Oracle® Product Information Management

Implementation Guide

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Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Product Information Management Implementation Guide.*

See Related Information Sources on page xii for more Oracle Applications product information.

TTY Relay Access to Oracle Support Services

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Structure

Related Information Sources

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

1

Setup Overview

This chapter covers the following topics:

- Setting Up Oracle Applications Technology
- Setup Prerequisites
- Using Oracle iSetup
- Setup Steps
- Profile Options

Setting Up Oracle Applications Technology

This overview explains how to implement the parts of Oracle Applications. You need to complete several setup steps including:

- Perform system wide setup tasks such as configuring concurrent managers and printers
- Manage function and data security, which includes setting up responsibilities to allow access to a specific set of business data and complete a specific set of transactions, and assigning individual users to one or more of these responsibilities.

Also, if your product uses Oracle Workflow to manage the approval of change requests (for example) or to send change notifications, you need to set up Oracle Workflow.

Related Topics

Oracle Workflow Guide

Setup Prerequisites

Before setting up this application, you must complete the *required* setup steps for the following:

- In Oracle Inventory, see "Setting Up" in the *Oracle Inventory User's Guide*

- In Oracle Bills of Material, see "Setting Up" in the *Oracle Bills of Material User's Guide*

- In Oracle Engineering, see "Setting Up" in the *Oracle Engineering User's Guide*

- If you are using lifecycle tracking projects, refer to Setup and Implementation in Oracle Projects.

- In Oracle Sourcing, if you intend to collaborate with suppliers complete the setup steps for defining suppliers see the *Oracle Sourcing Implementation and Administration Guide*

- In Oracle Receivables, if you intend to collaborate with customers complete the setup steps for defining customers see "Setting Up Receivables" in the *Oracle Receivables User's Guide*

Using Oracle iSetup

If you are implementing a new instance of the Oracle e-Business Suite and have relatively standard implementation requirements, you can use Oracle iSetup to rapidly configure the following applications:

- Oracle Purchasing

- Oracle Inventory

- Oracle Bills of Material

- Oracle Order Management

- Oracle Shipping

- Oracle Costing

- Oracle Planning

- Oracle Engineering

- Oracle Work in Process

- Oracle General Ledger

- Oracle Payables

- Oracle Receivables

- Oracle Cash Management
- Oracle Assets

Oracle iSetup simplifies the setup process by providing templates and predefined setup steps that may or may not apply to your enterprise.

Setup Steps

Following is a summary of the setup steps:

- Defining Responsibilities and Users
- Defining the Item Catalog
- Defining Catalogs
- Defining Change Categories and Types
- Defining Item Structures
- Setting Up Document Management
- Defining Roles
- Implementing Role-Based Security

Profile Options

Profile options enable or change the behavior of certain features in the application. Following is a description of each of the system profiles used in this application, and their default values.

Profile	Description	Default Value
EGO: Enable exporting to Excel	Governs the action of exporting search results. Changing the value to Yes enables users to export certain search results data.	No

EGO: Enable Oracle Collaborative Development	Enables edit options for structures in HTML. Oracle recommends leaving the value as No.	No
EGO: Enable Product Information Management Data Librarian	Enables the use of Product Information Management-specific features such as Import Workbench if the value is Yes. See: Setup Overview of Inbound Product Data Synchronization, page 14-1.	No
EGO: Enable Product Lifecycle Management	Enables the use of Product Lifecycle Management-specific features such as Document Management if the value is Yes.	No

EGO: Internal User Default Role for Items	Governs the default role that is set up for internal users who access items. This role is assigned to internal users for all items in the organizations to which the users have access. Design Reviewer is seeded for Forms interoperability. **Note:** Forms does not have data security, so users must be given additional privileges on specific items (either directly or via inheritance) to perform actions on itemsC. Users with the Design Reviewer role can view/access all item information. If you want to restrict access further, define a custom role and then reset the default role for all enterprise internal users. It is recommended that you always specify a role that minimally has the View Item privilege.	Design Reviewer
EGO: Maximum number of attribute groups in Search.	This site level profile option specifies the maximum number of attribute groups you can use as search criteria and in display formats. **Caution:** Increasing the value could result in slow item search performance.	5

EGO: Maximum number of rows for sorting	Specifies the maximum number of rows to sort during an item search. If a search retrieves more than the maximum number of rows, the search results are displayed without sorting (a warning is displayed). **Note:** Specifying a value greater than 2000 may have a negative impact on search performance.	2000
EGO: Number of recent links to display	Specifies the number of links to display in the Recently Visited list	20
EGO: Restrict actions in Item form	Governs the Forms actions for items. Set to Yes to ensure that data level role-based security is honored in Forms. When set to Yes users will be unable to access the following functionality in Forms: • Categories • Catalog • Revisions • Organization Assignments • Attachments (disables attachments) Keep the default value No if you wish to make all actions available in Forms.	No

EGO: Thesaurus for Matching	Enables the use of a synonym search when matching incoming external items to Oracle Product Information Management Data Hub (PIMDH) items if the value is Yes. See: Creating Match Rules, page 14-8. A thesaurus is not included by default in the database. If you load a thesaurus into the database, then set this option to Yes.	No
ENG: Internal User Default Role for Changes	Governs the default role that is set up for internal users who access change objects. This role is assigned to internal users for all change objects in the organizations to which the users have access. Reviewer is seeded for Forms interoperability. **Note:** Forms does not have data security, so users must be given additional privileges on specific change objects (either directly or via inheritance) to perform actions on change objects. Users with the Reviewer role can view/access all information for a change object. If you want to restrict access further, define a custom role and then set reset the default role for all enterprise internal users. It is recommended that you always specify a role that minimally has the View Item privilege.	Reviewer

EGO GDSN Enabled	Governs the GDSN Synchronization functionality. Changing the value to Yes enables GDSN functionality. Once you turn the flag to yes, then • the GDSN default functional area appears • the GDSN attributes appear in setup list page • the GDSN attributes become associated with the Item Catalog Categories • the GDSN Syndicated functional area flag on the Create Item and Functional Classification page becomes enabled.	No

2

Defining Responsibilities and Users

This chapter covers the following topics:

- Defining Responsibilities and Users
- Creating Responsibilities
- Creating Internal Users
- Setting Up Supplier Users
- Setting Up Customer Users

Defining Responsibilities and Users

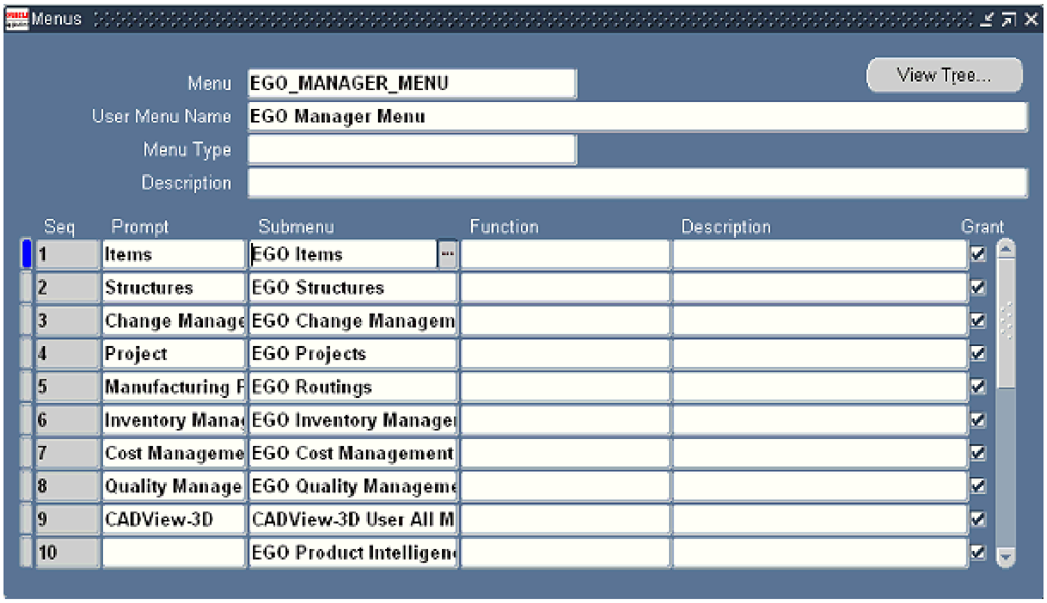
You can securely collaborate with internal users, suppliers, and customers. You can set up users and grant them responsibilities to enable specific business functions. You can further restrict access to specific items, catalogs, or change management objects with role-based security.

Task	**Required?**
Creating Responsibilities	
Creating Internal Users	Yes
Setting Up Supplier Users	
Setting Up Customer Users	

Creating Responsibilities

The top-level menu for the seeded responsibilities (Development Manager, Development Engineer, and Supplier Engineer) is the EGO Manager Menu (EGO_MANAGER_MENU); you should view the seeded menus and functions before creating ones of your own. To view the seeded menus and functions, open the EGO Manager Menu in the Application Developer's Menu form and click the View Tree button. In the Menu Viewer you can expand each menu as you decide which menus to include in your custom responsibilities. If a node appears with no prompt under a menu, then you should include that function to ensure that all the menu items work correctly. You can use menu exclusion rules when defining your responsibilities if you need to exclude any specific menus or functions for a user.

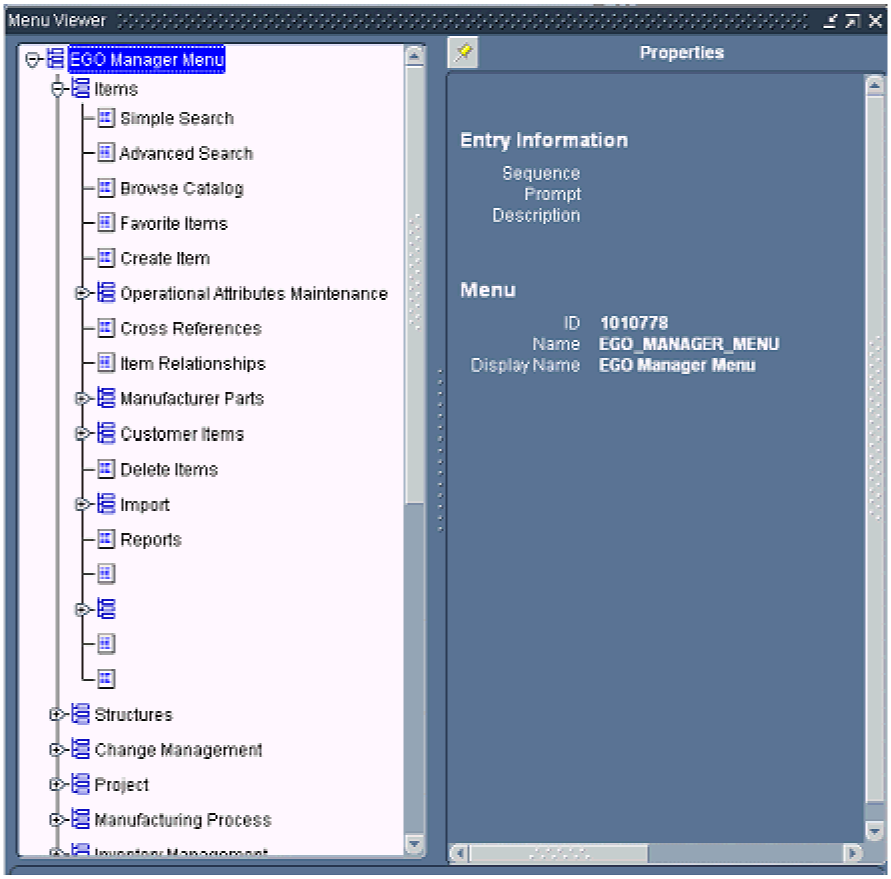
Top level menu with seeded responsibilities



Menu	EGO_MANAGER_MENU
User Menu Name	EGO Manager Menu
Menu Type	
Description	

Seq	Prompt	Submenu	Function	Description	Grant
1	Items	EGO Items			☑
2	Structures	EGO Structures			☑
3	Change Manage	EGO Change Managem			☑
4	Project	EGO Projects			☑
5	Manufacturing F	EGO Routings			☑
6	Inventory Mana	EGO Inventory Manage			☑
7	Cost Manageme	EGO Cost Management			☑
8	Quality Manage	EGO Quality Managem			☑
9	CADView-3D	CADView-3D User All M			☑
10		EGO Product Intelligen			☑

Menu Viewer



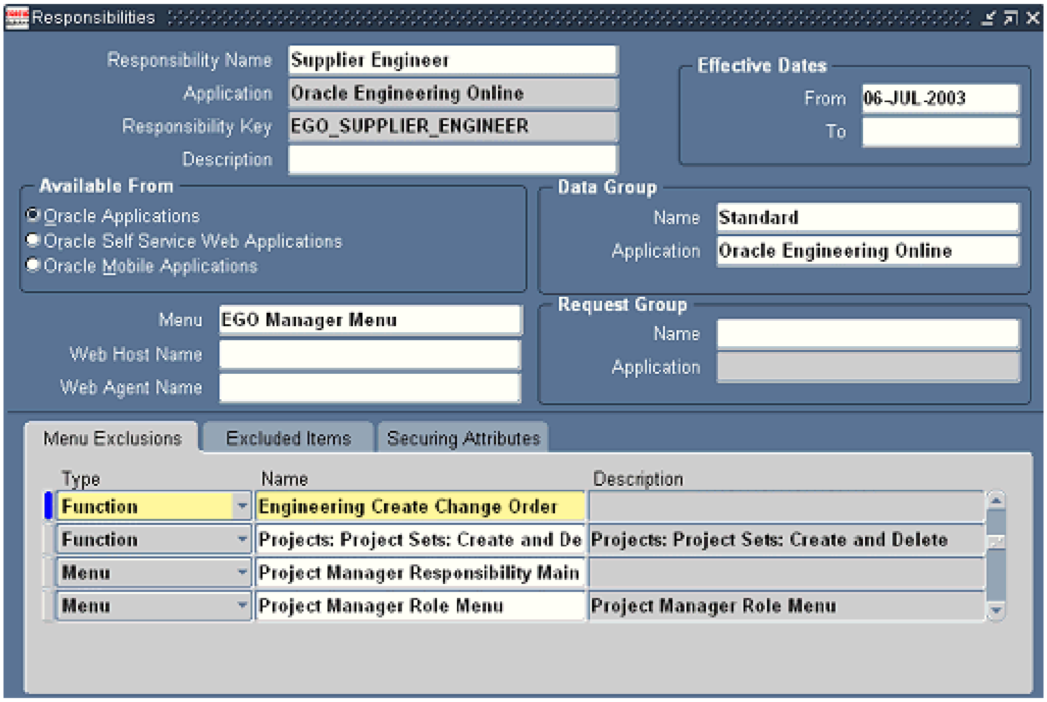
Entry Information

Sequence
Prompt
Description

Menu

ID 1010778
Name EGO_MANAGER_MENU
Display Name EGO Manager Menu

Defining responsibilities with menu exclusions



Responsibilities

Responsibility Name	Supplier Engineer
Application	Oracle Engineering Online
Responsibility Key	EGO_SUPPLIER_ENGINEER
Description	

Effective Dates

From	06-JUL-2003
To	

Available From

- ● Oracle Applications
- ○ Oracle Self Service Web Applications
- ○ Oracle Mobile Applications

Data Group

Name	Standard
Application	Oracle Engineering Online

Menu	EGO Manager Menu
Web Host Name	
Web Agent Name	

Request Group

Name	
Application	

Type	Name	Description
Function	Engineering Create Change Order	
Function	Projects: Project Sets: Create and De	Projects: Project Sets: Create and Delete
Menu	Project Manager Responsibility Main	
Menu	Project Manager Role Menu	Project Manager Role Menu

Creating Internal Users

You can define E-Business Suite users and assign them responsibilities that grant them access to specific E-Business Suite applications. After creating an employee, customer or supplier, create a user account to which you then link the employee, customer, or supplier. Each internal user should have an employee ID with an e-mail address specified so he or she can receive notifications. You can assign internal users a custom responsibility or one of the following seeded responsibilities:

- Development Engineer
- Development Manager
- Manufacturing Engineer
- Product Manager
- Program Manager
- Project Engineer
- Supplier Engineer

Setting Up Supplier Users

You can securely collaborate with suppliers. You can set up E-Business Suite users for each of the suppliers with whom you collaborate on product and component designs.

Assuming the supplier company has already been defined in Oracle Purchasing or Oracle Sourcing, you can register a supplier user in Oracle Sourcing using the Sourcing Super User responsibility. You need to specify the supplier's e-mail address as the user ID so that the system can e-mail the supplier his or her password. After the supplier user is registered via Oracle Sourcing, you can assign him or her a responsibility such as Supplier Engineer, which specifies the functions available to that supplier user. For example, the seeded responsibility Supplier Engineer provides a restricted set of functions that enable the supplier to view specific items (secured with item roles), create issues and change requests for an item, but not create or view change orders.

For more details about registering and setting up supplier users, see the *Oracle Sourcing Implementation and Administration Guide* and *Oracle Applications System Administrator's Guide*.

Setting Up Customer Users

You can securely collaborate with your customers. You can set up E-Business Suite users for each of the customers with whom you collaborate on product and component information.

Assuming that you have already defined the customer company in the Oracle E-Business Suite, create customer users by selecting the Trading Community Manager responsibility. In the Customers – Standard form create a new Customer Type of Person. You must specify a valid Address.

Then navigate to the Party Relations window and assign the person to the customer company as follows:

Relationship Type

EMPLOYMENT

Relation

Employee Of

Object

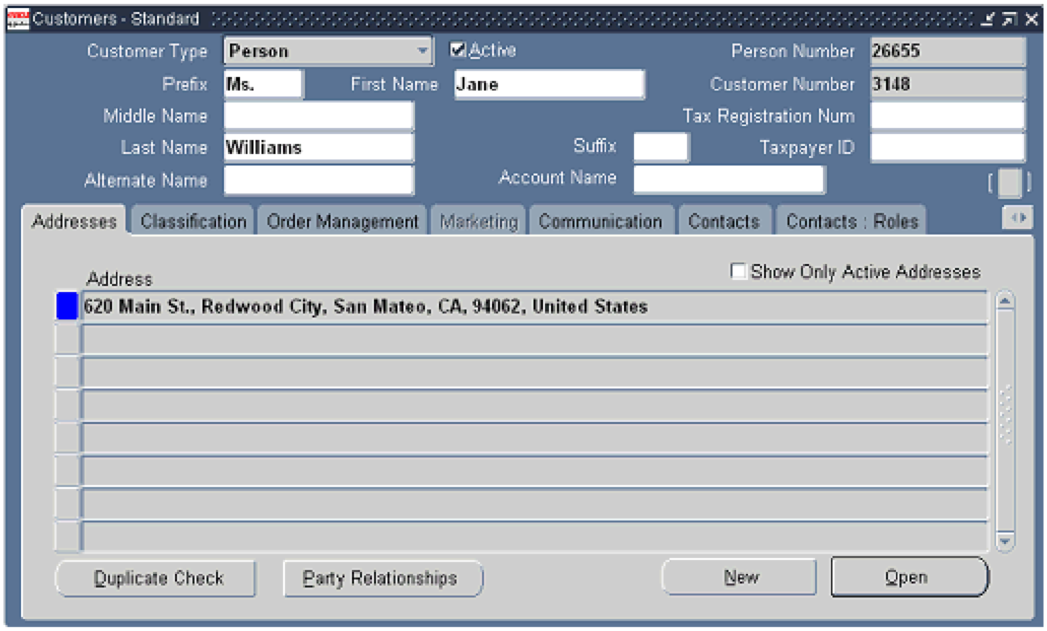
Company name

Start Date

Specify a start date. After assigning a person to the customer company, select the System Administrator responsibility to define the customer user. Then, in the Users form, enter the required information and specify the customer person name in the Customer field.

For more details about setting up customer users, see the *Oracle Receivables Users Guide* and *Oracle Applications System Administrator's Guide*.

Creating a new customer person



Customer Type: Person

☑ Active

Person Number: 26655

Prefix: Ms.

First Name: Jane

Customer Number: 3148

Middle Name:

Tax Registration Num:

Last Name: Williams

Suffix:

Taxpayer ID:

Alternate Name:

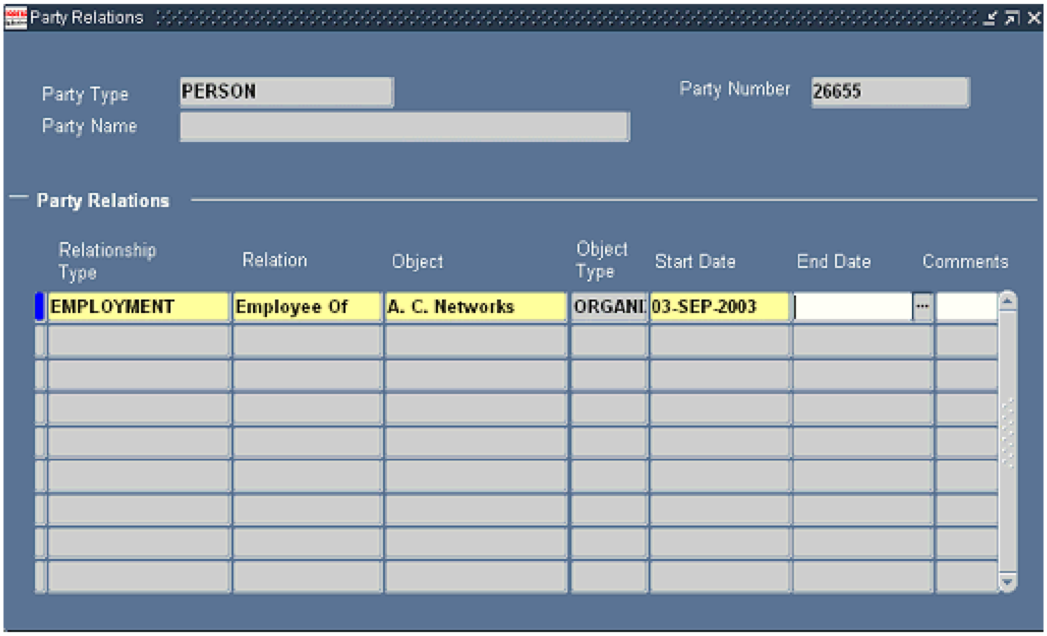
Account Name:

□ Show Only Active Addresses

Address

620 Main St., Redwood City, San Mateo, CA, 94062, United States

Setting up party relations for a new customer person



Party Type: PERSON

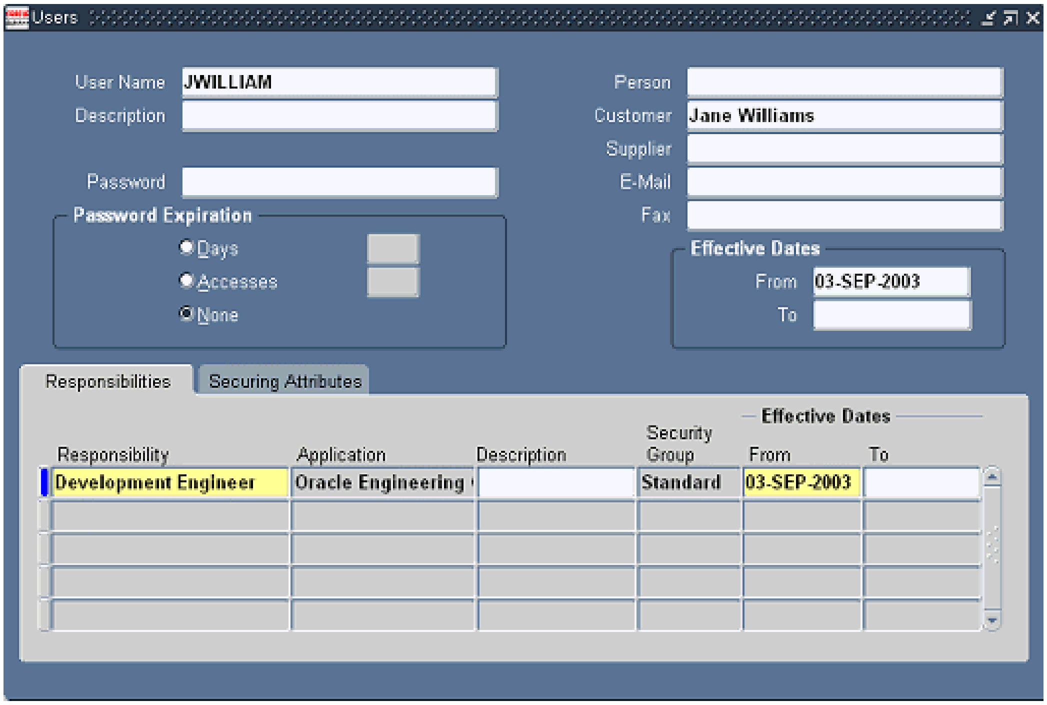
Party Number: 26655

Party Name:

Party Relations

Relationship Type	Relation	Object	Object Type	Start Date	End Date	Comments
EMPLOYMENT	Employee Of	A. C. Networks	ORGANI	03-SEP-2003		

Defining a customer user



User Name	JWILLIAM	Person	
Description		Customer	Jane Williams
		Supplier	
Password		E-Mail	
		Fax	

Password Expiration

○ Days
○ Accesses
● None

Effective Dates

From 03-SEP-2003
To

Responsibility	Application	Description	Security Group	Effective Dates From	Effective Dates To
Development Engineer	Oracle Engineering (		Standard	03-SEP-2003	

3

Setting Up the Item Catalog

This chapter covers the following topics:

- Overview of Item Catalogs
- Building the Item Catalog Text Index
- Defining Item Catalog Categories
- Defining Item Attachment Categories
- Adding Attachment Categories to an Item Catalog Category
- Defining Item Templates
- Managing Item Statuses
- Defining Lifecycle Phases
- Defining Lifecycles
- Associating Lifecycles to Item Catalog Categories
- Defining Change Policies
- Defining New Item Request Types
- Defining New Item Request Workflows
- Associating New Item Requests with an Item Catalog Category
- Defining Item Numbers and Descriptions
- Creating Pages for an Item Catalog Category
- Managing Search Criteria
- Managing Display Formats
- Defining Item Catalog Import Formats
- Defining Report Templates Using XML Publisher
- Defining Cross Reference Types

Overview of Item Catalogs

Oracle enables you to define hierarchies of items using catalogs and catalog categories. The Item Catalog contains all of the items in the system; all other catalogs are subsets of the Item Catalog. For example, the Product Catalog contains all of the items in the Item Catalog that are sold. Oracle provides several predefined catalogs, such as the Product Catalog, Asset Catalog, the Service Catalog. Customers can also define additional catalogs for browsing and reporting purposes. Each catalog includes a hierarchy of categories, with each catalog item assigned to a catalog category.

Task	**Required?**
Build the Item Catalog Text Index	Yes
Defining Item Catalog Categories	Yes
Defining Value Sets for User-Defined Attributes	
Defining Item Attributes and Attribute Groups	
Setting Up Item Attribute Group Security	
Implementing User-Defined Functions for Item Attributes	
Associating Item Catalog Attributes	
Defining Item Attachment Categories	
Associating Item Attachment Categories	
Defining Lifecycle Phases	
Defining Lifecycles	
Associating Lifecycles to Item Catalog Categories	
Defining Item Catalog Criteria Templates	

Defining Item Catalog Results Formats
Defining Item Catalog Import Formats

Related Topics

Catalogs chapter, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Data Librarian User's Guide*

Building the Item Catalog Text Index

To take advantage of the Oracle Text search features available such as keyword search, stemming search, and fuzzy search— run the concurrent program Item Catalog Text Index Build. Any user with the Development Manager responsibility can submit this concurrent program from the Submit Request window. Select the concurrent request parameter Action=CREATE when submitting the request.

Related Topics

Optimizing the Item Catalog Text Index, *Oracle Product Lifecycle Management User's Guide*

Defining Item Catalog Categories

The *item catalog* contains all items defined for your company or organization. Within the item catalog, *item catalog categories* provide a way to logically classify items that have similar characteristics. So, you can classify a computer monitor in an item catalog category named Computer Parts and Components. Item catalogs are hierarchical, and relationships between the various item catalog categories (such as an item's catalog category attributes) are inherited. You can define a rich hierarchical taxonomy of item catalog categories that enable you to set up item attribution, lifecycles and their change policies, security, attachment categories, results formats, criteria templates, and import formats.

When defining item catalog categories, do the following:

- Create a list of all your items.
- Classify the items in unique item catalog categories and sub-categories that suit your business needs.
- Consider which category is a sub-classification within a category (for example, SRAM, DRAM could be subcategories of the item catalog category Memory).

- List the required and optional item attributes for each item catalog category

Following are some of the basic item catalog category terms:

- **Item Catalog Categories**

  Item catalog categories inherit attributes from the parent category; so consider which attributes to associate at higher levels in the item catalog category. Inheritance helps to simplify maintenance.

- **Item Lifecycles**

  Item lifecycles enable you to track and control the lifecycle phases of items. You can specify an item lifecycle for each item catalog category. Item lifecycles are inherited from the parent item catalog category.

- **Change Policy**

  Item behavior is described by defining a change policy for each lifecycle phase in a given lifecycle.

- **Security**

  You can control item creation, viewing and update access by assigning a role on the item catalog category to a user or group of users.

- **Attachment Categories**

  You can classify a file that is attached to an item using an attachment category. Attachment categories are inherited from the parent catalog category, and those most commonly used can be defined at a higher node. You can then add more specific attachment categories for the child item catalog categories.

  > **Note:** Catalog Groups defined in Oracle Inventory will appear as Item Catalog Categories.

For details about seeded base attributes, see the *Oracle Inventory User's Guide*.

Item catalog categories provide metadata common to all items that share the category. For example, the item catalog category "Engine" describes attributes, functions and other characteristics common to several item numbers, such as Engine M10000 and Engine M20000.

Note: Item catalog categories are hierarchically structured, with characteristics (attribute groups, functions, pages, lifecycles, criteria templates, and result formats) being inherited throughout the hierarchy.

When you create a new item catalog category that does not have a parent node (meaning it is a top node), the system associates all base attribute groups and pages with the item catalog category. You cannot delete the attribute associations, but you can delete the pages. When you create a new item catalog category that has a parent node, all base attributes and pages are inherited from the parent. If a page is deleted at the parent node, then it is also deleted within all its child nodes. So if you wish to display pages in a particular item catalog category, but they have been deleted at the parent node, you must explicitly add them in the child item catalog category.

For a complete listing of the base (or main) attributes associated with new item catalog categories, see "Item Attributes Listed by Group Name" in the *Oracle Inventory User Guide*.

The following pages are configured for all new item catalog categories:

- Physical Attributes
- Sales and Order Management
- Planning
- Purchasing
- Inventory
- Manufacturing
- Service

To create an item catalog category:

1. On the item **Search: Item Catalog Categories** page, click the Create Item Catalog Category link.

2. On the **Create Item Catalog Category** page, enter the following:

   Catalog

   Defines the category name. The number of segments (and respective labels) for item catalog category depends on how the item catalog group flexfield is defined in Oracle Inventory setup.

   <Key Flexfield>

   All administrators have a key flexfield available for use in the "Catalog Category" section of the Create Catalog Category page. The heading and function of this field is determined by the administrator. The key flexfield is case insensitive.

   > **Note:** Any leading or ending white spaces in the key flexfield segments are trimmed automatically.

   Description

   Optionally enter a brief description of the item catalog category.

Parent Item Catalog Category

Specify the immediate parent of the item catalog category being created, thereby determining the item catalog category hierarchy.

Default Template

Optionally specify an item template to use to populate the **Create Item** page for any item of the item catalog category being created. On the **Create Item** page, you can modify the template to be applied upon item creation or choose not to apply a template.

Item Creation Allowed

Select to specify that items of the item catalog category can be created (if you do not select, the category only serves the purpose of being a placeholder in the catalog hierarchy). If item creation is not allowed, the category will typically specify characteristics (attribute groups, etc.) that are inherited by its descendants.

Inactive On

Optionally specify a date on which the item catalog category will become inactive. You cannot specify an inactive date that is later than the inactive date of an item catalog category's parent, nor can you specify an inactive date that has already passed. Also, all children of a parent catalog category with an inactive date should be made inactive at the same time or earlier. Making a category inactive has the following implications:

- You cannot create items of that item catalog category or any of its descendants.
- You cannot use that item catalog category or any of its descendants as the parent catalog category upon creation of an item catalog category.

3. Click Apply.

Defining Item Attachment Categories

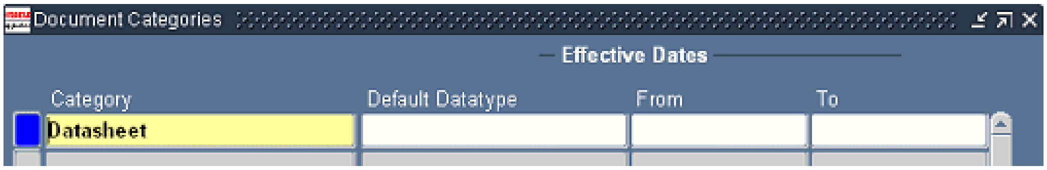
Whenever users add attachments to an item, they specify an *attachment category*. Item attachment categories provide a way to classify attachments—this classification identifies the purpose of the attachment to the business object, and can also be used as one of the search criteria within an attachment list. If users do not specify an attachment category for an item catalog category, and none are inherited from its parent catalog category, they always have the option of using the attachment category Miscellaneous.

> **Note:** Attachment categories inherited from a parent catalog category cannot be deleted at the child catalog category level.

Attachment categories are defined by the system administrator and are available across the various applications of the E-Business Suite. Attachment categories that you define can be made available to any E-Business Suite application. Thus, attachment categories are shared across the E-Business Suite applications and this should be kept in mind when defining any new attachment categories. Rules defining the usage of attachment categories are defined independently by each application.

You can define attachment categories in the Document Categories form. Before defining a new attachment category, verify that it does not already exist. If it already exists, then you can enable it for item catalog categories.

Defining an attachment category



Document Categories

	Effective Dates		
Category	Default Datatype	From	To
Datasheet			

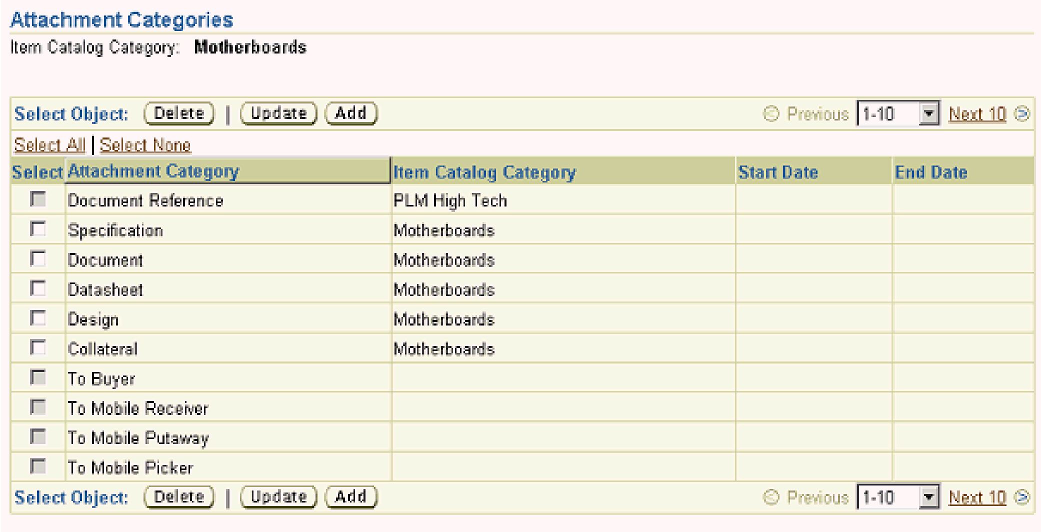
Adding Attachment Categories to an Item Catalog Category

Once you define an attachment category (also known as a "document category"), you can enable it for an item by associating it with an item catalog category.

All item catalog categories inherit attachment categories (in the same way they inherit item attributes) from their parent catalog category. So, before associating attachment categories with item catalog categories create a list of all attachment categories to be used in your item catalog. Consider which attachment categories are common among item catalog categories within each branch of the item catalog hierarchy. If an attachment category is applicable to all the child catalog categories, then the attachment category should be associated with the parent catalog category.

When associating Attachment categories with item catalog categories, you can specify the effectivity of this association by providing a Start Date and an End Date. If an attachment category association has an end date, that type of attachment cannot be used for the items belonging to the category beyond the specified date.

Associating an attachment category with an item catalog category



Attachment Categories

Item Catalog Category: **Motherboards**

Select	Attachment Category	Item Catalog Category	Start Date	End Date
□	Document Reference	PLM High Tech		
□	Specification	Motherboards		
□	Document	Motherboards		
□	Datasheet	Motherboards		
□	Design	Motherboards		
□	Collateral	Motherboards		
□	To Buyer			
□	To Mobile Receiver			
□	To Mobile Putaway			
□	To Mobile Picker			

To add attachments to an item, users need to specify an attachment category. Attachment Categories sort and organize attachments that users might attach to an item or items. They provide a way to classify attachments—this classification identifies the purpose of the attachment to the business object, and can also be used as one of the search criteria within an attachment list. If users do not specify an attachment category for an item catalog category, and none are inherited from its parent catalog category, they always have the option of using the attachment category "Miscellaneous"

When moving attachment categories, only those attachments whose categories are common between the source and target catalog categories will be retained.

By adding attachment categories, you can classify all attachments that you add to specific item catalog categories.

> **Note:** Attachment categories inherited from a parent catalog category cannot be deleted at the child catalog category level. Attachment categories can be inherited from a parent catalog category *and* explicitly added to the catalog category itself. Administrators should not associate the same attachment category with an item catalog category in this manner.

The following attachment categories are available for all item catalog categories:

- CADView-3D Model
- Description
- Image

- Item Internal
- Miscellaneous
- To Buyer
- To Supplier
- To Receiver
- To Mobile Picker
- To Mobile Putaway
- To Mobile Receiver

To add an attachment category to an item catalog category:

1. On the **Search: Item Catalog Categories** page, locate the item catalog category to which you wish to attach an attachment category.

2. On the **Basic Information** page of the item catalog category, click the Attachment Categories link.

3. On the **Attachment Categories** page, click Add.

4. On the **Search and Select: Attachment Categories** page, select an attachment category from the list. You can also search within the list for a specific attachment category and then select it.

5. Click Apply.

Defining Item Templates

You can specify one or more item templates during the item creation process. The system applies the templates in the order listed, so later templates overwrite attribute values applied with earlier templates. An item template is a defined set of attribute values used during item creation. When you apply a template to an item, you overlay or default in the set of attribute values to the item definition. For example, every time users in a particular organization create new items, the attributes as defined and approved by the organization appear in the appropriate fields--no user guesswork is required, and much time is saved during the creation of items with a similar form, fit and function.

You can create item templates that contain either the operational attributes for an item, which are visible to all organizations, or user-defined attributes, which are specific to an item catalog category. When you explicitly associate a template with an item catalog category, it is made available for all create and update item actions in that item catalog category. Also, the values for the user-defined attributes that are specified in the template are inherited from parent to child within the particular item catalog category. After creating the item template for use with user-defined attributes, you must associate it with an item catalog category.

Benefits:

- Default operational and user-defined attributes to speed up the process of specifying item attribute values

- Enforce consistency of item attribute values for items belonging to different item catalog categories or item types. For example, you may have an item template for all purchased computer hard-drive assemblies.

For more details about creating item templates that use operational attributes, as well as a listing of the Oracle provided templates, see Item Templates,*Oracle Inventory User's Guide*.

To define an item template and specify user-defined attributes:

1. Navigate to the Setup Workbench. In the Items tab, select the Templates subtab.

2. On the **Search: Templates** page, click Create.

3. In the Oracle Forms **Find Item Templates** window, click New.

4. Provide the item template name and description, and then specify the operational attributes and the default values. When finished, save the template.

5. Navigate to the item catalog category to which you wish to associate the new item template and click the Templates link.

6. On the **Templates** page, click Add Template.

   Associate item templates with any item catalog category. Item templates are inherited down through the item catalog hierarchy

7. On the **Add Templates to Item Catalog Category** page, locate the new template, select it and click Apply.

8. On the **Templates** page for the item catalog category, click the template name to which you wish to add user-defined attributes.

9. On the **Update Template** page, select the user-defined attributes you wish to add to the template:

   - Select an attribute group, then click Go.

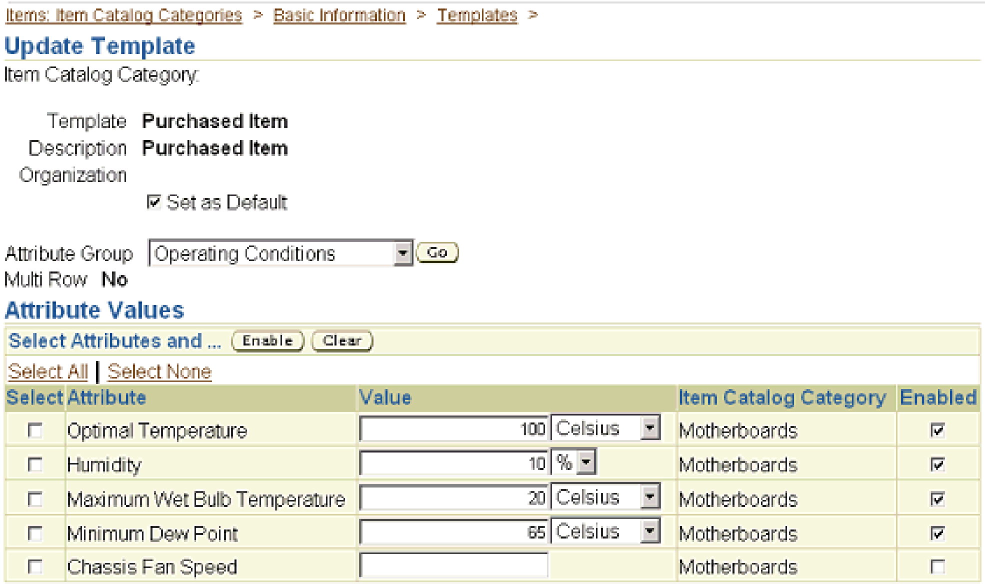
- Select the user-defined attributes to add to the template. You can also choose to set the default attribute values.

- Click Enable.

You can also make this the default item template for all new items created in this item catalog category by selecting Set as Default.

Click Apply.

Updating item template for user-defined item category attributes



Items: Item Catalog Categories > Basic Information > Templates >

Update Template

Item Catalog Category:

Template Purchased Item

Description Purchased Item

Organization

☑ Set as Default

Attribute Group: Operating Conditions

Multi Row No

Attribute Values

Select	Attribute	Value		Item Catalog Category	Enabled
□	Optimal Temperature	100	Celsius	Motherboards	☑
□	Humidity	10	%	Motherboards	☑
□	Maximum Wet Bulb Temperature	20	Celsius	Motherboards	☑
□	Minimum Dew Point	65	Celsius	Motherboards	☑
□	Chassis Fan Speed			Motherboards	□

How to Use Item Templates:

1. During the new item creation process you can specify one or more item templates or use the default if one was setup at the item catalog category level. See: Creating New Items, *Oracle Product Information Management User's Guide*

> **Caution:** If applying more than one template, specify the order to apply them. The last template's attribute values override any previously applied template attribute values.

2. The operational attribute values specified in an item template are not set for 'unapproved' items (i.e. items requiring a new item request). The item template will need to be applied manually once the item is approved.

Managing Item Statuses

An item status is assigned to a lifecycle phase; in fact, each lifecycle phase can have multiple item statuses associated with it. You should create item statuses, or edit item statuses appropriately before associating them with lifecycle phases.

To create an item status:

1. On the **Search: Item Catalog Categories** page, click the Lifecycle Phases tab.

2. On the **Search: Lifecycle Phases** page, click the Item Statuses link.

3. On the **Search: Item Statuses** page, click the Create Item Status link.

4. On the **Create Item Status** page, provide the following information:

   Status

   The name of the item status.

   Description

   The description of the item status.

   Inactive Date

   The date on which the item status is no longer valid and available for use.

5. Select the Value checkboxes that correspond to the attributes that you wish to associate with the item status.

6. Click Apply.

To edit an item status:

1. In the Applications tree menu, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, click the Lifecycle Phases tab.

3. On the **Search: Lifecycle Phases** page, click the Item Statuses link.

4. On the **Search: Item Statuses** page, select the item status that you wish to edit.

5. On the **Item Status Details** page, click Update.

6. On the **Edit Item Status** page, update the Description, Inactive Date, or, select an attribute you wish to apply.

7. Click Apply.

Related Topics

Defining Lifecycle Phases, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide*

Defining Lifecycle Phases

> **Important:** The ability to associate a lifecycle tracking project to an Item and/or Item revision is only available to customers who have licensed Product Lifecycle Management, and it is not available to licensees of Product Information Management.

An item lifecycle is a sequence of project phases. Each phase represents a set of tasks and deliverables that are required before promoting the item to the next phase. For example, the lifecycle phases for a computer component lifecycle might be: Concept, Design, Prototype, Pre-Production, Production, and Retirement. If you are using Oracle Projects you can associate the item lifecycle with a project based on a project template or an existing project. The project workplan's top tasks can be mapped to the lifecycle phases.

> **Important:** If you are using a lifecycle tracking project, then set the current phase within the project workplan. This action will automatically update the item phase.

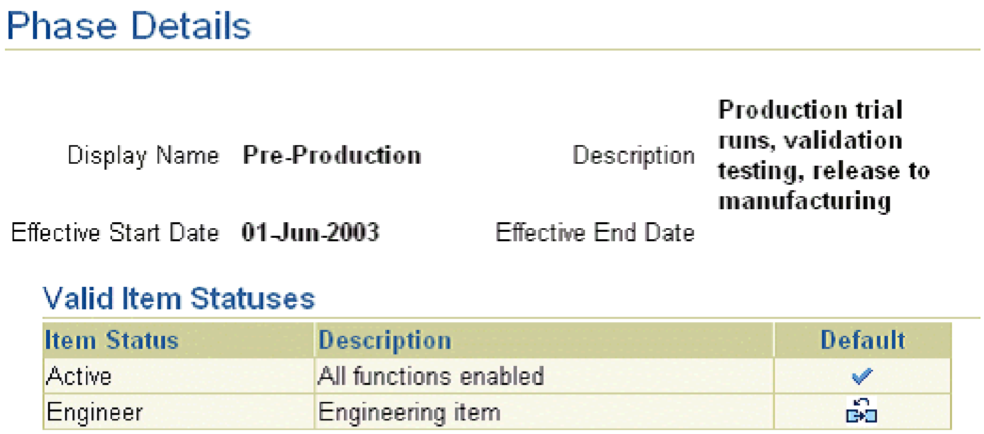
Define lifecycle phases in Oracle Projects. For more details about defining lifecycle phases, see the *Oracle Projects User's Guide*.

Specify the valid item statuses for each lifecycle phase. You can select a default item status for each phase. When you promote an item to the next phase the default item status is automatically applied to the item. These item statuses set operational characteristics of the item (such as whether the item is Purchasable, Transactable, Stockable, or whether BOMs are allowed). For example, in the Concept and Design phase you may have a default status of Inactive, so you cannot transact the engineering item in inventory or purchasing. However, in the Pre-Production and Production phases you may specify that the default item status is Active so that it is fully transactable in the E-Business Suite.

For more details about associating lifecycles to item catalog categories, see the following topics:

- Associating Lifecycles with an Item Catalog Category
- Managing Lifecycle Change Policies
- Managing Lifecycle Phases

Valid item statuses for lifecycle phase



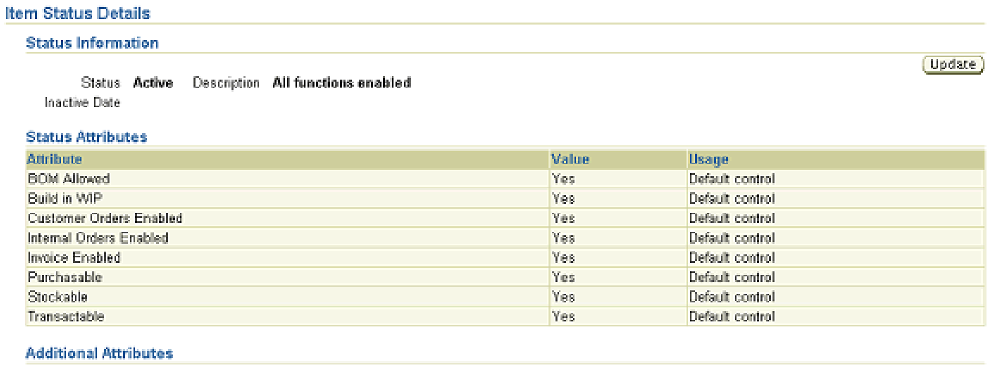
Phase Details

Display Name	**Pre-Production**	Description	**Production trial runs, validation testing, release to manufacturing**
Effective Start Date	**01-Jun-2003**	Effective End Date	

Valid Item Statuses

Item Status	Description	Default
Active	All functions enabled	✓
Engineer	Engineering item	

Item Statuses



Item Status Details

Status Information

Status **Active** Description **All functions enabled**

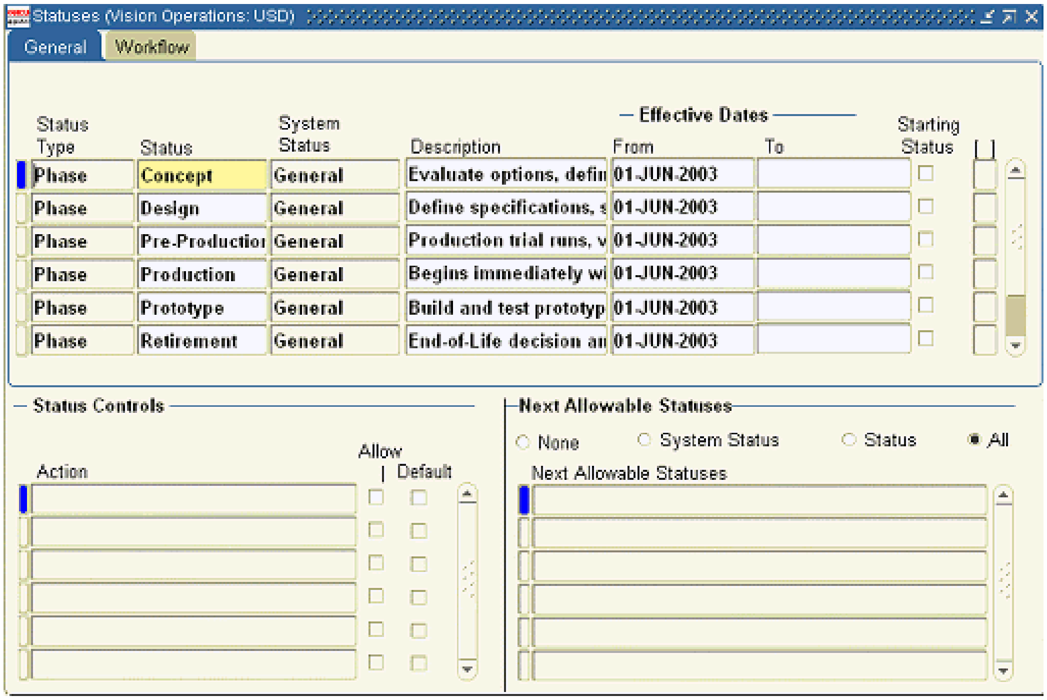
Inactive Date

Status Attributes

Attribute	Value	Usage
BOM Allowed	Yes	Default control
Build in WIP	Yes	Default control
Customer Orders Enabled	Yes	Default control
Internal Orders Enabled	Yes	Default control
Invoice Enabled	Yes	Default control
Purchasable	Yes	Default control
Stockable	Yes	Default control
Transactable	Yes	Default control

Additional Attributes

Defining lifecycle phases



Status Type	Status	System Status	Description	Effective Dates From	To	Starting Status
Phase	Concept	General	Evaluate options, defin	01-JUN-2003		□
Phase	Design	General	Define specifications, s	01-JUN-2003		□
Phase	Pre-Productio	General	Production trial runs, v	01-JUN-2003		□
Phase	Production	General	Begins immediately wi	01-JUN-2003		□
Phase	Prototype	General	Build and test prototyp	01-JUN-2003		□
Phase	Retirement	General	End-of-Life decision an	01-JUN-2003		□

Next Allowable Statuses: ○ None ○ System Status ○ Status ● All

Lifecycle phases can have multiple item statuses. Potential item statuses should be defined and edited appropriately before they are associated with a lifecycle phase.

For more information about lifecycle phases see:

- Defining Lifecycles, *Oracle Product Lifecycle Management Implementation Guide* or *Product Information Management Implementation Guide*

- Associating Lifecycles to Item Catalog Categories, *Oracle Product Lifecycle Management Implementation Guide* or *Product Information Management Implementation Guide*

To edit a lifecycle phase:

1. In the Application tree menu, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, click the Lifecycle Phases tab.

3. On the **Search: Lifecycle Phases** page, click the lifecycle phase you wish to edit.

4. On the **Phase Details** page, click Update.

5. On the **Edit Phase Details** page, provide the following information:

   Item Status

The valid item status associated with a phase. You can specify more than one. If no item status is associated, then there is no default item status. When you specify the first item status, that value becomes the default. If you delete your default item status, then the next item status in the list becomes the default. To add a new item status, click Add Another Row. To make that new item status the default, click the default icon in the Default column.

6. Click Apply.

Defining Lifecycles

> **Important:** The ability to associate a lifecycle tracking project to an Item and/or Item revision is only available to customers who have licensed Product Lifecycle Management, and it is not available to licensees of Product Information Management.

You can create lifecycles to manage the lifecycle phases of your items and item revisions. For example, you may have one lifecycle at the item level to manage new part introductions while having another lifecycle to manage the part revision process. You can use different lifecycles to manage manufactured assemblies and outsourced components.

Once the lifecycle phases have been defined, you create a lifecycle in Oracle Projects. To associate a lifecycle with an item or item revision you must check Enable for Items on the **Lifecycle Details** page. You must also check Enable for Projects if you use Oracle Projects.

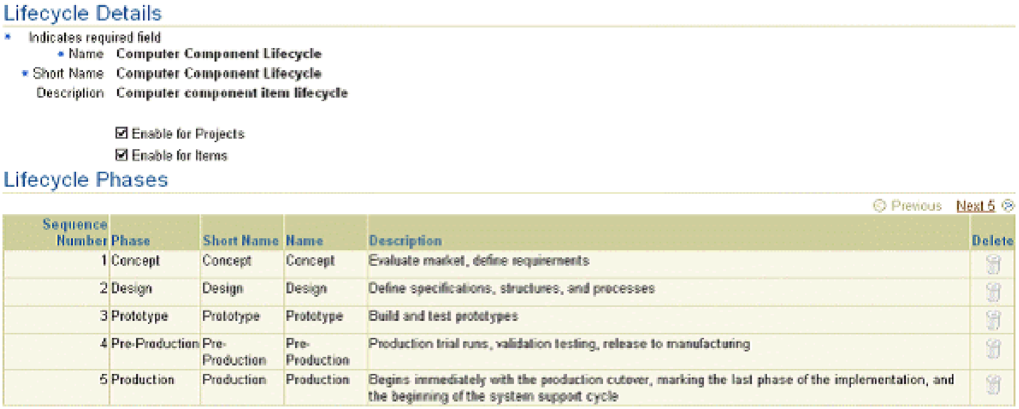
If you intend to associate lifecycle tracking projects with your item lifecycles, then when setting up your project or project template do the following.

- Assign the lifecycle to a work plan for the project or project template

- Assign a lifecycle phase to each top task.

See Also: For more details about defining lifecycles, see the Oracle Projects Users Guide.

Defining Lifecycles



Lifecycle Details

* Indicates required field

* Name Computer Component Lifecycle

* Short Name Computer Component Lifecycle

Description Computer component item lifecycle

☑ Enable for Projects

☑ Enable for Items

Lifecycle Phases

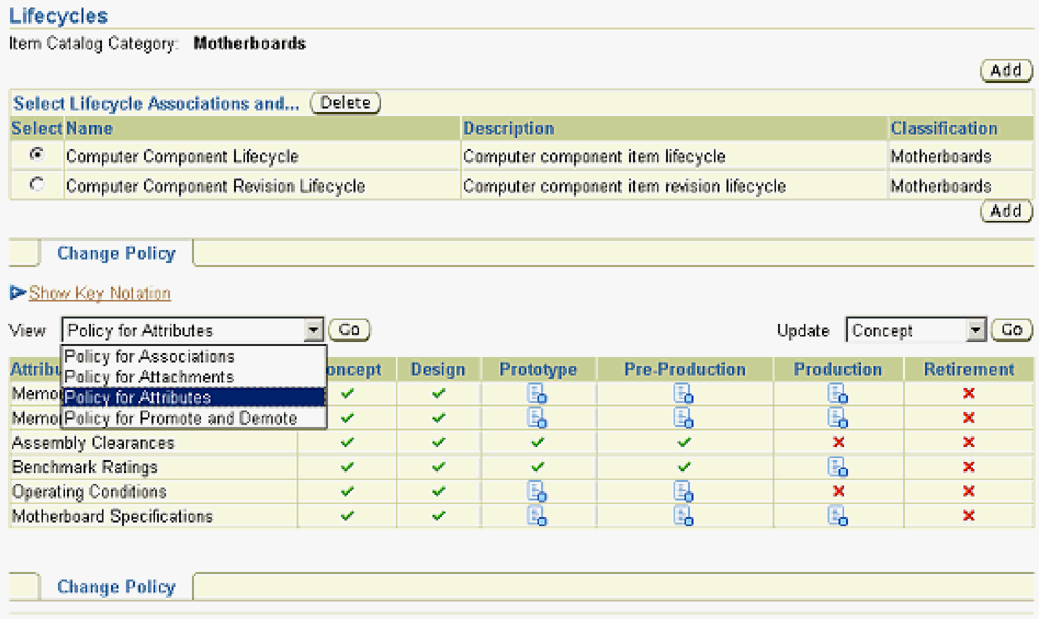
Sequence Number	Phase	Short Name	Name	Description	Delete
1	Concept	Concept	Concept	Evaluate market, define requirements	🗑
2	Design	Design	Design	Define specifications, structures, and processes	🗑
3	Prototype	Prototype	Prototype	Build and test prototypes	🗑
4	Pre-Production	Pre-Production	Pre-Production	Production trial runs, validation testing, release to manufacturing	🗑
5	Production	Production	Production	Begins immediately with the production cutover, marking the last phase of the implementation, and the beginning of the system support cycle	🗑

Associating Lifecycles to Item Catalog Categories

> **Important:** The ability to associate a lifecycle tracking project to an Item and/or Item revision is only available to customers who have licensed Product Lifecycle Management, and it is not available to licensees of Product Information Management.

Associating a lifecycle with an item catalog category makes the lifecycle available for all items in the item catalog category. Lifecycles are inherited throughout the item catalog category hierarchy—child categories inherit the lifecycle from the parent category. The following figure illustrates the valid lifecycles for the Motherboard item.

Associating lifecycles with item catalog categories



Lifecycles

Item Catalog Category: **Motherboards**

Select	Name	Description	Classification
●	Computer Component Lifecycle	Computer component item lifecycle	Motherboards
○	Computer Component Revision Lifecycle	Computer component item revision lifecycle	Motherboards

View Policy for Attributes

Update Concept

Attribu	oncept	Design	Prototype	Pre-Production	Production	Retirement
Memo	✓	✓	📄	📄	📄	✗
Memo	✓	✓	📄	📄	📄	✗
Assembly Clearances	✓	✓	✓	✓	✗	✗
Benchmark Ratings	✓	✓	✓	✓	📄	✗
Operating Conditions	✓	✓	📄	📄	✗	✗
Motherboard Specifications	✓	✓	📄	📄	📄	✗

For each lifecycle associated with an item catalog category, a Change Policy can be defined as detailed under Defining Change Policy. You can specify for each lifecycle phase of the item whether a change is allowed or not allowed or is possible only through a change order.

You can associate any number of lifecycles with an item catalog category. During creation of an item belonging to the item catalog category, you can choose the applicable lifecycle for the item from the set of lifecycles associated with the item catalog category.

> **Note:** Lifecycles inherited from a parent catalog category cannot be deleted at the child catalog category level. Lifecycles can be inherited from a parent catalog category *and* explicitly added to the item catalog category itself. Administrators should not associate the same lifecycle with an item catalog category in this manner.

To associate a lifecycle with an item catalog category:

1. In the Applications tree menu, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, search for the item catalog category (see:Browsing Item and Alternate Catalogs , *Oracle Product Information Management User's Guide*) and click its corresponding name link.

3. On the **Basic Information** page for the item catalog category, click the Lifecycles

link.

4. On the Lifecycles page, click Add.

5. On the **Search and Select: Lifecycles** page, select the lifecycle you wish to associate with the item catalog category.

6. Click Apply.

Related Topics

Associating Lifecycles to Item Catalog Categories, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide*

Defining Change Policies

> **Important:** Before defining an item change policy you must first define a lifecycle and its phases, and then associate it with an item catalog category. For more details see Managing Lifecycle Phases, page 3-13 and Associating Lifecycles within an Item Catalog Category, page 3-17.

Administrators can define and update item change policies for item catalog categories. These item change policies determine the rules for how and when an item's attributes, attachments, and associations are changed. For example, a company manufacturing an engine that has hundreds of specifications may wish to define item change policies for the different phases of development. So when the engine is in the concept or design phase, many of the attributes are allowed to change without formal approval, and the lifecycle policy is not very restrictive. When the engine progresses to the prototype phase, the company might wish to place all attributes, attachments, and associations under stricter change control, perhaps requiring a change order for all modifications. Later, when the engine is in the production phase, the company will likely want every facet of the engine's production under tight control.

Defining item change policies enables a company to:

- Specify whether or not item changes are allowed in a particular lifecycle phase of an item lifecycle

- Specify what types of changes (attributes, attachments, associations, structures) are allowed for an item in each lifecycle phase

- Specify whether or not a change order is required to make particular changes to an item in a specific lifecycle phase

> **Note:** Change policies inherited from a parent catalog category cannot

be edited at the child catalog category level.

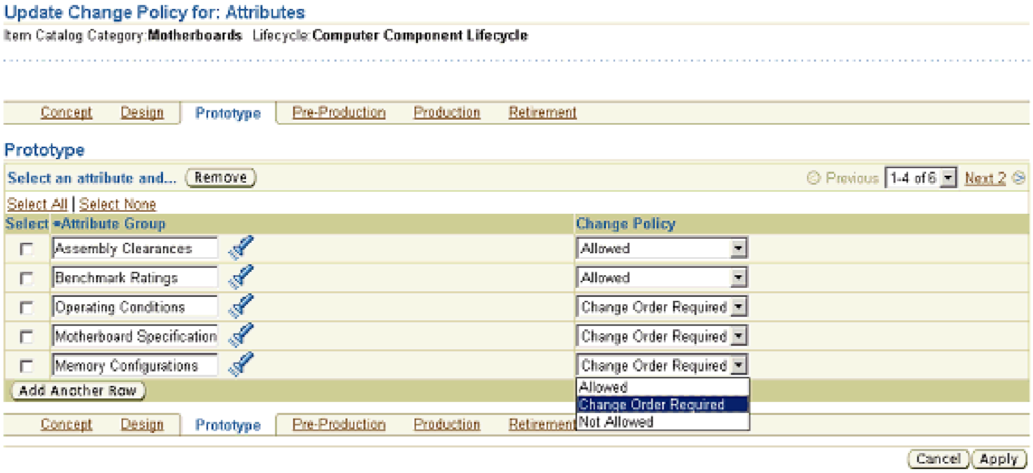
If you do not define a change policy for an item, then by default changes are allowed in all lifecycle phases.

Item change policies only take effect after the item has been Approved.

On the Update Change Policy for Attributes (Associations or Attachments) page, select the appropriate attribute group (association or attachment category) and the change policy you wish to apply for the particular phase. The valid change policies are:

- Allowed
- Not Allowed
- Change Order Required

Setting lifecycle change policy



Update Change Policy for: Attributes

Item Catalog Category: **Motherboards** Lifecycle: **Computer Component Lifecycle**

Concept | Design | Prototype | Pre-Production | Production | Retirement

Prototype

Select an attribute and... (Remove) Previous 1-4 of 6 Next 2

Select All | Select None

Select	*Attribute Group	Change Policy
□	Assembly Clearances	Allowed
□	Benchmark Ratings	Allowed
□	Operating Conditions	Change Order Required
□	Motherboard Specification	Change Order Required
□	Memory Configurations	Change Order Required

> **Note:** Before establishing a change policy for attributes or attachments, you must first associate the attribute group or attachment category with the item catalog category.

To define or update an item change policy:

1. On the **Search: Item Catalog Categories** page, search for the item catalog category (see: Browsing Item and Alternate Catalogs , *Oracle Product Information Management User's Guide*) for which you would like to define an item change policy, and click its name link.

2. On the **Basic Information** page for the item catalog category, click the Lifecycles

link.

3. On the **Lifecycles** page, locate the lifecycle for which you wish to define a change policy. If no lifecycles are listed, associate the lifecycle for which you wish to define item change policies.

   Select the item change policy (for attributes, associations, attachments, structures) you wish to define for the selected lifecycle, and then select the lifecycle phase.

4. On the **Update Change Policy for Attributes** (Associations, Attachments, or Sstructures) page, select the appropriate attribute group (association or attachment category) and the change policy you wish to apply for the particular phase. The valid change policies are:

   - Allowed

   - Not Allowed

   - Change Order Required

   > **Important:** Before establishing a change policy for attributes or attachments, you must first associate the attribute group or attachment category with the item catalog category.

   You can switch back and forth among the various lifecycle phases via the tabs on the **Update Change Policy for Attributes** (Associations or Attachments) page.

Related Topics

Defining Change Policies, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide*

Defining New Item Request Types

New Item request is a workflow process, which enables you to route the definition and approval of a new item. When creating a new item, various people in the organization can define various aspects of an item like base attributes, user-defined attributes, AML etc. using a workflow process. You can also combine the definition routing and approval routing in a new item request workflow.

New Item Request is a seeded Change Management category for which you must define a Type before you can set up new item requests for an item catalog category. New Item Request Types are defined like any other change type. The topic Defining Header Types, page 7-28 provides additional type definition details.

Once a specific NIR type is created, the administrator can assign additional information like the NIR related attributes to be associated. Examples of such attributes are Cost

Impact, Implementation costs etc. These attribute groups then could be organized in different pages similar to the Associating Item Catalog Attributes.

When users create items in item catalog categories that require an item request, the New Item Request Type specified for the item catalog category determines how the request is routed for distribution and approval, and identifies the approvers for the new item. For example, the New Item Request Type determines what item request attributes and sections are available on pages; it determines the valid priorities and reasons available to users; it also determines the valid statuses for the request (for example, Open, Approval, and Closed). In essence, the new item request change type defines the process for routing the collection of item attributes and approval requests from various people who are internal (such as Engineering and Manufacturing) or external to your organization (such as Suppliers).

Prerequisites

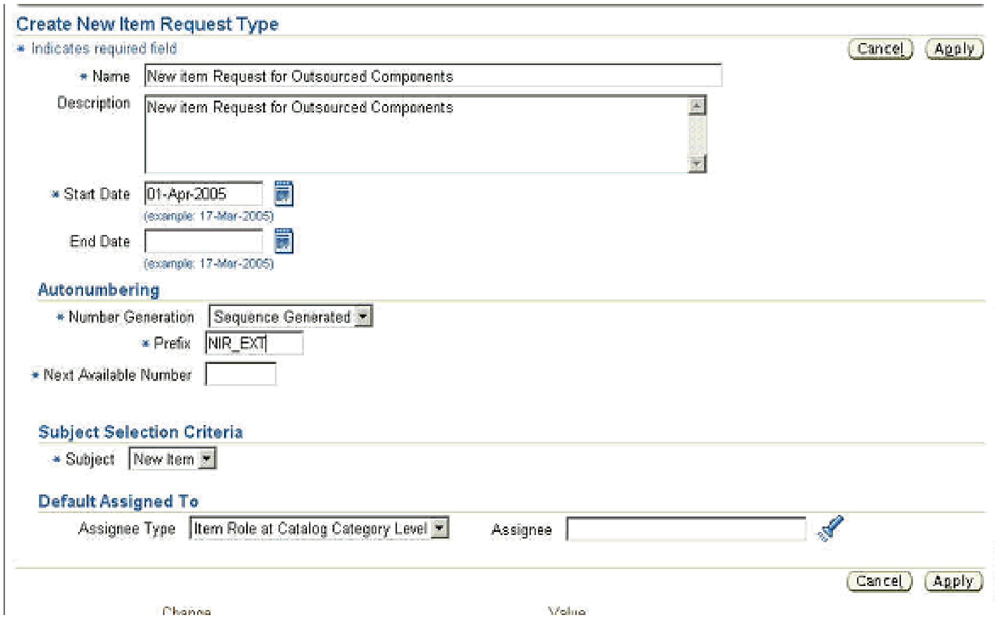
❒ Define one or more workflow templates. See:

- Defining Workflow Templates, page 7-16
- Defining New Item Request Workflows, page 3-25

To define a new item request type:

1. On the Change Management **Categories** page in the Setup Workbench, select the New Item Request category, then click the Types tab in the lower half of the page. When the page refreshes click Create.

Defining New Item Request Type



Create New Item Request Type

* Indicates required field

* Name: New item Request for Outsourced Components

Description: New item Request for Outsourced Components

* Start Date: 01-Apr-2005 (example: 17-Mar-2005)

End Date: (example: 17-Mar-2005)

Autonumbering

* Number Generation: Sequence Generated

* Prefix: NIR_EXT

* Next Available Number:

Subject Selection Criteria

* Subject: New Item

Default Assigned To

Assignee Type: Item Role at Catalog Category Level

Assignee:

2. On the **Create New Item Request Type** page, enter information in the required fields.

   The Number Generation field provides multiple methods for item number request generation, but you can only select either the Sequence Generated or Function Generated method for the new item request type. When using the sequence generated item request numbering method, all item number requests automatically generate based on the sequence generation rules specified here. Specify a prefix, starting number, and increment. For the function generated method, specify a function and select whether or not to enable key attributes.

   > **Note:** The Number Generation field on the **Create New Item Request Type** page applies to the number generation for new item requests, not for new items. Item number generation is defined at the item catalog category level.
   >
   > You must have already defined a custom function before using the function generation method. For details, see Creating User Defined Functions, page 4-21.

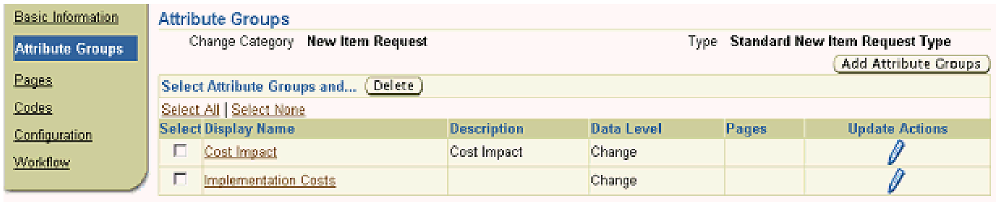
   You can set up the default Assignee for all new item requests of this Type in the Default Assigned To section.

3. After creating the New Item Request Type you can continue the setup tasks via the side navigation links on the **Basic Information** page.

Click the Attribute Groups link to associate attribute groups with the New Item Request type.

Click the Pages link to organize the associated attribute groups on one or more **New Item Request** pages.

Defining User defined Attributes for New Item Request Type



Attribute Groups

Change Category **New Item Request** Type **Standard New Item Request Type**

Select	Display Name	Description	Data Level	Pages	Update Actions
□	Cost Impact	Cost Impact	Change		✎
□	Implementation Costs		Change		✎

Click the Codes link to associate valid priorities and reasons for new items that are created with this request type.

Click the Configuration link to select the display sections and primary attributes that you wish to make available for this request type.

Click the Workflow link to define the statuses of the workflow. Click the Update Properties icon for a particular status to set up valid phases for promotion, demotion and the associated workflows. In the Workflows region, you can add many workflow templates, if desired. When creating a new item request using this new item request type, the user can select which workflow template to use. Select which workflow template to appear as the default during the new item request creation process.

You can then select each workflow template one at a time and specify the following:

- Auto Promote

  Indicates that when the workflow completes successfully and all required approvers have approved, the item request will automatically be promoted to the specified valid phase.

- Auto Demote

  Indicates that when the workflow completes successfully and all required approvers have approved, the item request will automatically be demoted to the specified valid phase.

- Enable Digital Signature

  Indicates that users who are expected to approve or reject the item request must enter their username and password to reauthenticate themselves.

Related Topics

Defining Header Types, page 7-28

Associating New Item Requests with an Item Catalog Category, page 3-26

Defining New Item Request Workflows, page 3-25

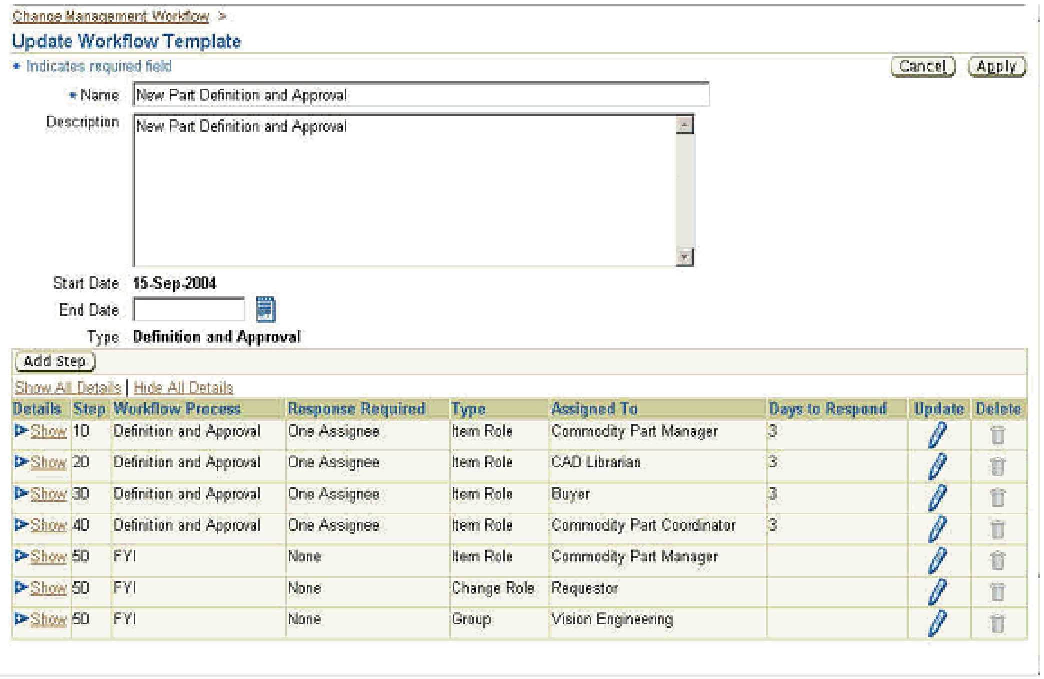
Creating New Item Requests, *Oracle Product Information Management User's Guide*

Defining New Item Request Workflows

One of the most important features of new item requests is the ability to associate one or more workflows to each status of a new item request. The administrator can add workflow steps and specify the status of the NIR in which to execute a workflow. The administrator can add multiple workflows for each status, then the user can choose from this list of workflows which one to use for the status in a particular new item request. The administrator specifies the step number, status of the NIR process in which one of the workflows will be initiated, and finally associates the workflows by choosing them from the workflow templates.

To define a workflow template to assign to a new item request, see Defining Workflow Templates, page 7-16. NIR workflows are typically Definition and Approval workflows. An example of a NIR workflow is outlined in the following figure.

NIR Workflow example



Change Management Workflow >

Update Workflow Template

* Indicates required field

* Name	New Part Definition and Approval
Description	New Part Definition and Approval
Start Date	15-Sep-2004
End Date	
Type	Definition and Approval

Add Step
Show All Details | Hide All Details

Details	Step	Workflow Process	Response Required	Type	Assigned To	Days to Respond	Update	Delete
Show	10	Definition and Approval	One Assignee	Item Role	Commodity Part Manager	3	✎	🗑
Show	20	Definition and Approval	One Assignee	Item Role	CAD Librarian	3	✎	🗑
Show	30	Definition and Approval	One Assignee	Item Role	Buyer	3	✎	🗑
Show	40	Definition and Approval	One Assignee	Item Role	Commodity Part Coordinator	3	✎	🗑
Show	50	FYI	None	Item Role	Commodity Part Manager		✎	🗑
Show	50	FYI	None	Change Role	Requestor		✎	🗑
Show	50	FYI	None	Group	Vision Engineering		✎	🗑

Once you finish associating workflow templates with the NIR type, you need to specify the category association for the NIR.

Related Topics

Associating New Item Requests with an Item Catalog Category, page 3-26

Defining Workflow Templates, page 7-16

Associating New Item Requests with an Item Catalog Category

> **Important:** Before associating new item requests with an item catalog category, you must set up *both* a workflow template and a new item request type. For details, see Defining Workflow Templates, page 7-16 and Defining New Item Request Types, page 3-21.

You can define a new item approval request for all items created in a particular item catalog category. Defining a new item approval request enables an enterprise to enforce standard business processes during item creation, thereby avoiding costly mishaps, such as duplicate parts. New item approval requests enable your enterprise to have different people from various lines of business help define the many item attributes required during item creation.

You can set up a new item request for an item catalog category to request approval from several people in sequence or parallel. Each person may also be required to enter certain item attributes during the approval process.

To associate a specific new item request type with a category, you need to navigate to the item catalog category and specify the new item request type in the **New Item Request** page.

In the Workflow/Approval section, you can specify which attributes the people associated with a workflow step are required to enter. For example, when the new item request has a workflow status of Open, one person in the workflow may be responsible for some technical specifications associated with the new item being created; another might need to provide details about the new item's safety standards. In this case, associate the attribute groups related to technical specifications and safety standards so that the appropriate people can add the information necessary to define all aspects of the new item.

Since a NIR is a change, it has a status type. Only certain workflow types are allowed for a given NIR status type as tabulated below.

NIR Status Type	Valid Workflow Type
Open	Definition
Approval/Review	Definition and Approval, or Approval
Others	Generic

Prerequisites

❒ Defining Workflow Templates, page 7-16

❒ Defining New Item Request Workflows, page 3-25

❒ Setting Up New Item Request Types, page 3-21

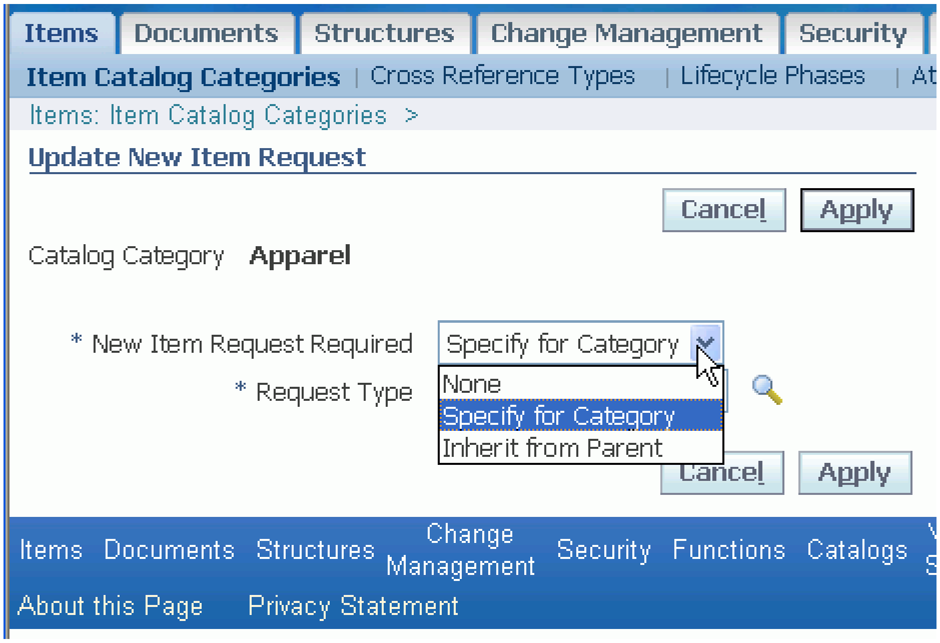
To associate new item requests with an item catalog category:

1. Navigate to the Setup Workbench Item Catalog Categories tab. Find and select the item catalog category to which to associate a new item request type.

