

Oracle® Product Information Management

Implementation Guide

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Preface

Intended Audience

Welcome to Release 12 of the *Oracle Product Information Management Implementation Guide*.

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

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Structure

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- E Change Management Business Events**

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.

License for Oracle Product Hub and Oracle Product Hub Data Steward

This chapter covers the following topics:

- License

License

Product Hub

The Product Hub is a bundle that includes two components, Siebel Universal Product Master and Oracle Product Information Management Data Hub.

If you are licensed for Product Hub then your use of the bundled programs is as defined in your license order and involves one of the following scenarios:

- If you are licensed for Siebel Universal Product Master, then your use is limited to the component that you are licensed for and you do not have rights to use the Oracle Product Information Management Data Hub.
- If you are licensed for Oracle Product Information Management Data Hub, then your use is limited to the component that you are licensed for and you do not have rights to use the Siebel Universal Product Master.
- If you are licensed for Product Hub, then your use is limited to a certain number of items. For example, if you licensed Product Hub for one million items, you can choose how many of those items to manage using Siebel Universal Product Master (500,000 items) and Oracle Product Information Management Data Hub (500,000 items).

Product Hub Data Steward

The Product Hub Data Steward is a bundle that includes two components, Siebel

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* (Includes: Product Information Management Data Librarian, Product Information Management Data Hub, Product Data Synchronization for GDSN and UCCnet services, Engineering, Bills of Material, Restricted Use: Inventory Management)

Implementation Overview

This chapter covers the following topics:

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

Set 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: Internal User Default Role for Items	<p>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.</p>	Design Reviewer
	<p>Design Reviewer is seeded for Forms interoperability.</p>	
	<p>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.</p>	
	<p>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.</p>	
	<p>It is recommended that you always specify a role that minimally has the View Item privilege.</p>	
EGO: Maximum number of rows for sorting	<p>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).</p>	2000
	<p>Note: Specifying a value greater than 2000 may have a negative impact on search performance.</p>	

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	<p>Governs the Forms actions for items.</p> <p>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:</p> <ul style="list-style-type: none"> • Categories • Catalog • Revisions • Organization Assignments • Attachments (disables attachments) <p>Keep the default value No if you wish to make all actions available in Forms.</p>	No

ENG: Internal User Default Role for Changes	<p>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.</p>	Reviewer
	<p>Reviewer is seeded for Forms interoperability.</p>	
	<p>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.</p>	
	<p>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.</p>	
	<p>It is recommended that you always specify a role that minimally has the View Item privilege.</p>	

EGO GDSN ENABLED	Governs the GDSN Synchronization functionality.	No
	Changing the value to Yes enables GDSN functionality.	
	Once you turn the flag to yes, then	
	<ul style="list-style-type: none">• GDSN default functional area appears• GDSN attributes appear in setup list page• GDSN attributes get associated to Item Catalog Category• GDSN Syndicated functional area flag on the Create Item and Functional Classification page gets enabled.	

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,

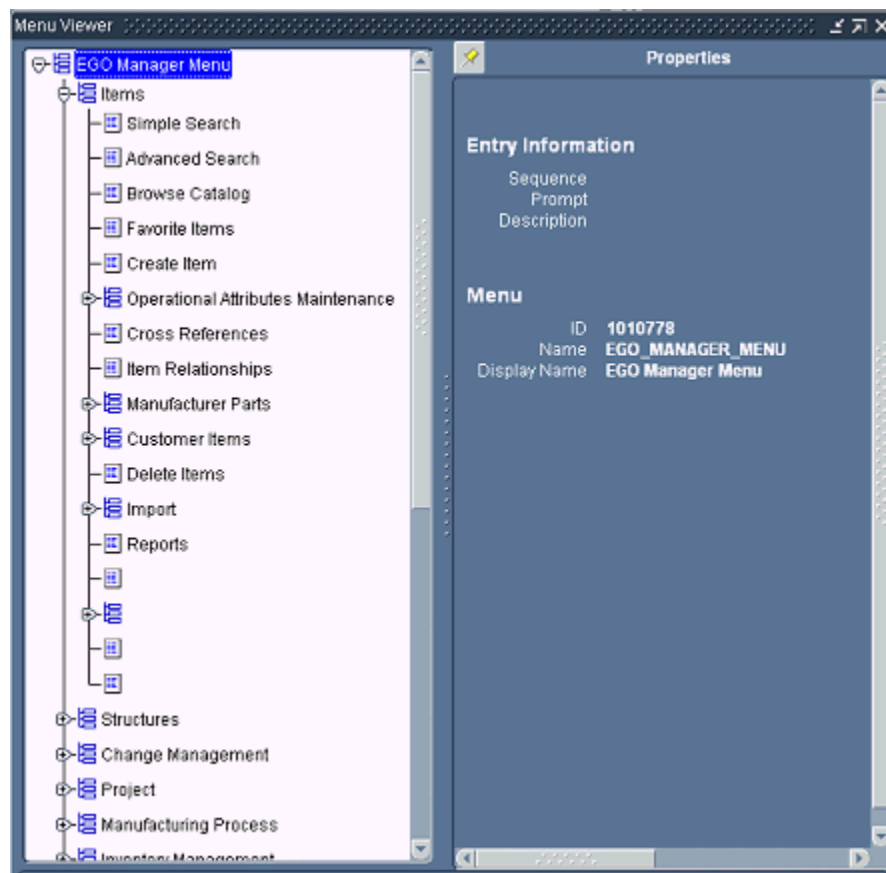
Development Engineer, and Supplier Engineer) is the EGO Manager Menu (EGO_MANAGER_MENU); you should view the seeded menus and functions before creating ones of your own. To view the seeded menus and functions, open the EGO Manager Menu in the Application Developer's Menu form and click the View Tree 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

The screenshot shows the 'Menus' form in Oracle. The 'Menu' field is set to 'EGO_MANAGER_MENU'. The 'User Menu Name' is 'EGO Manager Menu'. The 'Menu Type' and 'Description' fields are empty. A 'View Tree...' button is visible. Below the form is a table with 10 rows of seeded responsibilities.

Seq	Prompt	Submenu	Function	Description	Grant
1	Items	EGO Items			<input checked="" type="checkbox"/>
2	Structures	EGO Structures			<input checked="" type="checkbox"/>
3	Change Manage	EGO Change Managem			<input checked="" type="checkbox"/>
4	Project	EGO Projects			<input checked="" type="checkbox"/>
5	Manufacturing F	EGO Routings			<input checked="" type="checkbox"/>
6	Inventory Manag	EGO Inventory Manag			<input checked="" type="checkbox"/>
7	Cost Manageme	EGO Cost Management			<input checked="" type="checkbox"/>
8	Quality Manage	EGO Quality Manageme			<input checked="" type="checkbox"/>
9	CADView-3D	CADView-3D User All M			<input checked="" type="checkbox"/>
10		EGO Product Intelligenc			<input checked="" type="checkbox"/>

Menu Viewer



Defining responsibilities with menu exclusions

The screenshot shows the 'Responsibilities' configuration window in Oracle. The 'Supplier Engineer' responsibility is defined for the 'Oracle Engineering Online' application with the key 'EGO_SUPPLIER_ENGINEER'. It is available from Oracle Applications, Self Service Web Applications, and Mobile Applications. The menu is set to 'EGO Manager Menu'. The data group is 'Standard' and the request group is empty. The 'Menu Exclusions' tab is active, showing a table of excluded items.

