE_STANDARD: Lookup Codes section, click **Actions** > **New** and add your message standard.
3. Click **Save and Close**.

Create a Collaboration Message Type Definition for Your Trading Partner

Here's what you do to create a collaboration message type definition for your trading partner:

1. In the Collaboration Messaging Framework work area, click **Manage Collaboration Message Definitions**.
2. On the Manage Collaboration Message Definitions page, click **Actions** > **Create Collaboration Message Definition**.
3. In the Create Collaboration Message Definition dialog box, enter the required details.
   - The External Message Definition can be an existing message type definition or the message type definition that you created.
   - The Collaboration Document field determines whether the external message will be inbound or outbound. If it's an inbound message:
     - Application Partner Code XPath is an XPath expression that identifies the Oracle Fusion application partner code in a trading partner XML payload.
     - Object Key XPath is an XPath expression that identifies the object key in an XML payload. For example, Invoice number is the object key in the invoice XML file and the original message ID in Confirm Bod Messages.
     - Reference Object Key XPath is an XPath expression that identifies the reference object key in an XML payload. For example, the purchase order number is the reference object key in the invoice XML file or in the shipment XML file.
   - Select an XSLT file for your collaboration message transformation.
   - Select a payload template to validate inbound or outbound documents.
4. Click **Save and Close**.

Create a Generic XSLT File for Message Transformation

This is how you create a generic transformation XSLT file for message transformation:

1. In the Collaboration Messaging Framework work area, click **Manage Collaboration Message Definitions** from the Tasks panel.
2. On the Manage Collaboration Message Definitions page, search for the message type definition you created for your trading partner.
3. Select the message type definition and click **Actions** > **Export Transformation Package**.
4. Add the CollaborationMessagingCommonComponents.xsd and ProcessOutboundCollaborationMessage.xsd files into the xsd/target folder and delete the other XSDS files.
6. Open the root transformation package folder and then the xsl folder.
   - Rename the XSL file appropriately.
   - Rename the XSD file, per the file you copied into the xsd/target folder, in the target schema location.
7. Delete all the content under `<xsl:template match="/">` and all templates that were created outside `<xsl:template match="/">`.
   
   You can ignore any additional namespace declarations.
9. Open the XSL style sheet in a development environment tool such as Oracle JDeveloper and map the required elements.

Related Topics
- Overview of Lookups

Overview of Importing Collaboration Messaging Setup Data

You can import Collaboration Messaging Framework setup data or you can migrate your Oracle B2B setup data into Collaboration Messaging Framework for trading partners that use a service provider. The service provider, with delivery method, and inbound and outbound collaboration messages, must already be set up in the environment into which you import the data.

If you want to import your Collaboration Messaging Framework setup data, you need to create a ZIP file that contains two CSV files with these names:

- CmkConfigImportPartners.csv: This file contains information about trading partners.
- CmkConfigImportDocs.csv: This file contains the documents that are set up for the trading partner.

You need to upload both the files to the `scm$/B2BConfigurationImport$/import$` account and then follow the procedure in the Import Collaboration Messaging Setup Data section.

You can migrate your Oracle B2B setup data and update Oracle Fusion application setup in these scenarios:

- Data of Oracle Supplier Network Trading Partners
- Data of non-Oracle Supplier Network Trading Partners (a single trading partner, set up with many B2B Supplier site codes)
- Data of non-Oracle Supplier Network Trading Partners (many trading partners, each with a single B2B Supplier site code)

To migrate the data you have to first export your B2B configuration data using the B2B export feature, which creates a compressed file that contains all the B2B set up data, and upload the file into the `scm$/B2BConfigurationImport$/import$` account.

Then you need to use two scheduled processes to create a collaboration messaging setup data import file and then import the collaboration messaging setup data. And then you need to review the imported data using the Manage Collaboration Messaging Setup Data Import task.
Configure Collaboration Messaging for a Customer

Using this task, you can associate a customer account with an existing trading partner and select the collaboration messaging documents to be exchanged with the customer.

To configure collaboration messaging for a customer:

1. On the Collaboration Messaging Overview page, click the Tasks icon, and select the Manage Customer Collaboration Configuration task.
2. Search for the customer account, select the row, and click Edit Collaboration Configuration.
3. In Associated Service Providers, click Actions - Add Row and fill the details of the service provider and the trading partner.
4. Click Actions - Add Row and select at least one collaboration document.
5. Set the Association Status to Active to enable messaging with the selected service provider.
6. Click Save and Close.

Manage B2B Location Codes

To identify the address of the ship-to and bill-to site for inbound order processing, you can enter a location code for the address of each of your customer sites.

Add a B2B Location Code

Here’s how you can add a B2B location code:

1. In the Collaboration Messaging Framework work area, click Manage Customer Collaboration Configuration in the Tasks panel.
2. Select Order to Cash as the Collaboration Business Process, enter a Customer Name or a Customer Number, and search for your customer.
3. Select the row for the customer you want to associate with a trading partner and click Manage B2B Location Codes.
   The page displays customer sites that don’t already have a location code associated with them.
5. Select the site you want and click Add.
6. Click Save and Close.

Edit a B2B Location Code

To edit a B2B location code for a customer site, click Manage B2B Location Codes, delete the row for your customer site, and add it again with a new B2B Location Code value.

Import B2B Location Codes

As an alternative to adding B2B location codes using the Manage B2B Location Codes tab, you can also import B2B locations using a CSV file.
The CSV file must have three columns of data with these column headers specified:

<table>
<thead>
<tr>
<th>Column Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CustomerNumber</td>
<td>Identifies the customer number</td>
</tr>
<tr>
<td>PartySiteNumber</td>
<td>Identifies the customer site number</td>
</tr>
<tr>
<td>LocationCode</td>
<td>Identifies the B2B location code</td>
</tr>
</tbody>
</table>

Collaboration Messaging Framework identifies the columns regardless of the order in which you enter them.

Here's how you upload the CSV file to import B2B locations:

1. In the Collaboration Messaging Framework work area, click the Manage Customer Collaboration Configuration task.
2. Click Import B2B Location Codes.
3. Browse and select the CSV file, and click OK.
   A message displays the scheduled process identifier, which you can use to review the status of the import process from Scheduled Processes.
4. On the Manage Customer Collaboration Configuration page, click Done.

   **Note:** You can submit the process for importing B2B location codes only by using the Manage Customer Collaboration Configuration task > Import B2B Location Codes.

**Configure Collaboration Messaging for a Customer Account**

Using this task, you can configure a customer account to setup delivery of XML payload for the outbound messages and receive confirmation for the inbound messages.

To configure collaboration messaging for a customer account:

1. On the Collaboration Messaging Overview page, click the Tasks icon, and select the Manage Customer Account Collaboration Configuration task.
2. Search for the business process, select the customer account row, and click Edit Collaboration Configuration.
3. In Associated Service Providers, click Actions - Add Row and fill the details of the service provider and the trading partner.
4. In Collaboration Documents for Service Provider, click Actions - Add Row and select at least one collaboration document.

   **Note:** To select a collaboration document for the service provider, the associated trading partner must have either process invoice outbound document or confirm message receipt inbound document configured.
5. Set the **Association Status** to Active to enable messaging with the selected service provider.
6. Click **Save and Close**.

### Send an Outbound Message to Multiple Trading Partners

To send an outbound message to multiple trading partners, that is, suppliers or service providers, you must associate the trading partners with the outbound message and ensure that only one of them is the primary recipient of the message. Do the following:

1. On the Collaboration Messaging Overview page, click the **Tasks** icon, and then click one of the following:
   - Manage Customer Collaboration Configuration
   - Manage Supplier Collaboration Configuration
   - Manage Customer Account Collaboration Configuration
2. Enter the required values and click **Search**.
3. From the search results, select a customer or supplier and click **Edit Collaboration Configuration**.
4. On the page that opens, using the **Edit Associated Collaboration Documents** dialog box, set up multiple associated service providers and associate the relevant document with the service providers.
5. Select the service provider that you want as the primary recipient and then in the **Collaboration Documents for Service Provider** section, select the **Primary Recipient** check box.
6. Click **Save and Close**.
7. Validate the configuration.

### Configure Email Properties

The OAGIS XML B2B message can be delivered as an email attachment to your trading partners. Using this task, you can configure the subject and body of the email.

To configure email properties for an outbound message:

1. In the Collaboration Messaging Overview work area, click **Manage Collaboration Message Definitions** in the Tasks panel.
2. Search for the outbound messages, select the collaboration message row, and click **Actions > Configure Email Properties**.
3. On the Configure Email Properties dialog box, fill the required details, such as the default text for the subject line, the XPath that identifies the email ID of the recipient, and the header and column titles in the email body.

   **Note:** The email body content can be configured to have only header, only column table, or both header and column table.
The following figure is a sample email format.

![Sample Email Format](image)

4. Click **Save and Close**.

### How Documents are Sent as Email Attachments to Trading Partners

You can send documents as email attachments to trading partners, with or without service providers. To do so, you have to do the following high-level tasks:

1. Configure email properties of collaboration messages for trading partners.
2. Configure email properties for the trading partner.
3. Associate collaboration documents with the trading partner.
4. Validate the outbound message configuration.

### Configure Email Properties of Collaboration Messages for Trading Partners

To configure messaging email properties for trading partners, do the following:

1. In the Collaboration Messaging work area, click the **Manage Collaboration Message Definitions** task from the Tasks panel.
2. On the Manage Collaboration Message Definitions page, search for the outbound message definition with the following criteria:
   - Direction: Outbound
   - Name: AnyType_PO_CollabMsg
3. In the Collaboration Message Definitions section, select the message definition and click **Actions > Configure Email Properties**.
4. In the Configure Email Properties window, enter My email as the Default Subject Line, leave Recipient Email ID XPath blank, and then click **Save and Close**.
5. On the Manage Collaboration Message Definitions, page. Click **Done**.
Configure Email Properties for the Trading Partner

To configure email properties for a trading partner, do the following:

1. In the Collaboration Messaging work area, click the Manage B2B Trading Partners task from the Tasks panel.
3. In the Create Trading Partner window, specify the following details:
   - Service Provider: None
   - Trading Partner ID: For example, AnyTypeEmailNone_TPA
   - Partner ID Type: Generic
4. Click Save and Close.
5. On the Edit Trading Partner page, click Actions > Add Row in the Delivery Methods tab.
6. Specify the following values:
   - Name: For example, AnyTypeEmailNone_TPA
   - Delivery Method Type: Email
   - Recipient Email ID: A valid email address, for example, my.email@oracle.com.
   - Enable Attach XML Message.
7. Open the Outbound Collaboration Messages tab, click Actions > Add Row, and then specify the following values:
   - Name
   - Collaboration Message: For example, AnyTypeEmailNone_TPA
   - Delivery Method Name: For example, AnyTypeEmailNone_TPA1
8. Click Save and Close.

Associate Collaboration Documents with the Trading Partner

To associate collaboration documents with a trading partner, do the following:

1. In the Collaboration Messaging work area, click one of the following, as required, from the Tasks pane:
   - Manage Customer Collaboration Configuration
   - Manage Supplier Collaboration Configuration
   - Manage Customer Account Collaboration Configuration
2. Search for a, customer, supplier, or site to configure using the Business Process or Customer Name, or Supplier or Site name fields.
3. Select the relevant customer or supplier, click Edit Collaboration Configuration, and specify the following values:
   - Service Provider: None
   - Trading Partner ID = For example, AnyTypeEmailNone_TPA
4. On the same page, in the Collaboration Documents for Service Provider section, add the document PROCESS_PO_OUT and set Association Status to Enabled.
5. Click **Save and Close**.

**Configure Rules for Message Transformation**

You can specify a default value or identify a field as required for any outbound or inbound message setup for a trading partner.

**Configure Rules for a Trading Partner Without a Service Provider**

For a direct trading partner:

1. In the Collaboration Messaging work area, click **Manage B2B Trading Partners** in the Tasks panel.
2. On the Manage B2B Trading Partners page, select **Service Provider as None** and click **Search**.
3. Select a row in the search results and click **Actions > Edit**.
4. On the Edit Trading Partner page, select **Item: Outbound Collaboration Messages** or **Item: Inbound Collaboration Messages**.
5. Select the message you want to edit and click **Actions > Manage Message Processing Rules**.
6. In the **Manage Message Processing Rules dialog box**, do the following.
   a. Specify:
      - **Name**: The name of the message rule.
      - **NodeXPath**: The XPath of the message payload.
   b. Either select the **Required** check box or enter a value in the **Default Value** field.

If you select the **Required** check box, Oracle Applications Cloud ensures that the XPath location is present in the message payload.

If you enter a value in the **Default Value** field, Oracle Applications Cloud uses the value while processing if the message does not contain any value for the specified XPath location.

**Configure Rules for a Service Provider**

You can configure processing rules for transforming business-to-business (B2B) documents accurately.

For a service provider:

1. In the Collaboration Messaging work area, click **Manage B2B Trading Partners** in the Tasks panel.
3. On the Edit Trading Partner page, select a document and click **Actions > Manage Message Processing Rules**.
4. In the **Manage Message Processing Rules dialog box**, do the following.
   a. Specify:
      - **Name**: The name of the message rule.
      - **NodeXPath**: The XPath of the message payload.
   b. Either select the **Required** check box or enter a value in the **Default Value** field.

If you select the **Required** check box, Oracle Applications Cloud ensures that the XPath location is present in the message payload.
If you enter a value in the **Default Value** field, Oracle Applications Cloud uses the value while processing if the message does not contain any value for the specified XPath location.

**Message Transformation Rules**

**Considerations for Managing Message Transformation Rules**

For external partner messages, you can add user-defined transformation rules such as default values and cardinality to specify whether it's required or optional. For example, to ensure that messages have a response Email address, you can specify it as required or add a default value.

You can setup transformation rules for each message exchanged with a trading partner. These rules are always setup at the trading partner level, and not for the service provider.

**Note:** Collaboration Messaging Framework processes the rules after transformation for outbound messages and before transformation for inbound messages.

To setup a rule for a trading partner, on the Collaboration Messaging Overview page, click the Tasks panel tab, and select the **Manage B2B Trading Partners** task. Select the trading partner to edit and click **Actions - Manage Message Processing Rules**.

The transformation rules specified on the messages are processed as follows:

- If the message field is configured to use a default value:
  - Uses the value if it exists, otherwise uses the default value.
  - Triggers an error if the default value is missing.

