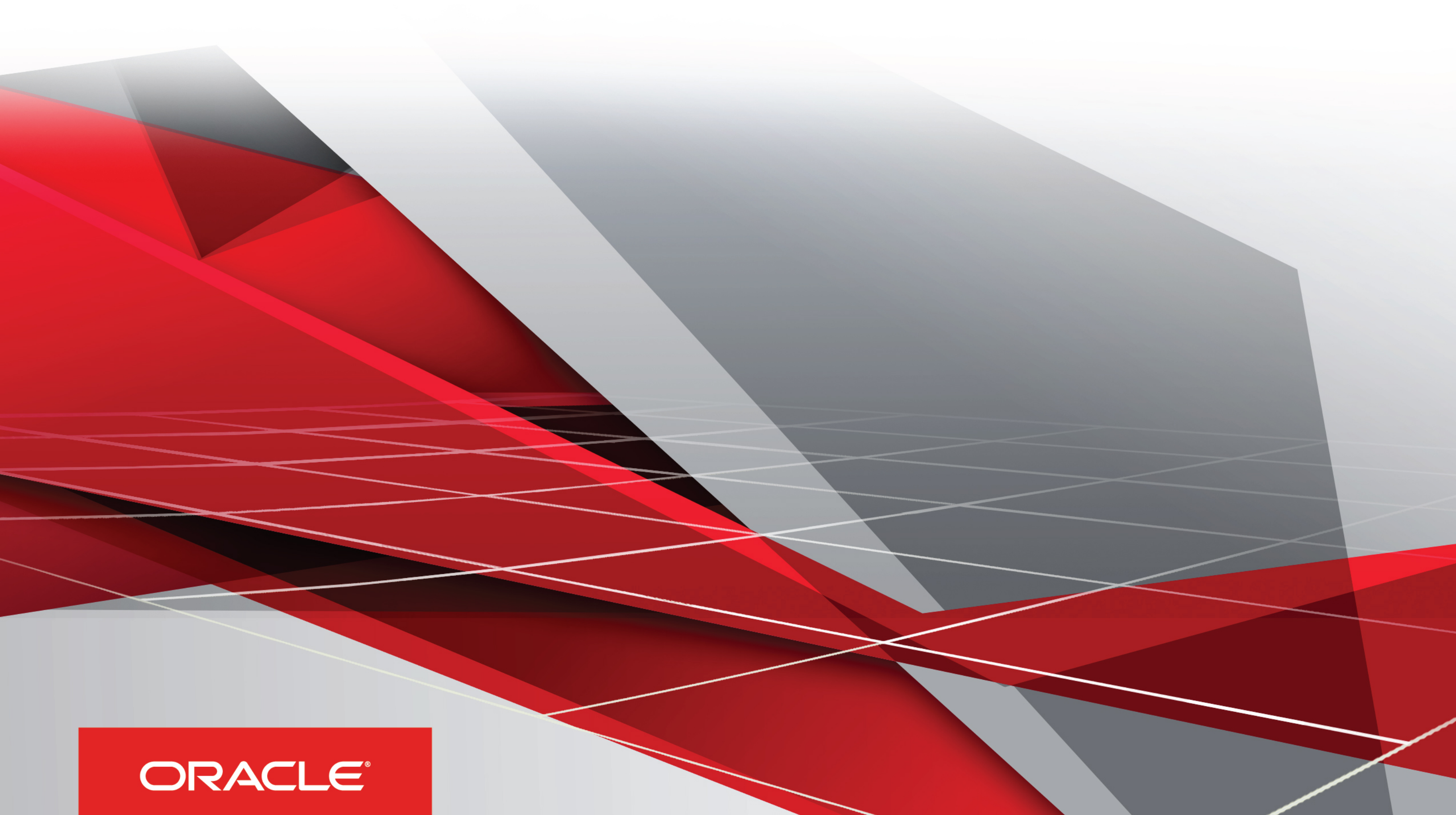
Oracle

SCM Cloud

Implementing Product Management

Release 12

This guide also applies to on-premises implementations



Oracle® SCM Cloud Implementing Product Management

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Contents

Preface

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

Oracle Applications Help

Use the help icon ? to access Oracle Applications Help in the application. If you don't see any help icons on your page, click the Show Help icon ? in the global header. Not all pages have help icons. You can also access Oracle Applications Help at https://fusionhelp.oracle.com.

Using Applications Help

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

Additional Resources

- **Community:** Use **Oracle Applications Customer Connect** to get information from experts at Oracle, the partner community, and other users.
- **Guides and Videos:** Go to the **Oracle Help Center** to find guides and videos.
- **Training:** Take courses on Oracle Cloud from **Oracle University** .

Documentation Accessibility

For information about Oracle's commitment to accessibility, see the **Oracle Accessibility Program** .

Comments and Suggestions

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1 Introduction to Product Management

Product Hub: Overview

Product Hub: Overview

Product Hub enables companies to consolidate all product information into a central repository that is based on a single, extensible data model. This improves item accuracy and standardizes information so items can be classified, making them easy to find and manage. The central repository accommodates virtually all information types, including:)

- Structured data such as item specifications, user-defined attributes
- Unstructured data such as documents, spreadsheets, images, drawings, and other attachments
- Lifecycle data (change requests and change orders)
- Bills of material (engineering, sales, manufacturing, service, and so on

The Product Hub solution provides a single source of truth of product data which can be leveraged across the enterprise, supporting business process improvements and increasing profitability. Organizations can control business functions and operations using predefined industry standard operational attributes such as GDSN (Global Data Synchronization Network).

Setting up Product Hub: Roadmap

In the **Setup and Maintenance** work area, tasks are grouped in **functional areas**. You can view and implement them through the **Product Management** offering. These tasks are described in more detail in subsequent chapters.

Task List	Description
Define Item Organizations for Product Management	You must define at least one item organization in order to take any actions with items. You can optionally set up organization trees to create a hierarchy of organizations to be used in various places throughout the application.
Define Items	There are several required and optional setup tasks that must be completed prior to working with items including: • Item Profile Options: These are defined for you. You should review these settings to confirm they meet your business needs. • Lifecycle Phases: You must create lifecycle phases and those must be assigned to the item class used to create the items or to a parent item class of the item class used to create the item. • Product and Child Value Sets: Required for creating item rules. • Attachment Categories: You can optionally define attachment categories. • Attributes and Attribute Groups: Create attributes and assign them to attribute groups. • Item Classes: You must create at least one item class before you can create items. • Various Flexfield tasks: These are optional tasks used to gather additional item data. • Deploy Item Flexfields: You must deploy flexfields after you create a new item class or make changes to any flexfields. • Item Statuses: These are seeded for you.

Task List	Description
	• Item Types: 37 types have been seeded for you. You can edit or create additional types. • Cross Reference Types: Optional task for defining cross references between two items. • Download Import template, Upload Item Data, Load Interface File, Import Items, Monitor Item Imports: Use these tasks if you are importing you item data into Product Hub. • Item Subtypes: Optional task for defining item subtypes.
Define Basic Catalogs for Product Information Management	The setup tasks in this task list are used to define setup information and functional area catalogs. Non-Product Hub customers use the Create Catalog and Manage Catalogs tasks to create and manage catalogs. Product Hub customers complete those tasks in the Product Information Management work area.
Define Change Orders	Creating change order types is required before you can create change orders. You must also define the task configurations and manage the approval groups. You can optionally define change reasons, priorities and statuses.
Define Product Rules	You must create rules and rule sets if you plan on using product rules for validating or assigning data to items.
Define New Item Requests	Similar to defining change orders, you must set up task configurations and approval groups prior to creating new item requests.
Define Product Spoke Systems	This task list is used to define spoke or source systems.
Define Advanced Catalogs	Product Hub customers can use this task list to define catalog mappings.
Define Item Mass Update Configuration	Used to create import formats and assign them to an item class.
Define Item Import Batch Configuration	Used to create import batch formats and assign them to an item class.
Define Audit History for Product Management	You can optionally define audit policies if you want to track who made what changes and when they were made.

Setting up Product Hub Portal for Supplier Users: Roadmap

Product Data Stewards need to carry out the following tasks before supplier users can begin managing their products in Product Hub Portal.

Required Setup	Description
Associate the Job Role with the Supplier User	All supplier users need to be assigned the Supplier Product Administrator job role for accessing Product Hub Portal.
Define Spoke Systems	Separate spoke systems must be setup for every supplier who uploads product data.

Required Setup	Description
Item Class Security	Item class security needs to be setup for the supplier users who upload product data. On the Edit Item Class page Security tab, the Supplier Product Administrator job role needs to be given item data privileges similar to other job roles such as the Product Data Steward.
Define a Default Catalog	The default catalog must be set using the Manage Advanced Item Profile Option task.
Create Catalog Category Mappings	Mappings between the categories of the default catalog and item class need to be setup for deriving the item class of supplier products.
Set up Item Extensible Attributes for Product Hub Portal	Use the Edit Item Class task in the Setup and Maintenance work area to expose item extensible attributes to suppliers. Attributes are selected on the Product Hub Portal sub-tab under the Pages and Attribute Groups tab of the Edit Item Class task.
Set up Import Maps	Import maps are used to allow suppliers to import their product data with generated pre-defined templates. Import Maps must be set to External in order for suppliers to access the associated templates.

Note: Supplier and Supplier User setup is handled in the Oracle Fusion Procurement application. See the Oracle Fusion Procurement documentation for more information..

Product Lifecycle Management: Overview

Oracle Innovation Management and Oracle Product Development, along with Oracle Product Hub, deliver comprehensive Innovation to Commercialization capabilities across your entire product value chain.

Oracle Innovation Management consists of the following products:

- Product Requirements and Ideation Management
- Concept Design Management
- Product Lifecycle Portfolio Management

Oracle Product Development enables you to manage product data and change orders while balancing cost.

In the **Setup and Maintenance** work area, these products appear as **Functional Areas**. You can view and implement them through the **Product Management** offering.

Functional Area	Description
Product Requirements and Ideation Management (PRIM)	The Innovation process begins with Ideas entered or uploaded into Ideas Management. Ideas that gain interest and approval are attached to a product proposal and later converted into more formal requirements specifications. Later these can be developed as input for detailed design in Product Lifecycle Management (PLM) solutions. Allows employees and stakeholders to collaborate on product innovation ideas and record requirements. Product managers can integrate requirements with concepts in Concept Design Management, and ideas with proposals in Product Lifecycle Portfolio Management.

Functional Area	Description
Concept Design Management (CDM)	Offers a collaborative design workspace for product architects, designers and executives to generate, capture, analyze, and approve product concepts that address product strategy goals. Approved concepts can then be transferred directly to Product Lifecycle Management (PLM) solutions for prototype planning, detailed design and product introduction.
Product Lifecycle Portfolio Management (PLPM)	Allows product portfolio managers to create, analyze, manage and revise product portfolios, to arrive at an optimal product mix. Portfolio managers can also optimize resources across a portfolio, evaluate portfolios, and design forecasting road maps.
Product Development (PD)	Uses Items, Structures (BOM), and Changes to track the development processes around products, and enable fast-track commercialization of the right products. PD enables a company to incorporate concepts or early BOMs, designs, and other documents from sources such as Oracle Innovation Management or external PLM applications. PD manages changes formally and centrally on items (parts), and items/BOMs can be released to manufacturing with recommendations on sourcing (example, manufacturer parts).

For information about getting started with Oracle Cloud and implementing Oracle SCM Cloud, refer to the Oracle Cloud Documentation library.

For information about upgrading from previous releases of Oracle Fusion Applications, refer to the Oracle Fusion Applications Upgrade Guide.

Related Topics

- Defining Product Development: Overview
- Defining Product Innovation: Overview

2 Define Item Organizations

Item Organizations: Overview

You must create item organizations before you can create items in Oracle Fusion Product Hub. These tasks are completed in the Setup and Maintenance work area:

Task	Description
Manage Item Organizations	An item organization is used when the organization does not have dependencies on business units or legal entities
Manage Organization Trees	In Product Hub, organization hierarchies (trees) are used across some of the mass change flows, including Assign to Organization, Assign Items to Supplier Organization, and Create Item Structure from Common.

Item Organizations: Explained

Item organizations are used to control the availability of attributes for items and item security. Item security is based on a combination of the item class, group or person, and the organization. The item organization structure is similar to the inventory organization structure, except the item organization structure does not have an association with a business unit or legal entity.

Product Management can be configured with two different organization structures:

- Item Organizations: An organization structure that does not have dependencies on business units or legal entities.
- Inventory Organizations: An organization structure that requires business units and legal entities. Used by the Oracle Fusion Material and Logistics and Procurement applications.

An item organization defines an item when inventory balances are not stored and inventory storage or inventory movement is not 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. Item organizations are also used to control the availability of attributes for items and item security. The item organization structure is similar to the inventory organization structure, except the item organization structure is not required to have an association with a business unit or legal entity. The item organization also does not have the required inventory organization-level attributes.

Item organizations can be changed by administrators to an inventory organization by updating the necessary attributes. There is no difference in the way items are treated in these two types of organizations except that there cannot be any financial transactions in the downstream applications (such as Oracle Fusion Logistics) for items that are assigned to an item organization.

For customers who have licensed only Oracle Fusion Product Hub, item organizations are sufficient.

To create an item organization:

1. Enter Organization Information: Item organizations are identified by a name and organization number. Each organization has a location which is defined by the location address. Locations are entered using the Manage Locations task. Optional information such legal entity and business unit can also be entered.
2. Enter the Item Master Organization: If this is the first item organization being created, it should be a master organization. To make this a master organization, enter the organization name again. If the new item organization is a child organization of an existing master organization, then enter the name of the master organization.
3. Enter the Starting Revision: Changes to the organization can be tracked through revisions and are usually represented by a letter or number or combination of the two.

Organization Trees: Explained

Organization trees are used to create a list of organizations for use in some of the mass change flows.

In some implementations, customers may have a specific set of organizations that they use in their business and may want to retain that list. You can define an organization tree to represent the list of hierarchies that you want to use. In Oracle Fusion Product Hub, organization trees are called organization hierarchies.

In Product Hub, organization hierarchies are used across some of the mass change flows, including Assign to Organization, Assign Items to Supplier Organization, and Create Item Structure from Common. In the mass change flows, if you want to select a set of items and assign them to a specific set of organizations, then you have the option of selecting each organization individually or selecting an organization hierarchy that represents the list of organizations. Item hierarchies are created in the Setup and Maintenance work area using the Manage Organization Trees task.

3 Define Items

Define Items: Overview

Before you can define items in Oracle Fusion Product Hub, you must complete several tasks in the Setup and Maintenance work area:

Task	Description
Manage Item Profile Options	Profile options manage configuration data centrally and influence the behavior of applications.
Manage Advanced Item Profile Options	This task is used by Product Hub. If you do not install Product Hub, you do not need to define these options.
Define Units of Measure	Units of Measure must be created before you can create or import items.
Manage 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.
Manage Product and Child Value Sets	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.
Manage Attachment Categories for Product Management	Used to create attachment categories and associate them with item classes.
Manage Operational Attribute Groups	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.
Manage Item Attribute Groups and Attributes	Used to determines how the attributes appear in the user interface, as well as how they are used in the application.
Manage Item Classes	Item classes are created at the root item class or under the parent item class and inherit values based on selections made when defining the item class. For Product Hub customers, the Manage Item Classes task is used to create and manage item classes, user defined attributes and data security.
Manage Item Class Descriptive Flexfields	Descriptive flexfields (DFF) appear in the user interface as Additional Information and can also appear in search results tables.
Deploy Item Extensible Flexfields	After you associate attribute groups and pages with an item class, you must deploy flexfields to view the pages or attribute groups at run time. The metadata that was created for the attribute group is not synchronized with the production data in Product Hub until the flexfield is deployed.
Manage Item Statuses	Item statuses are used to define the state an item is in and based on the state, the default values for item operational attributes.

Task	Description
Manage Item Types	Item types are date effective and are made active or inactive by adjusting the start and end dates.
Manage 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 a relationship between an item and an old part number.
Manage Item Descriptive Flexfields	Used to define descriptive flexfields that are specific to items.
Download Import Template	Each template includes table-specific instructions, guidelines, formatted spreadsheets, and best practices for preparing the data file for upload.
Upload Item Data	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.
Load Interface File through Scheduled Process	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.
Import Items	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.
Monitor Item Imports	Use this task to monitor the ESS process status in the search results table
Manage 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.
Manage Item Revision Descriptive Flexfields	Use descriptive flexfields associated at Item Revision level to capture item revision information whose values may differ between revisions of the same item.
Manage Item Relationship Descriptive Flexfields	Item types are date effective and are made active or inactive by adjusting the Start Date and End Date.
Manage Trading Partner Item Descriptive Flexfields	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.
Define Item-Specific UOM Conversions	After you define units of measure, define the conversions used for items.

Item Profile Options: Explained

Profile options manage configuration data centrally and influence the behavior of applications.

The profile options have a default value, which can be used for initial installations. These profile options should be evaluated to determine if additional values should be set:

- EGP_DISPLAY_IMAGES: Specify if images should be displayed in the search results table in the Manage Items task.
- EGP_ITEM_IMPORT_ITEMS_PER_THREAD: During item import, multiple threads of operation are created to process the items being imported. This profile option controls how many items are processed per each thread. It is a technical option used to optimize item import performance. The default value is 100.
- EGP_ITEM_IMPORT_NUMBER_OF THREADS: This option works in conjunction with the EGP_ITEM_IMPORT_ITEMS_PER_THRESD option. It controls how many threads of operations are created during the item import process. The default is 4.
- EGP_UPDATEABLE_ITEM: By default, the item number can't be changed after the item has been created. It can be updated after creation only if this option is set to Yes.

Advanced Item Profile Options: Explained

Profile options manage configuration data centrally and influence the behavior of applications. Only those customers who have licensed Oracle Fusion Product Hub can access these advanced profile options.

The profile options have a default value, which can be used for initial installations. These advanced profile options should be evaluated to determine if additional values should be set. Manage these values using the Manage Advanced Item Profile Options task in the Setup and Maintenance work area.