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

The screenshot displays the 'Customers - Standard' form in an Oracle application. The form is divided into several sections. At the top, there are fields for 'Customer Type' (set to 'Person'), 'Active' (checked), 'Person Number' (26655), 'Prefix' (Ms.), 'First Name' (Jane), 'Customer Number' (3148), 'Middle Name' (empty), 'Last Name' (Williams), 'Tax Registration Num' (empty), 'Suffix' (empty), 'Taxpayer ID' (empty), 'Alternate Name' (empty), and 'Account Name' (empty). Below these fields is a tabbed interface with tabs for 'Addresses', 'Classification', 'Order Management', 'Marketing', 'Communication', 'Contacts', and 'Contacts : Roles'. The 'Addresses' tab is selected, showing a list of addresses. The first address is '620 Main St., Redwood City, San Mateo, CA, 94062, United States'. There is a checkbox labeled 'Show Only Active Addresses' which is currently unchecked. At the bottom of the form, there are four buttons: 'Duplicate Check', 'Party Relationships', 'New', and 'Open'.

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			

Addresses | Classification | Order Management | Marketing | Communication | Contacts | Contacts : Roles

Address ☐ Show Only Active Addresses

<input checked="" type="checkbox"/>	620 Main St., Redwood City, San Mateo, CA, 94062, United States
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Setting up party relations for a new customer person

Party Relations

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

Users

User Name: **JWILLIAM**

Description:

Password:

Password Expiration

- ☒ Days
- ☐ Accesses
- ☐ None

Person:

Customer: **Jane Williams**

Supplier:

E-Mail:

Fax:

Effective Dates

From: **03-SEP-2003**

To:

Responsibilities | **Securing Attributes**

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

Defining the Item Catalog

This chapter covers the following topics:

- Overview of Item Catalogs
- Build the Item Catalog Text Index
- Defining Item Catalog Categories
- Defining Value Sets for User-Defined Attributes
- Defining Item Attributes and Attribute Groups
- Defining Attribute Usages
- Display Attachments on Item Attribute Pages
- 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
- Setting Up Item Templates
- Defining Lifecycle Phases
- Defining Lifecycles
- Associating Lifecycles to Item Catalog Categories
- Defining Change Policies
- Defining New Item Request Types
- Defining New Item Request Workflows
- Setting Up New Item Request for an Item Catalog Category
- Defining Item Number and Description Generation Rules
- Defining Item Catalog Search Criteria

- Defining Item Catalog 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*

Build 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*.

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.

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
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After analyzing the required validation rules, create the value sets as follows:

1. Specify the Name and Description.

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

2. Select the Data Type. The data type 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. In the preceding table, the data type Number has been specified for the value set Rating because it contains all numeric values. In comparison, the value set Primary Supplier uses the data type Char because it only contains text values.

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

3. Choose 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.

4. Select the Validation Type:

- **None:** Select None to indicate that there is no explicit set of values against which the user's input is validated.
- **Independent :** You define the explicit values against which the user's input is validated here. To create explicit values, select Independent and click Add Values. Enter each value by specifying its internal/display name, sequence and the start/end date.

For example, the value set Rating can have certain values disabled by setting the end date.

You can specify the way the values are displayed as follows:

- *List of values :* Users select values by clicking the list of values (LOV).

- *Pop list* Users select values from a dropdown.

Note: Display as Radio Group can be set while creating or editing attributes. For more details see Defining Item Attributes and Attribute Groups. Oracle recommends that when you use the value set type Independent, you save it as a pop list.

- *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. This information can be dynamically changed.

Note: Value sets using the Table validation type are always displayed as a list of values (LOV).

Example of the value set Primary Supplier

The screenshot shows the Oracle Value Set Details page for the 'PrimarySupplier' value set. The page has a navigation bar with tabs: Items, Structures, Change Management, Security, Functions, Catalogs, and Value Sets. The 'Value Sets' tab is selected, and the breadcrumb is 'Value Sets > Value Set Details'. The page title is 'Value Set Details'. There are two 'Update' buttons, one at the top right and one at the bottom right of the 'Validation Table Information' section.

Value Set Details

Value Set Name	PrimarySupplier
Description	Primary Supplier
Data Type	Char
Maximum Size	0
Validation Type	Table

Validation Table Information

Table Application	Oracle Engineering Online
Table Name	PO_VENDORS

Value Column

Name	vendor_name
Type	V
Size	80

ID Column

Name	vendor_name
Type	V
Size	80

Meaning Column

Name	
Type	
Size	

Where Clause

VENDOR_NAME is not null

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.

Value sets described in the attribute group Benchmark Rating

Maintain Value Sets

Search Name Data Type
Description Validation Type

Value Sets

From here, you can search for existing Value Sets or create new Value Sets.

Name	Description	Data Type	Maximum Size	Validation Type	Minimum Value	Maximum Value
Percent Range	Value Set for Percentage Range Validation	Number	0	None	0	100
Rating		Number	0	Independent		

You can use one of the seeded value sets (Yes or No) that are automatically displayed when you select the Display Option 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.

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. You can define attributes that more specifically identify items, their characteristics and specifications, and capture business process information. The item catalog enables you to create user-defined attributes with 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 an item catalog category; consequently, items belonging to the same catalog category have the same attributes. You can reuse the same attribute group across different item catalog categories. You can also set up as many attributes as necessary to define an item. Later, users can enter the values for the attributes on the item pages. Although item categories inherit attributes from the parent category, each child category can also have its own unique attributes. You can also configure how attributes are displayed to improve usability. You can specify attributes at the item or item revision level.

See Also: For details about associating attributes, see Associating Item Catalog Attributes.

Prior to creating user-defined attributes you should:

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

Attribute Group	Attributes	Data Type
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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 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 Also:** For more details, see "Implementing Item Attribute Group Security."

- 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, if necessary. For more details, see Defining Value Sets for User Defined Attributes.
- Decide whether you want the attribute to be searchable. If you want the attribute to be searchable, then (when creating the attribute) select an indexed 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.
- Choose the display format of the attribute group:

- **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 on "Defining item attributes and attribute groups" shows how the display options are set and used when specifying the value for attributes. A few attributes (such as Risk Rating, and Quality Rating) are set to display as a text field. However, the value set Rating is saved as a pop list; therefore, the attribute values are selected from the dropdown. The attribute Supplier uses the Primary Supplier value set, which is a list of values. The attribute Mean Time Between Failure uses the data type Number. Failure Rate also uses the Number data type and the Unit of Measure (UOM) is Percent.