- If the message field is configured as required:
  - Uses the value if it exists, otherwise triggers an error that a required value is missing.
  - Triggers an error if the required value node is missing.
The following flow illustrates how the transformation rules are processed:

Export or Import Collaboration Messaging Configuration Setup Data

To export or import collaboration messaging configuration setup data, you have to do the following. Use your test environment to export the configuration data and use your production environment for the import.

1. Create an implementation project and add the task name.
2. Create a configuration package that will use the implementation project for exporting and importing collaboration messaging configuration setup data.

Create an Implementation Project
To create an implementation project, do the following:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Task: Manage Implementation Projects
2. Click Actions > Create, enter the required details, and click Save and Open Project
3. On the Implementation Project page, click Actions > Select and Add.
4. In the Select and Add: Task Lists and Tasks dialog box, enter Manage Collaboration Messaging Configuration in the Name field and click Search.
5. Select the task from the results, click Apply, and then click Done.
6. On the Implementation Project page, click Done.

Create a Configuration Package
Do the following:

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Task: Manage Configuration Packages
2. On the Manage Configuration Packages page, click Actions > Create.
3. On the Create Configuration Package page, from the Name menu, select the implementation project that you created.
4. Click Yes on the warning message.
5. Click Submit.
6. Click Yes on the warning message.
   - The configuration package is added to the Manage Configuration Packages page in the Export and Import Processes section.

Export the Configuration Package
To export the configuration package, do the following:

1. On the Manage Configuration Packages page, click the Download icon and then click Download Configuration Package.
2. Extract the content.
3. Open the folder named businessObjectData.
4. Decompress the ORA_CMKCOLLAB_MSG_BUS_PROCESS.zip file, and open the ORA_CMKCOLLAB_MSG_BUS_PROCESS folder. It contains three XML files:
   - CollaborationMessagingParameters.xml: Collaboration Messaging Framework uses this file to configure collaboration messaging storage.
Import the Configuration Package

After you complete exporting the configuration package, do the following in your production environment:

1. Create an Implementation project and configuration package.
2. Upload the downloaded configuration data (compressed file) using the following XML files. The compressed file to be uploaded should have the exact package structure as the downloaded compressed file.
   - CollaborationMessagingBusinessProcess.xml
   - CollaborationMessagingParameters.xml
   - CollaborationMessagingParamsData.xml

Retrieve Supplier Site Details from a PO for a Procure to Pay Inbound Message: Procedure

You can retrieve supplier site details from a purchase order (PO) for a procure to pay inbound message.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Task: Manage Collaboration Messaging Configuration
3. In the Configure Collaboration Documents area, select PROCESS_INVOICE_IN or PROCESS_SHIPMENT_IN and then click Configuration Additional Details.
4. In the Process Inbound Configuration window that appears, enable the Retrieving Supplier Site from PO check box and then click OK.
5. Click Save and Close.

Overview of Setting up an Inbound Confirmation Message

When Oracle Fusion Collaboration Messaging Framework sends any type of outbound message to a partner, the partner may respond with a synchronous or asynchronous confirmation receipt, with the processing status of the message.

A partner can send multiple confirmation messages for an outbound message. You must provide the message ID of the original outbound message in the confirmation receipt for Collaboration Messaging Framework to correlate the confirmation with the original message. If the correlation is successful, Collaboration Messaging Framework logs the confirmation receipt as a new inbound collaboration message.

If communication with the partner is via a service provider, then the service provider must configure the confirmation receipt, and set up confirmation receipt documents for the trading partner. Collaboration Messaging Framework treats the confirmation receipt like any other trading partner inbound message.

You don’t have to set up the confirmation documents for the application partner because they’re associated with an outbound message (for example, an outbound invoice) that’s set up for the partner. So, for example, if an application partner has enabled an outbound invoice, and the trading partner associated with the customer account has the confirmation set up for the outbound invoice, then the confirmation is automatically enabled for the customer account.
You have to set up an inbound confirmation message once for a trading partner or service provider and associate it with multiple outbound messages. Note that the status of a confirmation message is always Active.

**Set up an Inbound Confirmation Message**

To set up an inbound confirmation message, you have to do the following:

1. Add a message standard lookup code.
2. Create an external message definition.
3. Create a collaboration message definition for your trading partner.
4. Use the message definition to associate the trading partner with an application partner.
5. Validate inbound collaboration messaging using the collaboration message processes:
   - `CollaborationMessageV2.Process`
   - `CollaborationMessageV2.AsyncProcess`

**View Records of Outbound Collaboration Messages**

The Manage Collaboration Messaging History page enables you to search for records of processed outbound collaboration messages.

You can access the Manage Collaboration Messaging History page from the Collaboration Messaging work area by clicking the Manage Collaboration Messaging History task in the Tasks panel.

To view the records you have to do the following:

1. Configure the trading partner to receive or not receive the confirmation of an outbound collaboration message.
2. Associate a collaboration documents with the supplier.
3. Configure the customer account.
4. Process the outbound collaboration message.

**Configure a Trading Partner to Receive or not Receive Confirmation of an Outbound Collaboration Message**

Here’s what you do to configure a trading partner to receive or not receive confirmation of an outbound collaboration message:

1. In the Collaboration Messaging work area, click the Manage B2B Trading Partners task.
2. On the Manage B2B Trading Partners page, click **Action > Create**.
3. In the Create Trading Partner window, enter the following details:
   - Service Provider: None
   - Trading Partner ID: TP_Confirm_COL
   - Partner ID Type = Name
4. Click **Save and Close**.
5. On the Edit Trading Partner page, in the Delivery Methods tab, click **Actions > Add Row** and then enter the following details:
   - Name: Email_TP_Confirm_COL
   - Delivery Method Type: Email
   - Recipient Email ID: <email>@oracle.com
Enable the Attach Payload check box.

For the trading partner to receive confirmation of messages
Do the following:

1. Click the Inbound Collaboration Messages tab and then click Actions > Add Row. Then enter these details:
   - Name: TP_Confirm_COL_IN
   - Collaboration Message Definition: OAGIS_10.1_CONFIRM_BOD_COLLAB_MSG_IN
   - Status: Active
2. Click the Outbound Collaboration Messages tab and then click Actions > Add Row. Then enter these details:
   - Name: TP_Confirm_COL_OUT1
   - Collaboration Message Definition: OAGIS_10.1_PROCESS_PO_COLLAB_MSG_OUT
   - Delivery Method Name: Email_TP_Confirm_COL
   - Status: Active
   - Confirmation Message: TP_Confirm_COL_IN
3. Click Save and Close.

For the trading partner to not receive confirmation of messages
Here's what you do:

1. Click the Outbound Collaboration Messages tab and then click Actions > Add Row. Then enter the following details:
   - Name: TP_Confirm_COL_OUT
   - Collaboration Message Definition: OAGIS_10.1_CHANGE_PO_OUT2
   - Delivery Method Name: Email_TP_Confirm_COL
   - Status = Active
   - Leave the Confirmation Message column blank.
2. Click Save and Close.

Associate a Collaboration Document with a Supplier
Go to the site for associated collaboration documents of the supplier, and add these documents:

- PROCESS_PO_OUT
- PROCESS_RCV_ADV_OUT
- CHANGE_PO_OUT

Configure the Customer Account
Here's what you do to configure a customer account:

1. In the Collaboration Messaging work area, click the Manage Customer Account Collaboration Configuration task.
2. On the Manage Customer Account Collaboration Configuration page, select Order To Cash as the Collaboration Business Process, enter the Customer Name, and then click Search.

3. On the Customer Accounts search results page, select the customer and click Edit Collaboration Configuration.

4. On the Edit Customer Account Collaboration Configuration page, in the Associated Service Providers section, click Actions > Add Row and then specify the following details:
   - Service Provider: None
   - Trading Partner ID: TP_Confirm_COL

5. In the Collaboration Documents for Service Provider section, click Actions > Add Row and then specify the following details:
   - Document: PROCESS_INVOICE_OUT
   - Association Status: Disabled

6. Click Save and Close.

Process the Outbound Collaboration Message for Confirmation Status Not Required and Confirmation Status Required

Here's what you do:

1. In the Collaboration Messaging work area, click the Validate Outbound Collaboration Messaging Setup task.

2. On the Validate Outbound Collaboration Messaging Setup page, specify the following details:
   - Collaboration Business Process: Procure To Pay
   - For Confirmation Status Not Required: Document: CHANGE_PO_OUT
   - For Confirmation Status Required: Document: PROCESS_PO_OUT

3. Click Next.

4. On the Validate Outbound Collaboration Messaging Setup: Select Recipient page, select the Supplier Name and click Next.

5. On the Validate Outbound Collaboration Messaging Setup: Define Payload page, click Create Message Payload and then click Process.
   - The outbound message is processed for validation.

6. Click OK and then click Next.

7. Note the Collaboration Message ID, view the details after the processing is complete, and then click Done.

Process the Outbound Collaboration Message for Confirmation Status Received

Here's what you do to process the outbound collaboration message for Received confirmation status:

1. In the Collaboration Messaging work area, click the Validate Inbound Collaboration Messaging Setup task.

2. On the Validate Inbound Collaboration Messaging Setup: Select Sender page, select these values:
   - Service Provider: None
   - From Partner ID: TP_Confirm_COL
   - The application generates the Partner ID Type and External Message ID.

3. Click Next.
4. On the Validate Inbound Collaboration Messaging Setup: Select Message page, select these values:
   - External Message Name: OAGIS_10.1_CONFIRM_BOD
   - Collaboration Message Definitions: OAGIS_10.1_CONFIRM_BOD_COLLAB_MSG_IN
   - Processing Service: CollaborationMessageV2.ProcessAsync

5. Click Next


7. In the payload area, replace the value for DataArea/Confirm/Original ApplicationArea/BODID with the value for OUT_####.

8. Click Process and then click OK on the information message window that appears.

9. Click Next and then click Refresh to view the results.

FAQs for Collaboration Messaging

What are the different undelivered collaboration message error statuses?

The following table describes the main differences among the various error statuses.

<table>
<thead>
<tr>
<th>Error</th>
<th>B2B Error</th>
<th>Hold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicates that the messages haven't</td>
<td>Indicates that the B2B component of the SOA suite couldn't deliver the</td>
<td>Indicates that messages haven't been processed because an administrator has put them on hold.</td>
</tr>
<tr>
<td>been delivered because of a validation,</td>
<td>message because of a configuration or processing error.</td>
<td></td>
</tr>
<tr>
<td>configuration, or processing error in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration Messaging Framework.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What are the different undelivered collaboration message error types?

The following table describes the main differences among the message error types.

<table>
<thead>
<tr>
<th>Document Retrieval Error</th>
<th>Inbound Processing Error</th>
<th>Outbound Processing Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occurs when the collaboration messaging framework fails to retrieve the document associated with a collaboration event.</td>
<td>Occurs when the collaboration messaging framework can't process inbound messages because of setup or business rule validation issues.</td>
<td>Occurs when the collaboration messaging framework can't process outbound messages because of setup or business rule validation issues.</td>
</tr>
</tbody>
</table>
What happens if I don't enable a document type for storage?
If you don't enable a document type for storage, the message processing and delivery details of such documents aren't stored in the log table.

Why did my message fail?
To know the cause of a message failure, search for the failed message on the Manage Failed Collaboration Messages page. When you click the message row, the cause of the failure appears in Processing History.

Why can't I see the import batch list to select from?
To see the list of setup data, you must first run the scheduled process to import the data into the staging tables.

When do I resubmit a collaboration message?
After Collaboration Messaging Framework delivers an outbound message and sets the status to Success or Sent, the processing may fail further in the business flow. In such cases, you can resubmit the message from Collaboration Messaging Framework.

How can I use a user-defined XSLT file?
You can attach a user-defined XSLT file only to user-defined messages. To create a user-defined message, duplicate a predefined message.

Why can't I perform any action if I select messages with different statuses?
The actions you can perform for the selected messages depend on the message status. For example, if you select messages with Success and Error status, you can't perform any action.

Based on the message status, you can:
- **Resubmit** messages with Success or Sent status
- **Reprocess** messages with Failed status
- **Cancel** messages with Error or B2B Error status
- **Delete** messages with Success, Sent, Failed, or Canceled status
Where are logs maintained for failed synchronous inbound trading partner messages?
You can view the logs on the Message History page.

How can I download a transformation package for a user-defined message?
Go to the Manage Collaboration Message Definitions page, search for a user-defined message, and then click Export Transformation Package.
14 Carriers

Shipping Methods

A shipping method is defined for every carrier. You must define and activate a shipping method after creating a carrier. After a shipping method is created, it is assigned to one or more organizations. The organization can then use the carrier and shipping method combination to deliver shipments to and from its warehouses. The active status of the shipping method indicates that it is in use by the selected carrier in all assigned organizations.

You can define a shipping method by selecting these options:

- Service Level
- Mode of Transport

Service Level

Service Level is the priority of transportation that affects how quickly goods are transported. For example, Next day, Overnight, Express, Door to Door.

Mode of Transport

Mode of transport refers to the means used to deliver shipments to the customer. For example, Rail, Air, Road.

Inbound Tracking Rules

Inbound tracking rules enable you to view the status of your shipments through the use of your carrier's website. When you click on a tracking number, you are directed to the carrier's website to view the tracking details associated with that shipment.

This aspect of inbound tracking rules can assist you in viewing shipment information:

- Associating the carrier and the carrier's website

Associating the carrier and the carrier's website

Associating the carrier and carrier's website enables you to track your shipments by viewing all of the current tracking numbers for a given carrier and shipment.

Considerations for Creating Tracking Rules

Tracking rules enable you to configure the carrier's website within the application. After you configure the carrier's website, you can view the tracking information through the carrier's website when you select a tracking number.
Before creating tracking rules, consider these questions:

- What base URL to enter?
- Which request method to select?
- What parameters to select?

**Base URL**
You must contact your carrier to obtain the website URL used to track shipments.

**Request Method**
You must contact your carrier to determine the request method to be selected; GET or POST. You can use the GET method if the parameters can be shown in the URL. You can use the POST method if the parameters are processed in the back end.

**Parameters**
You must contact your carrier to determine the parameters for the carrier. Consider if you require any constant value for the carrier's website for tracking shipments. Consider the most frequently used search value while tracking a shipment in the carrier's website. For example, if you frequently track shipments using the tracking number, then tracking number should be your lookup parameter.
15 Transit Times

Transit Times

You can define the shipping method and transit time required for a shipment to be transported from a point of origin to a destination. This enables you to effectively calculate the initial ship date of the shipment in order for it to arrive at the destination on the planned delivery date.