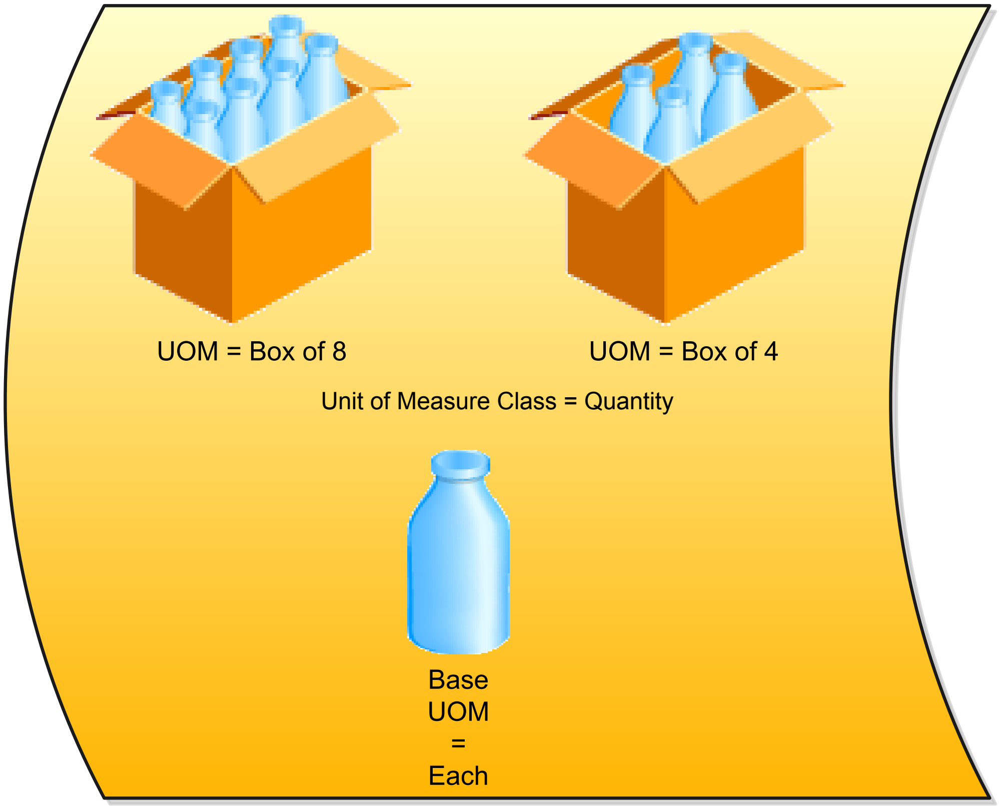
- **EGO_ASSIGN_PACK_ORG**: Assign all child items in the pack to the same organization as the parent pack item.
- **EGO_ASSIGN_PACK_SUP_SITE_ORG**: Assign all child items in the pack to the same supplier site organization combination as the parent pack item.
- **EGO_DEFAULT_STYLE_CATALOG**: Enable the assignment of the related SKU items to the same catalog as the style item.
- **EGO_DEFAULT_STYLE_ITEM__ORG**: Enable the assignment of the related SKU items to the same organization as the style item.
- **EGO_DEFAULT_STYLE_PEOPLE**: Enable the assignment of people to the related SKU items as the style item.
- **EGO_DEFAULT_STYLE_SUP_SITE_ORG**: Enable the assignment of the related SKU items to the same supplier site organization combination as the style item.
- **EGO_GATHER_STATS**: Specify the threshold value above which statistics collection is enabled.
- **EGP_ITEM_IMPORT_DEFAULT_CATG**: Specify the catalog to be used for deriving the item class of items being imported.
- **EGI_PUBLICATION_ITEMS_PER_PAYLOAD**: Determines the number of items to be used per payload in the publication concurrent program.
- **EGI_PUBLICATION_NUMBER_OF_PAYLOADS**: Determines the number of parallel payloads to be used in the publication concurrent program.

- **EGO_VER_LINE_ACTIVATE_COUNT_PER_THREAD**: Specify the number of versions or change order lines that become effective in a single thread.

Units of Measure, Unit of Measure Classes, and Base Units of Measure: How They Fit Together

Define units of measure, unit of measure classes, and base units of measure for tracking, moving, storing, and counting items.

The figure below 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.



Unit of Measure Classes

Unit 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 should generally be one of the smaller units. For example, you could use CU (cubic feet) as the base unit of measure for a unit of measure class called Volume.

Related Topics

- Assigning Base Units of Measure to Unit of Measure Classes: Examples

Lifecycle Phases: Explained

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, and the items in an item class can be assigned to any of the lifecycle phases associated with that item class.

Before you can create or import items, you must create lifecycle phases and those must be assigned to the item class used to create the items or 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.

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

Product Child Value Sets: Explained

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 colors; white, red, yellow, and blue. The variant is used to represent the colors of the shirt.

You define child value sets as follows:

- Create a value set with validation type of independent, for example All Colors.
- Select the new value set in the **Manage Product Value Sets** results table, for example All Colors.
- Click **Manage Values**, create several values, for example Blue, Red, Green, Yellow, and Black.
- Create a value set with validation type of Subset and enter the first value set you created for the independent value set, for example: Summer Colors.
- Select the value set Summer Colors 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 Summer colors. Select two of them. The value set Summer Colors is a child of All Colors.

The value set Summer Colors is a child of All Colors.

Attachment Categories: Explained

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 you, associate attachment categories with item classes. Associated attachment categories are inherited down through the item class hierarchy.

Operational Attributes Groups: Explained

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.

You choose the control level for operational attributes on the Manage Operation Attribute task in the Setup and Maintenance work area. 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.

Some operational attributes for items are defined as key flexfields. Key flexfields allow a structured value for attribute to be captured. Key flexfields can capture a key, such as a part number, a job code, or an 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

Operational attributes are stored in the Items data table.

Item Attribute Groups and Attributes: Explained

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 attributes, you must use **Manage Item Attribute Groups and Attributes** task (in the Setup and Maintenance work area under the Product Management offering). Choose 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.

Once saved, you cannot edit the behavior of the attribute group. You will have to discard it and begin the creation of new attribute group with the correct behavior type.

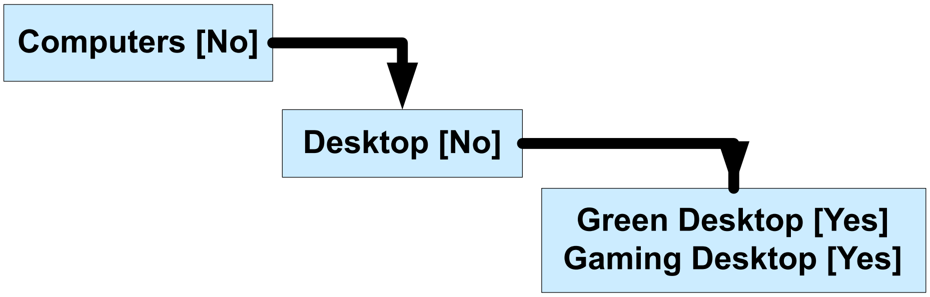
Item Classes: Explained

Item classes are created at the root item class or under the parent item class and inherit values based on selections made when defining the item class.

The Manage Item Classes task is used to create and manage item classes, user defined attributes and data security.

Item classes can be defined in a hierarchy where the child levels indicate sub levels 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.

Item classes can be used for classification purposes and in some case, item creation may not be allowed. By optionally setting the **Item Creation Allowed** attribute to No, item creation under an item class can be prevented. However, a child item class of such an item class may be allowed for item creation. For example:



This prevents items from being created in Computers and Desktops, but allows items to be created for Green Desktops and Gaming Desktops. Optionally, specify a date on which the item class will become inactive. You cannot specify an inactive date that is later than the inactive date of an item class parent, nor can you specify an inactive date that has already passed. Also, all children of a parent item class with an inactive date should be made inactive at the same time or earlier.

Note: Oracle Fusion Product Development does not support 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 mandatory, at each step. Definition of entire entity can be made mandatory or just certain attributes. This ensures that the item information required for a downstream step is defined and available for use.

Required attributes can be inherited from parent and assignee access is validated.

You can control item creation, viewing and update access by assigning a role on the item class to a principal or group of users. Security allows a person or a group to have privileges to an item of item class in each organization. This is inherited and hence a person who has a privilege in a parent item class will automatically have the same privilege in the child item classes.

Item Class Descriptive Flexfields: Explained

User-defined attributes are used to configure additional attributes to support your organization's requirements. Descriptive flexfields (DFF) appear in the user interface as additional information and can also appear in search results tables.

If you need to add only shallow and small numbers of individual data fields, consider using descriptive flexfields. For example, you may want to use a descriptive flexfield to capture different address fields (represented as context-sensitive segments) for different countries (represented as contexts). Address fields, though they may differ in number per country, are usually all at the same hierarchy level. For table layouts, if you have data that require a different context segment value per row, and that context segment value has different respective context-sensitive segments (in terms of type and number), then you must use descriptive flexfields, not extensible flexfields.

You cannot group attributes using descriptive flexfields. For example, if you wanted to define a maximum CPU speed and a minimum CPU Speed for an item, you have to specify an attribute called Maximum CPU Speed and another called Minimum CPU Speed. You couldn't have a grouping called CPU Speed and have two child attributes called Maximum and Minimum.

With descriptive flexfields, you can define many contexts for an object but you can display only one context at a time. For example if the context value is a State, then the context segment called "Capital" would have different values depending on the value of the context. If the descriptive flexfields have only one context, the context selector can be hidden in the user interface. You can define descriptive flexfields on items, structures, catalogs, categories, new item requests, and change orders.

Default Item Class: Explained

For non-Product Hub customers, the Manage Default Item Class task (in the Setup and Maintenance work area under the Product Management offering) is used, since these customers cannot create additional item classes nor can they create user defined attributes such as EFFs. 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.

Deploy Item Extensible Flexfields: Explained

After you associate attribute groups and pages with an item class, you must deploy flexfields to view the pages or attribute groups at run time. 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 Extensible Flexfields task in Functional Setup Manager. All extensible flexfields for Product Hub are created within 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 extensible 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 extensible 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 extensible flexfield configuration on the item.

Item Statuses: Explained

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 - Allows you to 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 cannot override the value.
- None -The item status attribute values will not be changed.

Any change made to an item status is not 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 is not editable and is populated from the value set on the Manage Attribute Groups page.

Managing Item Types: Explained

Item types are managed using the Manage Item Types task in the Setup and Maintenance work area (under the Product Management offering).

There are 32 seeded item types and you can edit them or create additional item types.

Item types are date-enabled and are made active or inactive by adjusting the Start Date and End Date.

To benefit from the use of item types, you must enable them by selecting the **Enable** check box.

Cross-Reference Types: Explained

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.

Managing Descriptive Flexfields for Items: Explained

You can use descriptive flexfields to capture additional information about items beyond what is provided by the predefined set of operational attributes in Oracle Fusion Product Model.

Item Descriptive Flexfields

If you are not using Oracle Fusion Product and Catalog Management, then you cannot create user-defined attribute groups and attributes. However you can use descriptive flexfields associated at Item level to create fields to capture information about items. Like other descriptive flexfields, item descriptive flexfields have context segments and context-sensitive segments whose values are validated on entry by value sets. You can define the value sets to control what values users can enter in a descriptive flexfield segment. Examples of information that you might capture are size and volumetric weight.

Manage this flexfield type by using the Manage Item Descriptive Flexfields task, which you can access by searching for flexfield tasks on the Setup and Maintenance Overview page.

Item Revision Descriptive Flexfields

Use descriptive flexfields associated at Item Revision level to capture item revision information whose values may differ between revisions of the same item.

Manage this flexfield type by using the Manage Item Revision Descriptive Flexfields task, which you can access by searching for flexfield tasks on the Setup and Maintenance Overview page.

Item Relationship Descriptive Flexfields

When defining descriptive flexfields associated with item relationships, you must use certain prefixes when naming the context segments, in order for the segments to be displayed for the respective relationships.

The prefixes required for naming the context segments are listed in the following table, with their corresponding item relationship types. For example, if you define an item relationship descriptive flexfield with a context segment named **`RELATED_RELATIONSHIP_ATTRIBUTES`**, then the value segments of this context will be displayed for Related Item Relationships when users conduct transactions in that context. For another example, when users navigate to a UI of a particular object, such as a Competitor Item, they see the contexts whose internal name has the prefix **`COMP`**.

Relationship Type	Prefix for Context Segment
Competitor Item Relationship	COMP
Customer Item Relationship	CUST
Item Cross-reference Relationship	XREF
GTIN Relationship	GTIN
Manufacturer Part Number Relationship	MFG
Related Item Relationship	RELATED

Relationship Type	Prefix for Context Segment
Source System Item Relationship	SYS

Manage this flexfield type by using the Manage Item Relationship Descriptive Flexfields task, which you can access by searching for flexfield tasks on the Setup and Maintenance Overview page.

Trading Partner Item Descriptive Flexfields

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.

The prefixes required for naming the context segments are listed in the following table, with their corresponding trading partner types. For example, if you define a trading partner item descriptive flexfield with a context segment named **`COMP_TPI_ATTRIBUTES`**, then the value segments of this context will be displayed for Competitor Item when users conduct transactions in that context..

Trading Partner Type	Prefix for Context Segment
Competitor Item	COMP
Customer Item	CUST
Manufacturer Item	MFG

Manage this flexfield type by using the Manage Trading Partner Item Descriptive Flexfields task, which you can access by searching for flexfield tasks on the Setup and Maintenance Overview page.

Related Topics

- Descriptive Flexfields: Explained
- Managing Descriptive Flexfields: Points to Consider
- Flexfields: Overview
- Item Relationships: Explained

Import Items: Explained

Item Management provides the ability to create and management 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 Universal Content Management system.

The objects listed below are supported through both methods:

- Items

- Item Revisions
- Item Category Assignments
- Item Associations*
- Item Relationships
- Item Extensible Flexfields*
- Item Translatable Extensible Flexfields*
- Item Revision Extensible Flexfields*
- Item Revision Translatable Extensible Flexfields*
- Item Supplier Extensible Flexfields*
- Item Translatable Supplier Extensible Flexfields*
- Item Style Variant Attribute Value Sets
- Trading Partner Items

Note: You must license Oracle Fusion Product Hub to use Extensible 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 guide, available on the Oracle Help Center.
2. Enter data in tabs within the item import template file.
3. Generate CSV (zip file).
4. Upload to Oracle Universal Content Management.
5. Move the data into Item Management interface tables.
6. Import data to Item Management product tables.

Generate the CSV File: Explained

After downloading the template, enter data into the item import template file and generate the CSV file.

The first tab in the file contains the instructions for using the template and generating the CSV ZIP file. The other tabs, also called Control Files, correspond to each of the item interface tables.

Keep these tips in mind when entering data into the template:

- The first row in each sheet contains column headers that represent the interface table columns. The columns are in the order that the control file expects them to be in the data file.
- Do not change the order of the columns in the Excel sheets. Changing the order of the columns will cause the load process to fail.
- You can hide columns that you do not intend to use, but you cannot delete columns. Deleting columns will cause the load process to fail.
- You must enter data that conforms to what the control file can accept and process for the associated database column.
  - Date fields must be entered in YYYY/MM/DD format.
  - Amount columns must not contain a thousands separator and must use a period (.) as the decimal separator.
  - Columns that must be whole numbers have data validation to allow only whole numbers to be entered.

- Refer to the bubble text on each column header for information on the data and data type the column requires.
- The seeded source system code, PIMDH, is used for imports. The source system represent external systems to Product Hub.
- The seeded item class is called Root Item Class, this item class will be used for imports.
- Items are always created in a master organization. Organizations are created during initial setup of the environment using the Setup and Maintenance task.
- Provide a numeric Batch ID. Non-Product Hub customers don't have access to create batches, so any ID is sufficient.

Generate the CSV ZIP file

After you complete entering data in the item import template file, you next generate a CSV file to be used for importing the data.

Click the **Generate CSV** button on the Instruction and CSV Generation tab to generate the file. This will create a ZIP file containing a CSV file for each tab completed in the ItemImportTemplate.xslm file.

You will be prompted to save the file to the desktop location several times. The first is to save the file, the second will ask the folder where the ZIP file will be saved and the next set of save requests will be for each of the tabs.

Upload to the Universal Content Manager: Explained

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.

UCM is an enterprise content management system that manages web content, documents, imaging management, and digital assets for the Oracle Fusion Applications.

> **Note:** You must have the correct functional privileges to support the upload of the CSV Zip file to UCM and have access to the UCM account scm/item/import.

Perform these steps to upload to the UCM:

1. From the Navigator link, select the File Import and Export action link under the Tools region.
2. On the File Import and Export page, click the Create icon in the Search Results table header.
   a. Click on the Browse button and select the Zip file that you created for the import.
   b. Select the account from the choice list. The account used for item import is scm/item/import.
   c. Click the Save and Close button to initiate the uploading of the file.

Import Data from the Item Management Interface Tables: Explained

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.

Perform these steps to move the data into the interface tables:

1. From the Navigator link, select the **Scheduled Process** link.
2. Click the **Scheduled New Process** button in the Search Result table header.
3. In the Schedule New Process dialog select the following:

    - **Type**: Job
    - **Name**: Load Interface File for Import

4. Click the **OK** button.
5. In the Process Details dialog, enter the following parameters:

    - **Import Process**: Item Import
    - **Data File**: the name of the ZIP file you uploaded to UCM

6. Click the **Submit** button to start the process.
7. Monitor the status of the scheduled process for moving the data from the Item Management interface tables to the Item Management production tables by entering the process ID in the Search region in the scheduled processes user interface.

Import the Data from Item Management Interface Tables

At this point in the import process, the data is now loaded into the Item Management interface tables and is ready to be imported into the Item Management production tables. The next process will perform the item import process that will validate the data for import and move the data into the Item Management production tables. After successful completion of this job, the data will be available in the user interface.

1. From the Navigator link, select the **Scheduled Processes** action in the Tools section.
2. Click the **Schedule New Process** button in the Search Result table header.
3. In the Schedule New Process dialog select the following:

    - **Type**: Job
    - **Name**: Item Import

4. Click the **OK** button.
5. In the Process Details dialog, enter item import for the import process.
6. Enter the following information in the Process Details dialog:

    - **Batch ID**: enter a unique identifier of the batch used to import the items.
    - **Process All Organizations**: Select Yes to import items from all organizations. Select No to not import items from all organizations.
    - **Process All Organizations**: Select Yes to import items from all organizations. Selecting No to not import items from all organizations.
    - **Process only**: Indicate which transaction-type records need to be processed for an item batch. Values are Create, Sync, Update.
    - **Delete Processed Rows**: Indicates if the rows in the interface tables are to be deleted after the processing of an item batch. Values are Yes or No.

7. Click the **Submit** button to start the process.
8. After you click the Submit button a Configuration dialog is launched with the process ID. Note the ID.
9. Multiple processes are created for all of the steps in importing the item. The child processes are: Item Import Preprocessing, Item Import Data Quality, and Item Import.

10. View the log file for any errors (if applicable), by selecting the row in the Search Results table and clicking the **View Log** button.

Successfully imported items and related child entities can be queried, modified and validated.