Defining item attributes and attribute groups

Attribute Group Details Update

Internal Name **Benchmark_Ratings**
 Display Name **Benchmark Ratings**
 Description **Benchmark Ratings**
 Multi-Row **No**

Data Security
 View Privilege
 Edit Privilege

Attributes Add Attribute Delete

Select Item(s) and ... Select All Select None Previous Next 10

Select	Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Enabled	Required	Indexed	Column	Edit
<input type="checkbox"/>	10	Risk_Rating	Risk Rating	Number	Text Field	Rating	Yes	No	No	N_EXT_ATTR1	
<input type="checkbox"/>	20	Quality_Rating	Quality Rating	Number	Text Field	Rating	Yes	No	No	N_EXT_ATTR2	
<input type="checkbox"/>	30	CPU_Rating	Atomic CPU Rating	Number	Text Field	Rating	Yes	No	No	N_EXT_ATTR3	
<input type="checkbox"/>	40	Video_Subsystem	Video Subsystem	Number	Text Field	Rating	Yes	No	No	N_EXT_ATTR4	
<input type="checkbox"/>	60	IO_Subsystem_Rating	IO Subsystem Rating	Number	Text Field	Rating	Yes	No	No	N_EXT_ATTR5	
<input type="checkbox"/>	70	Overall_Rating	Overall Rating	Number	Text Field		Yes	No	No	N_EXT_ATTR6	
<input type="checkbox"/>	80	Supplier	Supplier	Char	Text Field	PrimarySupplier	Yes	No	No	C_EXT_ATTR1	
<input type="checkbox"/>	90	MTBF	Mean Time Between Failure (Obsolete)	Number	Text Field		No	No	No	N_EXT_ATTR7	
<input type="checkbox"/>	91	MTBF1	Mean Time Between Failure	Number	Text Field		Yes	No	No	N_EXT_ATTR10	
<input type="checkbox"/>	100	Failure_Rate	Failure Rate (Obsolete)	Number	Text Field	Percent_Range	No	No	No	N_EXT_ATTR8	

Also notice in the figure above that certain attributes are set with the Enabled parameter set to No, indicating that such attributes are not displayed. You can always disable certain attributes. However, you cannot delete attributes after an attribute group has already been associated with an item catalog category.

Defining item attributes and attribute groups (setting attributes values)

Benchmark Ratings

Indicates required field

Risk Rating Atomic CPU Rating I/O Subsystem Rating

Supplier

Mean Time Between Failure Failure Rate

Quality Rating Video Subsystem Overall Rating

[Calculate Overall Rating](#)

[Cancel](#) [Apply](#)

The following figure is an example of the attribute group Marketing. Notice that the attribute Name is maintained as a Part of Unique Key and is set as required.

You can add/edit the unique key as long as doing so does not destroy the uniqueness (creating duplicates) of existing records.

Defining item attributes and attribute groups

Attribute Group Details

[Update](#)

Internal Name **Marketing**
Display Name **Marketing**
Description **Marketing**
Multi-Row **Yes**

Raise Post Attribute Change Event

[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
<input type="checkbox"/>	10	Marketing_Name	Name	Char	Text Field		Yes	Yes	No	Yes	C_EXT_ATTR1	Edit
<input type="checkbox"/>	20	Marketing_Type	Type	Char	Text Field		No	Yes	No	Yes	C_EXT_ATTR2	Edit
<input type="checkbox"/>	30	Marketing_URL	URL	Char	Text Field		No	Yes	No	Yes	C_EXT_ATTR3	Edit

Where Used

Name	Data Level	Enabled	Display Pages
Computer Parts and Components	Item	Yes	Marketing
Computer Systems	Item	Yes	Marketing
Enclosures	Item	Yes	Marketing

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, *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 Data Librarian, 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.

The screenshot shows the Oracle Item Catalog Administration web interface. The top navigation bar includes the Oracle logo and the title 'Item Catalog Administration'. Below this is a secondary navigation bar with tabs: Items, Documents, Structures, Change Management, Security, Functions, Catalogs, and Value Sets. A third navigation bar shows sub-tabs: Item Catalog Categories, Cross Reference Types, Lifecycle Phases, Attributes, Templates, GTIN, Item Type, and Attribute. The main content area is titled 'Attribute Usage'. It contains a 'Hide Filters' link, an 'Application' dropdown set to 'Configurator', an 'Attribute Group' search field with a magnifying glass icon, and a 'Go' button. Below these is an 'Update' button. A table with two columns, 'Attribute Group' and 'Attribute', is shown with the message 'No results found.' in the first row. The bottom of the page features a footer with links for 'About this Page' and 'Privacy Statement', and a copyright notice: 'Copyright (c) 2006, Oracle. All rights reserved.'

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 4-8

User-Defined Attributes, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Data Librarian User's Guide*

Display 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 Results 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.
2. Create an attribute group with an attribute where Display As is set to Attachment.
3. Associate the value set to the attribute.
4. Associate the attribute group to an item catalog category.
5. Create an item page to display the attribute group.
6. Add attachments to the item attachment list.

See Also: For more details, see:

- Defining Item Attributes and Attribute Group
- Define Value Set for Attribute
- Associating Item Catalog Attributes

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

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: <i>Computer Specifications</i>	Attribute Group: <i>Computer Specifications</i>	Attribute Group: <i>Computer Specifications</i>	Attribute Group: <i>Computer Specifications</i>
Attribute: <i>Release Notes</i>	Attribute: <i>Release Notes</i>	Value Set: <i>Item Attachment</i>	Value Set: <i>Item Attachment</i>

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 **ItemAttachments**
Description **Item Attachments**
Data Type **Number**
Maximum Size **0**
Validation Type **Table**

Update

Validation Table Information

Table Application **Oracle Engineering Online**
Table Name **FND_ATTACHED_DOCUMENTS A, FND_DOCUMENTS_TL TL, FND_DOCUMENTS D**

Update

Value Column

Name **TL.DESCRPTION**
Type **C**
Size **50**

ID Column

Name **A.ATTACHED_DOCUMENT_ID**
Type **N**
Size **40**

Meaning Column

Name
Type
Size

Where Clause

TL.LANGUAGE = userenv('LANG') AND A.ENTITY_NAME = 'MTL_SYSTEM_ITEMS' AND A.DOCUMENT_ID = TL.DOCUMENT_ID
AND D.DOCUMENT_ID = A.DOCUMENT_ID AND A.PK1_VALUE = :OBJECT\$.ORGANIZATION_ID AND A.PK2_VALUE
= :OBJECT\$.INVENTORY_ITEM_ID