2. Click the New Item Request link. In the **New Item Request** page, click Update.

   The **Update New Item Request** page opens.

Associating a New Item Request with an Item Catalog Category



Update New Item Request

Catalog Category Apparel

* New Item Request Required: Specify for Category

* Request Type

3. In the New Item Request Required field, specify one of the following:

   - None - no new item request is required for items created within this item catalog category.

   - Specify for Category - if you select this option, you can select a value in the Item Request Type field.

   - Inherit from Parent - use the same new item request type as the parent item catalog category.

   You can change the value of the New Item Request Required field at any time. For example, if you no longer want to inherit the NIR type from the parent ICC, you can specify a new NIR type or no longer require new item requests.

   Click Apply. The **New Item Request** page appears.

4. If the item catalog category is associated with an item request type, either through inheritance or directly, then the Workflow/Approval section appears in the **New Item Request** page.

   If there is more than one workflow associated with an item request type, select each workflow for each status using the pull down lists in the Workflow and Workflow Status fields. For each workflow, you can choose to associate attribute groups to each workflow step only if the ICC is associated with an item request type directly. Otherwise, the attribute group definitions are inherited from the parent ICC or nonexistent.

To update the attribute groups for a workflow step, click the Associate Attribute Groups icon for the workflow step.

Example of When to Associate Attribute Groups

When the new item request is in the Open workflow phase, one person in the workflow may be responsible for some technical specifications associated with the new item being created; another might need to provide details about the new item's safety standards. In this case, associate the attribute groups related to technical specifications and safety standards so that the appropriate people can add the information necessary to define all aspects of the new item.

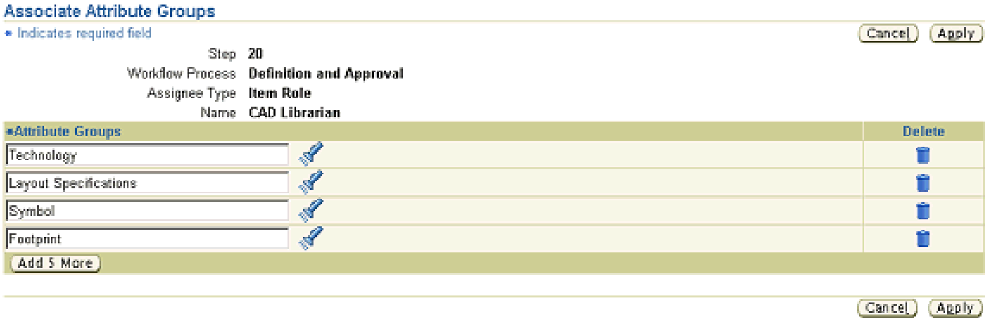
You can set up the collection of user-defined attributes during the new item request process for any attribute group associated with the item catalog category.

> **Note:** People associated with the workflow must also have sufficient privileges on the item for which you are creating a request. To ensure the appropriate people have sufficient privileges to view and update the attributes on the item for which they are responsible, you should confirm that they have the appropriate role at the organization or item catalog category level.

5. In the **Associate Attribute Groups** page, search for and select the user-defined attribute groups associated with the ICC for which you want the workflow assignees to add attribute values.

   Click Apply.

Associating Item Attribute groups with Definition Steps



Associate Attribute Groups

* Indicates required field

Step 20

Workflow Process Definition and Approval

Assignee Type Item Role

Name CAD Librarian

*Attribute Groups	Delete
Technology	🗑
Layout Specifications	🗑
Symbol	🗑
Footprint	🗑

Related Topics

Defining New Item Request Workflows, page 3-25

Defining Item Numbers and Descriptions

You can define new item numbers and descriptions so that they are automatically generated when users create new items. Setting up autonumber generation ensures that new items created in item catalog categories have a consistent numbering scheme. You can set up item number and description generation so that numbers/descriptions are either:

- Sequence generated

  If the item request numbering method is sequence generated, then all item number requests will be automatically generated based on the sequence generation rules specified here. You can specify a prefix, starting number, increment, and suffix.

  > **Note:** Sequence generation does not apply to Item Description generation--it is for item number generation only.

- Function generated

  If the item request numbering/description method is function generated, then all number/descriptions for new items in the item catalog category will be automatically generated based on a custom function. When specifying that an item number/description is function generated, select the function that you want to use, and then map the function parameters to the user-defined attributes that you want included in the item number/description. When you create a new item, users will be prompted to enter the user-defined attributes used in generating the item number/description.

  > **Note:** You must have already defined a custom function before using this item number/description generation method. For details, see Creating User-Defined Functions, page 4-21.

- Inherited from parent

  If the item request numbering/description generation method is inherited from parent, then the item number/descriptions for the items will be generated using the same method as the parent item catalog category.

  > **Note:** All item catalog category subcategories have, by default, a number/description scheme that is inherited from parent.

- User entered

  If the item request numbering/description method is user entered, then the user is required to manually enter a number or a description for new items.

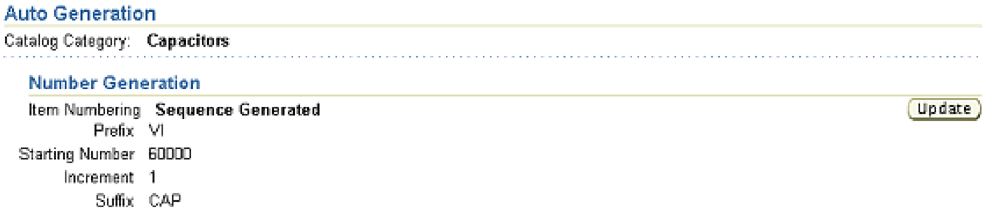
To set up automatic change number generation using user-defined functions, follow these steps:

1. Update the header type.
2. Select **Function Generated** from the Number Creation drop-down list.
3. Associate the function.
4. Associate the function parameters to the attributes.

To define automatic item number/description generation:

1. On the **Basic Information** page of an item catalog category, click either the Number Generation or Description Generation link. On the **Auto Generation** page for the generation method you selected, click Update.

Item Number Generation



Auto Generation

Catalog Category: Capacitors

Number Generation

Item Numbering Sequence Generated

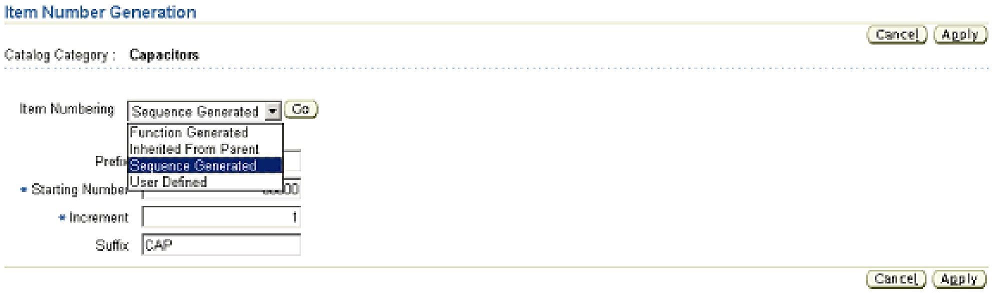
Prefix VI

Starting Number 60000

Increment 1

Suffix CAP

Setting up Item Number Generation



Item Number Generation

Catalog Category : Capacitors

Item Numbering Sequence Generated

Prefix

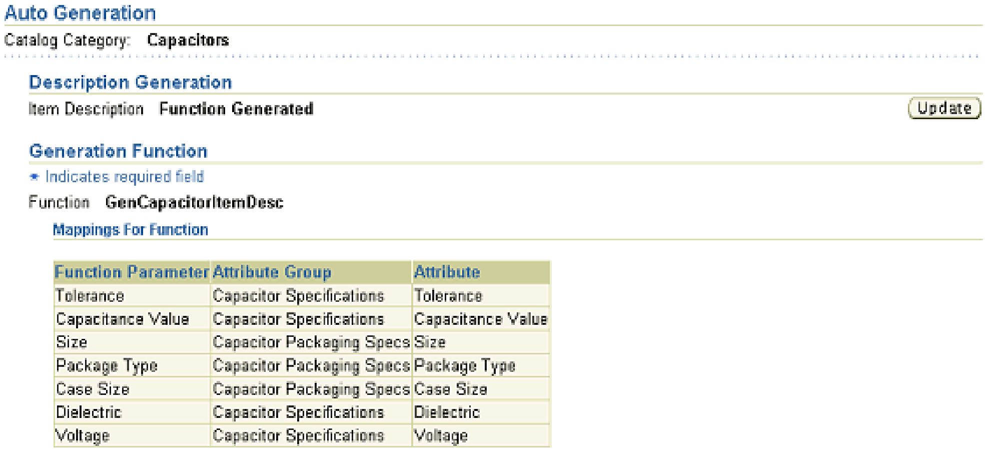
* Starting Number

* Increment 1

Suffix CAP

2. On either the **Item Description Generation** or **Item Number Generation** page, select the generation method you wish to use and fill in the required fields.

Description Generation Sample



Auto Generation

Catalog Category: **Capacitors**

Description Generation

Item Description **Function Generated**

Generation Function

* Indicates required field

Function **GenCapacitorItemDesc**

Mappings For Function

Function Parameter	Attribute Group	Attribute
Tolerance	Capacitor Specifications	Tolerance
Capacitance Value	Capacitor Specifications	Capacitance Value
Size	Capacitor Packaging Specs	Size
Package Type	Capacitor Packaging Specs	Package Type
Case Size	Capacitor Packaging Specs	Case Size
Dielectric	Capacitor Specifications	Dielectric
Voltage	Capacitor Specifications	Voltage

Creating Pages for an Item Catalog Category

Item pages provide a mechanism to customize the user interface. The administrator can combine and sequence attribute groups into pages. There is no limit on the number of attribute groups associated with a page. However, attribute groups contained in a page must have the same association level, for example, they must all be at one of the following attribute group levels:

- Item
- Item Revision
- Item Supplier
- Item Supplier Site
- Item Organization
- Item Supplier Site Organization

> **Note:** Pages inherited from a parent catalog category cannot be deleted at the child catalog category level. Pages can be inherited from a parent catalog category *and* explicitly added to the catalog category itself. Administrators should not associate the same pages with an item catalog category in this manner.

To create a page for an item catalog category:

1. On the **Search: Item Catalog Categories** page, search for the item catalog category (see:Browsing Item and Alternate Catalogs , *Oracle Product Information Management User's Guide*) and click its corresponding name link.

2. On the **Basic Information** page for the item catalog category, click the Item Pages link.

3. On the **Item Pages** page, click Add.

4. On the **Create Item Catalog Category Page** page, enter the following:

   Display Name

   Enter the name to be displayed in the user interface.

   Internal Name

   Enter the internal name. The internal name cannot be updated once a page has been created.

   Description

   Enter a description of the catalog category page.

   Sequence

   Enter the sequence number. For each page associated with a catalog category, a corresponding link is displayed to the user on the Item Detail page. The sequence number determines the order for the page links on the **Item Detail** page.

   Data Level

   Select Data Level and click Go. The data level constrains applicable attribute groups. The data level cannot be updated after a page has been created.

   > **Note:** If you change the data level after you have already associated attribute groups with a page, those attribute groups will no longer be associated with the page.

5. Click Add Another Row if you wish to add an attribute group to the page being created.

6. Click Apply.

Managing Search Criteria

Search criteria templates offer a convenient way to save frequently used search criteria. Search criteria can be created either by administrators or end users.

Administrator-created search criteria templates are available for all users. User-created search criteria are available only to the particular user who creates it. When a default search criteria template for a particular object is defined by a user and administrator, the user-defined search criteria template takes precedence.

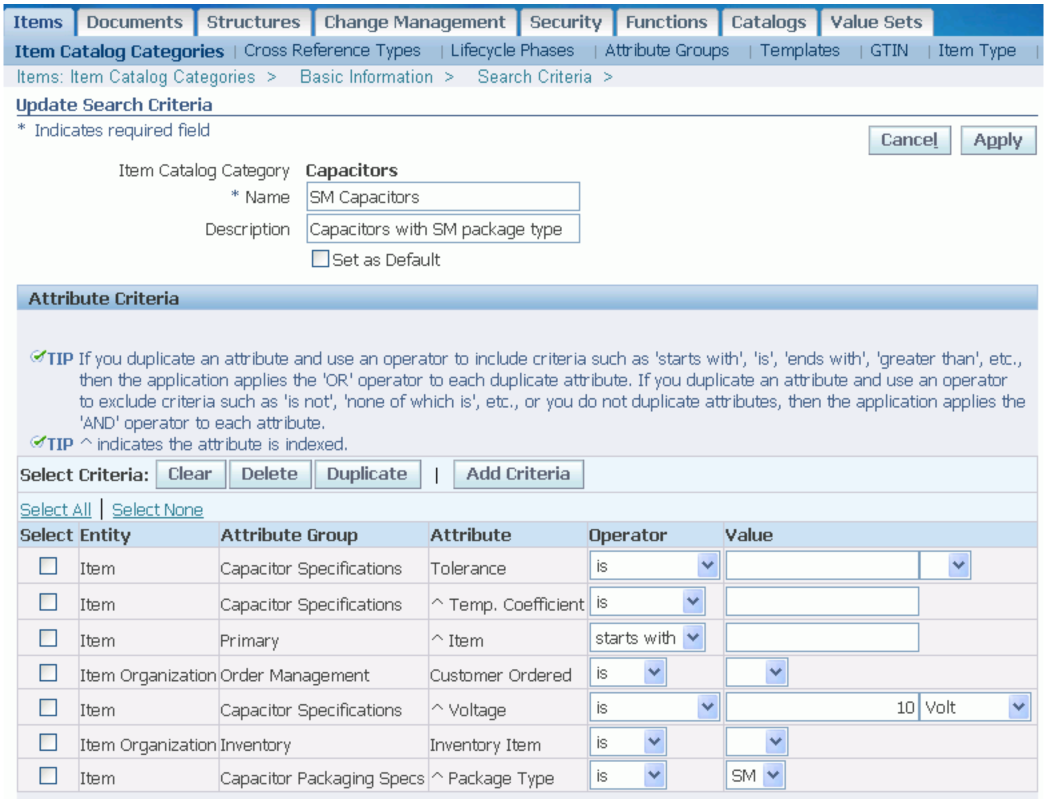
You can create item search criteria and import formats for the following business entities:

- Item
- Item Organization
- Item Revision
- Item Supplier
- Item Supplier Site
- Item Supplier Site Organization

Because search criteria templates contain primary, operational, and user-defined attributes, they are always defined in the context of an item catalog category, structure type, or change category (depending on the object for which a criteria template is being created).

The following figure shows the **Advanced Search** page, where you would define a criteria template for the item catalog category Capacitors. Begin by listing the common attributes a typical user might search for when using the item catalog category Capacitors. Here, attributes like Capacitor Tolerance and Capacitor Voltage, among others, are specified. After adding attributes, you can specify operators and values to further restrict the scope of your search.

Defining Item Catalog Search Criteria



Update Search Criteria

* Indicates required field

Item Catalog Category	**Capacitors**
* Name	SM Capacitors
Description	Capacitors with SM package type
	□ Set as Default

Attribute Criteria

✓TIP If you duplicate an attribute and use an operator to include criteria such as 'starts with', 'is', 'ends with', 'greater than', etc., then the application applies the 'OR' operator to each duplicate attribute. If you duplicate an attribute and use an operator to exclude criteria such as 'is not', 'none of which is', etc., or you do not duplicate attributes, then the application applies the 'AND' operator to each attribute.

✓TIP ^ indicates the attribute is indexed.

Select Criteria:

Select	Entity	Attribute Group	Attribute	Operator	Value
□	Item	Capacitor Specifications	Tolerance	is	
□	Item	Capacitor Specifications	^ Temp. Coefficient	is	
□	Item	Primary	^ Item	starts with	
□	Item Organization	Order Management	Customer Ordered	is	
□	Item	Capacitor Specifications	^ Voltage	is	10 Volt
□	Item Organization	Inventory	Inventory Item	is	
□	Item	Capacitor Packaging Specs	^ Package Type	is	SM

To create administrator level search criteria:

1. Administrators can create search criteria from the respective item catalog category definition page for an item, the structure type definition page for a structure, or the change category list page for a change object. You can access these pages via the Setup Workbench link on the Applications page.

2. From the object's definition page (either the **Basic Information** page for an item catalog category or structure type or the **Categories** page for a change object), click the Search Criteria link.

   Note: On the change management **Categories** page, click the Search Criteria icon in the row of the category for which you wish to create search criteria.

   Note: The Packaging BOM structure type **Basic Information** page has no link to Search Criteria. You can check Display Formats and Import Formats from the Setup Workbench Structures tab.

3. On the **Search Criteria Template** page, click Create.

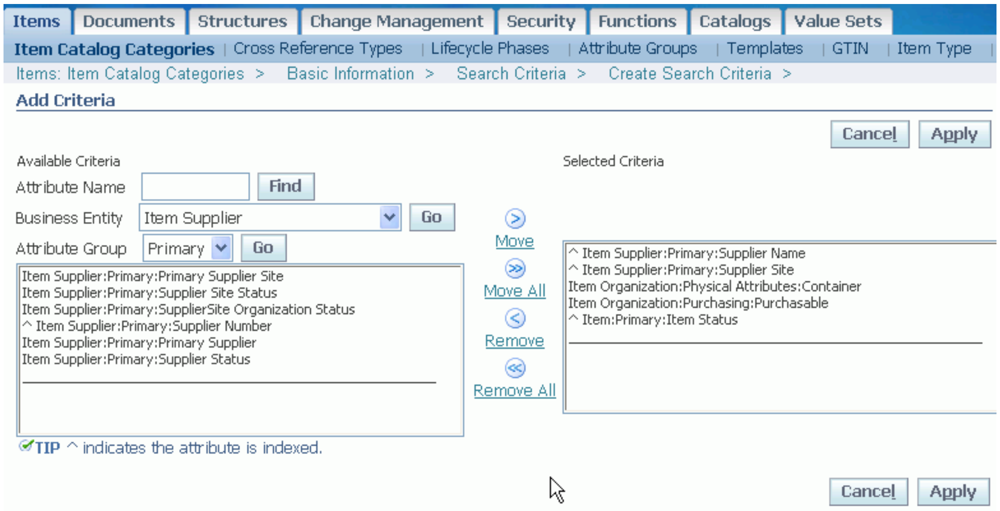
4. On the **Create Search Criteria** page, provide a name and description for the search criteria. You can set this search criteria as the default search criteria for the object by clicking Set as Default. Note that the name of the respective item catalog category, structure type, or change category already appears. You have the option of copying an existing item catalog category, structure type, or change category search criteria and combining the respective attributes with those you wish to add to this search criteria.

5. Click Add Criteria to add search criteria.

   If you simply wish to locate a single attribute, enter its name and click Find. To search for attributes by business entity (for item catalog categories only) and attribute group, select the business entity, click Go, then select the attribute group and click Go again.

   For change categories, search for attributes by change category.

   For structures, search for attributes either by structure type (you do not need to specify a structure type because you are always in the context of a structure and structure type) or by catalog category. To search for attributes by structure type, select Component. To search for attributes by catalog category, select Item.


Items
Documents
Structures
Change Management
Security
Functions
Catalogs
Value Sets
Item Catalog Categories | Cross Reference Types | Lifecycle Phases | Attribute Groups | Templates | GTIN | Item Type
Items: Item Catalog Categories > Basic Information > Search Criteria > Create Search Criteria >

Add Criteria

Available Criteria

Attribute Name:

Business Entity: Item Supplier

Attribute Group: Primary

Item Supplier:Primary:Primary Supplier Site
Item Supplier:Primary:Supplier Site Status
Item Supplier:Primary:SupplierSite Organization Status
^ Item Supplier:Primary:Supplier Number
Item Supplier:Primary:Primary Supplier
Item Supplier:Primary:Supplier Status

Selected Criteria

^ Item Supplier:Primary:Supplier Name
^ Item Supplier:Primary:Supplier Site
Item Organization:Physical Attributes:Container
Item Organization:Purchasing:Purchasable
^ Item:Primary:Item Status

TIP ^ indicates the attribute is indexed.

6. On the **Add Criteria** page, you can move search criteria back and forth from the Available Criteria list to the Selected Criteria list via the Move, Move All, Remove, and Remove All shuttles. When finished, click Continue.

7. Back on the **Create Search Criteria** page after adding criteria, you can specify operators and values to further refine the search criteria. For example, when searching for Capacitors, you may always want to include Capacitors with a Capacitance value that is between 5 and 30 uF (microfarads)--in this case you would

add the attribute "Capacitance Value" to your search criteria, then select the operator "between," and specify a minimum value of "5" uF and a maximum value of "30" uF.

> **Note:** For multi-row attributes with a value set, the distinction between the operators "is not" and "none of which is" is as follows:
>
> - *is not*
>
>   Returns *any* record containing at least one attribute value that is not the value specified. For example, suppose you have a multi-row attribute for "Color." If you specify an operator and value "is not" as "Red," then the search results will include records where there is at least one attribute value for "Color" that is not "Red."
>
> - *none of which is*
>
>   Returns any record where none of the attribute values is the value specified. For example, suppose you have a multi-row attribute for "Color." If you specify an operator and the value "none of which is" as "Red," then the search results will include records where none of the attribute values for "Color" are equal to "Red."
>
> To clear the criteria values, select the criteria and click Clear. To delete criteria attributes, select the criteria and click Delete. To copy a criteria attribute and it's value, select the criteria and click Duplicate.

> **Tip:** All of the operators except for "contains" are case sensitive.

8. Click Apply to save your search criteria definition.

To create user level search criteria:

1. Navigate to the **Advanced Search** page for items, change objects, or structures.

   For items, click on the Advanced Search link in the Applications tree menu. For change objects, click on the Issue, Idea, or Change Advanced Search link in the Applications tree menu. See Searching for Items in a Structure, *Oracle Product Information Management User's Guide* for instructions on how to navigate to the **Advanced Search** page for structures.

2. On the **Advanced Search** page, select an Item Catalog Category or Change Category (whichever is appropriate for your context) and click Go.

Skip this step for structures.

3. Click Personalize in the Search Criteria section.

4. Once in the **Personalize Search Criteria** page, follow the steps for "To create administrator level search criteria:" listed above. Begin at the step where you are in the **Search Criteria Template** page.

To update user level search criteria:

1. Navigate to the **Advanced Search** page for items, change objects, or structures.

   For items, click on the Advanced Search link in the Applications tree menu. For change objects, click on the Issue, Idea, or Change Advanced Search link in the Applications tree menu. See Searching for Items in a Structure, *Oracle Product Information Management User's Guide* for instructions on how to navigate to the **Advanced Search** page for structures.

2. On the **Advanced Search** page, select an Item Catalog Category or Change Category (whichever is appropriate for your context) and click Go.

   > **Note:** For structures, you do not have to specify a Structure Type because you are always in the context of a structure and structure type.

3. Click Personalize in the Search Criteria section.

4. On the **Personalize Search Criteria** page you are provided with a list of search criterion that are available for the item catalog category/structure type/change category you originally selected. You can only edit search criteria that you created. Click the update icon for the search criteria you wish to update.

5. On the **Update Search Criteria** page, you can update the name, description, set as default, and other attributes of the search criteria. You can also add/delete/copy/clear/modify criteria, corresponding search operators, and values.

6. Click Apply to save your search criteria definition.

Related Topics

Managing Display Formats, page 3-39

Searching for Items, *Oracle Product Information Management User's Guide*

Searching for Ideas, Issues, and Changes, *Oracle Product Information Management User's Guide*

Defining Change Category Search Criteria, page 7-46

Searching for Items in a Structure, *Oracle Product Information Management User's Guide*

Defining Display Formats and Search Criteria for Structures, page 8-2

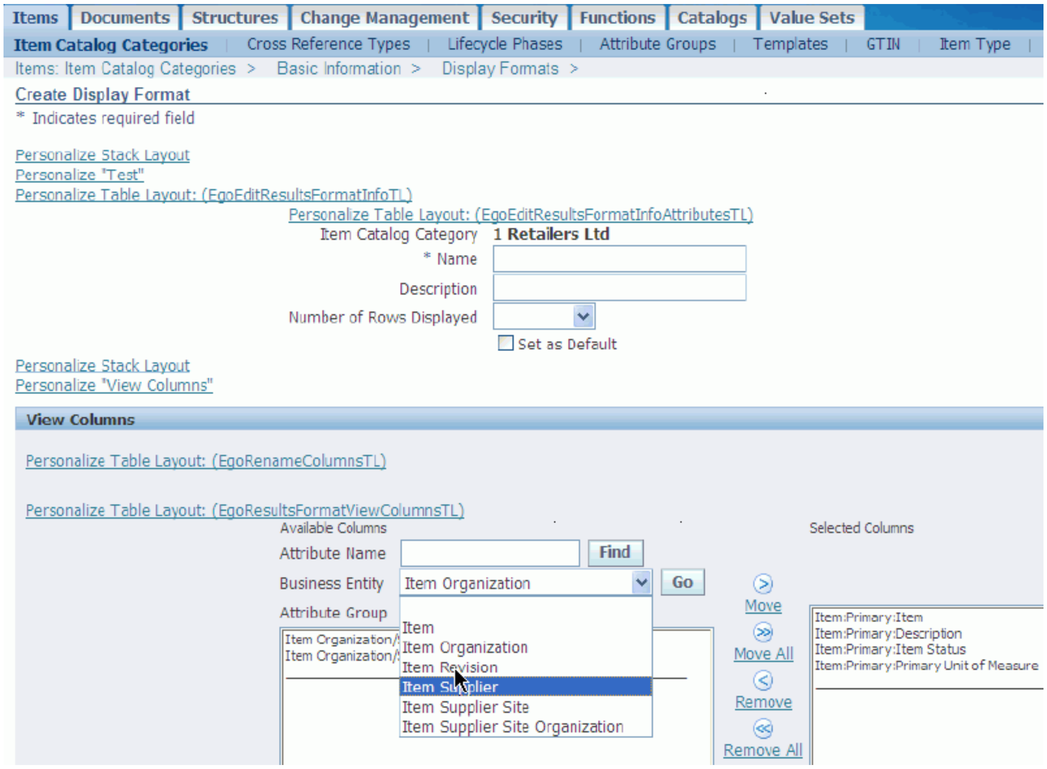
Managing Display Formats

Display Formats enable you to predefine search display views. You can use these views to look at different sets of attributes of the items, change objects, or structure components that are returned by the search. Item display formats, by default, always include the item number, item description, item catalog category, and revision level. Change display formats always include, by default, the change number. Structure display formats always include, by default, name, description, and component revision.

You can create item display formats using primary, operational, and user-defined attributes. Select user-defined attributes from attribute groups associated with any of the following business entities:

- Item
- Item Organization
- Item Revision
- Item Supplier
- Item Supplier Site
- Item Supplier Site Organization

Creating a Display Format


Items | Documents | Structures | Change Management | Security | Functions | Catalogs | Value Sets
Item Catalog Categories | Cross Reference Types | Lifecycle Phases | Attribute Groups | Templates | GTIN | Item Type
Items: Item Catalog Categories > Basic Information > Display Formats >
Personalize Stack Layout
Personalize "Test"
Personalize Table Layout: (EgoEditResultsFormatInfoTL)
Personalize Table Layout: (EgoEditResultsFormatInfoAttributesTL)
Personalize Stack Layout
Personalize "View Columns"
Personalize Table Layout: (EgoRenameColumnsTL)
Personalize Table Layout: (EgoResultsFormatViewColumnsTL)
Find
Go
Move
Move All
Remove
Remove All

Create Display Format

* Indicates required field

Item Catalog Category **1 Retailers Ltd**

* Name

Description

Number of Rows Displayed

□ Set as Default

View Columns

Available Columns

Attribute Name

Business Entity: Item Organization

Attribute Group

Item
Item Organization
Item Revision
Item Supplier
Item Supplier Site
Item Supplier Site Organization

Item Organization/
Item Organization/

Selected Columns

Item:Primary:Item
Item:Primary:Description
Item:Primary:Item Status
Item:Primary:Primary Unit of Measure

Both administrators and users can create display formats. Administrator-created display formats are available to all users. User-created display formats are available only to the users who created them.

To create an administrator level display format:

1. Administrators can create display formats from the respective item catalog category definition page for an item, the structure type definition page for a structure, or the change category list page for a change object. You can access these pages via the Setup Workbench link in the Applications tree menu.

2. From the object's definition page (either the **Basic Information** page for an item catalog category or structure type, or the **Categories** page for a change object), click the Display Formats link.

   > **Note:** On the change management **Categories** page, click the Display Format icon in the row of the category for which you wish to create a display format.

3. On the **Display Formats** page, click Create.

> **Note:** When viewing display formats for structures, the name of this page is **Search Results Format**.

Alternatively, you can click Copy to select an existing display format and copy its columns into a new display format. You can add additional, new columns into this copied display format, too.

4. On the **Create Display Format** page, provide the name and a description for the display format. Also, select the number of rows you want to display per page.

   You can set this display format as the default display format for the object by clicking Set as Default. Note that the name of the respective item catalog category, structure type, or change category already appears.

   In the View Columns region, specify the columns you want to display in the search results display. If you simply wish to locate a single attribute, enter its name and click Find. To search for attributes by business entity (for item catalog categories only) and attribute group, select the business entity, click Go, then select the attribute group and click Go again.

   For structures, search for attributes either by structure type (you do not need to specify a structure type because you are always in the context of a structure and structure type) or by catalog category. To search for attributes by structure type, select Component. To search for attributes by catalog category, select Item. If you select Item, you must specify a catalog category.

   You can move display attributes back and forth from the Available Columns list to the Selected Columns list via the Move, Move All, Remove, and Remove All shuttles.

   Note that you can rename the columns that will appear in your display format by clicking Rename Columns. On the **Rename Columns** page, the original column names that you have already selected are listed. Enter the new column names in the New Column Name field and click Continue.

   In the Sort Order section, you can select up to three columns upon which to sort the display results. You can also specify whether or not the search results in these columns be displayed in ascending or descending order. Only indexed and non-secured attributes (attributes that are not secured by a view or edit privilege) are available for sorting. Thus, you cannot sort secured attributes.

   Under "Display Sections," (available only for items and change objects) you can select which sections will be displayed in your search results. Sections are displayed as a column containing an icon with a direct link to the section. For example, to include an Attachments link on your search results page, select Attachments from the Available Sections list and move it to the Selected Sections list.

5. Click Apply to save your display format definition.

> **Note:** Set up a display format to include item multi-row attributes the same way you set it up to include single attributes. After the list of items that met your search criteria appears, click the Show link for a particular item. The Show region displays the multi-row attributes.

To update an administrator level display format:

1. Administrators can update display formats from the respective item catalog category definition page, the structure type definition page, or change category list page--all of which are accessible via the Setup Workbench link in the Applications tree menu.

2. From the object's definition page (either the **Basic Information** page for an item catalog category or structure type, or the **Categories** page for a change object), click the Display Format link.

   > **Note:** On the change management **Categories** page, click the Display Format icon in the row of the category for which you wish to update a display format.

3. On the **Display Format** page, click the Update icon in the row of the display format you wish to update. You can only edit the display formats that are explicitly associated with the item catalog category, structure type, or change category originally selected.

4. On the **Update Display Format** page, you can update the name, description and other columns of the display format. You can also add/remove/rename columns and modify sort criteria.

5. Click Apply to save your display format definition.

To create a user level display format:

1. Navigate to the **Advanced Search** page for items, change objects, or structures.

   For items, click on the Advanced Search link in the Applications tree menu. For change objects, click on the Issue, Idea, or Change Advanced Search link in the Applications tree menu. See Searching for Items in a Structure, *Oracle Product Information Management User's Guide* for instructions on how to navigate to the **Advanced Search** page for structures.

2. On the **Advanced Search** page, select an Item Catalog Category or Change Category (whichever is appropriate for your context) or, alternatively, an Alternate

Catalog, and click Go.

Optionally, you can limit your search further to a certain organization, revision, and, if you selected an Alternate Catalog, alternate category.

3. Click Personalize in the Display Format section.

4. On the **Personalize Display Formats** page, click Create or click the Copy icon for one of the existing display formats.

5. Once in the **Personalize Display Formats** page, follow the steps for "To create an administrator level display format:" listed above. Begin at the step where you are in the **Create Display Format** page.

6. Click Apply to save your display format definition.

To update a user level display format:

1. Navigate to the **Advanced Search** page for items, change objects, or structures.

   For items, click on the Advanced Search link in the Applications tree menu. For change objects, click on the Issue, Idea, or Change Advanced Search link in the Applications tree menu. See Searching for Items in a Structure, *Oracle Product Information Management User's Guide* for instructions on how to navigate to the **Advanced Search** page for structures.

2. On the **Advanced Search** page, select an Item Catalog Category or Change Category (whichever is appropriate for your context) or, alternatively, an Alternate Catalog, and click Go.

   Optionally, you can limit your search further to a certain organization, revision, and, if you selected an Alternate Catalog, alternate category.

   For structures, you do not need to specify a structure type because you are always in the context of a structure and structure type.

3. Click Personalize in the Display Format section.

4. On the **Personalize Display Formats** page, click the Update icon of the display format you wish to update. You can only update your user display formats that are explicitly associated with the item catalog category, alternate catalog, structure type, or change category originally selected.

5. On the **Update Display Format** page, you can update all of the display format fields.

6. Click Apply to save your display format definition.

Related Topics

Searching for Items, *Oracle Product Information Management User's Guide*

Searching for Ideas, Issues, and Changes, *Oracle Product Information Management User's Guide*

Defining Change Category Display Formats, page 7-47

Searching for Items in a Structure, *Oracle Product Information Management User's Guide*

Defining Display Formats and Search Criteria for Structures, page 8-2

Defining Item Catalog Import Formats

An import format identifies the primary and user-defined attributes (but not the operational attributes) in an item catalog category that is imported into the application using a spreadsheet. You can import operational attributes; however, to do this, you must specify an item template and item status in your import format. Both item templates and item statuses can be used to set operational attributes when importing items.

Seeded Business Entities for Importing

You can define import formats for the following business entities:

- Item
- Item Revision
- Item Supplier
- Item Supplier Site
- Item Organization
- Item Supplier Site Organization

An import format can also import values for a multi-row attribute group.

To import any of the above business entities from the system into an Excel spreadsheet, you must use an import format. An import format identifies the base and user attributes in an item catalog category that will be imported into the spreadsheet. Consequently, when you import item business entities from an Excel spreadsheet, the items are all imported to a particular item catalog category defined in the import format. These imported item business entities inherit all the attribute groups defined for the specific item catalog category. You can also copy, update and delete import formats.

If users do not select an item catalog category when importing business entities, the default System business entity import format is available for use. If an import format has not yet been defined for an item catalog category that a user selects, then the default

System business entity import format is available for use. The System business entity import format does not appear if a user selects an item catalog category that already has import formats defined. You cannot modify the System business entity import formats.

Items uploaded to the system from a spreadsheet become, by default, Engineering items. If you wish to upload a non-Engineering item, then include an available base attribute column called "Engineering Item Flag" in your import format. When uploading the spreadsheet identify such items in this column by specifying the value "Yes" or "No" in this column. If you leave the column blank, the item once again defaults to an Engineering item.

To create an item import format:

1. In the Applications tree menu, click the Setup Workbench link.

2. On the **Search: Catalog Categories** page, locate the item catalog category for which you wish to create the import format, and click its name link.

3. On the **Basic Information** page for the item catalog category, click the Import Formats link.

4. On the **Import Formats** page, click Create.

5. On the **Create Import Format** page, provide the following information:

   Name

   Provide the name of the import format you are creating for the item catalog category.

   Description

   Provide a description of the import format.

   Set as Default

   Select the checkbox if you wish for this import format to be the default import format for the item catalog category in which it is created.

   > **Note:** There can be only one default import format for each item catalog category.

6. In the View Columns region of the **Create Import Format** page, find the attribute columns to appear on the import format using the following fields:

   - Attribute Name

     If you know the partial name of an attribute and the business entity it belongs to, you can use this field to find it.

     For example, if you are looking for a status attribute assigned to the Item

Supplier business entity, select Item Supplier in the Business Entity field and click Go. Enter %stat% in the Attribute Name field and click Find. The Item Supplier attributes containing "stat" in their names are listed below and are available for selection.

- Business Entity

  To view all attributes assigned to a business entity, select one of the following entities and click Go.

  - Item
  - Item Organization
  - Item Revision
  - Item Supplier
  - Item Supplier Site
  - Item Supplier Site Organization

- Attribute Group

  Select an attribute group assigned to the selected business entity, then click Go. All attributes within the attribute group are now available for selection.

7. Use the Move and Remove buttons to select and remove attributes from the import format.

   You can select either single or multi-row attributes to include in the import format.

   > **Tip:** You can rename the columns that will appear in your import format by clicking Rename Columns. On the **Rename Columns** page, the original column names that you have already selected are listed. Enter the new column names in the New Column Name field and click Apply.

8. Once you have moved all of the attribute columns you want in the import format into the Selected Columns box, click Apply.

   Your new import format now appears in the list of available import formats for the selected Item Catalog Category.

   > **Note:** When importing data using Excel, you can use a combination of 220 character fields, 200 numeric fields, and 50 date fields, subject to an overall 255 field limit. For example, an import format

can include 220 character columns and 35 numeric columns for a total of 255 columns. If you use a display format to export and import data, the same restriction applies.

To copy an import format:

1. Navigate to the **Import Format** page. See: To create an item import format, page 3-45.

2. On the **Import Formats** page, locate the import format you wish to copy and click its Copy icon in the Copy column.

3. On the **Copy Import Format** page, note that a new name is defaulted, as well as the description. You can change either, and also add or remove attributes in the Selected Columns box.

   Note that you can rename the columns that will appear in your import format by clicking Rename Columns. On the Rename Columns page, the original column names that you have already selected are listed. Enter the new column names in the New Column Name field and click Continue.

   If there are more columns/attributes than can be easily scrolled in the list, you can filter the list by providing the attribute group and clicking Go, or providing the attribute name and clicking Find.

   > **Note:** You can select either single or multi-row attributes to include in the import format.

4. Click Apply.

To update an import format:

1. Navigate to the **Import Format** page. See: To create an item import format, page 3-45.

2. On the **Import Formats** page, locate the import format you wish to update and click the Update icon in the Update column.

3. On the **Edit Import Format** page, you can change the name, description, default setting and add or remove attributes/columns as needed.

   Note that you can rename the columns that will appear in your import format by clicking Rename Columns. On the **Rename Columns** page, the original column names that you have already selected are listed. Enter the new column names in the New Column Name field and click Continue.

If there are more columns/attributes than can be easily scrolled in the list, you can filter the list by providing the attribute group and clicking Go, or providing the attribute name and clicking Find.

> **Note:** You can select either single or multi-row attributes to include in the import format. Also, you cannot modify the System Item import format.

4. Click Apply.

To delete an import format:

1. Navigate to the **Import Format** page. See: To create an item import format, page 3-45.

2. On the **Import Formats** page, locate the import format you wish to delete, select it and click Delete.

Related Topics

Defining Item Catalog Import Formats, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide*

Defining Report Templates Using XML Publisher

Creating a template file consists of two basic steps:

1. Design your template layout - Use the formatting features of a word processing application and save the file as RTF.

2. Mark up your template layout - Insert the XML Publisher simplified tags.

To create a template, you need to create or use any of the existing seeded data definitions and associate or assign the change template file with the corresponding data definition file. For example, if you have a Change Order template file, associate it to a Change Order data definition file.

When you create a template, you need to assign it a data definition and upload the RTF. There are seven seeded "Summary" templates available in the system. These cannot be updated. Initially, upload one template file for a specific language and territory combination. This file will become the Default Template File. To upload additional template files or to change the Default Template File, use the **View Template** page.

To create a template:

1. Using the XML Publisher Administrator responsibility, navigate to the **Templates**

page.

2. Select the Create Template button

3. Provide the following information:

   Name

   Enter a user-friendly name for your template.

   Code

   Assign a template code using the product short name and a descriptive ending.

   Application

   While creating templates, select the correct application from the LOV. This application should be the same as the application of the Data definition. For Change Templates, the supported application is "Engineering".

   Data Definition

   Select the product's data definition from the LOV. Oracle Product Lifecycle Management. comes seeded with seven data definitions (Issue, Idea, Change Request, Change Order, New Item Request, Attachment Approval, Attachment Review). For example for an Issue Report Template, select the seeded Data Definition for Issues. This will result in the Template being available for Issue Reports. Type Select the input template type (RTF, PDF, or XSL-FO) from the LOV.

   Start Date

   Enter the date from which the template will be active.

   End Date

   To make the template inactive, enter an end date.

   Subtemplate

   If this is a subtemplate, select the check box.

   > **Note:** A subtemplate is referenced by other templates, but cannot run on its own

   File

   Use the Browse button to upload your RTF or PDF template layout file.

   Language

   Select the template language from the LOV. Add more language template files to your template definition from the View Template page.

   Territory

   Select the language territory from the LOV.

> **Important:** After the template definition is created, the following fields cannot be updated: Application, Code, and Type. You can update the template from the View Template page.

In the template file, you can include simplified XML tags to refer the Item information you want XML Publisher to print while generating the report.

Here is an example of the XML Input file that will generate report for Motherboard Items using the RTF template.

For further information, see:

- *Oracle XML Publisher User's Guide*
- *XML Publisher Feature Listing*

Associating Report Templates to Item Catalog Categories:

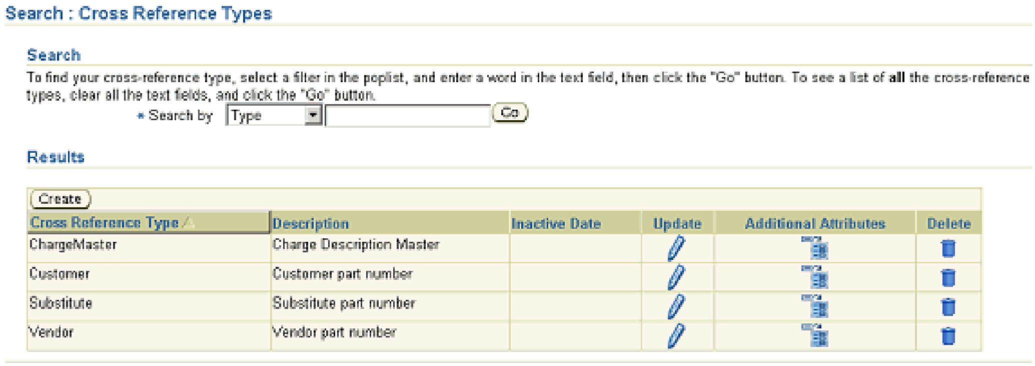
Associating a Report Template with an item catalog category makes these templates available for all items in the item catalog category. Report Templates are inherited throughout the item catalog category hierarchy—child categories inherit the Report Templates from the parent category. The following figure illustrates the valid Report Templates for the Motherboard item.

> **Note:** For details about how to associate Report Templates, see " Associating Report Templates to an Item Catalog Category" in *Oracle Product Lifecycle Management User's Guide*.

Defining Cross Reference Types

Items can have many cross-references. Example of cross-references are, customer part number, superseding/preceding item number etc. An administrator can define their own cross-reference types based on their business need. User-defined flex-fields and value sets can be associated with each cross-reference types. Cross-reference types have effectivity dates, which controls them being active or inactive.

Defining Cross Reference Types



Search : Cross Reference Types

Search

To find your cross-reference type, select a filter in the poplist, and enter a word in the text field, then click the "Go" button. To see a list of **all** the cross-reference types, clear all the text fields, and click the "Go" button.

* Search by Type

Results

Cross Reference Type △	Description	Inactive Date	Update	Additional Attributes	Delete
ChargeMaster	Charge Description Master		✎	▤	🗑
Customer	Customer part number		✎	▤	🗑
Substitute	Substitute part number		✎	▤	🗑
Vendor	Vendor part number		✎	▤	🗑

4

Setting Up Attributes and Functions

This chapter covers the following topics:

- Defining Value Sets for User-Defined Attributes
- Defining Table Value Sets
- Creating Independent Values
- Defining Item Attributes and Attribute Groups
- Creating User-Defined Functions for Item Attributes
- Defining Attribute Usages
- Displaying Attachments on Item Attribute Pages
- Associating Attribute Groups with an Item Catalog Category
- Adding Actions to an Attribute Group

Defining Value Sets for User-Defined Attributes

User-defined attributes capture all the detailed information (such as cost information) about an object (items, change requests or change orders). The item catalog enables you to create user-defined attributes with validation logic to support the needs of your organization. To do so, create value sets and associate the value sets with user-defined attributes. Attributes can have a static or dynamic list of valid values, or a range of values.

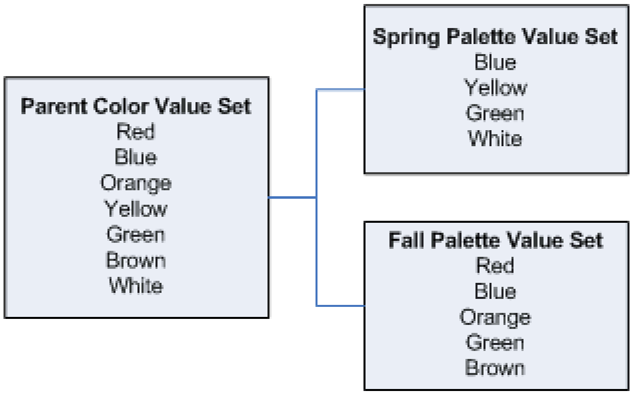
For each user-defined attribute, you can optionally specify a value set with data type and validation rules to be applied when the user inputs data. Once created, value sets can be reused for different attributes. It is recommended that you create your value set before defining your attribute groups.

You can also create child value sets that are subsets of a parent value set. The parent value set includes all possible values while the child value sets include some of the values from the parent value set. Use parent and child value sets for variant attributes when creating SKUs from style items (see: Overview of Style and SKU Items, *Oracle*

Product Information Management User's Guide).

Parent and Child Value Set Example

A clothing retailer sells a certain style of shirt in different colors for different seasons. Define all colors in the parent value set, then define a child value set for each season.



When creating the color variant attribute, specify the parent value set for the attribute. When creating the style item, you can choose either the parent or one of the child value sets for the color variant attribute.

Prior to creating value sets for user-defined attributes establish the validation rules for each attribute as follows:

- Choose the data type for the values.
- Know the range of the values.
- Know which set of actual values will satisfy the required condition for the attribute. For static values, specify a fixed set of values. Dynamic values are retrieved from a database table or view.
- Select the manner in which the values will be displayed: list of values (LOV), pop list (dropdown) or radio group.

The following table shows the validation rules for the attribute group Benchmark Rating.

Attribute Group	Attributes	Data Type	Value Range	Values	Display	Create Value Sets
Benchmark Rating	Risk Rating	Number	1 to 5	Static: 1,2,3,4,5	Pop list	Rating
Benchmark Rating	Quality Rating	Number	1 to 5	Static: 1,2,3,4,5	Pop list	Rating

Benchmark Rating	I/O Subsystem Rating	Number	1 to 5	Static: 1,2,3,4,5	Pop list	Rating
Benchmark Rating	Video System	Number	1 to 5	Static: 1,2,3,4,5	Pop list	Rating
Benchmark Rating	Overall Rating	Number	1 to 5	Static: 1,2,3,4,5	Pop list	Rating
Benchmark Rating	Failure Rate	Number	Min 0 Max100	Within the range	Text Field	Percent Range
Benchmark Rating	Supplier	Char	N/A	Dynamic: Queried from tables in the database	LOV	Primary Supplier

If you need a Yes or No value set, you can use the seeded value set EGO_YES_NO. This value set automatically displays when you set the Display As field to "Checkbox" for the attribute. You can see some of the seeded value sets on the **Value Set** page; these are used to support images and attachments in the long description on the **Item Summary** pages.

To create a value set:

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Catalog Categories** page, click the Value Sets tab.

3. On the **Maintain Value Sets** page, click Create.

4. On the **Create Value Set** page, enter the following information:

   Value Set Name

   The name by which the system and users keep track of the value set. You can only enter alphanumeric (a, b, c,..., 1, 2, 3,...) and the underscore (_) characters for the value set name. You cannot use spaces or special characters. The length is limited to 15 characters.

   > **Important:** Once specified, you cannot edit the value set name.

   Description

Optionally, enter a description of the value set.

Data Type

The data type of the value set. The data type that you select determines the values that are available in the value set. An attribute's data type must match the data type specified for that attribute's value set. The different data types are:

- Character
- Number
- Standard Date
- Standard Date Time

> **Important:** You cannot edit the data type once the value set has been created.

> **Warning:** You cannot create SKUs with the following variant attribute data types:
>
> - Standard Date
> - Standard Date Time
> - Translatable Text

Maximum Size

Specify the value for Maximum Size if you wish to limit the user's input in the attribute text field. For example, in some cases you may wish to limit the number of characters in the attribute Date to 10 characters, or the number of characters in Name to 50. Keep the default value of 0 if you wish to omit this particular validation.

Validation Type

A set of values against which the values entered by users are validated. Choices are:

- None

  There is no explicit set of values against which the user's input is validated.

- Independent

  The explicit values against which the user's input is validated are defined here. To create explicit values, select Table and click Apply and Continue to edit information on the **Enter Validation Table Information** page. If you select this validation type, see: Creating Independent Values, page 4-9. Select the "Poplist" radio button to display valid values as a drop-down list. Select the "List of Values" radio button to display valid values as a searchable list of values.

- Translatable Independent

  This validation type behaves the same as Independent, but enables the display of values in another language.

- Table

  The explicit values against which the user's input is validated comes from a database table. To create explicit values, select Independent and click Add Values or click Table and then click Edit Table Information. If you select this validation type, see: Defining Table Value Sets, page 4-7.

  > **Note:** Display value sets using the Table validation type as a list of values (LOV) or as a pop list.

Display Type

- Poplist

  > **Note:** Display as Radio Group can be set while creating or editing attributes. See: Defining Item Attributes and Attribute Groups, page 4-10. Oracle recommends that when you use the value set type Independent, you save it as a pop list.

- List of Values

  > **Important:** You can associate the Value Set to an attribute only if the above conditions are satisfied and the Security Type is 'No Security'. Value sets created in forms with a security type are not applicable for PLM/PIM and are not visible in the HTML user interface.

5. Optionally specify a Minimum Value and Maximum Value in the "Value Range" section. If you selected the Validation Type "None" and a data type of "Number," "Standard Date," or "Standard Date Time," you can enter a minimum and maximum value for your value set. If the data type is "Standard Date" or "Standard Date Time," you can substitute the $SYSDATE$ token for the current date. $SYSDATE$ is a min/max value placeholder that is replaced by the current day on the day the user enters a value for the attribute. You can also add or subtract whole numbers from $SYSDATE$. For example, "$SYSDATE$ - 4" would be four days prior to the current

date.

6. Click Apply to stop after creating one value set or click Apply and Continue to create another value set.

   > **Important:** The system's user-defined attributes framework does not support the following value set options. These options can be defined using the flex-fields value set forms.
   >
   > - Uppercase only
   > - Number only
   > - Precision

The **Value Set Details** page is displayed upon completion. You can edit certain settings after creation by clicking Update. You can find all existing value sets on the **Value Sets** page. You can search for value sets using the criteria Name, Description, Data type, or Validation type, as well as search for values within value sets. Optionally, add a description to a value.

To create a child value set:

After creating a value set, the system returns you to the **Maintain Value Sets** page. You can create a child value set directly from this page or from the **Value Set Details** page.

You can only create a child value set when the parent value set has a validation type of Independent or Translatable Independent.

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Catalog Categories** page, click the Value Sets tab.

3. On the **Maintain Value Sets** page, click the Create Child Value Set icon for a value set.

   Alternatively, select the value set name. From the **Value Set Details** page, in the Child Value Sets region, click Create.

4. In the **Create/Edit Child Value Set** page, enter the following information:

   - **Child Value Set Name**

     The name by which the system and users keep track of the child value set. You can only enter alphanumeric (a, b, c,..., 1, 2, 3,...) and the underscore (_) characters for the child value set name. You cannot use spaces or special characters. The length is limited to 15 characters.

Important: Once specified, you cannot edit the child value set name.

Description

Optionally, enter a description of the child value set.

Select Values

Select a value from the parent value set and use the arrow buttons to move (or remove) the value into the child value set.

5. Once you have selected all of the values for the child value set, click Apply.

Related Topics

Defining Table Value Sets, page 4-7

Creating Independent Values, page 4-9

Defining Table Value Sets

When creating a value set, you must specify a validation type. If you select the validation type "Table", then you must define the table whose values comprise the value set.

Table value sets build queries that draw valid values from a table/view. For example, you have identified the table EMP as having a value column EMP_ID, and the ID column EMP_NAME. If a user searches for a person named "Smith", the query is directed to the table EMP. The search value entered is "Sm", so the actual search value used is "Sm%". The value set builds a search of the EMP table to find all employees whose names begin with "Sm". A list of values containing all employees whose last names begin with "Sm" is returned to the user. Then the user selects the correct employee, and that employee ID is the value that gets stored for the attribute.

Note: Identifying a table is part of the process of creating a value set. Before identifying a table, you must create a value set. See: Defining Value Sets for User-Defined Attributes, page 4-1.

To identify a table for a value set:

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Catalog Categories** page, click the Value Sets tab. Find and select the value set for which you want to enter validation table information.

3. In the **Value Set Details** page, Validation Table Information region, click Update.

4. On the **Enter Validation Table Information** page, enter the following information:

   Application Name

   The name of the application in which the table is located.

   Table Name

   The name of the database table or view in the schema.

5. In the Value Column section, enter the following information:

   Name

   The name of the column that stores the internal value.

   Type

   The data type of the value column.

   Size

   The size of the value column.

6. In the Meaning Column section, enter the following information:

   Name

   The name of the column that stores the description of the value.

   Type

   The data type of the meaning column.

   Size

   The size of the meaning column.

7. In the ID Column section, enter the following information:

   Name

   The name of the column that stores the display value.

   Type

   The data type of the ID column.

   Size

   The size of ID column.

8. In the "Where Clause" section, enter an additional Where clause to further constrain a query. For example, go back to the example above. Say you wish to further constrict the search results by only searching for current employees. In this case, you would add an additional Where clause defining the JOB_STATUS as ACTIVE.

You can also use bind values in Where clauses in the following ways:

- You can refer to other attributes in the same attribute group as the attribute that uses this value set by using the following syntax:

  :$ATTRIBUTEGROUP$.<your attribute's internal name>

  For example:

  (lookup_type='EGO_EF_Industry_TYPE' and instr(:$ATTRIBUTEGROUP$.Attr1 , tag) > 0)

  > **Important:** In the example above, you must include a space between the comma and the word "tag" in order for the sql string to parse correctly.

- You can refer to primary keys for the object to which the attribute group is associated by using the following syntax:

  :$OBJECT$.<the object's primary key column name>

9. Click Apply.

Creating Independent Values

When creating a value set, you must specify a validation type. If you select the validation type "Independent", then you must define the independent values that comprise the value set.

Prerequisites

❒ Creating an independent value is part of the process of creating a value set. Before creating an independent value, you must create a value set. See: Defining Value Sets for User-Defined Attributes, page 4-1.

To create an independent value type:

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Catalog Categories** page, click the Value Sets tab.

   Find and select the value set for which you want to enter values.

3. In the **Value Set Details** page, Values region, click Create.

4. On the **Create Value** page, enter the following information:

   Value (Internal Name)

The internal name of the value; this is a valid value in your value set. The internal name must be of the same data type as the value set data type.

Translated Value

The display name of the value in another language. This field only appears if the value set validation type is Translatable Independent.

Description

The description of the value. The description does not have to be the same data type as the value set data type.

Enabled

Specify whether or not the value is enabled (and available for use) or disabled (and not available for use).

Sequence

The order or sequence in which the independent values are displayed.

Start Date

The date on which this value becomes a valid value in the value set.

End Date

The date on which this value is no longer a valid value in the value set.

5. Click Apply or Add Another. Both buttons save the value to the database.

Defining Item Attributes and Attribute Groups

Every catalog item has a set of operational attributes that determines the behavior of features in other E-Business Suite applications. In addition, you can create user-defined attributes that more specifically identify items, their characteristics and specifications, and capture business process information. User-defined attributes can also possess certain validation logic (for example, value sets) and indexes.

Attributes are defined by their names and values, and are saved within attribute groups. You can associate attribute groups with the following business entities (see: Assigning Suppliers to Items, *Oracle Product Information Management User's Guide*):

- item
- item revision
- item organization
- item supplier
- item supplier site

- item supplier site organization

Item business entity attribute values default from entity to entity in the following order when an attribute group is associated with multiple business entities:

- item to item supplier
- item supplier to item supplier site
- item supplier site to item supplier site organization
- item to item organization

Attribute values only default from the parent to the child level during item business entity creation. You can override the defaulted attribute value at the child level. For example, define an initial cost attribute value at the parent or style item level and it defaults to the child item business entities and/or SKU items. You can update the initial cost at the child level later.

You can set up as many attribute groups as necessary to define an item business entity, with the following limitations on the number of attributes within each attribute group:

- 40 character attributes
- 20 number attributes
- 10 date attributes
- 40 translatable attributes

Later, users can enter the values for the attributes on the item business entity pages. Configure how attribute groups are displayed on these pages to improve usability (see: Associating Attribute Groups with an Item Catalog Category, page 4-31).

> **Note:** You can also create user-defined attribute groups and attributes for objects such as:
>
> - projects
> - tasks
> - documents (For users of Oracle Product Lifecycle Management only. See: Creating User-Defined Attribute Groups, *Oracle Product Lifecycle Management Implementation Guide*)
> - change objects (see: Defining Header/Line Type Attributes and Attribute Groups, page 7-26)

For each user-defined attribute, you can optionally specify a value set (see: Defining

Value Sets for User-Defined Attributes, page 4-1) with data type and validation rules that are applied when the user inputs data. Once created, you can reuse value sets for different attributes. Create value sets before defining your attribute groups.

An attribute group can be single-row, multi-row, or variant. Multi-row attribute groups enable you to associate multiple sets of attribute values with the same object instance. For example, if your item is a book, you can create an attribute group called "chapters" with attributes "chapter number," "name" and "number of pages." Multiple rows of "chapters" can be associated with a book, while "name" and "number of pages" each require a single row. The attribute "chapter number" is identified as Part of Unique Key (see: Part of Unique Key, page 4-19 later in this section). Use variant attribute groups only with style and SKU items (see: Using Style and SKU Items, *Oracle Product Information Management User's Guide*)

> **Caution:** Style items can have an unlimited number of attribute groups. The restrictions on the number of variant attributes within each group are the same as for any other type of attribute. Oracle Retail only allows 4 variant attributes per style item, however. When integrating Oracle Product Information Management with Oracle Retail, limit the number of variant attributes to four per style item.

Third-party systems integrators can easily generate a database view of existing attributes and attribute groups. These views are particularly useful when users wish to read the Oracle-provided data as they write code for integration with Oracle applications. To generate database views, on the **Search: Attribute Groups** page, select the attribute groups for which you wish to generate the view and click Generate Database View.

Prerequisites

❒ Create value sets. See: Defining Value Sets for User-Defined Attributes, page 4-1.

❒ Group related attributes within the same attribute group. The following table shows some examples of attribute groups.

Attribute Group	Attributes	Data Type
Capacitor Specifications	Dielectric	Char
	Voltage	Number
	Tolerance	Number
	Minimum Temperature	Number

	Maximum Temperature	Number
Capacitor Packaging Specs	Package Type	Char
	Size	Number
	Case Size	Number

❒ Create custom privileges. See: Creating Custom Privileges, page 11-27.

❒ Create an object role (item) with custom privileges to define attribute group security (if necessary). You can secure the attribute group by setting Edit/View privileges. Later on, only users with certain roles can view or edit those attributes. See: To implement attribute group security, page 11-19.

❒ For attributes with a data type of Number, set up the Unit of Measure Classes (for example, Currency) and Units of Measure (for example, US Dollars). See: Defining Unit of Measure Classes, *Oracle Inventory User's Guide* and Defining Units of Measure, *Oracle Inventory User's Guide*.

Also, see Display As, page 4-18 later in this section for related information.

❒ Establish the validation rules for each attribute, if necessary. See: Defining Value Sets for User Defined Attributes, page 4-1.

To create and maintain attribute groups:

1. From the Home page, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, click the Attribute Groups subtab.

3. On the **Attribute Groups** page, click Create.

4. On the **Create Attribute Group for Item Management** page, enter the following:

   Internal Name

   Enter the internal name of the attribute group.

   Display Name

   Enter the name of the attribute group as it will be displayed in the user interface.

   Description

   Optionally, enter the description of the attribute group.

   Behavior

Select the Behavior of the attribute group:

- Multi-Row to associate multiple sets of attribute values with the same object instance.

- Single-Row to associate one attribute value with each object instance.

- Variant to use with style and SKU items. Variant attribute groups contain attributes that differentiate SKUs within one style item. See: Using Style and SKU Items, *Oracle Product Information Management User's Guide*

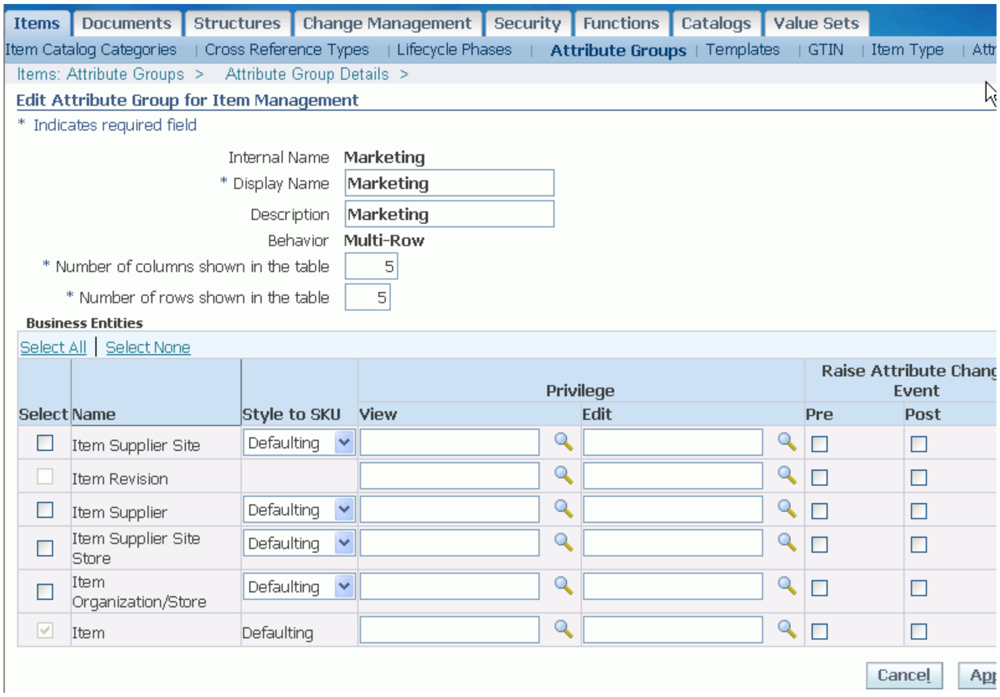
  > **Caution:** You can only associate a variant attribute group with an item business entity.

Number of columns in the page layout

Enter the number of columns to appear in the attribute group page. The default value is 2. This field does not appear when defining a variant attribute group.

Number of rows in the page layout

This field only appears for multi-row attribute groups. Enter the number of columns to appear in the attribute group page. The default value is 5.



Edit Attribute Group for Item Management

* Indicates required field

Internal Name	Marketing
* Display Name	Marketing
Description	Marketing
Behavior	Multi-Row
* Number of columns shown in the table	5
* Number of rows shown in the table	5

Business Entities

Select All | Select None

			Privilege		Raise Attribute Chang Event	
Select	Name	Style to SKU	View	Edit	Pre	Post
□	Item Supplier Site	Defaulting			□	□
□	Item Revision				□	□
□	Item Supplier	Defaulting			□	□
□	Item Supplier Site Store	Defaulting			□	□
□	Item Organization/Store	Defaulting			□	□
☑	Item	Defaulting			□	□

5. Select the business entities to which you want to apply the attribute group. For each business entity selected, specify the following:

   - **Style to SKU**

     Select one of the following:

     - Defaulting - when an attribute defaults from a style item to a SKU during SKU creation, you can change the attribute at the SKU level later without affecting the style item. Conversely, if you change a defaulted attribute at the style item level after SKU creation, the change does not automatically appear at the SKU level. You must manually make the change at the SKU level or use a mass update function to change the SKUs.

     - Inheritance - when a SKU inherits an attribute from its style item, the attribute is always controlled at the style item level. You can only change an inherited item level user defined attribute at the style item level. Once the style item attribute is changed, all related SKUs reflect the new attribute value.

   - **View Privilege**

     Select a viewing privilege. Users must have a view privilege for any object to which this attribute group is associated. Then, you can narrow the definition of viewing privileges to meet the needs of your enterprise. For example, you may create a privilege called View Item Cost and associate it with an attribute group called "Costs." Users who have view privileges for the item can view the item, but not necessarily the cost information associated with it. To view the costs associated with the item, users must have the additional View Item Cost privilege.

> **Note:** The lock icon (viewed on the **Search Results** page) indicates that a user does not have the privilege required to view a particular attribute group. If you wish to create a custom privilege, see Creating Custom Privileges, page 11-27.

- **Edit Privilege**

  Select an edit privilege. Users must have an edit privilege to edit information in this particular attribute group. Privileges are granted by roles assigned to users. If no view or edit privilege is specified for the attribute group, then users' ability to view and edit the attribute group is controlled by the view and edit privileges on the object to which the attribute group is associated. You can define editing privileges to meet the needs of your enterprise.

- **Raise Pre Attribute Change Event**

  Click Raise Pre Attribute Change Event to raise a business event every time you want to test a proposed attribute change. This enables you to test a proposed attribute change against validating criteria before committing the attribute value to the database. See: Item Business Events, page B-1 .

- **Raise Post Attribute Change Event**

  Click Raise Post Attribute Change Event to raise a business event every time an attribute is changed. Based on this event, you can choose to execute other functions or workflows to implement your company's business processes. See: User-Defined Attributes Business Event within the Synchronizing Item User-Defined Attributes With Item Descriptive Elements Overview, page D-1.

6. Click Apply and Add Attributes to add user-defined attributes to your attribute group. Note that clicking Apply and Add Attributes saves the attribute group and commits it to the database, even if you click Cancel while on the **Create Attribute** page. Alternatively, click Apply to only save the attribute group and stop the process.

   If choosing Apply and Add Attributes, continue on to the next step.

7. On the **Create Attribute** page, provide the following information:

   Internal Name

   The internal name of the attribute. The name by which the attribute is tracked internally.

Display Name

The name of the attribute as it appears within the user interface.

Sequence

The sequence number for the attribute. The sequence determines the order in which the attribute is displayed on the page, and also determines the order in which the attribute is processed.

Tip

The description of the attribute; this description also appears as tip text on pages that have attributes that can be updated.

Data Type

Lists the available data types. The data type that you select determines the values that are available in the column and value set. An attribute's data type must match the data type specified for that attribute's value set. The list of values for a value set only displays value sets whose data type matches the data type of the attribute. Note that selecting a data type always clears the column and value set. For example, say you selected the Number data type. Then you select your column and value set--remember that your column and value set choices are determined by the data type you chose. Then you decide to change the data type from Number to Date. Notice that after you change the data type, your column and value set are cleared; you need to select new ones based on your new data type. Additionally, the data type determines the values that are available in the Display As field. You cannot change the data type once an attribute is created.

> **Note:** The maximum number of characters for a character type attribute is 150 characters. Translatable text fields have a limit of 1,000 characters. Number type fields have a maximum size and precision of 22.5 (22 digits to the left of the decimal and 5 digits to the right).

Column

A list of values that enables you to specify the column in which the attribute is stored in the database table. The column list of values only returns columns with the data type you specified in Data Type. The list of values also indicates whether or not the column is indexed. If you want the attribute to be searchable, then select a column in the database. Ensure that the Indexed checkbox is selected before you complete the attribute definition. If no indexed columns are available in the database, and you still want a searchable attribute, select a non-indexed column, and ensure the Indexed checkbox is selected before completing the attribute definition; then the database column is automatically indexed. If you do not want the attribute to be searchable, and the only columns available in the database are indexed, then ensure that the Indexed checkbox is not selected before completing the attribute definition.

Enabled

Specify whether or not the attribute is enabled (and available for use) or disabled (and not available for use). If the attribute is enabled, specify whether or not the attribute is optional or required. If required, the user cannot save data for an object using the attribute group without entering a value for that attribute. You can always disable attributes. However, you cannot delete attributes after an attribute group has been associated with an item catalog category.

Required

Specify whether or not the user must enter an attribute value.

Display As

Determines how the attribute appears within the user interface. For example, if you select Text Field for an attribute called "Cost Center", then "Cost Center" appears in the user interface as a text field. The available values for Display As are determined by the data type selected.

If you choose Checkbox, then the value set defaults to EGO_YES_NO.

If you select Radio Group, then you must choose an independent value type set (in other words, the value set has a discrete set of values that you have already specified). If, while updating the value set, you select the Long List of Values validation type, attributes will be displayed as a text field with a list of values, thereby ignoring your choice of Radio Group.

If you select Text Field, *and* choose a value set whose type is independent, then your display would be either a poplist or list of values (whether or not you get the poplist or list of values is determined by the way you define the value set). Also, when the data type is Number, and Display As is a Text Field, a Unit of Measure list of values is presented. You can choose either the Unit of Measure or the Value Set; they are mutually exclusive.

Hidden attributes do not show up in the user interface; this attribute is primarily populated via user-defined functions.

Selecting Dynamic URL refreshes the page with a new section for specifying the dynamic URL. Enter a URL and use any attribute Internal Name in the attribute group, enclosed between $$ symbols, as a token for the value of a parameter. When users click on the URL, the value for that attribute will replace the token in the URL's query string.

Selecting Static URL enables you to input a web page address.

The following table describes which display types are supported for the various data types.

Display Types Supported by Data Types

Display Type	String	Number	Date	Date Time	Translatable Text
Text Field	Supported	Supported	Supported	Supported	Supported
Check Box	Supported	Not Supported	Not Supported	Not Supported	Not Supported
Hidden	Supported	Supported	Supported	Supported	Supported
Static URL	Supported	Not Supported	Not Supported	Not Supported	Supported
Dynamic URL	Supported	Supported	Supported	Supported	Supported
Radio Group	Supported	Supported	Supported	Supported	Supported
Attachment	Not Supported	Supported	Not Supported	Not Supported	Not Supported

Indexed

Specify whether or not you want the attribute to be indexed. If you choose to make this an indexed attribute, it will appear as an indexed attribute on the criteria template page. Only indexed attributes are available as sort criteria in result formats.

Part of Unique Key

If the attribute group is multi-row, the Part of Unique Key checkbox determines whether or not the attribute is part of the key that uniquely identifies a row. A unique key is any set of attributes whose values can be used to uniquely identify a row within the attribute group. You can define the unique key on the attribute group **Detail** page. You can add/edit the unique key as long as doing so does not destroy the uniqueness (creating duplicates) of existing records.

> **Note:** You can specify that each attribute is part of a unique key when creating the attribute, or--more conveniently--you can specify all unique key attributes in the group via the attribute group **Detail** page.

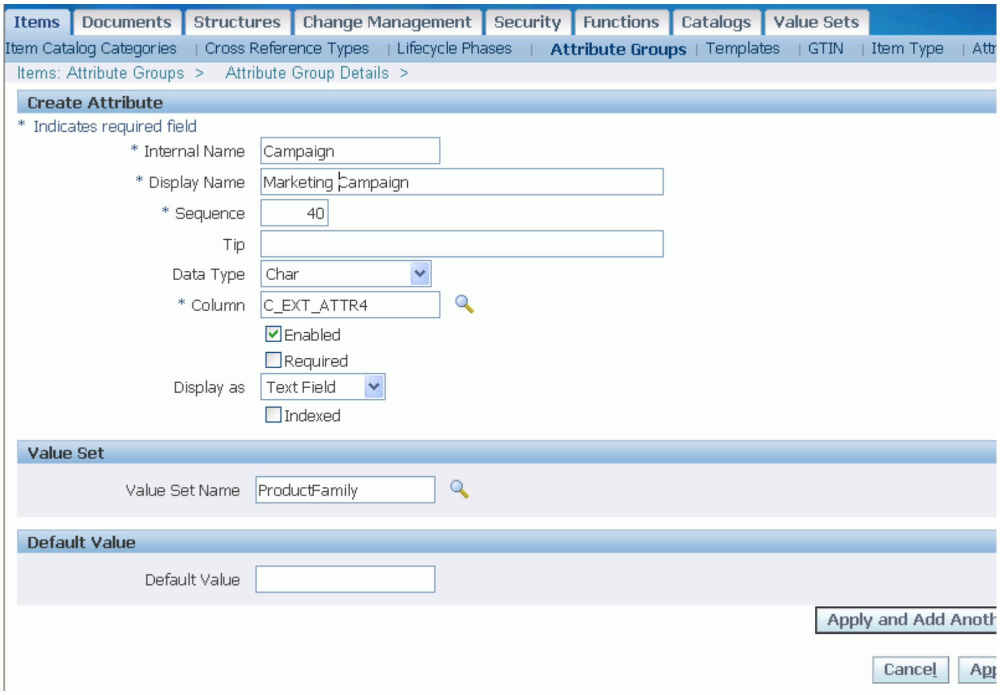
Value Set

Select a value set that will serve as a set of constraints for an attribute. For details about creating value sets, see Defining Value Sets for User-Defined Attributes, page 4-1.

Default Value

The default value of this attribute. If you've selected a value set, the value set's constraints apply to the default value. This value defaults upon object creation.

> **Caution:** In an attribute group with at least one required attribute, no default values are applied for any attributes when a required attribute does not have an assigned default value.



Create Attribute

* Indicates required field

* Internal Name	Campaign
* Display Name	Marketing Campaign
* Sequence	40
Tip	
Data Type	Char
* Column	C_EXT_ATTR4
	☑ Enabled
	☐ Required
Display as	Text Field
	☐ Indexed

Value Set

Value Set Name	ProductFamily

Default Value

Default Value	

8. Click Apply and Add Another to save and create another attribute or click Apply to save and stop the process.

To copy an attribute group and its attributes:

When you copy an attribute group, all of the attribute group's field values and attributes default to the new attribute group. You can override all defaulted values and attributes except for the attribute group Behavior field.

1. On the **Attribute Groups** page, search for the attribute group to copy.

2. In the attribute group search results, click the Copy icon for the attribute group.

3. On the **Create Attribute Group for Item Management** page, the field values from the original attribute group appear. You must enter a new internal name for the copied attribute group, but you have the option to change all field values except for the Behavior field; you cannot change the original Single-Row, Multi-Row, or Variant value in the Behavior field.

4. Click Apply.

   The **Attribute Details** page appears. The attributes from the original attribute group are attached to the newly copied attribute group. From this page, you can edit or delete the existing attributes and add new attributes.

Creating User-Defined Functions for Item Attributes

To define your own custom logic, you can add user-defined functions and actions to existing pages in the Item Catalog, Document Management, and Change Management without having to customize the entire page. By first setting up user-defined attributes, you can then execute user-defined functions with those attributes.

Using different algorithms, you can calculate values by passing attribute values to functions. User-defined functions can be Java, URL, or PL/SQL functions. Functions use input and/or output parameters of various data types such as string, integer, or Boolean. You can also map these parameters to attributes and object primary key values. Actions are trigger points for functions displayed as buttons or links on the page. You can determine the conditional visibility of the button and the label displayed on the button itself. You can also prompt the user based on the user's input. See: Adding Actions to an Attribute Group, page 4-35

User-defined functions can be Java, URL, or PL/SQL functions. Prior to setting up user-defined functions and actions you should:

Prerequisites

❒ Set up user defined attributes. See: Defining Item Attributes and Attribute Groups, page 4-10

❒ Create item pages associated with item catalog categories. See: Creating Pages for an Item Catalog Category, page 3-32

❒ Determine which attributes are functions of other attributes. Create user-defined functions to perform the necessary calculations (for example, summation of costs, efforts, ratings).

❒ Create custom privileges and roles if you need to secure access and control who can/cannot execute the function/action. See: To implement attribute group security, page 11-19

❒ Determine the conditions for displaying or changing the prompt of the button/link that executes the function. For example, the button may not be displayed until certain required attributes have values entered. The name of the button may change depending on the values of certain attributes. See: Adding Actions to an Attribute Group, page 4-35

To create a user-defined function:

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Item Catalog Categories** page, click the Functions tab.

3. On the **Search and Select: Functions** page, click Create Function.

4. On the **Create Function** page, enter the following information:

   Internal Name

   The internal name of the function.

   Display Name

   The name of the function as it appears in the user interface.

   Description

   The description of the function.

   Function Type

   Whenever you define a function, there must be an underlying implementation of that function. The type specifies the manner of implementation to which the function maps. The supported function types are:

   Java

   Specifies that the implementation is via a Java method. When you select Java, the page refreshes and you must specify the following:

   - Class

     The class in which the method resides.

   - Method

     The method that implements your custom logic.

     > **Note:** Place the Java class files in any directory and append this directory to the Apache servlet classpath.

   PL/SQL

   Specifies that the implementation is via a PL/SQL stored procedure. When you select PL/SQL, the page refreshes and you must specify the following:

- Package

  The package in which the procedure resides.

- Procedure

  The procedure that implements your custom logic.

  > **Note:** Run the PL/SQL package in your custom schema and then create a synonym for this package in the APPS schema.

URL

Specifies that the implementation is a simple URL link. When you select URL, the page refreshes and you must specify the following:

- URL

  Specify either absolute or relative URLs. For absolute URLs, begin the URL with the protocol (in most cases, the protocol will be http://).

5. Click Apply.

   > **Note:** You can only delete a function when it is no longer associated with an action.

To create parameter mappings for a function:

After creating a user-defined function, specify the parameters to pass when that function is called.

1. On the **Search and Select: Functions** page, click the name of the function you just created.

2. On the **Function Details** page, click Add.

3. On the **Create Function Parameter** page, enter the following information:

   Internal Name

   The internal name of the parameter.

   Display Name

   The name of the parameter as it appears in the user interface.

   Sequence

   The order in which this parameter appears relative to other parameters associated with this function. Sequence must be unique among all parameters associated with this function.

Specify the order sequence of the function parameters; this is the order in which the parameters are passed to a function or procedure. For example, you need to calculate time duration in days by using the attribute group "Duration in days" where Duration = End Date – Start Date.

Sequence	**Attribute Group:** *Duration in Days*	**Attribute Group:** *Duration in Days*	Mapping Attribute & Parameters	**Java Function**: *Duration*	**Java Function**: *Duration*	**Java Function**: *Duration*
Sequence	Attribute Name	Data Type	---------@--------	Parameter Name	Data Type	Parameter Type
1	Start Date	Standard Date	---------@--------	Date 1	Date	Input
2	End Date	Standard Date	---------@--------	Date 2	Date	Input
3	Duration	Number	---------@--------	Result	Integer	Return Value

Data Type

Lists the available data types. The values available are dependent on the type of function for which you are defining parameters.

Parameter Type

Select the parameter type for each parameter based on whether the corresponding attribute is providing an input parameter to the function or expecting a return value from the function (for example, input, output, input/output).

The parameter options for a parameter depend on the function type and parameter data type you have already selected. For example, if the Function Type is URL, then the Data Type is constrained to String, and the Parameter type is constrained to Input.

The valid parameters for Java functions are:

- Boolean
- Standard Date

- Error Array
- Float
- Integer
- Long
- Double
- Transaction
- String
- Standard Date Time

The valid parameters for PL/SQL functions are:

- Date
- Error Array
- Number
- Varchar

The valid parameter for URL function is:

- String

The system supports Java function parameters to be used as input, output, input/output or return. For output or input/output parameter types, you have to pass back the changed value as the same object. But you cannot change the values for immutable data types. Therefore, wrapper classes are created for these data types.