Monitor Item Imports: Explained

The Monitor Item Imports task is used to monitor the Item Import process.

Navigate to the Monitor Item Imports task in the Setup and Maintenance work area, to search for specific Enterprise Service Scheduler processes and monitor their status in the search results table.

Related Item Subtypes: Explained

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 seeded, and you can define additional subtypes using the Manage Related Item Subtypes task.

Seeded 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

Item Revision Descriptive Flexfields: Explained

Use item revision descriptive flexfields to capture item revision information whose values may differ between revisions of the same item.

Manage this flexfield type by using the Manage Item Revision Descriptive Flexfields task in the Setup and Maintenance work area.

Trading Partner Item Descriptive Flexfields: Explained

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.

The prefixes required for naming the context segments are listed in the following table, with their corresponding trading partner types. For example, if you define a trading partner item descriptive flexfield with a context segment named COMP_TPI_ATTRIBUTES, then the value segments of this context will be displayed for Competitor Item when users conduct transactions in that context.

Trading Partner Type	Prefix for Context Segment
Competitor Item	COMP
Customer Item	CUST
Manufacturer Item	MFG
Supplier Item	SUPP

Manage this flexfield type by using the Manage Trading Partner Item Descriptive Flexfields task, which you can access by searching for flexfield tasks on the Setup and Maintenance work area.

4 Define Catalogs

Catalogs: Overview

Before you can create catalogs and associate items with them you must complete several tasks in the Setup and Maintenance work area:

Task	Description
Manage Catalog Descriptive Flexfields (optional)	Descriptive flexfields can only have one context available at a single time.
Manage Category Descriptive Flexfields (optional)	Descriptive flexfields can only have one context available at a single time.
Create Catalog	Item catalogs provide a mechanism to classify or group a set of items together based on common meaning.
Manage Catalogs	Non-Fusion Product Hub customers use this task to manage their catalogs. Product Hub customers may use the Manage Catalogs task in the Product Information Management work area.
Manage Functional Area Catalogs	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 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. This task is only necessary if catalogs are to be used with other SCM products such as procurement or inventory.

Catalog Descriptive Flexfields: Explained

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.

Category Descriptive Flexfields: Explained

Descriptive flexfields are available at the category level to allow the user to define attributes for category in all catalogs where it is used.

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 are indicating what the packaging type is, such as box.

You create descriptive flexfields using the Manage Category Descriptive Flexfields task in the Setup and Maintenance work area.

Create Catalog: Explained

Item catalogs provide a mechanism to classify or group a set of items together based on common meaning. Catalogs can have a flat or single-level structure of categories or have a 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, or a catalog can contain only one level, no hierarchy where the catalog is a list of categories.

For example, a category can be configured to be a browsing category by configuring the category to allow only allow categories to be added. 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, as in the case where the category parent category in the hierarchy.

Item catalogs have two types: functional area catalogs that are created and maintained through the Manage Functional Area Catalogs task in the Setup and Maintenance work area and Product Hub catalogs that are created and maintained in the Production Information Management work area. Product Hub catalogs cannot be assigned to a functional area.

Functional area catalogs are primarily used to support other Fusion 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 Hub 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:

1. In the Navigator, click Setup and Maintenance.
2. On the Setup and Maintenance page, click the Manufacturing and Supply Chain Materials Management offering, and then click Setup.
3. On the Setup: Manufacturing and Supply Chain Materials Management page, click the Catalogs functional area, and then click the Manage Functional Catalogs task.
4. Click the Create icon.

Create product hub catalogs using the Manage Catalogs task in the Product Information Management work area.

1. Launch the Manage Catalogs task in the Product Information Management work area.
2. Create the catalog using the Create icon.

Manage Catalogs: Explained

You can edit a catalog after it has been created, using the Manage Functional Area Catalogs task in the Setup and Maintenance work area. You can also access this task from the Product Information Management work area, if you have Oracle Fusion Product Hub installed.

To edit functional area catalogs using the Manage Functional Area Catalogs task in the Setup and Maintenance work area:

1. In the Navigator, click Setup and Maintenance.
2. On the Setup and Maintenance page, click the Manufacturing and Supply Chain Materials Management offering, and then click Setup.
3. On the Setup: Manufacturing and Supply Chain Materials Management page, click the Catalogs functional area, and then click the Manage Functional Area Catalogs task.
4. Search for the catalog.
5. Click the link in the Catalog Name column or select the row and click the Edit icon.

Create Product Hub catalogs using the Manage Catalogs task in the Product Information Management work area.

1. Launch the Manage Catalogs task in the Product Information Management work area.
2. Create the catalog using the Create icon.

Edit Product Hub catalogs using the Manage Catalogs task in the Product Information Management work area.

1. Search for the catalog on the Manage Catalogs search page.
2. Click the link in the Catalog Name column or select the row and click the edit icon.

Category Hierarchy Tab

This contains the category hierarchy region in which the category hierarchy can be created and maintained. In addition, items can be assigned, the usage of the category in other catalog can be viewed, and the attributes for the category and catalog category association can be edited.

This tab also provides an action to allow the category hierarchy to be edited in a spreadsheet or a complete hierarchy to be edited. For example, a customer may be using a UNSPC classification. They can download the spreadsheet to their desktop and cut and paste the UNSPC classification hierarchy into the spreadsheet and upload the spreadsheet to the application.

Selecting a category will open the category detail region. This regions contains three additional tabs for the item category assignments, category details and category attachments.

Catalog Detail Tab

The Detail tab contains contains the catalog name and description, an image, the selection of the default category, the start and end date for the catalog and the catalog descriptive flexfields.

The default category is used by the automatic item assignment process that is run when:

- Category is assigned to the default category field in the catalog header. During automatic assignment process the item is assigned to the default category that is referenced by this field, for the catalog assigned to the functional area.
- Attribute values specified in the rules are met.

The start and end date allow the catalog life cycle to be controlled.

The Public Catalog check box is used to enable data security for catalogs and categories.

Catalog Attachments

The Attachments tab is used to add attachments related to the catalog such as related documents or images.

Functional Area Catalogs: Explained

Functional areas represents 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.

Automatic Assignment Catalogs: Explained

The automatic assignment catalog feature It is a simple way to create a non-hierarchical catalog because you do not have to add categories manually to the catalog. This feature adds the categories at the root level, so it works with both flat and hierarchical catalogs.

All categories that have the same category structure value as the catalog are automatically assigned and associated to the catalog when you create a catalog category association for each category.

Automatic Assignments

The automatic assignment feature is enabled during catalog creation when you select the **Enable automatic assignment of category** check box. The categories displayed for auto assignment catalogs are refreshed only at startup and after you save.

Note that if you create a category in another catalog with the same structure value as the automatic assignment catalog, the category is added to your catalog. The categories displayed for auto assignment catalogs are refreshed only at startup and after you save.

When you open a new catalog, any categories that have the same category structure value as the catalog structure value for the catalog are automatically assigned to the catalog.

For example, Purchasing may maintain a master catalog containing all categories that represent commodities. Each commodity team can create categories for their commodity in their own catalog.

The master catalog for purchasing is named Purchasing and is configured during creation to support the automatic assignment of categories. Because you enabled automatic assignments for the Purchasing catalog, any categories created by the commodity teams are added to the catalog automatically. The purchasing managers can view the collection of all commodities represented as categories in the Purchasing catalog.

Catalog Publishing: Explained

Other applications can use catalog data if you export the catalog content. For example, you may want to export catalog content to use as a monthly report of all items assigned to a specific catalog. You can use the default publish template provided in hyper text markup language (HTML). You can specify the content and layout of the catalog information. When the catalog is published, you select the format and initiate the creation of the content in the file.

Publish a Catalog

Search for a catalog from the Manage Catalogs page, select the row corresponding to the catalog that you want to publish and select the Publish action. The application generates the report based on the default template in HTML format. You can select a new template or format from the report window. The content displayed for items, categories, catalog categories, and catalog is based on the publish template. The seeded template is called Catalog Listing. The template controls what data is in the report and how it is formatted.

Type of Catalog Content That Can Be Published

The default catalog publish template allows the publication of the catalog header details, category hierarchy, category details, and category item assignments. The order of a published report begins with the catalog header and the catalog category details. If the category has a child relationship, then the catalog category association details for the child category follows. If the child category has a hierarchy, then the complete hierarchy under the category is published with the catalog category association details and categories details.

5 Define Change Orders

Change Order Setup: Overview

Before you can create change orders in Oracle Fusion Product Hub, you must complete these tasks in the Setup and Maintenance work area under the Product Management offering:

Task	Description
Manage Change Reasons	Change reasons are used to categorize and establish the cause or reason for a change. Change reasons are required for creating change orders.
Manage Change Priorities	Change order priorities are used to identify the criticality of changes. Change order priorities are required for creating change orders.
Manage Change Statuses	Change statuses enable you to manage a change order through its life cycle.
Manage Change Order Types	All change orders are assigned a change order type. You must define at least one change order type to use change orders.
Manage Change Order and New Item Request Header Descriptive Flexfields	Used to manage the header-level descriptive flexfields for change orders and new item requests.
Manage Change Order and New Item Request Line Descriptive Flexfields	Used to manage the line-level descriptive flexfields for change orders and new item requests.
Manage Organization Trees	Organization trees are used to create a list of organizations for use in some of the mass change flows. These are optional.
Manage Task Configurations for Supply Chain Management	Define the task configurations for the change order approval workflow.
Manage Approval Groups for Supply Chain Management	Define approval groups for the change order approval workflow.

Change Order Reasons: Explained

Change reasons are used to categorize and establish the cause or reason for a change. Change reasons are required for creating change orders.

Processes and rules can be defined around change reasons so that change orders with safety related reasons get priority over other change orders or they get routed through different levels of approvals.

The predefined values for change reasons are: Cost, Quality, and Safety

Additional values can be added, modified or deleted by accessing the Manage Change Reasons task in the Setup and Maintenance work area.

Change Order Priorities: Explained

Change order priorities are used to identify the criticality of changes. Change order priorities are required for creating change orders.

Processes and rules can be defined around change priorities so that change orders with a high priority get priority over other change orders or they get routed through different levels of approvals.

The predefined values for change priorities: High, Medium, and Low

Additional values can be added, modified or deleted by accessing the Manage Change Priorities task in the Setup and Maintenance work area.

Change Order Statuses: Explained

Change statuses enable you to manage a change order through its workflow.

You manage the progression of a change order through its workflow by promoting it (or sometimes demoting it) to the next in a series of change statuses. For each change type, you define a set of applicable statuses.

The change status types are:

- Draft
- Open
- Interim Approval
- Approval
- Scheduled
- Completed

As an administrator, you can create statuses of each change type and assign a name. You can apply different statuses to each change order type to form workflows unique to each status type.

If you use autopromote and autodemote in the same workflow, ensure that you do not autodemote the change order to the same status from which it was automatically promoted. For example, in a workflow consisting of Open, Approval, Scheduled, and Completed status:

Do not autopromote from Open to Approval and do not autodemote from Approval to Open (when the approval is rejected).

It is recommended that in the same workflow, create an additional status between Open and Approval as follows:

Open, Rework (type Open), Approval, Scheduled, and Completed.

Then, set autopromote and autodemote as follows:

- Autopromote from Open to Approval
- Autodemote from Approval to Rework (when the approval is rejected)

Draft Status

By default, the Draft status is the first status for all change orders irrespective of the change order type. You cannot configure Draft and it does not appear in the workflow. In this status, you can modify the change order.

Open Status

In Open status, you can make the following changes to the change order: add affected objects and modify attribute values, select priority and reason, and provide description and optional supporting documents. You can have more than one open status in the change order workflow. For example, Open, Interim Approval, Open, and Interim Approval.

Interim Approval Status

You can optionally add one or more Interim Approval status, to accommodate multiple approval flows or progressively approve change orders in your organization.

Approval Status

Change orders can be routed to a list of approvers. Approvers are defined in change order type, or if the approval is rule-based then approvers are defined in approval groups. Depending on the type definition, more than one person can approve. If the approval is rule-based, then approvers are defined in approval groups in the BPM worklist. Only user-defined approvers are defined at the type level. In a user-defined workflow, approvers can also be added at run time by either the initiator or the Assigned To person.

Scheduled Status

When a change order is approved, it is automatically promoted to a Scheduled status. After the change order is scheduled, it cannot be demoted or canceled. The change order remains scheduled until the effective dates of all affected objects has been reached.

Completed Status

When the effective date of items in the change order is reached, the changes defined in the change order become effective in production. When all item lines in the change order are effective, the change order is completed. The change order cannot be reopened or canceled once in this status.

Change Order Types: Explained

All change orders are assigned a change order type that defines the attributes and workflow of the change order. A change order type can be end-dated if it is not used in any change orders that have a workflow in progress. You must define the change order type to use change orders.

Use the Manage Change Order Types task (in the Setup and Maintenance work area) to create and modify change order types. The change order type contains the following information:

- Default values for Assigned To and Item Effective Date
- Number Generation Method

- Entry and exit criteria
- Propagation Rules
- Workflow set up

Note: Changes made to a change order type will not be applied to any existing change orders for this type.

Note: The Change Request and Deviation Change Request change types will be fully functional in a subsequent release. To restrict users from using these change types, it is recommended to set the end effective date to a previous date by using the Manage Change Order Types task in the in Setup and Maintenance work area.

Assigned To

Any change order created of the particular change type would be assigned by default to this user or group. You can modify this value when the change order is created. This user is similar to a change analyst who is notified about status changes and approvals to keep track of the change order.

Item Effective Date

Specify the default number of days, after the change order's creation date, on which you want the item changes to become effective. Alternatively, specify that the changes become effective immediately when the change order is completely approved. This option sets the default item effective date when a change order is created, which can be modified before the change order is submitted. If the effective date for an item is empty, the item change becomes effective immediately upon approval of the change order.

Note: It is the effective date of the specific items in a change order that determines their production effectivity, not this item effective date for the change order, which is used to set the default effective date of item lines in the change order.

Number Generation Method

When the administrator selects Sequence Generated, the administrator can provide the Prefix, Starting Number, Increment, and Suffix for change order numbers for the change order type.

When Rules Generated is selected as a number generation method, the user needs to associate a user-configured rule set, which creates change numbers in the sequence defined in the function.

You can also use the User-Defined method and define your own number generation methods.

Entry and Exit Criteria

Entry and exit criteria are set up as rules that validate progression of a change order through its workflow. You can define entry and exit criteria for each status to serve as checkpoints in a change process flow.

Entry criteria can be set up for Interim Approval and Approval status. Exit criteria can be set up for Open and Interim Approval status.

Before you create entry and exit criteria, create a change order type. Associate the change order type with the entry and exit criteria. Again associate the entry and exit criteria with the change order type (by using the Manage Change Order Entry and Exit Criteria task or the Manage Item Rule Sets task under the Product Management offering).

Create validation rules by using the Manage Item Rule Sets task (in the Setup and Maintenance work area under the Product Management offering); select association type as Change order type. Edit the change order type to select the entry and exit criteria (in the Workflow tab).

The following attributes may be used to create the validation rules:

- Change Header
    - Priority
    - Reason
    - Need-by Date
    - Requested by
    - Description
    - Descriptive Flexfield
- Change Line
    - Descriptive Flexfield

Associating Propagation Rules to Change Order Types

If propagation rules have been configured in the change order type, then the propagation organization appears in the change order header, the default list of organizations, or organization hierarchy identified by the change order type. You can select other organizations or organization hierarchies that have been identified in the change order type. The list of organizations associated with the selected propagation organization or hierarchy appear in the Propagation Organizations region.

Propagation rules are associated with the change order type that you select for the new change order. You define propagation rules when you create a change order type or edit an existing one on the Propagation Rules tab.

Specify the organizations from which a change order might be propagated. For each specified source organization, select one or more target organizations or organization hierarchies where the change order can be propagated.

Each change order type can be configured to support propagation from different organizations and propagation to different organizations or organization hierarchies.

6 Define Product Rules

Product Rules: Overview

Before you can use product rules in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Manage Item Rule Sets	Use this task to create validation, assignment or composite rule sets.

Rules and Rule Sets: Explained

Rules define integrity constraints on the attributes of items and structures. You can define integrity constraints on operational as well as on user-defined attributes. Integrity constraints often implement business rules and are created through use of the rules framework. For example, a rule might be that the minimum speed must be less than maximum speed.

Rule sets gather multiple rules together and are assigned to an association type, such as attribute groups, item classes, change types, or structure types. They also list valid business entities. For example, an item, item supplier, or item revision. This enables the expressions entered to be validated by checking for allowable entities.

Keep in mind that:

- If the rule set is assigned to an attribute group, then only the attributes in that group can be used in the rule.
- If the rule set is assigned to an item class, then only the attribute groups valid for that item class will be used.

The status of a rule set can be identified as draft. Users can keep a rule set in draft status until the drafting of rules is complete. If so, the rule set is not triggered as regular transactions are completed. During this time, simulation analysis can be run to study the impact of the rule sets on a selected set of existing items, enabling users to make necessary changes. While performing the simulation, the draft rule sets along with other active rule sets are applied on the selected set of items, and the impact is captured; this is handled by an asynchronous scheduled process.

The rules for new item request and change order type associations are used to generate new item request and change order numbers.

There are three types of rule sets and rules:

- Validation
- Assignment
- Composite

Validation

Validation rule sets validate conditions based on attribute values defined for items. They are typically used to model predefined business rules on items.

Each attribute is referenced by its business entity and attribute group name followed by the attribute name. For example, item.Physical_Attributes.NetWeight. In this example, item indicates that it is an item attribute; Physical_Attributes is the internal name of the attribute group, and NetWeight is the internal name of the attribute.

Validation rules restrict items that can be added as related items to an item, and restrict the relationship types that can be allowed for items. This restriction could be based on item or item revision-level attributes which could be operational or EFF.

Test the validations by going to the Item Update page and editing the appropriate attribute groups. Updated values are validated against the rules, and error messages appear on the screen.

Assignment

An assignment rule set determines the value of an item attribute based on the specified condition. Generally, rule sets for assignments should be executed before validations, since they permit you to write validation conditions ensuring that the result of the assignments are valid.

An example of an assignment rule is, Lead Percent is Total Lead Mass divided by Unit Weight.

After you create a rule, you validate and save it. Then, if necessary, enter subsequent rules. Rules are executed in the order of their sequence in the rule set. Therefore, if an attribute's expression depends on a previously calculated value, you must ensure that the previous value appears ahead of the attribute and is therefore computed first.

Composite

Composite rules set can contain both validation and assignment rule sets. They can be used to aggregate rule sets that operate on different attribute groups and item classes.