Associate value set to the attribute

Attribute Group Details

Internal Name **Computer_Specs**
Display Name **Computer Specifications**
Description
Multi-Row **No**

Update

Data Security

View Privilege
Edit Privilege

Attributes

Select Item(s) and ...										
										Delete
Select All Select None										Previous 10 11-11 of 11 Next
Select	Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Enabled	Required	Indexed	Column
<input type="checkbox"/>	110	Release_Notes	Release Notes	Number	Attachment	ItemAttachments	Yes	No	No	N_EXT_ATTR1

Associations

Classification	Data Level	Enabled	Display Pages
Computer Systems	Item	Yes	Technical Specifications

Select attachments to be displayed on attribute page

Computer Specifications

• Indicates required field

CPU Type	AMD Athlon	CPU Speed	900MHz
Memory	128M	Storage	100 G
Media Drives	16x/48x DVD-ROM Drive and 48x/24	Graphics Monitor	15" LCD Flat Panel Display (15" view
Audio Speakers	Integrated Stereo Audio	Power	Worldwide Voltage
Communication Devices	Integrated 10/100 Ethernet	Keyboard & Mouse	Multifunction Keyboard and Logitech
Release Notes	ProductSpecificationSheet.pdf		

Cancel Apply

Item attribute page displays link to one of the attached files

Attributes

Overview

Technical Specifications

Expansion Slots

Connectors

Operating Systems

Benchmark Ratings

Market Research

Marketing

Physical Attributes

Sales

Planning

Manufacturing

Search: [Advanced Search](#)

[Summary](#) > [Specifications](#) > [Technical Specifications](#)

Technical Specifications

Computer Specifications

CPU Type	AMD Athlon	CPU Speed	900MHz
Memory	128M	Storage	100 G
Media Drives	16x/48x DVD-ROM Drive and 48x/24x/48x CD-RW	Graphics Monitor	15" LCD Flat Panel Display (15" view
Audio Speakers	Integrated Stereo Audio	Power	Worldwide Voltage
Communication Devices	Integrated 10/100 Ethernet	Keyboard & Mouse	Multifunction Keyboard and Logitech
Release Notes	ProductSpecificationSheet.pdf		

Operating Conditions

Optimal Temperature	78 Farenheit	Maximum Wet Bulb Temperature	110 Farenheit
Humidity	10 %		
Minimum Dew Point	34 Farenheit		

Item attachment

Setting Up Item Attribute Group Security

When implementing role-based item security you can set up 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.

To implement attribute group security for this scenario:

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.
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 Data Security section.
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 Key Metrics
 - View Competitors
 - Edit Target Markets
 - Edit Key Metrics
 - Edit Competitors
 - 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 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		

Defining Item Attribute group with view and edit privileges

Attribute Group Details

Internal Name: Target_Markets
 Display Name: Target_Markets
 Description:
 Multi-Row: Yes

Data Security

View Privilege: View Target Markets
 Edit Privilege: Edit Target Markets

Attributes

Select Sequence	Internal Name	Display Name	Data Type	Display As	Value Set Name	Part of Unique Key	Enabled	Required	Indexed	Column	Edit
<input type="checkbox"/>	10 Target_Mkt_Name	Name	Char	Text Field		Yes	Yes	No	Yes	C_EXT_ATTR1	
<input type="checkbox"/>	20 Target_Mkt_Description	Description	Char	Text Field		No	Yes	No	No	C_EXT_ATTR2	

Associations

Classification	Data Level	Enabled	Display Pages
Computer Parts and Components	Item	Yes	Market Research
Computer Systems	Item	Yes	Market Research

Defining the Marketing Manager role with specific item attribute group privileges

Item Role Detail

Name Marketing Manager
Description Marketing Manager
Object Name Item

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 Target Markets	Edit Target Markets
Grant/Revoke Role on the Item	Grant/Revoke Role on the Item

Defining the Supplier Engineer role with no specific item attribute group privileges

Item Role Detail

Edit

Name Supplier Engineer
Description Supplier Engineer
Object Name Item

Item Privileges

Name	Description
View Item Revision List	View Item Revision List
View Item	View Item

Role Mappings

Edit

Type	Role Name
Issue	Change Supplier Engineer

Implementing User-Defined Functions for Item Attributes

You can define your own custom logic by adding user-defined functions and actions to existing item pages. Doing so saves you from having to customize an entire page.

Using different algorithms, you can calculate values by passing attribute values to functions. Actions—which can be displayed as buttons or links—become the trigger points for functions. You can determine the conditional visibility of the button or links, and also prompt users based on their input. You can also trigger a function when you save changes to attributes (for details, see "Appendix D: Synchronizing Item User-Defined Attributes with Item Descriptive Elements").

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

To set up user defined attributes:

1. Set up user-defined item attributes. Create the necessary item pages associated with the item catalog categories.
2. Determine which attributes are functions of other attributes. Create user-defined functions to perform the necessary calculations (for example, summation of costs, efforts, ratings).
3. Create custom privileges and roles if you need to secure access and control who can/cannot execute the function/action.
4. 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.

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

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

URL Function: Specify an absolute or relative URL.

When setting up parameters for functions:

1. 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).
2. 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.
- 5.

Sequence	Attribute Group: <i>Duration in Days</i>	Attribute Group: <i>Duration in Days</i>	Mapping Attribute & Parameters	Java Function: <i>Duration</i>	Java Function: <i>Duration</i>	Java Function: <i>Duration</i>
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

Once the function and parameters for Duration (based on the Java method that resides in the Java class) are set up, create an action to trigger the function on the item pages. Navigate to the attribute groups list for the corresponding item catalog category (such as Computer Systems) and select the Update action.

When setting up an action:

1. Add the Dynamic Visibility function (written in Java only) to the action if there is a certain condition that must be satisfied to view the action button or link. For example, if one or all of the fields are empty, then the user won't see the button/link to execute the action.
2. Add the Dynamic Prompt function (written in Java only) to the action if the label for the button or link must be changed depending on a certain condition. For example, if the Total Implement Cost field is empty, then the button label is Apply; otherwise the button label is Apply Changes.
3. After creating the action, map the function parameters to the corresponding attributes.

The mapping section on the **Action Detail** page contains mapping information for function parameters. You can also map function parameters to the object's primary key value (for example, ORGANIZATION_ID, INVENTORY_ITEM_ID for item objects).

Important: Dynamic Prompt and Dynamic Visibility function parameters must be mapped to the corresponding attributes as

well.

- The following figures show the setup details for the Calculate Grade function. The function was created to calculate the overall rating for items belonging to the Motherboard item catalog category. Benchmark Rating attribute values were used as parameters.

See Also: For details about setting up item attributes see Defining Item Attributes and Attribute Groups and Associating Item Catalog Attributes.