Boolean - oracle.apps.ego.common.EgoBoolean

Double - oracle.apps.ego.common.EgoDouble

Float - oracle.apps.ego.common.EgoFloat

Integer - oracle.apps.ego.common.EgoInteger

Long - oracle.apps.ego.common.EgoLong

Date - oracle.apps.ego.common.EgoDate

Timestamp - oracle.apps.ego.common.EgoTimestamp

All these wrapper classes have getValue () and setValue () that return/take the basic parameters respectively. For example, EgoInteger - setValue(Integer i) Integer getValue()

Other Java parameters supported are:

String - java.lang.StringBuffer

Transaction - oracle.jbo.Transaction

> **Note:** ErrorArray data type is a java.util.Vector to which you can add translated Error messages. This is an output parameter and the errors are displayed on the rendering page.

While writing Java Custom functions, use the above data types. When a user enters a decimal value for an attribute and this attribute is mapped to EgoInteger or EgoLong, the value is truncated before it passes to the function. For EgoBoolean, the value "Y" is considered TRUE. All other values are considered FALSE.

4. Click Apply.

Related Topics

Adding Actions to an Attribute Group, page 4-35

Creating Pages for an Item Catalog Category, page 3-32

Defining Item Attributes and Attribute Groups, page 4-10

Defining Attribute Usages

You can export user-defined attributes to other applications for their use. For example, export user-defined attributes to Oracle Configurator for use as item properties (See: Item Types and Imported BOM Properties within Imported BOM Models, *Oracle Configurator Developer User's Guide*). Oracle Configurator uses item properties to create generic rules for configured items, such as this rule:

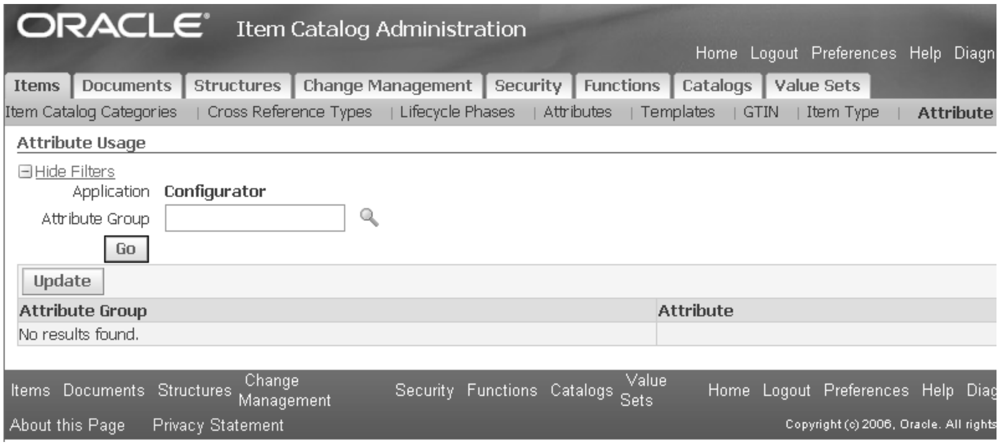
Rule
The voltage of the adapter must be equal to the voltage supplied in the country of installation.

In the rule above, an Item Property of Voltage could be created either:

- directly, in Oracle Configurator Developer.
- in Oracle Inventory, as a Descriptive Element, and imported into Configurator Developer as an Item Property (see: Defining Descriptive Elements, *Oracle Inventory User's Guide*).
- in Oracle Product Lifecycle Management or in Oracle Product Information Management, as a user-defined attribute, and exported to Configurator Developer, where it becomes an Item Property.

To export user-defined attributes to Oracle Configurator Developer:

1. From the Setup Workbench **Item Catalog Categories** page, Items tab, click the Attribute Usages sub-tab.


ORACLE
Item Catalog Administration
Home Logout Preferences Help Diagn
Items Documents Structures Change Management Security Functions Catalogs Value Sets
Item Catalog Categories | Cross Reference Types | Lifecycle Phases | Attributes | Templates | GTIN | Item Type | Attribute
Attribute Usage
Hide Filters
Attribute Group
Go
Update
Items Documents Structures Change Management Security Functions Catalogs Value Sets Home Logout Preferences Help Diag
About this Page Privacy Statement
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Application Configurator

Attribute Group	Attribute
No results found.	

2. In the Attribute Group field, search for the attribute groups that you want to export to Oracle Configurator Developer.

3. Click Go to list all of the attribute groups matching your search.

4. Select the attributes that you want to export.

5. Click Update to export the attributes.

Related Topics

Defining Item Attributes and Attribute Groups, page 4-10

Displaying Attachments on Item Attribute Pages

You can display items or change attachments as attributes on an item attribute page. Select a specific file from the existing item/change attachment list to display the file as a link within an attribute group on an item or change object page. You can then set up a Display Format that includes the attachment attribute as a column. Consequently, the link to the attachment is displayed in the search results.

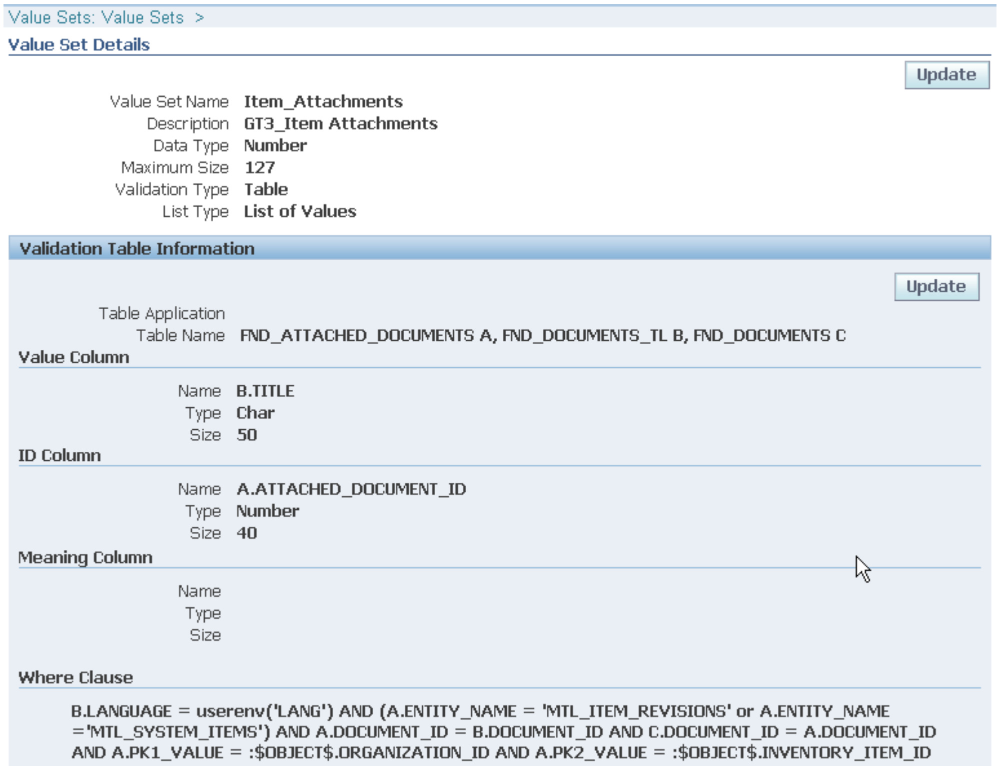
To display an attachment on an item attribute page:

1. Create a value set that queries the values for the object primary key and retrieves the information for the object attachment data. See: Defining Table Value Sets, page 4-7

When creating a value set to display item attachments, select the Table validation type and the Number data type (as shown in the following table).

Attribute Group: *Computer Specifications*	**Attribute Group:** *Computer Specifications*	**Attribute Group:** *Computer Specifications*	**Attribute Group:** *Computer Specifications*
Attribute: *Release Notes*	**Attribute**: *Release Notes*	**Value Set:** *Item Attachment*	**Value Set:** *Item Attachment*
Data Type	**Display as**	**Data Type**	**Validation Type**
Number	Attachment	Number	Table

Create a value set for an attribute to display an item attachment



Value Set Details

Value Set Name Item_Attachments
Description GT3_Item Attachments
Data Type Number
Maximum Size 127
Validation Type Table
List Type List of Values

Validation Table Information

Table Application
Table Name FND_ATTACHED_DOCUMENTS A, FND_DOCUMENTS_TL B, FND_DOCUMENTS C

Value Column

Name B.TITLE
Type Char
Size 50

ID Column

Name A.ATTACHED_DOCUMENT_ID
Type Number
Size 40

Meaning Column

Name
Type
Size

Where Clause

B.LANGUAGE = userenv('LANG') AND (A.ENTITY_NAME = 'MTL_ITEM_REVISIONS' or A.ENTITY_NAME ='MTL_SYSTEM_ITEMS') AND A.DOCUMENT_ID = B.DOCUMENT_ID AND C.DOCUMENT_ID = A.DOCUMENT_ID AND A.PK1_VALUE = :$OBJECT$.ORGANIZATION_ID AND A.PK2_VALUE = :$OBJECT$.INVENTORY_ITEM_ID

> **Important:** In the above screenshot, the value set table refers to Value Column = FND_DOCUMENTS_TL.TITLE. Alternatively, the value set table could refer to Value Column = FND_DOCUMENTS_TL.DESCRIPTION. Remember, though, that

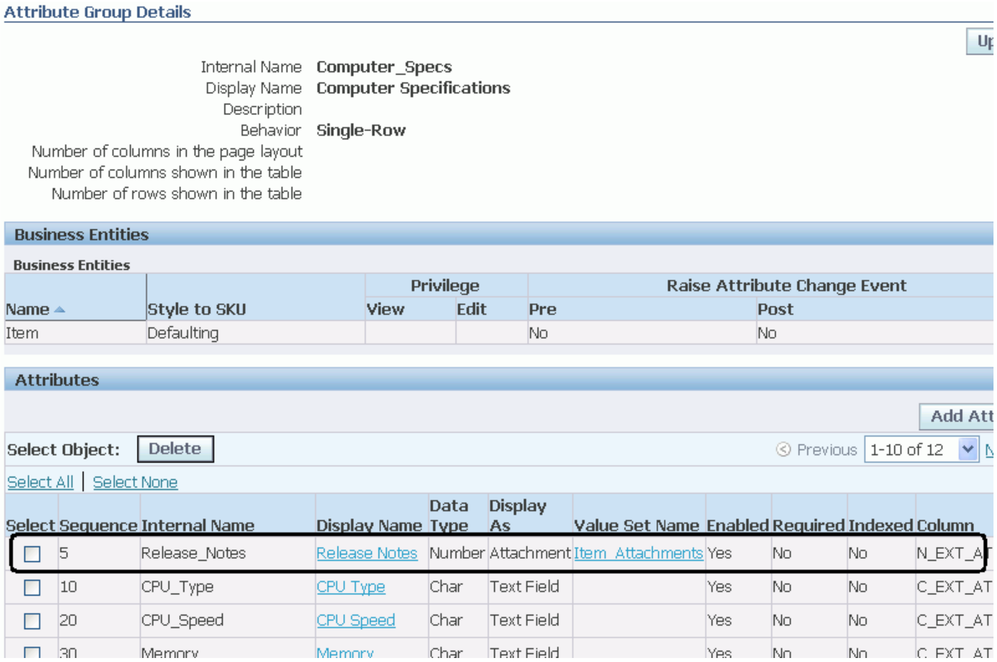
the file description is not a mandatory field when adding attachments. If an attachment has no description, then no name appears for the attachment in the value set if Value Column = FND_DOCUMENTS_TL.DESCRIPTION.

2. Create an attribute group with an attribute where Display As is set to Attachment. See: Defining Item Attributes and Attribute Groups, page 4-10

   To see Attachments in the Display As dropdown, use the Number data type for your attribute.

3. Associate the value set to the attribute.

Associate value set to the attribute



Attribute Group Details

Internal Name	Computer_Specs
Display Name	Computer Specifications
Description	
Behavior	Single-Row
Number of columns in the page layout	
Number of columns shown in the table	
Number of rows shown in the table	

Business Entities

Business Entities

		Privilege		Raise Attribute Change Event	
Name	Style to SKU	View	Edit	Pre	Post
Item	Defaulting			No	No

Attributes

Select Object:

Select	Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Enabled	Required	Indexed	Column
□	5	Release_Notes	Release Notes	Number	Attachment	Item_Attachments	Yes	No	No	N_EXT_AT
□	10	CPU_Type	CPU Type	Char	Text Field		Yes	No	No	C_EXT_AT
□	20	CPU_Speed	CPU Speed	Char	Text Field		Yes	No	No	C_EXT_AT
□	30	Memory	Memory	Char	Text Field		Yes	No	No	C_EXT_AT

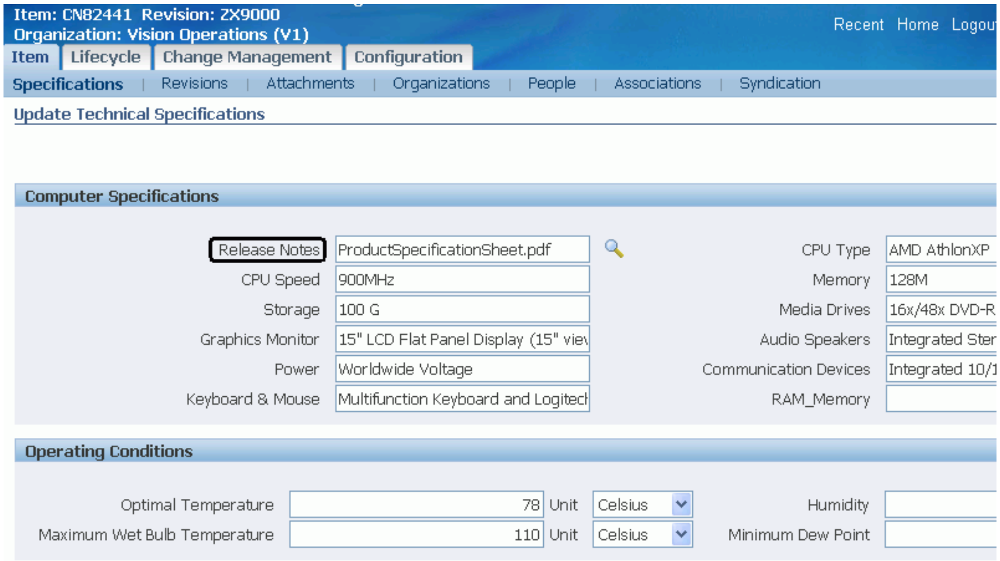
4. Associate the attribute group to an item catalog category. See: Associating Attribute Groups with an Item Catalog Category, page 4-31

5. Create an item page to display the attribute group. See: Creating Pages for an Item Catalog Category, page 3-32

6. Add attachments to the item attachment list. See: Adding Attachments, *Oracle Product Information Management User's Guide*

7. Select an attachment for display on the item attribute page. For more information about updating attributes, see: Managing Item Specifications, *Oracle Product*

Select attachments to be displayed on attribute page



Update Technical Specifications

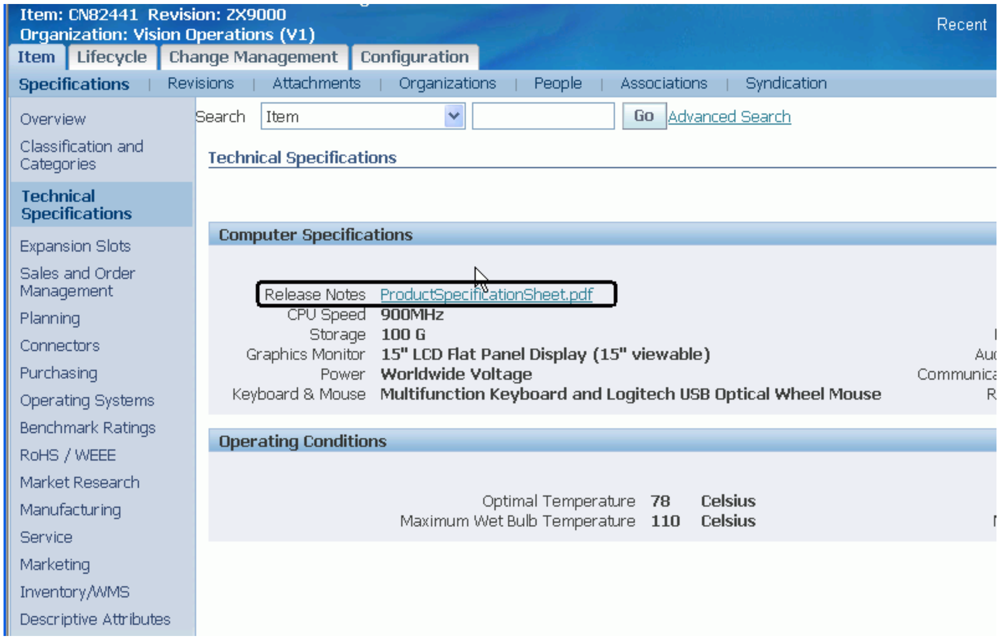
Computer Specifications

Release Notes	ProductSpecificationSheet.pdf	CPU Type	AMD AthlonXP
CPU Speed	900MHz	Memory	128M
Storage	100 G	Media Drives	16x/48x DVD-R
Graphics Monitor	15" LCD Flat Panel Display (15" viev	Audio Speakers	Integrated Ster
Power	Worldwide Voltage	Communication Devices	Integrated 10/1
Keyboard & Mouse	Multifunction Keyboard and Logitech	RAM_Memory	

Operating Conditions

Optimal Temperature	78	Unit	Celsius	Humidity	
Maximum Wet Bulb Temperature	110	Unit	Celsius	Minimum Dew Point	

Item attribute page displays link to one of the attached files



Item: CN82441 Revision: ZX9000
Organization: Vision Operations (V1)

Search: Item

Technical Specifications

Computer Specifications

Release Notes	ProductSpecificationSheet.pdf
CPU Speed	900MHz
Storage	100 G
Graphics Monitor	15" LCD Flat Panel Display (15" viewable)
Power	Worldwide Voltage
Keyboard & Mouse	Multifunction Keyboard and Logitech USB Optical Wheel Mouse

Operating Conditions

Optimal Temperature	78	Celsius
Maximum Wet Bulb Temperature	110	Celsius

Associating Attribute Groups with an Item Catalog Category

Attributes are details that further define the item and specify the item's behavior. For example, Physical item attributes identify the size, shape, and color of an item.

Attribute groups represent the logical grouping of similar item attributes. They collect characteristics (attributes) that can be used to record specifications or represent the properties of an item belonging to an item catalog category. Attribute groups can be associated with an item catalog category at the item or item revision levels, thereby determining whether attribute values change over revisions.

> **Note:** Attribute groups inherited from a parent catalog category cannot be deleted at the child catalog category level. Attribute groups can be inherited from a parent catalog category *and* explicitly added to the catalog category itself. Administrators should not associate the same attribute group with an item catalog category in this manner.

> **Note:** Common attribute group values will be retained even after moving to the target item catalog category.

To display user-defined item attributes, associate the corresponding attribute groups with an item catalog category and specify the item page upon which the attribute group should appear.

Note: You can re-use the same attribute group throughout the item catalog for different item catalog categories. Children categories inherit attribute groups from the parent category. You cannot edit inherited data.

Consider which item catalog categories in the item catalog hierarchy need to display the attribute groups.

Associate an attribute group to a parent category only if you need to view those attributes in all items within that hierarchy. For example, the Benchmark Rating attribute group is associated with the Computer System item catalog category. The Computer System category is the parent category for Desktop and Laptop. All items belonging to the parent category Computer System, as well as to its children Desktop and Laptop, will have Benchmark Rating attributes displayed on the items pages.

To associate an attribute group with an item catalog category:

1. From the Home page, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, search for the item catalog category (see:Browsing Item and Alternate Catalogs , *Oracle Product Information Management User's Guide*) and click its corresponding name link.

3. From the **Basic Information** page, click the Attribute Groups link.

4. On the **Attribute Groups** page, click Add Attribute Groups.

5. In the **Add Attribute Groups to Catalog Categories** page, search for and then select an attribute to add. Click Apply.

   The system automatically adds the attribute group to all business entities eligible for that attribute group. Possible eligible business entities include:

   - Item

   - Item Organization/Store

   - Item Revision

   - Item Supplier

   - Item Supplier Site

   - Item Supplier Site Store

   > **Note:** Item level attributes are set only in the Master Organization and copied to all child organizations in the organization hierarchy. Users cannot edit item level attributes in child organizations.
   >
   > Item organization/store level attributes are organization specific.

They default to the child organization during organization assignment. You can override the defaulting values at the child level.

Item revision level attributes are revision and organization-specific. For example, the Benchmark Rating attribute group is an item level attribute group and Desktop Specifications is associated at the item revision level. Item VI1004 is assigned to the master organization Vision Operations and to Seattle Manufacturing. Benchmark Rating attributes remain the same across the Vision Operations hierarchy while Desktop Specifications attributes vary from organization to organization and across different revisions in each organization.

Note: When you search for attribute groups, the system only returns those attributes eligible for the particular business entity selected in the View Attribute Groups For field. Define which attribute groups are eligible for which business entities when defining or editing an attribute group. See: Defining Item Attributes and Attribute Groups, page 4-10

To delete an attribute group from an item catalog category:

You can delete an attribute group from an item catalog category as long as the attribute group is not associated with item pages, display formats, or import formats. Once you remove any of these associations, you can delete the attribute group from the item catalog category. Deleting the attribute group deletes it from all business entities within the item catalog category.

1. View the attributes for any business entity, select the attribute group to delete, then click Delete.

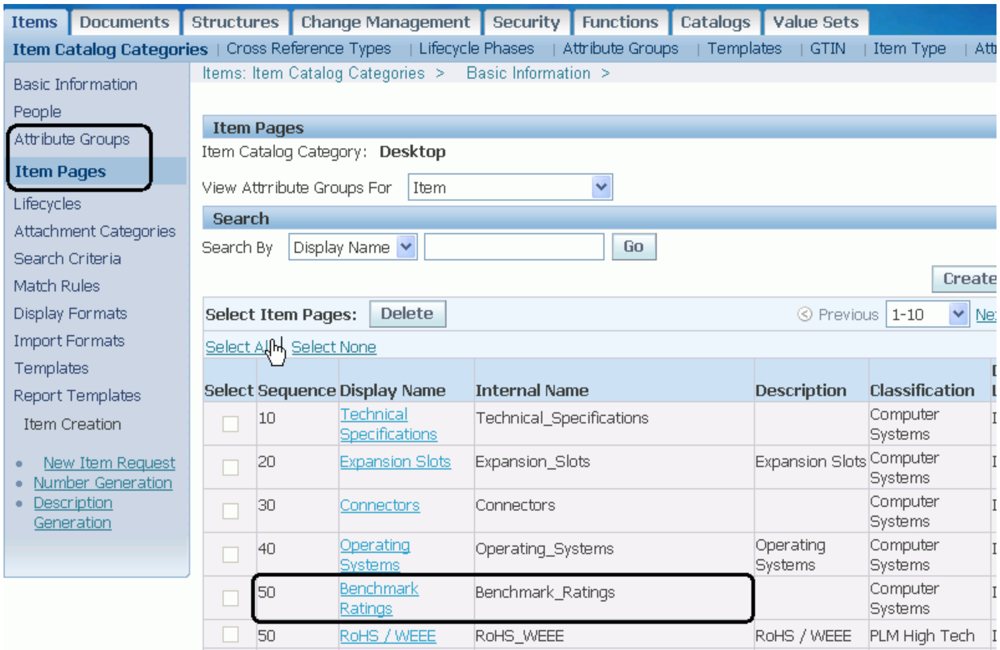
To define the item pages for attribute groups:

You can specify one or more attribute groups on a page or create a separate page for each attribute group. Item pages are also inherited from the parent item catalog categories.

1. On the **Basic Information** page of the item catalog category, click the Item Pages link.

   The **Item Pages** page lists all of the item pages created for the item catalog category by business entity.

Item Pages



Item Pages

Item Catalog Category: **Desktop**

View Attribute Groups For: Item

Search

Search By: Display Name

Select Item Pages:

1-10

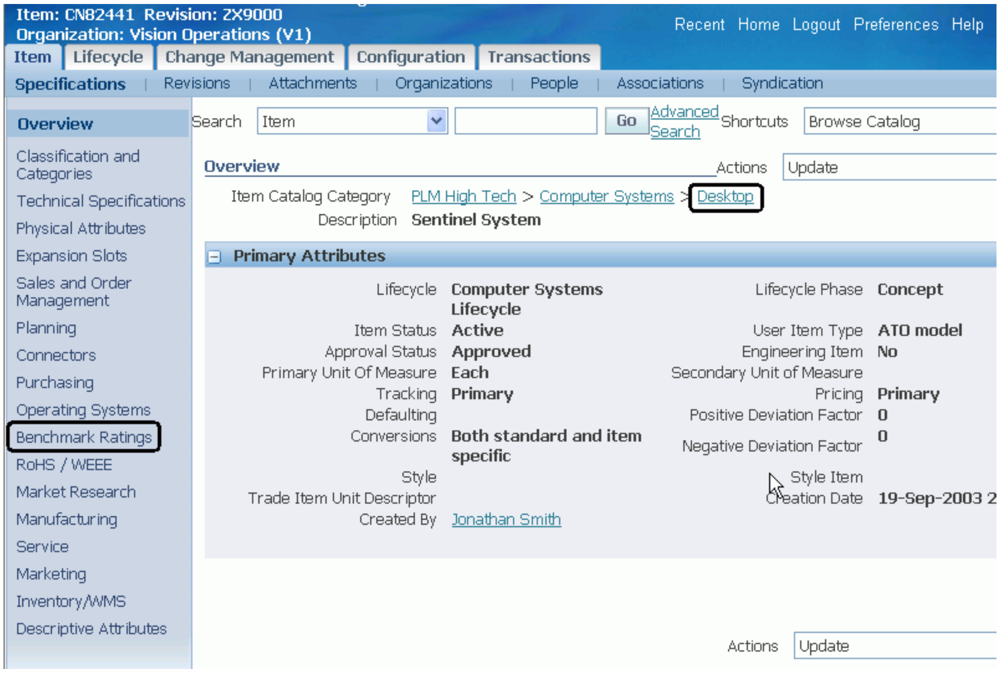
Select	Sequence	Display Name	Internal Name	Description	Classification	I
□	10	Technical Specifications	Technical_Specifications		Computer Systems	I
□	20	Expansion Slots	Expansion_Slots	Expansion Slots	Computer Systems	I
□	30	Connectors	Connectors		Computer Systems	I
□	40	Operating Systems	Operating_Systems	Operating Systems	Computer Systems	I
□	50	Benchmark Ratings	Benchmark_Ratings		Computer Systems	I
□	50	RoHS / WEEE	RoHS_WEEE	RoHS / WEEE	PLM High Tech	I

2. In the View Attribute Groups For field, select the business entity for which you want to create an item page.

3. Click Create Page to add a page to the item catalog category and business entity selected.

   Note: Navigate to the item **Overview** page to view the associated attribute group item pages.

Item pages for attributes on the item Overview page



Item: CN82441 Revision: ZX9000
Organization: Vision Operations (V1)

Search: Item
Shortcuts: Browse Catalog

Overview

Actions: Update

Item Catalog Category: PLM High Tech > Computer Systems > Desktop
Description: Sentinel System

Primary Attributes

Lifecycle	Computer Systems Lifecycle	Lifecycle Phase	Concept
Item Status	Active	User Item Type	ATO model
Approval Status	Approved	Engineering Item	No
Primary Unit Of Measure	Each	Secondary Unit of Measure	
Tracking	Primary	Pricing	Primary
Defaulting		Positive Deviation Factor	0
Conversions	Both standard and item specific	Negative Deviation Factor	0
Style		Style Item	
Trade Item Unit Descriptor		Creation Date	19-Sep-2003 2
Created By	Jonathan Smith		

Actions: Update

Important: This note applies only to Oracle Product Information Management users upgrading from a release prior to Release 12, Family Pack C.

Prior to Release 12, Family Pack C, users were unable to define item pages by business entity, so all item and item organization attribute groups appeared on item pages together. Any item organization attribute groups in existence prior to Release 12, Family Pack C must be added to item pages for the item organization business entity.

Adding Actions to an Attribute Group

You can associate user-defined actions with an attribute group in the context of an item catalog category. A user-defined action describes a function that, at run-time, can be invoked by the user. Attributes of the attribute group can be mapped to function parameters, so that their values are dynamically passed during function invocation.

To add an action to an attribute group associated with an item catalog category:

1. From the **Home** page, select the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, locate the appropriate item catalog category and click its name link.

3. On the **Basic Information** page, click the Attribute Groups link.

4. On the **Attribute Groups** page, click the Update Actions icon.

5. On the **View Actions** page, click Create Actions.

6. On the **Create Action** page, provide the following information:

   Sequence

   If there are multiple actions associated with an attribute group, the sequence number determines the order in which they are displayed to the user.

   Action Name

   The name of the action.

   Description

   The description of the action.

   Function

   Associates an existing function with the action. The function has a name, type, and specified parameters.

   Security Privilege

   The privilege required by a user in order for that user to execute this action.

   Execution Method

   The manner in which the action is executed.

   Display Style

   Defines the user interface element that executes the action.

   Prompt Application

   The application of the prompt for the action if the prompt is defined in the database.

   Prompt Message Name

   The message name of the prompt if the prompt is defined in the database. Otherwise, the actual prompt.

   Dynamic Prompt Function

   Selects an existing function whose return value will define the prompt of the action. Must have parameter of type Return, with data type String.

   Dynamic Visibility Function

Selects an existing function whose value will determine whether or not the action is rendered.

7. Click Apply.

To create parameter mappings for an action:

After creating an action, specify the values to pass to its associated functions when that action is executed. You can have up to three associated functions: the main function, the dynamic prompt function and the dynamic visibility function.

1. On the **View Actions** page, click the name of the action you just created.

2. On the **Action Details** page, within the appropriate function heading, click Edit.

3. On the **Create Mappings** page, for each function parameter select the following:

   Mapping Group Type

   The type of attribute that will be mapped to this parameter.

   Mapped Attribute

   The actual attribute that is mapped. Only attributes with the data type that matches the parameter data type are available.

4. Click Apply.

Related Topics

Creating User-Defined Functions for Item Attributes, page 4-21

5

Setting Up Catalogs

This chapter covers the following topics:

- Overview of Catalogs
- Defining Catalog Categories
- Defining Catalogs
- Assigning a Category to a Catalog
- Mapping Catalog Categories
- Administering a Category Hierarchy within a Catalog

Overview of Catalogs

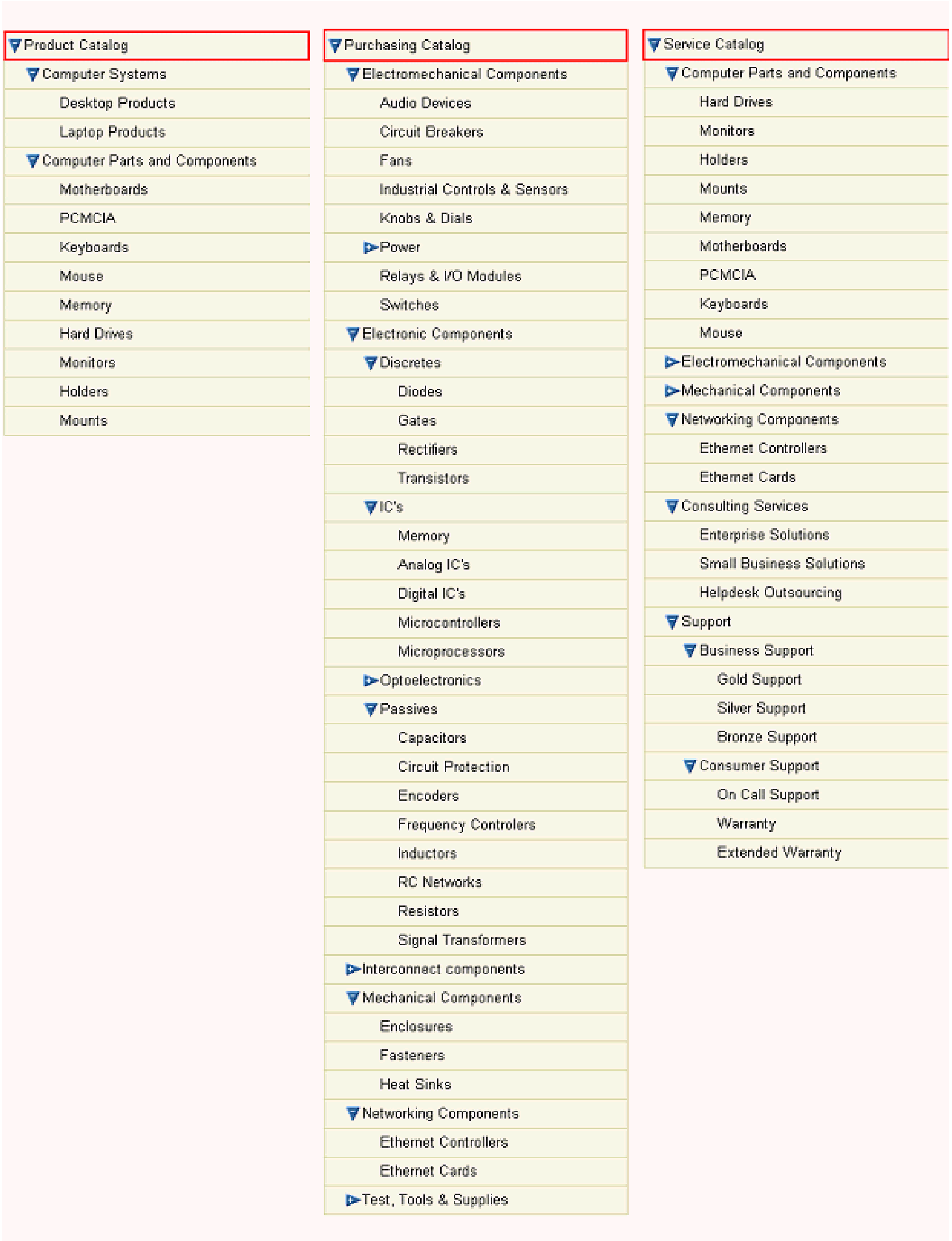
Defining catalogs includes the following tasks.

Tasks	**Required?**
Defining Catalog Categories	Yes
Defining Catalogs	Yes
Implementing Catalog Security	Yes

A *catalog* is a collection of items classified within a hierarchical taxonomy. A catalog consists of a hierarchy of catalog categories, each containing items assigned to the catalog category. Catalogs provide a convenient way to organize and present your items under various taxonomies. For example, you can set up a Product Catalog of sales items that the Sales and Marketing organizations, as well as your customers, can browse to find products. You can set up a Purchasing Catalog, which contains all the purchasable items that the Engineering, Manufacturing and Procurement organizations can browse to locate parts. You can also set up a Service Catalog that contains all serviceable items and service products for your field repair and customer service departments. The following figure shows the catalog hierarchies for a Product catalog, Purchasing catalog and Service catalog. You can define any number of catalogs and assign an item to more than one catalog. Depending on your setup, you can also assign an item to more than one catalog category within a catalog.

> **Note:** The *category sets* defined in the E-Business Suite appear as *catalogs* . The categories within each of these category sets appear as catalog categories in the respective catalog.

Example of catalog hierarchies



- ▼ Product Catalog
  - ▼ Computer Systems
    - Desktop Products
    - Laptop Products
  - ▼ Computer Parts and Components
    - Motherboards
    - PCMCIA
    - Keyboards
    - Mouse
    - Memory
    - Hard Drives
    - Monitors
    - Holders
    - Mounts

- ▼ Purchasing Catalog
  - ▼ Electromechanical Components
    - Audio Devices
    - Circuit Breakers
    - Fans
    - Industrial Controls & Sensors
    - Knobs & Dials
    - ▷ Power
    - Relays & I/O Modules
    - Switches
  - ▼ Electronic Components
    - ▼ Discretes
      - Diodes
      - Gates
      - Rectifiers
      - Transistors
    - ▼ IC's
      - Memory
      - Analog IC's
      - Digital IC's
      - Microcontrollers
      - Microprocessors
    - ▷ Optoelectronics
    - ▼ Passives
      - Capacitors
      - Circuit Protection
      - Encoders
      - Frequency Controlers
      - Inductors
      - RC Networks
      - Resistors
      - Signal Transformers
  - ▷ Interconnect components
  - ▼ Mechanical Components
    - Enclosures
    - Fasteners
    - Heat Sinks
  - ▼ Networking Components
    - Ethernet Controllers
    - Ethernet Cards
  - ▷ Test, Tools & Supplies

- ▼ Service Catalog
  - ▼ Computer Parts and Components
    - Hard Drives
    - Monitors
    - Holders
    - Mounts
    - Memory
    - Motherboards
    - PCMCIA
    - Keyboards
    - Mouse
  - ▷ Electromechanical Components
  - ▷ Mechanical Components
  - ▼ Networking Components
    - Ethernet Controllers
    - Ethernet Cards
  - ▼ Consulting Services
    - Enterprise Solutions
    - Small Business Solutions
    - Helpdesk Outsourcing
  - ▼ Support
    - ▼ Business Support
      - Gold Support
      - Silver Support
      - Bronze Support
    - ▼ Consumer Support
      - On Call Support
      - Warranty
      - Extended Warranty

Defining Catalog Categories

A category is a logical classification of items that have similar characteristics. Before creating a product catalog (also known simply as a catalog), you must have first created the appropriate category.

Use a *catalog category* to classify items within a catalog. You can define unlimited catalog categories and reuse catalog categories in more than one catalog. Before creating catalog categories, consider all the catalogs you need to define throughout your enterprise (for example, Product catalog, Purchasing catalog, Service catalog). Then create a list of all the catalog categories and sub-categories you will need to correctly classify each item within your catalogs. For example, you may have a catalog category for Hard Drives in each of your catalogs since you sell hard drives to customers, purchase hard drives from your supplier, and service hard drives. You should use the same flex structure for catalog categories so you can reuse them in different catalogs.

> **Note:** You can automatically trigger actions based on creating, updating, or deleting a category. See: Item Business Events, page B-1 and Managing Business Events, *Oracle Workflow Developer's Guide*.

To create a category:

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.

2. On the **Search: Catalogs** page, click the Categories tab.

3. On the **Search: Categories** page, click the "Create Category" link.

4. On the **Create Category** page, select a Flex Structure and click Continue.

   You must enter a flexfield structure. You can define multiple segment structures for the item categories flexfield structure. Each segment in the structure can have its own display name and its own prompt.

   If you choose a multi-segment flexfield structure you can assign a specific meaning to each segment. For example, if you want to group items according to product line and product information, then you can use the first segment to represent product line and the second segment to represent the product.

   Note that the categories that you assign to a catalog must have the same flexfield structure as the catalog itself. This is true even if you choose not to validate the category list.

   The "Category" section of the **Create Category** page is refreshed and populated with fields defined by the flexfield structure you have chosen. Provide the information in the remaining fields of the "Category" section.

5. In the "Category Details" section, provide the following information:

   Description

   Enter a meaningful description of the category.

   Inactive on

Select an inactive date for this category. As of the inactive date, you can no longer assign this category:

- As the default category of a new catalog
- As a valid category of a catalog
- To an item
- As a valid category of an item catalog category

You cannot set the inactive date to a date in the past. However, you can change the inactive date to one that is in the future. You cannot assign an inactive date to a category that is the default for a mandatory catalog set.

Iprocurement

The default is disabled (unchecked); this field cannot be modified unless the category is the default category for the purchasing functional area.

Viewable By Supplier

The default is enabled (checked); this field cannot be modified unless it is the default category for the purchasing functional area.

6. Click Apply

Defining Catalogs

A *catalog* is a hierarchy of catalog categories used to classify items defined in your item catalog. Once you have defined all of your catalog categories you can create each of your catalogs. When you construct your catalog category hierarchy keep in mind that only the leaf nodes of the catalog can contain items.

Before creating a catalog, it is a good idea to first understand its purpose and function. It may be easiest if you first understand what makes up an item catalog. The item catalog basically contains all items defined for your company or organization. Item catalogs are hierarchical, and relationships between the various item catalog categories (such as an item's catalog category attributes) are inherited. Catalogs are also hierarchical; however, relationships between the categories are not inherited. Instead, relationships between the categories are explicitly defined by the administrator. A catalog contains some user-defined subset of items that exist in the item catalog. The following table highlights some of the key differences between an item catalog and a catalog.

> **Important:** *Category sets* (in Oracle Inventory) are now available for use in the system as *catalogs*. You can add people to catalogs and enable them to browse. You can also create a hierarchy to reflect the category

set taxonomy (which now appears in the system as a flat list using categories and subcategories).

Functional Comparison of forms "Item Catalog" and the system

Area of Comparison	Item Catalog	Catalog
Purpose	Set up all item-level attributes, lifecycles, attachment categories, etc.	Create taxonomies related to lines of business (such as Assets, Purchasing, Service, etc.)
Contains	All items	Logical subsets of items that are typically based on lines of business
Security	Control inherited roles for items	Control access to catalog (basically, who can view or edit the catalog)
Lifecycle	Set up valid lifecycles for items	N/A
Business Intelligence	N/A	Intelligence reports based on catalog taxonomy

Before creating a catalog, you should have already created the necessary categories. Note that a category is a logical classification of items that have similar characteristics, while a catalog is a distinct grouping scheme and consists of categories.

To create a catalog:

1. In the Applications tree menu, click the "Setup Workbench" link.
2. On the **Search: Item Catalog Categories** page, click the Catalogs tab.
3. On the **Search: Catalogs** page, click the "Create Catalog" link.
4. On the **Create Catalog** page, provide the following information:

   Name

   Enter the name of the catalog.

   Description

Enter a meaningful description of the catalog. A description is required here so that users can browse the catalog by either the name or description.

Flex Structure

Select a flexfield structure. Flexfield structures contain multiple segment structures for the product catalog flexfield; each segment structure has its own display prompts and fields.

When you install the system, Oracle provides two flexfield structures by default: Item Categories and PO Item Category. You can define your own segment structures that have their own display prompts and fields.

Note that the categories that you assign to a catalog must have the same flexfield structure as the catalog itself. This is true even if you choose not to validate the category list.

Controlled At

Select one of the two available control levels.

- *Master Level*

  Items assigned to this catalog have the same catalog category value in all organizations in which the item is assigned.

- *Org Level*

  > **Important:** Once you assign the control level to the Organization Item level, you cannot change it back to Item level.

Default Category

Select a default category. This is the default category used when you assign an item to a catalog. You can override the default category and replace it with a more relevant category for each item.

Allow Multiple Item Category Assignments

Selecting this checkbox indicates that an item can be assigned to multiple categories within this catalog. If you do not select this checkbox, an item can be assigned to exactly one category in the catalog.

> **Note:** If you select this checkbox, you can assign multiple items to multiple categories within this catalog, but if multiple assignments exist, then you cannot deselect this checkbox until you delete the assignments and are left with only one.

Enforce List of Valid Categories

Select this checkbox if you wish to assign items only to those categories defined as valid categories for this catalog. When selected, the default category is automatically added to the list of valid categories for this catalog. If you do not select this checkbox, then you can assign an item to any defined category that uses the same flexfield structure as this catalog.

You can specify flex structures for both category sets and categories. You can also associate different categories with a category set; if you do this, they must share the same flex structure. However, this does not make a valid category set. The category set and category must also be associated. Once the catalog and category set share the same flex structure and are associated, you have a valid category set.

Enable Hierarchy for Categories

Selecting this checkbox enables you to define explicit hierarchies of categories within a catalog. Once made, you cannot revise this selection.

Business Events for Catalogs

Enable the appropriate business event to raise notifications for changes to the catalog information:

- Raise Item Catalog Assignment Change Event
- Raise Catalog Category Change Event
- Raise Alternate Catalog Hierarchy Change Event

See:

- Item and Catalog Business Events, page B-1
- Managing Business Events, *Oracle Workflow Developer's Guide*
- Publishing Item, Catalog, and Structure Data to Third Party Applications, page 12-4

5. Click Apply.

Related Topics

Assigning a Category to a Catalog, page 5-8

Assigning a Category to a Catalog

You can assign different categories to a catalog; however, the only categories that you can assign to this catalog are categories with the same flexfield structure as the catalog. When you assign a category to a catalog, you can also define a hierarchical category structure, page 5-9.

> **Note:** You can automatically trigger actions based on assigning a category to a catalog. See: Item Business Events, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide* and Managing Business Events, *Oracle Workflow Developer's Guide*.

To assign a category to a catalog:

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.
2. On the **Search: Catalogs** page, select the catalog to which you wish to assign a category.
3. On the **Basic Information** page for the catalog, click the "Categories" link.
4. On the **Categories** page, click Add Category.
5. On the **Search: Categories** page, locate the category you wish to assign to the catalog. Note that you search for the category by Name, Description, Flex Structure or Inactive On date. Select the category and click Apply.

Mapping Catalog Categories

Users can use Catalog Category mapping to map categories of different category sets to the reporting category set.

To view the Catalog Category Mapping page:

1. In the Applications tree menu, click the "Setup Workbench" link.
2. On the **Search: Item Catalog Categories** page, click the Catalogs tab.
3. On the **Search: Catalogs** page, click the "Catalog Category mapping" link. The **Catalog Category Mapping** page is displayed.

Administering a Category Hierarchy within a Catalog

You can define a hierarchy of categories within the context of a catalog, thereby making it easier to browse all the categories within a particular catalog. Creating category hierarchies within a catalog eases use because you are logically grouping categories even further within the context of a catalog. You can define multiple hierarchies within a catalog.

When you define a hierarchy, you add categories to a catalog. You can choose to add a category as a top level category, or as a child of an existing category. Note that the categories appearing in the category list all have the same flexfield structure as the catalog.

You can update a category hierarchy within a catalog by changing parent categories in the list of categories for that catalog.

> **Note:** You cannot assign the parent category of a valid category to a child (also known as a descendant) because it would create loops in the hierarchy.

You can delete categories from a catalog as long as you have not already assigned items to to it. In other words, if you have already assigned items to a category within a catalog, then you cannot delete the category.

> **Note:** You can automatically trigger actions based on deleting a category to a catalog. See: Item Business Events, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide* and Managing Business Events, *Oracle Workflow Developer's Guide*.

To create a category hierarchy within a catalog:

1. In the Applications tree menu, click the "Setup Workbench" link.

2. On the **Search: Item Catalog Categories** page, click the Catalogs tab.

3. On the **Search: Catalogs** page, select the catalog in which you wish to create a category hierarchy.

4. On the **Basic Information** page for the catalog, click the "Categories" link.

5. On the **Categories** page, you can add a parent category by clicking Add Category, or you can add sub-categories by selecting an existing category and then selecting Add Sub-category from the Actions pulldown.

6. On the **Search: Categories** page, locate the category you wish to assign as a sub-category. Select the category and click Apply.

To update a category hierarchy within a catalog:

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.

2. On the **Search: Catalogs** page, select the catalog in which you wish to update the category hierarchy.

3. On the **Basic Information** page for the catalog, click the "Categories" link.

4. On the **Categories** page, select the name link of the category whose parent category you wish to update.

5. On the **Category Details** page, click Update.

6. On the **Edit Catalog Category** page, select a new Parent Category, and then click Apply.

To delete a category from a catalog:

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.

2. On the **Search: Catalogs** page, select the catalog in which you wish to delete a category.

3. On the **Basic Information** page for the catalog, click the "Categories" link

4. On the **Categories** page, select the category that you wish to delete, and then select Delete from the Actions pulldown.

5. Click Go.

6

Administering Item Business Rules

This chapter covers the following topics:

- Overview of Item Business Rules
- Administering Rule Sets
- Building Rule Expressions
- Viewing Attributes Used in Rule Sets
- Including other Rule Sets
- Viewing Rule Set Dependencies
- Assigning Rule Sets to Entities

Overview of Item Business Rules

Oracle Product Information Management enables you to define and manage items and bills of material (BOMs) in multiple organizations and organization hierarchies. Item business rules define integrity constraints on the attributes of those items. You can define integrity constraints on operational as well as user-defined attributes (UDAs). A typical constraint, known as a validation expression, might check that a certain attribute is less than another. For example:

```
Physical_Attributes.Net_Weight <= Logistics.Shipping_Weight
```

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

You can also define assignment expressions. For example, use the following expression for the "Daily Waste Percent", where the daily waste percent equals the total waste percent divided by the shelf life in days.

```
Inventory.Total_Waste_Percent / Inventory.Shelf_Life
```

In order to use item business rules, you must define:

1. Rules and rule sets. See: Administering Rule Sets, page 6-4

2. Validation and assignment expressions. See: Building Rule Expressions, page 6-15

To activate a rule set, you must assign it to a business entity. See: Assigning Rule Sets to Entities, page 6-36

Rules and Rule Sets

Rules encapsulate a single integrity constraint or assignment expression, for example:

- Constraint:

  ```
  Physical_Attributes.Net_Weight <= Logistics.Shipping_Weight
  ```

- Assignment:

  ```
  Inventory.Total_Waste_Percent / Inventory.Shelf_Life
  ```

Rule sets group multiple rules together. You can associate a rule set with both:

- An attribute group or item catalog category (ICC)
- A list of valid business entities (such as an item, item supplier, item supplier site, item organization, or item supplier site organization)

This enables the system to validate that the rules include only attributes from the associated attribute group or ICC. A rule set associated with an attribute group can only use the attributes in that group within its expressions. A rule set associated with an ICC can only use the attribute groups valid for that ICC.

Apply a rule set to each business entity separately - rule expressions cannot default from one business entity to another. For example, you cannot check an item attribute against an item organization attribute. Also, a multi-row attribute group cannot use attributes from any other attribute groups in its expressions.

You can create composite rule sets to aggregate rule sets that operate using different attribute groups and ICCs. Activate a rule set by assigning it to a business entity. The composite rule set assigned to a business entity must include all of the attribute group and ICC-specific rule sets relevant to that business entity because you can only assign one rule set to each business entity.

Validation and Assignment Expressions

Create validation and assignment expressions after defining rules and rule sets. The expressions that make up the integrity validation and assignments follow a spreadsheet-like syntax. Each attribute is referenced by its attribute group name, followed by the attribute name:

```
Physical_Attributes.NetWeight
```

In the above example, Physical_Attributes is the internal name of the attribute group, and "NetWeight" is the internal name of the attribute.

Combine attributes into more complex expressions using build-in operators and functions such as:

Comparison Operators	== != < <= > >= in
Logical Operators	and or not (you can also use && and ||)
String Functions	compare contains endsWith match startsWith + indexOf length lowercase substring trim uppercase
Math Functions	+ - * / sum abs amount min max round roundup rounddown
Date Functions	+ (Date + days) - (Date - days)
Comparison to current Production Value Functions	changed delta percent previous

For example, the following expression checks if the item name's 3rd letter is "A" or "E":

```
substring(Item_Primary.Name,2,3) == "A" or
substring(Item_Primary.Name,2,3) == "E"
```

Example

The following integrity constraints are typical of what you might expect for an item, in this case, a computer motherboard:

Assignments

- Lead Percent equals Total Lead Mass divided by Unit Weight
- Sellable Date (date when item can be sold) equals 10 days after the Availability Date

Validations

- The Minimum CPU Speed (in MHz) must be less than the Maximum CPU Speed.
- If the Purchasable Flag equals Yes, then the List Price cannot be null.
- Unit Height cannot change by more than 3% without requiring approval.

To implement the above rules, create the appropriate rule sets and then assign them to the item entity:

1. Create assignment rule set.
2. Create validation rule set.

3. Create composite rule set.

4. Assign composite rule set to the business entity.

   Note: There is no limit to the number of rule sets that you can define for a business entity. Typically, define one rule set for each attribute group and ICC. If you create multiple rule sets for a business entity, you must create one composite rule set that contains all of these rule sets, then assign the composite rule set to the business entity. You can only assign one rule set to a business entity.

Administering Rule Sets

When you create the rule sets to address your business needs, first create the rule sets for all necessary attribute groups and item catalog categories (ICCs). Typically, assign one rule set for each attribute group and ICC. Next, determine if you can consolidate rule sets together into composite rule sets. There is no limit to the number of rule sets that you can define for a business entity, but, ideally, assign only one composite rule set to each business entity.

Generally, rule sets that perform assignments should execute before validation rule sets, since validation rule sets ensure that the results of the assignment rule sets are valid.

Computer Motherboard Rule Set Example

The following integrity constraints are typical of an item, in this case a computer motherboard:

Assignments

- Lead Percent equals Total Lead Mass divided by Unit Weight.
- Sellable Date (date when you can sell the item) equals 10 days after the Availability Date.

Validations

- Minimum CPU Speed (in MHz) must be less than the Maximum CPU Speed.
- If Purchasable Flag is set to Yes, then List Price has to be set.
- Unit Height cannot change more than 3% without requiring approval.

To implement the above rules, create the appropriate rule sets and then assign the sets to the Item entity following these steps:

1. Create Assignment Rule Set

   See steps below.

2. Create Validation Rule Set

See steps below.

3. Create Composite Rule Set

   See: Including Other Rule Sets, page 6-34

4. Assign Composite Rule Set to business entity

   See: Assigning Rule Sets to Entities, page 6-36

The procedures below refer to this example while explaining how to enter rules.

To create a new rule set:

1. Navigate to the Setup Workbench. In the Items tab, click the Rules subtab.

2. In the **Update Rule Set Assignment** page, select Item Rules from the left side menu.

3. In the **Item Rule Sets** page, click Create.

4. In the **Item Rules: Create Rule Set** page, enter Name, Description and Internal Name for the rule set.

   > **Caution:** You cannot change the Internal Name after the rule set is created.

5. In the Composite field, select NO.

   For rule sets containing rules, set the Composite field to NO. For rule sets that contain other rule sets, set the Composite field to YES.

To create a new assignment rule

The process for creating assignment and validation rules is the same up to this point. Follow the next set of steps to create assignment rules. Otherwise, skip to "To create a new validation rule:".

6. In the Type field, select Assignments.

7. Select the Item Catalog Category radio button.

8. Enter or search for and select an ICC.

9. Select all appropriate business entities for this rule set.

10. Click Continue.

    This creates an empty rule set with the appropriate ICC context. All of the attribute groups within the selected ICC are available for creating assignment rules. The following steps create the actual rules.

11. Within the **Item Rules: Rule List** page, select the Rules tab (if not already selected).

12. Click Add Above.

    You can also click Add Below. When you have more than one rule, these buttons enable you to create rules in a particular sequence.

13. In the **Item Rules: Create Attribute Assignment Rule** page, create an assignment rule by entering the following information:

    - Name - assignment rule name

    - Description

    - Set Value of Attribute - the name of the attribute where the computed value of the assignment rule is stored.

    - If Expression - enter the If part of an if/then expression, if required. If the attribute assignment rule has no requirements, then leave this field blank.

      This If expression must be blank or equal True for the assignment to take place.

    - If Expressions in the Then Expression region - You can add multiple If expressions in the Then Expression region. They are nested within the previous If expression located above the Then Expression region. If there is no If expression to enter here, then leave this field blank. It defaults to true and is always selected.

      Example of Nested If/Then Expressions

      The following example explains how the system reads multiple nested if/then expressions entered in the **Item Rules: Create Attribute Assignment Rule** page.

      ```
      if (main rule expression) = true
           if (If Expression #1 in the Then Expressions region) = true,
      then (Then Expression #1)
           else if (If Expression #2 in the Then Expressions region) =
      true, then (Then Expression #2)
           else if (If Expression #3 in the Then Expressions region) =
      true, then (Then Expression #3)
      end if
      ```

    - Then Expression - enter an expression that assigns an attribute value

    - Explanation Message - Optional. Use this field to inform the user about the assignment that took place.

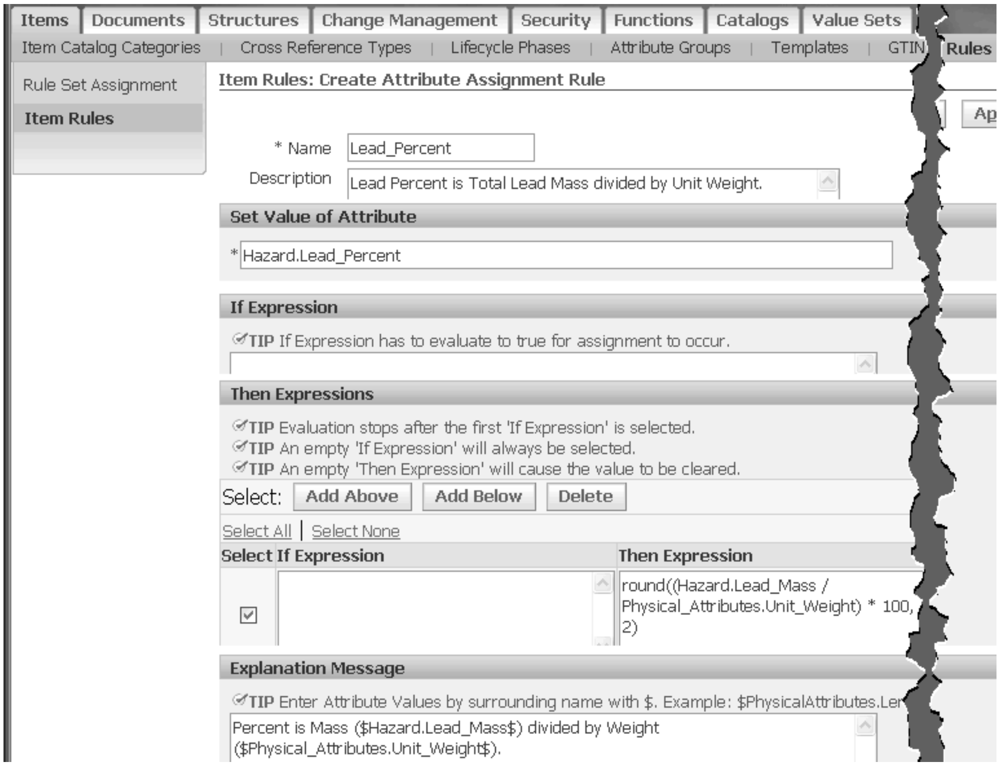
      > **Note:** You do not need to verify that attributes do not equal null, or, in the case of division, zero. The system ignores the assignment in this case.

Computer Motherboard Rule Set Example

To define the first assignment rule for the Computer Motherboard Rule Set Example described above, the field values are entered as follows:

Create Assignment Rule: Lead Percent is Total Lead Mass divided by Unit Weight

Field Name	Value
Name	Lead_Percent
Description	Lead Percent is Total Lead Mass divided by Unit Weight.
Set Value of Attribute	Hazard.Lead_Percent
If Expression	
Select If Expression	
Then Expression	round((Hazard.Lead_Mass / Physical_Attributes.Unit_Weight) * 100, 2)
Explanation Message	Percent is Mass ($Hazard.Lead_Mass$) divided by Weight ($Physical_Attributes.Unit_Weight$).



Item Rules: Create Attribute Assignment Rule

* Name: Lead_Percent

Description: Lead Percent is Total Lead Mass divided by Unit Weight.

Set Value of Attribute

* Hazard.Lead_Percent

If Expression

TIP If Expression has to evaluate to true for assignment to occur.

Then Expressions

TIP Evaluation stops after the first 'If Expression' is selected.
TIP An empty 'If Expression' will always be selected.
TIP An empty 'Then Expression' will cause the value to be cleared.

Select	If Expression	Then Expression
☑		round((Hazard.Lead_Mass / Physical_Attributes.Unit_Weight) * 100, 2)

Explanation Message

TIP Enter Attribute Values by surrounding name with $. Example: $PhysicalAttributes.Le

Percent is Mass ($Hazard.Lead_Mass$) divided by Weight ($Physical_Attributes.Unit_Weight$).

14. Click Validate to ensure that you typed the attribute names correctly.

    > **Important:** You must know the internal names of the attribute groups and attributes that you want to use in expressions. You cannot look up valid attribute groups and attributes from this page.

15. Click Apply.

    This enters the first assignment rule into the rule set and returns you to the **Rule Set: Rule List** page. From this page, you can continue to add assignment rules to the rule set using the Add Above or Add Below buttons and repeating the above steps. Rules execute in the order listed within the rule set. Use the Sequence field and the Update Sequence button to change the rule order. If an attribute's expression depends on a previously calculated value, you must ensure that the previous value calculation occurs before it is needed in a later rule.

Computer Motherboard Rule Set Example

The following if/else if expression describes the second assignment rule for the Computer Motherboard Rule Set Example described above.

```
if (Item_Primary.Sellable_Flag == "Yes")

     if (assignedTo("VeryFastDelivery")
     then Marketing.Sellable_Date = Planning.Availability_Date + 3

     else if (assignedTo("FastDelivery")
     then Marketing.Sellable_Date = Planning.Availability_Date + 6

     else Marketing.Sellable_Date = Planning.Availability_Date + 10
```

The "assignedTo" function verifies that an item is assigned to a particular Alternate Catalog Category.

From the **Rule Set: Rule List** page, click Add Below to add this second assignment rule. The table below shows the field values to enter in the **Item Rules: Create Attribute Assignment Rule** page.

Create Assignment Rule: Calculate Sellable Date based on the Availability Date

Field Name	Value
Name	Sellable_Date_Calculation
Description	Calculate Sellable date based on the Availability Date.
Set Value of Attribute	Marketing.Sellable_Date
If Expression	Item_Primary.Sellable_Flag == "Yes"
Select If Expression	assignedTo("Delivery", "VeryFastDelivery")
Then Expression	Planning.Availability_Date + 3
Select If Expression	assignedTo("Delivery", "FastDelivery")
Then Expression	Planning.Availability_Date + 6
Select If Expression	(field value is Null)
Then Expression	Planning.Availability_Date + 10
Explanation Message	(field value is Null)

To create a new validation rule

16. In the **Item Rule Sets** page, click Create.

17. In the **Item Rules: Create Rule Set** page, enter Name, Description and Internal Name for the rule set.

    Caution: You cannot change the Internal Name after the rule set is created.

18. In the Composite field, select NO.

    For rule sets containing rules, set the Composite field to NO. For rule sets that contain other rule sets, set the Composite field to YES.

19. In the Type field, select Validations.

20. Select the Item Catalog Category radio button.

21. Enter or search for and select an ICC.

22. Select all appropriate business entities for this rule set.

23. Click Continue.

    This creates an empty rule set with the appropriate ICC context. All of the attribute groups within the selected ICC are available for creating validation rules. The following steps create the actual rules.

24. Within the **Item Rules: Rule List** page, select the Rules tab (if not already selected).

25. Click Add Above.

    You can also click Add Below. When you have more than one rule, these buttons enable you to create rules in a particular sequence.

26. In the **Item Rules: Create Validation Rule** page, create a validation rule by entering the following information:

    - Name - validation rule name

    - Description

    - Severity - determines the action taken if the validation fails. Severity actions include:

        - Reject - You cannot save the business entity until the validation passes.

        - Needs Approval - requires a change order.

        - Warning - The Explanation Message displays, but you can still save the entity.

- If Expression - enter the If part of an if/then expression, if required. If the attribute validation rule has no requirements, then leave this field blank.

- Validation Condition - enter an expression that determines if a condition is true or false.

- Explanation Message - Optional. Use this field to inform the user about the validation that took place.

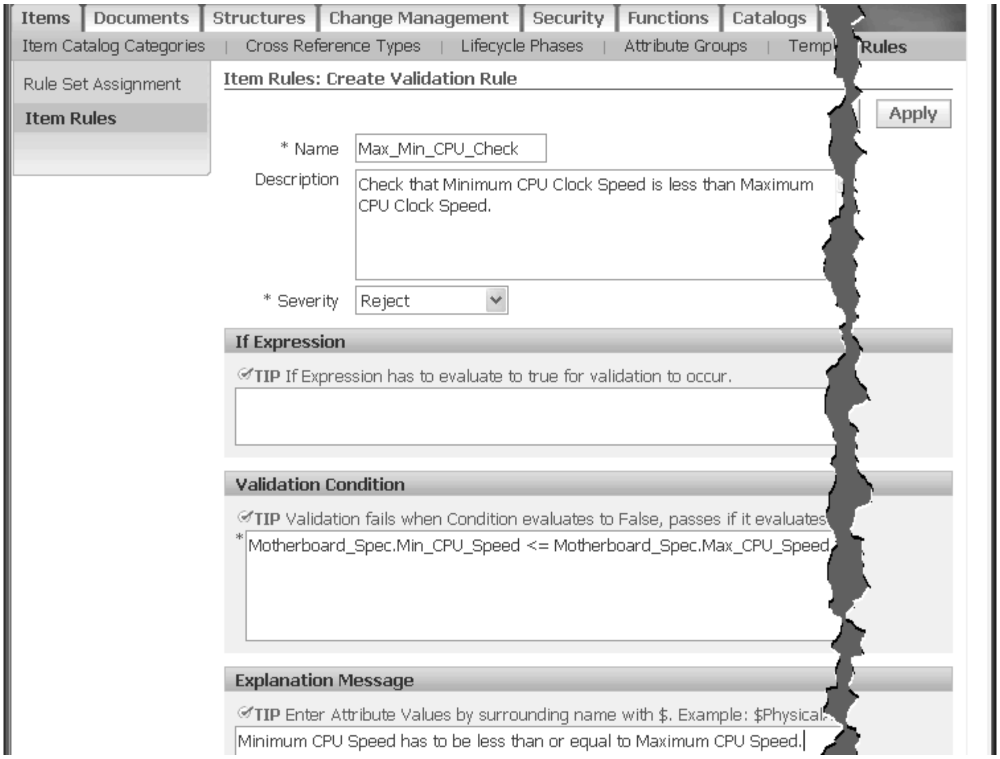
> **Note:** You do not need to verify that attributes do not equal null, or, in the case of division, zero. The system ignores the validation in this case. If you want to explicitly test for a null value, use the "isnull" function.

Computer Motherboard Rule Set Example

To define the first validation rule for the Computer Motherboard Rule Set Example described above, the field values are entered as follows:

Create Validation Rule: Minimum CPU Speed (in MHz) must be less than the Maximum CPU Speed.

Field Name	**Value**
Name	Max_Min_CPU_Check
Description	Check that Minimum CPU Clock Speed is less than Maximum CPU Clock Speed.
Severity	Reject
If Expression	
Validation Condition	Motherboard_Spec.Min_CPU_Speed <= Motherboard_Spec.Max_CPU_Speed
Explanation Message	Minimum CPU Speed must be less than or equal to Maximum CPU Speed.



Item Rules: Create Validation Rule

* Name: Max_Min_CPU_Check

Description: Check that Minimum CPU Clock Speed is less than Maximum CPU Clock Speed.

* Severity: Reject

If Expression

TIP If Expression has to evaluate to true for validation to occur.

Validation Condition

TIP Validation fails when Condition evaluates to False, passes if it evaluates

* Motherboard_Spec.Min_CPU_Speed <= Motherboard_Spec.Max_CPU_Speed

Explanation Message

TIP Enter Attribute Values by surrounding name with $. Example: $Physical

Minimum CPU Speed has to be less than or equal to Maximum CPU Speed.

27. Click Validate to ensure that you typed the attribute names correctly.

    Important: You must know the internal names of the attribute groups and attributes that you want to use in expressions. You cannot look up valid attribute groups and attributes from this page.

28. Click Apply.

    This enters the first validation rule into the rule set and returns you to the **Rule Set: Rule List** page. From this page, you can continue to add validation rules to the rule set by selecting the checkbox next to the first rule, using the Add Above or Add Below buttons, and repeating the above steps. Rules execute in the order listed within the rule set. Use the Sequence field and the Update Sequence button to change the rule order. If an attribute's expression depends on a previously calculated value, you must ensure that the previous value calculation occurs before it is needed in a later rule.

    Computer Motherboard Rule Set Example

    From the **Rule Set: Rule List** page, click Add Below to add this second validation rule. The table below shows the field values to enter in the **Item Rules: Create Attribute Validation Rule** page.

Create Validation Rule: If the Purchasable Flag equals Yes, then the List Price cannot be null.

Field Name	Value
Name	Require_List_Price
Description	List Price must be set if Purchasable Flag is set to "Yes".
Severity	Reject
If Expression	Purchasing.Purchasable == "Yes"
Validation Condition	(!isnull(Purchasing.List_Price))
Explanation Message	If Purchasable is set to Yes then List Price cannot be null.

Tip: The "!" in "!isnull" is used for "not".

Now, create the third validation rule in the example:

Validation Rule: Unit Height cannot change by more than 3% without requiring approval.

Name	Height_Change
Description	Unit Height cannot change by more than 3%.
Severity	Needs Approval
If Expression	
Validation Condition	abs(percent(Physical_Attributes.Unit_Height)) > 3.0
Explanation Message	A Unit Height change of 3% or more requires a Change Order.

Note: The percent function returns the percentage change of the new value to the value in Production. This change can be positive or negative. The abs function converts it to an absolute change.

To include other rule sets within a rule set (create a composite rule set)

29. See: Including Other Rule Sets, page 6-34

To delete a rule set:

1. In the **Item Rule Sets** page, search for and select the rule sets to delete.

2. Click Delete.

To copy a rule set:

1. In the **Item Rule Sets** page, search for and locate the rule set to copy.

2. In the row containing the rule set, click the Copy icon.

   The **PIM Rules: Copy Rule Set** page appears.

3. Enter a unique Internal Name for the rule set.

   The Name, Description, and Business Entities default from the original rule set, but you can change them.

4. Click Continue.

   This takes you to the **Rule Set: Rule List** page. All of the rules from the original rule set are copied into this new rule set, too. You can now update the attached rules and rule set as needed.

To update a rule set:

1. In the **Item Rule Sets** page, search for and locate the rule set to update.

2. In the row containing the rule set, click the Update icon.

   The **Item Rules: Rule List** page appears. From here, you can update the rule set description and the attached rules, as well as add or delete rules and update the rule sequence.

Related Topics

Overview of Item Business Rules, page 6-1

Assigning Rule Sets to Entities, page 6-36

Building Rule Expressions

The rule administrator writes assignment and validation rules based on the components of the logical data model. This topic describes the logical data model components and the syntax used to write business rules.

You can use the following data model components when building rule expressions:

- attributes
- attribute groups
- records, when using multi-row attribute groups
- alternate catalog categories
- intersections and relationships
- current production values

Item Business Rule Expression Reference

Use the syntax described in this section to build rule expressions.

Constants

All values used in rule expressions consist of the following simple types:

Type	Description
String	All strings and characters. Strings are delimited by double or single quotes. The escape character is "\".

Type	Description
Number	All decimals, integers, and so on. Depending on the user's Oracle E-Business Suite preferences, numbers can have a "." or "," as a decimal point. If "," is used as a decimal point, then function arguments use ";" as the argument delimiter.
Date	Date only. Enter dates in the format specified in your Preference Option. Date constants automatically reformat if a user logs in with a different preference. You can add days to the date using numbers. For example, compute the sell date by adding 30 days to the availability date.
DateTime	Combination of date and time
Time	Time only

Attributes and Catalogs

- Attributes

  Indicate an attribute by appending it to its attribute group (separated by a period). For example:

  ```
  <Attribute Group Name>.<Attribute Name>
  ```

  Use the internal name of the attribute group and attribute. The internal name must not contain any spaces.

- Attribute Units of Measure

  For attributes with a defined unit of measure (UOM), add the UOM to the end of the expression. For example:

  ```
  <Attribute Group Name>.<Attribute Name>.UOM
  ```

  > **Tip:** Note that all comparisons between amounts are automatically adjusted to take into account different UOMs, so accessing the UOM is not necessary for comparison purposes.

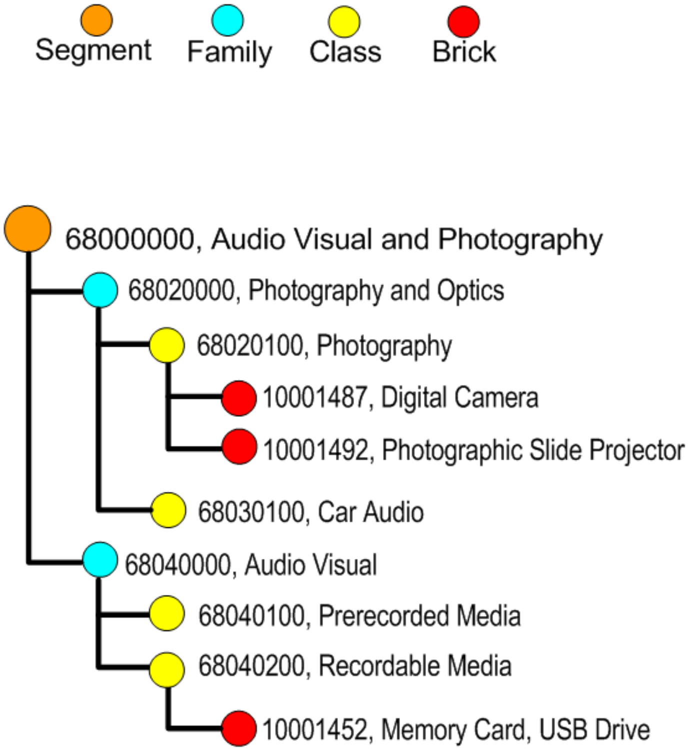
- Item Catalog Categories

  You cannot use item catalog categories in expressions. To make a rule set specific to an item catalog category (ICC), assign it to that ICC during rule set creation. That rule set then applies to each entity with the ICC attached as a parent or as an ancestor.

- Alternate Catalogs

  An administrator can define many alternate catalogs. For example, GS1, the supply chain standards organization, defines a categorization system named GPC. GPC contains four levels: Segment, Family, Class and Brick. The figure below illustrates some levels within the Audio Visual/Photography segment:

  GPC Categorization System Example


Segment
Family
Class
Brick
68000000, Audio Visual and Photography
68020000, Photography and Optics
68020100, Photography
10001487, Digital Camera
10001492, Photographic Slide Projector
68030100, Car Audio
68040000, Audio Visual
68040100, Prerecorded Media
68040200, Recordable Media
10001452, Memory Card, USB Drive

  You can access alternate catalog information two ways with item rules:

  - Determine if an entity is assigned to an alternate catalog or category.
  - Access the values of an alternate catalog category.

  If an item is assigned to an alternate category, all of the parent categories are also searchable.

Item rules referring to ICCs and Alternate Catalogs can use levels to identify the level in a catalog hierarchy tree. The root of the tree equals 1 and level 0 designates the node that the entity is assigned to, no matter what level in the hierarchy that this node actually appears. The following table shows the levels of the catalog hierarchy from the above GPC Categorization System example:

Level	Code	Description
1	68000000	Audio Visual/Photography
2	68020000	Photography/Optics
3	68020100	Photography
4 or 0	10001487	Digital Camera

AssignedTo Function

The AssignedTo function can use levels:

Syntax

- `assignedTo(catalog)`
- `assignedTo(catalog, category)`
- `assignedTo(catalog, category, level)`

You can use assignedTo with one, two, or three parameters:

Parameter	Type	Explanation
catalog	String (constant)	Name of Alternate Catalog. Use only constant names (no expressions). If this is the only parameter provided, then determine if the item is assigned to any category in this catalog.
category	String (constant)	Name of Category. If no other parameter is provided, then determine if the category matches any ancestor category of the item.
level	Number	Determine if the category matches at a specific level. Numbers count from the root category through the branches in the hierarchy. Level 0 is always the parent node.

assignedTo Examples

- Determine if an item is assigned to the Spring Collection alternate catalog:

  assignedTo("Spring Collection")

- Determine if an item is assigned to a category starting with 68:

  assignedTo ("GPC", "68000000")

- Determine if Level 2 of a Geographic Categorization is Washington:

  assignedTo ("Location", "Washington", 2)

The assignedTo functions work for any item intersection business entity. For example, if you are checking an item-supplier entity, then the function runs for the relevant item belonging to that item-supplier entity.

Accessing Alternate Catalog Attributes

To write expressions that go beyond determining assignment to a category, you can access the categories and its attributes directly. If an expression referencing the alternate catalog occurs, the system loops through all of the selected categories and evaluates the expression by instantiating each one. Use the following syntax:

```
<Catalog Specifier>.<Category Specifier>.<Attribute Specifier>
```

For example:

```
Catalog[Retail Hierarchy].AncestorCategory.Name == "USWest"
```

Caution: You can use only one alternate catalog per expression.

You can use multiple ParentCategory and AncestoryCategory specifiers, as long as they all refer to the same alternate catalog. The following list provides more information about each specifier:

- <Catalog Specifier>

  The catalog is specified by the keyword "Catalog" followed by the name of the catalog in square brackets.

- <Category Specifier>

  We support 2 category specifiers, ParentCategory and AncestorCategory. ParentCategory references the immediate category(s) assigned to the item. AncestorCategory references the immediate category, its parents, its parent's parents, and so on, to the root category.

- <Attribute Specifier>

  The Attribute Specifier is the internal name of the attribute. This also retrieves the Name and Description of the attribute. Other information about the attribute is represented and stored as flexfields and is accessed using the Flexfield keyword.

Examples include:

- `Catalog[Medical].AncestorCategory.Name == "Pediatrics"`
- `Catalog[RMS].ParentCategory.Name == "Fashion"`
- `[Electronics].ParentCategory.FlexField[HDTV] == "Yes"`

Multi-Row Attribute Groups

Multi-row attribute group expressions can only include attributes from a single multi-row attribute group. The system only processes the modified rows of a multi-row attribute group.

Entity Flexfields

Entity flexfields do not belong to any attribute group. Access them using the FlexField keyword:

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

For example:

```
Flexfield[DiagonalLength]
```

Operators and Functions

The following section describes how to use operators and functions when building rule expressions.

Null Values

Any attribute can have an empty (null) value. In a typical business process, not all attribute values are entered at the same time. Multiple people enter data for an item over a period of time. For example, the Production Engineer enters an item's weight, while the Marketing Manager enters the description. To facilitate this form of processing, rules referencing attributes that have no (null) value are ignored. This means that the expression is neither true or false; expressions that evaluate to null are ignored.

Therefore, there is no need to write a validation rule with the following logic:

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

The "if" part of the above rule is unnecessary. If Weight equaled null, the validation would be ignored. If you want to verify that an attribute has a non null value, use the "isnull" function. "isnull" verifies that an attribute contains a value. "isnull" is the only way to test for empty values.

Boolean Expressions

Boolean expressions return TRUE, FALSE or null. Use them in "If" expressions or in validations. Consider the following when writing Boolean expressions:

General Comparison Operators: == != < <= > >=

Use the following syntax:

```
expression1 == expression2
expression1 != expression2
expression1 < expression2
expression1 <= expression2
expression1 > expression2
expression1 >= expression2
expression1 in (expression2, expression3, …)
```

If one or both expressions are null, then the result is null. To check for null values, you must use the "isnull" function. A string comparison is case insensitive. For case sensitive comparisons, use the string "compare" function. The "in" function is equivalent to (expression1 == expression2) or (expression1 == expression3) or …(and so on).

Null Comparison: isnull

Use the following syntax:

```
isnull(expression)
```

The function "isnull" returns TRUE if its argument is a NULL value. Otherwise, it returns FALSE. This function lets you explicitly test whether a value is null. Other functions are ignored if the value of the argument is null. Use !isnull to check that an attribute is not null.

String Search: compare contains endsWith match startsWith

Use the following syntax:

```
compare(string1, string2)
contains(look_for_string, look_in_string)
endsWith(look_for_string, look_in_string)
match(pattern, look_in_string)
startsWith(look_for_string, look_in_string)
```

All string search functions are case sensitive. If you want to do a case insensitive comparison, use the "==" comparison operator. "compare" returns 0 when string1 is exactly equal to string2, -1 if string1 is lexicographically less than string2, and +1 if string1 is lexicographically greater than string2. "match" performs a regular expression search on a string. For a description of regular expression construct behavior, see Friedl, Jeffrey E. F. (2002). *Mastering Regular Expressions*. 2nd Edition. O'Reilly and Associates.

Logical Operators: and or not

Use the following syntax:

```
expression1 and expression2
expression1 or expression2
not expression1
```

The logical "and" function returns the following results based on whether or not expressions A and B are true:

A	B	A and B
False	False	False
False	True	False
True	False	False
True	True	True
False	null	False
null	False*	null

* The processor stops after it finds the first False. Therefore, there is a difference between "False and null" and "null and False".

The logical "or" function returns the following results based on whether or not expressions A and B are true:

A	B	A or B
False	False	False
False	True	True
True	False	True
True	True	True
True	null	True
null	True*	null

* The processor stops after it finds the first True. Therefore, there is a difference between "True and null" and "null and True".