You create a composite rule set on the Manage Rule Sets page. To define a composite rule set of mixed type, ensure it contains both validation and assignment rule sets. Set the type to Mixed, enabling the creation of a rule set that contains both assignment and validation rule sets. Then add assignment and validation rule sets to the composite rule set.

Related Topics

- What's a rule set?
- What are item rules?

Item Rule Data Types: Explained

Attributes in item rules belong to one of a set of data types.

In item rule expressions, all values are of one of the data types listed in the following table.

Data Type	Description
String	All strings and text characters
Number	All decimals and integers
Date	Dates only, without times

Data Type	Description
Time	Times only, without dates
DateTime	Combination of Date and Time

Null or Empty Values

Any attribute referenced in an item rule can have an empty or null value. To test for empty or null values you must use the function **`isnull`**.

Strings

Strings are delimited by double or single quotation marks (`"` or `'`).To escape a character's normal value (for example, in a regular expression), prefix it with the backslash (`\`).

Numbers

Depending on the setting of the regional preference for number format, the decimal point in decimal numbers can be represented by either a period character (`.`) or by a comma (`,`). If the comma is used as a decimal point, then arguments to functions must be delimited by semicolons (`;`).

Dates and Times

Dates and times are represented by the types Date, DateTime, and Time.

Dates will be entered in the format that you specify in the setting of the regional preference for date format . Date constants will automatically be reformatted if a you log in with a difference preference.

The following expression using a Date value is valid:

```
[Item].[Logistics].[StartDate] > "2005-Feb-23"
```

When writing an expression containing terms representing dates and times, enclose them in double quotation marks. They are internally converted to String values before they are compared. The following expression compares an attribute value to a textual date term.

Days can be added to a Date using Numbers. For example, the following expression computes the sell date as 30 days after the availability date:

```
[Item].[Logistics].[SellDate] > [Logistics].[AvailableDate] + 30
```

You cannot perform date calculations involving Custom Calendars.

Item Rule Syntax: Explained

Item Rules are used in defining and validating integrity constraints on item attributes, and in assigning values to attributes.

Basic Rule Formation

Item rules consist of expressions, operators, and functions. Most expressions reference the value of an item attribute.

Rules can encapsulate a single integrity constraint. The following example checks that a given attribute is less than another:

```
[Item].[Physical_Attributes].[Net_Weight] <= [Item].[Logistics].[Shipping_Weight]
```

In other words, the net weight of an item always has to be less than or equal to the shipping weight.

Rules can define assignment formulas. The following example is used in assigning a value for a "Daily Waste Percent" attribute:

```
[Item].[Inventory].[Total_Waste_Percent] / [Item].[Inventory].[Shelf_Life]
```

In the preceding example, the daily waste percent is the total waste percent divided by the shelf life in days.

Attribute Expressions

You access the value of an attribute by appending its name to its entity and attribute group, separated by a delimiter. The delimiter is the period character (.).

Following is the syntax of an attribute expression.

```
[<Entity Name>].[<Attribute Group Name>].[<Attribute Name>]
```

When referencing flexfields, use the `FlexField` keyword.

```
[ChangeHeader].Flexfield[Glob_Seg_Char_1]]
```

You must use the internal names of attribute groups and attributes, because internal names are guaranteed not to contain any spaces.

Null Values

Rules that reference attributes that have no value (also called a null value) are ignored. Expressions that evaluate to NULL are ignored.

That means that you never need to code Validations like:

```
if (not isnull(Item.PhysicalAttributes.Weight)) then Item.PhysicalAttributes.Weight <= 10
```

The "if" part is redundant, since if Weight was NULL the validation would be ignored. If you do want to check that an attribute has a non-null value, use the `isnull` function, which can be used to check that an attribute has a value entered.

Boolean Expressions

Boolean expressions are those that return TRUE, FALSE or null. Boolean expressions can be used in **If Expression** and **Validation Condition** fields of the Edit Rule Set page. Use logical and comparison operators and functions in Boolean expressions.

Item Rule Multi-Row Attribute Group Functions

To reference a value in a particular row of a multi-row attribute group, use one of the following functions.

To make a rule set specific to an item class, assign it to that item class during rule set creation. That rule set will then be active for each entity that has that item class as a parent or as an ancestor. You cannot access any other attributes associated with an item class.

loopSum

Syntax:

```
loopSum(([Entity_name].[multirow_AttributeGroupName].[AttributeName])
```

The loopSum function takes one numeric sub-expression as an argument. It runs the sub-expression for each multi-row row attribute group and compute the sum of the results.

Example

In this example, the sum of the values in all the rows of Percentage attribute cannot be a value other than 100.

```
Severity: Reject
If Expression: (loopSum([Item].[Composition].[Percentage])) != 100
```

conditionalLoopSum

Syntax:

```
conditionalLoopSum(boolean_expression, [Entity_name].[multirow_AttributeGroupName].[AttributeName])
```

The conditionalLoopSum function takes two sub-expression arguments. The first argument must be a boolean expression and the second argument will be a numeric sub-expression. The function runs the boolean sub-expression for each multi-row row and, if the boolean evaluates to true, computes the numeric sub-expression for that row. The function returns the sum of the computed numeric expressions.

Example

In this example, assume a multi-row attribute group named `Forecast` with the following rows:

Customer	Location	Reqd_Qty
ABC	Seattle	20
XYZ	Seattle	30
ABC	Boston	25

The following example will sum up the values of Reqd_Qty for which the corresponding Location is Seattle

```
conditionalLoopSum([Item].[Forecast].[Location] == "Seattle", [Item].[Forecast].[Reqd_Qty])
```

Item Rule Numeric Functions and Operators

Use numeric functions and operators to calculate values of numeric expressions.

Numeric Operators

The numeric operators available in item rules are listed below.

- + (addition)
- - (subtraction)
- * (multiplication)
- / (division)
- sum (aggregation)

Numeric Operator Expressions

`expression1 + expression2`

Performs regular mathematical addition of `expression1` and `expression2`. Returns null if any argument is null.

`expression1 - expression2`

Performs regular mathematical subtraction of `expression2` from `expression1`. Returns null if any argument is null.

`expression1 * expression2`

Performs regular mathematical multiplication of `expression1` and `expression2`. Returns null if any argument is null.

`expression1 / expression2`

Performs regular mathematical division of `expression1` by `expression2`. Returns null if any argument is null. Division by 0 returns null. The number of decimal digits returned by division is the maximum number of digits from `expression1` and `expression2`.

sum(expression1, expression2, ...)

Adds a series of values. Returns null if any argument is null.

Numeric Functions

The numeric functions available in item rules are listed below.

abs

Syntax:

```
abs (expression)
```

Returns the absolute value of `expression`.

Example:

In this example, the percentage weight change has to be less than 10.

```
abs(percent(Item.PhysicalAttributes.Weight)) <= 10
```

amount

Syntax:

```
amount(expression, target UOM)
```

Returns an amount in the given UOM. This ensures that comparisons or calculations are performed using the desired UOM.

Example:

In this example, the weight has to be less than or equal to 10 kg.

```
PhysicalAttributes.Weight <= amount(10, 'kg')
```

max

Syntax:

```
max(expression1, expression2, ...)
```

Returns the maximum value of a series of values. Can also be used for arrays or in query expressions.

Example:

In this example, the result would be `2006-11-30`.

```
max("2006-10-12", "2006-11-30")
```

min

Syntax:

```
min(expression1, expression2, ...)
```

Returns the minimum value of a series of values. Can also be used for arrays or in query expressions.

Example:

In this example, the result would be `2006-10-12`.

```
min("2006-10-12", "2006-11-30")
```

round

Syntax:

```
round(expression, decimal_places)
```

Rounds a number to the specified number of decimal places. `round` rounds to the nearest value.

Example:

In this example, the returned value is 1.58.

```
round(1.5758, 2)
```

rounddown

Syntax:

```
rounddown(expression, decimal_places)
```

Rounds a number to the specified number of decimal places. **`rounddown`** rounds toward zero.

Example:

In this example, the returned value is 1.57.

```
rounddown(1.5758, 2)
```

roundup

Syntax:

```
roundup(expression, decimal_places)
```

Rounds a number to the specified number of decimal places. **`roundup`** rounds away from zero.

Example:

In this example, the returned value is 1.58.

```
roundup(1.5758, 2)
```

Item Rule Production Value Functions

Use item rule production value functions and operators to compare the new value of an attribute to the value that is currently in production. This can be especially useful in tolerance rules.

changed

Syntax:

```
changed(attribute)
```

```
changed(attributeGroup)
```

Returns TRUE if the current value of **`attribute`** or **`attributeGroup`** differs from the current production value. Returns FALSE otherwise. Works with null values. If only **`attributeGroup`** is specified, then returns TRUE if any attribute in that attribute group has changed.

delta

Syntax:

```
delta(attribute)
```

Returns the difference between new and current production values of **`attribute.`** Comparisons of String values are case-insensitive. In comparisons of Boolean values, TRUE is considered greater than FALSE.

The following table illustrates the return value of this function when comparing new and current production values of various combinations of Numeric, Date, and DateTime attribute types.

Value comparison	Returned result for Numeric values	Returned result for Date or DateTime values
new < current production	new minus current production	new minus current production
new > current production	new minus current production	new minus current production
new == current production	0	0
current production does not exist	null	null
both new and current production are null	0	0
either new or current production are null, but not both	null	null

percent

Syntax:

```
percent(attribute)
```

Returns the difference between new and current production values, expressed as a percentage, according to the following formula:

```
(delta(attribute) / current_production_value ) * 100
```

Where `attribute` is the argument passed to `percent()`, and `current_production_value` is the current production value of the attribute. Can only be used with Numeric attributes.

previous

Syntax:

```
previous(attribute)
```

Returns the previous production value of `attribute`.

Item Rule String Functions

All string functions are case-sensitive. To perform a case-insensitive comparison use the `==` comparison operator.

String Comparison Functions

compare

Syntax:

```
compare(string1, string2)
```

Returns 0 when `string1` is exactly equal to `string2`. Returns -1 if `string1` is lexicographically less than `string2`. Returns +1 if `string1` is lexicographically greater than `string2`

contains

Syntax:

```
contains(look_for_string, look_in_string)
```

Returns TRUE when `look_for_string` is found in `look_in_string`. Returns FALSE otherwise.

Example:

The following example returns TRUE if the item description is "computer accessory product".

```
If Expression: contains("accessory", [item].[main].[description])
```

endsWith

Syntax:

```
endsWith(look_for_string, look_in_string)
```

Returns TRUE when `look_in_string` ends with `look_for_string`. Returns FALSE otherwise.

match

Syntax:

```
match(regexp_pattern, look_in_string)
```

Returns TRUE when `regexp_pattern` matches `look_in_string`. Returns FALSE otherwise..

This function uses regular expression pattern matching in its search. For reference on regular expressions, see the Javadoc reference for java.util.regex.Pattern (http://docs.oracle.com/javase/7/docs/api/java/util/regex/Pattern.html).

Example:

The following example returns TRUE if the description includes "electronic" or "electric".

```
match("ele*c", [item].[main].[description])
```

startsWith

Syntax:

```
startsWith(look_for_string, look_in_string)
```

Returns TRUE when `look_in_string` starts with `look_for_string`. Returns FALSE otherwise.

Example:

The following example returns TRUE if the item description is "Notebook".

```
startsWith("Note", [item].[main].[description])
```

Other String Functions

+ (plus sign)

Syntax:

```
expression1 + expression2
```

Concatenates two expressions and returns the resulting string. Note that this also returns a valid string if the expressions are of other data types.

indexOf

Syntax:

```
(look_for_string, look_in_string)
```

Returns position of **look_for_string** in **look_in_string**. String position starts at 0. Returns -1 if **look_for_string** is not found. The search is case-sensitive. Returns null if either expression is null.

length

Syntax:

```
length(expression)
```

Returns the length of the string **expression**. Returns null if **expression** is null.

lowercase

Syntax:

```
lowercase(expression)
```

Returns the lowercase equivalent of the string **expression**. Returns null if **expression** is null.

substring

Syntax:

```
substring(string, start)
```

```
substring(string, start, end)
```

Returns a substring of the string **string**starting at **start** and ending before **end**. If **end** is omitted, then returns remainder of **string**. String position starts at 0. If **start** is less than 0 then start at the beginning of the string. If **start**is greater than length of **string** then return up to the end of the string. Returns null if any of the arguments is null.

Example:

You can use rules to validate that the Packaging Indicator digit for a GTIN is appropriate for the Pack Type of the item. GTINs can be assigned at multiple levels of a packaging hierarchy. Consider a scenario in which your GTIN numbering rule declares that, if the pack type of the Item is "EA", then the fourth digit of the GTIN should be 8. You can use the following rule expressions to perform this kind of validation.

```
If Expression: [Item].[Main].[TRADE_ITEM_DESCRIPTOR]) == "EA"Validation Condition: subString([GTIN].
[GTINMain].[GTIN], 4, 4) == "8"
```

trim

Syntax:

```
trim(expression)
```

Removes all leading and trailing (but not middle) white space characters from a **expression**. Returns null if **expression** is null.

uppercase

Syntax:

```
uppercase(expression)
```

Returns the uppercase equivalent of the string `expression`. Returns null if `expression` is null.

Item Rule Logical Functions and Operators

Use item rule logical functions and operators to test the validity of expressions.

Logical Operators

The logical operators available in item rules are listed below.

- `and` (logical AND)
- `or` (logical OR)
- `not` (logical NOT)

and

Syntax:

```
expression1 and expression2
```

You can also use the notation `&&` in place of the `and` operator.

The logical `and` operator implements the following truth table for `expression1` and `expression2`.

expression1	expression2	expression1 and expression2
F	F	F
F	T	F
T	F	F
T	T	T
F	null	F
null	*[see note]	null

* The processor stops after it finds the first FALSE. Hence there is an asymmetry between `F and null` and `null and F`.

or

Syntax:

```
expression1 or expression2
```

You can also use the notation `||` in place of the `or` operator.

The logical `or` operator implements the following truth table for `expression1` and `expression2`.

expression1	expression2	expression1 or expression2
F	F	F
F	T	T
T	F	T
T	T	T
T	Null	T
null	*[see note]	null

* The processor stops after it finds the first TRUE. Hence there is an asymmetry between `T and null` and `null and T`.

not

Syntax:

```
not expression1
```

The logical `not` operator implements the following truth table for `expression1` and `not expression1`.

expression1	not expression1
F	T
T	F
null	null

Logical Functions

The logical functions available in item rules are listed below.

assignedToOrg

Syntax:

```
assignedtoOrg("org_code")
```

In a validation expression, returns TRUE if the item is assigned to the specified organization.

Example:

In the following example, when the item class of the item is Exact Servers, the organization cannot be S2.

```
Severity: Reject
If Expression: Item.Item_basic.Item_Class == "Exact_servers"
Validation Expression: !assignedtoOrg("S2")
```

assignedtoCatalog

Syntax:

```
assignedtoOrg(Catalog[Catalog Name].Category[Category Name])
```

In a validation expression, returns TRUE if the item is assigned to the specified catalog and category.

Example:

In the following example, if an item is assigned to the catalog Ladies Wear and the category Summer, it cannot be assigned to catalog Kids and category Summer.

```
Severity: Reject
If Expression: assignedtoCatalog(Catalog[LadiesWear].Category[Summer])
Validation Expression: !assignedtoCatalog(Catalog[Kids].Category[Summer])
```

exists

Syntax:

```
exists(Boolean_expression)
```

Loops through the rows of the entities used in **`Boolean_expression`** and returns TRUE if the expression is satisfied for any of the rows.

You can use **`exists()`** on the following entities:

- relationships (related item relationships and cross-references)
- structures
- multi-row attribute groups

Example expressions:

The following expression loops through all the structures on an item and returns TRUE if the any structure has the name "ManufacturingBOM".

```
exists([Structure].[StructureAttributes].[STRUCTURE_NAME] == "ManufacturingBOM")
```

The following expression validates whether a particular relationship exists for an item:

```
exists([Relateditem.[RelateditemMain[.[Type] == "Up-sell")
```

The following expression verifies whether a row exists in a multi-row attribute group:

```
exists(isNull([Item].[Ingredients].[Ingredient_name]) == false)
```

Example rules:

The following rule verifies that if the item attribute **`Pack Type`** is specified (using its internal name TRADE_ITEM_DESCRIPTOR), then the GTIN attribute **`GTIN`** cannot be null

```
If Expression: isNull([Item].[Main].[TRADE_ITEM_DESCRIPTOR]) == falseValidation Condition:
 exists(isNull([GTIN].[GTINMain].[GTIN])) == false
```

The following rule verifies that if the value of the attribute **TM** is **US**, then the GTIN relationship must be with a Customer named USFDA.

```
If Expression: [Item].[Group1].[TM] == "US"
Validation Condition:
[GTIN].[GTINMain].[PartyType] == "Customer" AND
[GTIN].[GTINMain].[PartyName] == "USFDA"
```

to_item_class

Syntax

```
to_item_class("item_class_name")
```

Invoked when the item class of an item is being changed. In a validation expression, returns TRUE if the name of the new item class matches **item_class_name**, which must be enclosed in quotation marks.

Example:

The following example returns TRUE if the new item class is **TCCHLDVR**

```
TO_ITEM_CLASS("TCCHLDVR")
```

from_item_class

Syntax

```
from_item_class ("item_class_name")
```

Invoked when the item class of an item is being changed. In a validation expression, returns TRUE if the name of the original item class matches **item_class_name**, which must be enclosed in quotation marks.

Example:

The following example returns TRUE if the original item class is **TCParent**:

```
FROM_ITEM_CLASS("TCParent")
```

Combined example:

The following example prevents changing the item class of an item from Pneumatic_Pumps to Hydraulic_Pumps.

```
Severity: Reject
If Expression: FROM_ITEM_CLASS("Pneumatic_Pumps") && TO_ITEM_CLASS("Hydraulic_Pumps")
```

Entity Flexfields

Entity flexfields do not belong to any attribute group, and are accessed using the **FlexField** keyword:

```
[<Entity Name>].Flexfield[<Flexfield Internal Name>]
```

Examples:

```
[ChangeHeader].Flexfield[Glob_Seg_Char_1]]
```

Comparison Operators

The comparison operators available in item rules are listed below.

- **==** (equals)
- **!=** (not equals)

- **<** (less than)
- **<=** (less than or equal)
- **>** (greater than)
- **>=** (greater than)

Comparison operators compare two Boolean expressions and return TRUE or FALSE, depending on the result of the comparison. If one or both expressions are null, then the comparison returns null.To check for null values, use the comparison function `isnull`.

String comparison is case-insensitive. For case-sensitive comparison use the string function `compare`.