Defining a function

[Functions](#) > Function Details

Function Details

Basic Information

Internal Name **Calculate_grade**
Display Name **Calculate Grade**
Description
Function Type **PL/SQL**
Package **EGO_DEMO_PUB**
Procedure **Calculate_Grade**

Package where procedure resides

Function Parameters

Select Function Parameter(s) and...

Select All | Select None

Select	Sequence	Internal Name	Display Name	Data Type	Parameter Type	Edit
<input type="checkbox"/>		10 p_component_risk	Component Risk	Number	Input	
<input type="checkbox"/>		20 p_lead_time	Lead Time	Number	Input	
<input type="checkbox"/>		30 p_cost	Cost	Number	Input	
<input type="checkbox"/>		40 p_supplier_risk	Supplier Risk	Number	Input	
<input type="checkbox"/>		50 p_grade	Grade	Number	Return Value	

Usages

Action Name	Object Name	Attribute Group	Usage Type	Edit
Calculate_Rating	Item	Benchmark Ratings	Action Function	

Action associated to attribute group to trigger the function

Action Details for Calculate_Rating

Basic Information	
Object Name	Item
Classification	728
Attribute Group	Benchmark Ratings
Sequence	10
Action Name	Calculate_Rating
Description	
Function	Calculate Grade
Security Privilege	
Execution Method	User Action
Display Style	Button
Prompt Application	Oracle Engineering Online
Prompt Message Name	Calculate Overall Rating
Visible	Yes
Dynamic Prompt Function	
Dynamic Visibility Function	

Mappings for Function Calculate Grade

Parameter Name	Mapped To	Mapped Attribute
Component Risk	Attribute Group	Risk Rating
Lead Time	Attribute Group	Quality Rating
Cost	Attribute Group	Atomic CPU Rating
Supplier Risk	Attribute Group	I/O Subsystem Rating

Item attribute page displays action button

Benchmark Ratings

• Indicates required field

Risk Rating	4	
Atomic CPU Rating	2	
I/O Subsystem Rating	3	
Supplier	Advantage Corp	
Mean Time Between Failure	2000	Day
Failure Rate	0.03	%

Quality Rating 5
Video Subsystem 3
Overall Rating 3 Result

Calculate Overall Rating

Cancel Apply

Associating Item Catalog Attributes

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 to an item catalog category:

1. Add the attribute group to the Attribute Groups list for that item catalog category. You can associate attribute groups to an item or item revision.

Note: Item level attributes are specific only to the Master Organization. However, the item revision level attributes are always 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.

2. Define the item pages for the 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.

Associate item catalog attribute and create item page

Item Pages
Item Catalog Category: **Desktop**

[Create Page](#) [Delete](#)

Select Item(s) and ... [Select All](#) | [Select None](#)

Select	Sequence	Display Name	Internal Name	Description	Classification	Data Level
<input type="checkbox"/>	10	Technical Specifications	Technical_Specifications		Computer Systems	Item
<input type="checkbox"/>	20	Expansion Slots	Expansion_Slots	Expansion Slots	Computer Systems	Item
<input type="checkbox"/>	30	Connectors	Connectors		Computer Systems	Item
<input type="checkbox"/>	40	Operating Systems	Operating_Systems	Operating Systems	Computer Systems	Item
<input type="checkbox"/>	50	Benchmark Ratings	Benchmark_Ratings		Computer Systems	Item

In the figure below you can see that the Desktop catalog category has five item pages, one of which is the Benchmark Rating page containing the Benchmark Ratings attribute group.

Item pages for attributes on Item Detail page

The screenshot shows the 'Item Detail' page. On the left is a sidebar titled 'Attributes' with a list of links: Overview, Technical Specifications, Expansion Slots, Connectors, Operating Systems, Benchmark Ratings (highlighted with a red circle), Market Research, and Marketing. The main content area is titled 'Item Detail' and shows the 'Item Catalog Category' as 'PLM High Tech > Computer Systems > Desktop' and the 'Description' as 'Vision MX2000 Desktop'. Below this is a section titled 'Detailed Description' with the 'Item Long Description' text: '900MHz AMD Athlon processor with 3D Now!, 128MB RAM, 100GB hard drive 56Kbps modem, 10/100 Ethernet, Logitech camera, Windows 2000 Standard optimized for fantastic multimedia capability and internet gaming.' There is an 'Add To Favorites' button in the top right corner.

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

The screenshot shows the 'Document Categories' form. It has a table with columns: Category, Default Datatype, From, and To. The 'Category' column has a dropdown menu with 'Datasheet' selected. The 'Effective Dates' section is highlighted in blue.

Category	Default Datatype	From	To
Datasheet			

Associating Item Attachment Categories

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 Object: <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="Add"/>		Previous	1-10	Next 10
Select All Select None				
Select	Attachment Category	Item Catalog Category	Start Date	End Date
<input type="checkbox"/>	Document Reference	PLM High Tech		
<input type="checkbox"/>	Specification	Motherboards		
<input type="checkbox"/>	Document	Motherboards		
<input type="checkbox"/>	Datasheet	Motherboards		
<input type="checkbox"/>	Design	Motherboards		
<input type="checkbox"/>	Collateral	Motherboards		
<input type="checkbox"/>	To Buyer			
<input type="checkbox"/>	To Mobile Receiver			
<input type="checkbox"/>	To Mobile Putaway			
<input type="checkbox"/>	To Mobile Picker			
Select Object: <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="Add"/>		Previous	1-10	Next 10

Setting Up Item Templates

You can define Item Templates for the Item Catalog to include operational attributes. You can also include user-defined attributes in an Item Template once it is associated with an Item Catalog Category. Item Templates may be inherited for use down through the item catalog hierarchy. You can specify a default Item Template for an Item Catalog Category. A reset is available to restore the default attributes and values inherited down through the item catalog hierarchy.

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.

How to Set Up Item Templates:

1. Create Item Template in Setup Workbench to specify operational attributes
2. Associate item templates with any item catalog category. Item templates are inherited down through the item catalog hierarchy
3. Specify which item template is the default for the item catalog category
4. Specify values for any associated user-defined attribute groups to the item catalog category. When you define a template at a parent category, the same template is inherited by all child categories. You can modify attribute values in the inherited template and if needed revert to inherited values at a later time.