The logical "not" function returns the following results based on whether or not expression A is true:

A	not(A)
False	True
True	False
null	null

Comparison to Current Production: changed delta percent previous

When using tolerance rules, you can compare the new value of an attribute to the current production value.

Use the following syntax:

```
changed(attribute)
changed(attributeGroup)
delta(attribute)
percent(attribute)
previous(attribute)
```

"changed" returns TRUE if the new value of an attribute differs from the current production value. This function also works with null values. If you specify only the Attribute Group, then the function returns TRUE if any attribute in that Attribute Group changes.

"delta" returns the difference between new and existing attributes. String comparisons are case-insensitive. For Booleans expressions, TRUE is considered greater than FALSE. The following table shows the result of different scenarios:

Operator	Number, Date, or DateTime
new < current production	new - current production value
new >current production	new - current production value
new == current production	0
current production value does not exist	null
both new and current production value are null	0

Operator	Number, Date, or DateTime
either new or current production value are null (but not both)	null

"percent" is only valid for numbers. It returns:

```
(delta(attribute)/"current production value")*100
```

"previous" accesses the actual previous value.

Number Operators

Use the following operators in numerical expressions:

Math: + - * / sum

Use the following syntax:

```
expression1 + expression2
```

```
expression1 - expression2
```

```
expression1 * expression2
```

```
expression1 / expression2
```

```
sum(expression1, expression2, …)
```

All of the above mathematical expressions return null if any argument is null and division by zero returns null. The number of decimal digits returned by division is the maximum number of digits from expression1 and expression2. Use "sum" to add up a series of values.

abs

Use the following syntax to return the absolute value of an expression.

```
abs(expression)
```

Example

For example, the percentage weight change must be less than 10.

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

amount

Use the following syntax to return an amount in a given unit of measure. This ensures that comparisons or calculations occur in the desired unit of measure.

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

Example

The weight must be less than or equal to 10 kg:

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

min, max

Use the following syntax to return the minimum or maximum value in a series of values. You can also use this function for arrays or in query expressions.

```
min(expression1,expression2,…)
```

Example

In the following example, the result is "2006-11-30".

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

round, roundup, rounddown

Use the following syntax to round a number to the specified decimal places. "round" rounds to the nearest value. "roundup" rounds away from zero and "rounddown" rounds toward zero.

```
round(expression,decimals)
```

```
roundup(expression,decimals)
```

```
rounddown(expression,decimals)
```

Example

Example Expression	Result
`round(1.5758,2)`	1.58
`roundup(1.5758,2)`	1.58
`rounddown(1.5758,2)`	1.57

String Functions

Use the following functions with string data types.

+

Use the following syntax to concatenate two expressions and return the resulting string. This syntax also returns a valid string if the expressions consist of other data types.

```
expression1 + expression2
```

indexOf

Use this syntax to return a position of "look_for_string" in "look_in_string". The string position starts at zero. If "look_for_string" is not found, then the processor returns a value of -1. The search is case sensitive. If either expression is null, the resultant value is null.

```
indexOf(look_for_string, look_in_string)
```

length

Use this syntax to return the length of the given string. If the expression is null, then the resultant value is null.

```
length(expression)
```

lowercase

Use this syntax to return the lowercase equivalent of the given expression. If the expression is null, then the resultant value is null.

```
lowercase(expression)
```

substring

Use this syntax to return a substring of "string" starting at "start" and ending before "end". If "end" is omitted, then return to the end of the string. The string position begins at zero. If "start" is less than zero, then start at the beginning of the string. If "end" is greater than the length of the string, then return up to the end of the string. If any expression is null, then the resultant value is null.

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

trim

Use this syntax to remove all leading and trailing (but not middle) whitespace characters from a string. If the expression is null, then the resultant value is null.

```
trim(expression)
```

uppercase

Use this syntax to return the uppercase equivalent of the given expression. If the expression is null, then the resultant value is null.

```
uppercase(expression)
```

Date Functions

Use the following functions with date data types.

+ -

Use the following syntax to add or subtract a certain number of days from a date. A single number is interpreted as days. Otherwise, use the ISO 8601 format.

```
expression1 + expression2
expression1 - expression2
```

For example, Item.Logistics.LeadTime + 3 equals 3 days after the Item Lead Time.

Pre-defined Attributes

You can access all user defined attributes (UDAs) using the <Attribute Group Name>.<Attribute> syntax. In addition, rules support access to certain pre-defined attributes. Use pre-defined attribute groups to access the attributes for all item related business entities. Supplier, supplier site, and organization business entities do not use attribute groups; they access the attributes directly. You cannot use rules to validate item revision business entities.

Rule Set Context Attributes

Rule set context attributes are a special set of seeded attributes that give some context to the rule execution.

Context Attributes	Description
Context.RuleSetVersion	Always set to "1.0"

Context Attributes	Description
Context.ExecutionDate	Date that rules are invoked.
Context.ExecutionDateTime	Date and time that rules are invoked.
Context.BatchID	Enter the Batch ID when running Import.
Context.BatchName	Enter the Batch Name when running Import.

Example

```
Context.ExecutionDate>="7/6/2007"
```

Item Primary Attributes

You can use item primary attributes when creating rules:

- Name
- Description
- Status
- Primary_UOM
- Secondary_UOM
- Engineering_Item
- Approval_Status

Item Supplier Intersection Attributes

Use the following two attributes for the item supplier, item supplier site, and item supplier site organization intersection business entities when creating rules. The attribute group is Intersection_Primary.

- Primary_Flag
- Status

Item Supplier Intersection Attribute Example

```
Intersection_Primary.Primary_Flag

Intersection_Primary.Status=="Production"
```

Supplier Attributes

Use the following supplier attributes when creating rules. Access the supplier attributes using the attribute group "Supplier".

- Supplier_Name
- Supplier_Number
- DUNS
- Taxpayer_ID
- Tax_Registration_Number

Supplier Attribute Example

```
Supplier.Supplier_Name == "Acme"
```

SupplierSite Attributes

Use the following supplier site attributes when creating rules. Access the supplier site attributes using the attribute group "SupplierSite".

- Supplier_Site
- Supplier_Site_ID
- City
- State
- Country

Supplier Site Attribute Example

```
SupplierSite.State=="CA"
```

Organization Attributes

Use the organization attribute "Code" when creating rules. Access the organization attribute using the attribute group "Organization".

Organization Attribute Example

```
Organization.Code=="9289"
```

Execution Behavior

Rules only run during item creation, when attributes change, or when assigning an alternate catalog and the rule contains an alternate catalog reference.

> **Note:** Rules run before the item number and description generating functions, so the Item Number and Description fields do not contain values when the rules run. However, the item number and description generating functions can use attribute values assigned by rules.

Rules and Change Management

An attribute requires a change order if one of the following conditions are met:

- an attribute's status equals "Change Order Required"
- A validation rule (using an attribute) with severity equal to "Needs Approval" runs

If an attribute requires a change order, any related attributes must also require change orders. Related attributes include any attribute used in a validation or assignment rule that contains another attribute requiring a change order.

Related Attribute Example

If Condition: General.Shippable == "Yes"

Assignment: Logistics.PostalLength = Physical.Length + Physical.Girth

If General.Shippable, Logistics.PostalLength, Physical.Length or Physical.Girth requires a change order, then all other attributes require a change order, also.

> **Note:** For validation rules, if any attribute requires a change order, then all updated attributes in the validation rule must be included in the same change order.

If the attributes computed in assignment rules are used in subsequent rules, then they can form a chain of dependencies. In order to ensure that the data remains consistent, the system propagates the change order requirement along the dependency chain. For example, consider the following two assignment rules:

- Physical.Girth = Physical.Width + Physical.Depth
- Logistics.PostalLength = Physical.Length + Physical.Girth

If "Physical.Depth" is updated and requires a change order, then the change order requirement propagates to Logistics.PostalLength. Note that the change order only propagates along updated attributes. If an attribute is not updated, then it does not require a change order (for example, Physical.Length above).

If an assignment rule assigns a value to an attribute in an attribute group with a change policy of "Not Allowed", then the application treats this item like a failed validation and rejects it. For example, consider the following assignment:

```
Logistics.PostalLength = Physical.Length + Physical.Girth
```

If the "Logistics.PostalLength" change policy is "Not Allowed" and "Physical.Length" changes, then the item is rejected.

This prevents inconsistent data from entering the database. If the system ignores the assignment rule, then the relationship between PostalLength, Length and Girth no longer holds. To avoid an error, ensure that all attributes dependent upon each other have change policies of "Not Allowed". In the above example, the "Logistics" and "Physical" attribute group change policies should be the same (see: Defining Change

Policies, page 3-19). If setting "Physical" to "Not Allowed" is not feasible, then ensure that Length and Girth do not change by other means, because the changed entity will be rejected.

Regular Expression Syntax

Use the following syntax when building rule expressions.

Characters

x	The character x
\\	The backslash character
\0n	The character with octal value 0n (0 <= n <= 7)
\0nn	The character with octal value 0nn (0 <= n <= 7)
\0mnn	The character with octal value 0mnn (0 <= m <= 3, 0 <= n <= 7)
\xhh	The character with hexadecimal value 0xhh
\uhhhh	The character with hexadecimal value 0xhhhh
\t	The tab character ('\u0009')
\n	The newline (line feed) character ('\u000A')
\r	The carriage-return character ('\u000D')
\f	The form-feed character ('\u000C')
\a	The alert (bell) character ('\u0007')
\e	The escape character ('\u001B')
\cx	The control character corresponding to x

Character classes

[abc]	a, b, or c (simple class)
[^abc]	Any character except a, b, or c (negation)
[a-zA-Z]	a through z or A through Z, inclusive (range)
[a-d[m-p]]	a through d, or m through p: [a-dm-p] (union)
[a-z&&[def]]	d, e, or f (intersection)
[a-z&&[^bc]]	a through z, except for b and c: [ad-z] (subtraction)
[a-z&&[^m-p]]	a through z, and not m through p: [a-lq-z](subtraction)

Predefined character classes

.	Any character (may or may not match line terminators)
\d	A digit: [0-9]
\D	A non-digit: [^0-9]
\s	A whitespace character: [\t\n\x0B\f\r]
\S	A non-whitespace character: [^\s]
\w	A word character: [a-zA-Z_0-9]
\W	A non-word character: [^\w]

Boundary matchers

^	The beginning of a line

$	The end of a line
\b	A word boundary
\B	A non-word boundary
\A	The beginning of the input
\G	The end of the previous match
\Z	The end of the input but for the final terminator, if any
\z	The end of the input

Greedy quantifiers

X?	X, once or not at all
X*	X, zero or more times
X+	X, one or more times
X{n}	X, exactly n times
X{n,}	X, at least n times
X{n,m}	X, at least n but not more than m times

Reluctant quantifiers

X??	X, once or not at all
X*?	X, zero or more times
X+?	X, one or more times
X{n}?	X, exactly n times

X{n,}?	X, at least n times
X{n,m}?	X, at least n but not more than m times

Possessive quantifiers

X?+	X, once or not at all
X*+	X, zero or more times
X++	X, one or more times
X{n}+	X, exactly n times
X{n,}+	X, at least n times
X{n,m}+	X, at least n but not more than m times

Logical operators

XY	X followed by Y
X|Y	Either X or Y
(X)	X, as a capturing group

Precedence

The precedence of character-class operators is as follows, from highest to lowest:

1. Literal escape \x
2. Grouping [...]
3. Range a-z
4. Union [a-e][i-u]
5. Intersection [a-z&&[aeiou]]

Note that a different set of metacharacters are in effect inside a character class versus outside a character class. For instance, the regular expression "." loses its special meaning inside a character class, while the expression "-" becomes a range forming metacharacter.

For a more precise description of the behavior of regular expression constructs, refer to Mastering Regular Expressions, 2nd Edition, Jeffrey E. F. Friedl, O'Reilly and Associates, 2002.

Viewing Attributes Used in Rule Sets

To view attributes used in rule sets:

1. Navigate to the Setup Workbench. In the Items tab, click the Rules subtab.
2. In the **Update Rule Set Assignment** page, select Item Rules from the left side menu.
3. In the **Item Rule Sets** page, search for and select the name of a rule set.
4. In the **Item Rules: Rule List** page, select the Attributes tab.

   You can search for the attributes included in the rule set using the following parameters:

   - Business Entity
   - Attribute Group
   - Attribute
   - Data Type
5. Click Go once you have entered your search parameters.

   The search results display below the search parameters.

Including other Rule Sets

Since you can only assign one rule set to each business entity, create composite rule sets to bundle rule sets together. You can create a hierarchy of rule sets. For example, create a composite assignment rule set, a composite validations rule set, then a master composite mixed rule set that contains the above two rule sets. Assign the master composite mixed rule set to the business entity.

To include other rule sets within a rule set:

1. Navigate to the Setup Workbench. In the Items tab, click the Rules subtab.

2. In the **Update Rule Set Assignment** page, select Item Rules from the left side menu.

3. In the **Item Rule Sets** page, click Create.

4. In the **Item Rules: Create Rule Set** page, enter Name, Description and Internal Name for the rule set.

   > **Caution:** You cannot change the Internal Name after the rule set is created.

5. In the Composite field, select YES.

   For rule sets containing rules, set the Composite field to NO. For rule sets that contain other rule sets, set the Composite field to YES.

6. In the Type field, select the type of rules you plan to include in the composite rule set. Choose from:

   - Assignments
   - Validations
   - Mixed - select Mixed if you plan to include assignment and validation rule sets in the composite rule set.

   > **Note:** You have the option to create multiple layers of composite rule sets, some of which might only contain assignment or validation rules. Use a mixed composite rule set to include both types of rule sets together in one composite rule set.

7. Click Continue.

   The **Item Rules: Rule List** page appears.

8. In the Included Rule Sets tab of the **Item Rules: Rule List** page, click Add Above or Add Below to add a rule set.

   > **Note:** The rule sets execute in the order listed in the Included Rule Sets tab. List validations after assignments if you want to validate some of the assignments.

9. In the **Rule Set Search** page, search for and select the rule sets to add to your composite rule set.

   The system returns you to the **Item Rules: Rule List** page.

10. Enter the sequence for the rules to run. Click Apply.

To remove a rule set from a composite rule set:

Select the composite rule set. In the **Item Rules: Rule List** page, select the rule to remove, then click Remove.

To update the rule set sequence in a composite rule set:

Select the composite rule set. In the **Item Rules: Rule List** page, enter a new sequence number in the Sequence field for each rule set. Click Apply.

Viewing Rule Set Dependencies

From the **Item Rules: Rule List** page for a rule set, you can view the attributes used in the rule set, if the rule set is included in other rule sets (part of a composite rule set), and what business entities use the rule set.

To view the attributes used in a rule set:

Navigate to the **Item Rules: Rule List** page for a rule set. In the lower region of the page, select the Attributes tab.

The search results region within the Attributes tab lists all attributes used in the rule set. Use the search parameters to filter the attributes listed in the search results.

To view which rule sets include the selected rule set:

Navigate to the **Item Rules: Rule List** page for a rule set. In the lower region of the page, select the Rule Sets Where Included tab.

The search results region within the Rule Sets Where Included tab lists all composite rule sets that include the rule set appearing in the **Item Rules: Rule List** page. Use the search parameters to filter the composite rule sets listed in the search results.

To view which entities use the rule set:

Once a rule set (typically a composite rule set) is assigned to an entity, you can view which entity uses the rule set.

Navigate to the **Item Rules: Rule List** page for a rule set. In the lower region of the page, select the Where Used tab. The search results region lists the business entity that the rule set validates.

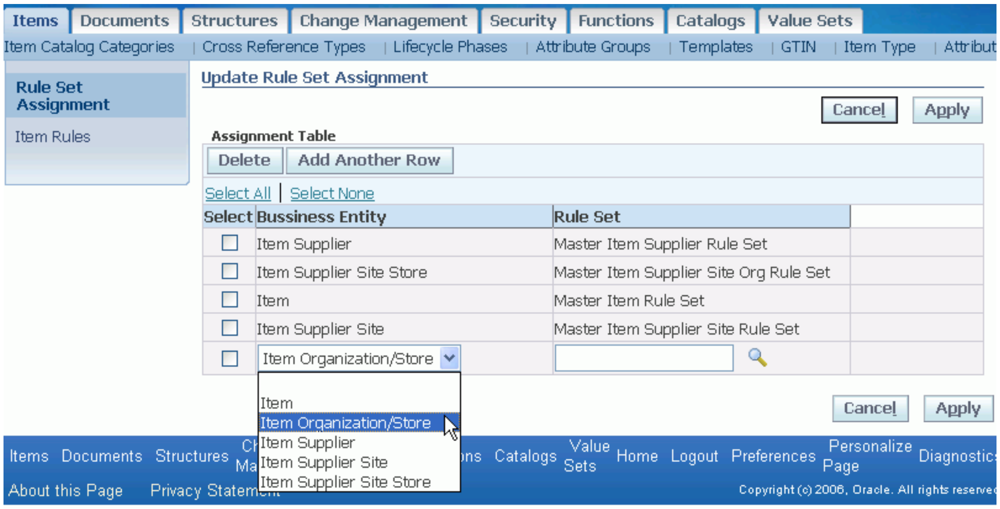
Assigning Rule Sets to Entities

After creating rule sets, you must activate them by assigning them to the appropriate business entity. You can activate them directly by assigning the rule set to a business entity, but you can only assign one rule set to each business entity. Activate a rule set indirectly by using composite rule sets to group multiple rule sets together (see: Including other Rule Sets, page 6-34). You can then assign one composite rule set to a business entity.

To assign a rule set to an entity:

1. Navigate to the Setup Workbench. In the Items tab, click the Rules subtab.

2. In the **Update Rule Set Assignment** page, click Add Another Row.



Update Rule Set Assignment

Assignment Table

Select	Bussiness Entity	Rule Set
□	Item Supplier	Master Item Supplier Rule Set
□	Item Supplier Site Store	Master Item Supplier Site Org Rule Set
□	Item	Master Item Rule Set
□	Item Supplier Site	Master Item Supplier Site Rule Set
□	Item Organization/Store	

3. Select a business entity and a rule set to validate it.

   - You can only create one assignment per business entity.

   - If you need to update an assignment, select the existing assignment, click Delete, then click Apply. Finally, click Add Another Row.

   - Assign a rule set for each business entity that you want validated.

4. Click Apply.

Test the rules in the item specification pages by updating attribute values in the appropriate attribute groups. The rules should validate any updated values and any defined error messages should appear.

7

Setting Up Change Categories and Types

This chapter covers the following topics:

- Overview of Change Categories and Types
- Building and Optimizing the Change Management Text Index
- Defining Change Categories
- Creating Priority Codes
- Creating Reason Codes
- Creating Classification Codes
- Creating Statuses
- Defining Workflow Templates
- Customizing Change Management Workflows
- Creating Task Templates
- Defining Header/Line Type Attributes and Attribute Groups
- Defining Header Types
- Defining Line Types
- Associating Change Type Attributes
- Associating Change Line Type Attributes
- Implementing User Defined Functions for Change Type Attribute
- Defining Change Category Search Criteria
- Defining Change Category Display Formats
- Defining Change Category Reports
- Subscribing to a Change Management Business Event

Overview of Change Categories and Types

Important: The seeded Change Management categories of Idea and Issue are available only to customers who have licensed Product Lifecycle Management, and they are not available to licensees of Product Information Management.

You must perform the following tasks to define Change categories and their associated types.

Task	Required?
Defining Change Categories	
Defining Change Types	Yes
Defining Line Types	
Defining Change Type Attribute Groups	
Defining Change Line Attribute Groups	
Setting Up Change Attribute Group Security	
Implementing User-Defined Functions for Change Type Attributes	
Associating Change Type Attributes	
Customizing Change Management Workflows	
Defining Approval Routing Templates	Yes
Creating User-Defined Priority Codes	Yes
Creating User-Defined Reason Codes	
Creating User-Defined Statuses	
Defining Change Category Criteria Templates	

Defining Change Category Results Formats

Defining Change Reports

Building and Optimizing the Change Management Text Index

To take advantage of the Oracle Text search features such as keyword search, stemming search, and fuzzy search— run the concurrent program Item Catalog Text Index Build. Any user with the Development Manager responsibility can submit this concurrent program from the Submit Request window. Select the concurrent request parameter Action=CREATE when submitting the request.

As item data changes over time due to ongoing item insert, delete, or update operations, the query response time may gradually decrease. Optimizing the change Management Text index using the Optimize Item Catalog Text Index concurrent program removes old data and minimizes index fragmentation, and therefore can improve query response time.

The Change Management Text Index should be optimized:

- After the import of many items
- After deleting or updating many items
- On a regular basis (you should optimize the text index at regular intervals, for example, twice a week.)
- When you notice slow performance for item simple search

> **Note:** This program optimizes at most 16,000 items per single run. To continue optimizing more items, re-run the program.

To optimize the Change Management Text Index:

1. In the Applications tree menu, click the "View Concurrent Requests" forms link.
2. In the Find Requests form, click Submit a New Request.
3. In the Submit a New Request form, select Single Request and click OK.
4. In the Submit Request form, select Optimize Change Management Text Index from the Name list of values.
5. In the Parameters form, provide the Program parameter values: FAST

This optimization method compacts fragmented rows. However, old data remaining from deleted rows is not removed. FULL This method both compacts rows and removes old data (for example, performs garbage collection).

Maximum Optimization

Time Specify the maximum optimization time, in minutes, for FULL optimize. If you do not enter a value, the program runs until the entire index is optimized. If you specify a maximum time, the program performs as much work as allowed by the imposed time limit. The optimization picks up and continues the next time the program is run. When you specify 0 for maximum time, Oracle performs minimal optimization.

6. Click Submit.

Defining Change Categories

You can use *change categories* to define and manage changes required by your enterprise. In addition to the seeded change categories (ideas, issues, change requests, change notifications, change orders) you can create change categories specific to your business needs. For example, you can create the change category Enhancement Requests to track your customers' product enhancement requests. You cannot delete seeded change categories; however, you can disable them.

You can configure each change category to have revised items or request lines based on the business purpose of the category. For example, a Change Order can have revised items as they allow a change order to implement item related changes. Request lines enable you to request changes or specify tasks related to an item and assign it to a person or group. You can associate criteria templates and result formats to a change category for frequently executed search criteria.

> **Important:** The seeded Change Management categories of Idea and Issue are available only to customers who have licensed Product Lifecycle Management, and they are not available to licensees of Product Information Management.

The system provides five base change categories that can be used to create other categories:

- Ideas - To capture suggestions, innovations, improvements etc. from customers and internal users.

- Issues - to track, manage and resolve various product/process related issues.

- Change Request - to request changes and get approval for requested changes.

- Change Order - to implement requested changes and revise items.

- Change Notification - to distribute documents and files to multiple recipients.

Other change categories provided by the system include:

- File Review - to allow for an informal process of review and feedback on attachments.

- File Approval - to allow for a formal process of review and approval of attachments.

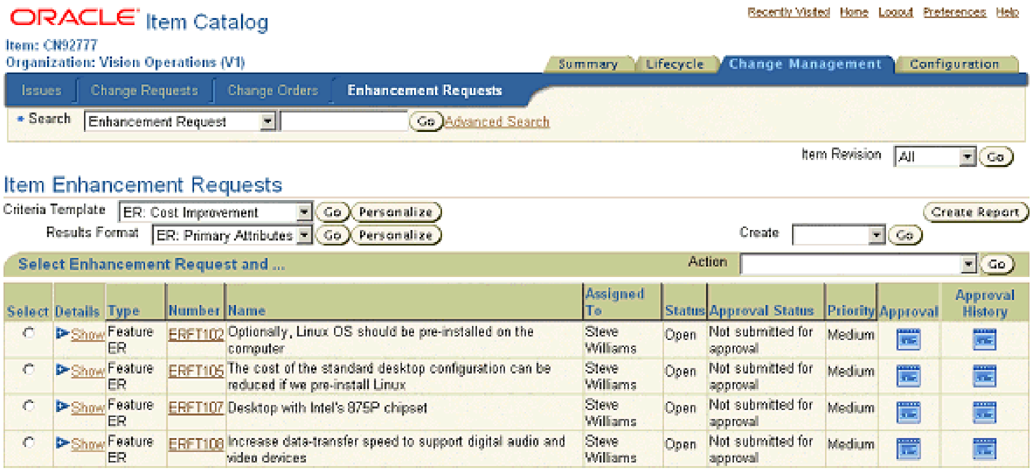
- New Item Request (NIR) - to provide a formal process of definition and approval of a new item.

You can create your own change categories to manage a variety of issue and change management business processes relevant to your company.

You can specify a form function to control who can view and create change category objects. The form function must be added to the change management security menu (EGO_CHGMGMT_USER_SECURITY), which in turn is referenced by a user responsibility (such as Development Manager or Development Engineer). You can also enable (in the Item Catalog workbench) a tab to show all instances of a change category for the item in context.

You can specify a form function to control who can view and create change category objects. The form function must be added to the change management security menu (EGO_CHGMGMT_USER_SECURITY), which in turn is referenced by a user responsibility (such as Development Manager or Development Engineer). You can also enable (in the Item Catalog workbench) a tab to show all instances of a change category for the item in context.

New change category Enhancement Requests enabled in the Item Catalog



Item: CN92777
Organization: Vision Operations (V1)

Search: Enhancement Request

Item Revision: All

Item Enhancement Requests

Criteria Template: ER: Cost Improvement

Results Format: ER: Primary Attributes

Create:

Select Enhancement Request and ... Action:

Select	Details	Type	Number	Name	Assigned To	Status	Approval Status	Priority	Approval	Approval History
○	Show	Feature ER	ERFT102	Optionally, Linux OS should be pre-installed on the computer	Steve Williams	Open	Not submitted for approval	Medium	▤	▤
○	Show	Feature ER	ERFT105	The cost of the standard desktop configuration can be reduced if we pre-install Linux	Steve Williams	Open	Not submitted for approval	Medium	▤	▤
○	Show	Feature ER	ERFT107	Desktop with Intel's 875P chipset	Steve Williams	Open	Not submitted for approval	Medium	▤	▤
○	Show	Feature ER	ERFT108	Increase data-transfer speed to support digital audio and video devices	Steve Williams	Open	Not submitted for approval	Medium	▤	▤

Enabling Change Category Function Security and the Item Change Category Tab

To enable the change category function and the item change category tab:

1. Create the Form Function for the Item Enhancement Request tab.

   Description Tab

   Function

   EGO_ITEM_ENH_REQ

   User Function Name

   EGO User Item Enh Request tab

   Description

   EGO User Item Enh Request tab

   Properties Tab

   Type

   SSWA JSP FUNCTION

   Maintenance Mode Support

   None

   Context Dependence

   Responsibility

   Web HTML Tab

   HTML Call
   OA.jsp?page=/oracle/apps/ego/item/eu/webui/EGOITEMCHANGEMGMTLISTPGL
   &akRegionApplicationId=431&addBreadCrumb=RP&OAHP=EGO_USER_WORKB

ENCH_HOMEPAGE&OASF=
EGO_ITEM_ENH_REQ&changeMgmtTypeCode=ENHANCEMENT_REQUEST

> **Important:** Boldfaced characters represent the form function and internal name of the change category, respectively.

2. Create the Form Function for Enhancement Request security. The function name must be 'ENG_CREATE_' (for example, ENG_CREATE_ENHANCEMENT_REQUEST):

   Description Tab

   Function

   ENG_CREATE_ENHANCEMENT_REQUEST

   User Function Name

   Engineering Create Enhancement Request

   Properties Tab

   Type

   SSWA JSP FUNCTION

   Maintenance Mode Support

   None

   Context Dependence

   Responsibility

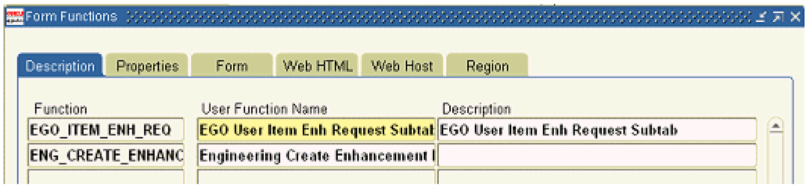
   Web HTML Tab

   HTML Call

   OA.jsp?page=/oracle/apps/eng/changemgmt/webui/SelectChgTypePG&
   changeMgmtTypeCode=**ENHANCEMENT_REQUEST**

   > **Note:** Boldfaced characters represent the internal name of the change category.

Create form functions for change category security and item change category tab



Function	User Function Name	Description
EGO_ITEM_ENH_REQ	EGO User Item Enh Request Subtal	EGO User Item Enh Request Subtab
ENG_CREATE_ENHANC	Engineering Create Enhancement I	

3. Add the Create Enhancement Request function to the change management navigation menu (see the menu EGO_CHANGE_MGMT_MENU).

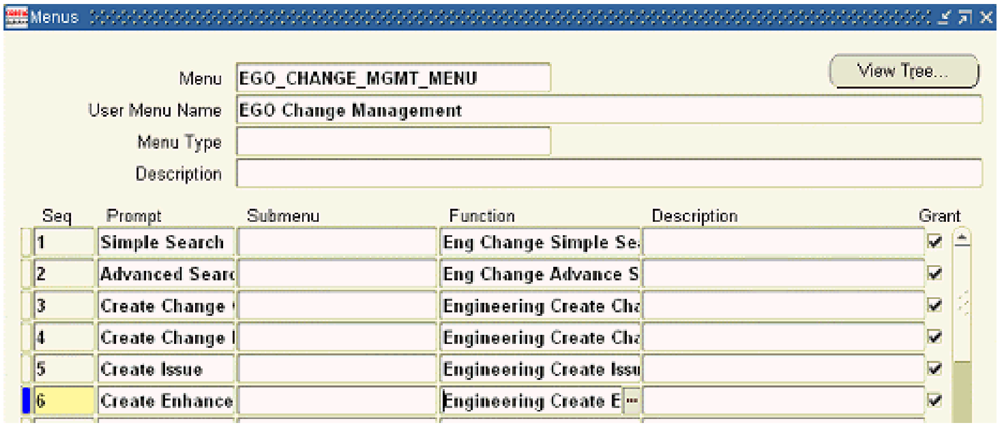
   Prompt

   Create Enhancement Request

   Function

   Engineering Create Enhancement Request

Add function to change management menu



Menu: EGO_CHANGE_MGMT_MENU

User Menu Name: EGO Change Management

Menu Type:

Description:

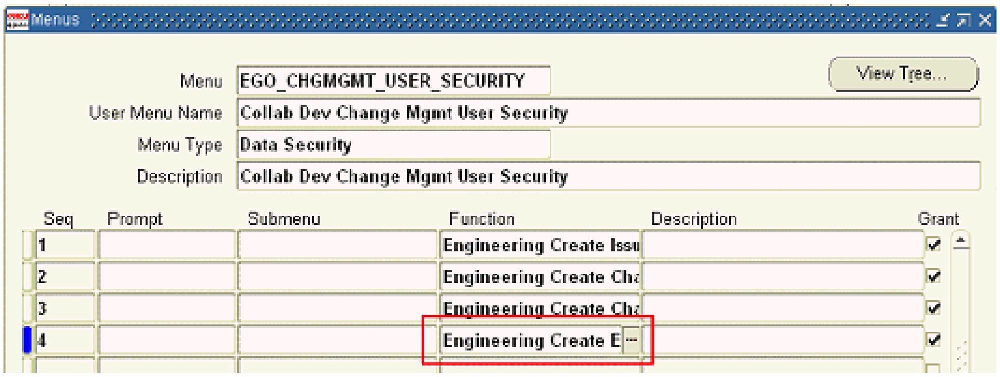
Seq	Prompt	Submenu	Function	Description	Grant
1	Simple Search		Eng Change Simple Se		☑
2	Advanced Searc		Eng Change Advance S		☑
3	Create Change		Engineering Create Cha		☑
4	Create Change I		Engineering Create Cha		☑
5	Create Issue		Engineering Create Issu		☑
6	Create Enhance		Engineering Create E		☑

4. Add the Enhancement Request security function to the change management security menu (see the menu EGO_CHGMGMT_USER_SECURITY).

   Function

   Engineering Create Enhancement Request

Add function to change management security menu



Menu	EGO_CHGMGMT_USER_SECURITY
User Menu Name	Collab Dev Change Mgmt User Security
Menu Type	Data Security
Description	Collab Dev Change Mgmt User Security

Seq	Prompt	Submenu	Function	Description	Grant
1			Engineering Create Issu		☑
2			Engineering Create Cha		☑
3			Engineering Create Cha		☑
4			Engineering Create E		☑

5. Add the Item Enhancement Request function to the item change management tab menu (query the menu EGO_USER_CHANGE_MANAGEMENT_TAB)

    Prompt

    Enhancement Requests

    Function

    EGO User Item Enh Request tab

    > **Important:** You must enter a prompt when adding a function to a change management menu such as EGO_USER_CHANGE_MANAGEMENT_TAB.

6. Add the new change category for Enhancement Requests by duplicating an existing Change Category. In example shown in the new Enhancement Request Change Category is being defined by duplicating the Issue category:

    Internal Name

    ENHANCEMENT_REQUEST

    Name

    Enhancement Request

    Description

    Enhancement Request

    Plural Name

    Enhancement Requests

    Sort Seq

    9

Start Date

defaults to sysdate

Number Generation

Sequence Generated

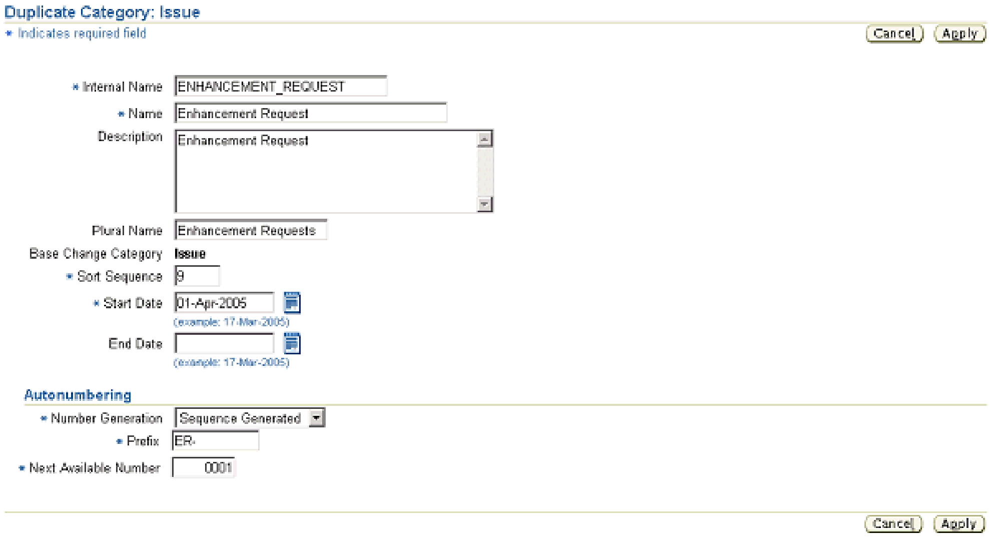
Prefix

ER-

Next Available Number

0001

Add new change category by duplicating an existing change category



Duplicate Category: Issue

* Indicates required field

* Internal Name	ENHANCEMENT_REQUEST
* Name	Enhancement Request
Description	Enhancement Request
Plural Name	Enhancement Requests
Base Change Category	Issue
* Sort Sequence	9
* Start Date	01-Apr-2005 (example: 17-Mar-2005)
End Date	 (example: 17-Mar-2005)

Autonumbering

* Number Generation	Sequence Generated
* Prefix	ER-
* Next Available Number	0001

Note: Oracle recommends that you stop and then start the Jserv and Apache listener middle tier ports after completing these setup tasks.

To create a new change category:

1. On the **Categories** page in the Setup Workbench, select any change category and click Duplicate.

   Note: Creating new categories by duplicating existing categories enables your enterprise to better control the general change categories in use. It also makes it easier to introduce new categories that are similar to the basic issue, change request and change order categories. Note, however, that duplication is not allowed for the following change categories:

- File Review
- File Approval
- New Item Request (NIR)

2. On the **Duplicate Category** page, change the data in the fields as necessary to create your new category.

   Important: When duplicating a change category, all information from the Basic Information section is copied. For new change categories based on existing change order categories, the following seeded line types are copied:

   - Item AML changes
   - Item attachment changes
   - Item attribute changes

   Note the following fields:

   - **Plural Name**

     Enter alphanumeric text to specify the plural of the name that appears in the user interface.

   - **Sort Sequence**

     Enter a number to specify the tab sequence in which the categories will appear in the user interface.

   - **Autonumbering**

     If you select the Number Generation method Override at Type Level, then autonumbering must be specified at the Type level, and therefore does not inherit the numbering schema used for the parent change category.

3. Click Apply to complete creation of the new change category.

   If, after creating a new change category you wish for the new category to be displayed as a tab in the item workbench, you must create a form function passing the change category name as a parameter, then assign the form function to the appropriate Menu in the user interface, and finally assign the Menu to a Responsibility, which in turn is granted to a user. For more information, see the

Oracle Product Lifecycle Management Implementation Guide or *Oracle Product Information Management Implementation Guide*. For more information on Menus and Responsibilities, see the *Oracle Applications Developer's Guide*.

All new change categories created will be available to the user for search and reporting under the general Change Management Menu.

If you wish to have this category be available separately to the user, you must create separate form functions for simple search, advanced search, create, and reports, assign the form functions to a menu, and finally assign the menu to a responsibility.

After creating a new change category, you can configure the Header Types, Line Types and Reports. For more details see:

- Managing Change Header Types, page 7-28

- Creating Line Types, page 7-38

- Creating Reports, page 7-48

Creating Priority Codes

Change priorities enable you to define the degree of urgency of change requests, change orders, and issues in a way that accommodates your business processes. You can create priority codes to capture different priorities (such as High, Medium or Low).

Priority codes are applicable to all change categories and their types.

You cannot delete seeded priority codes; however, you can disable the seeded priority codes and define new ones specific to your use. You can disable a priority on a given date by specifying a date in the Inactive On field.

To create a change priority:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Change Management tab.

2. On the **Categories** page, click the Codes tab.

3. On the **Priorities** page, click Add Another Row.

4. In the new row, enter the following:

   Priority

   Enter alphanumeric text to specify the name of the priority.

   Priority Sequence

   Enter a number between 0 and 9. Use 0 to denote the highest priority and 9 the lowest. Priority sequence is used to determine the sort sequence.

Description

Enter a description for the priority.

> **Note:** You can delete a change priority as long as it has not yet been used--once in use, a priority cannot be deleted.

Creating Reason Codes

Use change reasons to categorize and identify causes for changes. The system uses reasons for reference only.

Reason codes enable you to track the reason for which the issue/change has been created. Create reason codes to capture reasons for the issue/change (such as Quality Improvement, Design Improvement, Cost Reduction, Test Failure and Non Conformance).

Reason codes are applicable to all change categories and their types.

You cannot delete seeded reason codes; however, you can disable the seeded reason codes and define new ones specific to your use. You can disable a reason on a given date by specifying a date in the Inactive On field.

To create a change reason:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Change Management tab.

2. On the **Categories** page, click the Codes tab.

3. On the **Priorities** page, click the Reasons link.

4. On the **Reasons** page, click Add Another Row. In the new row, enter the following:

   Reason

   Enter alphanumeric text to describe a unique reason for initiating a change. For example, you could define a reason named OBSOLETE to indicate an obsolete part, or WAIVER to indicate a component change on a bill of material.

   Description

   Enter a description of the reason.

   > **Note:** You can delete a change reason as long as it has not yet been used--once in use, a reason cannot be deleted.

Creating Classification Codes

Classifications provide a mechanism for companies to automate the categorization of change orders, and to also indicate to users exactly how the change order will impact their production. Oracle provides two types of classifications:

Derived

Derived classification codes are derived from a user-defined function. For example, a division of a company, Vision Operations, needs to automate the process whereby a change order is assigned a particular classification code. To create an automated classification process, Vision has created a set of attributes that, when filled in by users, classifies change orders into a particular classification or workflow routing. The user-supplied attributes are mapped to user-defined functions. The function takes the data supplied in the attributes and derives a valid classification code. Derived classification codes appear to users as read-only data. For details about user-defined attributes and functions see Defining Header/Line Type Attributes and Attribute Groups, and Defining User-Defined Functions. For details about setting up user-defined functions for change type attributes, see the example: Implement User-Defined Functions for Change Type Attributes.

Valid

Valid classification codes are selected by the user from a list of values. Valid values are specified in the change header type. Note: Classifications are available only to change categories whose base category is Change Order.

> **Note:** Classifications are available only to change categories whose base category is Change Order.

To create classifications:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Change Management tab.

2. On the **Categories** page, click the Codes tab.

3. On the **Priorities** page, click the Classifications link.

4. On the **Classifications** page, click Add Another Row.

5. In the new row, provide the name of the Classification Code and a Description.

   > **Note:** You can delete a classification code as long as it has not yet been used. Once in use, a classification code cannot be deleted.

Creating Statuses

Statuses enable you to manage an issue/change through its lifecycle. You define statuses to indicate various states of an issue/change (for example, Open, On Hold, Complete and Cancelled).

Statuses are applicable to all change categories and their types

You cannot delete or disable seeded statuses; however, you can define new statuses specific to your business processes. You can disable user-defined statuses on a given date by specifying a date in the Inactive On field.

Change categories are managed through their statuses and an approval workflow. Each status can have one workflow associated with it, and that workflow is automatically launched when changes enter into the status.

> **Note:** You can change the name of any status, even those provided by the system. If a status is already in use you cannot delete it. Also, you cannot delete any of the system provided status.

To create a status:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Change Management tab.

2. On the **Categories** page, click the Workflow tab.

3. On the **Statuses** page, click Add Another Row.

4. In the new row, enter the following:

   - **Status**

     Provide a name for the new status.

   - **Status Type**

     Select the type that applies to the status:

     - Open

       When a change order has a status of Open, users can update it. However, when the workflow is running and Update Allowed is not selected, users cannot update it. Note that Update Allowed specifies that even if a workflow is running, the change object can still be updated. Otherwise, if a workflow is running, it cannot be updated , except for the posting of comments.

- Scheduled

  Once in use, the change cannot be updated. Scheduled change orders are picked up and implemented by auto-implement manager (when auto-implement is set up).

- Released

  Cannot be updated.

- Approval

  A workflow is mandatory for this status. Once the Approval is granted, the status cannot be updated. You can associate a workflow template containing an approval request step for Approval status types only.

- Implemented

  For each change header type, only one status can use Implemented. Implemented change orders cannot be reopened and canceled. Implemented must always be the final status.

  > **Note:** Once in use, you cannot delete or update Status Types (except for the Display Name).

- **Description**

  Enter a description of the status.

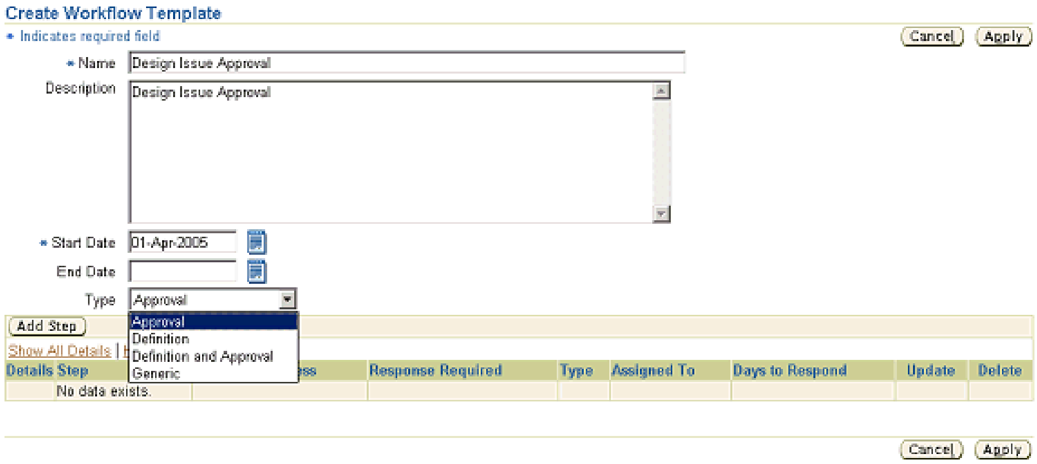
- **Inactive On**

  Optionally, enter a date on which the status becomes inactive. As of this date, you can no longer assign the status.

Defining Workflow Templates

Workflow templates enable you to predefine a business approval process. Change categories such as issues, change requests and change orders can only be approved via the successful completion of an approval routing. Workflows are supported at change header and line levels. You can create and maintain header and line workflow templates for each change type using workflow templates listed in the Setup Workbench under the Change Management Workflow tab.

Creation of a new Workflow Template



* Name	Design Issue Approval
Description	Design Issue Approval
* Start Date	01-Apr-2005
End Date	
Type	Approval

Details	Step	ess	Response Required	Type	Assigned To	Days to Respond	Update	Delete
	No data exists.							

Workflow templates enable you to define a workflow for a change object; you can use workflows for a variety of purposes, some of which include informational messages (FYI), request for comment, or approval requests. Create workflow templates for change header and line level usage separately and associate them at the change header and change line level, respectively.

Workflow templates are made up of steps--each step describes a workflow process and specifies the assignees. For example, you can create steps to request approval, request comment, or send an FYI notification.

While creating a workflow template its Type needs to be specified.

> **Important:** Once a workflow template is created of a particular type, its type cannot be changed.

Currently the following workflow template types are supported:

Approval

The Approval workflow template type is valid only for workflows with status type Approval.

Definition

The Definition workflow template type is used primarily for workflows in New Item Requests with status type Open.

Definition and Approval

The Definition and Approval workflow template type is used primarily for New Item Requests of status type Approval.

Generic

The Generic workflow template type is used for all other status types.

Certain workflow types can be associated with specific statuses. Following are the associations between status type and workflow types:

Valid Workflow Types for Change Categories (except New Item Request)

Status Type	Valid Workflow Type
Approval/Review	Approval
Others	Generic

Valid Workflow Types for New Item Requests

Status Type	Valid Workflow Type
Open	Definition
Approval/Review, Definition and Approval, or Approval	Approval
Others	Generic

Workflow templates are basically made up of approval steps; each approval step describes a workflow process and specifies the assignees. For example, you can create steps to request approval, request comment, or send an FYI notification.

You can use any of the following seeded workflow processes in a workflow template:

Request Approval

The Request Approval workflow enables you to request approvals from a person or group.

FYI

The FYI workflow enables you to send an FYI notification to a person or group.

Request Comment

The Request Comment workflow enables you to request comments from a person or group.

Definition

The Definition workflow is primarily used in the New Item Request Process and allows for the association of item attribute groups in the New Item Request process so that they can be defined by the step assignee.

Definition and Approval

The Definition and Approval workflow is similar to the Definition workflow but also requires an approval by the step assignee. For more details, see: Defining New Item Request Workflows, page 3-25.

You should plan and document the approval processes needed for specific types of changes in your enterprise. Pre-planning of these processes enable you to define workflow templates that adhere to your business processes.

You can manage parallel and serial approvals by assigning multiple people or groups to a routing step, or by assigning individual people or a group to each routing step. You can assign a specific role, person, or group to a routing step. Item roles need to be mapped to the change roles assigned on an approval routing step to ensure a person or group is assigned when the change is created (see Implementing Change Management Role Based Security, page 11-24 for details on mapping item roles to change roles).

To create a header workflow template:

1. In the Applications tree menu, click the Setup Workbench link.

2. On the **Search: Item Catalog Categories** page, click the Change Management tab.

3. On the **Categories** page, click the Workflow tab.

4. On the **Workflow Templates** page, select Header Templates and click Create.

5. **5a)**

   On the **Create Header Workflow Template** page, note the following fields:

   Start Date

   Defaults to the current date. Start date is the date from which the workflow template is available.

   End Date

   The date upon which this workflow template is no longer unavailable.

   Type

   Identifies the type of workflow template that you are creating. Available workflow template types are:

   - Approval

     The Approval workflow template type is valid only for workflows with status type Approval.

   - Definition

     The Definition workflow template type is used primarily for workflows in New Item Requests with status type Open.

- Definition and Approval

  The Definition and Approval workflow template type is used primarily for New Item Requests of status type Approval.

- Generic

  The Generic workflow template type is used for all other status types.

Certain workflow types can be associated with specific statuses. The following table shows the association between the header status type and the workflow type for all change categories:

Following are the associations between status types and workflow types for the change category New Item Request:

Header Workflow Types and their Usage in Change Categories and Statuses

Change Category/ Workflow Type	Definition	Definition and Approval	Approval	Generic	Notification
NIR	Available for Open Status	Available for Approval Status	Available for Approval Status	Available for all Statuses	-
Idea	-	-	Available for Approval Status	Available for all Statuses	-
Issue	-	-	Available for Approval Status	Available for all Statuses	-
Change Request	-	-	Available for Approval Status	Available for all Statuses	-
Change Notification	-	-	Available for Approval Status	Available for all Statuses	-
Change Order	-	--	Available for Approval Status	Available for all Statuses	-

Change Category/ Workflow Type	Definition	Definition and Approval	Approval	Generic	Notification
File Review	-	-	-	Use in All Statuses	-
File Approval	-	-	Available for Approval Status	Available for all Statuses	-

6. Click Add Step.

7. On the **Add Step** page, provide the following information:

   Step

   Enter the number of the step. This determines the order in which the steps are executed.

   Workflow Process

   Select the workflow process that describes this step. After selecting a workflow process, click Go. Selecting FYI changes the fields that follow; only the Instructions field appears. You can create custom workflow processes using Oracle Workflow Builder.

   > **Important:** Users receive a role based on the workflow process that is chosen here. If Request Comment is selected, the person from whom you are requesting the comment receives the Change Reviewer role. If Request Approval is selected, the person from whom you are requesting the approval receives the Change Approver role. If FYI is selected, the person to whom you are sending the FYI receives the Change Reviewer role. These roles are assigned in addition to any other roles these users may already have on the change object. The administrator can edit the privileges for these roles.

   Assignee

   Following are the choices for Assignee:

   - User Entered

     You must select a particular user who is restricted to the Roles or Groups specified in the Assignees list.

- Derived

  The assignee is derived based on user's roles. Hence, the list of available assignees (in the Assignees section) will all have the same role.

Response Required

Following are the rule choices for responses:

- All Assignees

  All assignees must respond (or approve).

- One Assignee

  Only one of the assignees must respond (or approve).

- Mandatory Assignees

  When you add assignees, you specify that they are Optional or Mandatory. You must always have at least one Mandatory responder/approver.

Days to Respond

Enter the number of days--from the time this step is executed--in which you will need a response. Note that this is not the amount of time that transpires from the time the approval routing is submitted, but that it is the number of days from the time this particular step begins.

Instructions

Optionally, enter instructions for the assignees to follow in their responses.

Assignees

You can add assignees based on roles, membership in groups, or by selecting a specific person.

> **Note:** When you select role, you are selecting either a change management or item role. If you assign someone by item role, then all users with this role on the item become Reviewers. If you assign someone by change management role, then all users with this role on the change become Approvers.

8. Click Apply to save this step.

9. On the **Update Workflow Template** page, verify that all steps required for the template have been added, and then click Apply.

To create a line workflow template:

Create line workflow templates using the same steps described in To create a header workflow template, page 7-19.

- Workflows are not associated to a particular status for change lines.
- Approval workflows are not supported at the line level.

The following workflow types are supported at the line level:

- Notification

  The notification workflow template type is available at the line level only. The workflow process associated to this type enables users to track assignees responses and manage the change line.

- Generic

  Use the generic workflow template type for change lines across all categories that support lines.

The following table shows the associations between change lines and workflow types for all change categories:

Change Category/ Workflow Type	Definition	Definition and Approval	Approval	Generic	Notification
NIR	-	-	-	-	-
Idea	-	-	-	Available	Available
Issue	-	-	-	Available	Available
	-	-	-	Available	Available
	-	-	-	Available	Available
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

Customizing Change Management Workflows

Oracle supports the extension of workflows. Extensions include using existing seeded processes to build new workflow processes and modifying parameters of an activity without changing process logic (for example, adding custom logic in an Abort Approval Routing subprocess).

If the Change Management seeded workflows do not meet your business processing needs, you can customize or extend the seeded Change Management Workflow processes by creating your own processes, modifying the seeded ones, adding a new activity to a seeded process, and/or modifying custom hook PL/SQL procedures.

Suggestions for Customizing Workflows

- If you decide to create a new workflow process for Priority Change rather than modifying the seeded workflow, you must write your own custom logic to start your custom workflow in the custom hook called in Start Workflow.

- If you add a new workflow process in the Change Approval Routing Step (ENGCSTEP), then the process will be enabled as an Approval Routing Step Workflow in the Approval Routing pages. The workflow process is automatically called from the Approval Routing workflow.

- The activity will be shared by more than one object's process, so create the activity in the ENG: Standard (ENGWFSTD) item type. Otherwise, create the activity in the appropriate object's item type.

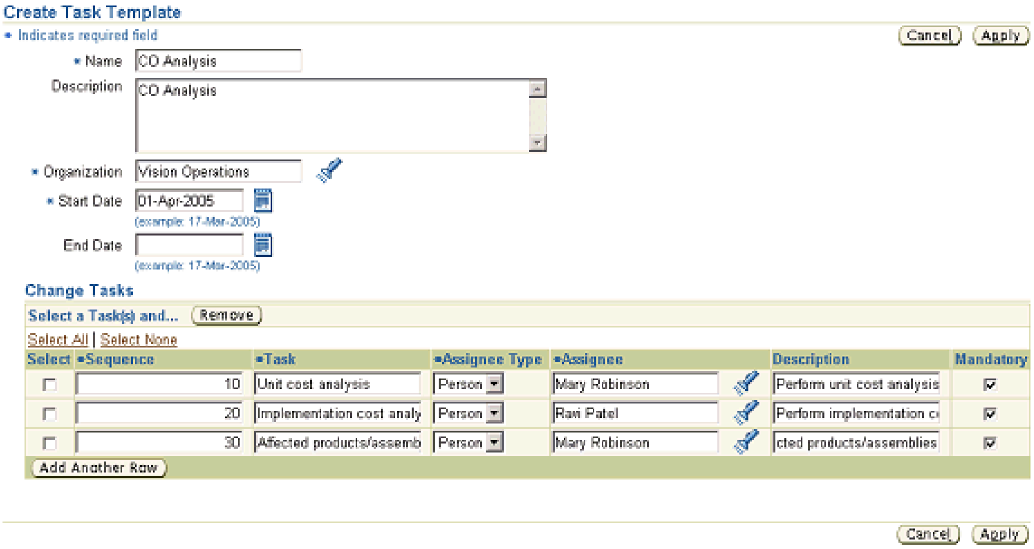
- Instead of modifying workflow notifications, you should create new messages. Oracle Workflow Builder does not maintain version information for objects such as item types, item type attributes, messages, and lookup types. For these objects, the latest definition always applies, so you must consider whether a change to any of these objects is backward compatible. If the modification affects existing processes, you should create a new object rather than edit the existing object.

  > **Important:** Oracle provides support only for its seeded activities, processes, and the types of extensions described in this guide. Oracle does not provide support for your custom activities and processes.

Creating Task Templates

Task templates define the various tasks that must be completed for a change order. You can create task templates only for categories whose base change category is Change Order. After creating task templates, you can use them to define the organization policies for change order header types.

Creation of a Task Template



* Name	CO Analysis
Description	CO Analysis
* Organization	Vision Operations
* Start Date	01-Apr-2005 (example: 17-Mar-2005)
End Date	 (example: 17-Mar-2005)

Select	*Sequence	*Task	*Assignee Type	*Assignee	Description	Mandatory
□	10	Unit cost analysis	Person	Mary Robinson	Perform unit cost analysis	☑
□	20	Implementation cost analy	Person	Ravi Patel	Perform implementation c	☑
□	30	Affected products/assemb	Person	Mary Robinson	cted products/assemblies	☑

The task templates are created for specific Organizations. Hence multiple task templates could be associated with a change order type. Depending on the organization in which the change order is created, the task templates defined for that organization associated with the change order become applicable.

If a task is specified as Mandatory it means that the task must be completed before the change order can proceed to the next status. After creating task templates, you can use them to define the organization policies for change order header types. This has been detailed in the section Defining Header Types.

To create a task template:

1. On the **Categories** page in the Setup Workbench, click the Task Templates tab.

2. On the **Task Templates** page, click Create.

3. On the **Create Task Template** page, provide data in the required fields and click Add Another Row in the Change Tasks table to specify the tasks associated with the change order header type. Note the following fields:

   - **Sequence**

     Determines the order in which the tasks will appear on the page.

   - **Task**

     The name of the task.

   - **Assignee Type**

Specify whether you wish to assign the task to a person or group.

- **Assignee**

  The person (or group) to whom the task is assigned.

- **Mandatory**

  Specifies that the task must be completed before the change order can proceed to the next status.

Defining Header/Line Type Attributes and Attribute Groups

Defining attributes and attributes groups enables you to capture additional information related to issues, change requests, and change orders. You can create user-defined attributes with validation logic and associate them to change types as a collection of attributes within an attribute group.

Attributes are defined by their names and values, and are saved within attribute groups. You can associate attribute groups to a change header type or change line type. You must define separate attribute groups for header types and line types. You can reuse the same attribute group across different change categories and their change types. Users enter the values for the attributes on the pages that you create for each change type. You can also define how attributes are displayed for your change objects to improve usability.

You can index attributes to speed up search performance. For numeric or date data types, a B-tree index enables users to search on a range of values or use relational operators such as "less than" and "greater than," among others. For text attributes, Oracle Text index allows flexible key word searching.

Prior to creating user-defined attributes, do the following:

- Group related attributes within the same attribute group. The following table shows some examples of attribute groupings:

Attribute Group	Attributes	Data Type
Customer Priorities	Customer	Char
	Priority	Char
	Date	Standard Date
	Review	Char

Implementation Cost	Manufacturing	Number
	Engineering	Number
	Supplier Charges etc	Number

- Create an object role (change) with custom privileges to define attribute group security (if necessary). You can secure the attribute group by setting Edit/View privileges. Later on, only users with certain roles can view or edit those attributes.
- Determine the data type of the attributes (for example, number, char, date).

> **Important:** You cannot edit the data type after you save the attribute.

- Set up the Unit of Measure Classes (for example, Currency) and Units of Measure (for example, US Dollars).
- Establish the validation rules for each attribute and create the corresponding value sets. For more details, see Defining Value Sets for User-Defined Attributes.
- Decide how you want the attribute group to be displayed:
  - Single row Displays a Text field with a value.
  - Multi-row Displays multiple values (rows) for the same attributes (column) in a table.

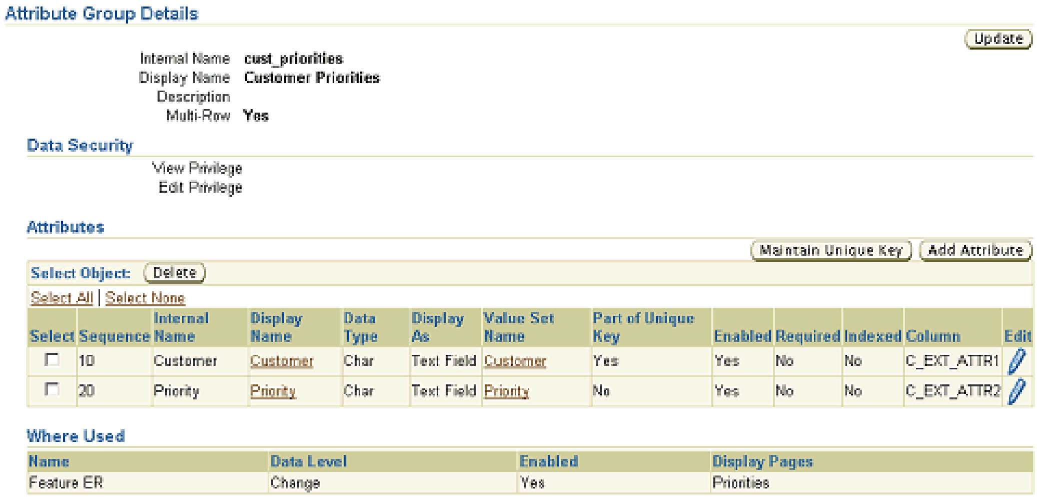
> **Important:** Define which attributes or combination of attributes will maintain uniqueness of records in cases where the attribute group is displayed as multi-row.

The figure below shows how the display options are set for the different attributes. The figure on Defining Change Attribute Types shows the results of these display option settings. For example, you can see that the attribute Customer is set to display as a text field, and indeed it does. Note that the attribute Customer uses the value set Customer, which is really a table that is displayed as a list of values (LOV) text field. Also notice that the attribute Customer is maintained as part of a unique key. You can add to/edit the unique key as long as doing so does not destroy the uniqueness (creating duplicates) of existing records.

Also note in the figure below that Enabled parameter is set to No for the Company Name attribute, indicating that this attribute will not be displayed on the change page.

You can always disable attributes; however, you cannot delete attributes if the attribute group has already been associated with a change type.

Defining change attributes and attribute groups



Attribute Group Details

Internal Name	cust_priorities
Display Name	Customer Priorities
Description	
Multi-Row	Yes

Data Security

View Privilege	
Edit Privilege	

Attributes

Select Object: Delete

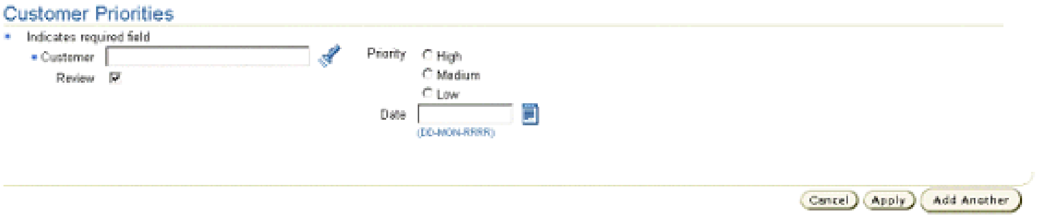
Select All | Select None

Select	Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Part of Unique Key	Enabled	Required	Indexed	Column	Edit
□	10	Customer	Customer	Char	Text Field	Customer	Yes	Yes	No	No	C_EXT_ATTR1	✎
□	20	Priority	Priority	Char	Text Field	Priority	No	Yes	No	No	C_EXT_ATTR2	✎

Where Used

Name	Data Level	Enabled	Display Pages
Feature ER	Change	Yes	Priorities

Defining change type attributes (setting attribute values)



Customer Priorities

* Indicates required field

* Customer

Review ☑

Priority ○ High ○ Medium ○ Low

Date (DD-MON-RRRR)

Related Topics

Defining Item Attributes and Attribute Group, *Oracle Product Lifecycle Management User's Guide or Oracle Product Information Management Distribution Librarian User's Guide*

Defining Header Types

Change types provide enterprises a way to accommodate business processes and classify types of changes within a change category. For example, you can define different issue types such as Quality Issue, Product Issue, and Performance Issue to capture the various types of issues in your enterprise.

You can configure a change type to have the following:

- **Auto Tracking Numbers**

  Choose from the following auto numbering schema options:

  - user entered
  - sequence generated
  - function generated

  For sequence generated schema, you can specify a prefix and a next available number of a sequence. For example, configure an Engineering Design Change type with a prefix of DSGN.

- **Default Assigned To Role**

  Specify an item role (such as Design Engineer) as the default assignment role for a specific person or a group. For example, if Design Engineer is selected, then the person or group who has the Design Engineer role on the subject item for which the change is created is assigned to the change. Note that the change is only assigned to one person or group, thereby ensuring that it is assigned only to the person or group for which it was intended. If more than one person must have the specified role, it is recommended that you create a group and place all users with the same role into the group, and then give that group the default assignment. If more than one person has the Design Engineer role, then the change would be randomly assigned to one of those users.

- **Attribute Groups/Pages**

  Associate attribute groups that have been defined for headers to a change type. These attribute groups enable you to capture additional information regarding the type of change being created, or business process-specific attributes required to process the change. You can create pages for a change type and then organize the attribute groups associated with the change type in a logical manner.

- **Setting up valid codes**

  Specify the valid codes for Priority, Reason and Classifications for the Change type. (Classification codes are only available change types based on the Change Order category.) This allows you to limit the available values for a user to only the selected values for each of these codes. The creation of these values for the different codes was detailed earlier in this chapter.

- **Configuring Primary Attribute groups and sections**

  Depending on your business process, you can elect to enable only certain primary attributes and sections for a change type. For example a Marketing Issue, you can elect not to enable the Project Name and Project Task Name attributes, as these would most likely be not used. Similarly for a Supplier Requested Issue, you can disable the People section, as you may not want the Supplier to have a visibility on who has what role in your organization.

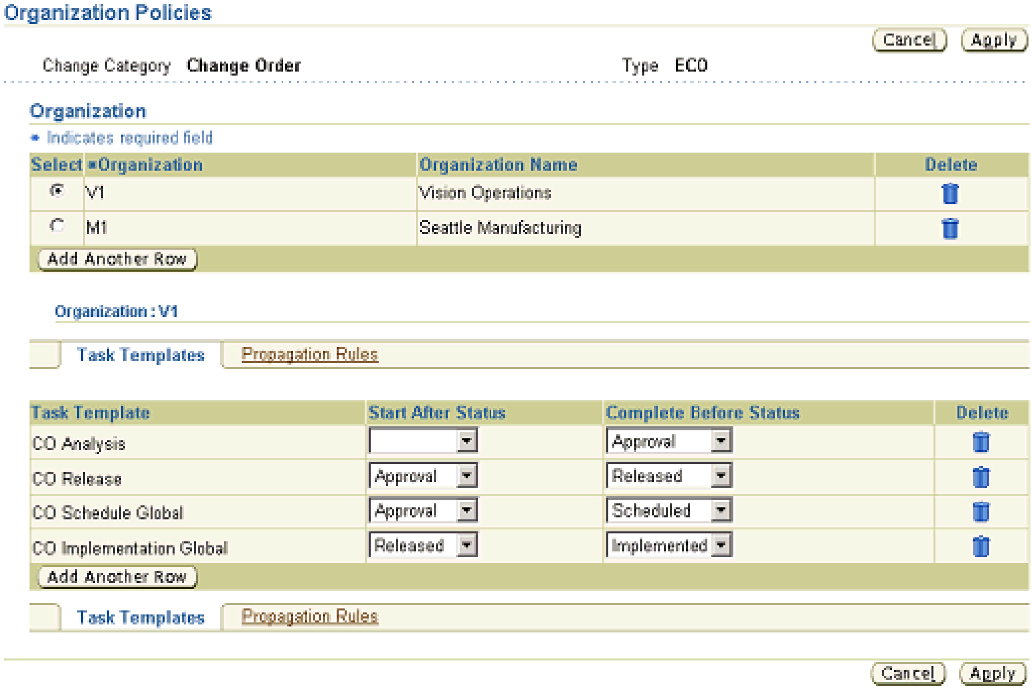
- **Workflow**

Define the various statuses for the change type under the workflow tab. You can specify the valid statuses for promotion and demotion as well as associate one or more workflows with each status. For an Approval status, only an Approval type workflow can be selected. Also, if desired, you can enable Digital Signatures for the Approval. If a workflow is associated with a status, you also have the option to enable Auto-promote and Auto-demote. This enables the change to be automatically promoted to the selected status on the successful completion of the workflow or the automatic demotion to the selected status on the rejection of a workflow. You can associate multiple workflows to a change status and specify one of them as a default. Use any one of the associated workflows at run time.

- **Organizational Policies and Task Templates for Change Orders**

  For change orders only, you can specify task templates and propagation rules by organization. You can group a set of change tasks (defined in a task template) to be performed during or between certain statuses of the change type's workflow. You can also specify whether or not all or some of these tasks are mandatory.

Associating Task Templates per organization



Organization Policies

Change Category **Change Order** Type ECO

Organization

* Indicates required field

Select	*Organization	Organization Name	Delete
●	V1	Vision Operations	🗑
○	M1	Seattle Manufacturing	🗑

Organization : V1

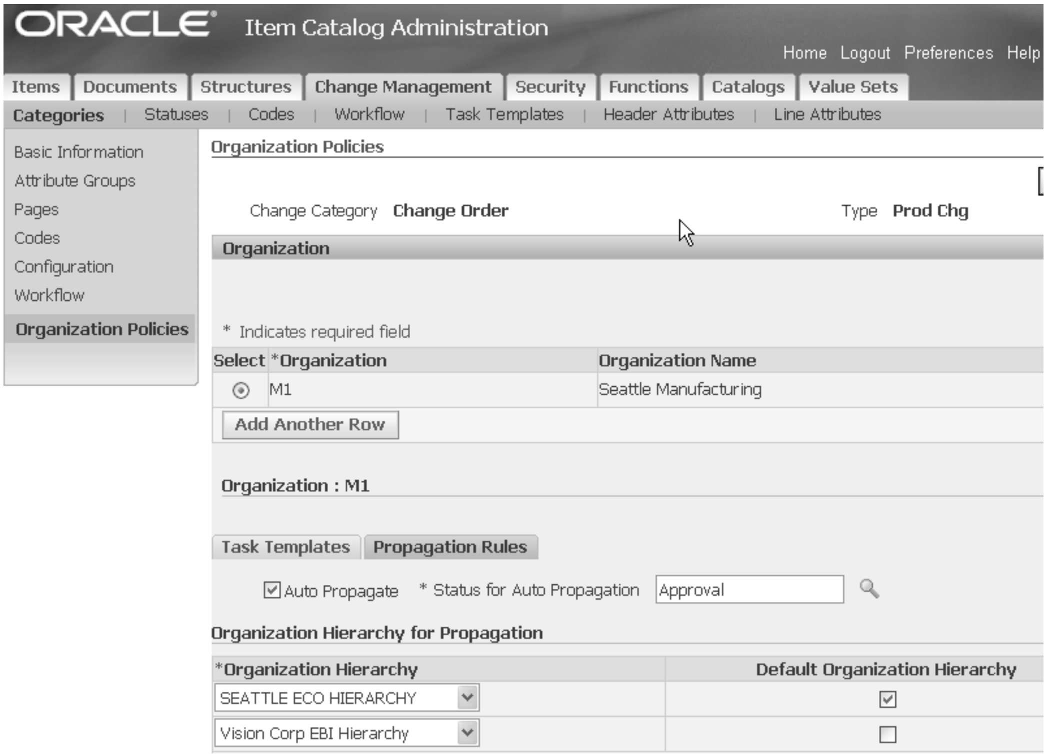
Task Template	Start After Status	Complete Before Status	Delete
CO Analysis		Approval	🗑
CO Release	Approval	Released	🗑
CO Schedule Global	Approval	Scheduled	🗑
CO Implementation Global	Released	Implemented	🗑

- **Propagation Rules for Change Orders**

  Besides associating Task templates for each organization, you can specify the Propagation rules for propagating change orders of this type to other organizations. A propagation rule enables you to specify an organizational hierarchy to propagate the change order, including all associated revised items and tasks. The propagation rule can be executed automatically when the change order enters a specific status. You can choose to auto-propagate the change by specifying the status to propagate in. Additionally, you can also choose to immediately schedule the propagated changes.

> **Note:** This option is available only if the change type supports the Scheduled status.

Defining Propagation Rules



Organization Policies

Change Category **Change Order** Type **Prod Chg**

Organization

* Indicates required field

Select	*Organization	Organization Name
●	M1	Seattle Manufacturing

Organization : M1

☑ Auto Propagate * Status for Auto Propagation Approval

Organization Hierarchy for Propagation

*Organization Hierarchy	Default Organization Hierarchy
SEATTLE ECO HIERARCHY	☑
Vision Corp EBI Hierarchy	☐

To create a change header type:

1. On the **Categories** page in the Setup workbench, select a change category and then click the Header Types tab.

2. If you already know of a similar header type, select it and click Duplicate. Otherwise, click Create.

3. On the **Create <Change Category Name>Type** page, note the following fields:

   - **Number Generation**

     Select a number generation method.

> **Note:** To enable autonumbering, you must enter both a prefix and next available number.

- Sequence Generated

  If the change header type numbering method is sequence generated, then all change headers will be automatically generated based on the sequence generation rules specified here. You can specify a prefix, starting number, and increment.

- User Entered

  If you specify user entered, then the user is required to manually enter a number for new headers of this change header type.

  > **Note:** The User Entered number generation method is not supported for the New Item Request change category.

- Function Generated

  Enables you to associate user-defined functions based on change type attributes. These functions will automatically create change numbers in the sequenced defined in the function.

  See: Creating User-defined Functions, page 4-21.

- Inherit From Parent

  If the change header type numbering method is inherited from parent, then the change header type number generation method will be the same as that defined for the parent change category.

  > **Note:** Inherit From Parent only appears as a Number Generation selection choice for the change header type when the associated change category's (the parent) Number Generation is set to Override at Type Level.

> **Note:** When importing new item requests using a spreadsheet, the associated change header type must have Sequence Generated or Function Generated autonumbering. User Entered autonumbering results in an import error.

- **Subject**

  You can specify that the subject of the change header type is an item, item revision, item and component, or document revision. The subject may then be restricted by item catalog category, item status, or item type. For example, you can set up an issue header type named Production Motherboard Issue where the subject of the issue is restricted to items in the Motherboard item catalog category with a status of Production.

Similarly, you can restrict the subject document revision by document category, document status, document lifecycle phase.

> **Note:** Unlike other change categories, the Change Order category does not support document revision as a subject.

- **Assignee Type**

  You can set up the change header type to assign change objects by Person, Group, or Item Role. A user may have more than one role for an because you can assign item roles at the organization, item catalog category, and item level. If you choose to assign change objects by item role, then you need to choose an Assignee Type that specifies the level in which to look up the assignee by item role:

  - Group

    The change header is assigned to members of the group that is specified.

  - Item Role at Catalog Category Level

    The change header is assigned to users who have a role on the subject item that is inherited from the item catalog category.

  - Item Role at Item Level

    The change header is assigned to users who have a role on the subject item.

  - Item Role at Organization Level

    The change header is assigned to users who have a role on the subject item that is inherited within the organization.

  - Person

    The change header is assigned to the person specified.

After creating and saving the basic information for the change header type, you can complete the configuration setup as described in the following tasks.

To associate attribute groups with a change header type:

1. On the **Basic Information** page of the header type to which you wish to associate

attributes groups, click Attribute Groups.

2. Click Add Attribute Groups.

3. Search for and select the attribute groups you wish to associate and click Apply.

To associate pages with a change header type:

Use the Pages link to add attribute groups specified for a type to pages within the user interface. For example, you may have created and associated the attribute groups Cost Information and Inventory Impact for a particular change header type. Now you wish to make them available via the user interface. Using Pages, you can set up a new page, for example, **Related Information**, on which to view and update the interface for the attributes Cost Information and Inventory Impact.

1. On the **Basic Information** page of the header type to which you wish to associate attributes groups, click Pages.

2. On the **Pages** page, click Create Page.

3. Enter the basic information in the required fields. Note that the number entered in Sequence determines the order in which the page links appear on the change object's detail page.

4. Click Add Another Row in the Attribute Groups section. Enter the Sequence number to specify the order in which the attribute groups will appear on the page.

To associate codes with a change header type:

You can specify valid priority and reason codes applicable to a change header type.

1. On the **Basic Information** page of the header type to which you wish to associate attributes groups, click Codes.

2. On the **Codes** page, select the valid priorities and reasons code for the header type.

To configure a change header type:

You can configure the change header type to specify what sections and primary attributes are enabled for the type.

1. On the **Basic Information** page of the header type click Configuration.

2. On the **Configuration** page, select the sections and primary attributes to enable for the change header type.

To associate workflows with a change header type:

You can associate multiple workflows to each status and set one of them as default. The system automatically uses the default workflow when you creates a change of that type. However, you can choose to select any of the associated workflows when creating the change.

> **Note:** If a mandatory workflow step is unassigned in an approval workflow, the workflow does not launch until all mandatory steps have valid assignees. If a workflow is associated to the first status (Open) on a change and a mandatory step in the workflow is unassigned, the change can only be saved as a draft. The change can move to the Open status after the step is assigned.

When you create a status you specify a status type. These status types determine some of the operational characteristics of the change header during its workflow:

- Open

  When a change header has a status of Open, users can update the change object. However, there are two exceptions:

  - If the workflow is running and Update Allowed is not selected, you cannot update the change object.

  - If an Open status follows an Approval status within a workflow, you cannot update the change object. You cannot update a change object once it has gone through an approval process.

- Scheduled

  Users cannot update the change object (unless reopened). Scheduled change objects are picked up and implemented by the auto-implement manager. Change headers must be Scheduled before they can enter the Implemented status.

- Released

  Ready to be scheduled or implemented. Cannot be updated (unless the change is reopened).

- Approval

  A workflow is mandatory for this status. Once the Approval is granted, the change object cannot be updated. You can associate a workflow template containing an approval request step for Approval status types only.

- Implemented

  The changes specified in the change object take effect. Implemented change objects cannot be reopened and canceled. Once implemented, no further changes can be made. For each change header type, only one status can use Implemented. Implemented must always be the final status.

Certain workflow types can be associated with the statuses defined here. Following are the associations between status type and workflow type for non-new item requests:

Status Type	Valid Workflow Type
Approval	Approval
Others	Generic

Following are the associations between status types and workflow types for new item requests:

Status Type	Valid Workflow Type
Open	Definition
Approval	Definition & Approval, or Approval
Others	Generic

1. On the **Basic Information** page of the header type, click Workflow to define the workflow for the change header type.

2. On the **Workflow** page, click Add Another Row in the Statuses section.

3. Specify a number that indicates the order in which the statuses are executed, and select a status. Click Apply.

4. After creating a workflow for a change header type, you can click the Update Properties icon to specify for each status the valid promotion and demotion statuses and assign one or more workflows. For workflows that contain an Approval status, you must assign a workflow template that contains at least one Request Approval step. If you specify a workflow, you can also select a status that, when successfully completed, automatically promotes the change to the next status. If the status is not successfully completed, you can likewise specify that the change is automatically demoted to a previous status.

To specify organization policies for change headers:

You can specify organization policies for change orders only.

You can specify organization policies for change header types such that task templates and propagation rules are applied to every change order created in a specific organization. The changes specified in a change order may need to be propagated to several other organizations in your company. A business may therefore be comprised of hierarchically related organizations for which you need to propagate these change orders. For example, you may have an organization, Vision Operations, which has two manufacturing organizations in the VisionMfg hierarchy named Seattle Manufacturing and Chicago Manufacturing. You initially create change orders in the Vision Operations organization. Once the change orders reach a certain status in the workflow (for example, Scheduled), the change orders can be propagated (for example, copied to the destination organization with the Status initially set to Open) to the two manufacturing organizations in the hierarchy. You can set up the organization policy such that a change order is automatically propagated downward to the other organizations in the hierarchy whenever the change order reaches a particular status. However, the changes only propagate to the organizations within the hierarchy to which the user entering the change order has access. For example, if another user who only has security access to the Vision Operations and Seattle Manufacturing organizations enters change orders under this organization policy, the change orders only propagate to Vision Operations and Seattle Manufacturing and not to Chicago Manufacturing.

Task templates identify the specific tasks that must be performed before a status is considered complete. For details, see Creating Task Templates, page 7-24.

1. On the **Basic Information** page of the change order header type to which you wish to create organization policies, click Organization Policies.

2. On the **Organization Policies** page, select the organization to which the organization policy will be applied.

3. Click the Task Template tab, and then click Add Another Row to specify the task template you wish to use. Note that you can assign more than one task template. You can specify the status in which to start the task and the status in which to complete the task.

4. Click the Propagation Rules tab. Before specifying the organization hierarchy for propagation, you have the option of selecting a particular status that, when entered, will automatically propagate the change order to a default organization hierarchy. To do so, select Auto Propagate and specify the Status for Propagation. If you wish to manually propagate change orders, do not select Auto Propagate.

5. In the Organization Hierarchy for Propagation table, click Add Another Row, then select the Organization Hierarchy to which the change order will be propagated. While you can add more than one organization hierarchy to the propagation rules, the change order can only be propagated to one. Also, you can select one organization hierarchy as the default to which all change orders are propagated.