For example, you define an origin to destination combination from Florida to London. Next, you assign the shipping method, Air, to it and define a transit time of 3 days. When you receive an order with a requested delivery date of July 3, 2011 for destination London, the transit time you defined earlier helps you determine the initial ship date. The initial ship date is date by when the shipment should be shipped from your warehouse in Florida in order for it to reach the customer on the planned arrival date of July 3, 2011. In this case, the initial ship date is calculated as being 3 days prior to the requested delivery date on July 1, 2011. Shipping costs are applied based on the shipping method used.

The following aspects can assist you in creating transit time records for future use:

- Origin and destination combination
- Shipping method assignment

Origin and Destination Combination

Defining an origin and destination combination enables you to create a shipping lane between locations where you deliver shipments. These locations can be of types Internal location, External location, Geography, and Zone. A few examples of the location types are, Internal Location: Warehouse, External Location: Customer site, Geography: place or country such as California or American Samoa, and Zone: a grouping of geographies such as the Asia Pacific.

Note: You cannot delete a transit time record for an origin and destination combination if an open shipment exists for the same combination.

Shipping Method Assignment

You must assign a shipping method to a specific origin and destination combination. For example, Express by Air. You can assign more than one shipping method to an origin and destination combination.

After you assign the shipping method, you can specify the transit time in number of days required to transport goods between the defined origin and destination using that specific shipping method. This enables you to calculate the initial ship date for shipments when you receive an order.

Additionally, you can choose to specify the maximum weight and volume capacity that can be transported daily using the assigned shipping method. You can also assign the cost per unit and the currency in which the cost is calculated. This will further assist you in planning the delivery of shipments by the requested delivery date.
Considerations for Origin Type and Destination Type

After you specify an origin and destination location, you can define the transit times by shipping methods. For example, you can ship goods from origin A to Destination B via Truck, Rail, and Air. You can define the transit time by shipping method, such as:

- Truck - 5 days
- Rail - 2 days
- Air - 1 day

When an order is placed for delivery from origin A to destination B, the customer also specifies the date on which the goods are required to reach the destination. This date becomes the planned delivery date. After the shipping method is determined based on transportation costs, the specified transit times is used to calculate the date on which the shipment should be shipped from origin A in order for it to reach destination B by the planned delivery date.

Before selecting the origin and destination types consider:

- What is the ship-from organization and ship-to location?

Origin and Destination Types and Locations

You must determine the point of origin and the destination and then select the origin type and destination type. The four origin and destination types are Internal Location, External Location, Geography, and Zone. The origin and destination locations will appear based on what you select as origin and destination types. For example, the location types can be, Internal Location: Warehouse, External Location: Customer site, Geography: region or country such as American Samoa or Canada, and Zone: a grouping of geographies such as Asia Pacific. After you specify the origin and destination combination, you can add multiple shipping methods and transit times at a later point in time. This also lets you offer a range of shipping methods and time choices to your customer.
# 16 Items

## Setup Tasks to Define Items

Before you can define items in Oracle Fusion Product Hub, you must complete several tasks in the Setup and Maintenance work area.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Item Profile Options</td>
<td>Profile options manage configuration data centrally and influence the behavior of applications.</td>
</tr>
<tr>
<td>Manage Advanced Item Profile Options</td>
<td>This task is used by Product Hub. If you do not install Product Hub, you do not need to define these options.</td>
</tr>
<tr>
<td>Define Units of Measure</td>
<td>Units of Measure must be created before you can create or import items.</td>
</tr>
<tr>
<td>Manage Lifecycle Phases</td>
<td>Item Lifecycle Phases are used as an indicator of the stage for an item within the lifecycle process. Each phase represents a set of tasks and deliverables that are required before promoting an item to the next phase.</td>
</tr>
<tr>
<td>Manage Product and Child Value Sets</td>
<td>In Product Hub, value sets are primarily used to define attributes that have a specific set of values. Each value set is associated with one or more attributes in the same attribute group or in a different attribute group.</td>
</tr>
<tr>
<td>Manage Attachment Categories for Product Management</td>
<td>Used to create attachment categories and associate them with item classes.</td>
</tr>
<tr>
<td>Manage Operational Attribute Groups</td>
<td>Operational attributes determine the behavior of the item with respect to various applications outside of Product Hub, such as Oracle Fusion Purchasing or Oracle Fusion Inventory Management.</td>
</tr>
<tr>
<td>Manage Item Attribute Groups and Attributes</td>
<td>Used to determine how the attributes appear in the user interface, as well as how they are used in the application.</td>
</tr>
<tr>
<td>Manage Item Classes</td>
<td>Item classes are created at the root item class or within a parent item class, and inherit values based on selections made when defining the item class.</td>
</tr>
<tr>
<td></td>
<td>For Product Hub customers, the Manage Item Classes task is used to create and manage item classes, user defined attributes and data security.</td>
</tr>
<tr>
<td>Manage Item Class Descriptive Flexfields</td>
<td>Descriptive flexfields appear in the user interface as additional information and can also appear in search results tables.</td>
</tr>
<tr>
<td>Task</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Deploy Item Flexfields</td>
<td>After you associate attribute groups and pages with an item class, you must deploy flexfields to view the pages or attribute groups at runtime. The metadata that was created for the attribute group is not synchronized with the production data in Product Hub until the flexfield is deployed.</td>
</tr>
<tr>
<td>Manage Item Statuses</td>
<td>Item statuses are used to define the state an item is in and based on the state, the default values for item operational attributes.</td>
</tr>
<tr>
<td>Manage Item Types</td>
<td>Item types are date effective and are made active or inactive by adjusting the start and end dates.</td>
</tr>
<tr>
<td>Manage Cross Reference Types</td>
<td>Cross-References provide the functionality to map additional information about an item in the form of a value and cross-reference type. For example, the cross-reference can map a relationship between an item and an old part number.</td>
</tr>
<tr>
<td>Manage Item Descriptive Flexfields</td>
<td>Used to define descriptive flexfields that are specific to items.</td>
</tr>
<tr>
<td>Download Import Template</td>
<td>Each template includes table-specific instructions, guidelines, formatted spreadsheets, and best practices for preparing the data file for upload.</td>
</tr>
<tr>
<td>Upload Item Data</td>
<td>After you have created the CSV file, the next step in the Import process will upload the CSV Zip file to the designated location within the Oracle Universal Content Management system.</td>
</tr>
<tr>
<td>Load Interface File through Scheduled Process</td>
<td>Once the CSV file is uploaded to UCM, you use the Load Interface File for Import scheduled process to move the data from the UCM folder to the interface tables.</td>
</tr>
<tr>
<td>Import Items</td>
<td>The Item Import task creates an Enterprise Scheduled Service (ESS) process that takes the data that is loaded in the interface tables and uses the import process to move the data to the production tables.</td>
</tr>
<tr>
<td>Monitor Item Imports</td>
<td>Use this task to monitor the ESS process status in the search results table</td>
</tr>
<tr>
<td>Manage Related Item Subtypes</td>
<td>A related item is an item relationship between two existing items. How the two items are related is defined by a subtype.</td>
</tr>
<tr>
<td>Manage Item Revision Descriptive Flexfields</td>
<td>Use descriptive flexfields associated at Item Revision level to capture item revision information whose values may differ between revisions of the same item.</td>
</tr>
<tr>
<td>Manage Item Relationship Descriptive Flexfields</td>
<td>Item types are date effective and are made active or inactive by adjusting the Start Date and End Date.</td>
</tr>
<tr>
<td>Manage Trading Partner Item Descriptive Flexfields</td>
<td>When defining descriptive flexfields associated with trading partner items, you must use certain prefixes when naming the context segments, in order for the segments to be displayed for the respective trading partner type.</td>
</tr>
</tbody>
</table>
### Item Statuses

In the Item Status table, select a status code to display the associated attribute groups and attributes as well as control information.

Item statuses are used to define the state an item is in and based on the state, the default values for item operational attributes.

Item statuses are seeded; the values are **Active** and **Inactive**. You can create, edit or delete item statuses on the Manage Item Statuses page.

Operational attribute groups and attributes corresponding to the selected item status are displayed in the **Details** section.

Whenever the status is applied to the item, the value of the attribute may change. Select the usage that corresponds to how the attribute value will change based on the item status value:

- **Defaulted** - Lets you override the value during the import and update of an item.
- **Inherited** - Sets the values of the item status attributes when the status value changes. You can't override the value.
- **None** - The item status attribute values won't be changed.

Any change made to an item status isn't applied automatically to existing items. The change will be applied when the item status value is changed while editing an item.

Status attributes for each item status control the actions that you can perform on the item. Some of the status attributes are: Build In WIP, Customer Orders Enabled and Internal Orders Enabled.

The **Controlled at** field isn't editable and is populated from the value set on the Manage Attribute Groups page.

### Cross-Reference Types

Cross-references provide the functionality to map additional information about an item in the form of a value and cross-reference type. For example, the cross-reference can map between an item and an old part number, where the value is the value for the old part number and the type is Old Part Number. Cross-reference types are part of item relationships where the item relationship type is cross-reference. There are no values seeded for cross-reference types. You define the values using the **Manage Cross Reference Types** task. Cross-reference types are date-enabled and can be made active or inactive by adjusting the values of the start date and end date. To use the item relationship for cross-reference, you must enable cross-reference types by checking the **Enable** check box.
Product Value Sets: Explained

Value sets are specific to the application in which they will be used. In Product Hub, value sets are primarily used to define attributes that have a specific set of values. Each value set is associated with one or more attributes in the same attribute group or in a different attribute group.

Value sets can be edited or new value sets can be created from the Manage Product Value Sets page. The Edit icon launches the Edit Value Sets page, which redraws in the same region of the local area. The Create icon launches the Create Value Sets page, which redraws in the same region of the local area.

The validation type determines how the value of field is validated for the assigned value set. The following are the seeded values:

- Format Only
- Independent
- Dependent
- Subset
- Table

The value data type determines the data type for the value set. The following are the seeded values:

- Character
- Number
- Date
- Date/Time

Define Product Child Value Sets

The Manage Product Child Value Sets task uses the same page as the Manage Product Value Set task.

A child value set is used to define variants for stock-keeping units or SKUs. A SKU contains the common properties for an item. For example, a shirt can be produced with sizes; small, medium, and large. The variant is used to represent the sizes of the shirt.

You define child value sets as follows:

- Create a value set with validation type of independent, for example All Sizes.
- Select the new value set in the Manage Product Value Sets results table, for example All Sizes.
- Click Manage Values, create several values, for example Small, Medium, Large, Extra Large.
- Create a value set with validation type of Subset and enter the first value set you created for the independent value set, for example: Plus Sizes.
- Select the value set Plus Sizes in the Manage Product Value Set result table.
- Click Manage Values and then click the Add icon. The dialog will show a list of values based on the value set named Plus Sizes. Select two of them. The value set Plus Sizes is a child of All Sizes.
Default Item Class

For non-Product Hub customers, the Manage Default Item Class task is used because these customers cannot create additional item classes nor can they create user defined attributes such as extensible flexfields. You can access this task from the Product Management offering in the Setup and Maintenance work area. An exception to this rule is that Product Development customers can create additional item classes and extensible flexfields. The Manage Default Item Class task launches an edit page for the Root Item Class.

The Manage Default Item Class task has three tabs:

- **Basic**: Item Class descriptive flexfields and attachment categories are defined on this tab.
- **Item Management**: Item number generation method is defined using this tab.
- **Lifecycle Phases**: The lifecycle phases that the items assigned to this item class will use are defined on this tab.
- **Item Templates**: The item templates that are used to create items are defined on this tab.

Item Profile Options

Profile options manage configuration data centrally and influence the behavior of applications. The profile options have a default value, which you can use for initial installations. Review these profile options and determine if you want to change the default values.

<table>
<thead>
<tr>
<th>Profile Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGP_DISPLAY_IMAGES</td>
<td>Specifies if images are displayed in the search results table in the Manage Items page.</td>
</tr>
<tr>
<td>EGP_UPDATEABLE_ITEM</td>
<td>By default, you can’t change the item number after you have created the item. However, if you set this option to Yes, you can update items even after they are created.</td>
</tr>
<tr>
<td>EGP_ITEM_IMPORT_ITEMS_PER_THREAD</td>
<td>When you import items, the application creates multiple threads of operation to process the imported items. This profile option controls how many items the application can process per thread. It is a technical option used to optimize the item import performance. The default value is 100.</td>
</tr>
</tbody>
</table>
| EGP_ITEM_IMPORT_NUMBER_OF_THREADS    | Determines the number of parallel threads of execution used when the item import process is run. The default value is 12. You can use these criteria to configure the profile option:  

  - Number of service servers configured on your instance: You can get this information by filing a service request.  
  - Other active processes: Other application processes that may be concurrently running on this server and utilizing the same service servers.  

If the item import is the only process running on the instance, you can configure the number of threads up to 16 times the number of service servers. If there are other processes likely to be running concurrently, reduce the number of threads proportionally. |
Profile Options | Description
---|---
| This profile option works in conjunction with the EGP_ITEM_IMPORT_ITEMS_PER_THREAD profile option.

Access the Profile Options
In the **Setup and Maintenance** work area, use this navigation to access and manage the item profile options:
- Offering: Product Management
- Functional Area: Items
- Task: Manage Item Profile Option

Overview of Import Items
Item Management provides the ability to create and manage item data through two methods: the Product Information Management work area and a process to import items from files located in a specific folder in Oracle WebCenter Content.

The objects listed below are supported through both methods:
- Items
- Item revisions
- Item category assignments
- Item associations
- Item relationships
- Item flexfields
- Item translatable flexfields
- Item revision flexfields
- Item revision translatable flexfields
- Item supplier flexfields
- Item translatable supplier flexfields
- Item style variant attribute value Sets
- Trading partner items

**Note:** You must license Oracle Fusion Product Hub to use certain flexfields.

The following is an overview of the item import process:

1. Download the item import template file from the File-Based Data Import for Oracle Supply Chain Management Cloud.
2. Enter data in tabs within the item import template file.
3. Generate CSV (ZIP file).
4. Upload to Oracle WebCenter Content.
5. Move the data into Item Management interface tables.
6. Import data to Item Management product tables.