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

Multi Row **No**

Attribute Values

Select Attributes and ... <input type="button" value="Enable"/> <input type="button" value="Clear"/>				
Select All Select None				
Select Attribute	Value		Item Catalog Category	Enabled
<input type="checkbox"/> Optimal Temperature	<input type="text" value="100"/> <input type="text" value="Celsius"/>		Motherboards	<input checked="" type="checkbox"/>
<input type="checkbox"/> Humidity	<input type="text" value="10"/> <input data-bbox="966 1428 990 1459" type="text" value="%"/>		Motherboards	<input checked="" type="checkbox"/>
<input type="checkbox"/> Maximum Wet Bulb Temperature	<input type="text" value="20"/> <input type="text" value="Celsius"/>		Motherboards	<input checked="" type="checkbox"/>
<input type="checkbox"/> Minimum Dew Point	<input type="text" value="65"/> <input type="text" value="Celsius"/>		Motherboards	<input checked="" type="checkbox"/>
<input type="checkbox"/> Chassis Fan Speed	<input type="text"/>		Motherboards	<input type="checkbox"/>

Creating/updating item template for item master operational attributes

Template Details

Template Description

Purchased Item

Purchased Item

Organization

Attribute Group

Lead Times

Go

Multi Row

No

Update

Attribute Values

Attribute	Value	Controlled At	Enabled
Preprocessing		Organization Item	No
Processing		Organization Item	No
Postprocessing		Organization Item	No
Fixed		Organization Item	No
Variable		Organization Item	No
Cumulative Manufacturing		Organization Item	No
Cumulative Total		Organization Item	No
Lead Time Lot Size		Organization Item	No

How to Use Item Templates

1. During the new item creation process you can specify an item template or use the default if one was setup at the item catalog category level
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.

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*.

Defining lifecycle phases

The screenshot shows the 'Statuses (Vision Operations: USD)' window with the 'Workflow' tab selected. The main table lists lifecycle phases and their associated statuses. Below the table are two sections: 'Status Controls' and 'Next Allowable Statuses'.

Status Type	Status	System Status	Description	Effective Dates		Starting Status
				From	To	
Phase	Concept	General	Evaluate options, define	01-JUN-2003		<input type="checkbox"/>
Phase	Design	General	Define specifications, s	01-JUN-2003		<input type="checkbox"/>
Phase	Pre-Production	General	Production trial runs, v	01-JUN-2003		<input type="checkbox"/>
Phase	Production	General	Begin immediately wi	01-JUN-2003		<input type="checkbox"/>
Phase	Prototype	General	Build and test prototyp	01-JUN-2003		<input type="checkbox"/>
Phase	Retirement	General	End-of-Life decision an	01-JUN-2003		<input type="checkbox"/>

— Status Controls —

Action	Allow	Default
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

Next Allowable Statuses

☐ None
 ☐ System Status
 ☐ Status
 ☒ All

Next Allowable Statuses

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

[Update](#)

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 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

Previous **Next 5**

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**

Add

Select Lifecycle Associations and...

Delete

Select Name	Description	Classification
<input checked="" type="radio"/> Computer Component Lifecycle	Computer component item lifecycle	Motherboards
<input type="radio"/> Computer Component Revision Lifecycle	Computer component item revision lifecycle	Motherboards

Add

Change Policy

Show Key Notation

View Policy for Attributes

Go

Update Concept

Go

Attribute	Concept	Design	Prototype	Pre-Production	Production	Retirement
Memo Policy for Associations	✓	✓	ⓘ	ⓘ	ⓘ	✗
Memo Policy for Attachments	✓	✓	ⓘ	ⓘ	ⓘ	✗
Memo Policy for Attributes	✓	✓	ⓘ	ⓘ	ⓘ	✗
Memo Policy for Promote and Demote	✓	✓	ⓘ	ⓘ	ⓘ	✗
Assembly Clearances	✓	✓	✓	✓	✗	✗
Benchmark Ratings	✓	✓	✓	✓	ⓘ	✗
Operating Conditions	✓	✓	ⓘ	ⓘ	✗	✗
Motherboard Specifications	✓	✓	ⓘ	ⓘ	ⓘ	✗

Change Policy

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.

Defining Change Policies

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) 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
<input type="checkbox"/> Assembly Clearances	Allowed
<input type="checkbox"/> Benchmark Ratings	Allowed
<input type="checkbox"/> Operating Conditions	Change Order Required
<input type="checkbox"/> Motherboard Specification	Change Order Required
<input type="checkbox"/> Memory Configurations	Change Order Required
Add Another Row	Allowed
	Change Order Required
	Not Allowed

Concept Design **Prototype** Pre-Production Production Retirement

Cancel Apply

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.

Defining New Item Request Types

New Item request is a workflow process, which allows you to route the definition and approval of a new item. When creating a new item, various aspects of an item like base

attributes, user-defined attributes, AML etc. could be defined by various people in the organization using a workflow process. The definition routing and approval routing could be combined in a new item request workflow.

New Item Request (NIR) is a Change category; there could be many types of New Item Request that suits a particular business process. Each type of NIR allows you to specify NIR number generation function, default assignee type and assignee. You can create a NIR type for a outsourced components which will have a specific numbering prefix and assigned to person with a role at the item category level.

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)

Aut numbering

* 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:

Channel: Value:

Cancel Apply

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.

Defining User defined Attributes for New Item Request Type

Attribute Groups

Change Category: New Item Request

Type: Standard New Item Request Type

Add Attribute Groups

Select Attribute Groups and... Delete

Select All | Select None

Select Display Name	Description	Data Level	Pages	Update Actions
<input type="checkbox"/> Cost Impact	Cost Impact	Change		
<input type="checkbox"/> Implementation Costs		Change		

Defining New Item Request Workflows

One of the most important functionality in NIR type, is to be able to associate workflow. The administrator can add workflow steps and specify the status of the NIR in which the workflow will be executed and assign the workflow, by choosing it from a list of workflow template. The administrator should specify the step number, status of the NIR process in which the workflow will be initiated and finally associate the workflow by choosing it from the workflow templates.

Defining a workflow template that could be assigned to a New Item Request is detailed in Defining Workflow Templates section later in the document. NIR workflow are typically Definition and Approval Workflow, an example of NIR workflow is outlined in the following figure.

NIR Workflow example

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: [Calendar Icon]

Type: Definition and Approval

Add Step

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	[Edit]	[Delete]
Show	20	Definition and Approval	One Assignee	Item Role	CAD Librarian	3	[Edit]	[Delete]
Show	30	Definition and Approval	One Assignee	Item Role	Buyer	3	[Edit]	[Delete]
Show	40	Definition and Approval	One Assignee	Item Role	Commodity Part Coordinator	3	[Edit]	[Delete]
Show	50	FYI	None	Item Role	Commodity Part Manager		[Edit]	[Delete]
Show	50	FYI	None	Change Role	Requestor		[Edit]	[Delete]
Show	50	FYI	None	Group	Vision Engineering		[Edit]	[Delete]

Once you associate the workflow template with the NIR type, you need to specify the category association for the NIR.

Setting Up New Item Request for an Item Catalog Category

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

In the Workflow/Approval section, you can specify which people are required to enter attributes during the workflow process for each lifecycle phase of the new item request.