    > **Note:** *Both* an organization and the task templates/propagation rules must be specified before you click Apply. If you select an organization only and click Apply no organization policy has been defined, thus

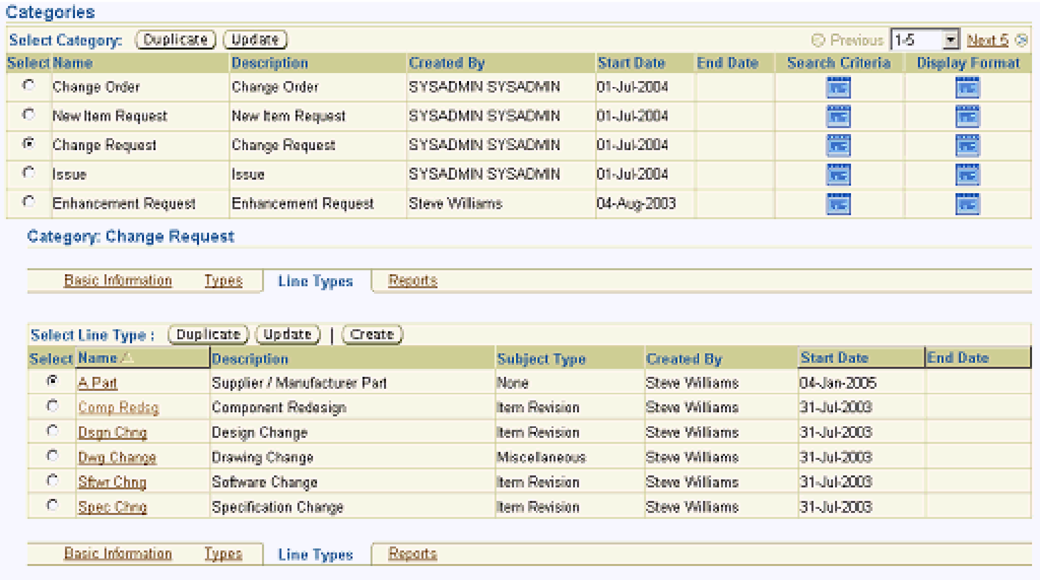
nothing is saved.

Defining Line Types

Change orders employ tasks and revised items to capture their various elements or "to do's." Change orders do not support ad-hoc line types. Issues, Change Notifications, Ideas, and Change Requests, however, use *change lines*, which serve a similar role. NIR and File Approval and File Review do not support line types. Change lines capture all the details required for a change.

Change line types enable you to capture specific changes to an item or tasks related to a change. For example, you can define different line types to capture item related changes (such as Item Attribute changes, Component redesign changes, Attachment changes and Part Obsolescence).

Change Line Types



Categories

Select Category: (Duplicate) (Update) — Previous 1-5 Next 5

Select	Name	Description	Created By	Start Date	End Date	Search Criteria	Display Format
○	Change Order	Change Order	SYSADMIN SYSADMIN	01-Jul-2004			
○	New Item Request	New Item Request	SYSADMIN SYSADMIN	01-Jul-2004			
●	Change Request	Change Request	SYSADMIN SYSADMIN	01-Jul-2004			
○	Issue	Issue	SYSADMIN SYSADMIN	01-Jul-2004			
○	Enhancement Request	Enhancement Request	Steve Williams	04-Aug-2003			

Category: Change Request

Basic Information | Types | Line Types | Reports

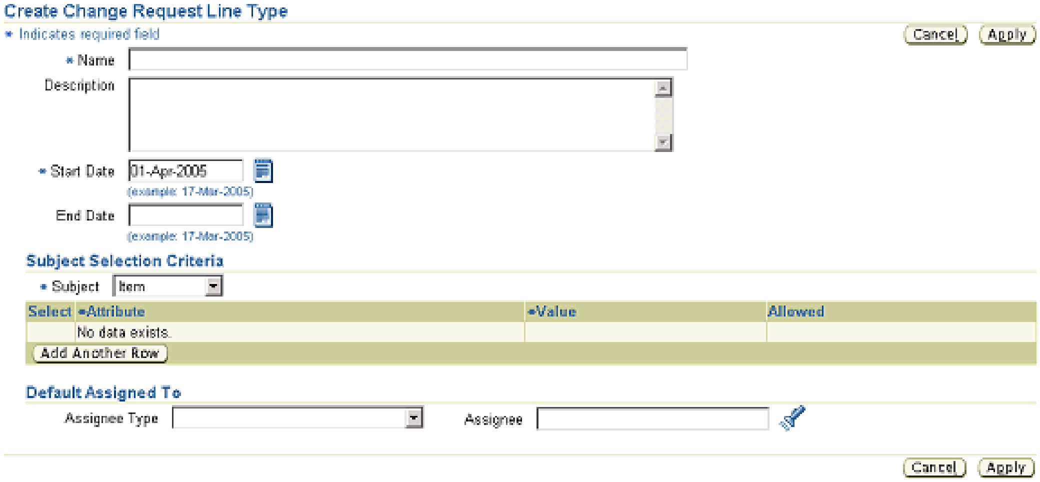
Select Line Type : (Duplicate) (Update) | (Create)

Select	Name	Description	Subject Type	Created By	Start Date	End Date
●	A Part	Supplier / Manufacturer Part	None	Steve Williams	04-Jan-2005	
○	Comp Redsg	Component Redesign	Item Revision	Steve Williams	31-Jul-2003	
○	Dsgn Chng	Design Change	Item Revision	Steve Williams	31-Jul-2003	
○	Dwg Change	Drawing Change	Miscellaneous	Steve Williams	31-Jul-2003	
○	Sftwr Chng	Software Change	Item Revision	Steve Williams	31-Jul-2003	
○	Spec Chng	Specification Change	Item Revision	Steve Williams	31-Jul-2003	

Basic Information | Types | Line Types | Reports

Creation of a Line type is similar to that of the Change Header type. Each Line type could have a default assignee as well as an associated Subject.

Defining a Change Line Type



Create Change Request Line Type

* Indicates required field

* Name

Description

* Start Date 01-Apr-2005
(example: 17-Mar-2005)

End Date
(example: 17-Mar-2005)

Subject Selection Criteria

* Subject Item

Select	*Attribute	*Value	Allowed
	No data exists.		

Default Assigned To

Assignee Type

Assignee

You can associate workflows at the line level. Generic and Notification workflow types are supported for lines—approval workflows are not supported for lines. You have the option to associate multiple workflows to a line type, with one of the workflows set as the default.

Defining a change line type:

1. On the **Categories** page in the Setup Workbench, select any change category that supports line types, and click the Line Types tab.

2. If you already know of a similar line type, select it and click Duplicate. Otherwise, click Create.

3. On the **Create <Change Category Name> Line Type** page, note the following fields:

   - **Subject**

     You can specify an item, item revision, or document revision upon which the line type shall be based. You can restrict the subject item further by item catalog category, lifecycle phase, or item type. For example, you can create an issue line type to restrict the subject to all items in a particular catalog category whose value you specify. So when users file issues, they will select from a list of values. If you do not restrict the subject, then all items will be available for the line type.

     Similarly, you can restrict the subject document revision by document category, document status, and document lifecycle phase.

     > **Note:** Unlike other change categories, the Change Order category does not support document revision as a subject.

- **Assignee Type**

  Typically users have different roles at different levels within an enterprise. To ensure users are assigned the correct role on line types, you can choose from the following Assignee Types:

  - Group

    The change line type is assigned to members of the group that is specified.

  - Item Role at Catalog Category Level

    The change line type is assigned to users who have a role on the subject item that is inherited from the item catalog category.

  - Item Role at Item Level

    The change line type is assigned to users who have a role on the subject item.

  - Item Role at Organization Level

    The change line type is assigned to users who have a role on the subject item that is inherited within the organization.

  - Person

    The change line type is assigned to the person specified.

After the change line type is created, you can associate attribute groups and pages with it.

To associate pages with a change line type:

Use the Pages link to add attribute groups specified for a change line type to pages within the user interface. For example, you may have created and specified the attribute groups Cost Information and Inventory Impact for a particular change line type. Now you wish to make them available via the user interface. Using Pages, you can set up a new page, for example, **Related Information**, on which to make available the interface for the attributes Cost Information and Inventory Impact.

1. On the **Basic Information** page of the change line to which you wish to associate attributes groups, click Pages.

2. On the **Pages** page, click Create Page.

3. Enter the basic information in the required fields. Note that the number entered in Sequence determines the order in which the page links appear on the change line's detail page.

4. Click Add Another Row in the Attribute Groups section. Enter the Sequence

number to specify the order in which the attribute groups will appear on the page.

> **Note:** You cannot associate pages with the following change order line types:
>
> - AML changes
> - Attribute changes
> - Attachment changes

To associate workflows with a change line type:

You can associate multiple workflow templates to a change line type, setting one of them as the default workflow.

> **Note:** Only Generic and Notification workflow types are supported for change line types. The Approval workflow type is not supported.

1. On the **Basic Information** page of the change line to which you wish to associate workflows, click Update.
2. On the **Update Change Request Line Type** page, find the Workflows section of the page. Click Add Another Row.
3. Search for and select a workflow template.
4. Optionally, with the workflow template selected, click Set as Default to select this template as the default workflow for the change line type.
5. Click Apply.

Associating Change Type Attributes

After creating the attributes, values, value sets, and attribute groups, associate the attribute group to a change type or a line type. You can define pages to display the associated attribute groups.

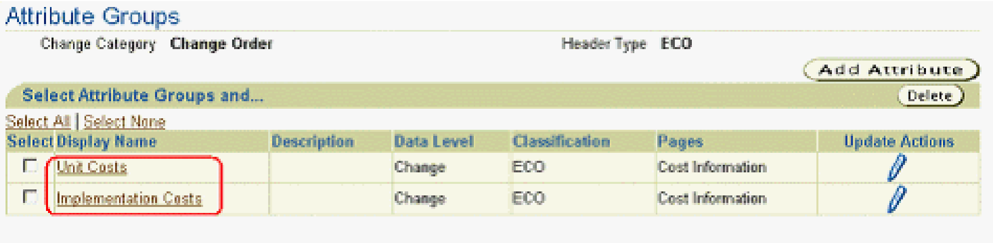
Note: You can reuse the same attribute group across change types belonging to different change categories.

To associate attribute groups with a change type:

1. Add the attribute group to the Attribute Groups list for that change type (change order or issue).

For example, the change category Change Order has the change type ECO. The following figure shows that the attribute groups Implementation Cost and Unit Cost are associated with the header type ECO.

Associate change type attribute



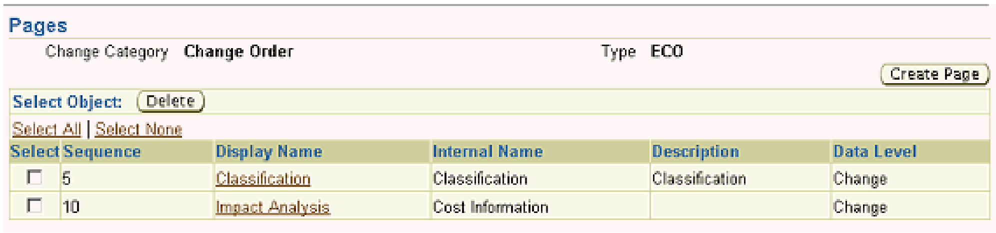
Attribute Groups

Change Category **Change Order** Header Type **ECO**

Select	Display Name	Description	Data Level	Classification	Pages	Update Actions
□	Unit Costs		Change	ECO	Cost Information	✎
□	Implementation Costs		Change	ECO	Cost Information	✎

2. Define change pages for the associated attribute groups. You can locate one or more attribute groups on a page, or create separate pages for each attribute group. The following figure shows the change order type ECO has two pages: Classification and Impact Analysis. The figure "Create pages for attributes" shows an example of how two attribute groups are rendered on a single page for a change order.

Create pages for attributes

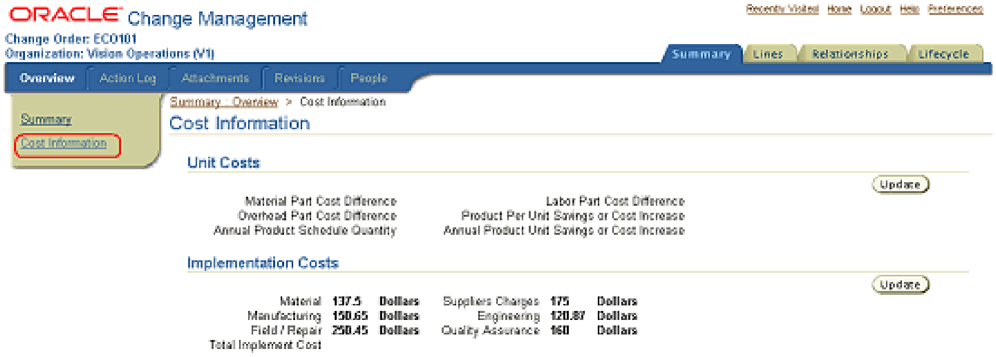


Pages

Change Category **Change Order** Type **ECO**

Select	Sequence	Display Name	Internal Name	Description	Data Level
□	5	Classification	Classification	Classification	Change
□	10	Impact Analysis	Cost Information		Change

Change page for attributes on change order overview page



Change Order: ECO101
Organization: Vision Operations (V1)

Cost Information

Unit Costs

Material Part Cost Difference	Labor Part Cost Difference
Overhead Part Cost Difference	Product Per Unit Savings or Cost Increase
Annual Product Schedule Quantity	Annual Product Unit Savings or Cost Increase

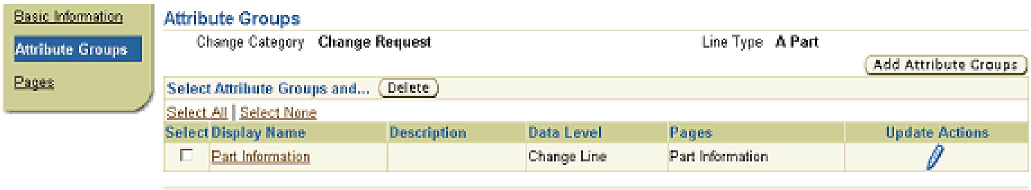
Implementation Costs

Material	137.5	Dollars	Suppliers Charges	175	Dollars
Manufacturing	150.65	Dollars	Engineering	120.87	Dollars
Field / Repair	250.45	Dollars	Quality Assurance	160	Dollars
Total Implement Cost					

Associating Change Line Type Attributes

You can configure a line type to have Attribute Groups/Pages. You can associate attribute groups that have been defined for lines to a change type. These attribute groups enable you to capture additional information regarding the type of change being created, or business process-specific attributes that are required to process the change. You can create pages for a line type, and then organize the attribute groups associated with the line type in a logical manner.

Attribute Groups for a Change Line Type



Attribute Groups

Change Category **Change Request**

Line Type **A Part**

Select	Display Name	Description	Data Level	Pages	Update Actions
☐	Part Information		Change Line	Part Information	✎

To associate attribute groups with a change line type:

1. On the **Basic Information** page of the change line to which you wish to associate attributes groups, click Attribute Groups.

2. Click Add Attribute Groups.

3. Search for and select the attribute groups you wish to associate and click Apply.

   Note: You cannot associate attribute groups with the following change order line types:

   - AML changes

   - Attribute changes

   - Attachment changes

Implementing User Defined Functions for Change Type Attribute

You can define your own custom logic by adding user-defined functions and actions to existing change pages. In such cases you do not need to customize the entire page.

You can register user-defined functions for executing customer-specific business rules and calculations. These functions can be written in Java or PL/SQL. URL functions can also pass the values of certain parameters to the URL string and redirect users to a secure page. For each function, you need to register the list of parameters, their data types, and how they get their values by specifying parameter types.

Actions are trigger points for functions and can be displayed as buttons or links. You can determine the conditional visibility of the button/links and also prompt the user based on his or her input.

Example: Implement User-Defined Functions for Change Type Attributes

The following example shows how you would calculate Total Cost by using the attribute group Implementation Cost.

Sequence	Attribute Group: Implement Cost	Attribute Group: Implement Cost	Attribute Group: Implement Cost	PL/SQL Function: Calculate Cost	PL/SQL Function: Calculate Cost	PL/SQL Function: Calculate Cost
Sequence	Attribute Name	Data Type	Mapping Attribute & Parameters	Parameter Name	Data Type	Parameter Type
1	Suppliers Charges	Number	--a` ---a` ---a`	Cost 1	Number	Input
2	Manufacturing	Number	--a` ---a` ---a`	Cost 2	Number	Input
3	Engineering	Number	--a` ---a` ---a`	Cost 3	Number	Input
4	Field/Repair	Number	--a` ---a` ---a`	Cost 4	Number	Input
5	Total Implement Cost	Number	--a` ---a` ---a`	Cost Result	Number	Return Value

First, registerthePL/SQLfunction "Calculate Cost" (based on the PL/SQL procedure that resides in the PL/SQL package) with all required parameters.

Then navigate to the "ECO" change order type and add the action to the attribute group "Implement Cost" by clicking Update Action. The action executes the function on the change pages. After creating the action, map the function parameters to the corresponding attributes.

The mapping section on the **Action Detail** page provides the mapping information for function parameters. You can also map parameters of functions to the object's primary key value (for example, CHANGE_ID for change objects).

When setting up an action:

1. Specify a role-based privilege to secure the action.

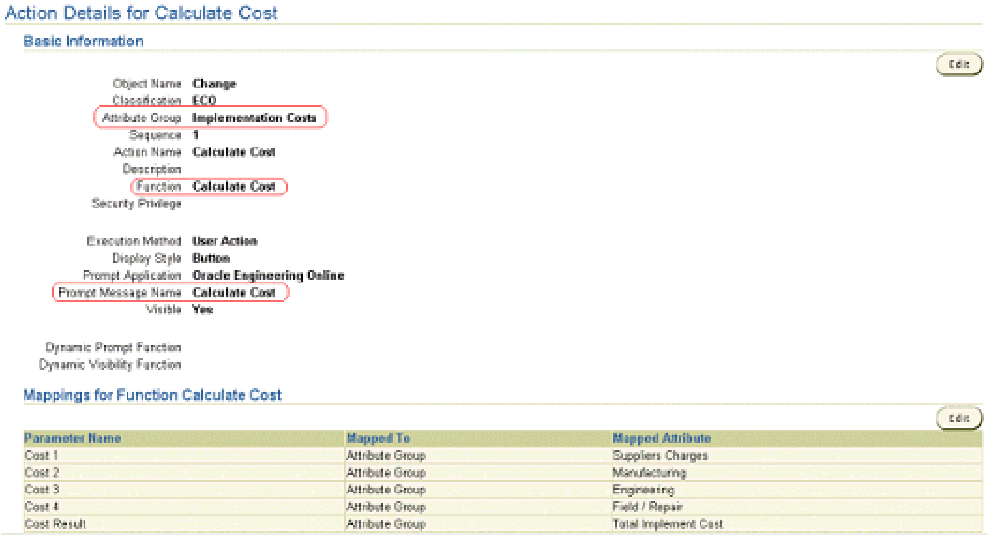
   See: Creating Custom Privileges, page 11-27

2. Add the Dynamic Visibility Function (written in Java only) to your action if there is a certain condition that needs to be satisfied before users can view the action button or link. For example, if one or all of the fields are empty, then the user cannot see the button/link to execute the action.

3. Add the Dynamic Prompt Function (written in Java only) to your action if the label for the button/link needs to be changed depending on a certain condition. For example, it the Total Implement Cost attribute is empty, then the button label is Apply, otherwise the button label is Apply Changes.

   > **Important:** Dynamic Prompt and Dynamic Visibility function parameters must be mapped to the corresponding attributes as well.

Associate action with attribute group to execute a function



Action Details for Calculate Cost

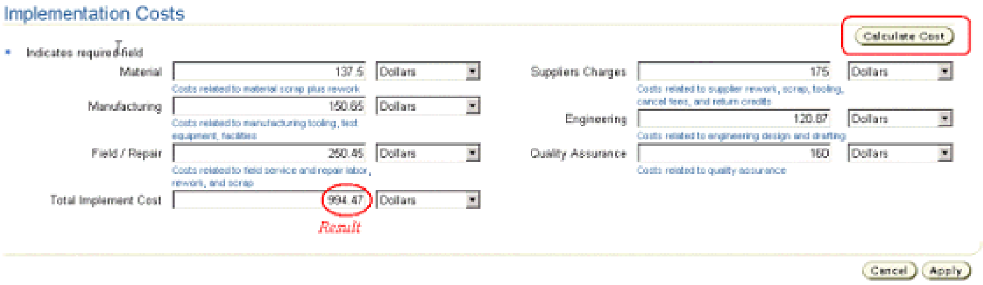
Basic Information

Object Name	Change
Classification	ECO
Attribute Group	Implementation Costs
Sequence	1
Action Name	Calculate Cost
Description	
Function	Calculate Cost
Security Privilege	
Execution Method	User Action
Display Style	Button
Prompt Application	Oracle Engineering Online
Prompt Message Name	Calculate Cost
Visible	Yes
Dynamic Prompt Function	
Dynamic Visibility Function	

Mappings for Function Calculate Cost

Parameter Name	Mapped To	Mapped Attribute
Cost 1	Attribute Group	Suppliers Charges
Cost 2	Attribute Group	Manufacturing
Cost 3	Attribute Group	Engineering
Cost 4	Attribute Group	Field / Repair
Cost Result	Attribute Group	Total Implement Cost

Change type attribute page displays action button



Implementation Costs

* Indicates required field

Material 137.5 Dollars
Costs related to material scrap plus rework

Manufacturing 150.65 Dollars
Costs related to manufacturing tooling, test equipment, facilities

Field / Repair 250.45 Dollars
Costs related to field service and repair labor, rework, and scrap

Total Implement Cost 994.47 Dollars

Suppliers Charges 175 Dollars
Costs related to supplier rework, scrap, tooling, cancel fees, and return credits

Engineering 120.87 Dollars
Costs related to engineering design and drafting

Quality Assurance 160 Dollars
Costs related to quality assurance

Related Topics

Implementing User-Defined Functions for Items, *Oracle Product Lifecycle Management User's Guide or Oracle Product Information Management Distribution Librarian User's Guide*

Defining Change Category Search Criteria

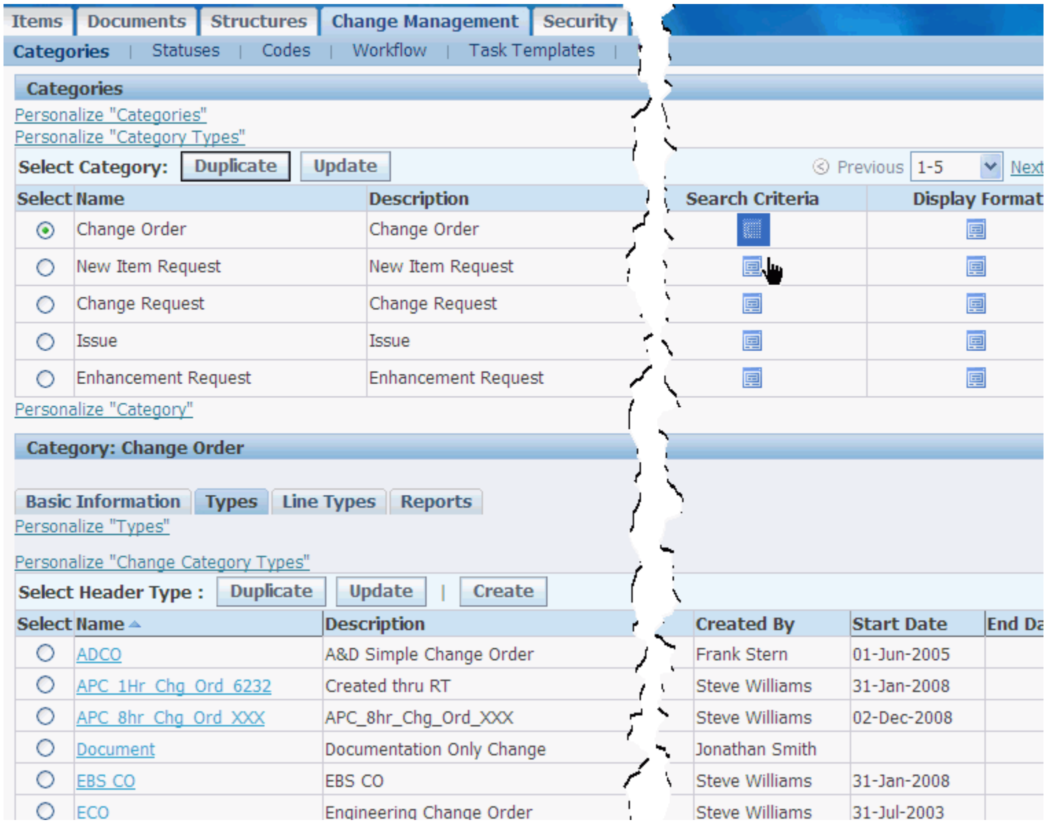
Criteria templates offer you a way to save frequently used search criteria—essentially, acting as a saved list of specific attributes and attribute values. Criteria templates that you—the administrator—create are available to all users, and serve to expedite searches for issues, ideas, change requests and change orders, thereby saving users the time it would take to specify search criteria and execute frequent change management searches.

Of course, users also have the option of creating criteria templates for their own private use. In fact, when both a user and administrator define a default criteria template for a particular change category, the user-defined criteria template takes precedence.

Because criteria templates contain user-defined attributes, you must always define them in the context of a change category. You can define as many criteria templates as you wish, and you can also denote the most commonly used as the default criteria template. For example, you may define criteria templates to quickly find Open Change Requests, My Issues, or Scheduled Change Orders.

For instructions on how to create and maintain search criteria for change objects, see: Managing Search Criteria, page 3-33.

Accessing Administrative Level Search Criteria and Display Formats



Select	Name	Description	Search Criteria	Display Format
●	Change Order	Change Order	▤	▤
○	New Item Request	New Item Request	▤	▤
○	Change Request	Change Request	▤	▤
○	Issue	Issue	▤	▤
○	Enhancement Request	Enhancement Request	▤	▤

Select	Name	Description	Created By	Start Date	End Da
○	ADCO	A&D Simple Change Order	Frank Stern	01-Jun-2005	
○	APC_1Hr_Chg_Ord_6232	Created thru RT	Steve Williams	31-Jan-2008	
○	APC_8hr_Chg_Ord_XXX	APC_8hr_Chg_Ord_XXX	Steve Williams	02-Dec-2008	
○	Document	Documentation Only Change	Jonathan Smith		
○	EBS CO	EBS CO	Steve Williams	31-Jan-2008	
○	ECO	Engineering Change Order	Steve Williams	31-Jul-2003	

Related Topics

Searching for Ideas, Issues, and Changes, *Oracle Product Information Management User's Guide*

Managing Search Criteria, page 3-33

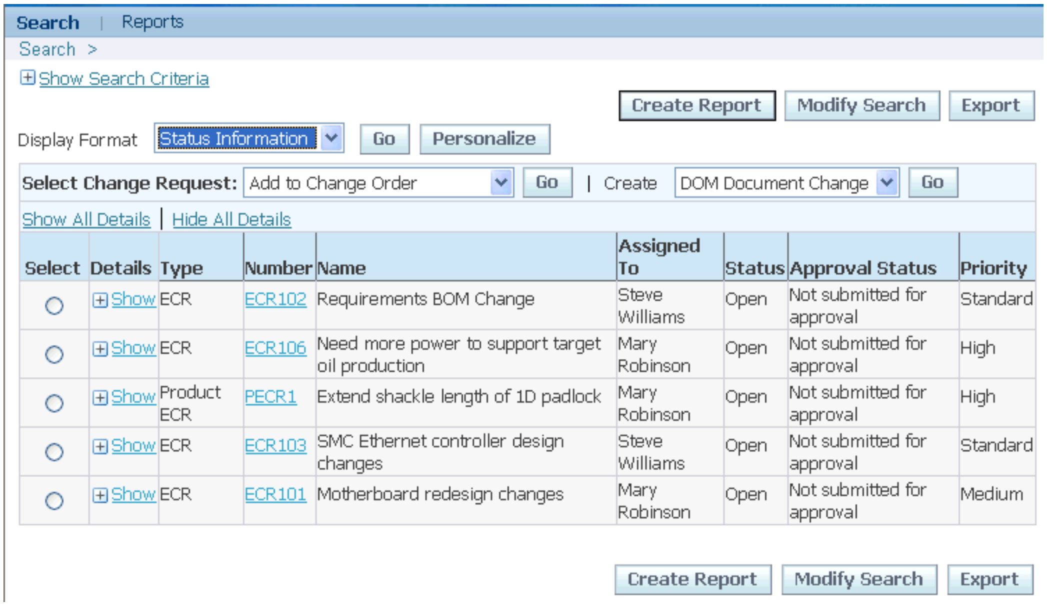
Defining Change Category Display Formats

Display formats enable you to predefine search results views for each change category. You can use these views to look at different sets of attributes of the change objects (for example, issues, change requests, change orders) that are returned by a search. Both administrators and users can create display formats. Administrator-created display formats are available to all users. User-created display formats are available only to the users who created them. You can define as many display formats as you wish, and you can also denote the most commonly used as the default display format.

You can include any primary, operational, or user-defined attributes in your display format definitions. You can include display sections in your display formats that provide links directly to the section from your search results. This enables you to display links in your search results to any user-defined change type page (such as Cost Information) or any of the standard display sections: Lines, Attachments, Action Log, Approval, Approval History, Dependencies, Revisions, and People.

For more information on how to create and maintain a change category display format, see: Managing Display Formats, page 3-39.

Change request search results using a user-created display format



Display Format: Status Information

Select Change Request: Add to Change Order

Create: DOM Document Change

Select	Details	Type	Number	Name	Assigned To	Status	Approval Status	Priority
○	⊞ Show	ECR	ECR102	Requirements BOM Change	Steve Williams	Open	Not submitted for approval	Standard
○	⊞ Show	ECR	ECR106	Need more power to support target oil production	Mary Robinson	Open	Not submitted for approval	High
○	⊞ Show	Product ECR	PECR1	Extend shackle length of 1D padlock	Mary Robinson	Open	Not submitted for approval	High
○	⊞ Show	ECR	ECR103	SMC Ethernet controller design changes	Steve Williams	Open	Not submitted for approval	Standard
○	⊞ Show	ECR	ECR101	Motherboard redesign changes	Mary Robinson	Open	Not submitted for approval	Medium

Related Topics

Searching for Ideas, Issues, and Changes, *Oracle Product Information Management User's Guide*

Defining Change Category Search Criteria, page 7-46

Managing Display Formats, page 3-39

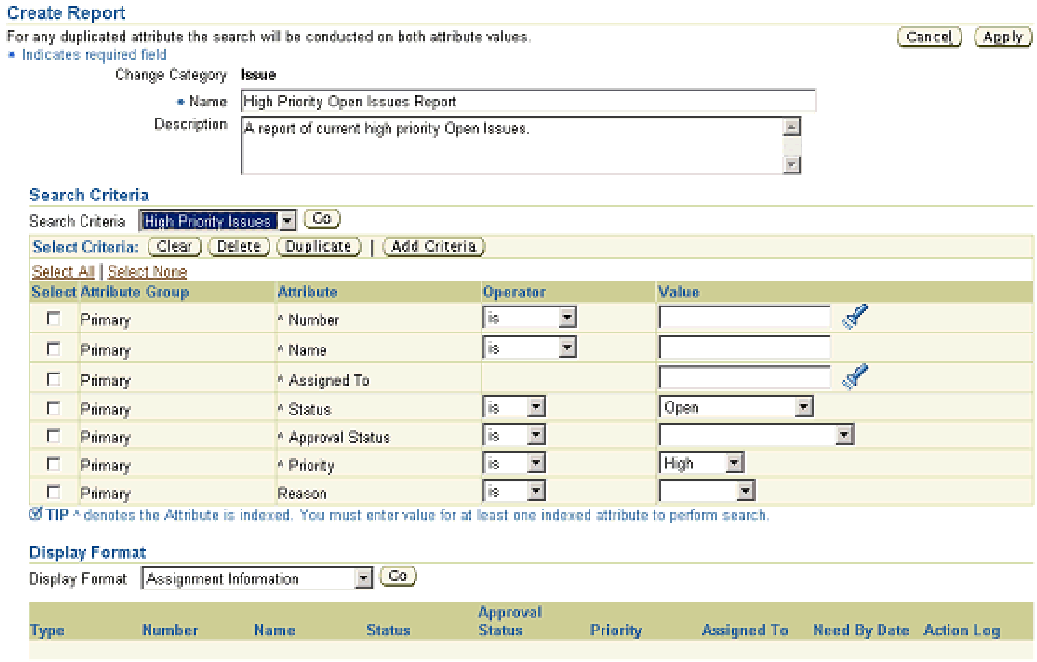
Defining Change Category Reports

Change management reports are basically search criteria and display formats that you can save, browse, email, or print. You can create reports for any change management category. You can also browse a report sequentially or using a summary view. Browsing a report sequentially enables you to step through each change object in a report. A summary view displays the report in tabular column format. You can send a report to other users including registered suppliers and customers.

An Admin can create a report for the most common or frequent searches that users of the system would be performing. This would be based on the business process being implemented. These Admin defined reports would save an ordinary user the time of selecting a change category, search criteria and display format, and repeating the same search over and over again. You can give reports meaningful names as well. For example, a search for all open high priority issues may yield dozens of issues, each identified by issue name and number. You can name the report for these search results " High Priority Open Issues Report" as shown in the figure below.

Report security is consistent with search security: you can only access change object on which you have the required role. Also, administrator-created reports are available to all users, although only the administrator can edit these reports.

High Priority Issue Report



Create Report

For any duplicated attribute the search will be conducted on both attribute values.

* Indicates required field

Change Category Issue

* Name High Priority Open Issues Report

Description A report of current high priority Open Issues.

Search Criteria

Search Criteria High Priority Issues

Select Criteria:

Select	Attribute Group	Attribute	Operator	Value
☐	Primary	* Number	is	
☐	Primary	* Name	is	
☐	Primary	* Assigned To		
☐	Primary	* Status	is	Open
☐	Primary	* Approval Status	is	
☐	Primary	* Priority	is	High
☐	Primary	Reason	is	

TIP * denotes the Attribute is indexed. You must enter value for at least one indexed attribute to perform search.

Display Format

Display Format Assignment Information

Type	Number	Name	Status	Approval Status	Priority	Assigned To	Need By Date	Action Log

To create a report:

1. In the Setup Workbench, on the **Categories** page, click the Reports tab. When the page refreshes, click Create Report.

2. When the **Create Report** page refreshes, provide the following:

   Name

   Provide a name for the Report.

   Description

   Optionally, provide a description of the Report.

   Criteria

   Select the criteria to be used in the search. You can use an existing search criteria template (if one exists for the change category selected), or add criteria here by clicking Add Criteria.

Format

Select a format for the report. You can use an existing display format by selecting it from the Display Format pulldown and clicking Go.

3. In the **Export Format** section, you can optionally select an export template and output format, such as .pdf , .rtf, .html, .xls, and .xml, in which you want to generate the report.

4. Click Apply.

Subscribing to a Change Management Business Event

Change management business events represent an activity or task that can be extended or customized. For example, creation of items and engineering change orders (ECO's) are examples of business events.

Change Management business events enable you to extend and customize your environment. You subscribe to Change Management business events to:

- Execute custom code on the event information
- Send event information to a workflow process
- Send event information to other queues or systems

Business events are represented within workflow processes by event activities. Business events can be synchronous or asynchronous. That is, when a local event occurs, the subscribing event can be executed during the same time as the transaction (synchronous), or the subscribing event can be deferred (asynchronous).

You use Oracle Workflow to set up business events.

You can subscribe to the following business events:

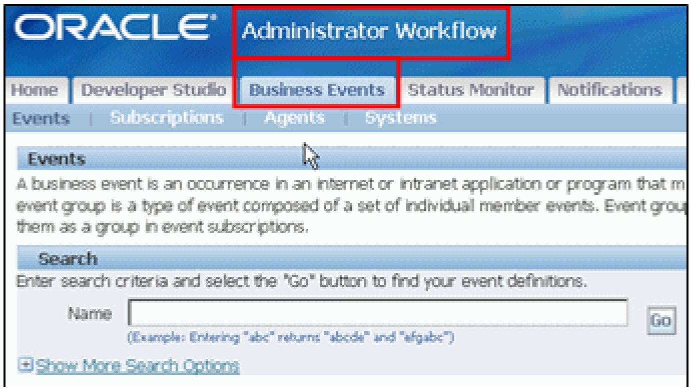
Business Event	Event Type	Description
oracle.apps.eng.cm.changeObject.changeApprovalStatus	CM Approval Status Change	Business event for change object approval status change
oracle.apps.eng.cm.changeObject.changePriority	CM Priority Change	Business event for change object priority changes

oracle.apps.eng.cm.changeObject.changeStatus	CM Status Change	Business event for change object status changes
oracle.apps.eng.cm.changeObject.changeWorkflowStatus	CM Workflow Status Change	Business event for change object Workflow Status changes
oracle.apps.eng.cm.changeObject.create	CM Create	Business event for the creation of a change object
oracle.apps.eng.cm.changeObject.postComment	CM Post Comment	Business event for a posted comment on a change object
oracle.apps.eng.cm.changeObject.reassign	CM Reassign	Business event for the reassignment of a change object
oracle.apps.eng.cm.changeObject.requestComment	CM Request Comment	Business event for a comment request of a change object
oracle.apps.eng.cm.changeObject.submit	CM Submit	Business event for the submission of a change object
oracle.apps.eng.cm.changeObject.update	CM Update	Business event for the update of a change object
oracle.apps.eng.cm.changeOrder.changeScheduleDate	CM Schedule Date Change	Business event for change order schedule date change
oracle.apps.eng.cm.import.complete	CM Import Complete	Change Management Import is completed
oracle.apps.eng.cm.revisedItem.changeScheduleDate	CM Revised Item Schedule Date Change	Business event for revised item schedule date change
oracle.apps.eng.cm.revisedItem.changeStatu	CM Revised Item Status Change	Business event for revised item status changes

To enable Change Management business events:

1. Log into Oracle Applications as Workflow Administrator.

2. Select the Business Events tab.



Events

A business event is an occurrence in an internet or intranet application or program that m
event group is a type of event composed of a set of individual member events. Event grou
them as a group in event subscriptions.

Search

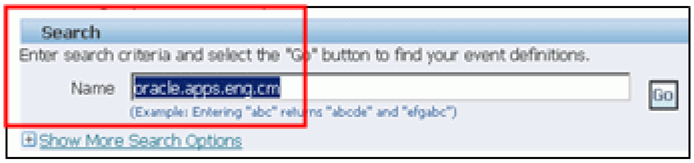
Enter search criteria and select the "Go" button to find your event definitions.

Name

(Example: Entering "abc" returns "abcde" and "efgabc")

3. Search for the business event to which you want to subscribe.

   Note: If you do not know the name of the event that you want to search for, use the following search string: Oracle.apps.eng.cm.



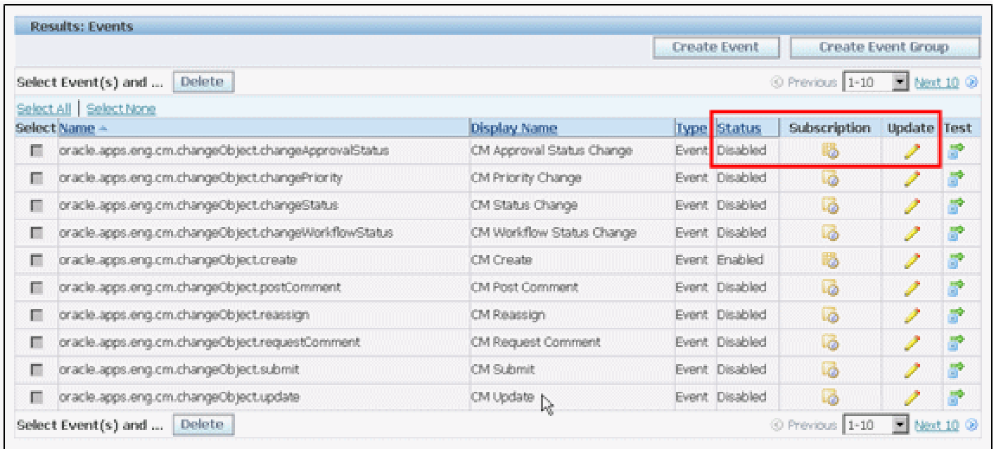
Search

Enter search criteria and select the "Go" button to find your event definitions.

Name oracle.apps.eng.cm

(Example: Entering "abc" returns "abcde" and "efgabc")

The search results include a list of change management business events. By default, all business events are disabled.

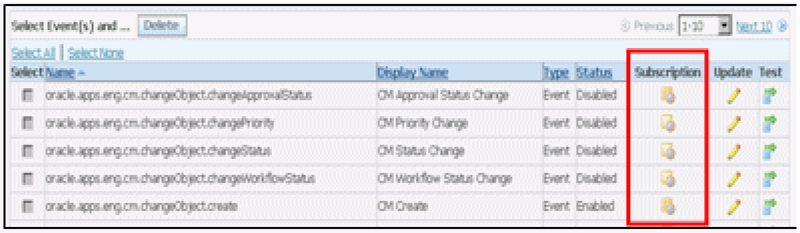


Results: Events

Select	Name	Display Name	Type	Status	Subscription	Update	Test
□	oracle.apps.eng.cm.changeObject.changeApprovalStatus	CM Approval Status Change	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.changePriority	CM Priority Change	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.changeStatus	CM Status Change	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.changeWorkflowStatus	CM Workflow Status Change	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.create	CM Create	Event	Enabled		✎	
□	oracle.apps.eng.cm.changeObject.postComment	CM Post Comment	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.reassign	CM Reassign	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.requestComment	CM Request Comment	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.submit	CM Submit	Event	Disabled		✎	
□	oracle.apps.eng.cm.changeObject.update	CM Update	Event	Disabled		✎	

4. To enable a business event, click the Update icon, which opens a page for the selected event where you can enable the event.

5. Click the Subscription icon to define the subscription code (also known as the Event trigger).

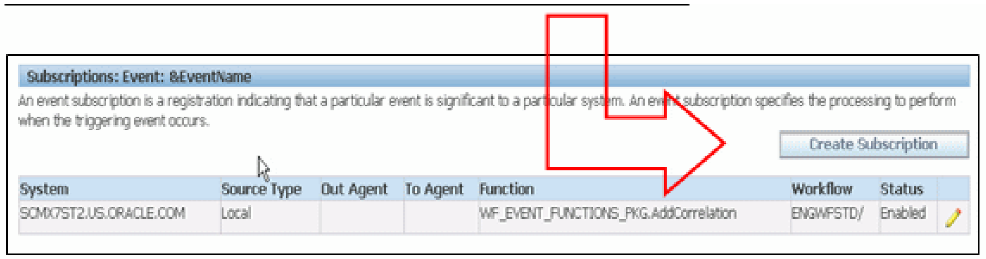


Select Event(s) and ... Delete

Previous 1-10 Next 10

Select All | Select None

Select	Name	Display Name	Type	Status	Subscription	Update	Test
□	oracle.apps.eng.cm.changeObject.changeApprovalStatus	CM Approval Status Change	Event	Disabled			
□	oracle.apps.eng.cm.changeObject.changePriority	CM Priority Change	Event	Disabled			
□	oracle.apps.eng.cm.changeObject.changeStatus	CM Status Change	Event	Disabled			
□	oracle.apps.eng.cm.changeObject.changeWorkflowStatus	CM Workflow Status Change	Event	Disabled			
□	oracle.apps.eng.cm.changeObject.create	CM Create	Event	Enabled			



Subscriptions: Event: &EventName

An event subscription is a registration indicating that a particular event is significant to a particular system. An event subscription specifies the processing to perform when the triggering event occurs.

Create Subscription

System	Source Type	Out Agent	To Agent	Function	Workflow	Status	
SCMX7ST2.US.ORACLE.COM	Local			WF_EVENT_FUNCTIONS_PKG.AddCorrelation	ENGWFSTD/	Enabled	

To review more detailed business events set up steps See: Setting Up the Business Event System, in the Oracle Workflow Administrator's Guide.

8

Setting Up Item Structures

This chapter covers the following topics:

- Overview of Item Structures
- Searching for Structure Types and Names
- Defining Display Formats and Search Criteria for Structures
- Defining Structures
- Associating Component Attribute Groups with a Structure Type

Overview of Item Structures

You can define item structures in the Product Workbench (see: Creating Structures, *Oracle Product Information Management User's Guide*) or in Oracle Bills of Material (see: Creating a Bill of Material, *Oracle Bills of Material User's Guide*). However, before defining structures, you must complete the following tasks:

Task	Required?
Create structure types. See: Defining Structures, page 8-5	Yes
Create structure names. See: Defining Structures, page 8-5	Yes
Associate structure names with structure types. See: Defining Structures, page 8-5	Yes
Define search criteria templates for a structure type. See: Defining Display Formats and Search Criteria for Structures, page 8-3	No

Task	Required?
Define search results display formats for a structure type. See: Defining Display Formats and Search Criteria for Structures, page 8-3	No
Associate component attribute groups with a structure type. See: Associating Component Attribute Groups with a Structure Type, page 8-9	No

Related Topics

Searching for Structure Types and Names, page 8-2

Defining Display Formats and Search Criteria for Structures, page 8-3

Defining Structures, page 8-5

Associating Component Attribute Groups with a Structure Type, page 8-9

Product Workbench Overview, *Oracle Product Information Management User's Guide*

Searching for Items in a Structure, *Oracle Product Information Management User's Guide*

Searching for Structure Types and Names

> **Note:** If you have used the structure type Packaging Hierarchy in releases prior to 12.1, note that only the preferred packaging structure from this structure type is migrated over in the upgrade process. If you have defined multiple packaging structures and want to migrate all of them, consider bringing them into the system by transferring them into other structure types, at which time they will be treated as regular structure types and not Packs.

You can search for structure types based on different criteria such as display name, internal name, description or parent structure type.

To search for structure types:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Structures tab.

2. On the **Search: Structure Types** page, select your search criteria in the Search By field, enter the search string, and click Go.

Note: The wildcard character (%) is appended to the search string entered. For example, if you enter "Eng", the search string is actually "Eng%". So the structure type Engineering BOM could be returned as part of the search results.

To search for structure names:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Structures tab.

2. On the **Search: Structure Types** page, click the Structure Names tab.

3. On the **Search: Structure Names** page, select your search criteria in the Search By menu, enter the search string, and click Go.

   Note: The wildcard character (%) is appended to the search string entered. For example, if you enter "Alternate", the search string is actually "Alternate%". So the structure name "Alternate 1" could be returned as part of the search results.

Defining Display Formats and Search Criteria for Structures

Search Criteria

You can search for structure names based on different search criteria such as display name, internal name, description or parent structure type. Criteria templates enable you to save frequently performed search criteria based on a list of attributes. Criteria templates for structures enable you to search components within a structure. You can associate with a structure type an existing criteria template for a given item catalog category, or create a new criteria template to search items within a structure. You can specify a default criteria template for each structure type.

Administrators and users can define search criteria for a given structure type. All search criteria defined by administrators are available to all users viewing a structure of the given structure type to which the search criteria is associated. All search criteria defined by a user are only available to that user. On selecting a search criteria, only those components that satisfy the criteria will be listed in the hierarchy and the components that do not match the criteria will be filtered out. Intermediate nodes will be listed even though they might not satisfy the criteria to maintain the context for a lower level component. Primarily search criteria are useful to filter only relevant components in a bill having a large number of components. Search criteria templates can be built using item and component primary, operational, and user defined attributes.

For instructions on how to create and maintain search criteria for structures, see: Managing Search Criteria, page 3-33.

Display Formats

Administrators and users can define display formats for a given structure type. All display formats defined by administrators are available to all users viewing a structure of the given structure type to which the display format is associated. User display formats are only available to that user. Display formats enable users to view attribute information across an entire structure. The display formats can include item and component primary, operational, and user defined attributes. You can define as many results formats as you wish, and you can also denote the most commonly used as the default results format.

For instructions on how to create and maintain display formats for structures, see: Managing Display Formats, page 3-39.

Oracle provides the following system defined display formats:

Display Format Name	Fields Included in the Display Format
Component Information	Component Name, Description, Revision, Category
Component Details	Component Name, Description, Revision, Item Sequence, Operation Sequence, UOM, Quantity, Planning%, Yield, Item type
Change Order	Component Name, Description, Revision, Implemented, Change Order
Comments	Component Name, Description, Revision, Comments
Effectivity	Component Name, Description, Revision, Effectivity Control, Effective From, Effective To, Change Order
Lifecycle Status	Component Name, Description, Revision, Lifecycle Phase, Approval Status, Item Status, Percent Complete, Schedule End Date, Progress Status
Long Description	Component Name, Description, Revision, Long Description
Material Control	Component Name, Description, Revision, Supply Type, Subinventory, Locator, Auto Request Material, Enforce Integer Requirements

Order Management	Component Name, Description, Revision, Check ATP, Optional, Mutually Exclusive, Minimum Quantity, Maximum Quantity, Basis
Reference Designators	Component Name, Description, Revision, Quantity, Quantity Related, Reference Designator
Shipping	Component Name, Description, Revision, Shippable, Include on Shipping documents, Required to Ship, Required for Revenue

Defining Structures

Before creating a structure, you must perform the following setup tasks:

- Create a structure type.
- Define a structure name.
- Associate the structure name with a structure type.

> **Note:** The following pages are accessible from a structure type, but no longer used:
>
> - Structure Pages
> - Create/Edit Structure Pages
> - Attribute Groups
> - Add Attribute Groups

To create a structure type:

A structure type enables you to classify and characterize item structures throughout the lifecycle of an item. For example, you can have structure types for Engineering, Manufacturing, and Service. You can define an unlimited number of structure names for a structure type, enabling you to create several different structures of the same type that you can use for comparison. For example, you can create several different engineering BOMs (EBOM1, EBOM2, EBOM3) using the structure type Engineering BOM with different component costs and BOM grading attributes. Comparing these BOMs enables you to make better decisions earlier in the lifecycle of your products.

You can associate item attachment categories, criteria templates and results formats with a structure type. Structure types are hierarchical, with structure names, item attachment categories, criteria templates and results formats inherited throughout the hierarchy.

Structure types provide metadata common to all structures/BOMs that share a structure type. For example, the structure type "Engineering BOM" describes valid component types, attributes, functions and other characteristics common to several structures, such as "EBOM Alternate 1" and "EBOM Alternate 2" of the item "Engine10000."

Structure types are hierarchically structured, with structure names inherited throughout the hierarchy.

To help classify your existing structures, you can use the following seeded structure types, or create your own structure types.

Internal Name	Display Name	Allow Subtypes
All-Structure Types	Root	Y
Packaging Hierarchy	Packaging BOM	N
Asset BOM	Asset BOM	Y
Cad BOM	Cad BOM	Y
Design Structure	Design Structure	Y
MBOM	Manufacturing BOM	Y

> **Important:** When you upgrade to a new software release, ensure that you use the newest seeded Packaging Hierarchy instead of an older version. Either delete or rename any older versions of a Packaging Hierarchy structure type.

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Structures tab.

2. On the **Search: Structure Types** page, click the "Create Structure Type" link.

3. On the **Create Structure Type** page, enter the following information:

   Internal Name

   The structure type's internal name.

Display Name

The structure type's display name.

Description

A brief description of the structure type.

Parent Structure Type

Select a parent structure type. The parent structure type specifies the immediate parent of the structure type being created, thereby determining the structure type hierarchy.

If you leave this field blank, the parent structure type displays as Root. If you use a root structure type as a parent, then the following information defaults to the descendants of the parent:

- Structure Header Attributes
- Item Attachment Categories
- Display Formats
- Import Formats
- Search Criteria
- Component Attribute Groups

See: Viewing Item Structures, *Oracle Product Information Management User's Guide*

Inactive On

Optionally, you can specify a date on which the structure type will become inactive. Making a type inactive has the following implications:

- You cannot create structures of that type or any of its descendants.
- You cannot use that type or any of its descendants as a parent structure type upon creation of a structure type.

Allow Subtypes

Select Allow Subtypes if you want this structure type to be a parent structure type or a member of a structure type hierarchy.

4. Click Apply.

To create a structure name:

You can search for structure names based on different criteria such as display name, internal name, description or parent structure type.

You can define multiple structure names for each structure type and enable them in different organizations. For example, you can have three engineering BOMs (EBOM1, EBOM2, EBOM3) that use the structure type Engineering BOM; you can use these to compare designs. Manufacturing BOMs may be slightly different in each global region because similar parts are procured from different suppliers. You can have a structure type Manufacturing BOM with different structure names (MBOM_US, MBOM_EMEA, MBOM_APAC) for each of your manufacturing regions around the globe. Structures within a structure type share the same common characteristics.

> **Note:** When creating a packaging hierarchy structure:
>
> - Create the structure in the master organization. Reference the structure from other organizations. See: Referencing Common Bills and Routings, *Oracle Bills of Material User's Guide*.
>
> - Assign units of measure that belong to the same unit of measure class to each component within the hierarchy. See: Defining Unit of Measure Classes, *Oracle Inventory User's Guide*.

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Structures tab.

2. On the **Search: Structure Types** page, click the Structure Names tab.

3. On the **Search: Structure Names** page, click the "Create Structure Names" link.

4. On the **Create Structure Name** page, provide the following information:

   Display Name

   The display name of the structure.

   Description

   The description of the structure name.

   Structure Type

   The associated structure type.

   Organization Assignment

   A structure name can be assigned to one or more organizations with different inactive dates.

   Inactive Date

   The date on which the organization assignment is no longer valid. One or more organizations may have different inactive dates.

5. Click Apply.

To associate a structure name with a structure type:

1. On the **Search: Item Catalog Categories** page in the Setup Workbench, click the Structures tab.

2. On the **Search: Structure Types** page, find the structure type you wish to associate and click its corresponding name link.

3. On the **Basic Information** page, click the "Structure Names" link.

4. On the **Structure Names** page, click Create.

5. On the **Create Structure Name** page, enter the following information:

   - Internal Name

   - Display Name

   - Description

   - Preferred for Structure Type

     Select this box if you want this structure name to be the default name for all structures created within this structure type.

6. On the **Create Structure Name** page, assign the structure name to one or more organizations by selecting the Assign box in an organization row(s). This enables you to use the structure name within the assigned organizations.

   Optionally, click Assign All to assign the structure name to all organizations.

7. For each assigned organization, you can optionally specify an Inactive On date. This makes the structure name no longer valid as of the Inactive On date.

8. Click Apply to create and save the structure name.

   Optionally, click Add Another to create another new structure name.

Related Topics

Creating a Bill of Material , *Oracle Bills of Material User's Guide*

Managing the Packaging Hierarchy, *Oracle Product Information Management User's Guide*

Associating Component Attribute Groups with a Structure Type

User defined attributes for structures and/or components allow the user to capture specific details about the structure or component. The attributes whose value(s) can be captured for a Structure, are defined by the administrator, while defining the Structure Types. User defined attributes has an administrative workbench which helps the setup of the attribute groups, attributes and the value set tied to an attribute, if any. Different types of structures and its components will have different attribution requirements, For example, when performing analysis of various design scenarios, every structure may need to capture the weight and cost attributes. Similarly, components may need to capture attributes like "Mean Time between failure" which are unique to a component usage in a specific structure.

When setting up the Structure Types, administrators can setup the attribute groups associated with that Structure Type.

Administrators can add attribute groups and define the association level of the attribute group, which can be either the Structure or the component.

End User View

The end user view of extensible attributes would be based on the administrative definition of the attribute groups/attributes and the value set tied to them. The pages would be generated dynamically.

Component attribute groups collect characteristics (attributes) for use with recording specifications or representing the properties of a component belonging to a specific structure type. Component attributes are associated with a structure type at the structure components level.

> **Note:** Child structure types can inherit component attribute groups from a parent structure type. You cannot delete component attribute groups inherited from a parent structure type at the child structure type level.

To associate a component attribute group with a structure type:

1. On the **Search: Structure types** page, search for the structure type and click on its corresponding name link.

2. Click the Component Attribute Groups link on the side navigator.

3. On the **Component Attribute Groups** page, click Add Attribute Groups.

4. On the **Add Component Attribute Groups** page, select the attribute groups you wish to associate with the current structure type.

5. Click Apply.

Related Topics

Defining Structures, page 8-5

9

Setting Up Content Management Repositories

This chapter covers the following topics:

- Integrating Oracle E-Business Suite Applications with Content Management Repositories
- Setting Up a Content Management Repository

Integrating Oracle E-Business Suite Applications with Content Management Repositories

You can attach unstructured data to many different business objects or entities in Oracle E-Business Suite (EBS). For example, attach a product data sheet in PDF format (the unstructured data) to an item (the business object). The following table lists other examples of objects and unstructured data:

Examples of Objects	Types of Unstructured Data
Change objects such as a change order or change request	Files such as word processing documents, spreadsheets, videos, images, and Web pages.
Projects	Folders
Project tasks	Text
Structures	URL

Store unstructured data in one or more content management repositories and set up EBS to integrate with the repositories. Integrate EBS with a repository using one of the following technologies:

- WebDAV (Web-based Distributed Authoring and Versioning) - a set of extensions to the HTTP protocol, enabling users to collaboratively manage files on remote Web servers. For more information, refer to www.webdav.org.

- Web Services - enables two separate systems to interact with each other by providing services invoked using XML messages. For more information, refer to the World Wide Web Consortium website, www.w3.org.

The following content management repositories are certified for use in three EBS applications - Oracle Projects, Oracle Internal Controls Manager, and Oracle Product Lifecycle Management:

- Oracle Files, releases 9.0.3 and 9.04, using WebDAV, is certified for use with EBS release 11i10

- Oracle Content Services, release 10.1.2, using WebDAV, is certified for use with EBS release 11i10

- Oracle Content DB (a module within Oracle Database), using WebDAV or Web Services, is certified for use with EBS release 12 and higher.

> **Tip:** Using Web Services with Oracle Internet Directory (OID), version 10.1.2 phase 2 and higher, enables users to sign on only once (single sign-on) to both EBS and Oracle Content DB. If you use WebDAV, you must sign on to EBS and Oracle Content DB separately.
>
> A single sign-on framework enables a number of different applications common to an enterprise to share a user authentication service. With Oracle's enterprise-wide single sign-on, a user only needs to log on, or authenticate himself, once. This identity verification is valid for the duration of the user session, and for every application participating in the single sign-on framework. Your session ends across every application when you log out.
>
> OID is Oracle's Lightweight Directory Access Protocol (LDAP). LDAP is a set of protocols for accessing information directories. LDAP is based on the standards contained within the International Standards Organization (ISO) or International Telecommunication Union (ITU) X.500 standard, but is significantly simpler. And unlike X.500, LDAP supports TCP/IP, which is necessary for any type of Internet access. Because it's a simpler version of X.500, LDAP is sometimes called X.500-lite.

Theoretically, EBS integrates with any WebDAV-enabled, non-Oracle content management repository (for example, Documentum), but it is only certified with the Oracle content management repositories for the Oracle applications listed above.

Integrating Oracle Content DB with EBS using Web Services gives you the most robust set of content management features. The following table lists examples of features available when using WebDAV versus Web Services:

Feature	Available with WebDAV	Available with Web Service
Upload a new file to a folder in the content repository and attach the file to an EBS object.	Yes	Yes
Attach an existing file/folder in the content repository to an EBS object.	Yes	Yes
Render content of an attached content repository file from EBS.	Yes	Yes
Detach files/folders from an EBS object.	Yes	Yes
Use the Where Attached feature to find all EBS objects to which a content repository file/folder is attached to.	Yes	Yes
Browse content repository folders within the EBS.	No	Yes
Single sign-on integration between the EBS and content repository.	No	Yes
Attach a specific version of a file in the content repository to an EBS object.	No	Yes
Submit a review/approval from the EBS for specific versions of files in the content repository.	No	Yes
Show the version history in the EBS of files in the content repository.	No	Yes
Create or delete files/folders in the content repository from within the EBS.	No	Yes
Move or copy files/folders in the content repository from within the EBS.	No	Yes
Check in or check out files in the content repository from within the EBS.	No	Yes

Feature	Available with WebDAV	Available with Web Service
Search for content within files stored in the content repository from within the EBS.	No	Yes
Grant or revoke access to EBS users on content repository folders from within the EBS.	No	Yes

Related Topics

Setting Up a Content Management Repository, page 9-4

E-Business Suite Attachments, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Data Librarian User's Guide*

Document Management and Collaboration, *Oracle Product Lifecycle Management User's Guide*

Setting Up a Content Management Repository

Oracle recommends using the Oracle Content Database (DB) as the repository to store files. Oracle Content DB can integrate with EBS using one of the following services:

- WebDAV
- Web Services

If you use Web Services, Oracle Content DB retrieves your single sign-on user ID and password from the Oracle Internet Directory (OID). So, if you are signed on to the EBS, you do not need to sign on to Oracle Content DB separately. If you use WebDAV, you must sign on to Oracle Content DB and Oracle EBS separately. Oracle recommends using the Web Services protocol.

To enable single sign-on with Web Services, you must:

- install OID on a standalone server.
- register EBS and Content DB in the same OID.
- export existing EBS users into OID.

For more information about setting up the OID, refer to the *Oracle Internet Directory Administrator's Guide*. You can also use a third party identity management system, such as Microsoft's Active Directory, as the password repository as long as the integration between the third party identity management system and OID has been set up correctly. For information about setting up this integration, see: *Oracle Internet Directory Administrator's Guide*.

> **Tip:** If you use Content DB as your repository, your system administrator can convert existing WebDAV files to Web Services files by running the concurrent program WebDAV to Web Service Repository Migration. The user name specified in the concurrent program needs sufficient privileges to version all of the files involved. Run the concurrent program in simulation mode first to verify that the user name specified has sufficient privileges.

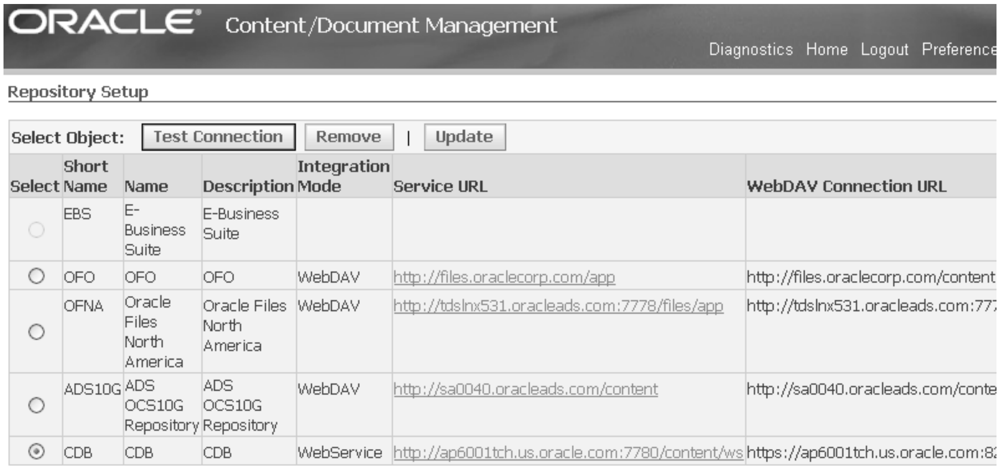
The following instructions also apply to setting up repositories other than Oracle Content DB, although Oracle only certifies the use of the Oracle content management repositories for the Oracle applications listed in Integrating Oracle E-Business Suite Applications with Content Management Repositories, page 9-1.

Prerequisites

❒ Set up attachment categories. See the Attachments chapter in the *Oracle Applications Developer's Guide*.

To set up the repository:

1. Navigate to the **Repository Setup** page.



Repository Setup

Select Object:

Select	Short Name	Name	Description	Integration Mode	Service URL	WebDAV Connection URL
○	EBS	E-Business Suite	E-Business Suite			
○	OFO	OFO	OFO	WebDAV	http://files.oraclecorp.com/app	http://files.oraclecorp.com/content
○	OFNA	Oracle Files North America	Oracle Files North America	WebDAV	http://tdslnx531.oracleads.com:7778/files/app	http://tdslnx531.oracleads.com:77
○	ADS10G	ADS OCS10G Repository	ADS OCS10G Repository	WebDAV	http://sa0040.oracleads.com/content	http://sa0040.oracleads.com/conte
●	CDB	CDB	CDB	WebService	http://ap6001tch.us.oracle.com:7780/content/ws	https://ap6001tch.us.oracle.com:8

2. Select an existing repository and click Update.

   If no repositories exist, then click Add a Row.

3. In the **Update Repositories** page, click Add Another Row.

4. Enter data in the following fields:

- Short Name - the short name of the repository.

- Name - the descriptive name of the repository.

- Description - optional. The description of the repository.

- Integration Mode - select either WebDAV or Web Service.

- Service URL - URL pointing to the Web Service servlet of the Repository instance.

  For example: http(s)://<host>:<port>/content/ws See the content repository installation guide (for example, Oracle Content Database Installation Guide) for the correct URL.

- WebDAV Connection URL - URL pointing to the DAV servlet of the Content Repository instance.

  For example: http(s)://<host>:<port>/content/dav or http(s)://<host>:<port>/files. See the content repository installation guide (for example, Oracle Content Database Installation Guide) for the correct URL.

- Sequence - If you have more than one repository, the sequence determines the order in which the repositories display during user selection.

- Certificate path - If the repository is SSL enabled, then this field contains the location to the repository digital certificate stored in the EBS mid-tier. The certificate must be accessible and readable.

5. Click Apply.

To test the repository connection:

1. In the **Repository Setup** page, select a repository and click Test Connection.

2. In the **Repository Confirmation** page, enter the user ID and password for the repository and click Test.

   If the user ID and password for the repository are correct and the repository is operational, a message appears notifying you that the connection with the repository is successful.

To remove a repository:

Before removing a repository, you must first detach all of the attachments stored in the repository from EBS objects.

1. In the **Repository Setup** page, select the repository to remove.

2. Click Remove.

   This deletes the repository definition from the EBS. The installed repository instance remains intact.

Related Topics

Integrating Oracle E-Business Suite Applications with Content Management Repositories, page 9-1

E-Business Suite Attachments, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Data Librarian User's Guide*

Document Management and Collaboration, *Oracle Product Lifecycle Management User's Guide*

10

Setting Up E-Business Suite Attachments

Overview of E-Business Suite Attachments

Oracle Product Lifecycle Management and Oracle Product Information Management provide integration to Oracle Files, Oracle Content Services, and Oracle Content DB (a module within Oracle Database). These content repositories provide users with a wide range of file management capabilities. Content DB, however, provides the most flexibility for organizing unstructured data and Oracle recommends using Content DB over other repositories. The content of this chapter explains how to set up E-Business Suite attachments with Oracle Content DB. Some of the set up steps, features, and processes do not apply to other repositories. For additional information about the file management features available with Oracle Content DB, see the Oracle Content DB Web client online help.

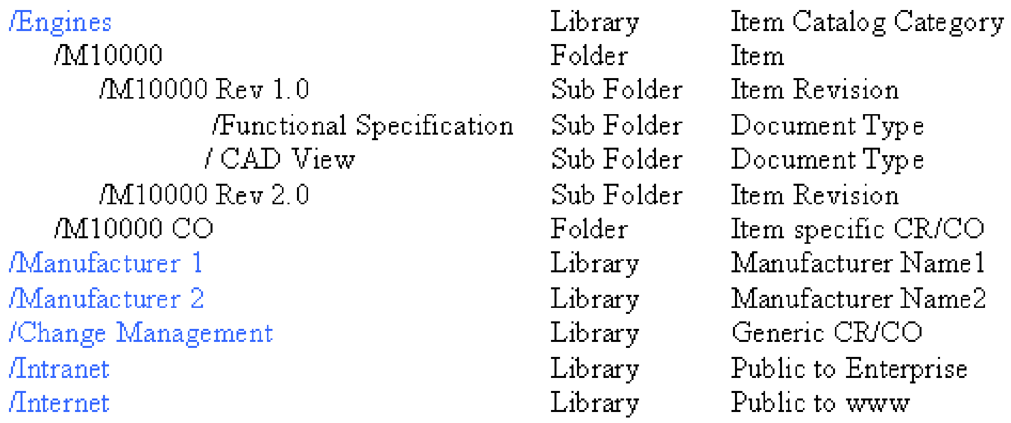
Structuring Folders

Oracle Content DB provides a great deal of flexibility in the structuring of data. The following security considerations should factor in to implementation decisions about the organization of unstructured data (files/folders):

- Examine what content is internal to the enterprise and what may be shared externally as part of the collaboration process or on a website.
- Access privileges by organizations modeled as Organizations in EBS.
- Access controlled by item catalog categories or types of items.
- Access controlled by business objects in EBS such as Items, Change Management, Projects, and Purchase Orders.
- Access controlled by the lifecycle state of the item.

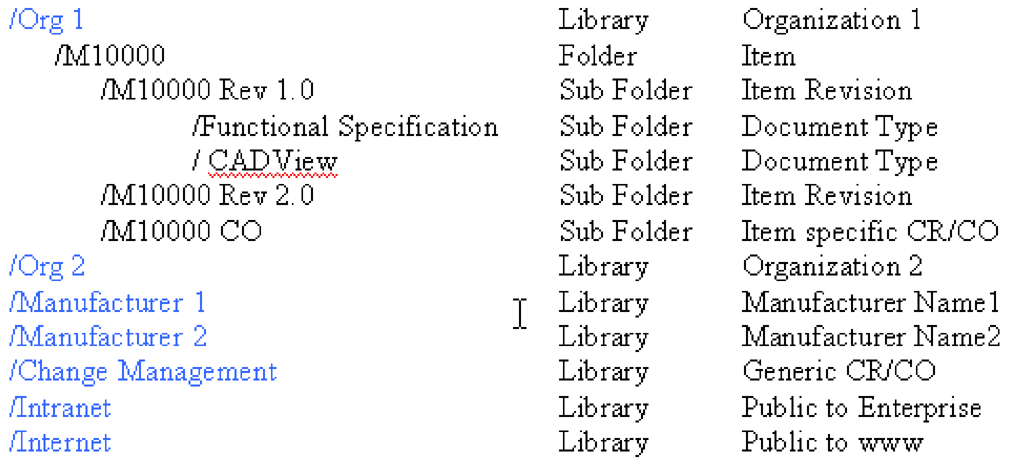
Following are some examples for structuring folders/libraries.

Example 1: Model Libraries as Item Catalog Categories



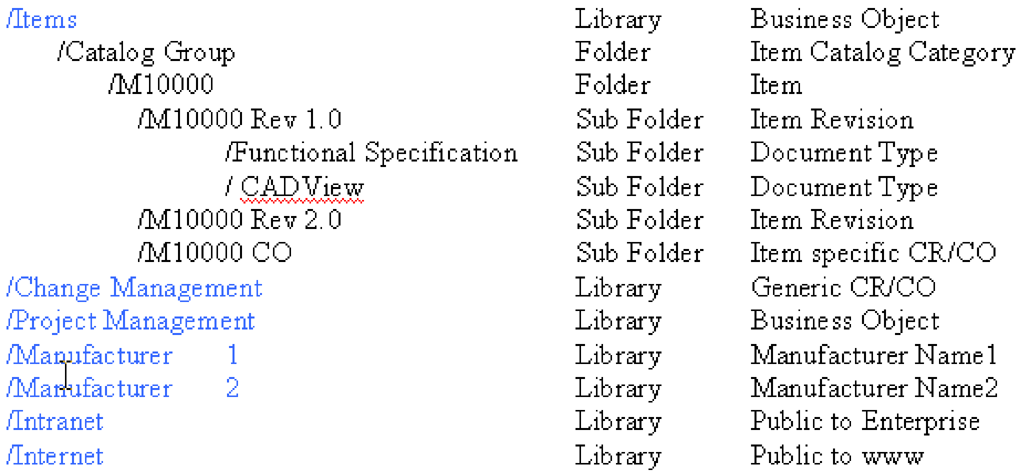
/Engines	Library	Item Catalog Category
/M10000	Folder	Item
/M10000 Rev 1.0	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ CAD View	Sub Folder	Document Type
/M10000 Rev 2.0	Sub Folder	Item Revision
/M10000 CO	Folder	Item specific CR/CO
/Manufacturer 1	Library	Manufacturer Name1
/Manufacturer 2	Library	Manufacturer Name2
/Change Management	Library	Generic CR/CO
/Intranet	Library	Public to Enterprise
/Internet	Library	Public to www

Example 2: Model Libraries as Organizations or Divisions in a Company



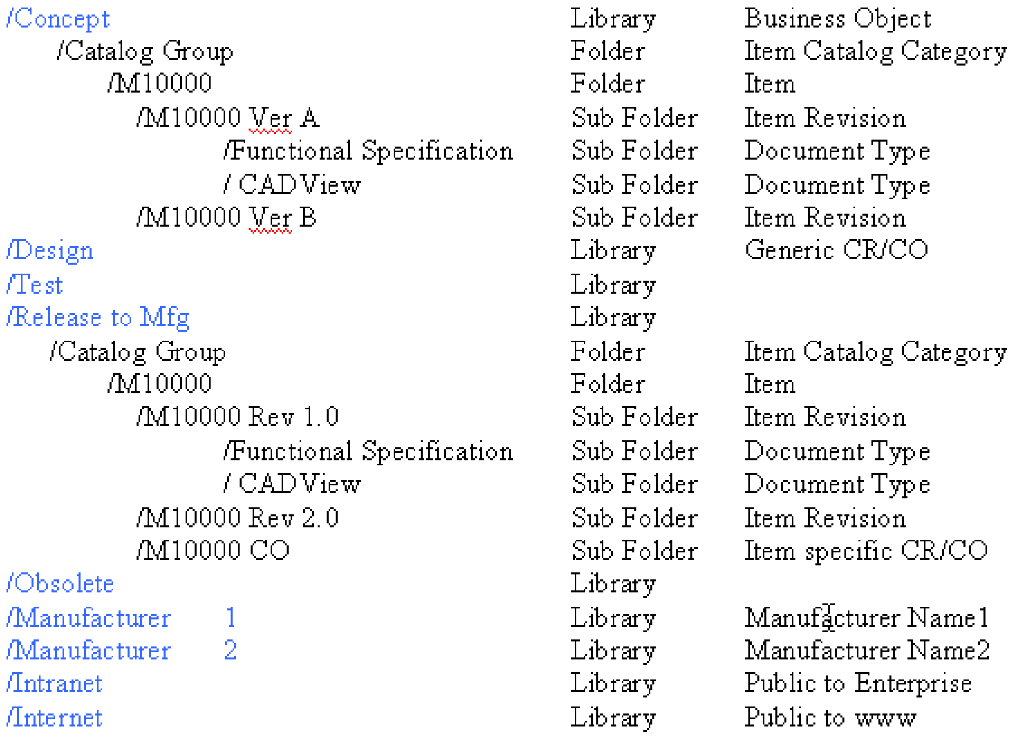
/Org 1	Library	Organization 1
/M10000	Folder	Item
/M10000 Rev 1.0	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ CADView	Sub Folder	Document Type
/M10000 Rev 2.0	Sub Folder	Item Revision
/M10000 CO	Sub Folder	Item specific CR/CO
/Org 2	Library	Organization 2
/Manufacturer 1	Library	Manufacturer Name1
/Manufacturer 2	Library	Manufacturer Name2
/Change Management	Library	Generic CR/CO
/Intranet	Library	Public to Enterprise
/Internet	Library	Public to www

Example 3: Model Libraries as Business Objects in EBS



/Items	Library	Business Object
/Catalog Group	Folder	Item Catalog Category
/M10000	Folder	Item
/M10000 Rev 1.0	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ CAD View	Sub Folder	Document Type
/M10000 Rev 2.0	Sub Folder	Item Revision
/M10000 CO	Sub Folder	Item specific CR/CO
/Change Management	Library	Generic CR/CO
/Project Management	Library	Business Object
/Manufacturer 1	Library	Manufacturer Name1
/Manufacturer 2	Library	Manufacturer Name2
/Intranet	Library	Public to Enterprise
/Internet	Library	Public to www

Example 4: Model Libraries as Lifecycle Phases



/Concept	Library	Business Object
/Catalog Group	Folder	Item Catalog Category
/M10000	Folder	Item
/M10000 Ver A	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ CAD View	Sub Folder	Document Type
/M10000 Ver B	Sub Folder	Item Revision
/Design	Library	Generic CR/CO
/Test	Library	
/Release to Mfg	Library	
/Catalog Group	Folder	Item Catalog Category
/M10000	Folder	Item
/M10000 Rev 1.0	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ CAD View	Sub Folder	Document Type
/M10000 Rev 2.0	Sub Folder	Item Revision
/M10000 CO	Sub Folder	Item specific CR/CO
/Obsolete	Library	
/Manufacturer 1	Library	Manufacturer Name1
/Manufacturer 2	Library	Manufacturer Name2
/Intranet	Library	Public to Enterprise
/Internet	Library	Public to www

Attachment Review and Approval

Attachment Review or Approval provides:

- Flexible and scalable way of defining different types of reviews/approvals;
- Capture of user-defined attributes for them;
- Secure collaboration
- Flexible and advanced approval routing definition.

Complex parallel and serial approval routes can be created as predefined templates to enforce strict approval processes, or ad hoc routings to obtain additional approvals within the enterprise can be specified.

Attachments can be selected and submitted for Review or Approval. The Review and Approval workflows can be independent of each other. The Approval and Review process use predefined approval templates with support for ad-hoc addition of new steps. You can add steps to the process only if a workflow routing is associated with the particular status. You cannot delete predefined (in the item catalog category) steps. You can add additional assignees to a step, but you cannot delete predefined assignees. Based on the Approval or Review type chosen, the workflow/approval routing is determined. Appropriate notifications are sent at the various stages of the approval process including a final notification of approval. Approvers can be derived from a user's role on the business object.

The system indicates the current status of the attachment. For files residing in a Content DB repository, the status refers to the file itself. When you submit a file for review and approval from within Content DB, you are asking for review and approval of the file content.

An attachment could have one of the following statuses of Approved/ Reviewed / Submitted for Approval/Submitted for Review or Rejected. If the file status is not one of these, then it means that the attachment has not been submitted through a formal review and approval process and is in a status of Draft or Unapproved. As the attachment progresses through the Approval process the attachment status should be automatically updated and the approval or review itself should be appropriately routed to different users for their review or approval.

The Attachment Review and Approval process is built using the Change Management Framework with Approval and Review being modeled as Change Categories. Thus, creating the different Approval and Review types is similar to Defining the Header Types for a Change Category, with a few minor differences. For example Lines and associated Line types cannot be defined for the Approval and Review types. Similarly the References, Dependencies and Attachments sections are not available.

Once an Attachment Approval or Review type has been defined, then with each status a workflow could be associated. An Approval type must have an Approval status with an approval workflow associated with it. For more details about creating workflows, see Defining Workflow Templates, page 7-16.

Related Topics

Managing Attachments, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management User's Guide*

Change Management for Attachments

Change Management for attachments provides change control functionality for all types of attachments, a crucial and important piece of non-structured information about the product.

Types of attachment changes supported using a change order include:

- adding a specific version of an attachment at the item or item revision level
- creating a new version for an existing attachment using by checking out the current version and checking in a new version.
- changing the attached version for an existing attachment.
- changing attachment attributes. Supported attributes include Name, Description, and Attachment Category.
- deleting attachments.

Change control is achieved by providing a mechanism to author, track and manage changes to attachments through a change order approval and implementation process. You can:

- Specify items and attachments that are revised or effected in a change order.
- Author and specify the exact changes that are desired or required to resolve an issue or change request.
- Route the change order for approval to the appropriate people responsible for the revised item based on item roles, change desired and lifecycle of item.

> **Warning:** If the lifecycle of the item requires the approval of attachment changes, the project associated with the file approval must have a progress cycle set to Daily or null. If the progress cycle is set to As Of Date, then you can only update the project on valid As Of Dates. See: Selecting Progress Options for a Workplan Structure, *Oracle Project Management User Guide*

Once the change order is approved, implement the changes manually or automatically on the specified implementation date.

Change Management for attachments is supported through the Change Management functionality. User can create a change order and specify changes to the attachments of a reviewed item. There are no additional steps required in the setting up of a change order to be able to do attachment changes for a revised item.