Related Topics
- File-Based Data Import for Oracle Supply Chain Management Cloud guide
- Key Points to Update the CSV File
- Upload the CSV File to Oracle WebCenter Content
- Import Data from the Item Management Interface Tables

Item Lifecycle Phases

Item Lifecycle Phases are used as an indicator of the stage for an item within the lifecycle process. Each phase represents a set of tasks and deliverables that are required before promoting an item to the next phase.

Each item must have a lifecycle phase associated with it.

Four lifecycle phase types are predefined in the application: Design, Preproduction or Prototype, Production and Obsolete. You can use the predefined phase types to create new values for the lifecycle phases.

Companies may use different terms to describe the same item lifecycle phase. For example, the phases named Production and In Manufacturing both refer to the lifecycle phase during which an item can be used to build and ship products.

Lifecycle phases are associated with item classes. The items in an item class can be assigned to any of the lifecycle phases associated with that item class.

Nota: The lifecycle phase of a child item is not automatically promoted when the parent item is promoted.

The effective date for items, in the Design lifecycle phase of a change order cannot be modified. If the item is in the 'Design' lifecycle phase, the change on the change order is effective on approval. If a future effective date is set for the affected object in a change order, a warning message appears with the following buttons:

1. Continue: To continue with the future effective date.
2. Edit: To cancel the current Save action, return to edit mode and correct the future effective date.

Nota: The best practice is to make items Effective on Approval, if they are in the design lifecycle phase.

Before you create or import items, create lifecycle phases. Assign phases to the item class used to create the items. You can also assign them to a parent item class of the item class used to create the item. When an item is assigned to a lifecycle phase, that phase is visible as part of the item's attributes. In item structures, lifecycle phases are used to control specific processes.

Item Classes

Item classes are created at the root item class or within a parent item class and inherit values based on selections made when defining the item class.

The Manage Item Classes task, accessed through the Setup and Maintenance work area, is used to create and manage item classes, user defined attributes and data security.
You can define item classes in a hierarchy where the child levels indicate the sublevels or types of the parent item class. All items are created within an item class. The item class hierarchy can be used to control processes for some levels of the hierarchy.

You can also use item classes for classification purposes and in some cases, item creation may not be allowed. By optionally setting the **Item Creation Allowed** attribute to No, item creation in an item class can be prevented. However, a child item class of that item class can be set to allow for item creation.

For example, the following figure illustrates the Desktop item class as a child of the Computers item class and both are set to not allow item creation.

![Diagram of item classes](image)

The Green Desktop and the Gaming Desktop item classes are children of the Desktop item class and are set to allow item creation. Optionally, you can specify a date on which an item class becomes inactive. The inactive date of a child item class must not be a past data and must be earlier than the inactive date of a parent item class. Also, all children of a parent item class with an inactive date must be made inactive at the same time or earlier.

**Note:** Product Development does not support the versioning of item classes.

When setting up definition steps for a new item request at the item class, you can identify various item details as required, at each step. The definition of the entire entity or just specific attributes can set as required. This ensures that the item information required for a downstream step is defined and available for use.

You can define data security on an item class. All child items and item classes of the item class inherit the data security specified. Consider the following while creating and managing data security for item classes:

- Item classes have a Public check box, which when selected indicates that all items in the item class are public. All new item classes, including its child items and child item classes, are public by default, and do not require data security to be set. To make a child item private, you must deselect the Public check box in the Data Security dialog box.
- Depending on your settings for the Public check box, if a parent item class or a parent root item class is public, all new item classes created within it are public by default. Similarly, item classes created within a private item class or a private root item class are private.
- When a parent item class is made public or private, the child items and child item classes inherit the updated data security setting of the parent.
- Private item classes cannot have child item classes that are public.
- Public item classes can have child item classes that are private or public.
- In case of private items, you can search for and view only the items you have access to.
- For EFF Attribute Groups, you must set the data security for public and private item classes. The data security controls which EFF attribute groups are visible to specific user, user group, or organization.
• You must set data security at the item class level to restrict access to user-defined attributes and values for public and private items.

You can control the creation, view, and update of items by associating a role with the item class and assigning it to a principal or group of users. Security allows a person or a group to have privileges to an item of an item class in each organization. This role is inherited. Therefore, if you have the privilege in a parent item class, you will automatically have the same privilege in the child item classes.

Attachment Categories

The basic tab of the Manage Item Class task is used to associate attachment categories to specific item classes. The Attachment Categories region allows for the creation and management of attachment categories for the items created within the item class. To classify item attachments, associate attachment categories with item classes. Associated attachment categories are inherited down through the item class hierarchy.

Related Topics

• Attachments
• Attachment Entities
• How Attachment Entities and Attachment Categories Work Together
• What’s an attachment category

Related Item Subtypes

A related item is an item relationship between two existing items. How the two items are related is defined by a subtype. Multiple subtypes for related items are predefined, and you can define additional subtypes using the Manage Related Item Subtypes task.

Predefined values are:

• Accessories
• Collateral
• Complimentary
• Conflict
• Cross-Sell
• Fulfillment
• Impact
• Mandatory Change
• Merge
• Migration
• Optional Change
• Option charge
• Prerequisite
• Promotional upgrade
• Repair to
• Service
• Split
• Substitute Supersede
• Upsell
• Warranty

Operational Attributes Controls

Operational attributes determine the behavior of the item with respect to various applications outside of Oracle Fusion Product Hub, such as Oracle Fusion Purchasing or Oracle Fusion Inventory Management. Operational attributes are stored in the Items data table.

In the Setup and Maintenance work area, use this navigation to specify the control level for operational attributes:

• Offering: Product Management
• Functional Area: Items
• Task: Manage Operational Attributes Groups

For each listed operational attribute group, you select the control level for each of the group's attributes. You can control the operational attributes at the master organization level or at the organization level. You can define operational attributes as part of a new item request.

You can also control the decimal precision of all numeric operational attribute values. All numeric item-operational attributes have the maximum decimal digits precision value of three by default. You can specify the precision up to three digits after the decimal point. For example, 8.724 is a valid item operational value, but 8.7241 is an invalid value.

**Note:** You can’t change the default value for the decimal precision in the Mass Updates page.

You can define some item operational attributes as key flexfields. Key flexfields allow you to capture a structured value for an attribute. Some examples of key flexfields are part number, job code, and account code.

Examples of operational attributes with the attribute groups they belong to:

• Inventory = Shelf Life Days
• Order Management = Shippable
• Purchasing = Negotiation Required
• Receiving = Allow Substitute Receipts

Item Attribute Groups and Attributes

Attribute groups are a logical group of attributes that are displayed in their own subregion of the user interface page at run time. Attribute groups can be either single-row or multiple-row. The selected behavior determines how the attributes appear in the user interface, as well as how they are used. Each attribute group is associated with one or more item classes.
To create an attribute group and attribute, you use Manage Item Attribute Groups and Attributes task from the Product Management offering in the Setup and Maintenance work area. Create an attribute group and specify its context usage as item. You can provide the attribute group with view or edit privileges, or both. Choose the behavior of attribute as either single-row or multiple-row:

- **Single-row attribute group**: Contains a collection of attributes that appear as separate fields in a region named for the attribute group. For example, a single-row attribute group named Processor contains the attributes appropriate for a processor. When these attribute groups are displayed in the user interface, the attribute fields for each group are arranged compactly within a region titled with the name of the attribute group. Attributes can be multiple data types.

- **Multiple-row attribute group**: Attributes appear as columns in a table that represents the attribute group. Each row in the table is considered an attributes group. The attributes is collection of values specified by the columns in the table. The table appears in the user interface within a region titled with the attribute group name, such as MSRP Price. No other fields appear in the table. For example, a multiple-row attribute group named MSRP Price contains the attributes Country, MSRP, and Currency. Each row of the table describes an MSRP price, and is a value of the MSRP Price attribute group.

When you configure an attribute group, you can assign privileges. Using these privileges you control the user’s ability to view or edit attributes in the following: view or edit Item tasks, change order impact analysis, and item structure report. To do this, select the view and edit privileges for the attribute group in Context Usage.

Within the attribute group, create an attribute and a value set. For example, create an attribute group named Cost and Compliance and within that add attribute named Material Cost. Using value sets, define the set of currencies applicable to item cost. After you create attribute groups and attributes, complete these tasks:

- Associate the attribute to the item class by using the Manage Item Class task
- Deploy the attribute by using the Deploy Item Flexfields task

**Related Topics**

- Overview of Descriptive Flexfields

### Deploy Item Flexfields

After you associate attribute groups and pages with an item class, you must deploy flexfields in order to to view the pages or attribute groups at runtime. The metadata that was created for the attribute group is not synchronized with the production data in Product Hub until the flexfield is deployed.

To deploy flexfields, select the Deploy Item Flexfields task in Setup and Maintenance work area. All flexfields for Product Hub are created within the flexfield code EGO_ITEM_EFF.

The deployment process is a CPU-intensive process, and is usually run at off-hour periods. You can choose from these deployment options:

- **Deploy Flexfield**: Online incremental deployment. The deployment process begins immediately. Only the flexfield setup that changed is deployed.

- **Deploy Offline**: Allows the deployment to be scheduled. The flexfields are deployed, one at a time, in the order that you deploy them to the queue. Because all Product Hub flexfields use the same flexfield code, the process deploys all of the attribute groups and attributes for all of the context usages at the same time. You cannot select individual attribute groups or item classes for deployment. You should choose to deploy offline if the flexfield changes impact 30 or more item classes.
• **Refresh and Deploy Offline**: Use this option only if the first two options result in errors. You must log out and log back in to view the flexfield configuration on the item.
17 Units of Measure

How Units of Measure, Unit of Measure Classes, and Base Units of Measure Relate to Each Other

Units of measure, unit of measure classes, and base units of measure are used for tracking, moving, storing, and counting items.

The following graphic shows that the unit of measure class named 'Quantity' contains the units of measure: Box of 8, Box of 4, and Each. The unit of measure named Each is assigned as the base unit of measure.

Units of Measure Classes

Units of measure classes represent groups of units of measure with similar characteristics such as area, weight, or volume.
Units of Measure

Units of measure are used by a variety of functions and transactions to express the quantity of items. Each unit of measure you define must belong to a unit of measure class.

Base Units of Measure

Each unit of measure class has a base unit of measure. The base unit of measure is used to perform conversions between units of measure in the class. The base unit of measure should be representative of the other units of measure in the class, and must be the smallest unit. For example, you could use CU (cubic feet) as the base unit of measure for a unit of measure class called Volume.

How to Assign Base Units of Measure to Unit of Measure Classes

A unit of measure class is a grouping of different UOMs. For example, the unit of measure class quantity might have several associated units of measure such as, dozen, gross, or each. Each unit of measure class must have a base unit of measure.

Scenario

This table lists examples of unit of measure classes, the units of measure in each unit of measure class, and base unit of measure. Note that the base unit of measure is the smallest unit of measure in its unit of measure class.

<table>
<thead>
<tr>
<th>Unit of Measure Class</th>
<th>Units of Measure</th>
<th>Base Unit of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Dozen</td>
<td>Each</td>
</tr>
<tr>
<td></td>
<td>Box</td>
<td></td>
</tr>
<tr>
<td></td>
<td>each</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Pound</td>
<td>Gram</td>
</tr>
<tr>
<td></td>
<td>Kilogram</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gram</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Hour</td>
<td>Second</td>
</tr>
<tr>
<td></td>
<td>Minute</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Second</td>
<td></td>
</tr>
</tbody>
</table>
Standard Conversions for Units of Measure

A unit of measure standard conversion specifies the conversion factor by which the unit of measure is equivalent to the base unit of measure.

Scenario

This table lists examples of unit of measure classes, one unit of measure included in each class, the base unit of measure for the unit of measure class, and the conversion factor defined for the unit of measure.

<table>
<thead>
<tr>
<th>Unit of Measure Class</th>
<th>Unit of Measure</th>
<th>Base Unit of Measure</th>
<th>Conversion Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Dozen</td>
<td>Each</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(One dozen = 12 each)</td>
</tr>
<tr>
<td>Weight</td>
<td>Pound</td>
<td>Gram</td>
<td>454</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(One pound = 454 grams)</td>
</tr>
<tr>
<td>Time</td>
<td>Minute</td>
<td>Second</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(One minute = 60 seconds)</td>
</tr>
</tbody>
</table>

In the first example, you're converting a unit of measure called dozen into a base unit of measure called each. The conversion factor tells the application that for each dozen, there are 12 of the base unit each. For example, if you had 48 each of eggs, with a conversion factor of 12, you would get 4 dozen eggs.

FAQs for Units of Measure
What's a unit of measure standard conversion?

A unit of measure standard conversion defines the factor by which the unit of measure is equivalent to the base unit of measure, that you defined for the unit of measure class. Defining a unit of measure standard conversion lets you perform transactions in units other than the primary unit of measure of the item being transacted. The standard unit of measure conversion is used for an item if an item-specific unit of measure conversion hasn't been defined.

What's a UOM interclass conversion?

A UOM interclass conversion defines the conversion between the source base unit of measure ("From Base UOM") in one unit of measure class ("From Class") and the destination base unit of measure ("To Base UOM") in a different unit of measure class ("To Class").

For example, the item is gasoline. The From Base UOM (of the From Class called "volume") is liters. The To Base UOM (of the To Class called "quantity") is Barrels. The conversion is 158.76 liters (volume) to 1 barrel of oil (quantity).

You cannot create the interclass and intraclass conversions when building the standard conversions. The UOM must be defined prior to creating Items. Items must be defined prior to creating interclass or intraclass conversions.

What's a UOM intraclass conversion?

A UOM intraclass conversion specifies the conversion between a unit of measure, the From UOM, and the base unit of measure of the same class.