Syntax:

```
expression1 == expression2 (equals
expression1 != expression2
expression1 < expression2
expression1 <= expression2
expression1 > expression2comp
expression1 >= expression2
```

isnull

Syntax:

```
isnull(expression)
```

Returns TRUE if its argument is null, returns FALSE otherwise. This function lets you explicitly test whether a value is null. Unlike other functions, it is not be ignored if the value of the argument is null.

The logical function `isnull()` implements the following truth table for `expression`.

expression	isnull(expression)
null	T
not null	F

Item Rule Utility Functions

Use these functions in building more complex expressions.

auto_sequence

Syntax:

```
auto_sequence("Sequence Name", starting_num, increment_by)
```

Searches for `Sequence Name` in the database tables. Enclose the sequence name in quotation marks to preserve space characters in the name. The sequence name is not case-sensitive. If the sequence exists, then the function returns the next value from the sequence. If the sequence does not exist, then the function creates a sequence with the specified name and returns **starting_num**. Further numbers in the sequence are incremented by **increment_by**. This function can be used in defining the return value of assignment and validation rules.

Example: The following expression used as the return value of a rule whose target attribute is **[General attributes].[EDC Number]** produces a sequence of numbers beginning at 1000 and increasing by 5 for each new item:

```
auto_sequence("EDC Number", 1000, 5)
```

between

Syntax:

```
between(value, min, max)
```

Returns TRUE if **value** falls between **min** and **max**. Returns FALSE otherwise. All arguments are of type Number, Date, or DateTime.

decode

Syntax:

```
decode(expression, search1, result1, [search2, result2, ...], [default])
```

Compares **expression** to the specified series of **search** arguments, one at a time, and returns the corresponding **result** when the first match is found. If no match is found, returns **default**. If **default** is omitted, returns null. Requires specification of at least **expression**, **search1**, and **result1**. You can specify an unlimited number of pairs of **search** and **result** arguments. The **default** argument is optional.

Example:

The following example returns RED COLOR if the item's body color is RED, BLUE COLOR if it's BLUE, and causes a rejection if none of those colors is matched.

```
Severity: Reject
If Expression: decode([Item].[BODY ATTR].[COLOR], "RED", "RED COLOR", "BLUE", "BLUE COLOR", "NONE") == "NONE"
```

in

Syntax:

```
in(expression, value1, value2,...)
```

Returns TRUE if **expression** is found in **value1**, **value2**, or other following value arguments. Returns FALSE otherwise. Requires specifying at least **expression** and **value1**. You can specify an unlimited number of **value** arguments.

Example:

The following example returns TRUE if "RED" is contained in the value of either of the specified attributes for colors.

```
If Expression: in("RED",[Item].[BODY ATTR].[COLOR], [Item].[COVER ATTR].[COLOR])
```

> **Note:** The functions **in()** and **not_in()** accept arguments of either String or Number. All arguments must be of the same type. The type of the first argument determines the type assigned to the subsequent arguments.

not_in

Syntax:

```
not_in(expression, value1, value2,...)
```

Returns TRUE if **expression** is not found in **value1**, **value2**, or other following value arguments. Returns FALSE otherwise. Requires specifying at least **expression** and **value1**. You can specify an unlimited number of **value** arguments.

Example:

The following example returns TRUE if "RED" is not contained in the value of either of the specified attributes for colors.

```
If Expression: not_in("RED",[Item].[BODY ATTR].[COLOR], [Item].[COVER ATTR].[COLOR])
```

to_number

Syntax:

```
to_number(string)
```

Returns **string** as a value of type Number.

Example:

The following example returns the count of an item as a string.

```
to_number([Item].[PHYSICAL PROP].[COUNT])
```

Date Operators

The **+** (plus) and **-** (minus) operators add or subtract the specified number of days from a date. A single number is interpreted as a number of days. You can also use dates in the format specified by the standard ISO 8601.

Syntax:

```
expression1 + expression2
```

```
expression1 - expression2
```

Example:

The following example expresses a time 3 days after the Item Lead Time

```
[Item].[Logistics].[LeadTime] + 3
```

Using Custom Object Data in Rules: Explained

You can use the function **getCustomObjectValue()** to access data stored in a custom object created in the Oracle Fusion CRM Application Composer.

Consider the following example use case for custom objects. Assume that your company uses a catalog for export-controlled items. You need to assign your inventory items to the catalog based on complex rules that take into account both item attributes and non-item attributes, such as trade agreements. You maintain the item attributes as operational attributes and extensible flexfields in the Product Information Management work area. You maintain the trade agreement attributes in custom business objects designed using Application Composer.

Item rules can refer to both the item attributes and the non-item attributes, to determine if an item should be assigned to the export-controlled items catalog. For accessing the attributes maintained in custom objects, item rules use the function **getCustomObjectValue()**.

In Application Composer, you have defined a custom object called Selling Restrictions, containing a matrix of selling restrictions by target market. You want to refer to that data to determine whether or not an item can be sold, based on its target market. Assume that the example custom object Selling Restrictions contains the data in the following table.

Target Market	Restriction
EU	No
North America	Yes
APAC	Yes
Middle East	No

The following example fetches the value of Restriction from Selling Restrictions where the Target Market is North America. That fetched value for Restriction is Yes.

```
getCustomObjectValue(
"Selling Restrictions",
"Restriction",
"Target Market", [ITEM].[Market Attributes].[Target Market])
```

Your item rules can use complex business rules to determine attributes for assignment or validation purposes. You can shift some of the data-induced complexity for business rules, such as deriving the restriction for a target market, or deriving the color family name for a given color shade, to custom business objects and then refer to those values in your business rules. This practice of decoupling business rules from the underlying data protects your business rules from changes in data sets, such as color shades being added or dropped, and simplifies maintenance of your business rules.

Another use of custom objects with item rules is to use data available in legacy systems that may not have built-in web services. Relevant data from such systems can be extracted and maintained in custom objects and then be referred to in your item rules. This practice greatly enhances the scope of data used in your business rules.

Related Topics

- Creating an Object: Example

Blending Rules

Blending Rules: Overview

To control which item attribute value is imported into production from multiple suppliers of the item, you can define blending rules, which are applied during import, and which determine which supplier's attribute value to import, based on the blending priority that you define in the blending rules.

To use blending rules:

- Understand how blending rules affect import
- Examine an example of how blending rules affect import

- Define blending rule sets and rules, and enable the blending rule sets

How Blending Rules Affect Import: Explained

When you import the same item from multiple suppliers, specific attributes of the item might have different values, depending on the supplier. To control which attribute value is imported into production, you can define blending rules, which are applied during import, and which determine which supplier's attribute value to import, based on the blending priority that you define in the blending rules.

During the import process, blending rules use the spoke system item relationships on a production item to identify the supplier product records to be blended with imported data. Blending rules are applied at the item level, in a specified order of preference among the spoke systems. If data quality is enabled, it runs to standardize the values of blended product records. When the import is uploaded to production, blended values overwrite the item attribute values in production.

Blending rules are not applied to product data for new items, since there is no existing data to be blended with new data. The spoke system item relationship used by blending rules to relate a supplier item to a production item is not created until an item is imported into production.

Blending rules are applied in the following business events:

- When an existing supplier provides updates to product data that was imported earlier.
- When a new supplier provides data for an existing item.

Blending rules operate during import if:

- Existing spoke system cross-references are found in the production database.
- New spoke system cross-references are established as a result of matching with a production item containing spoke system cross-references with other spoke systems.

You can choose to apply blending rules to attributes in the following ways:

- All attributes in one or more attribute groups. (This is the most common case.)
- All attributes associated with one or more item classes.
- One or more attributes from a single attribute group.

After blending is completed, the blended item record overwrites production data for the item.

General principles guiding the application of blending rules include:

- Blending rules run only if any of the suppliers mentioned in the blending rule has provided data into the supplier stage. If the higher priority supplier has not provided any data, then whatever is provided by the lower priority or other suppliers (suppliers not mentioned in the blending rules) will be imported.
- If a blending rule is written on an attribute then that rule will run only if that attribute is part of import. The attribute can be part of import because values are provided for that attribute in import.
- If a blending rule is written on an attribute group then that rule will fire only if any of the attributes of that attribute group are part of import. The attributes can be part of import because values are provided for those attributes.
- If a blending rule is written on an item class then that rule will run only if items of that item class or its child item classes are being imported.
- No updates will occur to the items staged in Oracle Fusion Product Hub Portal. Blending happens only within the import batch, and is then imported to production.
- If more than one rule exists on the same attribute, then the first rule in the master blending rule set will be run.

- Products in statuses Rejected or Draft do not get into the batch, so they do not have cross-references, and so they are not considered for blending.
- Blending rules defined for an item class which is at a higher level of the item class hierarchy will be inherited to child item classes.

Restrictions and validations on blending rules include:

- Blending rules apply only for the item entity, not for the item revision or supplier entities.
- Blending rules may be set up on any attributes of an item.
- Blending rule sets cannot be composite rule sets.
- Blending rules defined at the higher levels of an item class hierarchy are inherited by child item classes.
- Product Hub spoke and non-vendor spoke systems are not available as source systems for use in blending rules.
- Rule set impact analysis is not available for blending rule sets.

Related Topics

- Supplier Product Uploads: Explained
- Item Import Using Import Maps: Explained
- Item Batches: Explained

Blending Rule Sets and Rules: Procedures

Blending rules must be created as part of a blending rule set, and the blending rule set must be associated with the entity containing the attribute whose value you want to control through blending rules.

Defining Blending Rule Sets and Rules: Procedure

To define a rule set and rules for a blending rule:

1. In the Product Information Management work area, select the Manage Item Rule Sets task.
2. Select **Create** from the Manage Rule Sets task bar.
3. In the **Create Rule Set** dialog box, make the following required selections:
    - Set **Composite** to **No**.
    - Set **Type** to **Blending**.
4. When you set the Type to Blending, the available rule association types are restricted to attribute groups or item classes. In the **Association Type** field, select either **Attribute Group** or **Item Class**.
5. For an association type, you can select multiple attribute groups or item classes to associate with the rule set. In the **Associations** field, click the edit control.
6. In the **Select Associations** dialog box, click **Add**, to add an association with the rule set.

    In the **Association Name** list, search for and select the name of the entity that contains the attribute whose value you want to control with blending rules.

    - For an attribute group association, this entity is the attribute group containing the attribute.
    - For an item class association, this entity is the item class associated with the attribute group containing the attribute.
7. If you select **Draft**, then the rule set will not be triggered at all during import.

8. Click **Save and Continue**.
9. In the **Rules** tab of the Edit Rule Set page for the new rule set, select **Create** from the Actions menu.
10. In the **Create Rule** dialog box, enter an integer in the **Sequence** field. The sequence number determines the order in which the rule will be triggered when the rule set is triggered.
11. Using the **Attribute** list, select the attribute whose values you want to blend during import.

    If you selected multiple associations, then the rule applies to all attributes in the attribute group or item class, and you can't select an individual attribute. Accordingly the **Attribute Group** and **Attribute** lists are restricted to the value **All**.

    > **Note:** The following rule fields are not used by blending rules:
    >
    > - Return Type
    > - Target Business Entity
    > - Target Attribute Group
    > - Target Attribute

12. In the Details region for the rule, select **Create** from the Actions menu. Create a blending priority for the rule's associated attribute by selecting a value from the **Spoke System** list and entering a number in the **Priority** field.

    Lower priority numbers produce a higher blending priority. A spoke system with priority number 10 has a higher blending priority than a spoke system with priority number 20.
13. Repeat the previous step for each spoke system that supplies attribute values that you want to blend.
14. Define more rules in the rule set, as needed.
15. Click **Save** to save the rule set.
16. Add the rule set to the master blending rule set, to enable its operation during import.

Enabling Blending Rule Sets: Procedure

To enable the triggering of a blending rule, you must add its rule set to the master blending rule set, which is named BLENDING_MASTER_RULE_SET. This composite rule set is predefined. You can't create any other composite blending rule sets. Only rule sets with a Type of Blending can be added to this master set. When a blending rule set is added to the master blending rule set, its blending rules are triggered when you import items into Oracle Fusion Product Hub.

To add a rule set to the master blending rule set:

1. In the Product Information Management work area, select the Manage Item Rule Sets task.
2. On the Manage Rule Sets page, search for and select the rule set named BLENDING_MASTER_RULE_SET.
3. Select the rule set BLENDING_MASTER_RULE_SET.
4. Select **Add** from the Actions menu.
5. In the Select and Add: Rule Sets window, use the desired criteria to search for the rule sets that you want to add to the master.

    > **Tip:** You can find all blending rule sets by specifying **Blending** in the **Type** field. You can search for your blending rule sets by specifying the association type or association name that you used in your rule sets.

6. Select the rules sets you want to add, then click **OK** to add them to the master blending rule set.
7. The rules sets you added are place at end of the sequence of blending rule sets in the master blending rule set, and are run in that sequence. If there are multiple blending rules defined for an attribute, only the first rule is run.
8. To change the place of a blending rule set in the sequence, select it and select **Edit Sequence** from the Actions menu. In the **Edit Sequence** dialog box, enter the desired sequence number in the **Sequence** field and click **OK**. You must first edit the sequence of other rule sets to ensure that the desired sequence number is not already in use.

Related Topics

- Supplier Product Uploads: Explained
- Item Import Using Import Maps: Explained
- Item Batches: Explained

Blending Rules: Example

The following example demonstrates the effect of blending rules.

Scenario

For this example, assume that you have defined the blending rules shown in the following list.

- Blending_Rule_1
    - Item Class: Televisions
    - Attribute Group: Specs
    - Attribute: Frame Description
    - Priority -- Spoke System:
        - 1-- Vendor1 Spoke
        - 2-- Vendor2 Spoke
- Blending_Rule_2
    - Item Class: Televisions
    - Attribute Group: Specs
    - Attribute: Resolution
    - Priority -- Spoke System:
        - 1 -- Vendor2 Spoke
        - 2 -- Vendor1 Spoke
- Blending_Rule_3
    - Item Class: Televisions
    - Attribute Group: Specs
    - Attribute: Weight
    - Priority -- Spoke System:
        - 1 -- Vendor3 Spoke
        - 2 -- Vendor4 Spoke

At the beginning of the import process, Vendor1 loads data in Product Hub Portal for the attributes **Frame Description** and **Resolution**, as shown in the following list.

- Vendor1
    - Spoke Item:
        - Vendor1 TV Item
    - Attribute: Frame Description
        - Value: Plastic body with back hinge
    - Attribute: Resolution
        - Value: 1930x1024

You import the loaded data. Since Vendor2 has not loaded any data in Product Hub Portal, the values loaded by Vendor1 are imported for both of the attributes, Frame Description and Resolution. Consequently, the attribute values in production data are as follows.

- Production data in Product Hub:
    - Production item in Product Hub:
        - TV_1
    - Spoke Item cross-reference
        - Vendor1 TV Item
    - Attribute: Frame Description
        - Value: **Plastic body with back hinge** (initial value, from Vendor1)
    - Attribute: Resolution
        - Value: **1930x1024** (initial value, from Vendor1)

At a later time, Vendor2 loads data in Product Hub Portal for the attributes Frame Description and Resolution, as shown in the following list.

- Vendor2
    - Spoke Item:
        - Vendor2 Television
    - Attribute: Frame Description
        - Value: Plastic with hinge
    - Attribute: Resolution
        - Value: 2930x1034

Then you try to import the data loaded by Vendor2. You determine that there is a match with the existing production item TV_1, so you create a new spoke system cross-reference with TV_1. Since Blending_Rule_1 gives blending priority for the attribute Frame Description to Vendor1, Vendor1's value for that attribute remains as previously imported into production.

Since Blending_Rule_2 gives blending priority for the attribute Resolution to Vendor2, Vendor2's value for that attribute is imported into production. The resulting data imported into production, as shown in the following list.

- Production data in Product Hub:
    - Production item in Product Hub:
        - TV_1
    - Spoke Item cross-references
        - Vendor1 TV Item
        - Vendor2 Television
    - Attribute: Frame Description (Vendor1 has blending priority)
        - Value: **Plastic body with back hinge** (from Vendor1, unchanged)
    - Attribute: Resolution (Vendor2 has blending priority)
        - Value: **2930x1034** (from Vendor2)

At a later time, both Vendor1 and Vendor2 update their data in Product Hub Portal, including changed values for Frame Description and the addition of the new attributes Height and Weight, as shown in the following lists.

- Vendor1
    - Spoke Item:
        - Vendor1 TV Item
    - Attribute: Frame Description
        - Value: **Plastic body of PVC make with metallic back hinge** (updated)
    - Attribute: Resolution
        - Value: 1930x1024
    - Attribute: **Height** (new)
        - Value: **2 Feet** (new)
- Vendor2
    - Spoke Item:
        - Vendor2 Television
    - Attribute: Frame Description
        - Value: **PVC body with hinge** (updated)
    - Attribute: Resolution
        - Value: 2930x1034
    - Attribute: **Weight** (new)
        - Value: **5 kg** (new)

Then you import the updated data from Vendor2 (but not from Vendor1). The resulting data is imported into production, as shown in the following list.

- Production data in Product Hub:
  - Production item in Product Hub:
    - TV_1
  - Spoke Item cross-references:
    - Vendor1 TV Item
    - Vendor2 Television
  - Attribute: Frame Description (Vendor1 has blending priority)
    - Value: **Plastic body with back hinge** (original import, from Vendor1)
  - Attribute: Resolution (Vendor2 has blending priority)
    - Value: 2930x1034 (unchanged, from Vendor2)
  - Attribute: **Weight** (new, from Vendor2)
    - Value: **5 kg** (new, from Vendor2)

Note the following about the import into production data:

- Since Blending_Rule_1 gives blending priority for the attribute Frame Description to Vendor1, Vendor1's value for that attribute is used instead of Vendor2's updated value, which is not imported.
- Because Vendor1's updated data was not imported, Vendor1's value for the attribute Frame Description remains as originally imported into production.
- The new attribute Weight is imported from Vendor2. Even though Blending_Rule_3 is defined on that attribute, the rule is not triggered because neither Vendor3 or Vendor4 uploaded data in Product Hub Portal, and no spoke system cross-references for these vendors exist or are created by matching during import.

Related Topics

- Supplier Product Uploads: Explained
- Item Import Using Import Maps: Explained
- Item Batches: Explained

7 Define New Item Requests

New Item Requests: Overview

Before you can use new item requests in Oracle Fusion Product Hub, you must complete these tasks in the Setup and Maintenance work area:

Task	Description
Manage Change Order and New Item Request Header Descriptive Flexfields	Used to manage the header-level descriptive flexfields for change orders and new item requests.
Manage New Item Request Type Details	All new item requests are assigned a new item request type. You must define at least one new item request type to use new item requests.
Manage Change Order and New Item Request Line Descriptive Flexfields	Used to manage the line-level descriptive flexfields for change orders and new item requests.
Manage Task Configurations for Supply Chain Management	Define the task configurations for the new item request approval workflow.
Manage Approval Groups for Supply Chain	Define approval groups for the new item request approval workflow.