For example, when the new item request is in the Open 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 you would be sure to 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 NIR is change, it has a status type. Only the certain workflow type is 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

Associating a New Item Request with an Item Catalog Category

[Basic Information](#)
[People](#)
[Attribute Groups](#)
[Item Pages](#)
[Lifecycle](#)
[Attachment Categories](#)
[Search Criteria](#)
[Display Formats](#)
[Import Formats](#)
[Templates](#)
[Create Item](#)

- New Item Request**
- Number Generation
- Description Generation

Create Item

Catalog Category: **Capacitors**

Item Request

Item Request Required: **Yes** Update
Item Request Type: New Part Request

Workflow/Approval

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

[Show All Details](#) | [Hide All Details](#)

Details	Step	Workflow Process	Response Required	Type	Name	Days to Respond	Attribute Groups	Associate Attribute Groups
▶ Show	10	Definition and Approval	One Assignee	Item Role	Commodity Part Manager	3	Capacitor Specifications, Capacitor Packaging Specs, Materials/Substances, Lead (Pb)-Free Profile, Recovery and Recycling, Compliance and Certification	
▶ Show	20	Definition and Approval	One Assignee	Item Role	CAD Librarian	3	Technology, Layout Specifications, Symbol, Footprint	
▶ Show	30	Definition and Approval	One Assignee	Item Role	Buyer	3	Ratings, Reliability	
▶ Show	40	Definition and Approval	One Assignee	Item Role	Commodity Part Coordinator	3		
▶ Show	50	FYI	None	Item Role	Commodity Part Manager			

Associating Item Attribute groups with Definition Steps

Associate Attribute Groups

• Indicates required field

Cancel Apply

Step	20
Workflow Process	Definition and Approval
Assignee Type	Item Role
Name	CAD Librarian

*Attribute Groups	Delete
Technology	
Layout Specifications	
Symbol	
Footprint	
Add 5 More	

Cancel Apply

Defining Item Number and Description Generation Rules

For a given category, item number and description could be automatically generated when an user wants to create an item. Various item number and description generation methods are supported such as:

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.

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, which could be overridden at the child level.

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.

Item Number Generation

Auto Generation

Catalog Category : Capacitors

Number Generation

Item Numbering	Sequence Generated	Update
Prefix	VI	
Starting Number	60000	
Increment	1	
Suffix	CAP	

Setting up Item Number Generation

Item Number Generation

Catalog Category : Capacitors

Item Numbering

Sequence Generated

Function Generated

Inherited From Parent

Sequence Generated

User Defined

Prefix

Starting Number

Increment

Suffix

CAP

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.

Description Generation Sample

Auto Generation

Catalog Category: Capacitors

Description Generation

Item Description Function Generated

Update

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

Defining Item Catalog 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 an item, thereby saving users the time it would take to specify search criteria and execute frequent item 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 have defined a default criteria template for a particular item catalog category, the user-defined criteria template takes precedence.

Because criteria templates contain user-defined attributes, you must always define them in the context of an item catalog 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.

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 Voltage and Capacitor Value, 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

Advanced Search
For any duplicated attribute the search will be conducted on both attribute values.

Item Catalog Category:

Revision:

Search Criteria
Search Criteria:

Select Criteria:

Select All | Select None

Select Attribute Group	Attribute	Operator	Value
<input type="checkbox"/> Capacitor Specifications	^ Voltage	is	10 Volt
<input type="checkbox"/> Capacitor Packaging Specs	^ Package Type	is	SM
<input type="checkbox"/> Capacitor Specifications	^ Temp. Coefficient	is	
<input type="checkbox"/> Primary	^ Item	starts with	
<input type="checkbox"/> Capacitor Specifications	Tolerance	is	%
<input type="checkbox"/> Inventory	Inventory Item	is	
<input type="checkbox"/> Order Management	Customer Ordered	is	

TIP ^ Indicates indexed attribute. You must enter at least one indexed attribute to perform a search.

Display Format
Display Format:

Item Catalog Category	Item	Revision Label	Description	Voltage	Capacitance Value	Tolerance	Dielectric	Package Type	Size	Grade
-----------------------	------	----------------	-------------	---------	-------------------	-----------	------------	--------------	------	-------

[Recent](#) | [Home](#) | [Logout](#) | [Preferences](#) | [Help](#) | [Diagnostics](#)

Defining Item Catalog Display Formats

Results Formats enable you to predefine search results views for each item catalog category. You can use these views to look at different sets of attributes of the items that are returned by a search. Both administrators and users can create results formats. Administrator-created results formats are available to all users. User-created result formats are available only to the users who created them. You can define as many results formats as you wish, and you can also denote the most commonly used as the default results format.

You can define a results format by listing the common information a typical user might wish to view for an item. For example, for the item catalog category Capacitor, you might select Item Name, Description, Item Status, or other important item attributes such as Capacitance Value, or Tolerance.

Defining Item Catalog Import Formats

An import format identifies the base and user-defined attributes (but not the operational attributes) in an item catalog category that is imported into the application using a spreadsheet. You cannot import operational attributes; however, you can 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.

The base item attributes are:

- Item Name
- Item Catalog Category
- Description
- Primary Unit of Measure
- Lifecycle
- Lifecycle Phase
- Item Status
- Long Description

You can define import formats for both items and item revisions. An import format can also import values for a multi-row attribute group.

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

Item 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

<input type="button" value="Create"/>					
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				

Defining Catalogs

This chapter covers the following topics:

- Overview of Catalogs
- Defining Catalog Categories
- Defining Catalogs
- Implementing Catalog Security

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	▼ Purchasing Catalog	▼ Service Catalog
▼ Computer Systems	▼ Electromechanical Components	▼ Computer Parts and Components
Desktop Products	Audio Devices	Hard Drives
Laptop Products	Circuit Breakers	Monitors
▼ Computer Parts and Components	Fans	Holders
Motherboards	Industrial Controls & Sensors	Mounts
PCMCIA	Knobs & Dials	Memory
Keyboards	► Power	Motherboards
Mouse	Relays & I/O Modules	PCMCIA
Memory	Switches	Keyboards
Hard Drives	▼ Electronic Components	Mouse
Monitors	▼ Discretes	► Electromechanical Components
Holders	Diodes	► Mechanical Components
Mounts	Gates	▼ Networking Components
	Rectifiers	Ethernet Controllers
	Transistors	Ethernet Cards
	▼ IC's	▼ Consulting Services
	Memory	Enterprise Solutions
	Analog IC's	Small Business Solutions
	Digital IC's	Helpdesk Outsourcing
	Microcontrollers	▼ Support
	Microprocessors	▼ Business Support
	► Optoelectronics	Gold Support
	▼ Passives	Silver Support
	Capacitors	Bronze Support
	Circuit Protection	▼ Consumer Support
	Encoders	On Call Support
	Frequency Controllers	Warranty
	Inductors	Extended Warranty
	RC Networks	
	Resistors	
	Signal Transformers	
	► Interconnect components	
	▼ Mechanical Components	
	Enclosures	
	Fasteners	
	Heat Sinks	
	▼ Networking Components	
	Ethernet Controllers	
	Ethernet Cards	
	► Test, Tools & Supplies	

Defining Catalog Categories

You 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. Can you reuse the same catalog category in several 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.