Related Topics

Defining Change Categories and Types, *Oracle Product Lifecycle Management Implementation Guide* or *Oracle Product Information Management Implementation Guide*

11

Implementing Roles and Role Based Security

This chapter covers the following topics:

- Overview of Roles and Role Based Security
- Administering Roles
- Administering People, Groups, and Companies
- Implementing Role Based Security
- Implementing Change Management Role Based Security
- Creating Custom Privileges

Overview of Roles and Role Based Security

Role-based data security enables users to secure individual data objects and user-defined attribute groups. Your ability to view, edit and perform certain actions on an object or attribute group is determined by your role on it. Users with the privilege to add people can assign users to object roles. You can assign roles for the following objects:

- Catalog
- Catalog Category
- Change
- Group
- Item
- Item Catalog Category

Roles

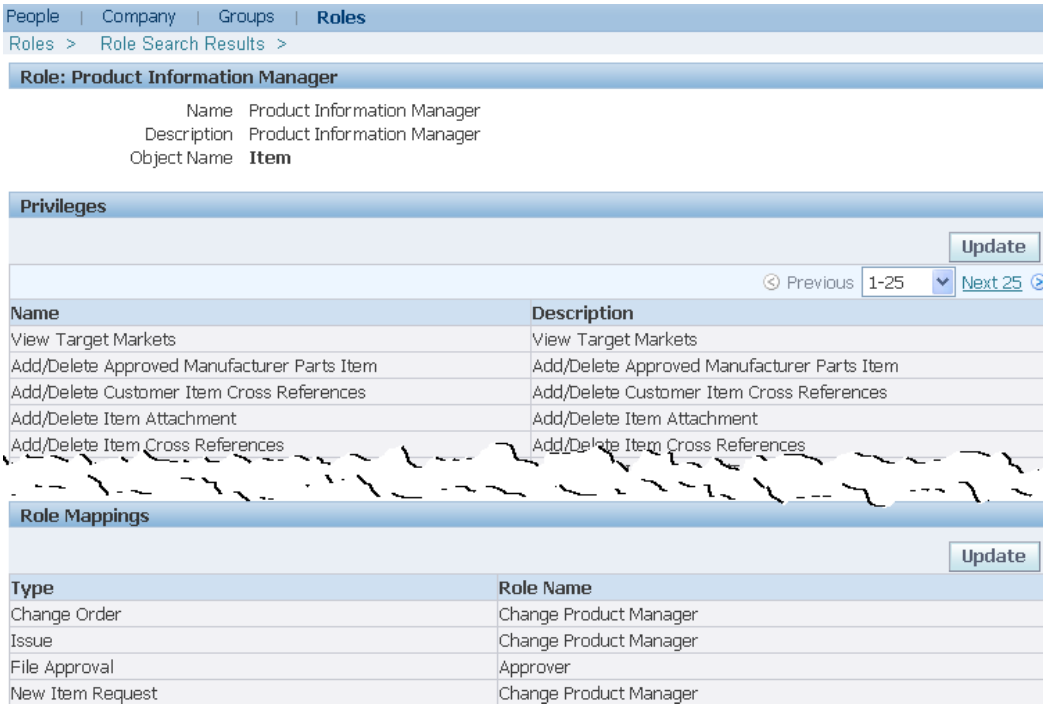
A role is a collection of privileges. Roles are a convenient way to group privileges into a bundle that can later on be assigned to users, groups, or companies. For example, a user with the Design Engineer role on an item is granted the privilege to View Item, Edit Item, Add/Delete Item Attachments and more. However, the Design Engineer is not granted the privilege to Promote Item/Item Revision Lifecycle Phase.

You can assign roles to a person, group, company, or all users. To simplify item security maintenance, you can assign item roles at the catalog category, catalog, organization, item catalog category, or item level. You can specify default roles for all items in an organization. For example, you can assign the Item Reviewer role to the Engineering group so that all engineers can search for and view all items in the item catalog. For each item catalog category, you can specify which people can create items by assigning them the Catalog Category User role. For example, you can assign just the New Product Introduction engineers the Catalog Category User on the item catalog categories for which they are responsible for maintaining. Next, you can assign default role assignments to people by organization for all items in the item catalog category. For example, you can assign your Motherboard engineers a Design Engineer role for the Motherboard item catalog category. You can assign the buyer for Motherboards a Buyer role. At the item level, you can assign direct roles to enable access to specific items. For example, you can assign the role of Supplier Engineer to suppliers with whom you are collaborating on specific items.

Privileges

A privilege defines a user's access to an object. For example, a user's ability to view an item and edit it is determined by his or her privileges on that item. You can define additional privileges to secure user-defined attribute groups. See: To implement attribute group security, page 11-19.

Example of an Item Role



People | Company | Groups | Roles
Roles > Role Search Results >

Role: Product Information Manager

Name Product Information Manager
Description Product Information Manager
Object Name **Item**

Privileges

Update
Previous 1-25 Next 25

Name	Description
View Target Markets	View Target Markets
Add/Delete Approved Manufacturer Parts Item	Add/Delete Approved Manufacturer Parts Item
Add/Delete Customer Item Cross References	Add/Delete Customer Item Cross References
Add/Delete Item Attachment	Add/Delete Item Attachment
Add/Delete Item Cross References	Add/Delete Item Cross References

Role Mappings

Type	Role Name
Change Order	Change Product Manager
Issue	Change Product Manager
File Approval	Approver
New Item Request	Change Product Manager

To implement roles and role-based security, perform the following tasks:

Task	Required?
Administering Roles, page 11-3	Yes
Administering People, Groups, and Companies, page 11-6	No
Implementing Role-based Security, page 11-11	Yes
Implementing Change Management Role-based Security, page 11-24	Yes
Creating Custom Privileges, page 11-27	No

Administering Roles

You can create roles for the following objects:

- Catalog

  A catalog role assigned to a user determines which actions that user can perform on items in a catalog.

- Catalog Category

  A catalog category role assigned to a user determines which actions that user can perform on items in a catalog category.

- Change

  The change role assigned to a user for a change object (for example, issue, change request, change order) determines which actions that user can perform on the change object. For example, a user with an Approver role on a change request is granted the View Basic Change Information and Edit/Delete Change privileges.

- Group

  A group role assigned to a user for a group determines which actions that user can perform on the group.

- Item

  The item role assigned to a user for an item determines which actions that user can perform on the item. You can also inherit item privileges assigned at the catalog, catalog category, and item catalog category levels. For example, a user with the seeded Catalog Category User role on the Motherboard catalog category is granted the "Create Item of this Catalog Category" privilege, which enables him or her to create Motherboard items.

- Item Catalog Category

  The item catalog category role assigned to a user determines which actions that user can perform on items in a specific item catalog category.

> **Note:** In order to administer roles, a system administrator must grant you a role at the Oracle Applications user level. This role is granted by default in seeded responsibilities that include the Role submenu. The Role submenu, which includes the Roles link, is available from the Development Manager and Development Engineer responsibilities, as well as others.
>
> If you cannot access the Roles link from your responsibility or if you cannot view, create, or update roles, then contact your system administrator. For more information, see:
>
> - Creating and Updating Roles, *Oracle Applications System Administrator's Guide - Security*.

- Excluding functions in the Menu Exclusions tab,Responsibilities Window, *Oracle Applications System Administrator's Guide - Security*.

To view roles:

You can view roles to examine the privileges that are associated with them.

1. Click the Roles link in the Application tree menu.
2. On the **Roles** page, enter the role name and click Go. If you know the specific object that the role is associated with, select it.
3. On the **Roles Search Results** page, click the name link of the role for which you were searching.
4. On the **Role Detail** page, you can view all the privileges associated with the role. You can also view the role mappings, which identify item roles and their corresponding change object roles.

To create a role:

1. From the applications tree menu, click Roles.
2. On the **Roles** page, click Create Role.
3. On the **Create Role** page, select the object for which you are creating a role and click Next.
4. Provide a name and description for the new role. Select the object privileges you want to associate with this new role and click Apply. Be aware that selecting the Edit privilege does not implicitly grant the view privilege. So, if you want someone to be able to edit an item, they must be able to view it first. Every role must have at least one privilege associated with it.

   > **Note:** Click Save and Map Roles if you wish to map an item role to a change object role.

To update a role:

1. In the applications tree menu, click Roles.
2. On the **Roles** page, enter the role name and click Go. If you know the specific object that the role is associated with, select it.
3. On the **Role Search Results** page, click the name link of the role for which you were

searching.

4. On the **Role: (Role Name)** page, click Update in the Privileges region.

5. On the **Update Role: (Role Name)** page, you can edit the role name, description, or select/unselect the privileges associated with it.

6. Click Apply.

To update role mappings

7. On the **Role: (Role Name)** page, click Update in the Role Mappings region.

8. On the **Role Mappings** page, you can select a different role name or no role name for each change object.

9. Click Apply.

To delete a role:

On the **Role Search Results** page, select the role you want to delete and click Delete.

> **Note:** Once a role has been granted it cannot be deleted.

Related Topics

Overview of Roles and Role Based Security, page 11-1

Administering People, Groups, and Companies, page 11-6

Implementing Role Based Security, page 11-11

Implementing Change Management Role Based Security, page 11-24

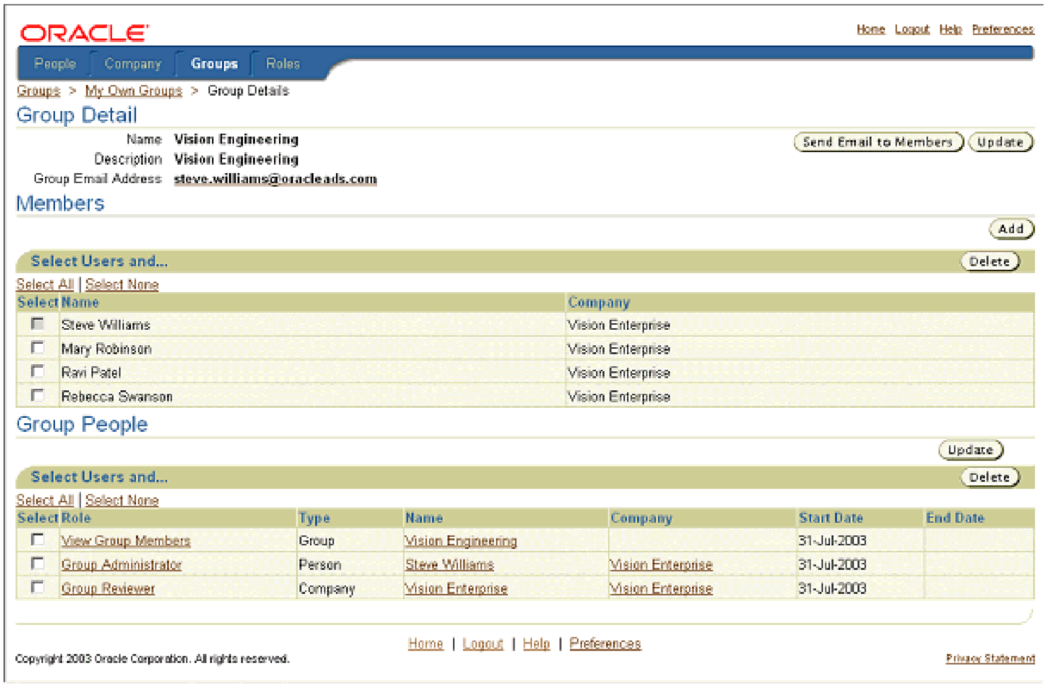
Creating Custom Privileges, page 11-27

Administering People, Groups, and Companies

You can assign a person, group, company, or all users a role on a particular object, such as the Product Catalog (a catalog object) or a mobile phone (an item object). Groups are useful for managing role assignments for items, catalogs, and change management. Groups are also useful in change management approval routings, where one or all people in a group must approve a change, or all people in a group should be notified of a change.

You can create groups of people that include internal users, suppliers and customers. A group consists of one or more members. You can create groups of people for different teams or departments that serve similar business functions. The person that creates the group is by default a member and the Group Administrator. Each member in a group is assigned a group role that determines which privileges are granted to the member of that group. There are three privileges a group role may grant a member: View Group Header, View Group Members, and Manage Group. For example, you can create a Supplier group made up of all your suppliers; however, you do not want any of the members to see who else is in the group. In this case, each of the members would be assigned the Group Reviewer role, which only allows them to see the group header information, but not the other members. In another scenario, you may wish to create an Engineering group where you want members to be aware of who else is in the group. In this case, you can grant each member the View Group Members role. Only a person or group with the Group Administrator role can also manage the group. The Manage Group privilege enables a user to add/delete members and change their roles.

Group details



Groups > My Own Groups > Group Details

Group Detail

Name **Vision Engineering**
Description **Vision Engineering**
Group Email Address steve.williams@oracleads.com

Members

Select Users and...

Select All | Select None

Select	Name	Company
□	Steve Williams	Vision Enterprise
□	Mary Robinson	Vision Enterprise
□	Ravi Patel	Vision Enterprise
□	Rebecca Swanson	Vision Enterprise

Group People

Select Users and...

Select All | Select None

Select	Role	Type	Name	Company	Start Date	End Date
□	View Group Members	Group	Vision Engineering		31-Jul-2003	
□	Group Administrator	Person	Steve Williams	Vision Enterprise	31-Jul-2003	
□	Group Reviewer	Company	Vision Enterprise	Vision Enterprise	31-Jul-2003	

Home | Logout | Help | Preferences

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Privacy Statement

You can add three types of people to a group or assign them to a role on an object directly. The Type attribute on the **People Search** and **Person: (Person Name)** pages corresponds to the three basic types of people in the system:

- Internal

  When you create a user using the E-Business Suite Define User form, you define an employee in the People field. This person, now identified by the username entered, is classified as Internal in the system. You can search for and view details about this person.

- Customer

When you create a user using the E-Business Suite Define User form, you define a customer in the Customer field. This person, now identified by the username entered, is classified as a Customer in the system. You can search for and view details about this person.

- Vendor

  When you create a user using the E-Business Suite Define User form, you define a supplier in Supplier field. This person, now identified by the username entered, is classified as a Vendor in the system. You can search for and view details about this person.

Customer and Vendor are *external* people.

> **Important:** You may have defined people, such as contractors and temporary employees, in Oracle HRMS. You may also have defined people as customers in Oracle Customer Online. These people are not recognized as valid people in the system despite the fact that they are in HRMS and Customer Online. You cannot search for or view details about these people.

To search for people:

1. In the Applications tree menu, click People, Groups and Companies.

2. Click the People tab.

3. On the **People** page, enter the name of the person for whom you are searching in the Search field.

   You can search by first name, last name or user name. You can enter a partial name and search on this. For example, enter "wil". A list of all people with a name beginning with "wil" is returned.

4. Click Go.

   The name you entered is returned in the People Search Results region. If the name you entered is not listed in the People Search Results, check the spelling of the name and try searching again. If you are unable to locate the name, the person is not registered in E-Business Suite, or is not valid in the system. Try registering the person in the E-Business Suite first, or make sure the person is valid in the system.

To create a group:

Groups are communities of people you can define in order to collaborate. You can represent all your teams as groups in the system and give your group access to the system's objects. You can send an e-mail to everyone in a group with a click of a button. To view and create a group, you must have the following list of privileges, such as in the seeded Group Administrator role:

- View Group Header
- View Group Members
- Manage Group

1. In the Applications tree menu, click People, Groups and Companies.
2. Click the Groups tab.
3. On the **Groups** page, click Create Group.
4. On the **Create Group** page, provide the following:

   Group

   Provide a name that identifies the group.

   Description

   Provide a brief description of the group.

   Group Email Address

   Specify the group mailing list, if you have one, as your group's Email address.

5. Click Apply to save the group, or click Add Another Row to create another group.

   After clicking Apply, the **Group Details** page appears.

6. On the **Group Details** page, you can perform the following actions:

   - Click Update in the Group Detail region to edit group information.
   - Click Add to add additional members to the group.
   - If you wish to delete a member, select that group member and click Delete.
   - Click Update in the Group People region to assign a group object role to a specific person, group or company.

     The system automatically assigns the following seeded roles:

     - Group Administrator to the person who created the group
     - View Group Members to all members of the group
     - Group Reviewer to any member of the group creator's company

Tip: Assign the Group Administrator role to an additional person as a backup.

To add/remove members to a group:

1. In the Applications tree menu, click People, Groups and Companies.
2. Click the Groups tab.
3. On the **Groups** page, click My Own Groups.
4. Select a group and click Edit Membership.
5. On the **Group Detail** page, click Add, and select one or more persons from the list of values.
6. To remove members, select each member to delete and click Delete.

To search for a group:

1. In the Applications tree menu, click People, Groups and Companies.
2. Click the Groups tab.
3. On the **Groups** page, enter the full or partial name of the group. Click Go.
    - To locate all groups in which you are a member, click My Group Memberships.
    - To locate all groups that you own, click My Own Groups.
4. If the group name you entered is not listed in the Group Search Results, check the spelling of the name and try searching again. If you are unable to locate the group, it has not yet been created. Create the group using the "Create Group" link on the Groups page.
5. On the **Group Search Results** page, select a group and click Request Membership to join a group. The owner is sent an Email notification and can add you as a member of that group.
6. Click a group name to see all the members of a group (only if you are the owner or a member of that group or have the View Group Members privilege assigned to you).

To find groups that you own:

1. In the Applications tree menu, click the "People, Groups and Companies" link.

2. Click the Groups tab.

3. On the **Groups** page, click the "My Own Groups" link to locate all groups that you own.

   See "To create a group:" above for more details about updating groups.

To search for a company:

1. In the Applications tree menu, click the "People, Groups and Companies" link.

2. Click the Companies tab.

3. On the **Companies** page, enter the name of the company for which you are searching, or enter a letter from the alphabet. If you only know part of the name of the company for which you are searching, enter that name. For example, if you are searching for a company named "AAA Supplier," type "AAA" in the search field. You will then see a list of all companies with "AAA" in their name.

4. Click Go. The name you entered is displayed in the Company Search Results field. If the company name you entered is not listed in the Company Search Results, check the spelling of the name and try searching again. If you are unable to locate the company, it is likely not registered in E-Business Suite. Try registering the customer company using Oracle Customer Online or Oracle Order Management. Try registering the Vendor/Supplier Company using Oracle Purchasing.

Related Topics

Overview of Roles and Role Based Security, page 11-1

Administering Roles, page 11-3

Implementing Role Based Security, page 11-11

Implementing Change Management Role Based Security, page 11-24

Creating Custom Privileges, page 11-27

Implementing Role Based Security

To implement role based security on a particular object, attach a role to the object and a person, group, company, or all users to the role on the object. For example, for each item catalog category, you can specify which people can create items by assigning them the Catalog Category User role on the item catalog category.

To implement role based security on a user-defined attribute group, assign people to an item role containing custom privileges for the attribute group.

Prerequisites

- ❒ Create roles. See: Administering Roles, page 11-3
- ❒ Optionally, create groups. See: Administering People, Groups, and Companies, page 11-6

To assign people to a catalog:

Depending on their assigned role, people can assign items to a catalog or view the catalog hierarchy. You can assign either of the following seeded roles to people in a catalog:

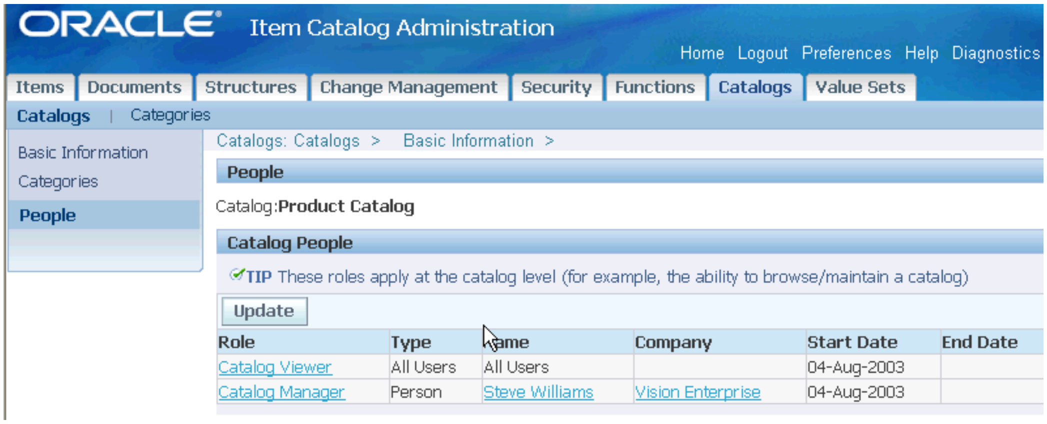
Catalog Manager

The Catalog Manager role enables users to view the catalog hierarchy and also enables them to assign items to this catalog.

Catalog Viewer

The Catalog Viewer role enables users to view the catalog hierarchy, but they cannot assign items to it.

Assigning Catalog Roles



Catalog:**Product Catalog**

✓TIP These roles apply at the catalog level (for example, the ability to browse/maintain a catalog)

Role	Type	Name	Company	Start Date	End Date
Catalog Viewer	All Users	All Users		04-Aug-2003	
Catalog Manager	Person	Steve Williams	Vision Enterprise	04-Aug-2003	

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.
2. On the **Search: Catalogs** page, select the catalog to which you wish to assign people.
3. On the **Basic Information** page for the catalog, click the "People" link.
4. On the **People** page, click Update. After the page refreshes, click Add Another Row.

5. After the **Update People** page refreshes, select a role, the type of people to use the role, and the name of the company, group, or person given the role on the catalog. Specify a start date and, optionally, an end date.

6. Click Apply.

To delete people from a catalog

7. In the **Update People** page, select a row and click Remove.

8. Click Apply.

To assign people to a catalog category:

> **Note:** There are no seeded roles for the catalog category object. You must create a role for the catalog category before you can assign people.

1. On the **Search: Item Catalog Categories** page, click the Catalogs tab.

2. On the **Search: Catalogs** page, select the catalog containing the category to which you wish to assign people.

3. On the catalog's **Basic Information** page, click the Categories link on the left side of the page.

   The **Categories** page displays the valid categories for the selected catalog.

4. Click on the name link of the valid category to which you wish to assign people.

5. On the **Category Details** page, click the People link.

6. On the **People** page, under the Category People heading, click Update. After the page refreshes, click Add Another Row.

7. After the **Category People** page refreshes, select a role, the type of people to use the role, and the name of the company, group, or person given the role on the catalog. Specify a start date and, optionally, an end date.

8. Click Apply.

To delete people from a catalog category

9. In the **Category People** page, select a row and click Remove.

10. Click Apply.

To grant group roles to people:

You can grant a person, group or company a specific role for a group. You must have the Manage Groups privilege for the group in order to grant others a role on the group.

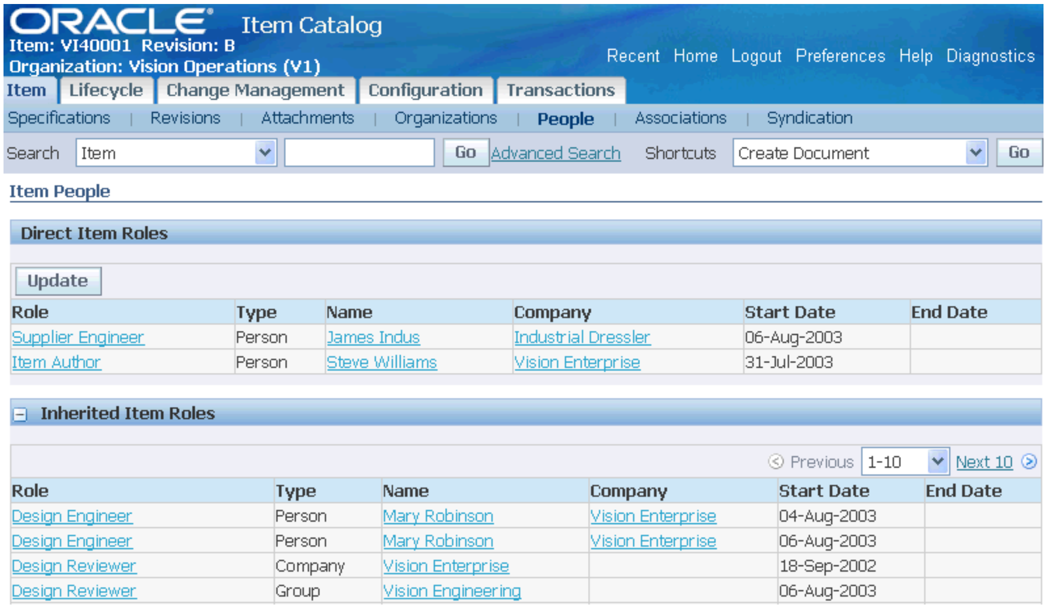
1. In the Applications tree menu, click People, Groups and Companies.
2. Click the Groups tab.
3. On the **Groups** page, click My Own Groups or search for a group for which you have the Manage Groups privilege.
4. Click on a group name.
5. In the **Group Details** page, under the Group People heading, click Update.
6. In the **Update Group People** page, click Add Another Row.
7. Select a role, the type of people to use the role, and the name of the company, group, or person given the role on the group. Specify a start date and, optionally, an end date.
8. Click Apply.

To assign people to an item:

You can assign roles for certain users directly to a single item or assign roles indirectly using roles inherited from the following objects that contain the item:

- an alternate catalog
- an alternate catalog category
- an item catalog category
- an organization

Item-specific role assignments


ORACLE Item Catalog
Item: VI40001 Revision: B
Organization: Vision Operations (V1)
Recent Home Logout Preferences Help Diagnostics
Item Lifecycle Change Management Configuration Transactions
Specifications | Revisions | Attachments | Organizations | People | Associations | Syndication
Search Item Go Advanced Search Shortcuts Create Document Go

Item People

Direct Item Roles

Update

Role	Type	Name	Company	Start Date	End Date
Supplier Engineer	Person	James Indus	Industrial Dressler	06-Aug-2003	
Item Author	Person	Steve Williams	Vision Enterprise	31-Jul-2003	

Inherited Item Roles

Role	Type	Name	Company	Start Date	End Date
Design Engineer	Person	Mary Robinson	Vision Enterprise	04-Aug-2003	
Design Engineer	Person	Mary Robinson	Vision Enterprise	06-Aug-2003	
Design Reviewer	Company	Vision Enterprise		18-Sep-2002	
Design Reviewer	Group	Vision Engineering		06-Aug-2003	

1. In the Applications tree menu, use either the "Simple Search" or "Advanced Search" links to search for the item to which you wish to add people.

2. Click the item's link in the search results.

3. On the item's **Overview** page, click People.

4. On the **Item People** page, click Update.

   > **Note:** You can only update the People page for an item from within the master organization.

5. On the **Update Item People** page, click Add Another Row. Provide the following information:

   Role

   Specify the role of the person you are adding.

   Type

   Specify the type of person you are adding (All Users, Company, Person, Group).

   Name

   Enter the name of the company, person, or group.

   Start Date

Specify the date on which the person/group gains access to the item.

End Date

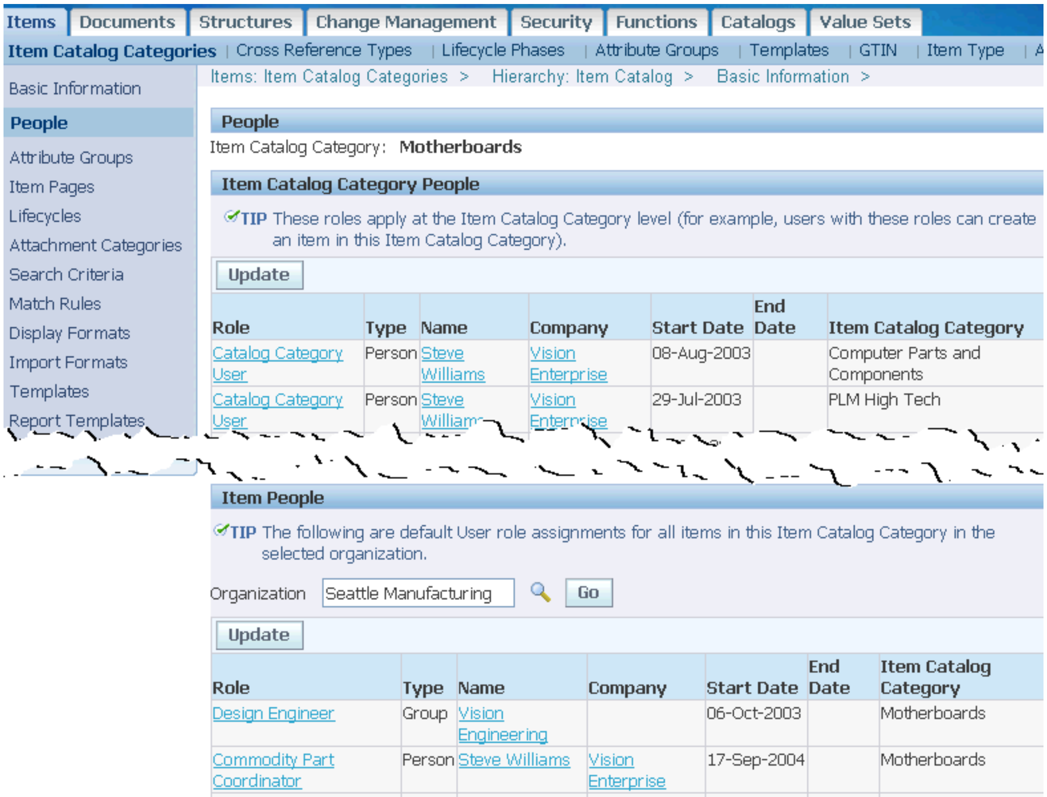
Optionally, specify the date on which the person/group no longer has access to the item.

6. Click Apply.

To assign people to an item catalog category:

You can grant roles to people by item catalog category for all organizations or by item catalog category in a particular organization. Item catalog categories at a lower level in the catalog hierarchy inherit roles granted to people at a higher level item catalog category. You cannot remove or edit inherited roles.

Item Catalog Category People



People

Item Catalog Category: **Motherboards**

Item Catalog Category People

TIP These roles apply at the Item Catalog Category level (for example, users with these roles can create an item in this Item Catalog Category).

Role	Type	Name	Company	Start Date	End Date	Item Catalog Category
Catalog Category User	Person	Steve Williams	Vision Enterprise	08-Aug-2003		Computer Parts and Components
Catalog Category User	Person	Steve Williams	Vision Enterprise	29-Jul-2003		PLM High Tech

Item People

TIP The following are default User role assignments for all items in this Item Catalog Category in the selected organization.

Organization: Seattle Manufacturing

Role	Type	Name	Company	Start Date	End Date	Item Catalog Category
Design Engineer	Group	Vision Engineering		06-Oct-2003		Motherboards
Commodity Part Coordinator	Person	Steve Williams	Vision Enterprise	17-Sep-2004		Motherboards

1. Navigate to the Setup Workbench. On the **Item Catalog Categories** page, search for and select an item catalog category.

2. On the **Basic Information** page, click the People link.

To assign people to an item catalog category for all organizations

3. On the **People** page, under the Item Catalog Category People heading, click Update.

   This updates roles for the item catalog category across all organizations.

4. In the **Edit People** page, click Add Another Row. Provide the following information:

   Role

   Specify the role of the person you are adding.

   Type

   Specify the type of person you are adding (All Users, Company, Person, Group).

   Name

   Enter the name of the company, person, or group.

   Start Date

   Specify the date on which the person/group gains access to the item catalog category.

   End Date

   Optionally, specify the date on which the person/group no longer has access to the item catalog category.

5. Click Apply.

To assign people to an item catalog category for a particular organization

6. On the **People** page, under the Item People heading, search for and select an organization.

7. Under the Organization field, click Update.

   This updates roles for the item catalog category only in the selected organization.

8. In the **Edit Item People** page, click Add Another Row. Provide the following information:

   Role

   Specify the role of the person you are adding.

   Type

   Specify the type of person you are adding (All Users, Company, Person, Group).

   Name

   Enter the name of the company, person, or group.

Start Date

Specify the date on which the person/group gains access to the item catalog category.

End Date

Optionally, specify the date on which the person/group no longer has access to the item catalog category.

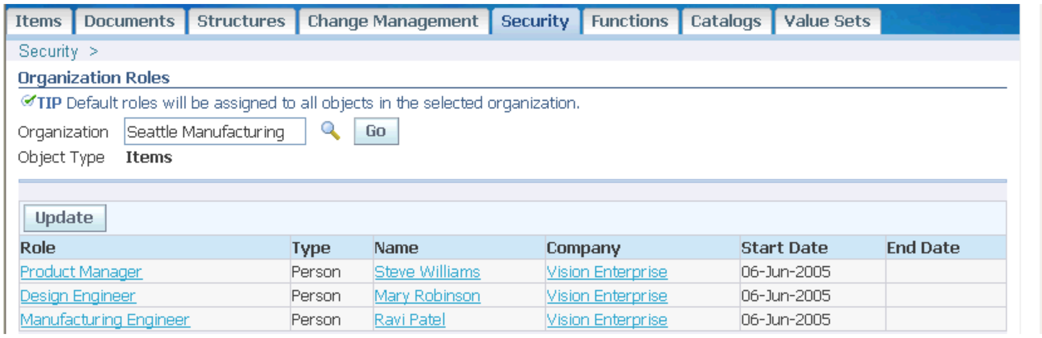
9. Click Apply.

To assign people to all items in an organization:

You can grant a specific role to a certain person, group, company, or all users that applies to all items in an organization. This is useful when you want to grant one person access to many items.

> **Note:** You can grant organization-level roles if you are assigned the Item Administration function through one of your responsibilities.
>
> If you cannot grant organization-level roles, then contact your system administrator. For more information, see:
>
> - Creating and Updating Roles, *Oracle Applications System Administrator's Guide - Security*.
>
> - Excluding functions in the Menu Exclusions tab,Responsibilities Window, *Oracle Applications System Administrator's Guide - Security*.

Organization Level Item Role Assignments



Organization Roles

TIP Default roles will be assigned to all objects in the selected organization.

Organization: Seattle Manufacturing

Object Type: Items

Role	Type	Name	Company	Start Date	End Date
Product Manager	Person	Steve Williams	Vision Enterprise	06-Jun-2005	
Design Engineer	Person	Mary Robinson	Vision Enterprise	06-Jun-2005	
Manufacturing Engineer	Person	Ravi Patel	Vision Enterprise	06-Jun-2005	

1. In the Applications tree menu, click Setup Workbench.

2. On the **Item Catalog Categories** page, click the Security tab.

3. On the **Organization Roles** page, select an Organization to which to grant a role

and click Go. The table returns all people, groups and companies who have been granted roles in the selected organization.

4. Click Update.

5. On the **Update Organization Roles** page, click Add Another Row. A new row appears in the table. Enter the following information:

   - **Role**

     Select a role for this grant.

   - **Type**

     Select the type of grant: a grant to a single person, a group, a company, or all users.

   - **Name**

     Enter the name of the person, group, or company to which you are making this grant.

   - **Start Date**

     Select a start date from which this grant is effective.

   - **End Date**

     Select an end date on which the grant will no longer be effective.

6. Click Apply.

To revoke a specific role from a person for all items in the organization

7. On the **Update Organization Roles** page, select the person(s) or group(s) whose role you wish to delete, and click Remove.

8. Click Apply.

To edit a role grant of a person for all items in an organization

9. On the **Update Organization Roles** page, select the person or group whose role you wish to edit, and provide a new start date or end date.

10. Click Apply.

To implement attribute group security:

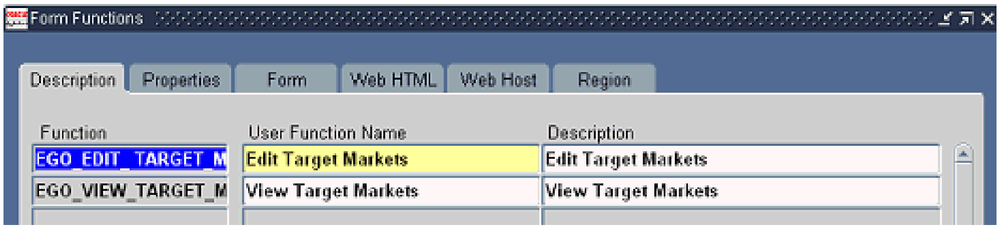
When implementing role-based item security, you can create custom privileges to control the view and edit permissions for specific item attribute groups. You can control which users can view and/or edit certain attribute groups for an item by assigning a role granting those specific privileges. By default, an item role's View Item and Edit Item privileges control whether or not you can view or edit item attributes that are not controlled specifically at the item attribute group level. In other words, when implementing item security you do not have to specify a view or edit privilege for each item attribute group.

Example: Attribute Group Security

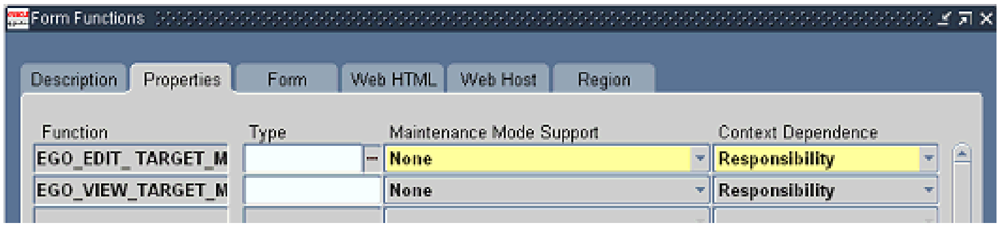
Suppose your company is designing, along with your supplier, a new motherboard for its next generation of desktop computers. To improve design collaboration you would like to securely share item information about the motherboard—both internally between departments and externally with your suppliers and contract manufacturers. The Supplier Engineer should only be able to view specific item attribute groups such as the Technical Specifications. The Supplier Engineer should not be able to view the Market Research attributes. The Engineering Manager and Marketing Manager should be able to view and edit the Market Research attributes, while a Design Engineer should only view the Market Research attributes. There are three sets of Market Research attributes (attribute groups): Key Metrics, Target Markets, and Competitors.

1. Select the Application Developer responsibility, navigate to the Form Functions form, and create Form Functions for each privilege that controls view and edit permissions for the Market Research attribute groups. See: Creating Custom Privileges, page 11-27.

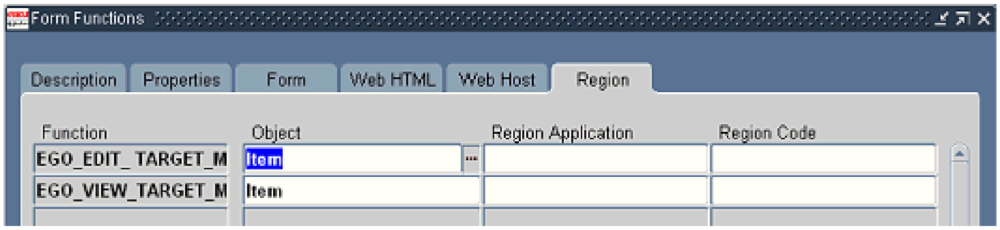
Defining form functions to create user-defined item role privileges



Function	User Function Name	Description
EGO_EDIT_TARGET_M	Edit Target Markets	Edit Target Markets
EGO_VIEW_TARGET_M	View Target Markets	View Target Markets



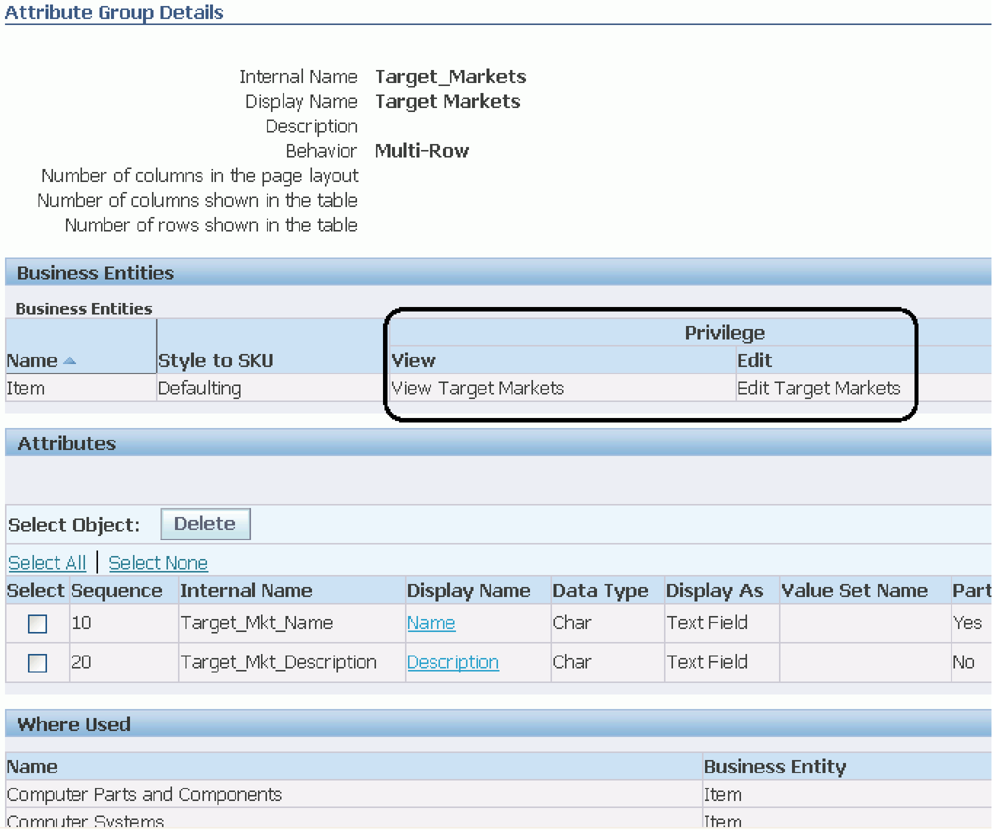
Function	Type	Maintenance Mode Support	Context Dependence
EGO_EDIT_TARGET_M		None	Responsibility
EGO_VIEW_TARGET_M		None	Responsibility



Function	Object	Region Application	Region Code
EGO_EDIT_ TARGET_M	Item		
EGO_VIEW_TARGET_M	Item		

2. Select the Development Manager responsibility and navigate to the Setup Workbench. In the **Attribute Group Details** page for each Market Research-related attribute group (for example, Target Markets) specify the View Privilege (for example, View Target Markets) and Edit Privilege (for example, Edit Target Markets) in the Business Entities region.

Defining Item Attribute group with view and edit privileges



Attribute Group Details

Internal Name	Target_Markets
Display Name	Target Markets
Description	
Behavior	Multi-Row
Number of columns in the page layout	
Number of columns shown in the table	
Number of rows shown in the table	

Business Entities

Business Entities

Name	Style to SKU	Privilege	
		View	Edit
Item	Defaulting	View Target Markets	Edit Target Markets

Attributes

Select Object: Delete

Select All | Select None

Select	Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Part
□	10	Target_Mkt_Name	Name	Char	Text Field		Yes
□	20	Target_Mkt_Description	Description	Char	Text Field		No

Where Used

Name	Business Entity
Computer Parts and Components	Item
Computer Systems	Item

3. On the **Item Role Detail** page for the Marketing Manager and Engineering Manager roles, grant the following privileges:

   - View Target Markets

     - View Key Metrics

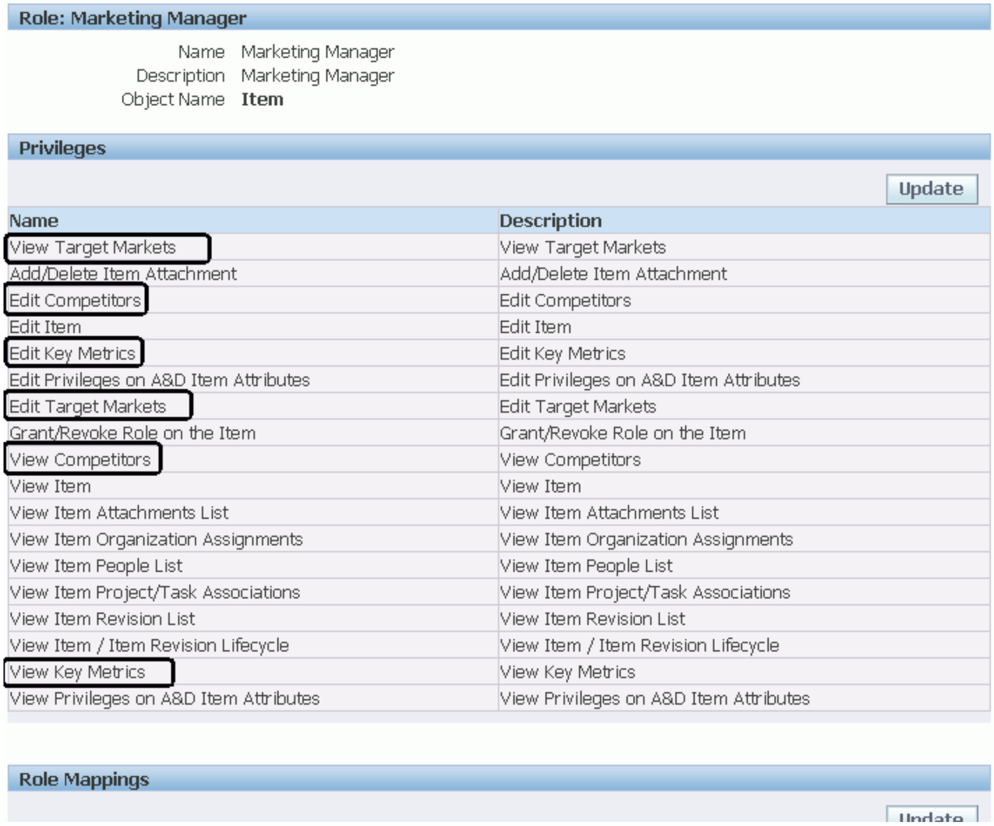
     - View Competitors

     - Edit Target Markets

     - Edit Key Metrics

     - Edit Competitors

Defining the Marketing Manager role with specific item attribute group privileges



Role: Marketing Manager

Name	Marketing Manager
Description	Marketing Manager
Object Name	**Item**

Privileges

Name	Description
View Target Markets	View Target Markets
Add/Delete Item Attachment	Add/Delete Item Attachment
Edit Competitors	Edit Competitors
Edit Item	Edit Item
Edit Key Metrics	Edit Key Metrics
Edit Privileges on A&D Item Attributes	Edit Privileges on A&D Item Attributes
Edit Target Markets	Edit Target Markets
Grant/Revoke Role on the Item	Grant/Revoke Role on the Item
View Competitors	View Competitors
View Item	View Item
View Item Attachments List	View Item Attachments List
View Item Organization Assignments	View Item Organization Assignments
View Item People List	View Item People List
View Item Project/Task Associations	View Item Project/Task Associations
View Item Revision List	View Item Revision List
View Item / Item Revision Lifecycle	View Item / Item Revision Lifecycle
View Key Metrics	View Key Metrics
View Privileges on A&D Item Attributes	View Privileges on A&D Item Attributes

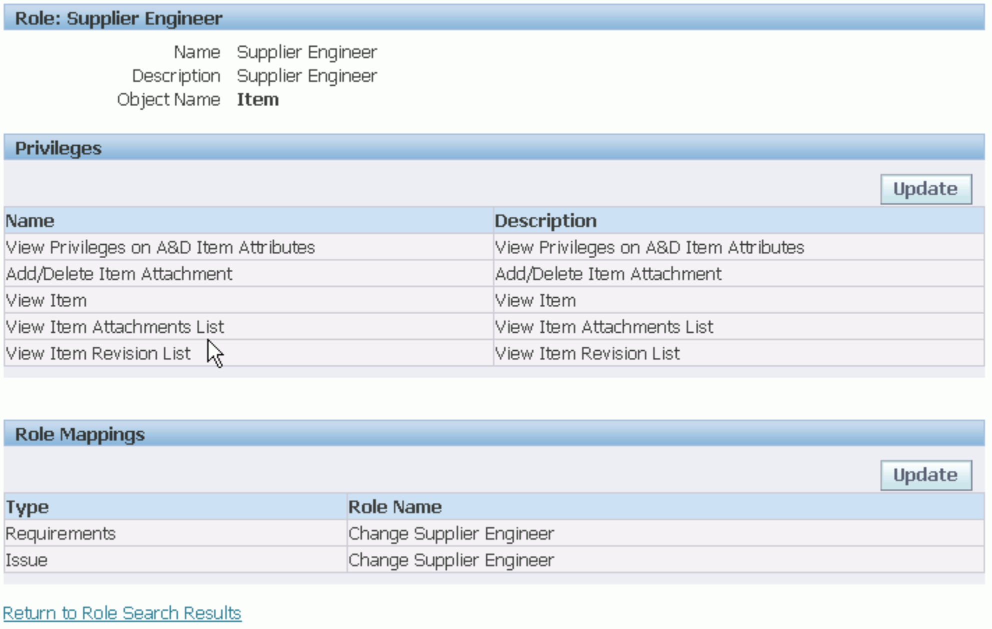
Role Mappings

For the Design Engineer role, grant the following privileges:

- View Target Markets
- View Key Metrics
- View Competitors

Do not grant any of the Market Research privileges to the Supplier Engineer role.

Defining the Supplier Engineer role with no specific item attribute group privileges



Role: Supplier Engineer

Name	Supplier Engineer
Description	Supplier Engineer
Object Name	**Item**

Privileges

Name	Description
View Privileges on A&D Item Attributes	View Privileges on A&D Item Attributes
Add/Delete Item Attachment	Add/Delete Item Attachment
View Item	View Item
View Item Attachments List	View Item Attachments List
View Item Revision List	View Item Revision List

Role Mappings

Type	Role Name
Requirements	Change Supplier Engineer
Issue	Change Supplier Engineer

Related Topics

Overview of Roles and Role Based Security, page 11-1

Administering Roles, page 11-3

Administering People, Groups, and Companies, page 11-6

Implementing Change Management Role Based Security, page 11-24

Creating Custom Privileges, page 11-27

Implementing Change Management Role Based Security

You can assign change roles to a person, group, company, or all users. To simplify maintaining change management security, you can assign change roles directly to the change object or inherit them through item role mapping from the subject item of the change object. For example, you can map the Design Engineer item role to the Change Design Engineer role for issues, change requests, and change orders. So users with the Design Engineer role on the subject item of the change request header will inherit the Change Design Engineer role as well. You can also assign a default role to all internal users with the site level profile ENG: Internal User Default Role for Changes. A role that is explicitly granted to a user for a change object is a direct role assignment. Roles inherited from an item are inherited role assignments.

All seeded item roles are mapped to seeded change object roles. User-created item roles do not have to be mapped to change roles. If you do not want a seeded item role mapped to a change role, edit that item role (such as Item Author) explicitly.

The change role assigned to a user for a change object (for example, issue, change request, change order) determines which actions that user can perform on the change object. For example, a user with an Approver role on a change request is granted the View Basic Change Information and Edit/Delete Change privileges. You can also specify which user-defined attribute groups a user can view and/or edit when granted a change role.

Following are the seeded change roles:

- Approver
- Assignee
- Creator
- Requestor
- Reviewer

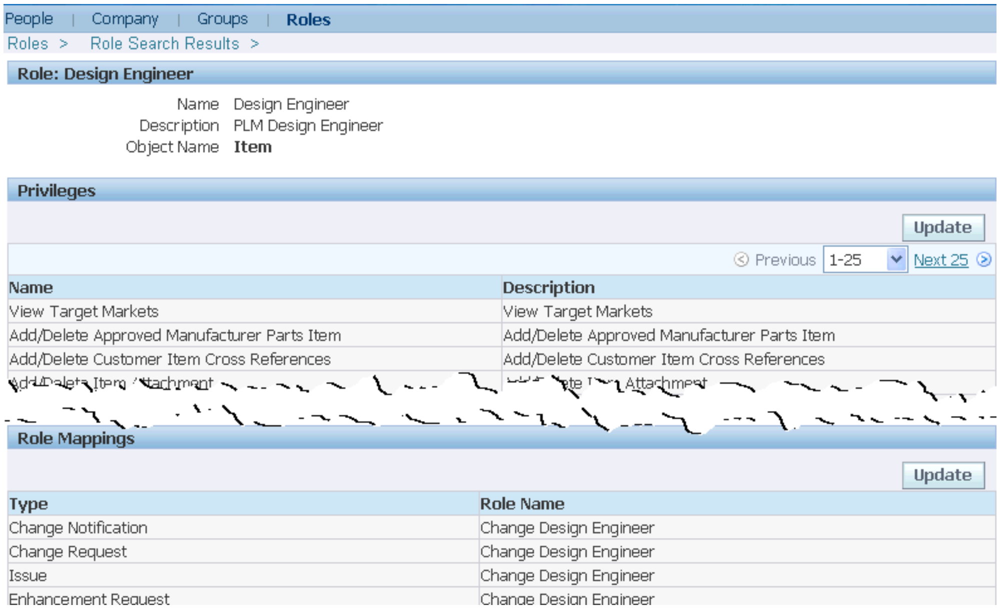
To assign change roles directly to the change object:

Change roles are assigned directly to the change object by the change type. When you defined your change types in Defining Header Types, page 7-28, you specified a workflow. Each workflow step with an Approval status requires at least one associated workflow template (see: Defining Workflow Templates, page 7-16). Each person, role, or group specified in the workflow template receives a role on the change object based on the approval routing activity. All Request Approval assignees get an Approver role. Request Comment and FYI assignees get a Reviewer role on the change object. You can also specify a Default Assigned To role for a person/group when you define a change type. The Assigned To person for every change object gets an Assignee role.

To inherit change roles through item role mapping:

1. In the applications tree menu, click Roles.
2. On the **Roles** page, select the item object, enter the role name, and then click Go.
3. On the **Role Search Results** page, click the name link of the role for which you were searching.
4. On the **Role: (Role Name)** page, click Update in the Role Mappings region.
5. On the **Role Mappings** page, you can map each change object type to a specific change role.
6. Click Apply.

Mapping an Item Role to Change Roles


People | Company | Groups | Roles
Roles > Role Search Results >
Update
Previous 1-25 Next 25
Update

Role: Design Engineer

Name Design Engineer
Description PLM Design Engineer
Object Name **Item**

Privileges

Name	Description
View Target Markets	View Target Markets
Add/Delete Approved Manufacturer Parts Item	Add/Delete Approved Manufacturer Parts Item
Add/Delete Customer Item Cross References	Add/Delete Customer Item Cross References
Add/Delete Item Attachment	Add/Delete Item Attachment

Role Mappings

Type	Role Name
Change Notification	Change Design Engineer
Change Request	Change Design Engineer
Issue	Change Design Engineer
Enhancement Request	Change Design Engineer

To assign a default change role to all internal users:

You can assign a default role to all internal users with the site level profile option ENG: Internal User Default Role for Changes.

1. Within the System Administrator responsibility, click System.

2. In the **System Profile Values** window, search for and select the site level profile option ENG: Internal User Default Role for Changes.

3. In the Site field, select the default change role for the site from the list of values.

4. Save your work.

To implement attribute group security for change management:

When implementing role-based change management security you can set up privileges to control the view and edit permissions for specific change management attribute groups. You can control which users can view and/or edit certain attribute groups for a change object by assigning a role granting those specific privileges. By default, a change role's View Basic Change Information and Edit/Delete Change privileges control whether you can view or edit attributes that are not controlled specifically at the attribute group level. In other words, when implementing change management security you do not have to specify a view or edit privilege for each attribute group.

Suppose your company is co-designing with your supplier a new motherboard for its next generation of desktop computers. To improve communication with your supplier on design changes to the motherboard, you would like to securely share change request information externally with your suppliers and contract manufacturers. The Supplier Engineer should only be able to view specific attribute groups.

1. Select the Application Developer responsibility, navigate to the Form Functions form, and create Form Functions for each privilege that controls view and edit permissions for the attribute groups. Specify "Change" or "Change Line" in the Object field for each Form Function.

   See: Creating Custom Privileges, page 11-27

2. Select the Development Manager responsibility and navigate to the Setup Workbench. On the **Attribute Group Details** page for each attribute group, specify the View Privilege and Edit Privilege in the Business Entities region.

3. On the **Change Role Detail** page, grant the privileges that you defined as Form Functions in the previous steps.

Related Topics

Overview of Roles and Role Based Security, page 11-1

Administering Roles, page 11-3

Administering People, Groups, and Companies, page 11-6

Implementing Role Based Security, page 11-11

Creating Custom Privileges, page 11-27

Creating Custom Privileges

The system includes a number of seeded privileges. However, you have the option to create custom privileges to meet the needs of your business.

To create a custom privilege:

1. Log into Oracle Forms using the System Administrator responsibility.

2. In the Application menu, select Function.

3. In the Form Functions window, provide the following information:

   Function

   Enter a unique function name. You may use this name when calling your function programmatically.

   User Function Name

   Enter a unique name that describes your function. You see this name when assigning functions to roles.

Description

Provide a description of the function.

4. Click the Region tab, and select the Object for which you are creating this privilege.

5. Click Save.

Related Topics

Overview of Roles and Role Based Security, page 11-1

Administering Roles, page 11-3

Administering People, Groups, and Companies, page 11-6

Implementing Role Based Security, page 11-11

Implementing Change Management Role Based Security, page 11-24

12

Publishing Item, Catalog, and Structure Data

This chapter covers the following topics:

- Overview of Item, Catalog, and Structure Data Publication
- Overview of Item, Catalog and Structure Business Events
- Overview of Item, Catalog, and Structure Publication Services
- Overview of User-Initiated Publication of Item, Catalog, and Structure Data

Overview of Item, Catalog, and Structure Data Publication

Users can manually initiate the publication process of Item, Catalog and Structure data in Oracle Product Information Management (PIM) as needed or automatically initiate the process as data is created or updated using business events. For user initiated publication, a publish action is available from the item workbench, simple and advanced search results pages, and browse catalog page, as well as from the structure list and structure details pages. Item, Catalog and Structure data in PIM can be published explicitly by the user or implicitly as data is created or updated. For user initiated publication, a publish action is available from the item workbench, simple and advanced search results pages, browse catalog page, plus structure list and structure details pages. For automated publication, the business event framework, in conjunction with publication services, provides an integration infrastructure for publishing data in the PIM repository to consuming business process services and/or subscribing applications.

Publication services are a set of predefined APIs that extract item, catalog, and structure information from PIM. Whenever an item, structure, catalog, and related data is created or changed within PIM, a business event is raised. These business events in PIM are pre-registered with the Oracle Workflow Event manager. A system registered in the Oracle Workflow Event manager can subscribe to an event, and use the event subscription logic to specify the processes to perform when the triggering event occurs.

A business event passes the primary identifier of the changed item, catalog, or structure plus the operation performed, such as create, update or delete. The subscriber can call the query services to extract the object definition from PIM using the entity identifier passed by the business event. The subscriber can specify what information they require about that entity based on the input parameters passed to the query service. The query service then returns the object definition to the subscriber.

Related Topics

Overview of Item, Catalog and Structure Business Events, page 12-2

Overview of Item, Catalog, and Structure Publication Services, page 12-3

Overview of User-Initiated Publication of Item, Catalog, and Structure Data, page 12-4

Item, Catalog, and Structure Publication Services, page G-1

Overview of Item, Catalog and Structure Business Events

If any of the following information is created, updated, deleted, or inactivated, Oracle Product Information Management (PIM) raises registered business events to record the occurrence. The name of the corresponding business event is shown in parentheses.

Items

- Item primary, GDSN, and user-defined attributes (oracle.apps.ego.item.postAttributeChange)

- Item supplier or supplier site assignments (oracle.apps.ego.item.associations.create, oracle.apps.ego.item.associations.delete, oracle.apps.ego.item.associations.update)

  Item supplier or supplier site attributes (oracle.apps.ego.item.postAttributeChange)

- Item organization assignments (oracle.apps.ego.item.associations.create, oracle.apps.ego.item.associations.delete, oracle.apps.ego.item.associations.update)

- Item organization attributes (oracle.apps.ego.item.postAttributeChange)

- Item supplier or supplier site organization assignments (oracle.apps.ego.item.associations.create, oracle.apps.ego.item.associations.delete, oracle.apps.ego.item.associations.update)

- Item supplier or supplier site organization attributes (oracle.apps.ego.item.postAttributeChange)

- Related items (oracle.apps.ego.item.postBatchProcess)

- Item cross references (oracle.apps.ego.item.postXrefChange)

- Style – SKU item relationships (oracle.apps.ego.item.postItemCreate, oracle.apps.ego.item.postItemUpdate)

- Item revisions (oracle.apps.ego.item.postRevisionChange)

Structures

- Bills of Material hierarchy structure components (oracle.apps.bom.structure.created, oracle.apps.bom.structure.modified, oracle.apps.bom.structure.deleteSuccess, oracle.apps.bom.component.deleteSuccess)

Item Catalogs

- Item Catalog Category (oracle.apps.ego.item.postCatalogCategoryChange, oracle.apps.ego.item.postValidCategoryChange)
- Item Catalog Category assignment (oracle.apps.ego.item.postCatalogAssignmentChange)

Catalogs

- Catalog (oracle.apps.ego.item.postValidCategoryChange)
- Catalog Category (oracle.apps.ego.item.postCatalogCategoryChange)
- Category assignment (oracle.apps.ego.item.postCatalogAssignmentChange)

Related Topics

Item and Catalog Business Events, page B-1

For structure business events, see: Business Events, *Oracle Bills of Material User's Guide*

Managing Business Events, *Oracle Workflow Developer's Guide*

Overview of Item, Catalog, and Structure Data Publication, page 12-1

Overview of Item, Catalog, and Structure Publication Services

Oracle provides the following item, catalog, and structure publication services:

- Item Services
  - getItemInformation

    This object level service takes an item, organization, revision, and a set of publish options as input, and returns information for that item and, optionally, the item's structure based on those parameters. The service returns a list of items comprised of the top item, and, if the caller chooses to explode the item structure, all components for that structure.
  - getItemAttributes

    This service takes an item and organization identifier as input and returns primary and user-defined attributes for the item.

- Catalog Services
  - getItemCategoryAttributes

    This service takes an item, organization, catalog, and category identifier as input and returns information about the specified item-category intersection.

  - getCategoryAttributes

    This service takes a category identifier as input and returns details about the specified category.

  - getCatalogAttributes

    This service takes a catalog identifier, and, optionally, a parent and child category identifier as input and returns details about the catalog.

- Structure Services
  - getItemStructure

    This object level service takes an item, organization, revision, and a set of publish options as input, and returns information for an item's structure and components based on those parameters. The output from the service is a list of structures, comprised of the top item structure and intermediate structures with their associated information.

  - getStructureAttributes

    This service takes a structure identifier and, optionally, a component identifier as input and returns details about the structure.

Related Topics

Overview of Item, Catalog, and Structure Data Publication, page 12-1

See the appendix for a full description of all publication services: Item, Catalog, and Structure Publication Services, page G-1

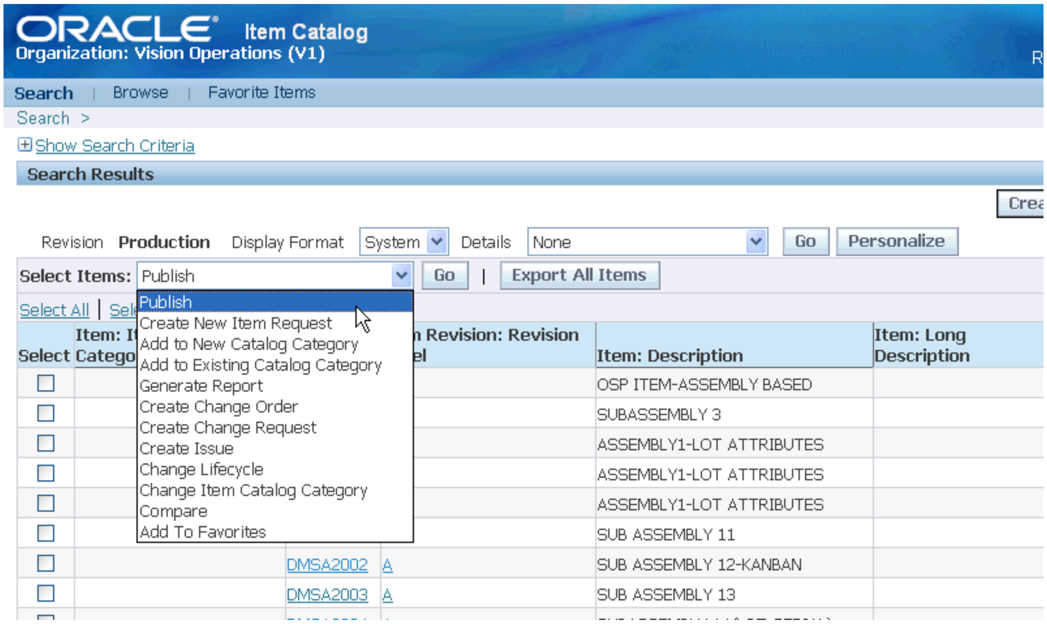
Overview of User-Initiated Publication of Item, Catalog, and Structure Data

You can initiate the publication process of item, catalog and structure data in PIM as needed or you can automatically initiate the publish process as data is created or updated using business events. For user initiated publication, use the publish action available from the simple and advanced **Search Results** and **Browse Catalog** pages, as well as the **Structure List** and **Structure: Primary** pages.

Refer to the following topics for instructions on how to navigate to the above pages:

- Browsing the Item Catalog and Alternate Catalogs, *Oracle Product Information Management User's Guide*
- Searching for Items, *Oracle Product Information Management User's Guide*
- Viewing Item Structures, *Oracle Product Information Management User's Guide*

Search Results Page

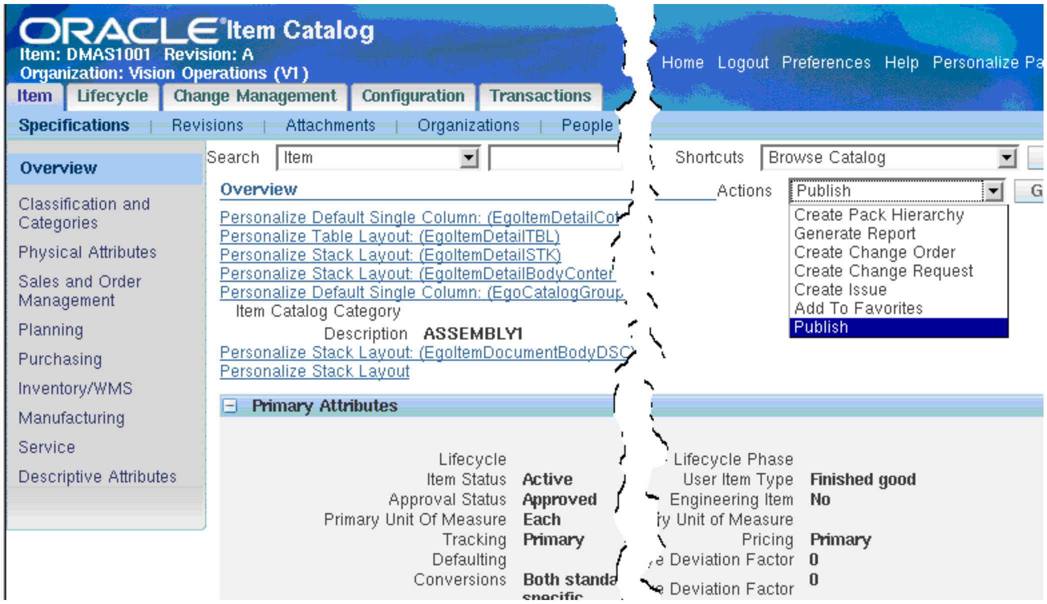


Revision **Production** Display Format System Details None

Select Items: Publish

Select	Item: It Catego		n Revision: Revision el	Item: Description	Item: Long Description
☐				OSP ITEM-ASSEMBLY BASED	
☐				SUBASSEMBLY 3	
☐				ASSEMBLY1-LOT ATTRIBUTES	
☐				ASSEMBLY1-LOT ATTRIBUTES	
☐				ASSEMBLY1-LOT ATTRIBUTES	
☐				SUB ASSEMBLY 11	
☐		DMSA2002	A	SUB ASSEMBLY 12-KANBAN	
☐		DMSA2003	A	SUB ASSEMBLY 13	

Item Overview Page



Item: DMAS1001 Revision: A
Organization: Vision Operations (V1)

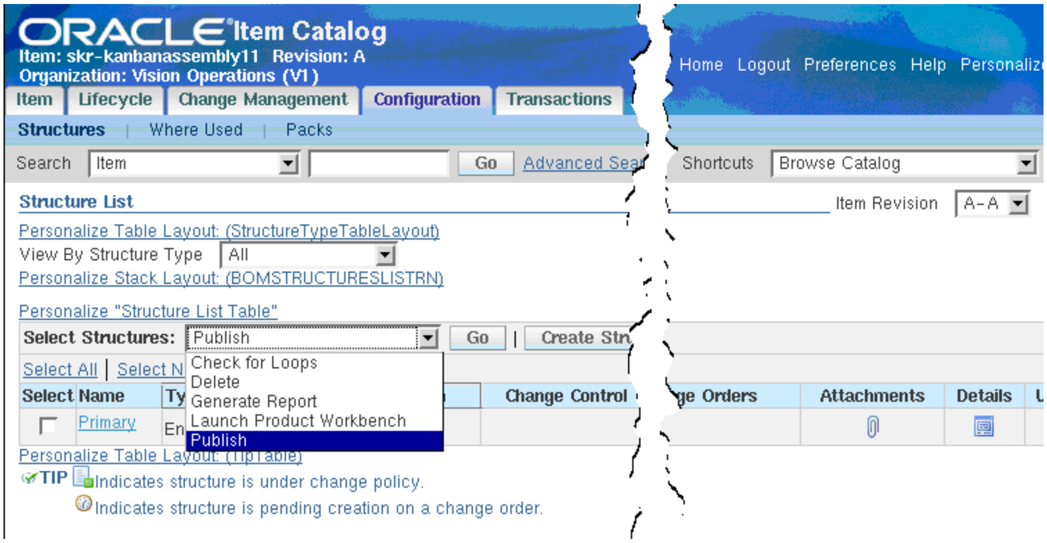
Overview

Personalize Default Single Column: (EgoItemDetailCol
Personalize Table Layout: (EgoItemDetailTBL)
Personalize Stack Layout: (EgoItemDetailSTK)
Personalize Stack Layout: (EgoItemDetailBodyConter
Personalize Default Single Column: (EgoCatalogGroup
Item Catalog Category
Description ASSEMBLY1
Personalize Stack Layout: (EgoItemDocumentBodyDSC
Personalize Stack Layout

⊟ Primary Attributes

Lifecycle		Lifecycle Phase	
Item Status	Active	User Item Type	Finished good
Approval Status	Approved	Engineering Item	No
Primary Unit Of Measure	Each	ry Unit of Measure	
Tracking	Primary	Pricing	Primary
Defaulting		e Deviation Factor	0
Conversions	Both standa specific	e Deviation Factor	0

Structure List Page



Item: skr-kanbanassembly11 Revision: A
Organization: Vision Operations (V1)

Structure List

Item Revision A-A

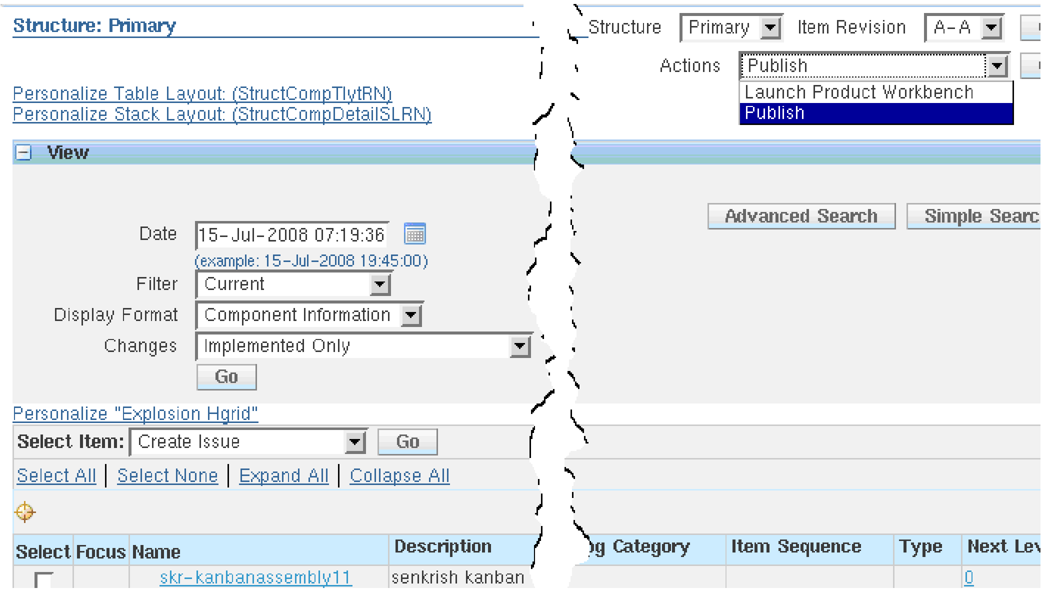
Personalize Table Layout: (StructureTypeTableLayout)
View By Structure Type All
Personalize Stack Layout: (BOMSTRUCTURESLISTRN)

Personalize "Structure List Table"

Select	Name	Ty	Change Control	ge Orders	Attachments	Details	U
□	Primary	En			📎	▤	

Personalize Table Layout: (TipTable)
TIP Indicates structure is under change policy.
Indicates structure is pending creation on a change order.

Structure: Primary Page



Structure: Primary

Structure: Primary
Item Revision: A-A
Actions: Publish

Personalize Table Layout: (StructCompTlytRN)
Personalize Stack Layout: (StructCompDetailSLRN)

View

Date: 15-Jul-2008 07:19:36
(example: 15-Jul-2008 19:45:00)
Filter: Current
Display Format: Component Information
Changes: Implemented Only

Personalize "Explosion Hgrid"

Select Item: Create Issue

Select	Focus	Name	Description	g Category	Item Sequence	Type	Next Lev
☐		skr-kanbanassembly11	senkrish kanban				0

Related Topics

Overview of Item, Catalog, and Structure Data Publication, page 12-1

13

Setting Up For The Global Data Synchronization Network

This chapter covers the following topics:

- Overview of the Global Data Synchronization Network
- Overview of the Inbound GDSN Implementation Architecture
- Administering the Network and Servers
- Administering BPEL

Overview of the Global Data Synchronization Network

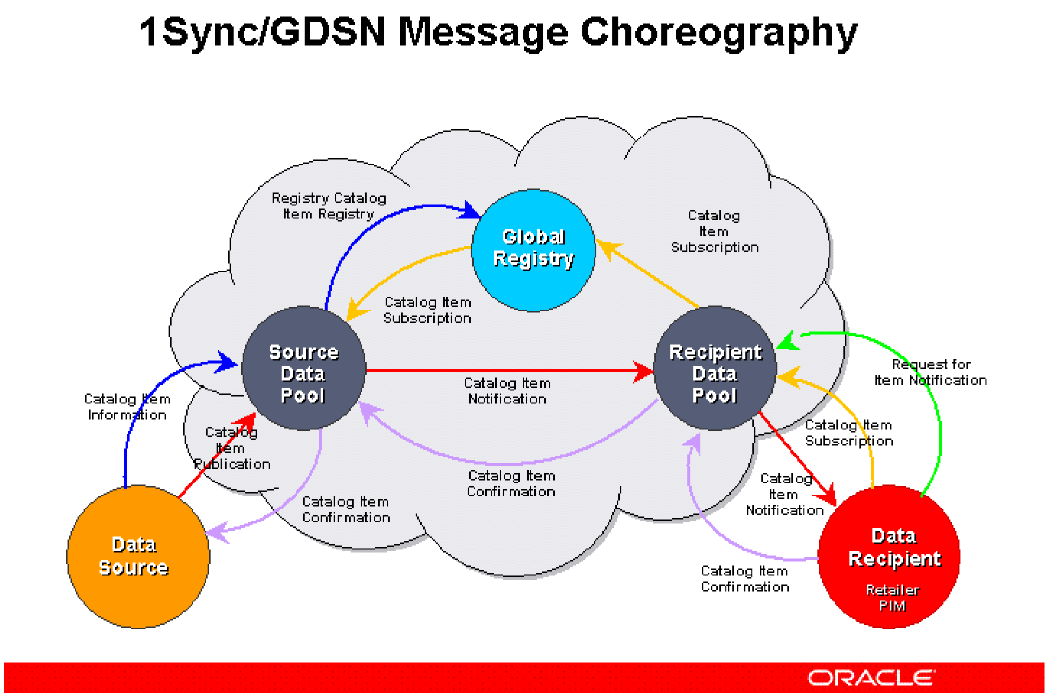
Oracle Product Information Management, along with Global Data Synchronization Network (GDSN) and 1SYNC Services, enables companies to securely receive product information from 1SYNC and via the Global Data Synchronization Network (GDSN), and then to subscribe to catalog items.

The Global Data Synchronization Network and its Global Registry provide a foundation for electronic commerce by providing Internet-based product information registration and synchronization services. These services include compliance verification, synchronization of product information, and registry and life cycle management of synchronized products, user locations, and user trade capabilities.

Retailers can receive Catalog Item Notification (CIN) messages and send out the following messages:

- Catalog Item Subscription (CIS)
- Catalog Item Correction (CIC)
- Request for Catalog Item Notification (RFCIN)

The following diagram shows the 1SYNC/GDSN message choreography:



1Sync/GDSN Message Choreography
Registry Catalog Item Registry
Global Registry
Catalog Item Subscription
Catalog Item Subscription
Source Data Pool
Recipient Data Pool
Catalog Item Notification
Request for Item Notification
Catalog Item Information
Catalog Item Publication
Catalog Item Subscription
Catalog Item Confirmation
Catalog Item Confirmation
Catalog Item Notification
Data Source
Catalog Item Confirmation
Data Recipient
Retailer PIM
ORACLE

Oracle Product Information Management (PIM) provides full support for retail-side 1SYNC message choreography. The above diagram shows these messages exchanged by the Data Recipient with the Recipient Data Pool. In order to receive item data in PIM from 1SYNC, the data source must connect to one of the data pools that acts as a source data pool in GDSN. The data source does not need to connect to 1SYNC. Different data pools use different message choreographies for the supply-side messages exchanged with the connected data sources. The supply-side message choreography (shown by messages exchanged by Data Source in the diagram) described below uses generic nomenclature that is data pool agnostic to conceptualize the messages without using the exact message names.

Data Source (Supply-Side) Message Choreography

1. The data source sends the item information to the source data pool using Catalog Item Information messages. Depending on the message choreography supported by the source data pool, you must send one or more messages to send item pack information.

2. Once the source data pool receives the item information, it registers the information with Global Registry using the Registry Catalog Item Registry (RCIR) message.

3. When the data source wants to synchronize item data with the data recipient (retailer), the data source sends the Catalog Item Publication message. Once the

source data pool receives this message, it searches the subscriptions of the specified data recipient. If any of the subscriptions have criteria that match with the item data, the source data pool sends a Catalog Item Notification (CIN) to the recipient data pool if the data recipient is not directly connected to the source data pool. If the data recipient is directly connected to the source data pool, the CIN message is sent directly to the data recipient. In order for the data recipient to receive the item data, at least one subscription that matches the item data must have been created and sent by the data recipient prior to the Catalog Item Publication message send date and time.

Data Recipient (Retail-Side) Message Choreography

1. In order to receive item data from any data source, the data recipient must send Catalog Item Subscription (CIS) messages to the recipient data pool.

2. Upon receipt of the CIS message, the recipient data pool sends it to the Global Registry, who then sends it to all other data pools in the GDSN. The recipient data pool saves the criteria specified in the CIS.

3. When the data source publishes item data and if the source data pool finds any matching subscriptions, then the source data pool sends the data recipient a Catalog Item Notification (CIN) message.

4. When the data recipient receives a CIN message, it reviews the item data and sends one or more Catalog Item Confirmation (CIC) messages to the recipient data pool. The CIC message contains one of the following statuses:

   - Accept - indicates that the data recipient has received the item data is reviewing it.

   - Review - indicates that the data recipient found validation errors in the item data.

   - Reject - indicates that the data recipient does not want to receive data for the specific item.

     Note: A CIC - Reject message tells the data source not to send item data to the data recipient for the reject items even if the data source publishes updated item data.

   - Synchronized - indicates that the item data received in the CIN is fully synchronized with the data recipient's internal systems.

5. When the recipient data pool receives a CIC message, it forwards the message to the source data pool. The source data pool forwards it to the data source.

6. Optionally, the data recipient can make a request to the recipient data pool by sending a Request For Catalog Item Notification (RFCIN) message.