For example, suppose you're considering converting cases of water into a base unit of each bottle of water. The unit of measure class is Quantity. The From UOM is case (CS). The base unit of measure is each (EA). The conversion is 24, to specify that 1 CS = 24 EA.
18 Catalogs

Setup Tasks to Manage Catalogs

Before you create functional area catalogs and associate items with them, you must complete several tasks in the Setup and Maintenance work area> Product Management offering> Catalogs functional area.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Catalog Descriptive Flexfields (optional)</td>
<td>Descriptive flexfields can only have one context available at a single time.</td>
</tr>
<tr>
<td>Manage Category Descriptive Flexfields (optional)</td>
<td>Descriptive flexfields can only have one context available at a single time.</td>
</tr>
<tr>
<td>Manage Functional Area Catalogs</td>
<td>Each functional area can have a set of rules to define how a catalog should be configured to support the functional area. When a catalog is created and assigned to the functional area, it is validated against the functional area rules. For example, many of the Supply Chain Management applications participate in a process that automatically assigns an item being created to the default category in a functional catalog. Also, if no catalog is assigned to the functional area, the functional area is skipped in the automatic assignment process. This task is only necessary if catalogs are to be used with other SCM products such as procurement or inventory.</td>
</tr>
</tbody>
</table>

Catalog Descriptive Flexfields

Descriptive flexfields are available at the catalog level to allow the user to define attributes for catalogs. For example, a customer wants to add attributes to the catalog to identify the usage of the catalog in their business process. An attribute called Usage is created as a descriptive flexfield for the catalog. The values are defined indicating what processes the catalog data is used in, such as new product development.

You create descriptive flexfields using the Manage Catalog Descriptive Flexfields task in the Setup and Maintenance work area> Product Management offering> Catalogs functional area.

Note: Catalogs functional area is shared with other offerings as well. For example, the Manufacturing and Supply Chain Materials Management offering also uses the Catalogs functional area. If you have enabled multiple offerings, then any change in the setup tasks within the Catalogs functional area will reflect across all other offerings that use this task.
Category Descriptive Flexfields

Descriptive flexfields are available at the category level. You can define category attributes in all those catalogs that use attributes.

For example, a customer wants to add attributes to the category to identify the packaging types for the items assigned to the category. An attribute called Packaging Type is created as a descriptive flexfield for the catalog. The values for this flexfield indicate what the packaging type is, such as a box or a case.

You create descriptive flexfields using the Manage Category Descriptive Flexfields task in the Setup and Maintenance work area> Product Management offering> Catalogs functional area.

Note: The Catalogs functional area is shared with other offerings as well. For example, the Manufacturing and Supply Chain Materials Management offering also uses the Catalogs functional area. If you have enabled multiple offerings, then any change in the setup tasks within the Catalogs functional area will reflect across all other offerings that use this task.

Create Catalogs

Item catalogs provide a mechanism to classify or group a set of items together based on a common meaning. Catalogs can have a flat or single-level structure of categories or have hierarchical structure categories.

For example, the item catalog Engine describes a group of categories that make up an engine such as engine block, carburetor, or ignition.

The items are assigned to the categories and represent components that make up the part of the engine. For example, spark plugs are a component of the ignition category.

Catalogs can be hierarchical and can contain a hierarchy where parent and child relationships between the category are used for classification. A catalog can also contain only one level without any hierarchy where the catalog is a list of categories.

You can create a browsing category by selecting the Restrict category to item assignment only check box. In addition, you can configure the category to allow both categories to be associated to it in a hierarchy and items can be assigned to it.

You can assign any catalog to a functional area. The functional area rules automatically validate the catalog assignment. If the catalog assignment do not conform to the functional area rules, then the assignment fails and you receive an error message.

Functional area catalogs are primarily used to support Oracle Fusion applications, specifically the applications that require integration between the functional area catalog and the process within the application. For example the Purchasing functional area catalog is integrated with the Procurement processes to allow the items assigned to the categories in this catalog to be used to support the purchasing processes.

Product catalogs are used to support additional processes and integration with external applications.

Create functional area catalogs using the Manage Functional Area Catalogs task in the Setup and Maintenance work area or the Manage Catalogs task in the Product Information Management work area.

1. Open the Manage Catalogs or Manage Functional Area Catalogs task.
2. Click the Create button. The Create Catalog dialog box opens.
3. Select a value for the Functional Area field. The Functional Area Parameters and Rules region expands. If the catalog requires a default category, the Default Category region opens as well.
4. Fill in the mandatory fields for the catalog.
5. Click Save and Continue to save your settings. The Edit Catalog page opens.

Create product catalogs using the Manage Functional Area Catalogs task in the Setup and Maintenance work area or the Manage Catalogs task in the Product Information Management work area:

1. Open the Manage Catalogs or Manage Functional Area Catalogs task.
2. Click the Create button. The Create Catalog dialog box opens.
3. Do not select any value for the Functional Area field. The Functional Area Parameters and Rules region expands. If the catalog requires a default category, the Default Category region opens as well.
4. Fill in the mandatory fields for the catalog.
5. Click Save and Continue to save your settings. The Edit Catalog page opens.

Functional Area Catalogs

Functional areas represent products or functionality of the product.

Each functional area can have a set of rules to define how a catalog should be configured to support the functional area. When a catalog is created and assigned to the functional area, it is validated against the functional area rules. For example, many of the Supply Chain Management applications participate in a new item process which automatically assigns an item being created to the default category in a functional catalog. Also if no catalog is assigned to the functional area, the functional area is skipped in the automatic assignment process.
19 Other Common Setup and Maintenance Tasks

Guidelines for Setting Up General Troubleshooting

To help the help desk troubleshoot issues that users encounter in the application, users can record the issue while they reproduce it. Some advanced users might also need detailed information in the About This Page dialog box. Setting up for troubleshooting involves making sure that users have the right access, and determining how many users can record at the same time.

Access

Check with your security administrator that the appropriate users are assigned roles that inherit the following privileges:

- **Record and View Issue (FND_RECORD_AND_VIEW_ISSUE_PRIV):** To create a basic recording
- **Set Issue Recording Advanced Options (FND_SET_ISSUE_RECORDING_ADVANCED_OPTIONS_PRIV):** To set advanced options before starting the recording
- **View Version Information (FND_VERSION_INFORMATION_PRIV):** To see the versions that technical components of the application are on

Number of Users

Recordings are stored on servers, and by default, up to five users can record at the same time on each server. For performance reasons, you can set the Maximum Number of Users Allowed to Record Issues (ORA_FND_RECORD_ISSUE_MAX_USERS) profile option to a number lower than five.

Related Topics

- Record Issues to Troubleshoot
- How can I view the version information of an application
- Set Profile Option Values

Home Page Setup

Configure Home Page Navigation

Use the Home Configuration page to configure the icons for *infolet* pages or other configurable pages in the page control on the home page.

Before You Start

Following are the prerequisites:

1. From the Navigator menu, select **Configuration > Structure**.
2. Click the **Home Configuration** tab.
3. Activate a sandbox. If you’re not in an active sandbox, click **Edit** in the Structure work area. You’re prompted to activate a sandbox.

   **Tip:** If you’re already in an active sandbox, then the **Edit** button doesn’t appear in the Structure work area.

If prompted, select a context layer to determine the scope of users that your changes affect. After you complete your changes, you can preview and test the changes, and then publish the sandbox to make your changes available to users.

### Define Settings

You can rename icons for infolet pages and other configurable pages in the page control, change their visibility settings, and reorder them. On the Home Configuration page, you can:

- Click the infolet name or any other configurable page name to rename it.
- Click the **Visible** field for an infolet or any other configurable page to change its visibility setting. You can show or hide the icon for these pages in the page control on the home page. You can select one of the following options:
  - **Yes**: The icon appears in the page control.
  - **No**: The icon doesn't appear in the page control.
  - **EL expression**: The evaluation of the EL expression decides whether the icon appears in the page control.
- Click the **Default View** field for an available configurable page to specify whether the page should be set as the default home view. You can select one of the following options:
  - **Yes**: The page is set as the default home view.
  - **No**: The page isn't set as the default home view.
  - **EL expression**: The evaluation of the EL expression decides whether the page is set as the default home view.

  **Note:** Only specific configurable pages, such as Quick Actions, are available for you to set as the default home view. When you click the **Default View** field for such pages, you get the options to select **Yes**, **No**, or **EL Expression**. These options aren't available for other pages that you can't set as the default home view.

- Use the **Move Up** and **Move Down** icons to adjust the relative positions of the icons for the infolet pages or other configurable pages in the page control on the home page.

You can use profile options to define settings for the **filmstrip**, which you can find above all pages:

- To enable users to use the filmstrip, set the **Springboard Strip Enabled** profile option (**FND_USE_FILMSTRIP**) to **Yes**.
- If the **FND_USE_FILMSTRIP** profile option is set to **Yes**, then you can display the filmstrip as expanded by default. To do so, set the **Springboard Strip Expanded** profile option (**FND_EXPAND_FILMSTRIP**) to **Yes**. A user can still collapse or expand the strip on any page, and when done, this profile option is set by default for subsequent sessions of that user.

### Related Topics

- Examples of EL Expressions for Configuring Navigation
- Set Profile Option Values
Define Home Page Appearance

Use the Appearance work area to first select your home page layout and then define its display settings. Use the Themes tab to select your default home page layout as panel, banner, or news feed. And then use the Home Page Display tab to define the display settings of your home page. Based on the home page layout you set using the Themes tab, the options available on the Home Page Display page may vary.

Let's see how to define the home page appearance. But before you start, activate a sandbox.

Define Home Page Layout

1. Click Navigator > Configuration > Appearance.
2. Click the Themes tab.
3. From the Themes list, select a predefined or saved theme.
4. From the Default Home Page Layout list, select Panel, Banner, or News Feed.
5. Click Apply.
   If you selected a predefined theme, enter a theme name, and click OK to create another theme with your changes. If you selected a saved theme, your theme changes are directly applied to your application.

Define Display Settings for Home Page with Panel or Banner Layout

If you selected the panel or banner layout on the Themes page, follow these steps to configure the display of information in the various sections of your home page:

1. Click the Home Page Display tab.
2. Select one of these options to display on the home page:
   a. Social: Displays social networking content, such as the number of followers.
   b. Announcements: Displays employee announcements.
   c. Cover image: Displays the image for the main panel or banner, which you specify on the Themes page.
   d. None
3. Specify whether to display the photo in the main panel or banner of the home page from the social network profile or from HCM.
4. Click Apply.

Define Display Settings for Home Page with News Feed Layout

If you selected the news feed layout on the Themes page, follow these steps to configure the display of information in the various sections of your home page:

1. Click the Home Page Display tab.
2. In the Name column of the table, click any section name to rename it.
3. Click the Visible field for a section to change its visibility setting. You can show or hide the section on the home page:
   a. Yes: The section appears on the home page.
   b. No: The section doesn't appear on the home page.
EL expression: The evaluation of the EL expression decides whether the section appears on the home page.

4. In the Order column, use the Move Up and Move Down icons to adjust the relative positions of the sections on the home page.

5. Click Apply.

Related Topics
- Manage Themes
- Overview of Configuring Themes and Home Page Settings
- Create Themes
- Overview of Sandboxes

Create and Enable an Announcement

You can create, edit, or delete company announcements. After you create an announcement, you can enable it to display on your home page.

Create an Announcement

1. From the Navigator, select Tools > Announcements.
2. Click Create.
3. Specify the details, such as subject, start date, and end date.
4. Select a category. If you select User-Defined, a text box appears, where you can provide additional details.
5. Select any of these options:
   - Predefined: Select an image from the list.
   - File: Browse and select a file from your local computer.
   - URL: Enter a full URL for the image

Note: Make sure your image size is 776x437 px or larger to avoid image distortion.

6. Add the content in the text box. Add the content in the text box. You can format your text using the formatting options.
7. Click Save and Close.

Your changes on the Announcements page apply immediately to all users, even if you saved your changes while a sandbox is active and not yet published.

Edit or Delete an Announcement

1. From the Navigator, select Tools > Announcements.
2. Select the announcement that you want to edit or delete.
3. Edit the announcement details or click Delete.

Enable an Announcement on the Home Page

After you create or edit an announcement, you can determine whether to display the announcement on your home page.

1. From the Navigator, select Configuration > Appearance.
2. Click the Home Page Display tab.
3. Based on your home page layout, use any of these options:
   - **Panel** or **Banner**: Select Announcements from the home panel options, and then click **Apply**.
   - **News feed**: Select **Yes** for News and Announcements, and then click **Apply**.

Your default home page layout also determines how the home page displays the announcement.
- **Panel** or **Banner**: The home page displays only the announcement content, not the subject or image.
- **News feed**: The home page displays the entire announcement along with the subject and image in the News and Announcements section.

**Related Topics**
- Overview of Configuring Themes and Home Page Settings
- Why can't I see announcements on the Home page

**FAQs for Home Page Setup**

**How can I rename an icon for an infolet page in the page control on the home page?**
You can rename an icon for an infolet page using the Home Configuration page of the Structure work area. To open this page, select **Configuration > Structure** from the Navigator menu, and then click the **Home Configuration** tab.

**Global Header**

**How do I define whether the user image, name, or initials display in the global header?**
Set the User Image Display Enabled (FND_USER_PHOTO_ENABLED) profile option. If you select:
- **Yes**, then the user image is displayed in the *global header* only if the user uploaded a photo. Otherwise, the user's initials are displayed. By default, this profile option is set to Yes.
- **No**, then only the user name is displayed in the global header.

**Related Topics**
- Change Your Photo

**Contextual Addresses**
Set Up the Mapping Service for Contextual Addresses

A contextual address is marked with an orange triangle, the More icon. When users hover over the triangle, an icon appears that they can click to display the address on a map. The Mapping Service for Contextual Addresses profile option determines the mapping service which you must use to display the map. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area
- Task: Manage Application Toolkit Administrator Profile Values

Profile Option Default

By default, the Mapping Service for Contextual Addresses profile option has no value.

Caution: Until you enter a valid value for this profile option, users continue to get an error when they try to open a map for any contextual address.

Profile Option Value

After you find and select the Mapping Service for Contextual Addresses profile option, enter a mapping service URL in the Profile Value column, for example:

- http://bing.com/maps/?v=2&encType=1&where1=

You can include parameters in the URL. For example, to avoid a locator box in Google Maps, add &iwloc=& to the URL. So, you would enter http://maps.google.com/maps?iwloc=&amp;&output=embed&q= as the profile value.

Related Topics

- Set Profile Option Values
- Why can’t I see the map for contextual addresses

Privacy Statement

Set Privacy Statement URL

A privacy statement is legal content that tells you how a company collects and manages user data. You can add a link to your company’s statement in the About This Application dialog box.