New Item Requests Workflow Statuses: Explained

There are five predefined New Item Request (NIR) workflow statuses which enable you to perform various tasks when a new item request is created. You cannot create new statuses or delete statuses.

The four statuses are:

- Open
- Definition
- Approval
- Scheduled
- Completed

Open

New item request attributes and items are defined and updated when the workflow status is open. A seeded request comment notification is associated with this status and the new item request cannot move to the next status until this notification has been responded to. The notification will be sent to the assignee and the requester of the new item request.

However, to bypass the notification, an administrator can select to skip this notification on the new item request type. Assignees would then need to promote the new item request to the next status manually or on the new item request type.

Definition

In the definition workflow status, you define the item information, such as specifications, structures, packs and so on. Additional items cannot be added in this workflow status. The definition workflow steps are defined at the item class level. Based on the definition steps, a notification is sent to those responsible for defining the item. Once the item is defined, you then promote the new item request to approval status manually or to be automatically approved in the BPEL process.

Approval

When approval is granted, the new item request cannot be modified. Approval notifications are sent to the approvers based on the rules set up in Approval Management Extensions (AMX), if the assignment method is rule-based, or to a pre-defined set of approvers, if the assignment method is user-defined. After all the required approval is received and the status is Scheduled, a job is triggered and the status is automatically changed to Completed by the system.

Scheduled Status

After approval, the NIR is automatically promoted to a Scheduled status. Automatic promotion and demotion is set up on new item request type, otherwise the promotion is manual.

Completed

After all the required approvals are received and the status is Scheduled, a job is triggered and the status is automatically changed to Completed by the system. It cannot be modified.

New Item Request Definition Phase: Explained

During the definition phase, definition notifications are routed to participants for them to complete the item's definition tasks.

Define an Item

From the **Manage New Item Requests** page, search for the new item request.

Launch the new item request from the **Search Results** table by clicking on a new item request link. That will take you to the New Item Request page.

Click on the Details sub tab and select the definition row. In the definition Workflow Details table, select Expand All from the Actions menu.

Click the Go to Task icon for the entity that needs definition. The item page appears where you enter the item information. The item definition page is rendered dynamically for each participant, where you can enter only the attributes or item entities for which you are responsible.

> **Note:** You can also quickly navigate and drill down to an item detail page directly from a new item request definition notification. A read-only item page will open a separate browser window.

You can identify various item details as mandatory at each step. This will ensure that item information required for a downstream step is defined and available for use.

Any item definition that is available to be set up for definition through new item request, can be identified as mandatory while completing the definition steps at the item class, including:

- Operational
- Extensible flexfield attributes
- Structures
- Packs
- Supplier associations
- Organization assignments
- Attachments
- Catalog category assignments
- Relationships

New Item Request Approval Phase: Explained

During the approval phase of a new item request, approval notifications are routed to the participants.

You can set up the new item request type so that a request only needs to be approved by a single member of a user group. On the Manage New Item Request Type Details page of the Setup and Maintenance work area, select the Approval step on the Workflow tab. Then for an approval activity in the step's status details, set **Response Required From** to One. When one member of a group approves the request, the notifications to other approvers in the group are withdrawn..

Approval notifications can be addressed to individual users or to multiple users in a predefined user group. From the notification, users can approve or reject the new item request.

For each new item request header, you can select an assignment method in the Approval status details for the Header approval , as either rules-based or user-defined. If you choose user-defined assignment, you then select an approver by using the **Assigned To** control.

You can also assign approvers as optional approvers. A single optional approver can reject a change order, but approvals from optional approvers are ignored. To assign an optional approver, select an approver by using the **Assigned To** control on the **Optional approval** row of the Approval status details.

When an approval is granted, the new item request cannot be modified. After the new item request is approved, the status is changed to Scheduled, through a scheduled process, and when its effective date is reached, its status is changed to Completed, also through a scheduled process..

New item approval rules are defined and managed through the Approval Management Engine. For information on how approval rules are defined and managed, refer to the Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite.

Note: The assignment method needs to be rule-based in order for approval rules to be utilized.

Related Topics

- New Item Requests: Explained

- New Item Request Notifications: Explained
- Change Order Approval Process: Explained

Defining Entry and Exit Criteria for New Item Requests: Procedure

You can define criteria that govern when a new item request can exit the current workflow status or enter into the next status. You define such entry and exit criteria in product rules, and then select those criteria rules when defining the new item request type.

Defining entry and exit criteria for a new item request type requires the following tasks:

1. Defining the criteria in a validation rule set.
2. Assigning the criteria to the new item request type's workflow.

Defining the Criteria in a Validation Rule Set

Define one or more rule sets that validate your criteria for new item request status entry and exit. Criteria can be based on attributes or on descriptive flexfields.

You define the specific criteria for validating the criteria by creating product rules. You can write validation expressions in the product rules using references to the following business entities:

Business Entity	Provides Access To
Change Header	Descriptive flexfield segments on new item request header rows. The attribute group Change Header Main, which contains attributes corresponding to the basic attributes of a new item request header: Priority, Reason, Need-By Date, Requested By, and Description
Change Line	Descriptive flexfield segments (but not attributes) on new item request lines

Example: Define a product rule that allows the change order workflow to exit from Open status only if its Reason is Cost and its Priority is High.

1. From the Items work area, select the **Manage Item Rule Sets** task.
2. Create a rule set. In the Create Rule Set dialog, you must make the following selections.
   - For Type, select **Validations**.
   - For Association Type, select **New Item Request**.
   - For Association Name, select **New Item Request**.
3. On the Edit Rule Set page, create a rule. The Severity is automatically set to Reject.
4. In the **If Expression** field, right-click and select **Insert Attribute**. Using the Insert Attribute dialog, select the Business Entity, Attribute Group, and Attribute that insert the following expression:

   ```
   [ChangeHeader].[ChangeHeaderMain].[ReasonCode]
   ```

5. Add the rule code `== "Cost"`, to form the following complete comparison expression:

```
[ChangeHeader].[ChangeHeaderMain].[ReasonCode] == "Cost"
```

6. In the **Validation Condition** field, use the same procedure to insert the following expression:

```
[ChangeHeader].[ChangeHeaderMain].[PriorityCode]=="High"
```

7. Optionally, add a user message, such as the following:

```
New item requests related to cost must have high priority to be considered for approval.
```

8. Validate the rule's syntax, by clicking the **Validate** button.

Assigning the Criteria to the New Item Request Workflow

Modify the new item request type to use a validation criteria rule set.

After defining a rule set that validates your new item request status criteria, you can assign that rule set as the entry or exit criteria for the new item request type statuses related to the approval workflow. The new item request type must be already associated with the rule set in order to use the rule set in the new item request type.

You can assign criteria to a new item request's workflow statuses, beginning with its exit from Open status through its entry to Approval status. The status types that can have entry or exit criteria are listed in the following table:

Status Type	Entry Criteria?	Exit Criteria?
Open	No	Yes
Definition	Yes	Yes
Approval	Yes	No

Example: Select the entry criteria for the workflow status Approval.

1. From the Setup and Maintenance work area, search for and select the Manage New Item Request Type Details task, which enables you to edit the new item request type. There is only a single new item request type.
2. On the Workflow tab of the Manage New Item Request Type Details page, select the status **Approval**.
3. The choice list in the **Entry Criteria** column does not yet have a selected value. Select the name of the rule set that you created, which defines the entry criteria for this status of the workflow for new item requests.

Now, when a new item request of this type is submitted for the Approval status, it will be rejected by the validation criteria rule set if its Priority value is not **High**.

Related Topics

- New Item Requests: Explained
- Defining Entry and Exit Criteria for Change Orders: Procedure
- Item Rule Syntax: Explained

8 Define Product Spoke Systems

Product Spoke Systems: Overview

Before you can use Product Spoke Systems in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Define Source Systems for Product Management	Spoke systems enable users to identify the source of the data they are imported into the Oracle Fusion database or published from the Oracle Fusion database. The terms spoke system and source system are used interchangeably.

Product Spoke Systems: Explained

Spoke systems (also called Source Systems) enable users to identify the source of the data they are imported into the Oracle Fusion database or published from the Oracle Fusion database.

Spoke System Setup

The task to set up spoke systems is the Manage Trading Community Source System task in the Set up and Maintenance work area..

A spoke system is identified by a unique code and a name. A spoke system has description and type as well. When the spoke system is defined, the types of entities that will be supported are selected from the following list:

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

The spoke system used by Oracle Product Hub must have the Items entity enabled.

Item Publication Criteria:

- **Publish Only Changed Entities**: only the changed item entities will be published.
- **Revisions**: controls what revisions will be published for the items; choices are: Current Revision or Current and Future Revisions
- **Days in the Future**: number of days in future that will be used to determine what future revisions will be published.
- **Item Entities**: select the child entities of the items that will be published for the items, by default on the item attributes will be published. The entities that are published:
    - Attributes

- Attachment URL
- Supplier Site Associations
- Item Category Assignments
- Item Relationships
- Structures
- Packs
- Item Revisions

Item Select Rules: one or more rules that are based on business entities that include:

- **Item Class Business Entity Rule**: equal/does not equal to an Item Class with option to select to include the child item classes for the item class in the rule
- **Catalog Business Entity Rule**: equal/does not equal to an Item Class with option to select to include the child item classes for the item class in the rule
- **Organization Business Entity Rule**: equal/does not equal to an Organization
- **Organization Hierarchy Business Entity Rule**: equal/does not equal Organization hierarchy and sub-organization within the hierarchy

Item Validation Rules: a validation rule set that will be used to determine which items are published. The rule set may contain one or more rules and is defined using the Manage Item Rule Sets task.

- Example: A validation that rule that would publish only the items with an active status: `If Expression: INVENTORY_ITEM_STATUS_CODE == 'Active'`
- Item Validation Rules are evaluated prior to publishing.

9 Define Advanced Catalogs

Advanced Catalogs: Overview

Before you can map catalogs in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Manage Catalog Mappings	The Manage Catalog Mappings task is used to create a mapping between one catalog and another catalog or between a catalog and the root item class. These catalog mappings contain category mappings between the categories of one catalog to the categories of another catalog or between categories of a catalog and item classes under the root item class.

Catalog Mappings: Explained

The Manage Catalog Mappings task is used to create a mapping between one catalog and another catalog or between a catalog and the root item class. These catalog mappings contain category mappings between the categories of one catalog to the categories of another catalog or between categories of a catalog and item classes under the root item class.

While creating a catalog mapping, users select a source catalog and a target catalog. The combination of the source catalog and target catalog should be unique, meaning, users cannot create two mappings with the same source and target catalogs. Once the source and target catalogs are mapped and the mapping is created, users can create mappings between the categories of the source catalog and the categories of the target catalog within this catalog mapping. For the category mappings, only one mapping can be created for a particular source category, meaning, users cannot create two mappings with the same source category. However, different source categories can be mapped to the same target category.

If the catalog mapping is created with the root item class as the source or target catalog, the category mappings created inside this catalog mapping can only have child item classes under root item class as the source or target category. The root item class cannot be set as the source or target category in the category mappings.

10 Define Item Mass Update Configuration

Item Mass Update Configuration: Overview

Before you use item mass updates in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Manage Item Import Formats Configuration	Used to define import formats to be used when performing item mass updates.

Item Import Formats Configuration: Explained

An import format identifies those main and user-defined attributes in an item class whose values are imported into the application using a spreadsheet. Consequently, when you import item data from a spreadsheet, the items are all imported into the particular item class for which the item format was defined. You can edit an import format after it is created.

While all the mandatory attributes will be automatically added to the import format, users can also pick and choose which other attributes to be included as part of the import format.

While setting up the import formats, you can selectively choose which item attributes to be included. All of these attributes defined in an import format will get added to the ADFdi spreadsheet when it is generated while adding the items to an item batch.

You can also optionally inherit import formats defined for the parent item classes while creating a new import format. This will inherit all the attributes of the parent item class import format to the import format being defined. This helps in maintaining the various import formats across the item class hierarchy.

Additionally you can mark an import format as inactive or active. This helps to selectively hide or display the import formats for downloading the ADFdi spreadsheet until the setup of the import format is complete.

11 Define Item Import Batch Configuration

Item Import Batch Configuration: Overview

Before you can create item import batches in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Manage Item Import Formats Configuration	Used to define import maps to be used during the item import batch process.

Item Import Formats Configuration: Explained

An import format identifies those main and user-defined attributes in an item class whose values are imported into the application using a spreadsheet. Consequently, when you import item data from a spreadsheet, the items are all imported into the particular item class for which the item format was defined. You can edit an import format after it is created.

While all the mandatory attributes will be automatically added to the import format, users can also pick and choose which other attributes to be included as part of the import format.

While setting up the import formats, you can selectively choose which item attributes to be included. All of these attributes defined in an import format will get added to the ADFdi spreadsheet when it is generated while adding the items to an item batch.

You can also optionally inherit import formats defined for the parent item classes while creating a new import format. This will inherit all the attributes of the parent item class import format to the import format being defined. This helps in maintaining the various import formats across the item class hierarchy.

Additionally you can mark an import format as inactive or active. This helps to selectively hide or display the import formats for downloading the ADFdi spreadsheet until the setup of the import format is complete.

12 Define Audit History for Product Management

Audit History for Product Management: Overview

Before you can use audit policies in Oracle Fusion Product Hub, you must complete this task in the Setup and Maintenance work area:

Task	Description
Manage Audit Policies	Manage Audit Policy task lists Product Hub business objects and their attributes available for audit. You can re-calibrate your audit policy to suit changing business needs.

Audit Trail: Explained

Audit Trail is a functionality that allows users to identify a collection of Product Hub business objects (ex: Items) as business critical to be tracked for data changes (ex: marking the item as purchasable) and object definition changes (ex: adding an EFF). In other words, an audit policy is a collection of Product Hub business objects and the respective attributes that require continuous monitoring of changes to it's data and definitions. Users can scrutinize change history on-line or off-line by exporting it into spreadsheet applications. In order to audit changes, an audit policy must be in place.

The Manage Audit Policy task lists all the Product Hub business objects and their attributes available for audit. You can define your audit policy by flagging the objects their attributes of your change-tracking interest. For auditing descriptive flexfields, select the **Additional Attributes** check box.

Note that you can make adjustments to your audit policy as and when your business needs change.

When you make changes to Product Hub business objects listed in the audit policy, then the application logs who (user) changed what (add or update or delete) and when (date and time).

These are the data changes to business objects that cause a change to be logged:

- Data inserts
- Data updates
- Data deletions

The above changes will be logged only for the objects and attributes that are members of the audit policy.

Note that Audit trail is not the same functionality as the New Item Request or Change Order functionality. While NIR and CO are approval oriented changes, Audit Trail involves the auto-logging of data change events that were triggered by any functionality including NIR and CO.

The following table lists the search parameters used and the outcome of their selection in the detailed report:

Search Parameter	Result of Selection
Business Object Type	• Narrows the search results to that specific business object within the selected product. • Enables the Show Attribute Details check box to display.
Include Child Objects	Displays all the child objects that were listed under the business object when audit was set up. For example, Items business object includes several items as child objects. **Note:** Displays the objects at the immediate parent-child level only. To view the children at subsequent levels, select the child object as the business object type and search again.
Show Attribute Details	• Displays the name of each attribute that users either created, updated or deleted, and the corresponding old and replaced values. • Enables the attribute list so that users can select a specific attribute and view its change record. • Enables the Show Extended Object Identifier Columns check box.
Show Extended Object Identifier Columns	Displays the instances (contexts) in which the business object was used. The context values identify the objects and the transactions in which they were used. Each context is unique and assigns a unique description to the business object. For example, if an item is made purchasable in a child organization, then the child organization is listed as the context.

You can access the Create Data Audit History Reports task to view the tracked changes on-line or export them as a CSV file for off-line review using spreadsheet applications.

13 Define Product Lifecycle Management

Setting up Product Lifecycle Management: Roadmap

This topic provides an overview of the tasks required to implement Oracle PLM in the **Setup and Maintenance** work area.

Tasks	Description
1. Access the list of setup tasks	Use the **Getting Started** page in the **Setup and Maintenance** work area to access the complete list of setup tasks, descriptions of the options and features that you can select when you configure the offering, and lists of associated business objects and enterprise applications.
2. Configure the offerings you want to implement	Enable the offerings that you want to make available to implement. Select the following options under the Product Management offering: • Product Requirements and Ideation Management • Concept Design Management • Product Lifecycle Portfolio Management • Product Development
3. Create implementation projects to generate task lists per project	Create one or more implementation projects for the offerings and options that you want to implement. This generates task lists for each project. The application implementation manager can customize the task list and assign and track each task.
4. Complete Common Applications Configuration for Product Management	Define Common Applications Configuration for Product Management offering: 1. Define Initial Users 2. Define Users and Security 3. Define Extensions for Product Management 4. Define Transactional Business Intelligence Configuration
5. Configure Target Systems (Optional)	Configure a Product Lifecycle Management (PLM) system - Oracle Agile PLM or Oracle Agile Engineering Data Management (EDM) - to integrate with Oracle Innovation Management.
5a. Configure Agile PLM	The following tasks are required to integrate Oracle Innovation Management with Agile PLM only. 1. Configure security certificates. 2. Enable Security Assertion Markup Language (SAML) web services in Agile PLM. 3. Configure web service connections in Enterprise Manager. 4. Create Oracle Innovation Management users in Agile PLM or configure Agile PLM to use the same Lightweight Directory Access Protocol (LDAP) server as Oracle Innovation Management. 5. Enable Oracle Innovation Management attributes in Agile PLM. 6. Add Oracle Innovation Management attributes to required privileges in Agile PLM. 7. Configure External References Application and Subclass in Agile PLM. 8. Enable required privileges for Oracle Innovation Management users to create reference objects in Agile PLM. **Note:** If you are integrating Oracle Innovation Management to Agile PLM (9.3.4 or above), you also require Weblogic Suite or Weblogic Suite for Oracle Applications.