   > **Note:** The RFCIN message contains criteria similar to the Catalog Item Subscription (CIS) message, but the 1SYNC data pool handles it differently. While the criteria specified in a CIS message is maintained by the data pools, the criteria specified in an RFCIN message is treated as an ad-hoc, one-time query from the data recipient to receive item information that already exists at the 1SYNC data pool. 1SYNC finds all items matching the criteria specified in the RFCIN, then creates and sends CIN messages with the matching item information to the data recipient.
   >
   > Leave the Is Reload box unchecked to specify for 1SYNC to send all items that match the criteria in the RFCIN message, including the items previously rejected using CIC-Reject message. Checking the Is Reload box specifies that 1SYNC must only send the items that have not been rejected.

Retail-Side Messages Supported by PIM

PIM supports all messages that 1SYNC exchanges with a data recipient. To make the solution data format agnostic, PIM internally processes messages in a canonical format that is then translated into 1SYNC messages. This enables PIM to provide a more generic solution that can handle inbound item data in other formats. The steps above describe retail-side messages exchanged by a data recipient. The following list describes the canonical equivalent messages exchanged by PIM with 1SYNC.

- Item Subscription - equivalent to the Catalog Item Subscription (CIS) message sent by the data recipient to the recipient data pool.

- Item Publication - a Catalog Item Notification (CIN) message sent by the recipient data pool to PIM is first translated into an Item Publication message and then processed by PIM.

- Item Publication Response - after receiving an Item Publication message, PIM generates one or more Item Publication Response messages that are translated into Catalog Item Confirmation (CIC) messages before they are sent to 1SYNC.

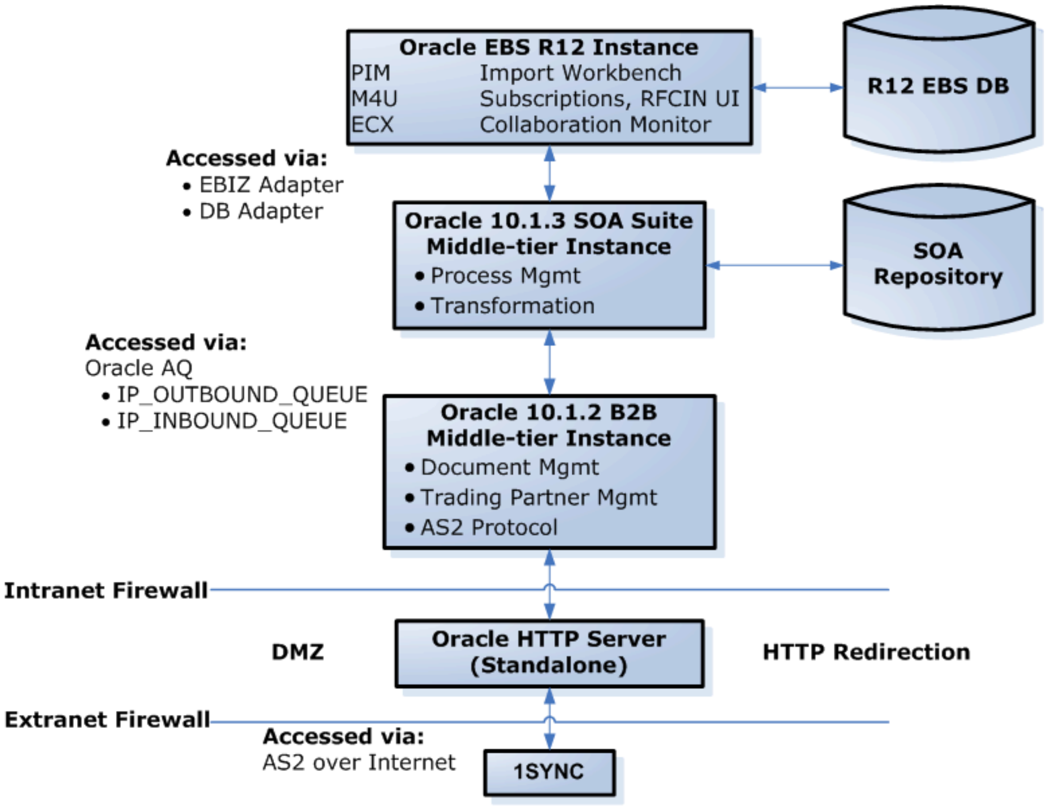
- Item Publication Request - PIM creates and sends Item Publication Request messages to the data pool that are translated into Request for Catalog Item Notification (RFCIN) messages.

Related Topics

1SYNC home page, http://www.1sync.org/home.html

Overview of the Inbound GDSN Implementation Architecture

The following diagram provides an overview of how PIM synchronizes inbound data with 1SYNC.



1SYNC communicates with its partners using the secure AS2 protocol over the Internet. PIM securely exchanges messages with 1SYNC using the B2B server, which enables AS2 communication.

In order to communicate with 1SYNC, a trading partner must have a B2B gateway that communicates using the AS2 protocol. The AS2 protocol internally uses HTTP (or HTTPS) as the lower-level transport protocol. Oracle B2B server is one such gateway that implements AS2 communication using HTTP/HTTPS.

Security certificates are exchanged between the trading partner and 1SYNC to secure the AS2 communication channel over HTTP. The B2B gateways located on both sides of the secure channel use the other side's digital certificate to encrypt or decrypt the messages.

A typical trading partner intranet is secured from the internet using a DMZ – a Demilitarized Zone. In this typical setup for firewalls, an extranet/internet firewall and an intranet firewall are set up with an HTTP server located between them. Both of the firewalls allow the HTTP traffic through. The HTTP server located in the DMZ receives the HTTP traffic through the extranet firewall and redirects it through the intranet firewall to another HTTP server located in the intranet – the internal corporate network.

Oracle B2B server hosts an HTTP server that receives the HTTP traffic from the HTTP server located in the DMZ. This HTTP traffic is actually the encrypted AS2 messages that use HTTP as the underlying protocol. Being an AS2 gateway, the B2B server encrypts/decrypts the payload and sends the appropriate acknowledgements as required by the AS2 specifications.

Oracle uses the Oracle Advanced Queuing (AQ) feature to exchange messages using the B2B server and PIM. Two queues handle this message exchange. The IP_INBOUND_QUEUE queue receives the messages sent by 1SYNC to PIM, such as:

- Catalog Item Notification (CIN)
- message responses sent by 1SYNC, such as:
    - Catalog Item Confirmation Response (CIC Response)
    - Catalog Item Subscription Response (CIS Response)
    - Request for Catalog Item Notification Response (RFCIN Response)

The IP_OUTBOUND_QUEUE queue sends the following messages to 1SYNC from PIM:

- Catalog Item Confirmation (CIC)
- Catalog Item Subscription (CIS)
- Request for Catalog Item Notification (RFCIN)

The IP_OUTBOUND_QUEUE queue also sends the message responses sent by PIM, such as the Catalog Item Notification Response (CIN Response).

PIM does not directly communicate with the B2B server. To allow flexible and customizable processing of the messages, the messages are routed through user-configurable BPEL processes. These processes are seeded by Oracle and are hosted by the Oracle BPEL Process Manager (BPEL PM). The BPEL PM is a fundamental component of Oracle SOA Suite.

Administering the Network and Servers

This configuration is assumed to install Oracle B2B Integration Server within the firewall and standalone Oracle HTTP Server (OHS) in the DMZ.

To set up and access B2B via DMZ:

1. Install standalone Oracle HTTP Server in the DMZ on a machine with a static public IP address.

2. Configure the external firewall to open the HTTP port of OHS which is installed in the DMZ.

3. Install the B2B Server in the intranet.

4. Configure the internal firewall to open the HTTP port of the B2B Server which is installed in the intranet.

5. Append the following lines to LoadModule section of standalone OHS httpd.conf file:

   - LoadModule proxy_module modules/mod_proxy.so (If it is already there then not required)

   - LoadModule proxy_http_module modules/mod_proxy_http.so

6. Add following lines to end of standalone Apache2.0 httpd.conf file:

   - ProxyPass / http://:/

   - ProxyPassReverse / http://:/)

To test the DMZ setup to the intranet:

1. Restart standalone Apache 2.0.

2. Invoke the following URL from any machine in DMZ using browser http://:/b2b/transportServlet.

   This request initially goes to DMZ Apache and we have configured Apache to forward the request to B2B instance in intranet. It should display the 'transportServlet' parameters if everything goes well. This testing confirms that request is being passed from DMZ layer to Intranet layer but not from outside world to Intranet layer.

To test the DMZ setup from the outside public network:

1. Configure external firewall to accept the data for DMZ standalone Apache HTTP port.

   Use the URL http://<ohs-ip-address>:<ohs-port>/b2b/transportServlet. It should display the 'B2B server' parameters if everything goes well.

To set up the DMZ with Load Balancer:

Optionally, you can configure Load balancer like 'BigIP' on external firewall to route the requests to DMZ layer .If you have DMZ layer front ended by load balancer, then configure the load balancer to communicate with standalone HTTP server in DMZ. In this case, we expose the URL http://:/b2b/transportServlet to outside world to communicate with B2B.

To configure the proxy settings for the B2B server:

1. Add the following java.net properties to start parameters of OC4J_b2b component in the opmn.xml file of the B2B Server:

   - http.proxySet

   - http.proxyHost

   - http.proxyPort

   Modified XML Fragment Example

   ```
   <category id="start-parameters">
   <data id="java-parameters"
   value"-server-Xms8M-Xmx512M-Dhttp.proxySet=true -
   Dhttp.proxyHost=www-proxy.us.oracle.com-Dhttp.proxyPort=80"/>
   </category>
   ```

2. Now restart B2B and oc4j_b2b components or all components.

To set up the B2B server for exchanging business messages:

Follow the steps below to set up B2B server to exchange the business messages with remote trading partners using AS2 connectivity. Exchanging business messages with B2B requires two trading partners. In this case, the trading partners are:

- Host trading partner (Oracle B2B instance)

- 1Sync Data pool (Remote trading partner)

Configuring B2B to exchange the documents with trading partners requires the following steps, explained in detail later:

- Creating business documents under a selected protocol

- Creating business actions

- Creating a remote trading partner

- Assigning business actions to remote trading partner's capabilities

- Creating communication capabilities for both the remote and host trading partners

- Creating a trading partner agreement that includes all business actions

- Creating a configuration and deploying it on the B2B server

A sample B2B configuration XML file, which has the required document definitions, is shipped in <soa-suite-home>/bpel/system/xmllib/m4u/config/Sample_B2B_Agr_Export.xml.

The document types, document revision, and hostname used while defining the 1SYNC trading partner agreement should be cross-referenced in the M4U configuration XML file (m4uConfig.xml) to allow integration between the M4U BPEL processes and 1SYNC.

The following table provides the document types seeded in the B2B and in BPEL configuration file. Use these document types to exchange retail business messages with the 1SYNC datapool.

Seeded Document Types

Document Type Name	Direction	XPath	Document Routing ID	Revision
M4U_DMD_CIN	IN	//*[local-name()='envelope']/*[local-name()='catalogueItemNotification']	b2buser	1.0
M4U_DMD_CIN_ACK	OUT	/*[local-name()='envelope']/*[local-name()='catalogueItemNotificationResponse']	b2buser	1.0
M4U_DMD_CIC	OUT	/*[local-name()='envelope']/*[local-name()= 'catalogueItemConfirmation']	b2buser	1.0
M4U_DMD_CIC_ACK	IN	/*[local-name()='envelope']/*[local-name()='catalogueItemConfirmationResponse']	b2buser	1.0
M4U_DMD_CIS	OUT	/*[local-name()='envelope']/*[local-name()= 'catalogueItemSubscription']	b2buser	1.0

M4U_DMD_CIS_ACK	IN	/*[local-name()='envelope']/*[local-name()= 'catalogueItemSubscriptionResponse']	b2buser	1.0
M4U_DMD_RFCIN	OUT	/*[local-name()='envelope']/*[local-name()= 'requestForCatalogueItemNotification']	b2buser	1.0
M4U_DMD_RFCIN_ACK	IN	/*[local-name()='envelope']/*[local-name()= 'requestForCatalogueItemNotificationResponse']	b2buser	1.0

To create business documents under a selected protocol

Use the following steps to create the 1SYNC datapool document types shown in the Seeded Document Types table.

1. Click Partners, then Protocols.
2. Click Custom Document over Internet for AS2 connectivity.
3. Click Details under the Document Protocol page area.
4. Click Create
5. Enter any name for the document without trailing spaces and '1.0' as revision.
6. Enter any name for document definition.
7. Set Translation Enabled to No.
8. Set Validation Enabled to Yes or No, depending on whether or not you need validation against XSD.
9. 9) Upload schemas zip file to Definition.
10. Set Starting XSD File Path to root XSD file(Proxy XSD) name in zip file.

11. Set Identification Expression (XPath) for XML Documen" to XPath of document. This identifies the incoming document.

    Set this property for outbound document also, if you want to validate them against XSDs.

    ### CIC-Response Example

    If CIC-Response is the incoming message for Host, the XPath for it would look like:

    ```
    /*[local-name()='envelope']/*[local-name()=
    'catalogueItemConfirmationResponse']
    ```

12. Click Apply.

To create business actions

1. Click Partners, then Protocols.
2. Click Custom Document over Internet.
3. Click Create Business Action from the Shortcut page area, which is available at top right corner of the page.
4. Enter any meaningful name for Business Action name.
5. Enter 1.0 for Revision or any other numeric value, then click Next.
6. Select Use Existing from Create Mode list.
7. Select whatever available from Document Protocol Revision dropdown list, then click Next.
8. Select Use Existing from Create Mode dropdown list.
9. Select the document type created previously in "To create business documents under a selected protocol" from the Document Type dropdown list and click Next.
10. Review all the details you entered in the previous pages and confirm by clicking Finish.

To create a remote trading partner

1. Click Partners, then Trading Partners and then click Create.
2. Enter a meaningful name for the trading partner without any trailing spaces, then click Next.
3. Enter any of the identifiers (this is Protocol specific).

   If you are using the AS2 exchange protocol, then you must use an AS2-identifier. AS2 connectivity with 1SYNC uses 8380160030003 as the AS2 identifier.

4. Click Finish.

To assign business actions to remote trading partners capabilities

1. Select the Trading Partners submenu from the Partners main menu.

2. Now click on the remote trading partner name (in this case, the 1SYNC datapool partner).

3. Click on the Capabilities hyperlink.

4. Click on the Custom Document over Internet protocol for AS2. If this is not there, then you can add it by clicking Add.

5. Click on Create Operational Capability.

6. Select the Business action you created in "To create a remote trading partner".

7. Set Is Initiator to True if remote trading partner initiates the message. Otherwise, set it to False.

   For example, a CIC-Response is sent by the 1SYNC data pool (remote trading partner) to a host trading partner. In this case, the 1SYNCc data pool is the Initiator for the message.

8. Set "Functional acknowledgement required"" to No.

9. Set "Is acknowledgement handled by Integration B2B?" to Yes.

10. Select a document type from the drop down list and click Apply.

    > **Tip:** To add more business actions, repeat the above steps. Operational capabilities are added to the host trading partner automatically. You do not need to add them to the host trading partner separately..

To create communication capability for the remote trading partner

1. Select the Trading Partners submenu from thePartners main menu.

2. Click on the remote trading partner name for whom you want to add communication capability.

3. Click on the Capabilities hyperlink.

4. Click on Custom Document over Internet protocol for AS2 connectivity.

5. Click on Create Communication Capability.

6. Enter some meaningful name for Name field and set the following properties to 'Yes'.

   - Is Non-Repudiation of Receipt Required

   - Is Non-Repudiation of Receipt Required

   - Encryption Enabled

   Leave the remaining fields to their default values and click Next.

7. Enter Name and select a value from the "Exchange Protocol Revision" drop down list. Leave the Exchange Protocol Parameters to their default values. In this page, do the following:

   - Select SMIME 3.0 with DES from Digital Envelope choice list.

   - Enter a meaningful name for a certificate and upload the remote trading partner certificate in Base64Encoded format.

   - Select SMIME 3.0 with SHA – RSA from the Digital Signature choice list.

   - Enter a meaningful name for a certificate and upload the same remote trading partner certificate in Base64Encoded format.

   Click Next to navigate to the page with the Transport details.

8. Enter a Name.

9. Select the HTTP - 1.1 transport protocol from Transport Protocol.

10. Enter a meaningful name in the Transport Server Name field.

11. Enter the remote trading partner transport server host name without trailing spaces in Host Name.

    Refer to the 1SYNC_AS2_CONNECTIVITY_GUIDE available at https://solutioncenter.preprod.1sync.org to find the latest 1SYNC AS2 transport URLs.

    The following tables summarize the 1SYNC AS2 connectivity information:

Production Specific Information

Production AS2 Identifier:	0838016003001

Production URL:	http://as2.prod.1sync.org:4080/exchange/0838016003001 Host Name: as2.prod.1sync.org Port: 4080 Endpoint URI: exchange/0838016003001
Production Sending IPAddresses:	216.64.206.240 216.64.206.241 216.64.206.242 216.64.206.243

Pre-Production Specific Information

Pre-Production AS2 Identifier:	8380160030003
Pre-Production URL:	http://as2.preprod.1sync.org:4080/exchange/8380160030003 Host Name: as2.preprod.1sync.org Port: 4080 Endpoint URI: exchange/8380160030003
Pre-Production Sending IPAddresses:	216.64.218.170 216.64.218.171

12. Enter Transport server port no, enter 4080 for 1SYNC datapool partner.

13. You can select an already existing Endpoint URI or create new for new mode. Click Next.

14. Review the data you have entered in the previous steps and click Finish.

To create communication capability for the host trading partner:

1. Select the Trading Partners submenu from the Partners main menu.

2. Click on host trading partner name for whom you want to add communication capability.

3. Click on Capabilities hyperlink.

4. Click on Custom Document over Internet protocol for AS2 connectivity.

5. Click on Create Communication Capability.

6. Enter a meaningful Name and set the following properties to Yes.

   - Is Non-Repudiation of Receipt Required

   - Encryption Enabled

   Leave the remaining fields to their default values and click Next.

7. Enter Name and select the value from the Exchange Protocol Revision drop down list. Leave the Exchange Protocol Parameters with their default values.

   Set the following field as described below:

   - Select SMIME 3.0 with DES from the Digital Envelope choice list.

   - Enter a meaningful name for the certificate and upload the host trading partner certificate in Base64Encoded format.

   - Select SMIME 3.0 with SHA – RSA from Digital Signature choice list.

   - Enter a meaningful name for the certificate and upload the same host trading partner certificate in Base64Encoded format.

   Click Next. The next page deals with Transport details.

8. Enter Name.

9. Select HTTP - 1.1 transport protocol from Transport Protocol.

10. Enter the Transport Server Name.

11. Enter host trading partner transport server host name without trailing spaces in the Host Name field. (Check for B2B installation notes)

12. Enter the HTTP Transport server port number. (Check for B2B installation notes)

13. Enter the 'b2b/transportServlet' as the endpoint URI and click Next.

14. Review the data entered in the previous steps and click Finish.

    > **Note:** The endpoint URI forthe Oracle host B2B is always b2b/transportServlet By default, the transport URL is http://<B2B

Host Name>:<port>/b2b/transportServlet

15. Go to Partners, then Trading Partners and click host trading partner.

16. Click Update under the Details region to provide Wallet password. Click Apply.

    Note: You must importthe host certificate and root certificate in Base64Encoded format into the Oracle wallet, save the wallet, and set the following property in tip.properties file.

    Set oracle.tip.adapter.b2b.WalletLocation to wallet file path (up to the directory level).

This completes the digital certificates setup for the host trading partner.

To create a trading partner agreement that includes all business actions

1. Select the Agreements submenu from the Partners main menu.

2. Click Create.

3. Now select the Remote trading partner name from the Trading Partner dropdown list.

4. Select Custom Document over Internet from the Supported Business protocol.

5. Select the Business Action that was created in one of the previous steps from the Supported Business actions drop down list.

6. Now select "AS2 identifiers" identification for both trading partners.

7. Now select trading partner delivery channels for both trading partners from the lists.

8. Enter an agreement name and ID and click Apply.

    Tip: If you want to add more business actions to the agreement, click Add on the current page and proceed.

9. Validate the agreement by clicking the Validate.

To create a configuration and deploy it on to the B2B server

1. Click the Deployment main menu and then click Create.

2. Enter a Configuration Name and select agreement.

3. Click Apply.

4. Click Deploy.

   This brings the configuration to the Active state, which means the configuration is deployed on the B2B instance.

5. Restart the B2B server.

   The completion of the above configuration steps ensures that B2B is ready to receive/send any business messages with the remote trading partner.

Administering BPEL

To configure M4U BPEL properties:

Configure the M4U BPEL properties by editing the file <soa-suite-home>\bpel\system\xmllib\m4u\config\m4uConfig.xml created in Administering the Network and Servers, page 13-6.

The file has the following structure. You need to modify the values in the XML (starting with the $ sign, with the actual values based on your setup in the B2B Integration Server):

> **Note:** The values are shown in bold below to help you find them.

```
<m4u:m4uConfiguration
xmlns="http://xmlns.oracle.com/m4u/demand/M4UTypes>
 <m4u:notifyToEmail>$error_dest_email_to</m4u:notifyToEmail>
 <m4u:notifyCCEmail>$error_dest_email_cc</m4u:notifyCCEmail>
 <m4u:b2bHostName>$b2b_host_name</m4u:b2bHostName>
<m4u:b2bPartnerName>$b2b_1sync_partner_name</m4u:b2bPartnerName>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_RFCIN</m4u:m4uDocumentType>
<m4u:m4uDocumentType>M4U_DMD_RFCIN</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_rfcin_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_rfcin_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIS</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cis_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cis_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIN</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cin_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cin_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIC</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cic_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cic_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_RFCIN_ACK</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_rfcinack_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_rfcinack_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIS_ACK</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cisack_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cisack_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIN_ACK</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cinack_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cinack_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
 <m4u:b2bMapping>
<m4u:m4uDocumentType>M4U_DMD_CIC_ACK</m4u:m4uDocumentType>
<m4u:b2bDocumentType>$b2b_cicack_doc_type</m4u:b2bDocumentType>
<m4u:b2bDocumentRevision>$b2b_cicack_doc_rev</m4u:b2bDocumentRevision>
 </m4u:b2bMapping>
</m4u:m4uConfiguration>
```

Replace the tokens with the following values:

Token	Value	Example
$error_dest_email_to	Email address to which BPEL error notifications should be mailed.	admin@mycompany.com

Token	Value	Example
$error_dest_email_cc	Email address to which error notification should be copied.	admin@mycompany.com
$b2b_host_name	Host name defined for your organization in B2B Server setup.	My Company
$b2b_1sync_partner_name	Trading partner name defined for 1Sync in B2B Server setup.	1Sync
$b2b_rfcin_doc_type	Document type defined in B2B Server for outbound Request For Catalogue Item Notification message.	M4U_DMD_RFCIN
$b2b_rfcin_doc_rev	Document revision defined in B2B Server for outbound Request For Catalogue Item Notification message.	1.0
$b2b_cis_doc_type	Document type defined in B2B Server for outbound Catalogue Item Subscription message.	M4U_DMD_CIS
$b2b_cis_doc_rev	Document revision defined in B2B Server for outbound Catalogue Item Subscription message.	1.0
$b2b_cic_doc_type	Document type defined in B2B Server for outbound Catalogue Item Confirmation message.	M4U_DMD_CIC
$b2b_cic_doc_rev	Document revision defined in B2B Server for outbound Catalogue Item Confirmation message.	1.0

Token	Value	Example
$b2b_cin_doc_type	Document type defined in B2B Server for inbound Catalogue Item Notification message.	M4U_DMD_CIN
$b2b_cin_doc_rev	Document revision defined in B2B Server for inbound Catalogue Item Notification message.	1.0
$b2b_rfcinack_doc_type	Document type defined in B2B Server for inbound Request for Catalogue Item Notification message.	M4U_DMD_RFCIN_ACK
$b2b_rfcinack_doc_rev	Document revision defined in B2B Server for inbound Request for Catalogue Item Notification message.	1.0
$b2b_cisack_doc_type	Document revision defined in B2B Server for inbound Catalogue Item Subscription response message.	M4U_DMD_CIS_ACK
$b2b_cisack_doc_rev	Document revision defined in B2B Server for inbound Catalogue Item Subscription Response message.	1.0
$b2b_cinack_doc_type	Document type defined in B2B Server for outbound Catalogue Item Notification Response message.	M4U_DMD_CIN_ACK
$b2b_cinack_doc_rev	Document revision defined in B2B Server for outbound Catalogue Item Notification Response message.	1.0
$b2b_cicack_doc_type	Document type defined in B2B Server for inbound Catalogue Item Confirmation Response message.	M4U_DMD_CIC_ACK

Token	Value	Example
$b2b_cicack_doc_rev	Document revision defined in B2B Server for inbound Catalogue Item Confirmation Response message.	1.0

To build the m4u_CommonOutFlow BPEL process

1. Copy file $APPL_TOP/cln/12.0.0/patch/115/jar/bpel/cln_bpel_CommonOutFlow.jar to your local development environment.

2. Rename the local copy of file cln_bpel_CommonOutFlow.jar to m4u_CommonOutFlow.jar.

3. Create an empty BPEL project using jDeveloper 10.1.3.1.0 with the name "m4u_CommonOutFlow".

    1. Name: m4u_CommonOutFlow

    2. Namespace: http://xmlns.oracle.com/m4u

    3. Use either "default project setting"

    4. Choose template - Empty BPEL Process

4. Unzip the contents of the jar file into m4u_ComonOutFlow/bpel directory created in the previous step. Override any files with the same name.

5. Edit the EBIZM4UUpdateRequestsService.wsdl file in the project. In the following XML fragment in the file EBIZM4UUpdateRequestsService.wsdl, replace http://ap6032fems.us.oracle.com:7781 with the hostname and port of the SOA Suite 10.1.3.1 instance. For example, http://dev-soa:7000.

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" >
 <xsd:import
namespace="http://xmlns.oracle.com/EnterpriseObjects/Core/EBO/Item/V
1"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
EnterpriseObjectLibrary/Core/EBO/Item/ItemEBM.xsd"/>
 </xsd:schema>
 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" >
 <xsd:import namespace="http://www.1sync.org"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/1sync/item/1.0/M4U1SyncPayloadProxy.xsd"/>
 </xsd:schema>
 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" >
 <xsd:import namespace="http://xmlns.oracle.com/m4u/demand"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/M4UTypes.xsd"/>
 </xsd:schema>
```

6. Save your changes.

7. Create the project using jDeveloper.

8. Find the BPEL suitecase m4u_CommonOutFlow.jar in the output directory of the project.

To build the m4u_CommonInFlow BPEL process

1. Copy file $APPL_TOP/cln/12.0.0/patch/115/jar/bpel/cln_bpel_CommonInFlow.jar to your local development environment.

2. Rename the local copy of file cln_bpel_CommonInFlow.jar to m4u_CommonInFlow.jar.

3. Create an empty BPEL project using jDeveloper 10.1.3.1.0 with name "m4u_CommonInFlow".

   1. Name: m4u_CommonInFlow

   2. Namespace: http://xmlns.oracle.com/m4u

   3. Use either "default project setting"

   4. Choose template - Empty BPEL Process

4. Unzip the jar file into m4u_CommonInFlow/bpel directory. Override any files having same name.

5. Edit DequeueB2BPayloadService.wsdl file in the project. In the following XML fragment in the file DequeueB2BPayloadService.wsdl

```
<schema xmlns="http://www.w3.org/2001/XMLSchema" >
<import namespace="http://www.1sync.org"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/1sync/item/1.0/M4U1SyncPayloadProxy.xsd" />
</schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema" >
<import namespace="http://xmlns.oracle.com/m4u/demand"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/M4UTypes.xsd" />
</schema>
```

Replace http://ap6032fems.us.oracle.com:7781 with the hostname and port of the SOA Suite 10.1.3.1 instance. For example, http://dev-soa:7000.

6. Save changes.

7. Create the project using jDeveloper.

8. Find the BPEL suitecase m4u_CommonInFlow.jar in the output directory of the project.

To build the m4u_ProcessCINMsgFlow BPEL process

1. Copy file $APPL_TOP/cln/12.0.0/patch/115/jar/bpel/cln_bpel_ProcessCINMsgFlow.jar to your local development environment.

2. Rename the local copy of the file cln_bpel_ProcessCINMsgFlow.jar to m4u_ProcessCINMsgFlow.jar.

3. Create an empty BPEL project using jDeveloper 10.1.3.1.0 with the name "m4u_ProcessCINMsgFlow".

    1. Name: m4u_ProcessCINMsgFlow

    2. Namespace: http://xmlns.oracle.com/m4u

    3. Use either "default project setting"

    4. Choose template - Empty BPEL Process

4. Unzip the jar file into the m4u_ProcessCINMsgFlow/bpel directory. Override any files having the same name.

5. Edit PollM4UDmdMessageService.wsdl file in the project. In the following XML fragment in the file PollM4UDmdMessageService.wsdl, replace http://ap6032fems.us.oracle.com:7781 with the hostname and port of the SOA Suite 10.1.3.1 instance. For example, http://dev-soa:7000.

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <xsd:import namespace="http://www.1sync.org"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/1sync/item/1.0/M4U1SyncPayloadProxy.xsd"/>
 </xsd:schema>
 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import
namespace="http://xmlns.oracle.com/EnterpriseObjects/Core/EBO/Item/V
1"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
EnterpriseObjectLibrary/Core/EBO/Item/ItemEBM.xsd"/>
 </xsd:schema>
 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import namespace="http://xmlns.oracle.com/m4u/demand"
schemaLocation="http://ap6032fems.us.oracle.com:7781/orabpel/xmllib/
m4u/schema/M4UTypes.xsd"/>
</xsd:schema>
```

6. Save changes.

7. Edit the following XML fragment in bpel.xml file in the project.

   ```
   <partnerLinkBinding name="SaveData">
   <property
   name="wsdlLocation">http://ap6032fems.us.oracle.com:7781/orabpel/mm1
   st121_dm/EGO_SaveData/1.0/EGO_SaveData?wsdlproperty
   name="wsdlLocation">http://ap6032fems.us.oracle.com:7781/orabpel/mm1
   st121_dm/EGO_SaveData/1.0/EGO_SaveData?wsdl>
   </partnerLinkBinding>
   ```

8. For partnerLinkBinding "SaveData", replace the value of the property (contained between <property name="wsdlLocation"></property>) with the URL of EGO_SaveData BPEL WSDL deployed on your SOA Suite instance.

9. Create the project using jDeveloper.

10. Find the BPEL suitecase m4u_ProcessCINMsgFlow.jar in the output directory of the project.

To deploy the M4U BPEL processes to the BPEL Process Manager Server

Check the Oracle SOA Suite documentation for options and steps to follow for deploying a BPEL suitecase to the BPEL Process Manager.

Deploy the following BPEL processes to the BPEL Process Manager.

1. m4u_CommonOutFlow.jar created in the previous steps.

2. m4u_CommonInFlow.jar created in the previous steps.

3. m4u_ProcessCINMsgFlow.jar created in the previous steps.

To add M4U Lookup values:

1. Log on to the Application Developer responsibility. Navigate to Application, then

Lookups, and then Application Object Library. Add values for the M4U lookups.

2. Add values for the lookup M4U_TARGET_MARKET_COUNTRIES.

   Query for lookup M4U_TARGET_MARKET_COUNTRIES and add lookup values for target market codes supported by 1SYNC. Refer to the document 1SYNC_Data_Recipient_XML_Guide_R6.1v2.pdf, available at the 1SYNC solution center portal (see: http://www.1sync.org/home.html), for a list of 1SYNC supported target-market codes.

   While adding lookup codes, enter the 2/3-letter 1SYNC code as the lookup code. Enter user-friendly values into the meaning and description fields. For example, Code = US, Meaning = United States, Description = United States.

3. Add values for lookup M4U_USER_GLN.

   Query lookup M4U_USER_GLN and add the user-GLN used by your organization in the 1SYNC datapool. For example, Code = 0060974050159, Meaning = 0060974050159, Description = Oracle GLN.

4. Add values for the lookup M4U_DATAPOOL_GLN.

   Query for lookup M4U_DATAPOOL_GLN and add the GLN of the 1SYNC datapool. For example, Code = 8380160030003, Meaning = 8380160030003, Description = 1SYNC GLN.

5. Add values for lookup M4U_ USER_GLNS.

   Query lookup M4U_GLN_USERS and add the user-GLN used by your organization in the 1SYNC datapool as the lookup code and user ID corresponding to the user-GLN as the lookup meaning. For example, Code = 0060974050159, Meaning = bu.0060974050159.ZmNMEJxP, Description = 1Sync GLN.

6. Add values for the lookup M4U_REP_PARTY_GLN.

   If you are using the Oracle to synchronize item information for organizations having a different GLN from your user GLN, add a lookup value for M4U_REP_PARTY_GLN.

   Query for lookup M4U_REP_PARTY_GLN and add values for each represented party GLN. For example, Code = 0060974050159, Meaning = 0060974050159, Description = Oracle Retail GLN.

To assign M4U Responsibility to users:

Assign the M4U Demand User responsibility to users who require this responsibility.

To run the M4U Setup program:

In the M4U Demand User responsibility, execute the M4U: Demand Setup CLN Tracking concurrent program.

To restart the applications:

After all the required configuration changes are complete and tested:

- Restart the Oracle B2B Integration server mid-tier instance.
- Restart the Oracle B2B Integration server infrastructure instance.
- Restart the SOA Suite.
- Restart Oracle Applications.

14

Setting Up Inbound Product Data Synchronization and Data Quality Management

This chapter covers the following topics:

- Setup Overview of Inbound Product Data Synchronization
- Creating a 1SYNC Target System and Global Location Number
- Creating Match Rules
- Defining Source Systems
- Applying the 1SYNC Library
- Defining Units of Measure for GDSN Attributes
- Mapping Values Between 1SYNC Codes and Oracle Codes
- Mapping Categories Between GPC Alternate Catalogs and Item Catalogs

Setup Overview of Inbound Product Data Synchronization

Oracle Product Information Management uses the Import Workbench to bring product data from disparate systems into a master product information repository, known as the Product Information Management Data Hub (PIMDH).

While importing data into a centralized data model, the Import Workbench identifies and resolves duplicates and errors while at the same time enriching existing data with external information. This process creates a blended record, known as the single source of truth. You can then create business reports and other documents related to the updates.

In order to import data from an external source system, you must define a source system for each data source and create match rules to help match imported data to existing data in the product information repository. If you plan to import item data from the 1SYNC Global Data Synchronization Network (GDSN), then you must complete the following additional steps:

- Create a 1SYNC target system and GLN

  See: Creating a 1SYNC Target System and Global Location Number, page 14-3

- Create suppliers and supplier sites, both with an appropriate GLN

  Define the suppliers and supplier sites from whom you intend to receive data through 1SYNC, as well as the Global Location Numbers (GLNs) of the supplier sites. 1SYNC uses the GLN to identify the supplier.

  See: Suppliers, *Oracle Payables User's Guide* and Setting Up GLN for Customers, *Oracle Product Information Management Implementation Guide*.

- Create structure batches to receive GDSN item data

  Create structure batches within a source system. The source system must have the Enable for Data Pool flag set to Yes. View the data sent by the supplier via 1SYNC in the Unconfirmed tab of the batch if no match rules ran automatically.

  See: Creating Batches, *Oracle Product Information Management User's Guide*.

- Apply the 1SYNC library to seed the attributes required to receive item data

  See: Applying the 1SYNC Library, page 14-17

- Define units of measure classes and units of measure for GDSN attributes

  See: Defining Units of Measure for GDSN Attributes, page 14-18.

- Create an XSL mapping from 1SYNC UOM classes to the GDSN attribute UOM classes

  See: Creating XSL Mappings from 1SYNC UOM classes to GDSN Attribute UOM Classes, page 14-20

- Create an Item Catalog Category and associate attribute groups to the category for items received by way of 1SYNC

  Create an item catalog category (ICC) for the items received through 1SYNC and map the attribute groups created using the ldt file egogdsnag.ldt. This enables you to see the data sent by 1SYNC in the item pages.

  See: Defining Item Catalog Categories, page 3-3 and Associating Attribute Groups with an Item Catalog Category, page 4-31

- Create alternate catalog categories with GPC codes

  Create alternate catalog categories (ACCs) with the same names as the GPC codes. This enables you to identify the items received from 1SYNC and to map them to appropriate ICCs.

  See: Defining Catalog Categories, page 5-3.

- Map categories between the GPC alternate catalog and the item catalog

  See: Mapping Categories Between GPC Alternate Catalogs and Item Catalogs, page 14-22

Related Topics

Creating Match Rules, page 14-8

Defining Source Systems, page 14-11

Defining Units of Measure for GDSN Attributes, page 14-18

Overview of Inbound Product Data Synchronization and Data Quality Management, *Oracle Product Information Management User's Guide*

Creating a 1SYNC Target System and Global Location Number

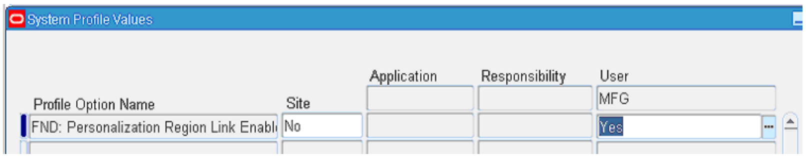
GDSN requires each physical location in a company to have a Global Location Number (GLN). The GLN is 13-digit number with a check digit assigned as the last digit. Oracle enables you to assign a GLN to each supplier address using Oracle Payables.

The GLN is not displayed by default, since it is primarily used for the purpose of synchronizing product data. You can display the field using the personalization framework.

To add a GLN to a supplier location:

1. From the Home page, select the System Administrator responsibility.
2. From the menu, under Profile, select System.
3. Search for and select the profile option Personalize Self-Service Defn.
4. In the System Profile Values form, Site field, select Yes from the list of values.
5. Search for and select the profile option FND: Personalization Region Link Enabled. Enter the User for whom you want to enable personalization as a search criteria.
6. In the System Profile Values form, set the profile option FND: Personalization Region Link Enabled to Yes at the User Level for the user.

   > **Tip:** Enter a user with the Payables responsibility and who will update the GLN.



System Profile Values

Profile Option Name	Site	Application	Responsibility	User
				MFG
FND: Personalization Region Link Enabl	No			Yes

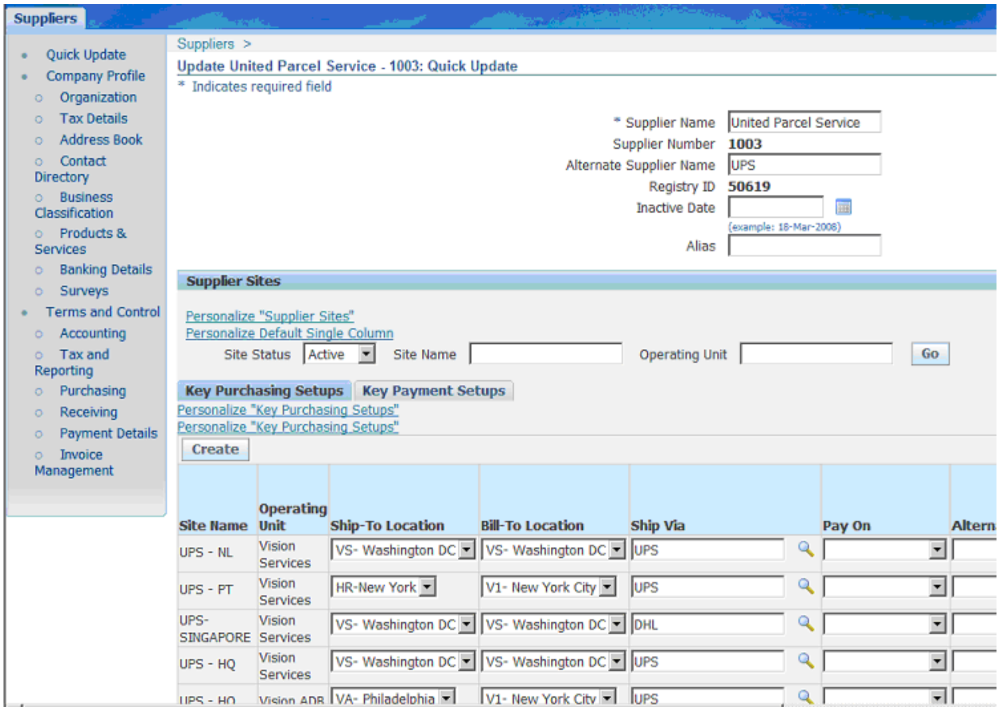
7. Log out, then log on again as the user with the Payables responsibility.

8. Select the Payables responsibility for the Operating Unit under which you plan to update the supplier site GLN.

9. In the menu, under Suppliers, select Entry.

10. Search for and select the supplier for which you plan to update a supplier site with the GLN.

11. From the **Update (supplier name): Quick Update** page, select the Company Profile: Address Book link.



Suppliers >

Update United Parcel Service - 1003: Quick Update

* Indicates required field

* Supplier Name	United Parcel Service
Supplier Number	1003
Alternate Supplier Name	UPS
Registry ID	50619
Inactive Date	(example: 18-Mar-2008)
Alias	

Supplier Sites

Personalize "Supplier Sites"
Personalize Default Single Column

Site Status Active Site Name Operating Unit Go

Key Purchasing Setups | Key Payment Setups

Personalize "Key Purchasing Setups"
Personalize "Key Purchasing Setups"

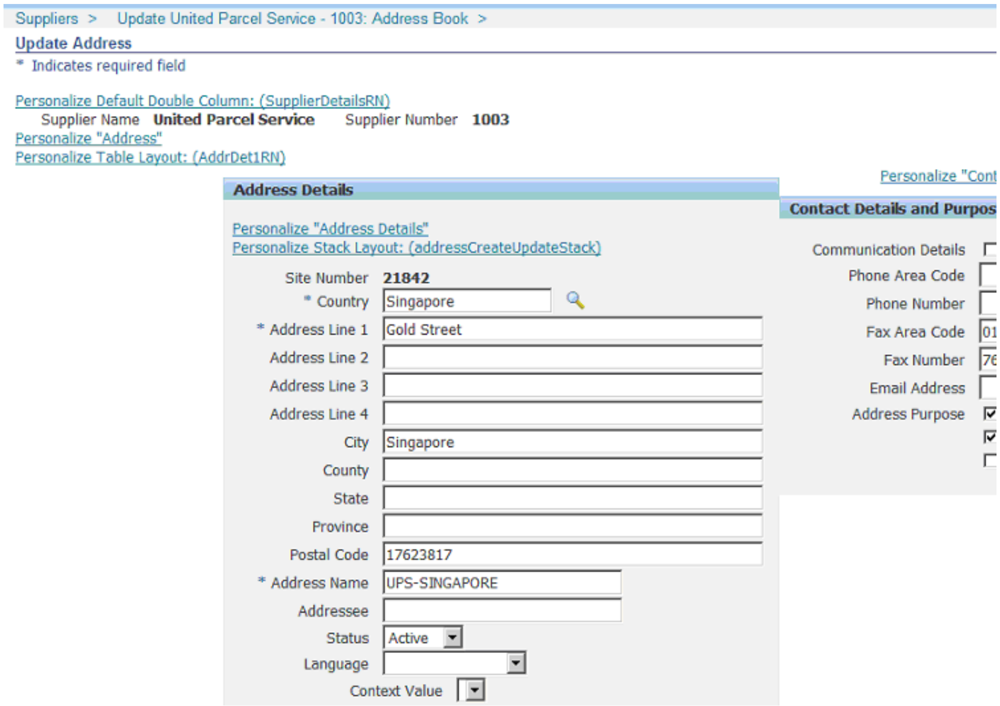
Create

Site Name	Operating Unit	Ship-To Location	Bill-To Location	Ship Via	Pay On	Altern
UPS - NL	Vision Services	VS- Washington DC	VS- Washington DC	UPS		
UPS - PT	Vision Services	HR-New York	V1- New York City	UPS		
UPS-SINGAPORE	Vision Services	VS- Washington DC	VS- Washington DC	DHL		
UPS - HQ	Vision Services	VS- Washington DC	VS- Washington DC	UPS		
UPS - HQ	Vision ADB	VA- Philadelphia	V1- New York City	UPS		

12. In the **Update (supplier name): Address Book** page, find the supplier site. Click Update for the site.

13. In the **Update Address** page, click the Personalize "Address" link.

Note: The Global Location Number field does not appear by default on the page. You must personalize it.



Suppliers > Update United Parcel Service - 1003: Address Book >

Update Address

* Indicates required field

Personalize Default Double Column: (SupplierDetailsRN)

Supplier Name **United Parcel Service** Supplier Number **1003**

Personalize "Address"

Personalize Table Layout: (AddrDet1RN)

Address Details

Personalize "Address Details"

Personalize Stack Layout: (addressCreateUpdateStack)

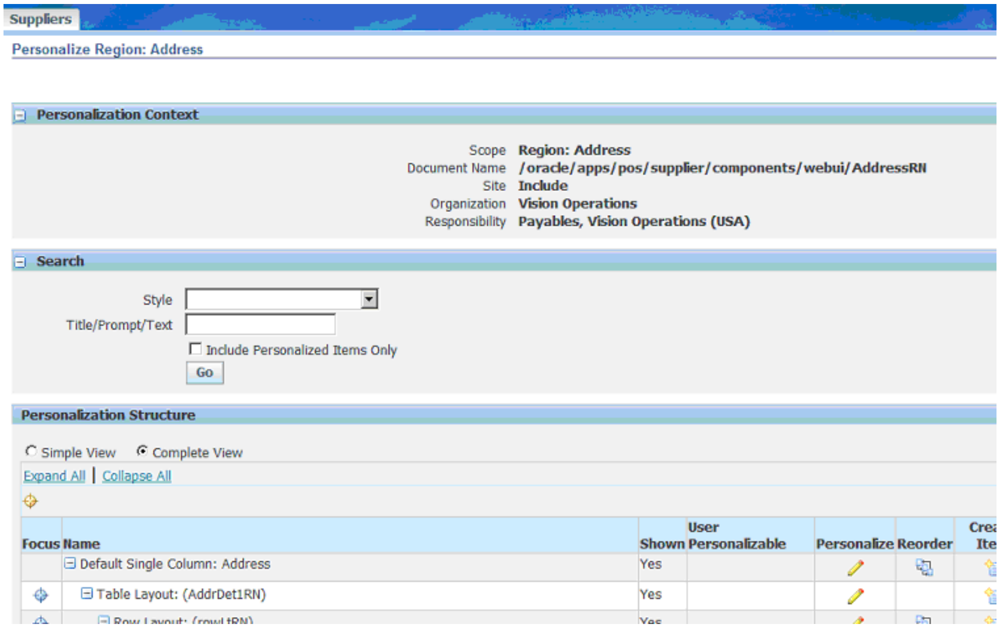
Site Number	**21842**
* Country	Singapore
* Address Line 1	Gold Street
Address Line 2	
Address Line 3	
Address Line 4	
City	Singapore
County	
State	
Province	
Postal Code	17623817
* Address Name	UPS-SINGAPORE
Addressee	
Status	Active
Language	
Context Value	

Personalize "Cont

Contact Details and Purpos

Communication Details	□
Phone Area Code	
Phone Number	
Fax Area Code	01
Fax Number	76
Email Address	
Address Purpose	☑ ☑ □

14. In the **Personalize Region: Address** page, select Complete View and click Expand All.



Suppliers

Personalize Region: Address

⊟ Personalization Context

Scope	Region: Address
Document Name	/oracle/apps/pos/supplier/components/webui/AddressRN
Site	Include
Organization	Vision Operations
Responsibility	Payables, Vision Operations (USA)

⊟ Search

Style

Title/Prompt/Text

☐ Include Personalized Items Only

Go

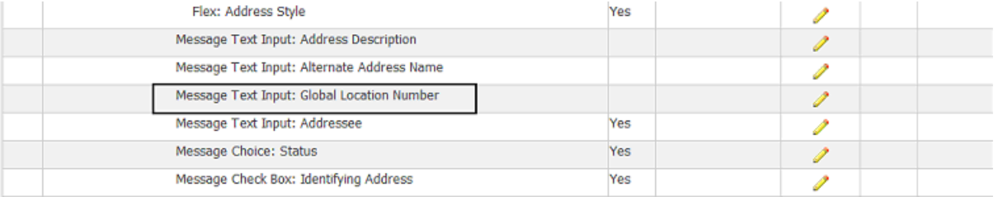
Personalization Structure

○ Simple View ● Complete View

Expand All | Collapse All

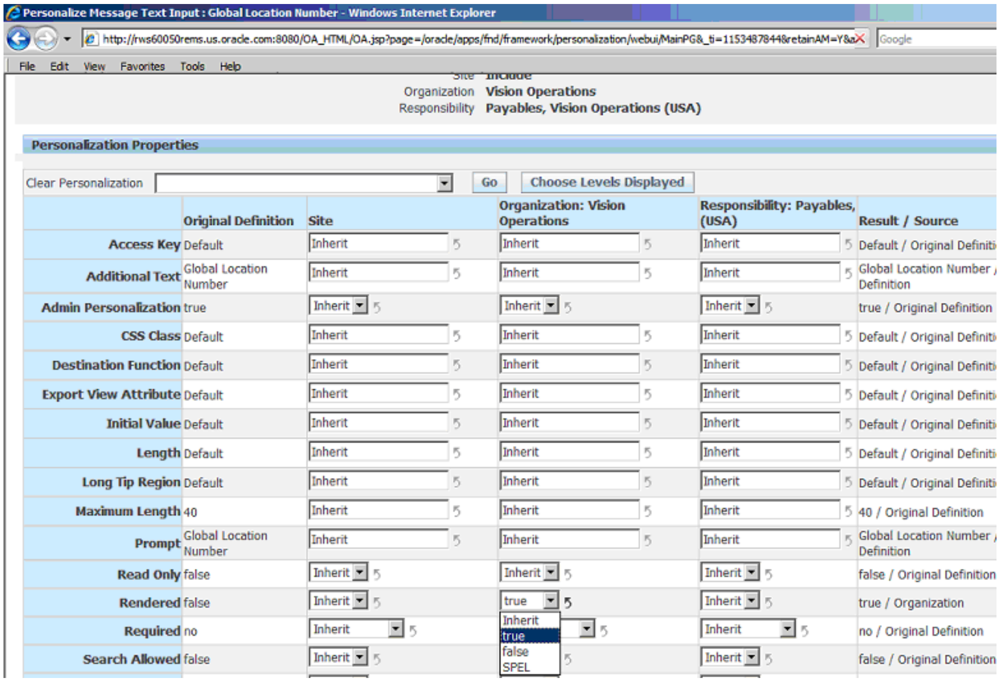
Focus	Name	Shown	User Personalizable	Personalize	Reorder	Crea Ite
	⊟ Default Single Column: Address	Yes		✎		
	⊟ Table Layout: (AddrDet1RN)	Yes		✎		
	⊟ Row Layout: (rowLtRN)	Yes		✎		

15. Find the Global Location Number field and click Update.



	Flex: Address Style	Yes		✎		
	Message Text Input: Address Description			✎		
	Message Text Input: Alternate Address Name			✎		
	Message Text Input: Global Location Number			✎		
	Message Text Input: Addressee	Yes		✎		
	Message Choice: Status	Yes		✎		
	Message Check Box: Identifying Address	Yes		✎		

16. In the **Personalize Message Text Input: Global Location Number** page, find the presentation property Rendered. The Original Definition value is false. Choose whether to update the value to true at the Site, Organization and/or Responsibility level. Click Apply.



Personalize Message Text Input : Global Location Number - Windows Internet Explorer
http://rws60050rems.us.oracle.com:8080/OA_HTML/OA.jsp?page=/oracle/apps/fnd/framework/personalization/webui/MainPG&_ti=1153487844&retainAM=Y&a
Google
File Edit View Favorites Tools Help

Organization Vision Operations
Responsibility Payables, Vision Operations (USA)

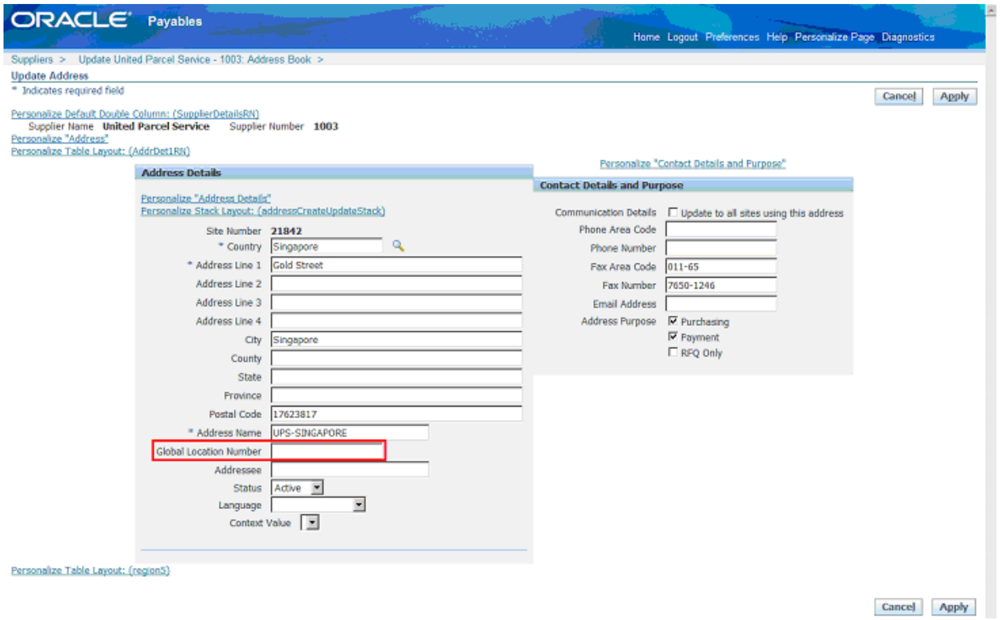
Personalization Properties

Clear Personalization
Go
Choose Levels Displayed

	Original Definition	Site	Organization: Vision Operations	Responsibility: Payables, (USA)	Result / Source
Access Key	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Additional Text	Global Location Number	Inherit	Inherit	Inherit	Global Location Number / Definition
Admin Personalization	true	Inherit	Inherit	Inherit	true / Original Definition
CSS Class	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Destination Function	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Export View Attribute	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Initial Value	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Length	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Long Tip Region	Default	Inherit	Inherit	Inherit	Default / Original Definiti
Maximum Length	40	Inherit	Inherit	Inherit	40 / Original Definition
Prompt	Global Location Number	Inherit	Inherit	Inherit	Global Location Number / Definition
Read Only	false	Inherit	Inherit	Inherit	false / Original Definition
Rendered	false	Inherit	true	Inherit	true / Organization
Required	no	Inherit	Inherit true false SPEL	Inherit	no / Original Definition
Search Allowed	false	Inherit		Inherit	false / Original Definition

17. In the **Personalize Region: Address** page, click Return to Application.

18. In the **Update Address** page, the Global Location Number field now appears. Enter the GLN value, then click Apply.


ORACLE Payables
Home Logout Preferences Help Personalize Page Diagnostics
Suppliers > Update United Parcel Service - 1003: Address Book >
Cancel
Apply
Personalize Default Double Column: (SupplierDetailsRN)
Personalize "Address"
Personalize Table Layout: (AddrDet1RN)
Personalize "Address Details"
Personalize Stack Layout: (addressCreateUpdateStack)
Personalize "Contact Details and Purpose"
Personalize Table Layout: (region5)
Cancel
Apply

Update Address

* Indicates required field

Supplier Name **United Parcel Service** Supplier Number **1003**

Address Details

Site Number **21842**

* Country Singapore

* Address Line 1 Gold Street

Address Line 2

Address Line 3

Address Line 4

City Singapore

County

State

Province

Postal Code 17623817

* Address Name UPS-SINGAPORE

Global Location Number

Addressee

Status Active

Language

Context Value

Contact Details and Purpose

Communication Details ☐ Update to all sites using this address

Phone Area Code

Phone Number

Fax Area Code 011-65

Fax Number 7650-1246

Email Address

Address Purpose ☑ Purchasing

☑ Payment

☐ RFQ Only

Related Topics

Entering Suppliers Manually, *Oracle Payables User's Guide*

Creating Match Rules

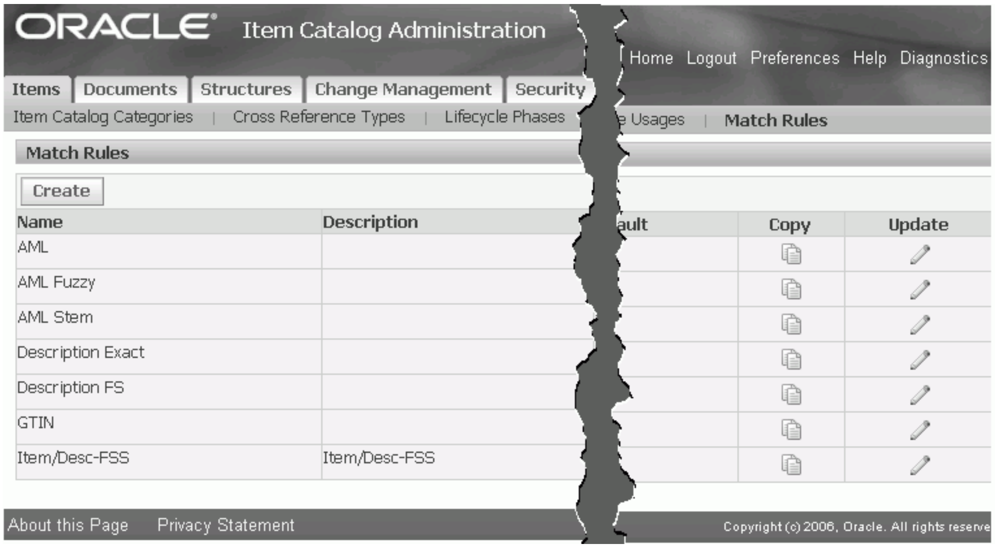
A match rule defines matching criteria in order to find matches between the incoming external (source system) items and Oracle Product Information Management Data Hub (PIMDH) items. Create match rules at the item catalog level.

After uploading the records into the interface table, PIMDH determines if cross-references for items exist in the production table. If the source system item matches a PIMDH item name, the system confirms the match. At the source system batch level, users can define the default matching rule and choose whether to run the matching rule automatically upon data upload. If you choose to run the matching rule automatically, then a concurrent request launches to find a match using the default matching rule for all unconfirmed records. Alternatively, you can select a match rule and launch the concurrent request to find a match for all unconfirmed items. You can run different matching rules against each batch one at a time while searching to match batch items to the appropriate PIMDH items. The matching process only applies to unconfirmed items. You cannot make changes to the batch while the matching concurrent request executes. The system searches to match source system items against all PIMDH items, including unapproved items.

To create a match rule for an item catalog:

1. Navigate to the Setup Workbench. From the Items tab, click the **Match Rules**

sub-tab. Click **Create**.


ORACLE Item Catalog Administration
Home Logout Preferences Help Diagnostics
Items Documents Structures Change Management Security
Item Catalog Categories | Cross Reference Types | Lifecycle Phases
e Usages | Match Rules
Match Rules
Create
About this Page Privacy Statement
Copyright (c) 2006, Oracle. All rights reserve

Name	Description	ault	Copy	Update
AML			⧉	✎
AML Fuzzy			⧉	✎
AML Stem			⧉	✎
Description Exact			⧉	✎
Description FS			⧉	✎
GTIN			⧉	✎
Item/Desc-FSS	Item/Desc-FSS		⧉	✎

2. **Name** the match rule and provide a **Description**. Check **Set as Default** to have this match rule automatically appear as the default item catalog match rule for source systems. Optionally, you can select another default match rule when defining a source system.

3. Click **Add Criteria**.

4. Find and select the item attributes for which you want to add criteria using either the **Attribute Name**, **Business Entity**, or **Attribute Group** field. Click **Apply**.

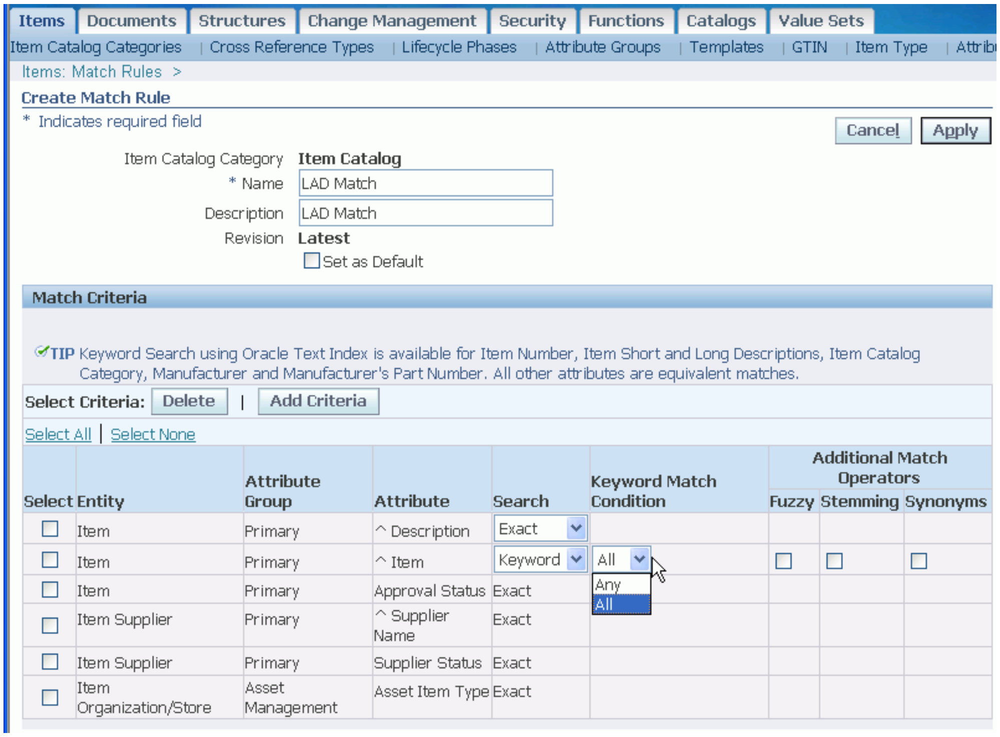
   Choose from the following business entities:

   - Item
   - Item Organization/Store
   - Item Revision
   - Item Supplier

   > **Tip:** You can match the following attributes by keywords, using fuzzy, stemming, and synonym searches:
   >
   > - item
   > - item description
   > - item long description

- item catalog category
- manufacturer
- manufacturer part number
- supplier
- supplier part number

All other attributes must match exactly. To use synonym searches, you must load a thesaurus into the database and set the site level EGO: Thesaurus for Matching profile option to Yes.



Create Match Rule

* Indicates required field

Item Catalog Category	**Item Catalog**
* Name	LAD Match
Description	LAD Match
Revision	**Latest**
	□ Set as Default

Match Criteria

TIP Keyword Search using Oracle Text Index is available for Item Number, Item Short and Long Descriptions, Item Catalog Category, Manufacturer and Manufacturer's Part Number. All other attributes are equivalent matches.

Select Criteria: Delete | Add Criteria

Select All | Select None

						Additional Match Operators		
Select	Entity	Attribute Group	Attribute	Search	Keyword Match Condition	Fuzzy	Stemming	Synonyms
□	Item	Primary	^ Description	Exact				
□	Item	Primary	^ Item	Keyword	All Any All	□	□	□
□	Item	Primary	Approval Status	Exact				
□	Item Supplier	Primary	^ Supplier Name	Exact				
□	Item Supplier	Primary	Supplier Status	Exact				
□	Item Organization/Store	Asset Management	Asset Item Type	Exact				

5. Once you have added all of the criteria, click **Apply**.

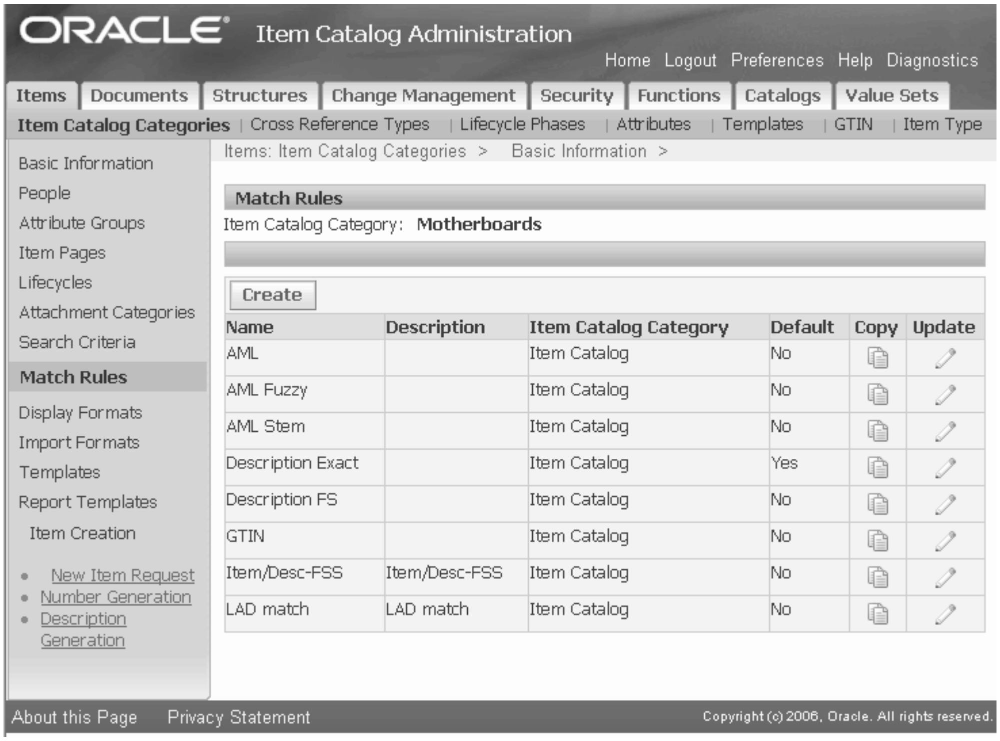
To optionally create a match rule for an item catalog category:

After defining match rules at the item catalog level, you can optionally create additional match rules for individual item catalog categories.

1. Navigate to the Setup Workbench. Click the **Item Catalog Categories** tab. Search for the item catalog category, then click an item catalog category name link.

2. Select **Match Rules** from the list of options under the Item Catalog Categories sub-tab. From here, follow the same procedure to create match rules for the item catalog category as you did to create match rules for an item catalog.

   > **Note:** The item catalog match rules are listed along with the item catalog category match rules, but you cannot update them from within the item catalog category.


ORACLE Item Catalog Administration
Home Logout Preferences Help Diagnostics
Items | Documents | Structures | Change Management | Security | Functions | Catalogs | Value Sets
Item Catalog Categories | Cross Reference Types | Lifecycle Phases | Attributes | Templates | GTIN | Item Type
Basic Information
People
Attribute Groups
Item Pages
Lifecycles
Attachment Categories
Search Criteria
Match Rules
Display Formats
Import Formats
Templates
Report Templates
Item Creation
New Item Request
Number Generation
Description Generation
Items: Item Catalog Categories > Basic Information >
Match Rules
Create
About this Page Privacy Statement
Copyright (c) 2006, Oracle. All rights reserved.

Item Catalog Category: **Motherboards**

Name	Description	Item Catalog Category	Default	Copy	Update
AML		Item Catalog	No	⧉	✎
AML Fuzzy		Item Catalog	No	⧉	✎
AML Stem		Item Catalog	No	⧉	✎
Description Exact		Item Catalog	Yes	⧉	✎
Description FS		Item Catalog	No	⧉	✎
GTIN		Item Catalog	No	⧉	✎
Item/Desc-FSS	Item/Desc-FSS	Item Catalog	No	⧉	✎
LAD match	LAD match	Item Catalog	No	⧉	✎

Related Topics

Overview of Inbound Product Data Synchronization and Data Quality Management, *Oracle Product Information Management User's Guide*

Defining Source Systems, page 14-11

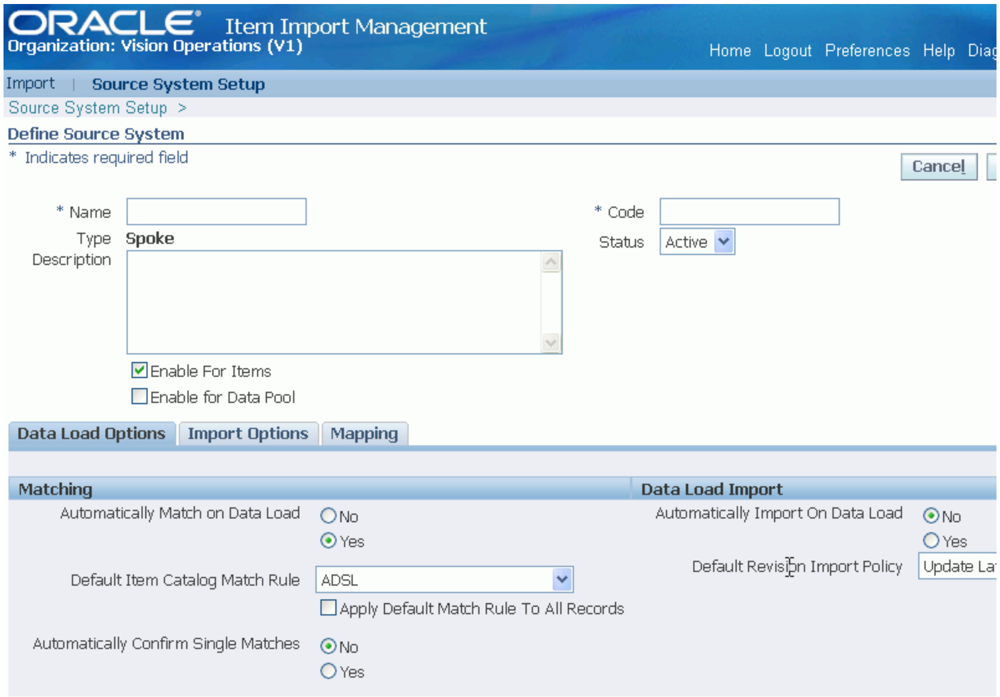
Defining Source Systems

When importing data from a source other than Oracle Product Information Management Data Hub (PIM Data Hub or PIMDH), you must create a source system within Import Workbench.

To define a source system:

1. Navigate to the Import Workbench and select the Source System Setup tab.

2. Click **Define Source System** to create a new source system.


ORACLE Item Import Management
Organization: Vision Operations (V1)
Home Logout Preferences Help Diag
Import | Source System Setup
Source System Setup >
Define Source System
* Indicates required field
Cancel
Data Load Options
Import Options
Mapping

* Name

* Code

Type Spoke

Status Active

Description

☑ Enable For Items

☐ Enable for Data Pool

Matching

Automatically Match on Data Load ○ No ● Yes

Default Item Catalog Match Rule ADSL

☐ Apply Default Match Rule To All Records

Automatically Confirm Single Matches ● No ○ Yes

Data Load Import

Automatically Import On Data Load ● No ○ Yes

Default Revision Import Policy Update La

3. Alternatively, you can search for and view any existing source system item that is enabled only for customer items. Enable it for items.

4. On the **Define Source System** page, enter the following for the source system:

   - a unique name

   - a unique code

     Note: The code can be alphanumeric, but must not contain any spaces.

Select the **Enable For Items** check box if you plan to use this source system for item-related data.

> **Note:** Oracle Product Information Management Data Hub uses the same architecture as Oracle Customer Data Hub. The Enable For Items check box communicates that you plan to enter item-related

data. You can always uncheck this box at a later time.

Select the **Enable for Data Pool** check box if the source system is a GDSN data pool. The system can perform certain tasks for GDSN batches, such as:

- using a group ID to process an entire item hierarchy
- automatically sending a message to the data pool once data is imported
- enabling you to send messages to 1SYNC as needed

> **Note:** You can specify a GDSN-enabled source system for both GDSN and non-GDSN batches. However, you cannot specify a non-GDSN source system for a GDSN batch.
>
> For more information about GDSN, see: Overview of Global Data Synchronization Network and 1SYNC, *Oracle Product Information Management User's Guide*.

5. On the **Define Source System** page, Click the Data Load Options sub-tab.
6. Select Yes by **Automatically Match on Data Load** if you want to run match rules.

   > **Tip:** If you want to load data from a source system and manually inspect it before running match rules, then select No.

7. If you are using match rules, then select a **Default Item Catalog Match Rule** from the list.
8. Determine whether to check or uncheck **Apply Default Match Rule To All Records** .

   - Uncheck - The system applies the default item catalog category-level match rule to unconfirmed items with an assigned item catalog category. The system assigns the item catalog level match rule for items with no item catalog category.

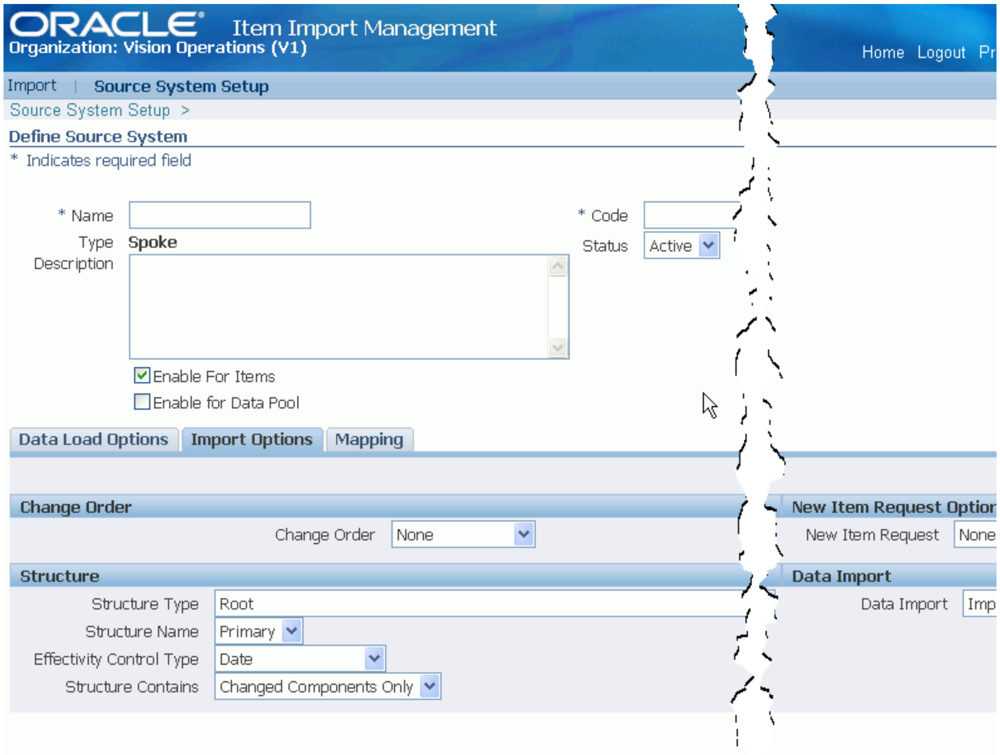
     Check - The system applies the default item catalog-level match rule to all unconfirmed items.

9. Select Yes if you want to **Automatically Confirm Single Matches** that you find when running match rules for the entire batch If you select No, then the system tries to match all unconfirmed records using the default match rule.
10. Select the appropriate **Import** option:

- Immediately on data load - automatically updates the Oracle Item Master table with matched data.
- Schedule Data and Time - select the date and time to import the confirmed items or structures in the batch.
- None - leaves the data in the Import Workbench. You can manually import the data at a later time.

11. Select the appropriate **Default Revision Import Policy**:
    - Create New - creates a new version of the item.
    - Update Latest - updates the latest item revision upon import.
12. Click the **Import Options** sub-tab.

    Define default import options here. You can change the import options for a particular batch later, if necessary.


ORACLE Item Import Management
Organization: Vision Operations (V1)
Home Logout Pr
Import | Source System Setup
Source System Setup >
Data Load Options
Import Options
Mapping

Define Source System

* Indicates required field

* Name		* Code	
Type	Spoke	Status	Active
Description			

☑ Enable For Items

□ Enable for Data Pool

Change Order

Change Order	None

New Item Request Optior

New Item Request	None

Structure

Structure Type	Root
Structure Name	Primary
Effectivity Control Type	Date
Structure Contains	Changed Components Only

Data Import

Data Import	Imp

13. Select one of the following **Change Order** options:

- Add To Existing - associates the imported data with an existing change order.

- Create New - creates a new change order for the imported data.

  Note: When creating a new change order, you have the opportunity to enter or select the following:

  - Change Order Category

  - Change Order Type

  - Change Order Name

  - Change Order Description

  Once you select the change order type, depending on the setup, the Change Order Number field is automated or you must manually enter a change order number.

- None - imports the data into PIMDH without going through a change approval process.

14. Select one of the following **New Item Request** options:

    - None - you cannot create any new item requests from this source system. Instead, the system creates draft items. Later, you can navigate to the Item Workbench, further define the draft items, and add it to a new item request. See:

    - One per Item Catalog Category - create one new item request per item catalog category within an imported batch. This new item request can contain multiple line items.

    - One per Item - create one new item request per item.

    For more information about new item requests, see: Creating New Item Requests, *Oracle Product Information Management User's Guide*.

15. If you are importing structures, select the following default options:

    - Structure Type

        > **Caution:** Oracle Product Information Management Data Librarian recommends avoiding the use of the Root structure type. User-defined attributes and import formats are not supported for the Root structure type.

    - Structure Name

    - Effectivity Control Type - choose Date or Model/Unit Number

    - Structure Contains - choose All Components or Changed Components Only

16. Select one of the following **Data Import** options:

    - Import All Data

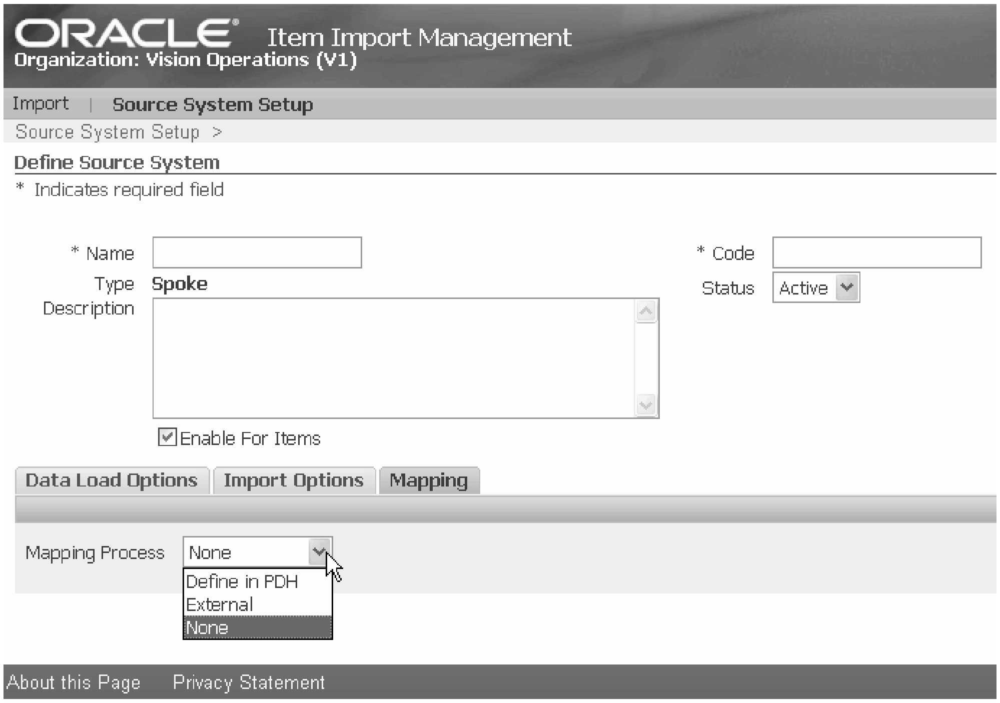
    - Create Cross References Only - Select this option if you want to create cross-references only. It will not import the data.

17. Click the **Mapping** sub-tab. Select one of the following **Mapping Process** options:

    - Define in PIMDH - Enables you to define the mapping of attributes between an external source system and PIM Data Hub within PIM Data Hub.

    - External - Enables you to upload an XSLT file containing mapping information between an external source system and PIM Data Hub.