1. In the Setup and Maintenance work area, go to the Manage Applications Core Administrator Profile Values task in the Application Extensions functional area.
2. Search for the Privacy Statement URL (PRIVACY_PAGE) profile option.
3. In the Profile Values section, update the Profile Value field with the full URL of the web page that has the privacy content. By default, this profile value is N.

| Caution: | Don't enter any other value, such as Y, because that causes a broken link. |

4. Click Save and Close.

And that's it! Your users can now view the Privacy Statement link by clicking their user image or name in the global header and selecting About This Application.
20  External Integration

Web Services

Overview of Web Services

Use web services to integrate web-based applications into your Oracle Applications Cloud. Web services expose business objects and processes to other applications using open standards-based technologies.

Web services support development environments and clients that comply with these open standards:

- Extensible Markup Language (XML)
- Simple Object Access Protocol (SOAP)
- Business Process Execution Language (BPEL)
- Web Services Description Language (WSDL)
- XML Schema Definitions (XSD)

Oracle Applications Cloud has these two types of web services:

- Application Development Framework (ADF) services
- Composite services

Let's look at the web service types in detail.

<table>
<thead>
<tr>
<th>Web Service Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| ADF services           | ADF services usually represent business objects, such as employees or purchase orders. You can use these services to expose standard operations, such as create, update, and delete. However, for locally-persisted objects, ADF services aren't limited to these operations. Here are a few examples of ADF services and what they're used for:  
  - Worker.changeHireDate - Use to update the hire date of the worker business object.  
  - ProjectTask.createTask - Use to 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. You can use these services to manage multiple object-based services, rules services, and human workflows. Here are a few examples of composite services and what they're used for:  
  - ProjectStatusChangeApproval.process - Use to accept the change in project status.  
  - ScheduleOrchestrationOrderFulfillmentLineService.scheduleOrders - Use to schedule resources used to fulfill an order. |

For more information about web services, see the SOAP Web Services guide for your cloud services.
Section: Developer Connect

Overview of Developer Connect
The Developer Connect portal provides information about the web services deployed to your Oracle Applications Cloud instance. You can use this information to integrate with or extend Oracle Applications Cloud and develop solutions to suit your business requirements.

To use the Developer Connect portal, your job role must have the `FND_INTEGRATION_SPECIALIST_JOB`, `FND_APPLICATION_DEVELOPER_JOB`, or `ZCA_CUSTOMER_RELATIONSHIP_MANAGEMENTAPPLICATION_ADMINISTRATOR_JOB` privilege. Alternately, you can grant the `ATK_WEB_SERVICE_INFO_ACCESS_PRIV` entitlement to your custom role, and then grant the custom role to users who require access. For more information, see the security guide for the appropriate cloud service at Oracle Help Center (https://docs.oracle.com).

To open the Developer Connect portal, from the Navigator menu, select Tools - Developer Connect. This portal displays dynamic information of the web services, and the modifications done to web services to integrate with Oracle Applications Cloud. You can synchronize the Developer Connect portal with your cloud instance to retrieve the latest web service information such as service attributes, operations, business objects, security policies, and WSDL files.

Use the Developer Connect portal to:

- View the summary of the web service information such as the business object that the service defines, life cycle status, and security policy.
- Discover the operations available for the selected web service, and the request and response payloads for each operation.
- View the hierarchy of the service data objects and know information such as the data type and whether it's a required field for user-defined attributes.
- Review the sample payload XMLs for the operations of the web service. You can add or edit sample payloads, and also delete user-defined sample payloads.

Web Service Life Cycle
A web service goes through three phases in a life cycle:

- Active: A service is active when it's delivered the first time, until it's deprecated.
- Deprecated: A service is deprecated when it's superseded by a newer version, or if there is a planned obsolescence in a future release. A service in this state is still supported and becomes obsolete in a later release.

  **Note:** You must use the active version of the service. If you were previously using a service that has been deprecated, then migrate to the new, active version.

- Obsolete: A service is obsolete when it's no longer shipped or supported.

Message Patterns
All operations exposed on a business object service have both synchronous and asynchronous message patterns defined. For conciseness, the service documentation includes the definition for the synchronous message pattern only. Both synchronous and asynchronous operations have the same functional behavior, and request and response payloads. Custom object services don't have corresponding asynchronous operations.
Naming Conventions and Examples

The naming convention for the asynchronous operation is:

- Operation name: Synchronous operation name appended with Async
- Callback name: Synchronous operation name appended with AsyncResponse

Using Help Topic Abstract Service as an example, if the name of the synchronous operation is `getEntityList`, the asynchronous operation name and callback name would be `getEntityListAsync` and `getEntityListAsyncResponse`.

Manage Web Service Sample Payloads

This example demonstrates how to add and edit a sample payload XML for a web service operation. It also describes how to delete a user-defined sample payload XML.

Adding a Sample Payload XML

Follow these steps to add a sample payload XML for the `getEntityList` operation of Help Topic Abstract Service:

1. From the Navigator menu, select Tools - Developer Connect.
2. On the Web Service overview page, search for Help Topic Abstract Service, and click the service display name.
3. On the Summary page, click the Sample Payloads tab, and then click Add Sample Payload.
4. Select `getEntityList` operation from the list, and enter a brief description.
5. Enter the payload XML, and click OK.

Editing a Sample Payload XML

The Developer Connect portal displays predefined and user-defined payloads of the web services. You can edit only the user-defined payloads. Follow these steps to edit a user-defined sample payload of the `getEntityList` operation of Help Topic Abstract Service:

2. On the Summary page of the web service, click the Sample Payloads tab and select `getEntityList` operation.
3. In the Edit Sample Payload dialog box, edit the payload XML and click OK.

Deleting a Sample Payload XML

You can delete only user-defined payloads, and not predefined payloads. Follow these steps to delete a user-defined sample payload of the `getEntityList` Operation of Help Topic Abstract Service:

2. On the Summary page of the web service, click the Sample Payloads tab and select `getEntityList` operation.
3. Click the delete icon for the selected operation and click OK.

Import Value Set Values to Oracle Applications Cloud

This example demonstrates how to use the information in the Developer Connect portal to import value set values to Oracle Applications Cloud.

Suppose a fictional partner application wants to extend it with certain functionality available in another application. Instead of creating the required business objects and attributes in this application, you can import them using a web service. Before you proceed with the import process, enable the access permissions for the web service and review the information in the Developer Connect portal:

- Synchronize the web services information
Synchronizing Web Services Information
You must synchronize the Developer Connect portal with your Oracle Applications Cloud instance to get the latest web service information. Follow these steps:

1. From the Navigator menu, select Tools > Developer Connect.
2. Click Synchronize.
   
   **Note:** The Last Refreshed date indicates when the Developer Connect portal was last synchronized with your cloud instance.

Searching And Reviewing Web Service Information
On the Web Services overview page, you can enter Manage File Import and Export in the Find field. You can also use Advanced Search option to find web service names that contain import, and select the relevant service from the search results.

To review the information:

1. On the Web Services overview page, select Manage File Import and Export Service. The Summary panel shows information such as the display name, business object that the service defines, life cycle status, QName, security policy used, and a brief overview of the service.
2. Click the Operations tab to view the operations supported by the web service.
3. Click the uploadFiletoUCM operation and review the result parameter in the response payload. This parameter holds the file ID in the WebCenter Content repository from which the value set values are imported.
4. Click the valueSetValuesDataLoader operation and review the fileIdAtRepository parameter in the request payload. This parameter holds the file ID in the WebCenter Content repository.
5. Click WSDL File link of the service to download the web service information.

Updating Request Payload
To add a sample payload to import the value set values:

1. Click the Sample Payloads tab and then click Add Sample Payload.
2. Select uploadFiletoUCM from the operation name list.
3. Enter a brief description of the payload in the description text box.
4. Add the payload to get the file ID from the WebCenter Content repository:

```xml
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns1:uploadFiletoUCM
      xmlns:ns1="http://xmlns.oracle.com/oracle/apps/fnd/applcore/webservices/types/
        ns2="http://xmlns.oracle.com/oracle/apps/fnd/applcore/webservices/"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <ns1:document xsi:type="ns2:DocumentDetails">
        <ns2:fileName>VS123.txt</ns2:fileName>
        <ns2:contentType>plain/text</ns2:contentType>
        <ns2:content>
          VmFsdWVTZXRDb2RlfE1uZGVwZW5kZW50OmFsWV8kZXBlbnRlbmR1bnRWWX12U51bWJlcnxJbmR1cGVuZGVudFZhbHVlRGF0ZUxJbmR1cGVuZGVuZGVu
          QX
          RcmldXRlmNH
          xDdxN0b21lWWx1ZUF0ZHJpYnV0aV8Q3VzdG9tVmFsWV8dHRyaWU1dGU2fEN1c3RvbVzhbHV1QXR0cmldXRlmN3xExN0b21lWWx1ZUF0dHJpYnV0a
          Hx
          8fHx8fHx8fHxK
          UKVVM19CM19WU19OVU1fSU5EfHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx8fHx
        </ns2:content>
      </ns1:document>
    </ns1:uploadFiletoUCM>
  </soap:Body>
</soap:Envelope>
```
Cross-Origin Resource Sharing

CORS Cross-Origin Resource Sharing (CORS) enables secure cross domain communication from a browser. You can configure CORS headers to enable a client application running in one domain to retrieve resources from another domain, using HTTP requests. By default, browser-based programming languages, such as JavaScript, can access content only from the same domain. CORS provides a mechanism to overcome this limitation and access resources from different domains.

To enable CORS in Oracle Applications Cloud, you must set profile option values for the CORS headers in the Setup and Maintenance work area. This table lists the supported CORS headers.

<table>
<thead>
<tr>
<th>CORS Header</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access-Control-Allow-Origin</td>
<td>Contains a comma-separated list of trusted origins that a client application can access resources from.</td>
</tr>
<tr>
<td>Access-Control-Max-Age</td>
<td>Specifies the duration of storing the results of a request in the preflight result cache.</td>
</tr>
<tr>
<td>Access-Control-Allow-Methods</td>
<td>Contains a comma-separated list of permitted HTTP methods in a request.</td>
</tr>
<tr>
<td>Access-Control-Allow-Headers</td>
<td>Contains a comma-separated list of permitted HTTP headers in a request.</td>
</tr>
<tr>
<td>Access-Control-Allow-Credentials</td>
<td>Specifies whether a client application can send user credentials with a request.</td>
</tr>
</tbody>
</table>
Example
A client application retrieves resource X from server A, which runs the application logic. The client application then makes an HTTP request to retrieve resource Y from server B. To allow this cross-server request from the client application, you must configure the `Access-Control-Allow-Origin` header in server B. Otherwise, the request fails and displays an error message.

Related Topics
- Profile Option Values for CORS Headers
- Set Profile Option Values

Profile Option Values for CORS Headers
You can set profile option values for the CORS headers using the Manage Administrator Profile Values task in the Setup and Maintenance work area.

CORS Headers
This table lists the CORS headers that you can set profile option values for.

<table>
<thead>
<tr>
<th>CORS Header</th>
<th>Profile Option Name (Profile Option Code)</th>
<th>Profile Option Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access-Control-Allow-Origin</td>
<td>Allowed Domains (ORACLE. ADF. VIEW. ALLOWEDORIGINS)</td>
<td>Valid values for allowed origins:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• URL of the specific origin, for example, <a href="http://www.exampledomain.com">http://www.exampledomain.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Comma-separated list of origins, for example, <a href="http://www.exampledomain.com">http://www.exampledomain.com</a>,</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://us.example.com">http://us.example.com</a>, <a href="http://software.example.com">http://software.example.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• * to allow access to resources from all origins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Empty (no value set) to prevent access to resources from any origin</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> You must set a value for this header to enable CORS.</td>
</tr>
<tr>
<td>Access-Control-Max-Age</td>
<td>CORS: Access-Control-Max-Age (CORS_ACCESS_CONTROL_MAX_AGE)</td>
<td>Default value for caching preflight request is 3600 seconds.</td>
</tr>
<tr>
<td>Access-Control-Allow-Methods</td>
<td>CORS: Access-Control-Allow-Methods (CORS_ACCESS_CONTROL_ALLOW_METHODS)</td>
<td>Default values for allowed methods are OPTIONS, HEAD, GET, POST, PUT, PATCH, and DELETE.</td>
</tr>
<tr>
<td>Access-Control-Allow-Headers</td>
<td>CORS: Access-Control-Allow-Headers (CORS_ACCESS_CONTROL_ALLOW_HEADERS)</td>
<td>Default values for allowed headers are Accept, Accept-Encoding, Authorization, Cache-Control, Content-</td>
</tr>
<tr>
<td>CORS Header</td>
<td>Profile Option Name (Profile Option Code)</td>
<td>Profile Option Values</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Access-Control-Allow-Credentials | CORS: Access-Control-Allow-Credentials (CORS_ACCESS_CONTROL_ALLOW_CREDENTIALS) | • True to enable sending credentials with the request  
                                  |                                            | • False, which is the default value, to disable sending credentials with the request |

**Related Topics**
- Set Profile Option Values

---

**View Details About Predefined Scheduled Processes**

To use web services to run predefined scheduled processes, you require details about the processes. View job definitions that the processes are based on, for example to get information about parameters. You might also need to find security requirements for running the scheduled process.

**Job Definitions**

A job definition contains the metadata that determines how a scheduled process works and what options are available during submission.

To view job definitions:

1. Go to the Setup and Maintenance work area.
2. From the Application Extensions functional area, open any of these tasks as appropriate:
   - Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications
   - Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications
   - Manage Enterprise Scheduler Job Definitions and Job Sets for Customer Relationship Management and Related Applications
3. In the Manage Job Definitions tab, select your job definition and click **Edit**.
   
   **Note:** Predefined job definitions are marked with an asterisk.
4. Cancel after you get the information you need.

**Security**

Privileges provide the access required to run specific scheduled processes. Privileges are granted to duty roles, which are granted to job roles. To see which job roles inherit the required privileges, use the Security Console or the security reference manuals for the appropriate product family.
Files for Import and Export

Overview of Files for Import and Export

You can import data into or export data out of the applications. A repository stores the content and the import and export processes handle the data movement into and out of the repository. 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:

- Using the File Import and Export page
- Interacting with content management
- Uploading to facilitate import
- Downloading to facilitate export
- Determining the file size

The File Import and Export Page

Use the File Import and Export page to upload content to or download content from the document repository of Oracle WebCenter Content. Search criteria on the page are limited to the minimum metadata of content management records needed for file import and export. To open the page, from the Navigator in the global header, select Tools > File Import and Export.