Tasks	Description
5b. Configure Agile EDM	The following tasks are required to integrate Oracle Innovation Management with Agile EDM only. 1. Configure Agile EDM web services 2. Configure SSO for Agile EDM web services a. Set up Agile EDM LDAP b. Create Wallet c. Attach Web Service Policies to Agile EDM web services 3. Attach Web Service Client Policies for Oracle Innovation Management 4. Customize Agile EDM setup Custom changes include: ○ Configure database objects in SQL ○ Import the Loader file ○ Set up File Vault ○ Configure External References
6. Configure Oracle Innovation Management for Integration (Optional)	Configure Oracle Innovation Management to integrate with target PLM systems or Oracle Product Development. 1. Register Agile PLM or Register Agile EDM System Register Agile EDM File Server 2. Manage Target System
7. Implement Oracle Innovation Management and Product Development	Use the implementation projects to assign and track implementation tasks for the following task lists: • Define Product Innovation • Define Product Development

Related Topics

- Configuring Agile PLM: Overview
- Configuring Agile EDM: Overview

Configure Oracle PLM for Integration

Overview

The tasks Register Agile PLM, Register Agile EDM, Register Agile EDM File Server, and Manage Target System are not module-specific. Complete these optional tasks as required to integrate external PLM systems with Oracle Innovation Management.

Note: You must first complete the common application setup and configuration tasks for Product Management in the **Setup and Maintenance** workspace.

Task List	Description
Register Agile PLM	This task is a prerequisite for the Manage Target System task, and required to connect Oracle Agile Product Lifecycle Management (Agile PLM) to Oracle Innovation Management.
Register Agile EDM	This task is a prerequisite for the Manage Target System task, and required simultaneously with the Register Agile EDM File Server task, to connect Oracle Agile Engineering Data Management (Agile EDM) to Oracle Innovation Management.
Register Agile EDM File Server	This task is a prerequisite for the Manage Target System task, and required simultaneously with the Register Agile EDM task, to connect Oracle Agile Engineering Data Management to Oracle Innovation Management.
Manage Target Systems	Use this task to configure connections between Oracle Innovation Management and external Product Lifecycle Management (PLM) systems, or Oracle Product Development.

Register Agile PLM: Explained

This task integrates Oracle Agile PLM with Oracle Innovation Management.

Note: You must first complete the common application setup and configuration tasks for Product Management in the Setup and Maintenance workspace.

The typical Agile PLM endpoint is {protocol}://{host}:{port}/CoreService/services/{service}?wdsl

The values for protocol, host, port, and context root {CoreService} need to be entered into the corresponding filed for registering the target endpoint in your Cloud application using the Setup and Maintenance workspace.

Use the Register Agile PLM task to configure server details of the target system (Agile PLM) intended for use, as tabulated here.

Value	Description
*Server Protocol	Select from the menu options (**http** or **https**)
*External Server Host	Enter the Agile PLM system name. Example: <plmserver>. oracle.com
*External Server Port	Example: 7001

The following table details the Associated Modules and their Context Root Values.

Module	Context Root Value
AgileA9WebClient	Default is **Agile**. You can change this during Agile PLM installation.
AgileA9CoreService	Enter the SAML web service reference value here that matches the value defined in the file **application.xml**. `<context-root>CoreService</context-root>`

Register Agile EDM System: Explained

The **Register Agile EDM System** and **Register Agile EDM File Server** tasks are prerequisites for the **Manage Target System** task, to connect Oracle Agile EDM to Oracle Innovation Management.

Complete the **Register Agile EDM System** task to configure server details of the target Agile EDM system intended for use. This task enables the sharing and display of Agile EDM data in the Oracle Innovation Management environment, in use cases involving relationships, links, and quick view.

Value	Description
*Server Protocol	Select from the menu options
*External Server Host	Enter the system name for the Agile EDM system. Example: <plmserver>. oracle.com
*External Server Port	Example: 7001

The following table describes the Associated Modules.

Module	Context Root Value
ORA_ AGILEE6CORESERVICES	Example: CoreService

Register Agile EDM File Server: Explained

The **Register Agile EDM System** and **Register Agile EDM File Server** tasks are prerequisites for the **Manage Target System** task, to connect Oracle Agile EDM to Oracle Innovation Management.

Complete the **Register Agile EDM File Server** task to configure server details of the target Agile EDM system intended for use. This task enables transfer of file attachments directly associated with business objects in Oracle Innovation Management, to Agile EDM.

Value	Description
*Server Protocol	Select from the menu options
*External Server Host	Enter the system name for the Agile EDM system. Example: <plmserver>. oracle.com
*External Server Port	Example: 7001

The following table describes the Associated Modules.

Module	Context Root Value
ORA_ AGILEE6STREAMINGFILESERVICES	Example: StreamingFileService

Manage Target System: Explained

Use the **Manage Target System** task to configure data connections, based on web services, between Oracle Innovation Management and target PLM systems.

- Use the **Manage Connections** task to define template-based connectors that enable access between Oracle Innovation Management and target PLM systems or Oracle Product Development.
- Use the **Manage Mapping to External System** task to configure the display and usage of target PLM or Oracle Product Development Cloud entities and their attributes within Oracle Innovation Management.
- Use the **Manage Mapping to Innovation Management** task to map Oracle Innovation Management entities and attributes to target PLM or Oracle Product Development Cloud entities, depending on the connector used.

Related Topics

- Integration with External Systems: Points to Consider

Manage Connections: Points to Consider

Use the **Manage Connections** task to configure multiple target PLM system connections, and activate any one at a given time.

Preconfigured connector templates are available for Agile PLM, Agile EDM, and Product Development configurations. The connector templates are easily identified by their names (beginning with **ORA_**) as well as their descriptions in the **Connector Type** column.

Duplicate the connector template

Duplicate any one of the existing connector templates to create a connector.

Note: You cannot edit a connector template directly.

To duplicate a connector template:

1. Select it and click the **Duplicate** icon or use the **Duplicate** option from the **Actions** menu.
2. Name the newly created connector.

> **Note:** The connector name cannot begin with **ORA_**.

Customize the Agile PLM connector

To integrate Agile PLM with Oracle Innovation Management, start by duplicating the **ORA_A9** connector template. Customize and configure the newly created connector using the **Edit** option from the **Actions** menu.

Alternatively, select the newly created connector and click the **Edit** icon.

Value	Description
Client URL	URL of the Oracle Agile PLM Web Client
*Object Create Batch Size	Minimum value is 1. The maximum value depends on the hardware configuration used. If this value is high, the web service payload is too large.
*Object Read Batch Size	Define how many objects are read with the object ID from the Agile PLM system in one chunk. The minimum value is 1. The maximum value depends on the hardware configuration used. If this value is high, the web service payload is too large.
*Maximum Number of Search Results	Define the maximum number of records to be retrieved from a query, irrespective of the number of records that match the search criteria. Minimum value is 1. The maximum value depends on the hardware configuration used. If this value is high, the web service payload is too large.
*Buffer Size for Attachments in MB	Example: 10
*Buffer Size for Thumbnails in MB	Example: 10
ECO Usage	Define the engineering change order processing type to use when transferring items or item structures to PLM. If you select an option other than **User Selection**, the end user is not given an option on the engineering change order action when converting a concept component in Oracle Innovation Management to an item in the external PLM system.
Overwrite Web Service URL	The check box is enabled by default, and the predefined web service endpoint is used to access an Agile PLM system which is not SAML-enabled.

Value	Description
	Disable the **Overwrite Web Service URL** check box to engage the Web Service URL defined through the **Register Agile PLM** task.
Web Service URL	If you enable the **Overwrite Web Service URL** check box, ensure that the **Web Service URL** you add points to a SAML-enabled Agile PLM system. Example: http://<plmserver>:<port>/CoreService/services **Note:** If **Overwrite Web Service URL** is enabled, you can verify if the URL provided is valid, by opening the URL in a browser. If the URL is incorrect, the WSDL file does not open in the browser. You must then change the value in **Web Service URL**.

Customize the Agile EDM connector

To integrate Agile EDM with Oracle Innovation Management, start by duplicating the **ORA_E6** connector template. Customize and configure the newly created connector using the **Edit** option from the **Actions** menu.

Alternatively, select the newly created connector and click the **Edit** icon.

Value	Description
*Object Create Batch Size	Minimum value is 1. The maximum value depends on the hardware configuration used. If this value is high, the web service payload is too large.
*Object Read Batch Size	Define how many objects are read with the object ID from the Agile PLM system in one chunk. The minimum value is 1. The maximum value depends on the hardware configuration used. If this value is high, the web service payload is too large.
*Buffer Size for Attachments in MB	Example: 10
*Buffer Size for Thumbnails in MB	Example: 10
ECO Usage	Define the engineering change order processing type to use when transferring items or item structures to PLM. If you select an option other than **User Selection**, the end user is not given an option on the engineering change order action when converting a concept component in Oracle Innovation Management to an item in the external PLM system.
*Daemon Host	Details of the currently connected PLM server. Example: <plmserver>. oracle.com

Value	Description
*Daemon Port	Example: 16000 Use the **Test Connection** button to validate the daemon connection during the configuration process itself.
*Application	Example: fusionref
*File Vault	Default value: fusion For more information on the File Vault, refer to the section Customizing Agile EDM Setup: Explained.
*Client URL	Link to the Agile EDM Java Client. Test the URL using the **External URL** icon.
Overwrite Web Service URL	The check box is enabled by default, and the predefined web service endpoint is used to access an Agile EDM system. Disable the **Overwrite Web Service URL** check box to engage the Web Service URL defined through the **Register Agile PLM** task. **Note:** If **Overwrite Web Service URL** is enabled, you can verify if the URL provided is valid, by opening the URL in a browser. If the URL is incorrect, the WSDL file does not open in the browser. You must then change the value in **Web Service URL**.
*Document File Service URL	Used by the **Register Agile EDM File Server** task.
*Metadata Service URL	Core web service URL used by the **Register Agile EDM** task.
*Business Object Service URL	Core web service URL used by the **Register Agile EDM** task.
*Configuration Service URL	Core web service URL used by the **Register Agile EDM** task.
*Document Management Service URL	Core web service URL used by the **Register Agile EDM** task.

Customize the Product Development connector

To integrate Oracle Product Development with Oracle Innovation Management, start by duplicating the **ORA_PD** connector template. Customize and configure the newly created connector using the **Edit** option from the **Actions** menu.

Alternatively, select the newly created connector and click the **Edit** icon.

Use the tasks **Manage Item Organizations** and **Manage Item Classes** in the Product Management offering to create and manage item classes, item organizations, and item templates. Refer to the Oracle SCM Cloud Implementing Product Information Management guide for information.

Value	Description
*Default Organization	Select from a list of organizations in the menu. Example: Vision Germany
*Default Item Class	Select from a list of item classes in the menu. Example: Root Item Class
*Default Item Template	Select from the menu. Example: Configured Item

Manage Mapping to External System: Points to Consider

Use the **Manage Mapping to External System** task to define entities, entity subtypes (subclasses), and their relationships to corresponding entities in the external PLM system.

The configuration of entities in this task determines their availability and usage in all Oracle Innovation Management integration use cases.

Edit Base Entities

The connector template you use contains a nonnegotiable list of base entities. You cannot add an entity that is absent from the list.

Note: You must duplicate a template connector and modify the copy. The template connectors are not modifiable.

1. Select the required connector from the **Connector Name** menu to view entities associated with it.
2. Click the **New** icon or **New** option from the **Actions** menu in the **Entity** pane to add entities from a list specific to each connector.

Edit or Remove Entity Subtypes

Some entities may contain subtypes (also called **subclasses** in Oracle Agile PLM) that you can configure for additional value in an entity definition, and to appear in the **Quick View** of a PLM item in Oracle Innovation Management.

Caution: Removing subtypes deletes all related records like assigned attributes and mappings. Deleting subtypes from an active connector can cause errors in active sessions.

Select an entity and click the **New** icon or **New** option from the **Actions** menu in the **Entity** pane, to add subtypes which are defined in the Agile PLM application for the selected base entity.

Edit an Entity

Select an entity and click the **Edit** icon or **Edit** option from the **Actions** menu in the **Entity** pane, to modify the entity name or its **auto number** source.

Note: The **auto number** source is applicable to the Agile PLM connector only. Define the value in the Oracle Agile PLM Java Client for object classes, to allow newly created objects in Agile PLM to be automatically numbered.

Define Individual Attributes of Entities

Among other options, decide the order of visibility of each attribute, and if it can be found in the Oracle Innovation Management search options.

1. Select an entity from the **Entity** pane to view its attributes in the **Attribute** pane.
2. Click the **New** icon or **New** option from the **Actions** menu in the **Attributes** pane to add attributes from a list predefined per entity.
3. Select an attribute and click the **Edit** icon or **Edit** option from the **Actions** menu in the **Attributes** pane to edit it.

Note: Attributes common to all subtypes, configured at the entity level in Oracle Innovation Management, are also known as **Title Block** or **Page Two** attributes in the Agile PLM Java Client. Attributes particular to some subtypes, configured at the subentity level in Oracle Innovation Management, are also known as **Page Three** attributes in the Agile PLM Java Client.

Value	Description
Attribute Name	Enter the name of the field as intended for display for users. The modifiable name is the label of the attribute seen in Oracle Innovation Management, such as in **Quick View** or the search results table.
API Name	The auto-generated, unique system-wide identifier for objects in Oracle Agile PLM. API Name is a read-only value field.
Data Type	A predefined value indicating the type of attribute. Values include: SINGLELIST_ DISPLAYVALUE SINGLELIST_ KEY MULTILIST_ DISPLAYVALUE INTEGER, DATE, STRING, MONEY_AMOUNT, MONEY_ CURRENCY DOUBLE, UNITOFMEASURE_ AMOUNT UNITOFMEASURE_ UNIT.
Data Type Length	A predefined value indicating the number of bytes that can be entered in the field.
Scale	Enter the number of digits required after the decimal point (in a numeric field only). This setting must be greater than or equal to zero (0).
Searchable Indicator	Enable or disable the attribute from being added as search criteria in the Oracle Innovation Management search options for **Parts**, **Items**, **Designs** and **Relationships**. Attributes from relation entities like part structure are not searchable. **Important:** When using the Agile EDM connector, and the **Searchable Indicator** option is enabled on Boolean data type attributes of **Items**, the **Advanced Search** function in Oracle Innovation Management may not display accurate records.

Value	Description
Search Result Sequence	Indicate the column order in which you require the attribute field to appear in search results within Oracle Innovation Management. **Note:** An empty value or a value less than 0 implies that the attribute is not displayed.
Quick View Sequence	Indicate the row order in which you require the attribute field to appear in the **Quick View** box that is displayed on hovering over a PLM item within Oracle Innovation Management. **Note:** An empty value or a value less than 0 implies that the attribute is not displayed.
Basic Search Sequence	Indicate the row order in which you require the attribute field to be displayed as search criteria when the **Basic Search** function is in use. This field is applicable only to the Agile EDM connector template. **Note:** An empty value or a value less than 0 implies that the attribute is not displayed.
Advanced Search Sequence	Indicate the row order in which you require the attribute field to be displayed as search criteria when the **Advanced Search** function is in use. This field is applicable only to the Agile PLM connector template. **Note:** An empty value or a value less than 0 implies that the attribute is not displayed.
Default Value	Assign a default value to be used for the attribute field in Oracle Innovation Management, if the user does not provide a value. Default values are relevant in the following use cases: • In search results, when no value is defined in the Agile PLM system • When creating objects in the Agile PLM system. For example, all attributes denoting currency have a default value of **USD**, as an Oracle Innovation Management user cannot specify the currency type. In Oracle Agile PLM, the currency value of a business object obtained from Oracle Innovation Management is automatically appended with the value **USD**.
Is Hover Over	Use the check box to enable or disable the attribute from being displayed as a **Quick View** attribute in Oracle Innovation Management.
Is Hyperlink	Use the check box to enable or disable the attribute from being linked directly to its source object in the external PLM system. For thumbnail attributes, a link to open the thumbnail image is provided.

Value	Description
Is Auto Number Source	Use the check box to indicate the key attribute having an auto number source. This field is applicable only to the Agile PLM connector template. To create an object of an entity in Agile PLM, you must define an auto number source value.

Manage Mapping to Innovation Management: Points to Consider

Use the **Manage Mapping to Innovation Management** task to configure value transformations for handling data across the data formats of external PLM systems, Oracle Product Development, and the data formats of Oracle Innovation Management.

Mapping Sets

Each mapping set per connector template represents a use case that filters the data model of Oracle Innovation Management to fulfill unique scenario requirements.

Note: You cannot edit the name of a mapping set, or create a mapping set.

The following table describes the mapping sets associated with the connector templates.

Mapping Set	Use Case
AUCommonReferences	Control entities and type of objects that can be linked through the **Relationships** table
CDMCopyItem	Control entities when converting an item to a concept component The item can belong to either an external PLM system or Oracle Product Development.
CDMCreateItem	Control entities when converting a concept component to an item
CDMDefault	Determine how **Designs** are linked through the **Designs** table
CDMLinkItem	Control entities when linking them through to the concept structure
CDMProposalProjects	Link projects from Agile PLM to proposals in Oracle Innovation Management **Note:** This mapping set is not applicable to the Agile EDM and Oracle Product Development connectors.
E6Attachment	Determine what type of **Document** is created to hold the file attachments copied from Oracle Innovation Management to Agile EDM during a **Convert to Item** operation. **Note:** This mapping set is not applicable to the Agile PLM and Oracle Product Development connectors.

Mapping Set	Use Case
VINItem	Control entities in the graphical display of concept structure.

View and Edit Entity Mappings

Select a connector and a mapping set to view and edit the entity mappings associated with the mapping set.

Note: You cannot add an entity that is absent from the list.

1. To add an entity to the active mapping set, click the **New** icon or **New** option from the **Actions** menu in the **Innovation Management Entity Mappings** pane.
2. To modify the **Innovation Management Entity Name**, select an entity mapping and click the **Edit** icon or **Edit** option from the **Actions** menu in the **Innovation Management Entity Mappings** pane.
   You may edit the **Entity** name in the following use cases:
   - Disable linking a Project from Agile PLM into Innovation Management if this use case should not be supported.
   - Change the subclass of part to be used when converting components to items in Agile PLM.
   - Limit the type of objects to be linked through the relationships table or rename the object names to be shown in the list.

   Caution: Changing the name incorrectly can result in errors in the data model.
3. View, add, edit, or delete attributes of the selected entity mapping.
   a. To view entity attributes in the **Attribute** pane, select an entity mapping from the **Innovation Management Entity Mappings** pane.
   b. To add attributes from a list predefined per entity, click the **New** icon or **New** option from the **Actions** menu in the **Attributes** pane.
   c. To edit an attribute, select it and click the **Edit** icon or **Edit** option from the **Actions** menu in the **Attributes** pane.