    - None - No mapping occurs.



* Name

* Code

Type Spoke

Status Active

Description

☑ Enable For Items

Mapping Process None

Related Topics

Overview of Inbound Product Data Synchronization and Data Quality Management, *Oracle Product Information Management User's Guide*

Creating Match Rules, page 14-8

Applying the 1SYNC Library

> **Important:** This setup step is mandatory if you receive item data from 1SYNC. If you do not receive item data from 1SYNC, you can skip this step.

You must maintain the item data sent by 1SYNC in PIM. Create the appropriate attribute groups and attributes in the setup pages. Apply the item attributes specified in 1SYNC by applying an ldt file containing these seeded values to PIM.

To create the attributes for receiving item data from 1SYNC:

1. Create the value sets by applying the value set ldt file egogdsnvs.ldt.

2. Create the attributes by applying the attribute group ldt file egogdsnag.ldt.

Note: If necessary, remove attributes not require. For example, attributes for an industry vertical (such as electronics) not supported by the customer.

Defining Units of Measure for GDSN Attributes

Important: This setup step is mandatory if you receive item data from 1SYNC that contains the GDSN attributes listed below. If you do not receive item data from 1SYNC, you can skip this step.

Oracle Product Information Management includes 150+ GDSN Attributes. Some of these attributes do not have pre-defined units of measure (UOMs), though, so that you can tailor the attribute UOMs to fit your business needs.

Important: You must set up UOMs for these attributes before accepting inbound attribute values from 1SYNC. If you accept an inbound attribute value for these attributes before setting up the UOM, you cannot set up the UOM later. If this happens, clear the values for those attributes (for all items), and then set up the UOM.

The following table lists the attributes that need UOM classes and UOMs assigned to them.

Attribute Group Name	Attribute Name
Trade Item Pack Hierarchy	Composition Width
Material Information	Weight
FMCG: Measurements	Fat Percent In Dry Matter
Size	Size Dimension
Hardlines	Nesting Increment
GDSN Industry: Hardlines	Out Of Box Depth
GDSN Industry: Hardlines	Out Of Box Height
GDSN Industry: Hardlines	Out Of Box Width

Attribute Group Name	Attribute Name
Handling Information	Non GTIN Pallet Height
Handling Information	Non GTIN Pallet Gross Weight UOM
Handling Information	Maximum Stacking Weight
Temperature Information	Storage Handling Temperature Maximum
Temperature Information	Storage Handling Temperature Minimum
Temperature Information	Delivery To Distribution Center Temperature Minimum
Temperature Information	Delivery To Market Temperature Maximum
Temperature Information	Delivery To Distribution Center Temperature Maximum
Temperature Information	Delivery To Market Temperature Minimum
Storage Handling Humidity	Minimum Humidity
Storage Handling Humidity	Maximum Humidity
Hazardous Information	Flash Point Temperature
Trade Item Measurements	Depth
Trade Item Measurements	Height
Trade Item Measurements	Width
Trade Item Measurements	Diameter
Trade Item Measurements	Volume
Trade Item Measurements	Gross Weight
Trade Item Measurements	Net Weight

Attribute Group Name	Attribute Name
Trade Item Measurements	Drained Weight
Trade Item Measurements	Peg Horizontal
Trade Item Measurements	Peg Vertical
Trade Item Measurements	Product Strength Basis
Trade Item Measurements	Generic Ingredient Strength
Order Information	Order Sizing Factor
Order Information	Order Lead Time
Ordering Information	Goods Pick up Lead Time
Packaging Material Information	Packaging Material Composition
Price Date Information	List Price Basis Per Unit
Price Date Information	Suggested Retail Price Basis Per Unit
Price Comparison Measurement	Comparison Measurement

Related Topics

Mapping Values Between 1SYNC Codes and Oracle Codes, page 14-20

> **Note:** When using Oracle UOM codes that have corresponding 1SYNC UOM codes, map the UOM codes to each other using UNIT_OF_MEASURE_DVM.xml.

Defining Unit of Measure Classes, *Oracle Inventory User's Guide*

Defining Units of Measure, *Oracle Inventory User's Guide*

Mapping Values Between 1SYNC Codes and Oracle Codes

You must create a map to link the following Oracle codes to the corresponding 1SYNC codes:

- Country
- Currency
- Item Processing
- Language
- Trade Item Descriptor
- Unit of Measure

Use domain-value map (DVM) files to map Oracle codes to 1SYNC codes. Each DVM file has 2 columns, GDSN, and EBIZ. Each row in the file maps a 1SYNC code value to the corresponding code used in Oracle eBusiness Suite. The Oracle Enterprise Service Bus documentation provides specific steps to load a DVM file and to create DVM records. See: Creating and Populating Domain-Value Maps, *Oracle Enterprise Service Bus Developer's Guide 10g (10.1.3.3.0)*.

Verify the presence of the following DVM files in the directory <soa-suite-home>\Bpel\system\xmllib\m4u\config after you inflate the cln_bpel_xmllib.jar from $APPL_TOP/cln/12.0.0/patch/115/jar to <soa-suite-home>\bpel\system\xmllib\.

Import each of the DVM files from the <soa-suite-home>\Bpel\system\xmllib\m4u\config into your Enterprise Service Bus Console. Once you import these files, edit the DVMs from the ESB console to create new mapping records.

DVM Files

- COUNTRY_DVM.xml

  Map between country codes used in Oracle E-Business Suite and 1SYNC target market codes.

  Country Code Example
  The target market code for United States of America is US in the 1SYNC XML file. Oracle E-Business Suite defines the United States of America country code as USA. To map these two values, create a record in COUNTRY_DVM.xml with the value USA in the EBIZ column and the value US in the GDSN column.

- CURRENCY_DVM.xml

  Map between currency codes used in Oracle E-Business Suite and 1SYNC currency codes.

- ITEM_PROCESSING_CODES_DVM.xml

  Map between the SyncItemPublicationLine processing codes used in Oracle E-Business Suite and the 1SYNC CatalogueItemNotification codes. There is no requirement to define additional records after importing

ITEM_PROCESSING_CODES_DVM.xml since this map is predefined.

- LANGUAGE_DVM.xml

  Map between the language codes used in Oracle E-Business Suite and the 1SYNC language codes.

  Language Code Example
  The 1SYNC language code for American English is "en". Oracle defines American English as "US". To map these two values, create a record in LANGUAGE_DVM.xml with the value US in the EBIZ column and the value en in the GDSN column.

- TRADE_ITEM_DESCRIPTOR_DVM.xml

  Map between the tradeItemDescriptor codes used in Oracle E-Business Suite and the 1SYNC ProductType codes.

  Trade Item Descriptor Code Example
  You can choose to define a TRADE_ITEM_DESCRIPTOR code of BASE_UNIT_OR_EACH to represent a product type EACH in Oracle E-Business Suite. 1SYNC uses the ProductType EA to identify EACH items. To map these two values, create a record in TRADE_ITEM_DESCRIPTOR_DVM.xml with the value BASE_UNIT_OR_EACH in the EBIZ column and the value EA in the GDSN column.

- UNIT_OF_MEASURE_DVM.xml

  Map between the UOM codes used in the Oracle E-Business Suite and the 1SYNC UOM codes.

  Unit of Measure Code Example
  Define a UOM code of KILOG to represent the unit of measure kilogram in Oracle E-Business Suite. 1SYNC uses the UOM code KG to identify kilograms. To map these two values, create a record in UNIT_OF_MEASURE_DVM.xml with the value KILOG in the EBIZ column and the value KG in the GDSN column.

Related Topics

For a list of 1SYNC code values, refer to 1SYNC_Data_Recipient_XML_Guide_R6.1v2.pdf, available for download from 1SYNC. Contact 1SYNC at http://www.1sync.org/home.html.

Mapping Categories Between GPC Alternate Catalogs and Item Catalogs

Map the alternate catalog category (ACC) to the item catalog category (ICC) that you created to maintain the items received from 1SYNC. When the items are received from 1SYNC, BPEL uses this mapping to identify the ICC to which the items belong in PIM. This also enables you to run the match rules defined for the ICC.

1. Navigate to the Setup Workbench. Click the Item Catalog Categories tab.

2. Click the Catalog Category Mapping link.

3. Click Create to create a new mapping.

4. Enter the Name of the mapping.

5. Specify the Source Catalog. This is the Catalog that has the alternate catalog category with GPC codes.

6. Specify the Item Catalog as the Target Catalog.

7. Check the Enabled flag. This activates the mapping.

8. In the Mappings region, click Add Another Row.

9. Specify the From Category. This is the alternate catalog category with GPC codes.

10. Specify the To Category. This is the ICC that has the attribute groups and pages created for 1SYNC items.

11. If you want to map more alternate categories to different/same ICCs, click Add Another Row and repeat the previous two steps.

12. Click Apply.

A

Workflows for Change and Document Management

This appendix covers the following topics:

- Workflows for Change and Document Management

Workflows for Change and Document Management

The system uses Oracle Workflow technology to automate business processes in Change Management, Document Management and Collaboration (DOM), and Group Member registration. You must set up Oracle Workflow to implement Oracle Product Lifecycle Management or Oracle Product Information Management.

> **Important:** Oracle Product Lifecycle Management (PLM) and Oracle Product Information Management (PIM) share a common technological foundation, but address different business needs through a different mix of core functions, plus specific functions that are unique to each product. Document Management and Collaboration (DOM) is available only to customers who have licensed Product Lifecycle Management, and it is not available to licensees of Product Information Management. Change Management is a core function, available to licensees of both products.

> **Note:** Run wfver.sql under $FND_TOP/sql for detailed information about workflow versions.

Workflow Setup

Refer to the Oracle Workflow Implementation and User Documentation required for setup.

Overview of Change and Document Management Workflows

Change and Document Management use Oracle Workflow technology to execute workflow routing for a change and document objects and events occurring in a change or document object (such as Submit, Reassign, Priority Change, and Status Change actions). Change and Document Management enable you to model your business processes in terms of generic order processes. So you can model your business processes by customizing or extending seeded workflow processes and/or modifying custom hook PL/SQL procedures.

Viewing Processes in Oracle Workflow Builder

From within the Oracle Workflow Builder you can view the different workflow processes and their associated functions, messages, subprocesses, notifications, and properties.

To view processes in Oracle Workflow Builder:

1. Within Oracle Workflow Builder, select Open from the File menu and connect to the database. Alternatively, you can connect to the workflow definitions file engchgmt.wft located in the product directory tree of your Oracle Applications server.

2. Expand the data source, and then select the item type branch within that data source.

3. Expand the processes branch within your item type and select a process activity to display the diagram of the process in a Process window.

Display Name (Internal Name)	**Purpose**	**Location of Flat File Store on Server (Location of other Flat File Stores with Item Type embedded)**
ENG: Standard(ENGWFSTD)	Contains a collection of commonly used (by other Eng Workflow Item Types) Function Activities and Lookup Types.If the activity will be shared by more than one object's process, create the activity in the ENG: Standard (ENGWFSTD) item type. Otherwise, create the activity in the appropriate object's item type	$ENG_TOP/patch/115/import //engchmgt.wft

Change (ENGCACT)	Contains activities, attributes, notifications, and processes used by Change Action Process	$ENG_TOP/patch/115/import //engchmgt.wft
Change Line (ENGCLACT)	Contains activities, attributes, notifications, and processes used by Change Line Action Process	$ENG_TOP/patch/115/import //engchmgt.wft
Change Workflow Routing(ENGCRT)	Contains activities, attributes, notifications, and processes used by Change Approval Routing Process	$ENG_TOP/patch/115/import //engchmgt.wft
Change Workflow Routing Step(ENGCSTEP)	Contains activities, attributes, notifications, and processes used by Change Approval Routing Step Process	$ENG_TOP/patch/115/import //engchmgt.wft

Pre-Seeded Workflow Processes

Change (ENGCACT)

Process Internal Name	Process Display Name	Description
INITIATE_CHANGE	Initiate Change	Sends an assignment notification to assignee and starts "Initiate Change Line" workflow if Change has a line. This workflow is started when users submit a Change Object.
PRIORITY_CHANGE	Priority Change	Sends a priority change notification to Requestor, Owner, and Assignee for changes. This workflow is started when users change the priority for a Change Object.

REASSIGN_CHANGE	Reassign Change	Sends an assignment notification to assignee. This workflow is started when users reassign a Change Object.
REQUEST_COMMENT	Request Comment	Sends a notification to request comment to specified people on the Request Comment Action page. When the recipient responds to the request notification, Workflow sends a response notification to the requestor. This workflow is started when users request comment for a Change Object.
RESPONSE_FYI	Send Response FYI	This process is called when the recipient responds to the request notification in Request Comment workflow process.
STATUS_CHANGE	Status Change	Sends a status change notification to Requestor, Owner, and Assignee for a change. This workflow is started when users change the status for a Change Object.

Change Line (ENGCLACT)

Process Internal Name	**Process Display Name**	**Description**
INITIATE_CHANGE	Initiate Change	Sends an assignment notification to assignee. This workflow is started from the Change Header's Initiate Change Workflow or when a user creates a Change Line if Change Header is Open.

REASSIGN_CHANGE	Reassign Change	Sends an assignment notification to the assignee. This workflow is started when a user reassigns a Change Line.
STATUS_CHANGE	Status Change	Sends a status change notification to Header Requestor, Header Owner, Header Assignee, Line Owner and Line Assignee. This workflow is started when a user changes status for a Change Line.

Change Workflow Routing (ENGCRT)

Process Internal Name	Process Display Name	Description
ROUTE_AGENT	Workflow Routing Agent	Controls Workflow Routing and sends Approval Status change notification to Requestor, Owner, and Assignee for a Change. This workflow is started when a user submits an Workflow Routing for a Change Object. Also this workflow is aborted when user aborts an Workflow Routing.

Change Workflow Routing Step (ENGCSTEP)

Process Internal Name	Process Display Name	Description

REQUEST_DEFINITION	Definition	Sends a definition request notification to specified assignees on Workflow Routing page and controls definition request for New Item Request. If the assignees do not respond by the specified period, workflow will also send a reminder notification. Once the step is completed, workflow will return control parent Workflow Routing Agent workflow. This workflow is started from Workflow Routing Agent based on the definition of Workflow Routing.
REQUEST_DEFIINITION_AND_APPR	Definition and Approval	Sends a definition and approval request notification to specified assignees on Workflow Routing page and controls definition and approval request for New Item Request. If the assignees do not respond by the specified period, workflow will also send a reminder notification. Once the step is completed, workflow will return control parent Workflow Routing Agent workflow. This workflow is started from Workflow Routing Agent based on the definition of Workflow Routing.

REQUEST_APPROVAL	Request Approval	Sends an approval request notification to specified assignees on Workflow Routing page and controls approval request. If the assignees do not respond by the specified period, workflow will also send a reminder notification. Once the step is approved, workflow will return control parent Workflow Routing Agent workflow. This workflow is started from Workflow Routing Agent based on the definition of Workflow Routing.
REQUEST_COMMENT	Request Comment	Sends a comment request notification to specified assignees on Workflow Routing page and controls comment requests. If the assignees do not respond by the specified period, workflow will also send a reminder notification. Once the step is completed, workflow will return control parent Workflow Routing Agent workflow. This workflow is started from Workflow Routing Agent based on the definition of Workflow Routing.
SEND_FYI	FYI	Sends an FYI notification to specified assignees on Workflow Routing page. Once the step is completed, workflow will return control parent Workflow Routing Agent workflow. This workflow is started from Workflow Routing Agent based on the definition of Workflow Routing.

Following are two Process Attributes for the Workflow Routing Step workflow process:

1. **Default Change Role Instance Set (DEFAULT_CHANGE_ROLE)**

   Assigned on current or last Workflow Routing. Implicit grants securely based on the steps workflow process.

   ENG_CHANGE_WF_APPROVERS -> Granted Role: Approver (ENG_CHANGE_APPROVER)

   ENG_CHANGE_WF_REVIWERS -> Granted Role: Reviewer (ENG_CHANGE_REVIEWER).

   Implicit Role (Instance Set) to be granted is defined in the Step workflow process attributes

   DEFAULT_CHANGE_ROLE

   In case of seeded Step Workflow Process

   Request Approval (DEFAULT_CHANGE_ROLE: " ENG_CHANGE_WF_APPROVERS")

   The step assignees get "Approver" implicit role from instance set ENG_CHANGE_WF_APPROVERS.

   Request Comment & FYU (DEFAULT_CHANGE_ROLE: " ENG_CHANGE_WF_REVIEWERS")

   The step assignees get "Reviewer" implicit role from instance set ENG_CHANGE_WF_REVIEWERS. Oracle Workflow does not support other roles by default.

2. **Activity Condition Code (ACTIVITY_CONDITION_CODE)**

   Attribute will indicate whether or not the Condition radio box is displayed on the Workflow Routing Create/Update step page. Acceptable values are Y or N.

3. **Enable Flag in Type: Definition (DEFINITION)**

   Attribute will indicate whether or not the this process is displayed in the Workflow Process pull-down list based on the Definition Type of Workflow Routing (Template) on the Workflow Routing Create/Update step page. Acceptable values are Y or N.

4. **Enable Flag in Type: Approval (APPROVAL)**

   Attribute will indicate whether or not the this process is displayed in the Workflow Process pull-down list based on the Approval Type of Workflow Routing (Template) on the Workflow Routing Create/Update step page. Acceptable values are Y or N.

5. **Enable Flag in Type: Definition and Approval (DEFINITION_APPROVAL)**

   Attribute will indicate whether or not the this process is displayed in the Workflow

Process pull-down list based on the Definition and Approval Type of Workflow Routing (Template) on the Workflow Routing Create/Update step page. Acceptable values are Y or N.

6. **Enable Flag in Type: Generic (GENERIC)**

   Attribute will indicate whether or not the this process is displayed in the Workflow Process pull-down list based on the Generic Type of Workflow Routing (Template) on the Workflow Routing Create/Update step page. Acceptable values are Y or N.

7. **Association Enabled Flag (ASSOC_ENABLED)**

   Attribute will indicate whether or not the the association for the assignee is available in the Workflow Routing Step for New Item Request on the Create/Update step page. Acceptable values are Y or N. This atttribute is only applicable for "Definition" and "Definition and Approval" Workflow.

Seeded Workflow Item Attributes

The following table describes the common item attributes for Change and Document Management Workflow. Each Workflow Item Type should have these attributes.

All Item Type

Internal Name	Display Name	Description	Type	Length	Misc info (used for etc)
CHANGE_ID	Change Id	Engineering Change Unique Identifier	Number		Primary Key Values
CHANGE_NOTICE	Change Number	Engineering Change Number	Text	30	Old Primary Key Values
CHANGE_NAME	Change Name	Engineering Change Name	Text	240	Token replacement for messages.
ORGANIZATION_ID	Organization Id	Organization Id	Number		Old Primary Key Values
ORGANIZATION_CODE	Organization Code	Organization Code	Text	3	Token replacement for messages.

CHANGE_MANAGEMTENT_TYPE	Change Management Type	Change Management Type	Text	40	Token replacement for messages.
DESCRIPTION	ECO Description	ECO Description	Text	2000	Token replacement for messages.
STATUS	Status	Change Status	Text	80	Token replacement for messages.
APPROVAL_STATUS	Approval Status	ECO Approval Status	Text	80	Token replacement for messages.
PRIORITY	Priority	Priority	Text	50	Token replacement for messages.
REASON	Reason	Reason	Text	50	Token replacement for messages.
ASSIGNEE_NAME	Assignee Name	Assignee Name	Text	360	Token replacement for messages.
ASSIGNEE_COMPANY	Assignee Company	Assignee Company	Text	360	Token replacement for messages.
WF_USER_ROLE	WF Owner User Role	Role of Person Who Started the Workflow	Role		Runtime information for the work item
WF_USER_ID	WF Owner User Id	User Id of Person Who Started the Workflow	NUMBER		Runtime information for the work item

HOST_URL	Host URL and port	Host URL and port	Text		Runtime information for the work item
DEFAULT_STYLE_SHEET	Default Style Sheet	Default Style Sheet	Text	100	/OA_HTML/cabo/styles/blaf.cssTemporary placeholders for HTML notifications
CHANGE_DETAIL_PAGE_URL	Change Detail Page URL	Change Detail Page URL	URL		
MESSAGE_TEXT_BODY	Message Text Body	Message Text Body	Document		Temporary placeholders for notifications
MESSAGE_HTML_BODY	Message HTML Body	Message HTML Body	Document		Temporary placeholders for notifications
REVIEWERS_ROLE	Change Standard Reviewer Role	Change Standard Reviewer Role	Role		Temporary placeholders for notifications
ASSIGNEE_ROLE	Assignee Role	Assignee Role	Role		Temporary placeholders for notifications

ACTION_ID	Change Action Id	Change Action Id	Number		Primary Key for Change Actions (ENG_CHANGE_ACTIONS.ACTION_ID) Runtime information for the work item
ADHOC_PARTY_LIST	Adhoc Party List	Adhoc Party List	Text		Runtime information for the work item
ADHOC_PARTY_ROLE	Adhoc Party Role	Adhoc Party Role for Change Action	Role		Temporary placeholders for notifications
RESPONSE_TIMEOUT	Response Timeout	Response Timeout in Minutes for Action calculated from Response_By_Date	Number		
RESPONSE_COMMENT	Response Comment	Response Comment	Text		Temporary placeholders for notifications
ATTACHMENTS	Attachments	Attachments	Document		Temporary placeholders for notifications: Notification Detail Page Attachment LinkFND:entity===

WF_USER_ID	WF Owner User Id	User Id of Person Who Started/Aborted the Workflow	NUMBER		Runtime information for the work item
WF_USER_ROLE	WF Owner User Role	Role of Person Who started/aborted the Workflow	Role		Runtime information for the work item
WF_ADMINISTRATOR	WF Administrator	WF Administrator	Role		Constant: SYSADMINFor WFERROR: DEFAULT_ERROR (Default Error Process.)
WF_SIG_POLICY	Signature Policy	Signature Policy	Text		To use Signature Policy defaulting in future
ERROR_TIMEOUT	WF Error Timeout Value	Timeout Value in Days	Number		Constant: 0For WFERROR: DEFAULT_ERROR (Default Error Process.)
RCS	RCS version	RCS version	Text	240	RCS version
FROM_ROLE	From Role	From Role	Role		Item Attribute which holds the From Role. (Message #FROM_ROLE)

ENGCLACT Specific Item Attributes (required attributes when you pass the change line ID to StartWorfklow API)

Internal Name	Display Name	Description	Type	Length	Misc info (used for etc)
CHANGE_LINE_ID	Change Line Id	Engineering Change Line Unique Identifier	Number		Primary Key Values
LINE_NAME	Change Line Name	Engineering Change Line Name	Text	240	Token replacement for messages.
LINE_DESCRIPTION	Change Line Description	Change Line Description	Text	4000	Token replacement for messages.
LINE_SEQUENCE_NUMBER	Change Line Sequence Number	Change Line Sequence Number	Number		Token replacement for messages.
LINE_STATUS	Change Line Status	Change Line Status	Text	80	Token replacement for messages.
LINE_ASSIGNEE_NAME	Change Line Assignee Name	Change Line Assignee Name	Text	360	Token replacement for messages.
LINE_ASSIGNEE_COMPANY	Change Line Assignee Company	Change Line Assignee Company	Text	360	Token replacement for messages.
LINE_REVIEWERS_ROLE	Change Line Reviewer Role	Change Line Reviewer Role	Role		Temporary placeholders for notifications
LINE_ASSIGNEE_ROLE	Change Line Assignee Role	Change Line Assignee Role	Role		Temporary placeholders for notifications

LINE_ATTACHMENTS	Attachments	Attachments	Document		Temporary placeholders for notifications: Notification Detail Page Attachment LinkFND:entity===

ENGCRT Specific Item Attributes

Internal Name	Display Name	Description	Type	Length	Misc info (used for etc)
ROUTE_ID	Route Id (Workflow Routing Id)	Route Id	Number		Primary Key Values for Change Route
STEP_ID	Current Step Id (Workflow Routing Step Id)	Current Step Id	Number		Primary Key Values for Current Step Id
ROUTE_PEOPLE_ROLE	Route (Workflow Routing) People Role	All people in the Workflow Routing workflow that have already been notified (i.e. completed or in process steps)	Role		Temporary placeholders for notifications

ENGCSTEP Specific Item Attributes

Internal Name	Display Name	Description	Type	Length	Misc info (used for etc)

ROUTE_ID	Workflow Routing Id	Workflow Routing Id	Number		Primary Key Values for Change Route
STEP_ID	Workflow Routing Step Id	Current Step Id	Number		Primary Key Values for Step Id
ROUTE_PEOPLE_ROLE	Workflow Routing People Role	All people in the Workflow Routing workflow that have already been notified (i.e. completed or in process steps)	Role		Temporary placeholders for notifications
STEP_SEQ_NUM	Workflow Routing Step Sequence Number	Workflow Routing Step Sequence Number	Number		Temporary placeholders for notifications
STEP_PEOPLE_ROLE	Workflow Routing Step People Role	Workflow Routing Step People Role	Role		Temporary placeholders for notifications
STEP_CONDITION	Workflow Routing Step Activity Condition	Workflow Routing Step Activity Condition	Text	30	Temporary placeholders for notifications
STEP_VOTING_OPTION	Workflow Routing Step Voting Option for Activity Condition	Workflow Routing Step Voting Option for Activity Condition	Lookup		Standard Voting Option
YES_RESPONSE_PERCENT	Yes Response Percentage of Votes	Yes Response Percentage of Votes	Number		Temporary placeholders for notifications

NO_RESPONSE_PERCENT	No Response Percentage of Votes	No Response Percentage of Votes	Number		Temporary placeholders for notifications

Change Management Workflow PL/SQL Packages

Change Management Workflow Private APIs will contain the following list of packages. These are private APIs for reference purposes only for your customization.

Package Name	**File Name**	**Description**	**Location of Flat File Store on Server**
ENG_WORKFLOW_PUB	ENGBWKFS.pls ENGBWKFB.pls	Private APIs: for developers or consultants at Oracle: This package contains All PL/SQL Function for Workflow Function Activity.	$ENG_TOP/patch/115/sql
ENG_WORKFLOW_UTIL	ENGUWKFS.pls ENGUWKFS.pls	Private APIs: This package contains utility functions and procedures for Eng Workflows	$ENG_TOP/patch/115/sql
ENG_WORKFLOW_NTF_UTIL	ENGUNTFS.pls ENGUNTFS.pls	This package contains utility functions and procedures for Eng Workflow Notifications	$ENG_TOP/patch/115/sql

ENG_WORKLFOW_EXT	ENGXWKFS.pls ENGXWKFB.pls	This package contains procedures that serve as "hooks" into the Eng Workflows for customization of the workflows. The "StartCustomWorkflow " and the "AbortCustomWorkflow" are called from ENG_WORKFLOW_UTIL package when a workflow process is started and aborted, respectively. Users with customized workflows can add their custom logic in these two procedures to be executed at the appropriate times. Also GetCustomMessageBody is called from the seeded PL/SQL Document APIs when system generates notification. Users can customize the PL/SQL procedure to modify notification contents. Additionally, users can create new procedures in this package for custom workflow activities.	$ENG_TOP/patch/115/sql

B

Item and Catalog Business Events

This appendix covers the following topics:

- Business Events

Business Events

Using Oracle Workflow, you can automatically trigger actions based on the following business events. Examples of actions you can trigger include issuing notifications and launching a workflow.

The following table lists business events, as well as a description and the event parameters of each event.

Item Business Events

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postAML.Change	Item AML is changed (such as a manufacturer part number is added, updated, or deleted) Applicable: SSWA, FORMS	DML_TYPE: CREATE, UPDATE, DELETE INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID MANUFACTURER_ID: Manufacturer ID MFG_PART_NUM: Manufacturer Part Number

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postItemCreate	Item Creation Applicable: SSWA, FORMS, API	INVENTORY_ITEM_ID: Item ID ITEM_NUMBER: Item ID ORGANIZATION_ID: Organization ID ORGANIZATION_CODE: Organization Code ITEM_DESCRIPTION: Item Description
oracle.apps.ego.item.postItemUpdate	Item Update Applicable: SSWA, FORMS, API	INVENTORY_ITEM_ID: Item ID ITEM_NUMBER: Item ID ORGANIZATION_ID: Organization ID ORGANIZATION_CODE: Organization Code ITEM_DESCRIPTION: Item Description
oracle.apps.ego.item.postGTINAttributeChange	GTIN Attribute group row is created or updated. Applicable: SSWA	DML_TYPE: CREATE, UPDATE, DELETE ATTR_GROUP_NAME: Attribute Group Name EXTENSION_ID: Extension Id that uniquely identifies the record in the UDA extension table INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID REVISION_ID: Revision ID

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postItem Approved	On Item Approval Applicable: SSWA	INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID
oracle.apps.ego.item.postItem Bulkload	Bulk Item processing (creation, update) Applicable: XL import, IOI	REQUEST_ID: Concurrent Request ID that processed the bulk item import
oracle.apps.ego.item.postXref Change	Item cross-reference creation, update, or deletion Applicable : SSWA, FORMS	DML_TYPE: CREATE, UPDATE, DELETE INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID CROSS_REFERENCE_TYPE: Cross-reference Type CROSS_REFERENCE: Cross-reference
oracle.apps.ego.item.postRevi sionChange	Item revision is created or updated Applicable: SSWA, FORMS, IOI, XL import, API	DML_TYPE: CREATE, UPDATE, DELETE INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID REVISION_ID: Revision ID REQUEST_ID: Concurrent Request ID

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postItemRoleChange	An item role grant is changed (added, modified, or removed) Applicable: SSWA	DML_TYPE: CREATE, UPDATE, DELETE INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID ROLE_ID: Role ID PARTY_TYPE: Party Type (Person, Group or Company) PARTY_ID: Party ID START_DATE: Start Date
oracle.apps.ego.batch.postbatchprocess	Post Batch Import of Item and Item Related Entities This event is raised when a batch is processed.	REQUEST_ID: Concurrent Request ID that processes the batch.
oracle.apps.ego.item.preAttributeChange	Item Attribute group row is created, updated, or deleted. This event is raised before the change is committed. Applicable: SSWA	DML_TYPE: CREATE, UPDATE, DELETE ATTR_GRP_NAME: Attribute Group Name EXTENSION_ID: Extension ID that uniquely identifies the record in the UDA extension table INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID REVISION_ID: Revision ID

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postAttributeChange	Item Attribute group row is created, updated, or deleted. This event is raised after the change is committed. Applicable: SSWA	DML_TYPE: Indicates the type of operation. Values can be CREATE, UPDATE, or DELETE. ATTR_GRP_NAME: Attribute Group Name EXTENSION_ID: Extension ID that uniquely identifies the record in the UDA extension table INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID REVISION_ID: Revision ID PK1_VALUE: Supplier ID PK2_VALUE: SupplierSite ID DATA_LEVEL_ID: Data Level ID
oracle.apps.ego.item.associations.create	Item Association Creation This event is raised after an item's association with a supplier, suppliersite, or suppliersite organization is created.	INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID ASSOCIATION_ID: Association Id ASSOCIATION_TYPE_CODE: Indicates the type of association (supplier, suppliersite, or suppliersite organization).

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.associations.delete	Item Association Deletion This event is raised after an item's association with a supplier, suppliersite, or suppliersite organization is deleted.	INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Org ID SUPPLIER_ID: Supplier ID SUPPLIER_SITE_ID: Supplier Site ID
oracle.apps.ego.item.associations.update	Item Association Update This event is raised after an item's association with a supplier, suppliersite, or suppliersite organization is updated.	INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID ASSOCIATION_ID: Association Id ASSOCIATION_TYPE_CODE: Indicates the type of association (supplier, suppliersite, or suppliersite organization).

Catalog Business Events

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postCatalogCategoryChange	Catalog category is changed such as when categories are created, updated or deleted Applicable: SSWA, FORMS	DML_TYPE: Indicates the type of operation. Values can be CREATE, UPDATE, or DELETE. CATEGORY_NAME: Category Name CATEGORY_ID: Category ID

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postCatalogAssignmentChange	Post Item Catalog Assignment Change Event This event is raised when an item's assignment to a category (within a catalog) is created, updated or deleted. Applicable: SSWA, FORMS, IOI	DML_TYPE: Indicates the type of operation. Values can be CREATE, UPDATE, or DELETE. INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID CATALOG_ID: Catalog ID CATEGORY_ID: Category ID REQUEST_ID: Concurrent Request ID
oracle.apps.ego.item.postValidCategoryChange	Post Valid Category Change Event This event is raised when a category is added to or removed from a catalog. This event is also raised when the attributes of catalog are changed. Applicable: SSWA, FORMS	DML_TYPE: Indicates the type of operation. Values can be CREATE, UPDATE, or DELETE. CATEGORY_SET_ID: Category Set ID CATEGORY_ID: Category ID PARENT_CATEGORY_ID: Parent Category ID

Other Business Events

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.gtin.uccnetEvent	UCCnet GDSN Event	-
oracle.apps.ego.item.postCustItemXrefChange	Post Customer Item Cross Reference Change	-
oracle.apps.ego.item.postRelatedItemChange	Post Related Item Change	-

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.orchestration.postProcessMessage	Send Post Process Confirmation Message Event	-

Common Event Parameters

Event Parameter Name	Description
Event_Type	This parameter identifies the type of transaction that raised the event. The values are Single or Bulk.
Last_Updated_By	Identifier of the user.
Last_Update_Date	Identifies the date the transaction occurred.
Created_By	Identifier of the user. **Note:** In bulk events that include both creation and update transactions, this parameter is does not apply and is not available.
Creation_Date	Identifies the date the creation transaction occurred. **Note:** In bulk events that include both creation and update transactions, this parameter is does not apply and is not available.
Request_Identifier	When Event_Type = Bulk, this identifies the concurrent request that processed the bulk data set.

Related Topics

To view sample subscription functions, see Sample Subscription Functions, Business

Event Data for Oracle Bills of Material, *Oracle Bills of Material User's Guide*.

Using Item Business Events, *Oracle Product Information Management User's Guide*

C

Reading Data for User-Defined Attributes

This appendix covers the following topics:

- Overview

Overview

You can define an unlimited number of attribute groups for items without programming them. You can define attributes using the setup user interface; definitions are stored in metadata tables. However, you may also need to read attribute data to interface with third party or custom systems.

Generate database views to read User-defined attributes data

Using the attribute group setup screens, you can generate database views for reading user-defined attributes data. These views hide the complexity of dealing with the attribute meta-data.

Using PL/SQL to Access Data for Attributes

Another way to access user-defined attribute data for a particular item is to use PL/SQL. The EGO_USER_ATTRS_DATA_PUB procedure follows:

PROCEDURE Get_User_Attrs_Data

p_api_version	IN NUMBER
,p_object_name	IN VARCHAR2
,p_pk_column_name_value_pairs	IN EGO_COL_NAME_VALUE_PAIR_ARRAY
,p_attr_group_request_table	IN EGO_ATTR_GROUP_REQUEST_TABLE

,p_user_privileges_on_object	IN EGO_VARCHAR_TBL_TYPE DEFAULT NULL
,p_entity_id	IN VARCHAR2 DEFAULT NULL
,p_entity_index	IN NUMBER DEFAULT NULL
,p_entity_code	IN VARCHAR2 DEFAULT NULL
,p_debug_level	IN NUMBER DEFAULT 0
,p_init_error_handler	IN VARCHAR2 DEFAULT FND_API.G_FALSE
,p_init_fnd_msg_list	IN VARCHAR2 DEFAULT FND_API.G_FALSE
,p_add_errors_to_fnd_stack	IN VARCHAR2 DEFAULT FND_API.G_FALSE
,p_commit	IN VARCHAR2 DEFAULT FND_API.G_FALSE
,x_attributes_row_table	OUT NOCOPY EGO_USER_ATTR_ROW_TABLE
,x_attributes_data_table	OUT NOCOPY EGO_USER_ATTR_DATA_TABLE
,x_return_status	OUT NOCOPY VARCHAR2
,x_errorcode	OUT NOCOPY NUMBER
,x_msg_count	OUT NOCOPY NUMBER
,x_msg_data	OUT NOCOPY VARCHAR2

p_api_version

Callers should pass a constant value of 1.0.

p_object_name

Callers should pass a constant value of 'EGO_ITEM'

p_pk_column_name_value_pairs

This is a table of EGO_COL_NAME_VALUE_PAIR_OBJ objects specifying the Inventory Item ID and Organization ID for which the caller wants attribute data. Callers should create the table with code like the following:

l_pk_column_values EGO_COL_NAME_VALUE_PAIR_ARRAY;

l_pk_column_values := EGO_COL_NAME_VALUE_PAIR_ARRAY(

EGO_COL_NAME_VALUE_PAIR_OBJ('INVENTORY_ITEM_ID', <your inventory item ID>) ,EGO_COL_NAME_VALUE_PAIR_OBJ('ORGANIZATION_ID', <your organization ID>));

p_attr_group_request_table

This is a table of EGO_ATTR_GROUP_REQUEST_OBJ objects, one for each attribute group whose values the caller wants. The objects also support requests for only some of the attributes in the attribute group. Each EGO_ATTR_GROUP_REQUEST_OBJ object in the table will look like the following:

EGO_ATTR_GROUP_REQUEST_OBJ(

NULL,

431,

'EGO_ITEMMGMT_GROUP',

<your Attribute Group internal name>,

<your Revision ID if the Attribute Group is associated at the Revision level; otherwise NULL>,

NULL,

NULL

<an optional comma-delimited list of the Attribute internal names whose values you want, or NULL>);

p_user_privileges_on_object

This is an optional table of VARCHAR2s, one for each privilege the caller wants validated against the View privileges of the attribute groups being requested. For example, if a user invokes a procedure that calls Get_User_Attrs_Data, and the calling procedure wants to enforce attribute group data security, the calling procedure could pass a list of the user's privileges based on his/her role on the current item. If this parameter is non-null, Get_User_Attrs_Data will enforce data security for those attribute groups that have a View privilege defined.

p_entity_id, p_entity_index, p_entity_code

Parameters for use with ERROR_HANDLER package. Can safely be defaulted unless caller wants to distinguish among errors for multiple items; if so, please investigate the ERROR_HANDLER package for more details.

p_debug_level

Parameter to control debug logging; can safely be defaulted.

p_init_error_handler, p_init_fnd_msg_list, p_add_errors_to_fnd_stack

More parameters for use with ERROR_HANDLER package; can safely be defaulted.

p_commit

Controls whether or not Get_User_Attrs_Data issues a COMMIT statement at the end of processing; present to comply with API standards, but since Get_User_Attrs_Data does not perform any DML, can safely be defaulted.

x_attributes_row_table

This is a table of EGO_USER_ATTR_ROW_OBJ objects, each one representing a row of user-defined attributes data (for example, one database table row of data). It contains the Extension ID value from EGO_MTL_SY_ITEMS_EXT_VL (stored as ROW_IDENTIFIER) and serves mainly as a way to organize the objects in x_attributes_data_table.

x_attributes_data_table

This is a table of EGO_USER_ATTR_DATA_OBJ objects, each one representing a single attribute value. All of the attribute values for a given row of data will share the same ROW_IDENTIFIER value; as with x_attributes_row_table, the ROW_IDENTIFIER value is the Extension ID from EGO_MTL_SY_ITEMS_EXT_VL. Each object also contains the attribute internal name (stored as ATTR_NAME) and its value (stored as ATTR_DISP_VALUE).

x_return_status, x_errorcode, x_msg_count, x_msg_data

Four standard OUT parameters indicating what happened in processing. The first, x_return_status, will equal FND_API.G_RET_STS_SUCCESS if processing succeeded, FND_API.G_RET_STS_ERROR if an expected error case was encountered, or FND_API.G_RET_STS_UNEXP_ERROR if something went wrong during processing. X_errorcode is not used. X_msg_count indicates how many error messages were logged with ERROR_HANDLER; if x_msg_count is 1, then x_msg_data contains that message (to save the caller the inconvenience of interacting with ERROR_HANDLER for only one message).

D

Synchronizing Item User-Defined Attributes with Item Descriptive Elements

This appendix covers the following topics:

- Overview

Overview

You can define an unlimited number of user-defined attributes for items without programming. These attributes can have different data types, value sets, and can be parametrically searched. This appendix describes how to synchronize user-defined attribute values with descriptive element values. Oracle provides a public API to update Item Descriptive Element values. It also raises a business event when any pre-selected user-defined attribute values change. You can subscribe to this event and then call the Item Descriptive Element API to synchronize the descriptive elements with the attribute values. A business event is raised when any pre-selected item user-defined attribute values change.

See: Event Manager, and Standard API for an Event Rule Function, *Oracle Workflow Developer's Guide.*

User-Defined Attributes Business Event

You can configure user-defined attribute groups to raise a Business Event every time a row is added, altered, or deleted The name of the Business Event raised is

```
oracle.apps.ego.item.attributesChanged
```

The parameters passed by this Business Event are

```
INVENTORY_ITEM_ID

ORGANIZATION_ID

EXTENSION_ID

ATTR_GROUP_NAME
```

The Event is disabled by default and must be explicitly enabled for synchronization to work.

Item Descriptive Elements API

Oracle provides the following API (with accompanying data type) to maintain Descriptive Elements for a given item.

The data type used by the API follows:

```
ITEM_DESC_ELEMENT_TABLE: this is an associative array (also known as a
PL/SQL table or an index-by table) of ITEM_DESC_ELEMENT records:
ITEM_DESC_ELEMENT IS RECORD
(
      ELEMENT_NAME         VARCHAR2(30)
      ,ELEMENT_VALUE        VARCHAR2(30)
      ,DESCRIPTION_DEFAULT  VARCHAR2(1)
     );

ELEMENT_NAME: Column ELEMENT_NAME from
MTL_DESCRIPTIVE_ELEMENTS
ELEMENT_VALUE: Column ELEMENT_VALUE from MTL_DESCR_ELEMENT_VALUES
DESCRIPTION_DEFAULT: Column DEFAULT_ELEMENT_FLAG from
MTL_DESCR_ELEMENT_VALUES (indicates whether this Descriptive Element
will be used in the description generation)
```

The API signature is:

```
INV_ITEM_CATALOG_ELEM_PUB.Process_Item_Descr_Elements
(
 p_api_version       IN NUMBER
,p_init_msg_list     IN VARCHAR2 DEFAULT fnd_api.g_FALSE
,p_commit_flag       IN VARCHAR2 DEFAULT fnd_api.g_FALSE
,p_validation_level  IN NUMBER   DEFAULT
INV_ITEM_CATALOG_ELEM_PUB.g_VALIDATE_ALL
,p_inventory_item_id IN NUMBER   DEFAULT  -999
,p_item_number       IN VARCHAR2 DEFAULT  NULL
,p_item_desc_element_table IN ITEM_DESC_ELEMENT_TABLE
,x_generated_descr   OUT VARCHAR2
,x_return_status     OUT VARCHAR2
,x_msg_count         OUT NUMBER
,x_msg_data          OUT VARCHAR2
);
```

p_api_version

Pass the value 1.0 for this parameter.

p_init_msg_list

This parameter can safely be defaulted.

p_commit_flag

Indicates whether or not the API commits the transaction.

p_validation_level

Determines how much validation occurs; can safely be defaulted.

p_inventory_item_id

Pass the value 1.0 for this parameter.

p_item_number

This parameter can safely be defaulted.

p_item_desc_element_table

Data type defined above.

x_generated_descr

Returns the Item Description generated from the updated Descriptive Elements. If you want to update the Item Description with this value, use Item Open Interface.

x_return_status

Returns one of the following:

```
FND_API.G_RET_STS_SUCCESS, FND_API.G_RET_STS_ERROR,
FND_API.G_RET_STS_UNEXP_ERROR
```

x_msg_count

Number of messages logged by the API.

x_msg_data

The message logged if exactly one message was logged.

Subscribing to the Event and Calling the API

As briefly mentioned earlier, the Business Event oracle.apps.ego.item.attributesChanged must be explicitly enabled through the graphical user interface in order for synchronization to work. After this step is complete, you must subscribe to the User-Defined Attributes Business Event. See: Event Manager, *Oracle Workflow Developer's Guide*.

```
oracle.apps.ego.item.attributesChanged
```

As part of Event Subscription, define an Event Subscription Rule Function that will be called when the Event is raised. See Standard API for an Event Rule Function, *Oracle Workflow Developer's Guide*.

This Rule Function should:

- Identify the attribute group that raised the Event and determine the correct Descriptive Elements for that attribute group (perhaps through customer-supplied mapping metadata).

- Fetch the data altered by the Event (see the following example Rule Function and also the White Paper "Reading Data for Item User-Defined Attributes" for more details) and process it as necessary.

- Call the Item Descriptive Elements API that is passing the processed data.

Sample Rule Function

```
FUNCTION Synch_Attrs_With_Desc_Elems (
        p_subscription_guid  IN     RAW
       ,p_event              IN OUT NOCOPY WF_EVENT_T
)
RETURN VARCHAR2
IS

TYPE ATTR_TO_DESC_ELEM_MAPPING_REC IS RECORD
    (
      ATTR_NAME              VARCHAR2(30)
     ,DESC_ELEM_NAME         VARCHAR2(30)
     ,DESCRIPTION_DEFAULT    VARCHAR2(1)
    );
    TYPE ATTR_TO_DESC_ELEM_MAPPING_TBL IS TABLE OF
ATTR_TO_DESC_ELEM_MAPPING_REC
      INDEX BY BINARY_INTEGER;

    l_parameter_list         WF_PARAMETER_LIST_T;
    l_next_parameter         WF_PARAMETER_T;
    l_dml_type_param         WF_PARAMETER_T;
    l_attr_group_name_param  WF_PARAMETER_T;
    l_inventory_item_id_param WF_PARAMETER_T;
    l_organization_id_param  WF_PARAMETER_T;
    l_revision_id_param      WF_PARAMETER_T;
    l_pk_column_values       EGO_COL_NAME_VALUE_PAIR_ARRAY;
    l_request_table          EGO_ATTR_GROUP_REQUEST_TABLE;
    x_attributes_row_table   EGO_USER_ATTR_ROW_TABLE;
    x_attributes_data_table  EGO_USER_ATTR_DATA_TABLE;
    x_return_status          VARCHAR2(1);
    x_errorcode              NUMBER;
    x_msg_count              NUMBER;
    x_msg_data               VARCHAR2(1000);
    l_current_mapping_rec    ATTR_TO_DESC_ELEM_MAPPING_REC;
    l_mapping_rec_table      ATTR_TO_DESC_ELEM_MAPPING_TBL;
    l_attributes_data_index  NUMBER;

    l_current_row_obj        EGO_USER_ATTR_ROW_OBJ;
    l_current_data_obj       EGO_USER_ATTR_DATA_OBJ;
    l_current_item_desc_elem
INV_ITEM_CATALOG_ELEM_PUB.ITEM_DESC_ELEMENT;

    l_item_desc_elem_table
INV_ITEM_CATALOG_ELEM_PUB.ITEM_DESC_ELEMENT_TABLE;

    x_generated_descr        VARCHAR2(240);

    l_return_status          VARCHAR2(30) := 'SUCCESS';

BEGIN

    l_parameter_list := p_event.getParameterList();

    --------------------------------------------------------
    -- Sort the parameters that the Business Event passed
    --------------------------------------------------------
    FOR i IN l_parameter_list.FIRST .. l_parameter_list.LAST
    LOOP
```

```
l_next_parameter := l_parameter_list(i);
    IF (l_next_parameter.getName() = 'DML_TYPE') THEN
        l_dml_type_param := l_next_parameter;
    ELSIF (l_next_parameter.getName() = 'ATTR_GROUP_NAME') THEN
        l_attr_group_name_param := l_next_parameter;
    ELSIF (l_next_parameter.getName() = 'INVENTORY_ITEM_ID') THEN
        l_inventory_item_id_param := l_next_parameter;
    ELSIF (l_next_parameter.getName() = 'ORGANIZATION_ID') THEN
        l_organization_id_param := l_next_parameter;
    ELSIF (l_next_parameter.getName() = 'REVISION_ID') THEN
        l_revision_id_param := l_next_parameter;
      END IF;

END LOOP;

 ---------------------------------------------------------
 Copy the PK values into our EGO_COL_NAME_VALUE_PAIR_ARRAY object
 ---------------------------------------------------------

   l_pk_column_values :=

            EGO_COL_NAME_VALUE_PAIR_ARRAY(
                 EGO_COL_NAME_VALUE_PAIR_OBJ('INVENTORY_ITEM_ID',
                   l_inventory_item_id_param.getValue())
                   ,EGO_COL_NAME_VALUE_PAIR_OBJ('ORGANIZATION_ID',
                   l_organization_id_param.getValue())
                     );
 ---------------------------------------------------------------
 Prepare an EGO_ATTR_GROUP_REQUEST_TABLE object with one element, an
 EGO_ATTR_GROUP_REQUEST_OBJ for the Attr Group that raised the Event
----------------------------------------------------------------

    l_request_table := EGO_ATTR_GROUP_REQUEST_TABLE();
    l_request_table.EXTEND();
    l_request_table(l_request_table.LAST) :=
                             EGO_ATTR_GROUP_REQUEST_OBJ(
                             NULL      --ATTR_GROUP_ID
                             ,431
                             ,'EGO_ITEMMGMT_GROUP'
                             ,l_attr_group_name_param.getValue()
                             ,l_revision_id_param.getValue()
                             ,NULL    --DATA_LEVEL_2
                             ,NULL    --DATA_LEVEL_3
                             ,NULL    --ATTR_NAME_LIST
                              );

    --------------------------------------------------
    Get the data for this Event, if there is any
    --------------------------------------------------
    IF (l_dml_type_param.getValue() <> 'DELETE') THEN

      EGO_USER_ATTRS_DATA_PUB.Get_User_Attrs_Data(
        p_api_version                => 1.0
       ,p_object_name                => 'EGO_ITEM'
       ,p_pk_column_name_value_pairs => l_pk_column_values
       ,p_attr_group_request_table   => l_request_table
       ,p_user_privileges_on_object  => NULL
       ,p_entity_id                  => NULL
       ,p_entity_index               => NULL
       ,p_entity_code                => NULL
       ,p_debug_level                => 0
,p_init_error_handler         => FND_API.G_FALSE
       ,p_init_fnd_msg_list          => FND_API.G_FALSE
       ,p_add_errors_to_fnd_stack    => FND_API.G_FALSE
       ,p_commit                     => FND_API.G_FALSE
       ,x_attributes_row_table       => x_attributes_row_table
       ,x_attributes_data_table      => x_attributes_data_table
       ,x_return_status              => x_return_status
       ,x_errorcode                  => x_errorcode
       ,x_msg_count                  => x_msg_count
       ,x_msg_data                   => x_msg_data
      );

      ------------------------------------------------------------
      If the call failed, we report that an error occurred
      (in a production situation, we would retrieve and pass
      on all errors on the ERROR_HANDLER message stack)
      ------------------------------------------------------------
      IF (x_return_status IS NULL OR
          x_return_status <> FND_API.G_RET_STS_SUCCESS) THEN
        IF (x_return_status = FND_API.G_RET_STS_ERROR) THEN
          RAISE FND_API.G_EXC_ERROR;
        ELSE
          RAISE FND_API.G_EXC_UNEXPECTED_ERROR;
        END IF;
      END IF;
    END IF;

 ------------------------------------------------
 Process the Descriptive Elements according to the
 Attr Group that raised the Event and the DML type
 ----------------------------------------------
 IF (l_attr_group_name_param.getValue() = 'Pella_Windows') THEN

----------------------------------------------
Find mappings from Attr Group Attrs to Desc Elems; in this example,
hard code the mapping from Attr Group Attrs to Desc Elems, but in a
production situation customers may have some stored mapping between
the Attrs in an Attr Group associated to a Catalog Category and the
Descriptive Elements for that Catalog Category (similarly, in this
example we always set DESCRIPTION_DEFAULT as 'Y' for simplicity)
------------------------------------------------
l_current_mapping_rec.ATTR_NAME := 'Style';
l_current_mapping_rec.DESC_ELEM_NAME := 'Style';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'GB_Options';
l_current_mapping_rec.DESC_ELEM_NAME := 'Grille Bar Options';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'Wood_Type';
l_current_mapping_rec.DESC_ELEM_NAME := 'Wood Type';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'Frame_Area';
l_current_mapping_rec.DESC_ELEM_NAME := 'Frame Area';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'GRADE';
l_current_mapping_rec.DESC_ELEM_NAME := 'Grade';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'PW_Exterior';
l_current_mapping_rec.DESC_ELEM_NAME := 'Primed Wood Exterior';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'DATE';
l_current_mapping_rec.DESC_ELEM_NAME := 'Date';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

ELSIF (l_attr_group_name_param.getValue() = 'WD_Attributes') THEN

l_current_mapping_rec.ATTR_NAME := 'STYLE';
l_current_mapping_rec.DESC_ELEM_NAME := 'WD Style';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'WD_Grade';
l_current_mapping_rec.DESC_ELEM_NAME := 'WD Grade';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'DATETIME';
l_current_mapping_rec.DESC_ELEM_NAME := 'Date';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

l_current_mapping_rec.ATTR_NAME := 'URL_link';
l_current_mapping_rec.DESC_ELEM_NAME := 'URL';
l_current_mapping_rec.DESCRIPTION_DEFAULT := 'Y';
l_mapping_rec_table(l_mapping_rec_table.COUNT + 1) :=
l_current_mapping_rec;

    END IF;

 -----------------------------------------------------------------
 For every Desc Elem, get its value (a NULL value, or a DML_TYPE of
DELETE,
 will result in a NULL Elem value), set its DESCRIPTION_DEFAULT flag,
and
 add it to the ITEM_DESC_ELEMENT_TABLE
 -----------------------------------------------------------------
 FOR i IN l_mapping_rec_table.FIRST .. l_mapping_rec_table.LAST
 LOOP

 l_current_mapping_rec := l_mapping_rec_table(i);
```

```
l_current_item_desc_elem.ELEMENT_NAME :=
l_current_mapping_rec.DESC_ELEM_NAME;
 l_current_item_desc_elem.DESCRIPTION_DEFAULT :=
l_current_mapping_rec.DESCRIPTION_DEFAULT;

-------------------------------------------------------------------
This example uses single-row Attr Groups, so we don't need to make use
of the EGO_USER_ATTR_ROW_TABLE object; but for a multi-row Attr Group,
we would use the ROW_IDENTIFIER field of each EGO_USER_ATTR_ROW_OBJ to
find all the EGO_USER_ATTR_DATA_OBJ objects for that particular row
------------------------------------------------------------------
 IF (x_attributes_row_table IS NOT NULL AND
     x_attributes_row_table.COUNT > 0 AND
     x_attributes_data_table IS NOT NULL AND
     x_attributes_data_table.COUNT > 0) THEN

  l_attributes_data_index := x_attributes_data_table.FIRST;
  WHILE l_attributes_data_index <= x_attributes_data_table.LAST
    LOOP
      EXIT WHEN l_current_item_desc_elem.ELEMENT_VALUE IS NOT NULL;
        l_current_data_obj :=
x_attributes_data_table(l_attributes_data_index);
        IF (l_current_data_obj.ATTR_NAME =
l_current_mapping_rec.ATTR_NAME) THEN
         l_current_item_desc_elem.ELEMENT_VALUE :=
SUBSTRB(l_current_data_obj.ATTR_DISP_VALUE, 1, 30);
           END IF;
         l_attributes_data_index :=
x_attributes_data_table.NEXT(l_attributes_data_index);
           END LOOP;
      END IF;

--------------------------------------------------------
-- Now we add the ITEM_DESC_ELEMENT record into our table
-------------------------------------------------------
l_item_desc_elem_table(l_item_desc_elem_table.COUNT + 1) :=
l_current_item_desc_elem;

    END LOOP;
----------------------------------------------------
Now that we have all the necessary data and metadata, we
call the API to update the Desc Elems for this Attr Group
(note that the API returns the Item Description generated
from the updated Descriptive Elements; if required, you
can update the Description through Item Open Interface)
---------------------------------------------------
INV_ITEM_CATALOG_ELEM_PUB.Process_Item_Descr_Elements(
      p_api_version                  => 1.0
     ,p_inventory_item_id            =>
l_inventory_item_id_param.getValue()
     ,p_item_desc_element_table      => l_item_desc_elem_table
     ,x_generated_descr              => x_generated_descr
     ,x_return_status                => x_return_status
     ,x_msg_count                    => x_msg_count
     ,x_msg_data                     => x_msg_data
    );
    RETURN l_return_status;
EXCEPTION
  WHEN OTHERS THEN
    WF_CORE.CONTEXT('EGO_EF_QA_PUB', 'Synch_Attrs_With_Desc_Elems',
            p_event.getEventName(), p_subscription_guid);
```

```
WF_EVENT.setErrorInfo(p_event, 'ERROR');
      RETURN 'ERROR';
END Synch_Attrs_With_Desc_Elems;
```

E

Change Management Business Events

This appendix covers the following topics:

- Description of Change Management Business Events

Description of Change Management Business Events

Change Management business events can be triggered for the following actions:

- Approval status change
- Priority changes
- Status changes
- Workflow status changes
- Creation of a change object

> **Note:** To subscribe to any of the following business events, see Subscribing to a Change Management Business Event in the Oracle Product Lifecycle Management User's Guide, or the Oracle Product Information Management User's Guide.

Business Event Name	Triggering Event
oracle.apps.eng.cm.changeObject.changeApprovalStatus	Approval status changes
oracle.apps.eng.cm.changeObject.changePriority	Priority changes

oracle.apps.eng.cm.changeObject.changeStatus	Status changes
oracle.apps.eng.cm.changeObject.changeWorkflowStatus	Workflow status changes
oracle.apps.eng.cm.changeObject.create	Creation of a change object
oracle.apps.eng.cm.changeObject.postComment	Posted comment on a change object
oracle.apps.eng.cm.changeObject.reassign	Reassignment of a change object
oracle.apps.eng.cm.changeObject.requestComment	Common request of a change object
oracle.apps.eng.cm.changeObject.submit	Submission of a change object
oracle.apps.eng.cm.changeObject.update	Update of a change object
oracle.apps.eng.cm.changeOrder.changeScheduleDate	Schedule date change
oracle.apps.eng.cm.import.complete	Import is completed
oracle.apps.eng.cm.revisedItem.changeScheduleDate	Revised item schedule date change
oracle.apps.eng.cm.revisedItem.changeStatus	Revised item status changes

Change Management Dependencies and Interactions

Change Management business events, depend on the following systems and applications:

- Workflow
- Business events

- XML Publisher
- Oracle TCA

Change Management business events can interact with the following:

- Items
- Multiple modules in Oracle Discrete Manufacturing, including: Engineering, Bills of Materials, Work In Process, and Planning
- CADView-3D
- Projects

F

Administering Item Metadata Libraries

This appendix covers the following topics:

- Overview of Metadata Libraries
- Creating Metadata Documentation
- Creating and Exporting Metadata Libraries
- Importing and Using Metadata Libraries

Overview of Metadata Libraries

Product Information Management (PIM) manages the consolidation, organization, and syndication of data from suppliers, and the subsequent publication to multiple sales channels by enabling the creation of metadata libraries by exporting specified components from an existing PIM installation. PIM uses the Import Workbench to bring product data from disparate systems into a master product information repository, known as the Product Information Management Data Hub (PIMDH). The metadata libraries can be exported from PIMDH as well as imported.

PIMDH data libraries offer the following:

- Creates a single source of the truth for content creation, visualization, approval, and delivery, eliminating manual reentering and verifying of product attributes in separate systems

- Reduces the time to add new items and introduce them in stores or online.

- Provides a single source where retailers can enhance and regulate product information for publication to multiple catalogs, including Web, paper, and customized catalogs

- Cleanses, categorizes, and ensures the completeness of product information, especially when the original data resides in multiple systems or the same product needs to be represented differently for different sales channels or for different regions of the world.

- Improves the effectiveness of assortment, space, and category planning systems through harmonized product information

- Enables various item owners, such as buyers and merchandisers, to participate in workflows that improve business process efficiency.

- The industry-specific attribution and library, along with necessary validation functionality, facilitates the seamless integration of Oracle E-Business Suite applications with the Oracle Retail Merchandising System.

This flexible mechanism of exporting and importing a retail library consisting of metadata information can be used for:

- Cloning PIMDH instances across environments such as – Pilot, Test, Development, Training and Production with a specific set of metadata library components.

- Maintaining multiple sets of industry-specific metadata libraries for one or more PIMDH instances.

- Maintaining baselines of different sets of configurations.

Creating Metadata Documentation

A PIMDH user or an industry expert can create and test the different components such as:

- User-defined functions

- Attribute groups and their associated attributes

- Validations rule sets

- Value sets

These components are used to support an industry vertical, and can be included in a metadata library that can be exported as an independent set of inventory. This library can then be uploaded (imported) independently into other PIMDH installations.

Each metadata library must be accompanied by a document that includes (at a minimum) the following information:

- **Name**: The library name, for example, Oracle Retail 12.0.

  The version specified as the part of the name has nothing to do with the library version.

- **Description**: This section describes the contents and the usage of the library.

- **Version**: The library version.

  Major and minor versions (such as 2.1.1) may be used to specify the full version. The library version allows the update the library contents without modifying the older library contents. Once a library is published, its contents cannot be modified without creating a new version of the library.

- **Release Date**: The release date is the date on which the library was released.

  This is useful to compare the chronological releases of different libraries.

- **Components**: A list and details of the components that are included in the library, such as, attribute groups, catalog taxonomies, and rules.

- **What Is New**: The details of what is new in the library compared to the older version of the library.

- **Library Dependencies**: If the library depends on other libraries being applied (imported) prior to importing it, this section should include the list of other libraries.

  For example, if "GDSN Core" is required to be imported prior to importing the " GDSN Office Supplies" library, it must be specified in this section of the documentation.

- **Product Compatibility**: This section specifies the different versions of the product (PDH) that the library is compatible with.

  The format of the library may change over time and may become incompatible with the older versions of the product.

Creating and Exporting Metadata Libraries

Instead of using UI pages, a command-line program along with a configuration file that describes the components to be exported with export options and included in the metadata library are used to export the metadata components from an existing PIM installation and to create a metadata library.

Keep the following in mind when you create a metadata library for exporting into an existing PIM installation:

1. A retail library is composed of these components:

   - Metadata Library Contents

   - Retail Library – Upload (Import)

   - Retail Library – Export

2. A metadata library is created and delivered as a patch.

   Existing patch framework is used to specify the components to be included in the library.

   1. An administrator uses the patch (loader) framework to create a patch and export the metadata library from an existing PIM installation.

   2. The patch framework in a different PIM installation imports the patch.

      The patch framework uses control and data files.

3. A document is created that describes the contents and the usage of the library.

4. The metadata library and the associated documentation are posted in My Oracle Support (http://metalink.oracle.com) for distribution and download.

Components that cannot be included in the metadata library

The following lists the components that cannot be included in the metadata library:

- Unit of measure (UOMs)
- Primary catalog categories
- Mapping between primary catalog categories and associated attribute groups
- Alternate catalog categories - this includes the ORMS alternate catalog
- UI pages for attribute groups
- External transaction views
- Styles
- Packaging hierarchies
- Display formats

Importing and Using Metadata Libraries

This functionality allows creation of a metadata library by importing specified components from an existing PIM installation using UI pages that are integral part of PIM. Instead of using UI pages, a command-line program along with a configuration file, that describes the components to be imported with the import options and included in the metadata library, are used to import the metadata components into an existing PIM installation.

Keep the following in mind when you are ready to import a PIM retail library:

1. You access and download the library (patch) and documentation through My Oracle Support (http://metalink.oracle.com).

2. You use the existing patch framework to import the components included in the library.

   A log file is generated that records the success and failure statuses of different components being imported.

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Item, Catalog, and Structure Publication Services

This appendix covers the following topics:

- Publication Services

Publication Services

For more information about Publication Services, refer to:

Overview of Item, Catalog, and Structure Data Publication, page 12-1

Overview of Item, Catalog and Structure Business Events, page 12-2

Overview of Item, Catalog, and Structure Publication Services, page 12-3

Overview of User-Initiated Publication of Item, Catalog, and Structure Data, page 12-4

Item Services

Item Services includes the following services:

- getItemInformation
- getItemAttributes

getItemInformation

This object level service takes an item, organization, revision, and a set of publish options as input, and returns information for that item and, optionally, the item's structure based on those parameters. The service returns a list of items comprised of the top item, and, if the caller chooses to explode the item structure, all components for that structure.

The signature of the service is described below, where itemQueryParameters is a Service Data Object (SDO), holding the parameters for the getItemInformation method as its attributes:

```
public StringListOfStringItems getItemInformation(
ItemQueryParameters
itemQueryParameters
)
```

A Service Data Object (SDO) is a java class that represents a row of data, which can include embedded SDOs at a child level in a hierarchical construct. The definition of the itemQueryParameters and child SDOs are described below:

ItemQueryParameters

For items and organizations, the calling program can pass either the IDs or the corresponding names for items and organizations. Both items and organizations are required input to the service. If both IDs and names are passed, the names are ignored.

For revisions, if only the revision date is passed, the service returns only components that are effective as of that date. If only the revision/revision ID is passed, the start date of the revision is used to return components that are effective as of that date. However, if both the revision/revision ID and revision date are passed, then:

- If the revision date lies outside the revision effectivity, then the revision's start date is used.
- If the revision date lies within the revision effectivity, then the revision date passed is used.

Type	Attribute
Number	InventoryItemId
InventoryItemName (SDO)	InventoryItemName
Number	OrganizationId
String	OrganizationCode
Number	RevisionId
String	Revision
Date	RevisionDate
BomExploderParameters (SDO)	BomExploderParameters
PublishEntities (SDO)	PublishEntities

InventoryItemName

InventoryItemName corresponds to the segments of the item key flexfield.

Type	Attribute
String	Segment1
String	Segment2
String	Segment3
String	Segment4
String	Segment5
String	Segment6
String	Segment7
String	Segment8
String	Segment9
String	Segment10
String	Segment11
String	Segment12
String	Segment13
String	Segment14
String	Segment15

BomExploderParameters

Type	Attribute
Number	LevelsToExplode

Type	Attribute
Number	ExplodeOption

- LevelsToExplode - determines the number of levels in the structure to explode. The default value is 60. The user can specify any level less than or equal to 60.
- ExplodeOption - this option has 2 possible values:
  - 2 (CURRENT)
  - 3 (CURRENT and FUTURE)

PublishEntities

- The calling program can pass either the IDs or the corresponding names for OperationalAttributeGroups and UserDefinedAttributeGroups.
- OperationalAttributeGroups corresponds to the item's Operational Attribute Groups, which are returned. This applies to both the parent item and the components of its primary structure.
- UserDefinedAttributeGroups corresponds to the item's User Defined Attribute Groups, which are returned. This applies to both the parent item and the components of its primary structure.
- OperationalAttributeGroups, UserDefinedAttributeGroups and ItemRevisions are attributes that take Y or N values and indicate whether to publish the corresponding entity or not.
- If OperationalAttributeGroups is Y then PublishOperationalAttributeGroups determines which Operational Attribute Groups are published.
- If OperationalAttributeGroups is Y and the PublishOperationalAttributeGroups (SDO) is null, then all the Operational Attribute Groups are returned.
- Similarly, if UserDefinedAttributeGroups is Y, then PublishUserDefinedAttributeGroups indicates which User Defined Attribute Groups are published.
- If UserDefinedAttributeGroups is Y and PublishUserDefinedAttributeGroups is null, then all the UserDefinedAttributeGroups are returned.

Type	Attribute
String	OperationalAttributeGroups
String	UserDefinedAttributeGroups
String	ItemRevision
PublishOperationalAttributeGroups (SDO)	PublishOperationalAttributeGroups
List of PublishUserDefinedAttributeGroups (SDO)	PublishUserDefinedAttributeGroups

PublishOperationalAttributeGroups

The following attributes can have a value of Y or N, which determines whether the corresponding attribute groups are published or not.

Type	Attribute
String	MainCharacteristics
String	ItemCatalog
String	InventoryCharacteristics
String	PhysicalCharacteristics
String	BillsOfMaterialCharacteristics
String	WorkInProcessCharacteristics
String	CostingCharacteristics
String	ProcessingLeadTimeCharacteristics
String	PlanningCharacteristics
String	PurchasingCharacteristics
String	ReceivingCharacteristics

Type	Attribute
String	OrderManagementCharacteristics
String	InvoicingCharacteristics
String	WebOptionsCharacteristics
String	ServiceCharacteristics
String	AssetCharacteristics
String	ProcessMfgCharacteristics

PublishUserDefinedAttributeGroups

Type	Attribute
Number	AttributeGroupId
String	AttributeGroupName

The XSD returned by the service is shown below:

```
<ListOfItems>
     <Item>
          <MainCharacteristics>

          </MainCharacteristics>
          <ItemCatalog>

          <ItemCatalog>
          <InventoryCharacteristics>

          </InventoryCharacteristics>
          <PhysicalCharacteristics>

          </PhysicalCharacteristics>
          ...

          <ListOfAttributeGroups>
               <AttributeGroup>

<AttributegroupId></AttributegroupId>
<AttributeGroupName></AttributeGroupName>
                    <ListOfItemUDA>
                         <ItemUDA>

                         </ItemUDA>
                         <ItemUDA>

                         </ItemUDA>
                    <ListOfItemUDA>
               </AttributeGroup>
               <AttributeGroup>

               </AttributeGroup>
          </ListOfAttributeGroups>
          <ListOfItemRevisions>
               <ItemRevision>

               </ItemRevision>
               <ItemRevision>

               </ItemRevision>
          </ListOfItemRevisions>

     </Item>
     <Item>

     </Item>

</ListOfItems>
```

getItemAttributes

This service takes an item and organization identifier as input and returns primary and user-defined attributes for the item.

Input Parameters	Data Type	Comments
Inventory_item_id	number	Item Id
organization_id	number	Organization Id
extension_id	number	Extension Id (Optional)
p_language	Varchar2	Language in which the attribute values are needed. Null indicates all languages. (Optional)

Output Parameters	Data Type	Comments
x_xml_document	xmltype	Output in an xml payload
x_error_message	varchar	Returns error message in case of errors

Output XML format

```
<SyncItemPrimaryAttributeEBM>
     <DataAre>
          <SyncItemPrimaryAttribute>
          ------ Include Item Identification -----------------------
               <ItemIdentification></ItemIdentification>
          ------- Include Item Base ---------------------------------
               <ItemBase></ItemBase>
          ------- Include UDA --------------------------------------
               <AttributeGroup></AttributeGroup>
          </SyncItemPrimaryAttribute>
     </DataArea>
</SyncItemPrimaryAttributeEBM>
```

Catalog Services

Catalog Services include the following services:

- getItemCategoryAttributes
- getCategoryAttributes
- getCatalogAttributes

getItemCategoryAttributes

This service takes an item, organization, catalog, and category identifier as input and returns information about the specified item-category intersection.

Input Parameters	Data Type	Comments
p_api_version	number	API Version (optional)
p_inventory_item_id	number	Item ID
p_organization_id	number	Organization ID
p_catalog_id	number	Catalog ID
p_category_id	number	Category ID
p_language	varchar2	Language in which the attribute values are needed. Null indicates all languages. (Optional)

Output Parameters	Data Type	Comments
x_xml_document	xmltype	Output in an xml payload.
x_error_message	varchar	Returns error message in case of errors.

Output XML format

```
<SyncItemCatalog>
   ---ITEM IDENTIFICATION---
   <ItemCatalog>
        <CatalogReference>
             <CatalogIdentification>
                  <Identification>
                      <ID></ID>
                      <Name></Name>
                  </Identification>
             </CatalogIdentification>
             <Description></Description>
        </CatalogReference>
        <ClassificationReference>
              <Name></Name>
        </ClassificationReference>
   </ItemCatalog>
</SyncItemCatalog>
```

getCategoryAttributes

This service takes a category identifier as input and returns details about the specified category.

Input Parameters	Data Type	Comments
category_id	number	Category ID
GetFlexAttributesFlag	char	Accepts 'Y' or 'N'. Indicates whether the DFF for the category is needed or not.

Output Parameters	Data Type	Comments
x_xml_document	xmltype	Output is in an xml payload.
x_error_message	varchar	Returns an error message in case of errors.

Output XML Format

```
<SyncClassificationSchemeEBM>
     <DataArea>
        <SyncClassificationScheme>
             <ClassificationSchemeIdentification>
                  <Identification>
                       <Id></Id>
                  </Identification>
             </ClassificationSchemeIdentification>
             <Classification>
                  <Code></Code>
                  <AttributeGroup>
                       <Id></Id>
                       <Name languageId="String"></Name>
                       <Attribute>
                            <Name languageId="String"></Name>
                            <ValueText langaugeId="String"></ValueText>
                       </Attribute>
                  </AttributeGroup>
             </Classification>
        </SyncClassificationScheme>
    </DataArea>
</SyncClassificationSchemeEBM>
```

getCatalogAttributes

This service takes a catalog identifier, and, optionally, a parent and child category identifier as input and returns details about the catalog.

Input Parameters	Data Type	Comments
CatalogId	number	Catalog ID
ParentCategoryId	number	Parent Category ID (Optional)
CategoryId	number	Category ID (Optional)
p_language	varchar	Language in which the attribute values are needed. Null indicates all languages. (Optional)

Output Parameters	Data Type	Comments
x_xml_document	Xmltype	Output in an xml payload.
x_error_message	Varchar	Returns an error message in case of errors.

Output XML Format

```
<SyncCatalogEBM>
     <DataArea >
          <SyncCatalog>
               <CatalogIdentification>
                    <Identification>
                         <Id></Id>
                         <Name languageId="String"></Name>
                    </Identification>
                </CatalogIdentification>
                <CatalogBase>
                    <Description languageId="String"></Description>
</CatalogBase>
                <CatalogClassification>
                    <CatalogClassificationStructure>
                         <ClassificationCode
Name=""></ClassificationCode>
                         <ChildClassificationCode
Name=""></ChildClassificationCode>
                    </CatalogClassificationStructure>
                 </CatalogClassification>
          </SyncCatalog>
     </DataArea>
</SyncCatalogEBM>
```

Structure Services

Structure Services include the following services:

- getItemStructure
- getStructureAttributes

getItemStructure

This object level service takes an item, organization, revision, and a set of publish options as input, and returns information for an item's structure and components based on those parameters. The output from the service is a list of structures, comprised of the top item structure and intermediate structures with their associated information.

The signature of the service is described below, where StructureQueryParameters is a Service Data Object (SDO) that holds the parameters for the getItemStructure method as its attributes:

```
public ListOfStringStructureHeaders getItemStructure(
          StructureQueryParameters
          structureQueryParameters
          )
```

A Service Data Object (SDO) is a java class that represents a row of data, which can include embedded SDOs at a child level in a hierarchical construct. The definition of the StructureQueryParameters and child SDOs are described below:

StructureQueryParameters

For an item and organization, the calling program can pass either the IDs or the corresponding names for each Item and Organization. Both Item and Organization are required input to the service. If both IDs and names are passed, the names will be ignored. Structure Name is an optional parameter and, if null, information for the primary structure is published.

For Revisions, if only the Revision Date is passed, the service returns only components that are effective as of that date. If only Revision/RevisionId is passed, the start date of the revision is used to return components that are effective as of that date. However, if both the Revision/RevisionId and Revision Date are passed, then:

- If the Revision Date lies outside the revision effectivity, then the start date of the revision is used.
- If the Revision Date lies within the revision effectivity, then the revision date passed is used.

Type	Attribute
Number	InventoryItemId
InventoryItemName (SDO)	InventoryItemName
Number	OrganizationId
String	OrganizationCode
Number	RevisionId
String	Revision
Date	RevisionDate
String	StructureName
BomExploderParameters (SDO)	BomExploderParameters
PublishEntities (SDO)	PublishEntities

InventoryItemName

InventoryItemName corresponds to the segments of the item key flexfield.

Type	Attribute
String	Segment1
String	Segment2
String	Segment3
String	Segment4
String	Segment5
String	Segment6
String	Segment7
String	Segment8
String	Segment9
String	Segment10
String	Segment11
String	Segment12
String	Segment13
String	Segment14
String	Segment15

BomExploderParameters

Type	Attribute
Number	LevelsToExplode
Number	ExplodeOption

- LevelsToExplode: Determines the number of levels in the structure to explode. If the default value is 60, the user can specify any level less than or equal to 60.

- ExplodeOption: This option has two possible values: either 2 (CURRENT) or 3 (CURRENT and FUTURE).

PublishEntities

- StructureRevisions, StructureHeaderAttributeGroups, and StructureComponents are attributes that will take Y or N values to indicate whether the corresponding entity should be published or not.
- If StructureHeaderAttributeGroups is Y, then PublishStructureHeaderAttributeGroups determines which Attribute Groups are published. If PublishStructureHeaderAttributeGroups is null, all the Structure Header Attribute Groups are returned.

Type	Attribute
String	StructureRevisions
String	StructureHeaderAttributeGroups
String	StructureComponents
List of PublishStructureHeaderAttributeGroups (SDO)	PublishStructureHeaderAttributeGroups
PublishStructureComponents (SDO)	PublishStructureComponents

PublishStructureComponents

- StructureReferenceDesignators, StructureSubstituteComponents and ComponentAttributeGroups are attributes that take either a Y or N value to indicate whether the corresponding entity should be published or not.
- If ComponentAttributeGroups is Y, PublishComponentAttributeGroups indicates which Attribute Groups are published. If PublishComponentAttributeGroups is null, all the component attribute groups are returned.

Type	Attribute
String	StructureReferenceDesignators

Type	Attribute
String	StructureSubstituteComponents
String	ComponentAttributeGroups
List of PublishComponentAttributeGroups (SDO)	PublishComponentAttributeGroups

PublishStructureHeaderAttributeGroups

Type	Attribute
Number	AttributeGroupId
String	AttributeGroupName

PublishComponentAttributeGroup

Type	Attribute
Number	AttributeGroupId
String	AttributeGroupName

Output XML Format

The XSD of the XML output that is returned is in Structure.xsd. A summary of the output is shown below:

```
<listOfStructureHeaders>
  <StructureHeader>
    <StructureRevision>
    </StructureRevision>
    <StructureComponent>
      <ComponentAttributeGroup>
        <ComponentUDA>
        ...
        </ComponentUDA>
        <ComponentUDA>
        ...
        </ComponentUDA>
        ...
      </ComponentAttributeGroup>
      <ComponentAttributeGroup>
        <ComponentUDA>
        ...
        </ComponentUDA>
        <ComponentUDA>
        ...
        </ComponentUDA>
        ...
      </ComponentAttributeGroup>
      ...
    </StructureComponent>
    <StructureComponent>
      <ComponentAttributeGroup>
        <ComponentUDA>
        ...
        </ComponentUDA>
        <ComponentUDA>
        ...
        </ComponentUDA>
        ...
      </ComponentAttributeGroup>
      <ComponentAttributeGroup>
        <ComponentUDA>
        ...
        </ComponentUDA>
        <ComponentUDA>
        ...
        </ComponentUDA>
        ...
      </ComponentAttributeGroup>
      ...
    </StructureComponent>
    ...
    <StructureHeaderAttributeGroup>
      <StructureHeaderUDA>
      ...
      </StructureHeaderUDA>
      <StructureHeaderUDA>
      ...
      </StructureHeaderUDA>
      ...
    </StructureHeaderAttributeGroup>
  </StructureHeader>
</listOfStructureHeaders>
```

getStructureAttributes

This service takes a structure identifier and, optionally, a component identifier as input and returns details about the structure.

Input Parameters	Data Type	Comments
P_api_version	number	API Version (optional)
p_structure_id	number	Structure ID/Bill Sequence ID
p_component_id	number	Component Sequence ID (Optional)
p_language	varchar	Languages in which the attribute values are needed. Null indicates all languages. (Optional)

Output XML Format

```
<SyncItemStructure>
   <ItemStructureIdentification>
         <Identification>
              <ID></ID>
              <Name></Name>
         </Identification>
   </ItemStructureIdentification>
   <ItemStructureBase>
        <Description "languageId=US"></Description>
   </ItemStructureBase>
    ---ITEM IDENTIFICATION---
   <ComponentItem>
      ---ITEM IDENTIFICATION---
      <ComponentItemBase>
         <Quantity></Quantity>
      </ComponentItemBase>
   </ComponentItem>
</SyncItemStructure>
```

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