Contact the WebCenter Content Administrator for the following additional requirements:

- Information or assistance regarding general access to content management (including all metadata)
- Creating and managing accounts
- Programmatically uploading and downloading content

Interacting with Content Management

Each user with access to the File Import and Export page is assigned to one or more accounts in Oracle WebCenter Content. Accounts organize and secure access to the content items.

Uploading to Facilitate Import

Uploading a file creates a record in Oracle WebCenter Content. When you upload a file, you must also specify an account to which you upload the file. The account you specify determines which import process picks up that file to import it. You can upload any compatible file format, such as MIME, which the content repository can parse. However, the uploaded format must conform to the requirements of the import process. For example, the comma-separated values (CSV) file for the Load Interface File for Import process.

Downloading to Facilitate Export

Records in the search results table of the File Import and Export page provide download links to the files.

File Size

Upload and download don't apply the following by default:

- Data compression
File 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).

Guidelines for File Import and Export

Interaction between the File Import and Export page and Oracle WebCenter Content requires securing content in an account. You can use the predefined accounts that are available in Oracle WebCenter Content.

Areas of file import and export involve the following:

- Defining security
- Searching records
- Accessing content in a new account
- Naming the account
- Deleting files

Defining Security

You require the File Import and Export Management duty role for accessing the File Import and Export page. 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 having access to that account can work with those files. Account names are unique and each account is treated as discrete by access control. You can only upload and download files to and from content repositories that are linked to the accounts you can access. The underlying integrated content management handles security tasks such as virus scanning.

Searching Records

A record in Oracle WebCenter Content contains the metadata used for accessing the file. When a scheduled process is run on a file, the record for the file is assigned a process ID.

Accessing Content in a New Account

After you create a new account in Oracle WebCenter Content, restart the content server. Otherwise, when you use the File Import and Export page to access content in the new account, you may experience a delay. The policy store is being updated with the new account information, which causes the delay.

Naming the Account

If you create accounts for importing or exporting data, use the following conventions for naming the account:

- Don’t include a slash (/) at the beginning or end.
- End the name with a dollar sign ($) to avoid partial string matching.
- Use dollar sign and slash ($/) as a separator in the hierarchical structure.

For example: `fin$/journal$/import$` The File Import and Export page transforms account names by removing the dollar sign ($) separators. For example `fin$/journal$/import$` appears as `fin/journal/import`. The Remote Intradoc Client (RIDC) HTTP command-line interface (CLI) transforms the account name you specify without the dollar sign ($) to one that includes the sign. 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.

Related Topics
- Document Transfer Utility

External Data Integration Services for Oracle Cloud

Overview of External Data Integration Services for Oracle Cloud
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.

External Data Integration Services for Oracle Cloud include the following components:
- Templates to structure, format, and generate the data file according to the requirements of the target application tables.
- File-based load process to load the data files into the interface tables.
- Application-specific data import processes to transfer data from interface tables to the application tables in your Oracle Fusion Applications.
The following flow diagram outlines the steps involved in loading data from external sources.

For further information, see Using External Data Integration Services for Oracle ERP Cloud (2102800.1) on My Oracle Support at https://support.oracle.com.

Related Topics
- Using External Data Integration Services for Oracle ERP Cloud

File Import Templates

The File Based Data Import guides in the Oracle Help Center (http://docs.oracle.com) include 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.

Preparing external data using templates involve the following tasks:

- Downloading templates
- Preparing data using the XLS template
Downloading Templates

To download the templates:

1. Open the File Based Data Import guide for your cloud service.
2. Locate the import process.
3. View the list of files.
   - Control files describe the logical flow of the data load process.
   - XLSM templates include the worksheets and macros for structuring, formatting, and generating your data file.

   **Note:** You can use XML templates to import data into Oracle Data Integrator.

4. Click the template link in the File Links table to download the file. For example, click JournalImportTemplate.xlsm in the Journal Import topic.

Preparing Data Using the XLS Template

To prepare your data in a spreadsheet format:

1. Open the XLS template. The first worksheet in each file provides instructions for using the template.

   **Note:** If you don’t follow the instructions, you get data load errors and data import failures.

2. Save the file.
3. Click the **Generate CSV File** button.

   The macro generates a comma-separated values (CSV) file and compresses the file into a ZIP file. You must transfer the ZIP file to the content management server.

Opening the XML Template

To prepare your data in Oracle Data Integrator, download the XML templates using the following steps:

1. Import the family-level template as a model folder.
2. Import the product-level template as a model folder within the family-level model folder.
3. Import the product template as a model within the product-level model folder.
4. Create the integration project.
5. Create the package.
6. Add and configure these elements:
   - Integration projects
   - Content management document transfer utility
7. Execute the package. The package generates the CSV file and compresses it into a ZIP file.

**Related Topics**

- Document Transfer Utility
Use Excel Integration Templates to Generate Data Files

The File Based Data Import guides in the Oracle Help Center (http://docs.oracle.com) include 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.

Template Structure

The integration templates include the following characteristics:

- 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.
- Columns are formatted, where applicable, to match the target field data type to eliminate data entry errors.
  
  The worksheet columns appear in the order that the control file processes the data file.

For more information on the template structure, see the Instructions and CSV Generation worksheet in the template.

Template Requirements

To minimize the risks of an unsuccessful data load, ensure the following:

- Unused columns can be hidden, but not reordered or deleted.
  
  Caution: Deleting or reordering columns causes the load process to fail and results in an unsuccessful data load.

- External data must conform to the data type accepted by the control file and process for the associated database column.
- Date column values must appear in the YYYY/MM/DD format.
- Amount column values can’t have 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.
- For columns that require internal ID values, refer to the bubble text for additional guidance about finding these values.

After you finish preparing the data in the sheet, click the Generate CSV File button to generate a ZIP file containing one or more CSV files.

Use XML Templates to Generate Data Files for Integration

The File Based Data Import guides in the Oracle Help Center (https://docs.oracle.com) include XML integration templates that you use with Oracle Data Integrator to generate import files from your external data. Oracle Data Integrator provides a solution for integrating complex data from a variety of sources into your Oracle Fusion applications.
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:** For Oracle Cloud implementations, you must upload the ZIP file to the content management repository in Oracle Cloud. For non-Cloud implementations, you can streamline the data integration process by installing the content management document transfer utility, which uses Oracle Data Integrator to transfer the ZIP file.

**Related Topics**
- Document Transfer Utility

Use XML Integration Templates to Generate Data Files

Use XML templates in Oracle Data Integrator to prepare your external data for the load and import process.

The File Based Data Import guides in the Oracle Help Center (https://docs.oracle.com) include three types of XML templates that you import as target models in your Oracle Data Integrator repository:

- 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:

- Use the family-level XML file to support assets in the family, for example, Oracle Fusion Financials or Human Capital Management.
- Import the family-level XML file into your Oracle Data Integrator repository prior to importing the other XML files.
- Import one family-level XML file as a model folder for each family of products.
- Import each family-level XML file as a high-level model folder.
- Import the family-level XML file one time; it supports all subsumed product-level model folders.
- 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:

- Use the product-level XML file to support assets in the product line, for example, Fixed Assets, General Ledger, or Payables.
- Import one product-level XML file as a model folder for each line of products.
- Import the product-level XML file as a model folder into your Oracle Data Integrator repository.
- Import the family-level XML file before you import product XML files.
• Import each product-level XML file as a mid-level model folder within the appropriate family-level model folder.
• Import the product-level XML file one time; it supports all subsumed product models.
• Select Synonym Mode Insert Update as the import type.

Product XML Files
A product XML file represents a specific interface table asset.
Consider the following points when you use product XML files:
• Import one product XML file as a model for each interface table or set of tables, for example, Mass Additions.
• Import the product XML file as a model into your Oracle Data Integrator repository after you import the product-level XML file.
• Import each product XML file as a model within the appropriate product-level model folder.
• Import each product XML file one time. The model is based on File technology.
• Select Synonym Mode Insert Update as the import type.
• After you import the product model, connect the model to the correct logical schema.

Related Topics
• Document Transfer Utility

How You Create Integration Projects That Generate Data Files for Import
When you use Oracle Data Integrator to generate the 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. The source is your external data and the target is the import data file that you load and import into your Oracle Fusion Applications.
To create your integration project, you configure the following components:
• 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. For example, check knowledge modules ensure that constraints on the sources and targets are not violated, and integration knowledge modules load data to the target tables.
Consider the following points about knowledge modules:
• 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 contain the 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 data store from your external data model.
- The target is the interface table data store, which is the CSV file from your interface table model.
- After you set up the source and target data stores, map the target fields to the source fields, or map source field values to target fields or constants.

**Related Topics**
- Document Transfer Utility

**Transfer Data Files to Oracle WebCenter Content Using Manual Flow**

After you generate the ZIP file that contains the CSV data import file, transfer the ZIP file to the content repository. Use any of the following methods to transfer file:

- File Import and Export page in Oracle Fusion Applications: Manual flow
- Oracle Fusion ERP Integration web service: Automated flow

Aspects of transferring data files to content management involve the following:

- Target accounts
- Accessing transferred content

**Predefined Target UCM Accounts**

You can transfer data files to predefined accounts in the Universal Content Management server that correspond to the interface table or assets.

To find the UCM account:

1. Open the File Based Data Import guide for your cloud service.
2. Locate your respective import process. For example, Journal Import.
3. View the UCM account in the Details section.

For more information, see the following guides in the Oracle Help Center (https://docs.oracle.com):

- SOAP Web Services guide for your cloud services
- File Based Data Import guide for your cloud services

**Related Topics**
- Document Transfer Utility

**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.

**Related Topics**

- Document Transfer Utility

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**Import Data into Application Tables**

The final destination for your external data is the application data tables of your Oracle Fusion application. Importing data into application tables involves 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 application 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 using the following steps:

1. From the Navigator, click **Tools**.
2. Click **Scheduled Processes**.
3. Click the **Schedule New Process** button.
4. Search and select the Load Interface File for Import job.
5. On the Process Details page:
   a. Select the target import process.
   b. Enter the data file name.
6. Submit the process.

If the process is successful, the status is SUCCEEDED and the process populates the interface tables. If the process isn't successful, the status is ERROR.

**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 application.

To import your data into the application tables:

1. From the Navigator, click **Tools**.
2. Click **Scheduled Processes**.
3. Click the **Schedule New Process** button.
4. Search and select the import process for the target application tables.
5. On the Process Details page, select the process that corresponds to the data that you’re importing. For example, **Journal Import**.
   
   If you prepared your data using the spreadsheet template, select the process shown in the Overview section of the spreadsheet.
6. Submit the process.

If the process is successful, the status is **SUCCEEDED**. The data in the interface tables is validated and the successful records are imported into the Oracle Fusion application tables. If the process isn’t successful, the status is **ERROR**.

**Note:** For more information on the process used for data prepared using the spreadsheet template, see the Instructions and CSV Generation tab of the spreadsheet template.

**Related Topics**
- **Document Transfer Utility**

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 Load File to Interface child process ends as an error or warning. All rows that were loaded by the process are deleted and the entire batch of records is rejected.

Correcting Data Upload Errors
To correct errors:

1. Review the error logs.
2. Change any structural or formatting anomalies in the data.
3. Generate the ZIP file containing the CSV files using the template.
4. Upload the file to the UCM server and resubmit the Load Interface File for Import process.
5. Repeat these steps until the process successfully loads all the data.

Correcting Import Process Errors
If the import process fails with errors:

1. Review the errors in the import log.
2. Correct the error records using the ADFdi correction spreadsheets.
Overview of Moving Common Reference Objects

The common reference objects 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's created for an implementation project. While moving the application content, for example, moving from test to the production phase of an implementation, attend 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 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, you must note all the dependencies before moving the objects so that there are no broken references among them.

Related Topics

- Overview of Setup Data Export and Import
- Setup Data Export and Import Using an Offering or a Functional Area

Business Objects for Moving Common Reference Objects

Common reference objects in Oracle Fusion Functional Setup Manager are used to move application setup content from one environment to another. For example, from a test environment to a production environment.

Choice of Parameters

The following table lists the business objects, the movement details, and the effect of the setup task parameter on the scope of the movement.

Note:

- You can move only the translations in the current user language.
- You can move the Oracle Social Network business objects and the changes to the Navigator using the configuration sets on the Configuration Set Migration page.
<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Moved Functional Item</th>
<th>Effect on the Scope of Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Message</td>
<td>Messages and associated tokens</td>
<td>No parameters: All messages are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only messages belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter messageName/ applicationId Only the specified message is moved.</td>
</tr>
<tr>
<td>Application Taxonomy</td>
<td>Application taxonomy modules and components</td>
<td>No parameters: All taxonomy modules and components are moved.</td>
</tr>
<tr>
<td>Application Attachment Entity</td>
<td>Attachment entities</td>
<td>No parameters: All attachment entities are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only attachment entities belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td>Application Attachment Category</td>
<td>Attachment categories and category-to-entity mappings</td>
<td>No parameters: All attachment categories and category-to-entity mappings are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey 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.</td>
</tr>
<tr>
<td>Application Document Sequence Category</td>
<td>Document sequence categories</td>
<td>No parameters: All categories are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only categories belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter code/ applicationId Only the specified document sequence category code is moved.</td>
</tr>
<tr>
<td>Application Document Sequence</td>
<td>Document sequences and their assignments</td>
<td>No parameters: All sequences are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only document sequences belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter name: Only the specified document sequence is moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Application Descriptive Flexfield | Descriptive flexfield registration data and setup data                                 | No parameters: All descriptive flexfields are moved.  
Parameter moduleType/ moduleKey Only descriptive flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter descriptiveFlexfieldCode/ applicationId Only the specified descriptive flexfield is moved. Importing the metadata of a flexfield can change its deployment status. Therefore, you must redeploy if there are any affected flexfields. The import process automatically submits affected flexfields for redeployment. Also 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  
Parameter moduleType/ moduleKey Only extensible flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter extensibleFlexfieldCode/ applicationId Only the specified extensible flexfield is moved. Importing the metadata of a flexfield can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment.  
Also, 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.  
Parameter moduleType/ moduleKey Only key flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter keyFlexfieldCode/ applicationId Only the specified key flexfield is moved.  
Importing the metadata of a flexfield can change its deployment status and therefore, the affected flexfields must be redeployed. The import process |
<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Moved Functional Item</th>
<th>Effect on the Scope of Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Flexfield Value Set</td>
<td>Value set setup data</td>
<td>automatically submits affected flexfields for redeployment. Only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.</td>
</tr>
<tr>
<td>Application Reference Currency</td>
<td>Currency data</td>
<td>No parameters: All currencies are moved.</td>
</tr>
<tr>
<td>Application Reference ISO Language</td>
<td>ISO language data</td>
<td>No parameters: All ISO languages are moved.</td>
</tr>
<tr>
<td>Application Reference Industry</td>
<td>Industry data including industries in territories data</td>
<td>No parameters: All industries are moved.</td>
</tr>
<tr>
<td>Application Reference Language</td>
<td>Language data</td>
<td>No parameters: All languages are moved.</td>
</tr>
<tr>
<td>Application Reference Natural Language</td>
<td>Natural language data</td>
<td>No parameters: All natural languages are moved.</td>
</tr>
<tr>
<td>Application Reference Territory</td>
<td>Territory data</td>
<td>No parameters: All territories are moved.</td>
</tr>
<tr>
<td>Application Reference Time zone</td>
<td>Time zone data</td>
<td>No parameters: All time zones are moved.</td>
</tr>
<tr>
<td>Application Standard Lookup</td>
<td>Standard lookup types and their lookup codes</td>
<td>No parameters: All standard lookups are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only standard lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Application Common Lookup    | Common lookup types and their lookup codes                  | No parameters: All common lookups are moved.  
Parameter moduleType/ moduleKey  
Only common lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter lookupType: 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.  
Parameter moduleType/ moduleKey  
Only set-enabled lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter lookupType: Only the specified set-enabled lookup is moved. |
| Application Profile Category | Profile categories                                         | No parameters: All profile categories are moved.  
Parameter moduleType/ moduleKey Only categories belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.  
Parameter name/ applicationId Only the specified category is moved. |
| Application Profile Option    | Profile options and their values                             | No parameters: All profile options and their values are moved.  
Parameter moduleType/ moduleKey Only profile options and their values belonging to the specified module are moved.  
Parameter profileOptionName: 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.  
Parameter moduleType/ moduleKey Only profiles and their values belonging to the specified module are moved. |
### Migration of Common Reference Objects