Value	Description
Attribute Name	Define the **Attribute** name as it is to be used in Oracle Innovation Management. Select from the list of attributes provided from the data definition in **Manage Mapping to External System** for the selected entity. In the Agile PLM or Agile EDM systems, the names may differ. Example: **Part Name** is used for the Agile PLM attribute (Part) **Number**. In Agile EDM, **Part Id** is used instead.
Innovation Management Attribute Name	The name of the attribute as known in Oracle Innovation Management.
Innovation Management Data Type	Value indicating the type of Oracle Innovation Management object attribute: DATE, DOUBLE, INTEGER, LONG, BOOLEAN, DECIMAL, STRING, JBO_NUMBER, JBO_DATE.
Innovation Management Type Length	Value indicating the number of numeric places or characters that can be entered in the field.

Value	Description
Innovation Management Type Scale	Enter the number of digits required after the decimal point (in a numeric field only). This setting must be greater than or equal to zero (0).
From Converter	Select from a list of values detailed in the section Handling Custom Conversions Between Data Types.
To Converter	Select from a list of values detailed in the section Handling Custom Conversions Between Data Types.

Handling Custom Conversions Between Data Types

Use the **From Converter** and **To Converter** options for handling custom conversions between data types in Oracle Innovation Management and an external PLM system.

From and To Converter Values	Converter Descriptions
oracle. apps. scm. productCollaboration. auIntegration. configuration. uiModel. AUConverterFactory $PositiveIntegerConverter. class	Converts negative integer values to 0; positive values are left intact.
oracle. apps. scm. productCollaboration. auIntegration. configuration. uiModel. AUConverterFactory $TolerantStringIntegerConverter. class	Converts strings which are numeric into positive integers (see PositiveInteger converter) and nonnumeric strings to 0 (as integer).
oracle. apps. scm. productCollaboration. auIntegration. configuration. uiModel. AUConverterFactory $TolerantStringDoubleConverter. class	Converts strings which are numeric into positive double values (see PositiveInteger converter) and nonnumeric strings to 0 (as double).
oracle. apps. scm. productCollaboration. auIntegration. configuration. uiModel. AUConverterFactory $TolerantStringBigDecimalConverter. class	Converts strings which are numeric into positive decimal values (see PositiveInteger converter) and nonnumeric strings to 0 (as decimal).
oracle. apps. scm. productCollaboration. auIntegration. configuration. uiModel. AUConverterFactory $BooleanYesNoConverter. class	Converts a Boolean true value to yes and a false to no.

Define Product Innovation

Overview

This topic outlines the prerequisites and default tasks required to define Product Innovation in the **Setup and Maintenance** workspace.

Prerequisites

You must first complete the common application setup and configuration tasks for Product Management.

In the **Setup and Maintenance** workspace, use the **Search: Tasks** panel to find individual tasks, and click the **Go to Task** icon in the **Task Search Results** page to view and edit individual tasks. Navigate to the **Define Product Innovation** task list.

The configuration tasks detailed here for Oracle Product Innovation are independent of the tasks for Oracle Product Development.

Task List	Description
Define Product Requirements and Ideation Management • Manage Product Idea Classes • Manage Product Idea Statuses • Manage Product Requirements Classes • Manage Product Requirements Statuses • Manage Product Requirements and Ideation Lookups	Use this task list to configure ideas, and requirements specifications.
Define Concept Design Management • Manage Product Concept Classes • Manage Product Concept Component Classes • Manage Product Concept Statuses • Manage Product Concept Lookups	Use this task list to configure concepts and concept components.
Define Product Lifecycle Portfolio Management • Manage Proposal Statuses • Manage Product Portfolio Classes • Manage Portfolio Statuses • Manage Product Portfolio Planning Periods • Manage Product Portfolio Lookups • Manage Portfolio and Product Rule Sets	Use this task list to configure proposals and portfolios.

Class Management in Oracle Innovation Management: Explained

Class Management is the definition of classes, class hierarchies, and class codes to establish reusable business objects. This topic introduces Class Management for Ideas, Requirements Specifications, Concepts, and Portfolios in Oracle Innovation Management.

The tasks addressed in this topic are:

- Manage Product Idea Classes
- Manage Product Requirement Classes
- Manage Product Concept Classes
- Manage Product Concept Component Classes
- Manage Product Portfolio Classes

Class

Use classes and subclasses to define business object types.

When you create a class, the class name that you provide is stored and used as an object type, at the time of business object creation.

Select a class to edit the class name and description. The **Object Creation Allowed Indicator** in the **Edit Class** page controls the possibility of creating business objects of the current class value. Select the indicator to ensure that the class name is available to use as a type when creating a business object.

Class Code

A Class Code is a constant and unique value associated with each class across Oracle Innovation Management and associated PLM systems.

You can define a class code only once, when creating a class, as it is used during integration with external systems, and is required to remain a consistent internal code.

Note: You cannot edit the class code after class creation. However, you can delete the existing class, if it was not already used to create an object, and create a class with the required class code.

Class Hierarchy

Class Hierarchy enables you to group and search for classes, based on class values or business objects types.

Select a class in the **Manage Class** page to view the class hierarchy in the **Edit Class** page.

Innovation Management Lookups: Explained

Oracle Innovation Management provides lookups that you can use to define values in Requirements, Concept, and Portfolio modules during implementation.

This topic addresses the following tasks:

- Manage Product Requirements and Ideation Lookups

- Manage Product Concept Lookups
- Manage Product Portfolio Lookups

Use standard lookups in Oracle Innovation Management to define values such as type, status, priority, scope, compliance, resource pool, metrics, lifecycle phases, and rank.

Application statuses are also standard lookups. You can execute the following tasks as lookup tasks:

- Manage Product Idea Status
- Manage Product Requirement Status
- Manage Product Concept Status
- Manage Proposal Status
- Manage Portfolio Status

The following table details the standard lookups available in Oracle Innovation Management.

Lookup types with customization level **System** do not allow you to add or delete lookup codes. However, you can edit the **Meaning** and **Description** fields of the existing lookup codes.

Application	Module	Lookup Type	Lookup Code Meaning	Customization Level
Product Requirements and Ideation Management	Ideas	Status	Pending, Accepted, Rejected, Implemented, In Progress, Review	User
	Requirements	Associated Product	Common Services, Product Concept Design, Product Lifecycle Portfolio Management, Product Requirements and Ideation Management	User
		Requirement Fulfillment	Yes, No	User
		Requirement Priority	Must Have, Nice to Have, Should Have	User
		Requirement Scope	Yes, No	System
		Requirement Status	Pending, Submitted, Released	System
		Comment Status	Open, Closed	System
Product Concept Design	Concepts	Proposal Business Unit	Business Unit	User
		Concept Product Type	New Product, Technology Evaluation, Product Redesign	User

Application	Module	Lookup Type	Lookup Code Meaning	Customization Level
		Component Product Type	Documentation, Electrical, Mechanical, Software, Tooling	User
		Concept Status	Draft, Submitted Approved, Converted	System
		Cost Category	Development, Production	System
		Cost Status	Actual, Projected	System
		Proposal Cost Types	Fixed, Labor, Material, Variable	System
		Funding Request For	Concept, Feasibility, Product, Prototyping	User
		Market Strategy	Differentiation, Neutralization, Optimization, Others	System
		Primary Justification	Enter New Markets, Enter New Regions, Exit Market, Expand Market Share	User

Related Topics

- Lookups: Explained
- How can I edit lookups?
- Managing a Standard Lookup: Example

Manage Planning Periods: Explained

Product portfolio planning period is the time period during which the portfolio objects collect data for analysis. Before defining a planning period, create planning period units using the **Manage Product Portfolio Planning Period** task in the Setup and Maintenance work area.

Provide start date, number of units and specify the duration, which can be either monthly or quarterly, to create planning period time units. The planning period time units are created with default labels. You can add time units for a previously created planning period unit by providing the number of units before the first unit or by providing the number of units after the last unit.

Note: After you have created a planning period unit specifying a duration, you cannot make further changes except for changing the names of the units.

To create a planning period, provide the start date planning period unit, end date planning period unit, and select the planning period unit from the choice list.

Impact of planning period and planning period units:

- The columns in the **Manage Resource Capacity** table is dynamically created and displayed based on the number of planning period units defined in the planning period for the portfolio.
- The timelines in the Schedule, Resource, and Launch charts are decided based on the number of planning period units defined in the planning period for the portfolio.

Manage Product Portfolio Metrics: Explained

Oracle Innovation Management offers you a list of predefined metrics that you can use for measuring portfolio performance. You can also set the minimum and maximum threshold values for these metrics in accordance with business requirements.

Metrics can be defined in the **Manage Product Portfolio Metrics** task within the **Setup and Maintenance** work area. Metrics marked as **Enabled** are made available for selection when you add metrics using **Actions > Define Metrics**. Enabled metrics that are also marked as **Default** appear in the locations described here.

Default metrics for	Appear here
Product proposals	In the **Proposal Metrics** selection dialog that opens when you click the **123** icon during proposal creation.
Products	As column headers in the **Elements** table.
Portfolios	As column headers in the **Scenarios** table.

Note: A portfolio is a grouping of product lines, most often within company Business Units. All proposals related to product lines within a portfolio should ideally be evaluated by a common set of metrics so that the evaluations are consistent and objective. If you define consistent metrics for a portfolio and proposals within that portfolio, portfolio metrics can be rolled up from proposals as needed.

Metrics are of three types:

- **Derived**- Calculated using fixed formulas. (Examples: Return On Investment, Internal Rate of Return)
- **Derived and rolled up** - Calculated using fixed formulas and derived from certain values that you enter. (Examples: Net Present Value, Actual Cost, Projected Cost).
- **User entered** - Entered by the user in the user interface. (Examples: Impact, Alignment, Risk Numeric)

The following portfolio metrics can be configured using Data Composer:

- Resource Value Index
- Cost Value Index
- Expected Commercial Value
- Resources Productivity Index
- Cost Productivity Index
- Portfolio Strategic Fit

Related Topics

- Net Present Value: How It Is Calculated
- Internal Rate of Return: How It Is Calculated
- Break Even Time: How It Is Calculated
- Payback Period: How It Is Calculated
- Customize Innovation Management: Explained

Manage Portfolio and Product Rule Sets: Explained

Define portfolio and product rule sets to associate multiple rules together, and assign them to portfolio classes.

Type of Rule Set and Rule	Description
Validation	Define validation conditions based on attribute values. predefined business rules Logical expression Validation condition User message
Assignments	Define the value of an attribute, based on the specified condition. Rules are executed in the order of their sequence in the rule set. Target business entities are: • Portfolio General Information • Product • Scenario
Composite	Aggregate rules sets that operate on different attribute groups. Composite rule sets contain both validation and assignment rule sets.

Related Topics

- Rules and Rule Sets: Explained
- What's a rule set?

Define Product Development

Overview

This topic outlines the prerequisites and optional tasks required to configure Oracle Product Development in the **Setup and Maintenance** workspace.

You must first complete the common application setup and configuration tasks for Product Management.

In the **Setup and Maintenance** workspace, use the **Search: Tasks** panel to find individual tasks, and click the task name in the **Task Search Results** page to view and edit individual tasks. Navigate to the **Define Product Development** task list

The configuration tasks for Product Development span four functional subareas:

- Item Organizations
- Items
- Change Orders
- Product Development Setup

The Product Development configuration tasks are detailed in the following table.

Task List	Description
Define Item Organizations for Product Management • Manage Item Organizations • Manage Organization Trees	For more information, refer to the Oracle SCM Cloud Implementing Product Management guide.
Define Items • Manage Item Classes • Manage Item Attribute Groups and Attributes • Manage Lifecycle Phases	For more information, refer to the Oracle SCM Cloud Implementing Product Management guide.
Define Change Orders • Manage Change Order Types • Manage Change Order and New Item Request Header Descriptive Flexfields • Manage Change Order Entry and Exit Rule Sets	For more information, refer to the Oracle SCM Cloud Implementing Product Management guide.
Define Product Development • Manage Structure Component Descriptive Flexfields • Manage Product Development Lookups	Use this task list to configure items, manufacturers, manufacturers parts, and change orders.

Product Development Components: How They're Configured

This topic describes the hierarchy of tasks required to set up Oracle Fusion Product Development.

Item Organizations and Items

The Product Development offering includes two mandatory task bundles: **Item Organizations** and **Items**.

Note: For more information, refer to the Oracle SCM Cloud Implementing Product Management Guide.

Change Orders

The **Change Orders** set of tasks are optional, and you do not have to configure them for Oracle Product Development to operate. However, if your installation requires routing change orders for items, manufacturer items, and assemblies, ensure that you configure this set properly. The **Change Orders Class** and **Change Order Types** must be created for your Product Development installation to have change orders available.

Product Development Configuration

The Product Development Configuration tasks provide additional refinement to your Product Development installation. This task bundle does not originate from Oracle Product Hub.

Related Topics

- Change Orders: Overview
- Item Classes: Explained
- Change Order Approval Process: Explained
- Revisions: Explained

Manage Change Order Entry and Exit Rule Sets: Explained

This topic describes how to manage Change Order entry and exit criteria.

You can configure what fields must appear as Required Fields when a change order enters or exits a workflow state, by using either of the following tasks:

- Manage Change Order Entry and Exit Rule Sets (in the Setup and Maintenance work area)
- Manage Item Rule Sets (in the Setup and Maintenance work area under the Product Management offering)

This could be any field in the change item's General Information page, Affected Items table, Attachments table, Relationships table, or Extensible Flexfield. This could also include fields on the item object or item BOM/AML. For example, a rule set that enforces need-by date value to be mandatory for high priority change orders.

Using the Manage Item Rule Sets task, you can also enforce the value of a change order attribute based on another attribute. For example, if the user selects Reason as Quality, then the priority of change order can be enforced as High. If the user selects the priority as Low, then change order can be restricted from progressing to the next status.

Additional Examples:

- A rule set specifies that when a Change moves from **Pending** to **Submitted** state, all items in the Engineering Change Order (ECO) should have a description filled out. To ensure this, mark the **Description** field as a required field.
  For each rule set, use the **Type** options to filter the fields by type. Select the fields that should appear as required fields. In addition to setting up criteria for the whole workflow, you can specify criteria for a specific status within the workflow.
- You can determine required fields and approvals based on **Change** and **Affected Item** attributes.
  Examples:
  - If **Requires Implementation Plan** is **Yes**, ensure text is entered in a field called **Implementation Plan**.
  - If **Estimated Cost** is > 5000, require Finance and VP approvals.
  - If **Impacts Safety** is **Yes**, ensure Compliance approval.

Product Development Lookups: Explained

Use the **Manage Product Development Lookups** task in Setup and Maintenance to configure standard lookups (including category, status, and lifecycle phase) for Oracle Product Development.

Note: Lookup types with customization level **System** do not allow you to add or delete lookup codes. However, you can edit the **Meaning** and **Description** fields of their existing lookup codes.

Application	Module	Meaning (Lookup)	Meaning (Codes)	Customization Level
Product Development	Items	Approved Manufacturer List Status	Preferred, Alternate, Obsolete	User
		Manufacturer Part Status	Active, Inactive, Pending	User
		Manufacturer Status	Active, Inactive, Pending	User
	Change Order	Change Priorities	High, Low, Medium	User
		Change Reasons	Quality, Safety, Safety	User
Common References	Common	Class Family Name	Design, Concept, Concept Component, Portfolio, GSCC Placeholder, Idea, Requirement	User
		Class Policy	Abstract Only, Concrete Only, Leaf Class, Standard	User
		Reviewer Role	Approver, Observer	User

Application	Module	Meaning (Lookup)	Meaning (Codes)	Customization Level

Related Topics

- Lookups: Explained
- How can I edit lookups?
- Managing a Standard Lookup: Example

Configuring Item, Document, and Change Management in Product Development: Explained

This topic explains the configuration process for items management and change management in Oracle Product Development.

To access the Product Development configuration screen, click **Settings (icon) > Settings** in the upper-right corner of the Product Development **Overview** page. Configuration areas include:

- Settings Tab
  - Default organization for items
  - Enable Document Management check box
- Items Tab
  - Item grading rules
  - Item lifecycle phase for information tile
  - Attributes to display in Items Details information tile
  - Manufacturer part status definitions
  - Item attributes display settings
  - Extended attribute display
- Change Orders Tab

  Cycle Time Threshold for a Change type

Settings Tab

Use the **Settings** tab to configure the default organization for items, and to enable the Document Management functionality.

Items Tab

Use the **Grade** section to configure Item Grading rules.

The Item Grading rules allow you to configure whether the BOM score in Product Development should be based on a letter or number grade. The predefined rules that you select are considered in the Item Grade score calculations.

Use the **Life Cycle Phase Definitions** section to configure item states that must be considered Released, Unreleased, or Obsolete, and how these item states must be displayed in the Structure information tile. When the user opens an item with a BOM, the data displayed in the information tile is based on the Released, Unreleased, and Obsolete items in the entire structure; the definition of the item lifecycle phase is calculated based on this specific setting.

In the **Item Information Tile Attributes Configuration** section, select three attributes you want visible in the Item Details General Information tile.

> **Note:** No attributes are assigned to the Item Details information tile by default. To avoid configuration errors, start with defining an item template that is used to create Product Development items. This template must include the default values for attributes like Lifecycle Phase, Item Status, Primary Unit of Measure, and so on. To do this, run the Manage Item Classes task in the Setup and Maintenance work area (under the Product Management offering). If you are using Product Development and Innovation Management together, you must also link the same default item template in the Product Development connector configuration. To do this, run the Manage Target System task in the Setup and Maintenance work area (under the Product Management offering).

Use the **Manufacturer Part Status Definitions** section to classify AML statuses and map to known system statuses such as Approved or Unapproved.

Use the **Item Attributes Display Settings** section to configure operational attributes that you want displayed as part of item's general information.

Change Orders Tab

Use the **Change Orders** tab to configure the **Cycle Time Threshold in Days** for **Change Types**.

For each Change Type, define a time limit by which the change order (for that change type) must be approved. The values that you configure here are used to display unreleased changes that are within the time limit, and those past the deadline.

To create Change Types, run the Manage Change Order Types task in the Setup and Maintenance work area.

Glossary

automatic assignment catalog

A non-hierarchical catalog to which categories that match the catalog's Catalog Structure value are automatically added. Add categories and share categories actions are disabled for this catalog configuration.

catalog

A collection of categories used to classify items which can be organized into a hierarchy that represents a taxonomy.

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 custom attributes that apply to certain entity rows based on the value of the context segment.

descriptive flexfield

An extendable field that captures additional information.

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.

GTIN

Abbreviation for Global Trade Identification Number

value set

A set of valid values against which values entered by an end user are validated. The set may be tree structured (hierarchical).