<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Moved Functional Item</th>
<th>Effect on the Scope of Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application Reference Data Set</strong></td>
<td>Reference data sets</td>
<td>Parameter categoryName/categoryApplicationId: Only profiles and their values belonging to the specified category are moved. Parameter profileOptionName: Only the specified profile and its values are moved.</td>
</tr>
<tr>
<td><strong>Application Reference Data Set Assignment</strong></td>
<td>Reference data set assignments</td>
<td>Parameter determinantType: Only assignments for the specified determinant type are moved. Parameter determinantType/referenceGroupName: Only assignments for the specified determinant type and reference group are moved.</td>
</tr>
<tr>
<td><strong>Application Tree Structure</strong></td>
<td>Tree structures and any labels assigned to the tree structure</td>
<td>Parameter moduleType/moduleKey: Only tree structures (and their labels) belonging to the specified module are moved. Parameter treeStructureCode: Only the specified tree structure (with its labels) is moved.</td>
</tr>
<tr>
<td><strong>Application Tree</strong></td>
<td>Tree codes and versions</td>
<td>Parameter moduleType/moduleKey: Only trees belonging to the specified module are moved. Parameter treeStructureCode: Only trees belonging to the specified tree structure are moved. Parameter treeStructureCode/TreeCode: Only trees belonging to the specified tree structure and tree code are moved.</td>
</tr>
<tr>
<td><strong>Application Tree Label</strong></td>
<td>Tree structures and any labels assigned to the tree structure</td>
<td>Parameter moduleType/moduleKey: Only tree structures (and their labels) belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. Parameter treeStructureCode: Only the specified tree structure (with its labels) is moved.</td>
</tr>
</tbody>
</table>
Oracle SCM Cloud
Implementing Common Features for SCM

Chapter 21
Migration of Common Reference Objects

<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Moved Functional Item</th>
<th>Effect on the Scope of Movement</th>
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</thead>
<tbody>
<tr>
<td>Application Data Security Policy</td>
<td>Database resources, actions, conditions, and data</td>
<td>No parameters: All database resources/actions/conditions/policies are moved.</td>
</tr>
<tr>
<td></td>
<td>security policies</td>
<td>Parameter moduleType/moduleKey Only database resources/actions/conditions/policies belonging to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter objName: Only the specified database resource along with its actions/conditions/policies</td>
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<tr>
<td></td>
<td></td>
<td>is moved.</td>
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<tr>
<td></td>
<td></td>
<td>If the policies being moved contain reference to newly created roles, move the roles before</td>
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<td></td>
<td></td>
<td>moving the policies.</td>
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<tr>
<td></td>
<td></td>
<td>If the source and target systems use different LDAPs, manually perform the GUID reconciliation</td>
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<tr>
<td></td>
<td></td>
<td>after moving the data security policies.</td>
</tr>
</tbody>
</table>

Guidelines for Moving Related Common Reference Objects

Certain common reference objects may use other common reference objects creating dependencies among the objects. During the movement of common reference objects, ensure that these dependencies or references aren't broken or lost.

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 decide 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 decide to move only value sets, or move both value sets and their lookups as part of the same package. Whatever be the combination, Oracle recommends 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 following order:

1. Move created taxonomy modules before moving any objects that reference them, such as flexfields, lookups, profiles, messages, and so on.
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 have dependencies on newly created security roles, you must move the security roles before moving the security policies.

Guidelines for Moving Common Reference Objects Using the Seed Data Framework

To move the common reference objects, you can use the Seed Data Framework. You can also use the command line interface of the Seed Data Framework 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 Seed Data Framework to import flexfield metadata, the flexfield setup metadata is imported into your database. However, you must initiate the flexfield deployment process separately after seed data import to regenerate the runtime flexfield artifacts in the target environment. Similarly, if you use Seed Data Framework 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 isn’t lost during the movement, certain guidelines are prescribed. It’s recommended that you perform the movement of object data exactly in the following order:

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

accounting flexfield
The structure that determines the chart of accounts, including the number and order of the individual segments, as well as assigning the value sets to the segments.

accounting method
A set of journal entry rules which determine how a subledger journal entry is created for each event class or event type.

action
The kind of access, such as view or edit, named in a security policy.

ADF
Application Developer Framework. A set of programming principles and rules for developing software applications.

analytics
Business intelligence objects such as analyses and dashboards that provide meaningful data to help with decision making.

application feature
A standardized functionality that is available to implemented.

application partner
A B2B trading partner defined in Oracle Applications Cloud that engages in the collaboration messaging activity. For example, a supplier site, or a customer account.

autosuggest
Suggestions that automatically appear for a search field, even before you finish typing your search term. You can select any of the suggestions to run your search.

balancing segment
A chart of accounts segment used to automatically balance all journal entries for each value of this segment.

business function
A business process or an activity that can be performed by people working within a business unit. Describes how a business unit is used.

business intelligence catalog
The repository where all business intelligence objects, including analyses, reports, briefing books, and agents, are stored. The catalog contains separate folders for personal, shared, and modified objects.
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.

condition
The part of a data security policy that specifies what portions of a database resource are secured.

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 be associated with a different set of context-sensitive segments.

context-sensitive segment
A flexfield segment that may or may not appear depending upon a context. Context-sensitive segments are attributes that apply to certain entity rows based on the value of the context segment.

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.

CORS
Acronym for Cross-Origin Resource Sharing. A web service standard to enable a client application running in one domain to retrieve resources from another domain, using HTTP requests.

cost center
A unit of activity or a group of employees used to assign costs for accounting purposes.

country holding company
A legal entity that acts on behalf of several divisions within an enterprise, and is the legal employer in a country.
**dashboard**
A page that gives quick access to key tasks and summary information for a business process or object.

**data security**
The control of access and *action* a user can take 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.

**descriptive flexfield**
Expandable fields used for capturing additional descriptive information or attributes about an entity, such as a customer case. You may configure information collection and storage based on the context.

**determinant**
A value that specifies the use of a reference data set in a particular business context.

**determinant type**
The value that affects sharing of reference data in a transaction across organizations, such as a business unit or a cost organization.

**determinant type**
An optional value that affects document sequencing in a transaction. The available determinant types are Business Unit, Ledger, Legal Entity, and Tax Registration.

**determinant value**
A value specific to the selected determinant type of a document sequence. 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. It is relevant in a document sequence assignment only if the document sequence has a determinant type.

**division**
A business-oriented subdivision within an enterprise. Each division is organized to deliver products and services or address different markets.
**document sequence**
A unique number that is automatically or manually assigned to a created and saved document.

**enterprise**
An organization having common control over one or more legal entities.

**entitlement**
Grant of access to functions and data. Oracle Fusion Middleware term for privilege.

**extensible flexfield**
Expandable fields that you can use to capture multiple sets of information in a context or in multiple contexts. Some extensible flexfields let you group contexts into categories.

**feature**
Business practices or methods applicable to the functional areas that enable the fine-tuning of business functionality.

**filmstrip**
The single strip of icons that you can use to open other pages. The strip appears between the global header and the page title.

**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**
A flexible data field that you can configure such that it contains one or more segments or stores additional information. Each *segment* has a value and a meaning.

**flexfield segment**
An extensible data field that represents an attribute and captures a value corresponding to a predefined, single extension column in the database. A segment appears globally or based on a context of other captured information.
**global header**
The uppermost region in the user interface that remains the same no matter which page you're on.

**global search**
The search in the global header that lets you search across many business objects.

**grade**
A component of the employment model that defines the level of compensation for a worker.

**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.

**infolet**
A small, interactive widget on the home page that provides key information and actions for a specific area, for example social networking or your personal profile. Each infolet can have multiple views.

**interface table**
Database table that stores data during data transfer between applications or between databases that reside inside and outside of an Oracle Fusion application.

**inventory organization**
A logical or physical entity in the enterprise that tracks inventory transactions and balances, stores definitions of items, and manufactures or distributes products.

**item master**
A collection of data that describes items and their attributes recorded in a database file.

**item organization**
Item definition where inventory balances are not stored and movement of inventory is not tracked in the applications. Item attributes that carry financial and accounting information are hidden.

**item subinventory**
An association of an item with a subinventory that is created when you add an item to a subinventory.

**Items**
Entries within the Product master database. For example, items for a manufacturing company can include nuts, bolts, and screws.

**job**
A generic role that’s independent of any single department or location. For example, the jobs Manager and Consultant can occur in many departments.
**job definition**
The metadata that determines what a job does and what options are available to users when they submit the scheduled process. A job is the executable for a scheduled process.

**job role**
A role, such as an accounts payable manager or application implementation consultant, that usually identifies and aggregates the duties or responsibilities that make up the job.

**key flexfield**
Configurable flexfield comprising multiple parts or segments, each of which has a meaning either individually or in combination with other segments. Examples of key flexfields are part numbers, asset category, and accounts in the chart of accounts.

**key flexfield segment instance**
A single occurrence of a key flexfield segment in a key flexfield structure instance.

**key flexfield structure**
The arrangement of segments in a key flexfield. In some cases, you can define multiple structures for a single key flexfield.

**key flexfield structure instance**
An occurrence of a key flexfield structure that shares the same order of segments as other instances of the key flexfield structure. However, each instance uses different value sets to validate the segments.

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

**legal employer**
A legal entity that employs people.

**legal entity**
An entity identified and given rights and responsibilities by commercial law through the registration with country's appropriate authority.

**legal jurisdiction**
A physical territory, such as a group of countries, single country, state, county, parish, or city, which comes in 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
An option available within a lookup type, such as the lookup code BLUE within the lookup type COLORS.

lookup type
The label for a static list that has lookup codes as its values.

mainline metadata
The primary branch of metadata that a sandbox is published to. Once published, changes made in the sandbox become available to all users.

manufacturing facilities
Employed in the making of goods for sale such as a factory or plant.

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.

Navigator
The menu in the global header that you can use to open the work areas and dashboards that you have access to.

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.
**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.

**position**
A specific occurrence of one job that’s fixed within a department. It’s also often restricted to one location. For example, the position Finance Manager is an instance of the job Manager in the Finance Department.

**primary ledger**
Main record-keeping ledger.

**privilege**
A grant of access to functions and data; a single, real world *action* on a single *business object*.

**profile option**
User preferences and system configuration options that users can configure to control application behavior at different levels of an enterprise.

**profile option level**
The category or layer that defines a profile option. Site, Product, and User are the predefined levels.

**profile option value**
The setting mapped to the level of a profile option. A profile option may have multiple values set at different levels, such as Site or User.

**Query By Example**
The icon for filtering data in a table.

**reference data**
Data in application tables that is not transactional or high-volume, which an enterprise can share across multiple organizations. For example, sales methods, transaction types, or payment terms.

**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 group**
A logical collection of reference data sets that correspond to logical entities, such as payment terms defined across multiple tables or views. Based on the common partitioning requirements across entities, the reference data sets are grouped to facilitate data sharing among them.
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.

report
An output of select data in a predefined format that’s optimized for printing.

role
Controls access to application functions and data.

sandbox
A testing environment that isolates untested code changes from the mainline environment so that these changes don’t affect the mainline metadata or other sandboxes.

scheduled process
A program that you run to process data and, in some cases, generate output as a report.

segment
A segment is a single field within a flexfield and maps to a single table column in your database. When configuring a flexfield, you define the appearance and meaning of individual segments.

service provider
An intermediary that facilitates exchange of messages between Oracle Applications Cloud and trading partners.

set
Classified and grouped reference data that organizational entities share.

set enabled
A property that describes entities that an organization shares as reference data. For example, you can indicate a lookup, customer, location, or document attachment as set enabled.

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.
**storage facilities**
Commercial building for storage of goods such as a warehouse.

**suggestion group**
Category of suggestions that appear in the autosuggest for the global search.

**territory**
A legally distinct region used in the country field of an address.

**trading partner**
A B2B partner engaging in the collaboration messaging activity but defined outside Oracle Applications Cloud.

**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**
A set of guidelines or a framework applied to create a tree, include data, version a tree, or access a tree.

**user rate type**
Rate you enter at journal entry time to convert foreign currency transactions to your ledger currency.

**value set**
A predefined set to validate the values that a user enters in the application. The set may be hierarchical.

**work area**
A set of pages containing the tasks, searches, and other content you need to accomplish a business goal.

**workflow**
An automated process that passes a task from one user (or group of users) to another to view or act on. The task is routed in a logical sequence to achieve an end result.