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.

You can set up catalogs in a way that the items may be classified the same across all organizations or differently between organizations. You can enable item assignments to more than one catalog category within your catalog.

Related Topics

Creating Catalogs, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Assigning a Category to a Catalog, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Creating a Catalog Category within a Catalog, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Implementing Catalog Security

You can use role-based security to control which users, groups, companies, or organizations can view and manage catalog items. For example, you may allow customers and the Sales organization to view your Product catalog, while only Engineering, Procurement, and Manufacturing can view the Purchasing catalog.

There are two privileges that you can grant a user with a role on the catalog: View Catalog and Manage Catalog. The two seeded roles are Catalog Viewer and Catalog Manager. Users who have been granted the View Catalog privilege can browse and view all items in the catalog. A user granted the Manage Catalog privilege can assign items to a catalog category within the catalog.

Role	View Catalog Privilege	Manage Catalog Privilege
------	------------------------	--------------------------

Catalog Viewer	Yes	No
Catalog Manager	Yes	Yes

Related Topics

Assigning People to a Catalog, Oracle Product Lifecycle Management User's Guide or Oracle Product Information Management Distribution Librarian User's Guide

Assigning People to a Valid Category, Oracle Product Lifecycle Management User's Guide or Oracle Product Information Management Distribution Librarian User's Guide

Defining Change Categories and Types

This chapter covers the following topics:

- Overview of Change Categories and Types
- Build the Change Management Text Index
- Defining Change Categories
- Creating Priority Codes
- Creating Reason Codes
- Creating Classification Codes
- Creating Statuses
- Defining Workflow Templates
- Attaching 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
- Setting Up Change Attribute Group Security
- Implementing User Defined Functions for Change Type Attribute
- Defining Change Category Search Criteria
- Defining Change Category Display Formats
- Defining Change Category Reports

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	

Build 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.

Related Topics

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

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.

The following change categories are seeded:

Issues To track, manage and resolve various product/process related issues.

Change Requests To request changes and get approval for requested changes.

Change Orders To implement requested changes and revise items.

Ideas To capture suggestions, innovations, improvements etc. from customers and internal users.

New Item Request To provide a formal process of definition and approval of a new item.

Change Notification To distribute documents and files to multiple recipients.

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.

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

The screenshot displays the Oracle Item Catalog interface for 'Item Enhancement Requests'. At the top, there's a navigation bar with tabs for 'Issues', 'Change Requests', 'Change Orders', and 'Enhancement Requests'. Below this, a search bar contains the text 'Enhancement Request'. The main section is titled 'Item Enhancement Requests' and includes a 'Criteria Template' dropdown set to 'ER: Cost Improvement' and a 'Results Format' dropdown set to 'ER: Primary Attributes'. A table of enhancement requests is shown with columns for 'Select', 'Details', 'Type', 'Number', 'Name', 'Assigned To', 'Status', 'Approval Status', 'Priority', 'Approval', and 'Approval History'. The table lists four requests, all assigned to Steve Williams and in an 'Open' status. Below the table, there are buttons for 'Create' and 'Go'.

Select	Details	Type	Number	Name	Assigned To	Status	Approval Status	Priority	Approval	Approval History
<input type="checkbox"/>	Show	Feature ER	ERFT102	Optionally, Linux OS should be pre-installed on the computer	Steve Williams	Open	Not submitted for approval	Medium	View	View
<input type="checkbox"/>	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	View	View
<input type="checkbox"/>	Show	Feature ER	ERFT107	Desktop with Intel's 875P chipset	Steve Williams	Open	Not submitted for approval	Medium	View	View
<input type="checkbox"/>	Show	Feature ER	ERFT108	Increase data-transfer speed to support digital audio and video devices	Steve Williams	Open	Not submitted for approval	Medium	View	View

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 Subtab	EGO User Item Enh Request Subtab
ENG_CREATE_ENHANC	Engineering Create Enhancement Request	

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

Seq	Prompt	Submenu	Function	Description	Grant
1	Simple Search		Eng Change Simple Se		<input checked="" type="checkbox"/>
2	Advanced Search		Eng Change Advance S		<input checked="" type="checkbox"/>
3	Create Change		Engineering Create Chz		<input checked="" type="checkbox"/>
4	Create Change I		Engineering Create Chz		<input checked="" type="checkbox"/>
5	Create Issue		Engineering Create Issu		<input checked="" type="checkbox"/>
6	Create Enhance		Engineering Create E...		<input checked="" type="checkbox"/>

4. Add the Enhancement Request security function to the change management security menu (see the menu EGO_CHGGMGMT_USER_SECURITY).

Function

Engineering Create Enhancement Request

Add function to change management security menu

Seq	Prompt	Submenu	Function	Description	Grant
1			Engineering Create Issu		<input checked="" type="checkbox"/>
2			Engineering Create Cha		<input checked="" type="checkbox"/>
3			Engineering Create Cha		<input checked="" type="checkbox"/>
4			Engineering Create E		<input checked="" type="checkbox"/>

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

Cancel Apply

* 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 <small>(example: 17-Mar-2005)</small>
End Date	 <small>(example: 17-Mar-2005)</small>
Autonumbering	
* Number Generation	Sequence Generated
* Prefix	ER-
* Next Available Number	0001

Cancel Apply

Note: Oracle recommends that you stop and then start the Jserv and Apache listener middle tier ports after completing these setup tasks.

Related Topics

Creating Change Categories, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Creating Priority Codes

Priority codes enable you to track the urgency of an issue/change. 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.

Creating Reason Codes

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.

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.

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.

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

Create Workflow Template

* Indicates required field

* Name: Design Issue Approval

Description: Design Issue Approval

* Start Date: 01-Apr-2005

End Date:

Type: Approval

Add Step

Show All Details

Details Step

Step	Response Required	Type	Assigned To	Days to Respond	Update	Delete
No data exists.						

Cancel Apply

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 please refer to Defining New Item Request section.

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 " Defining Roles" for details on mapping item roles to change roles).

Attaching Workflow Templates

In the Setup Workbench you can associate multiple workflow templates with a given change type. You associate multiple workflow templates with a workflow status at the header level of a idea, issue, change request, change notification, or change order. You can also add ad-hoc step assignees to the workflow based on role, group, and person filters. This enables a user to abort the workflow within a status, and to choose a different template for that status.

Once these associations are made, when creating an individual change object within that type, you can select various workflow options. This enables you to select a specialized workflow to reach those people who need to approve specific changes different from those who would approve changes.

You can set up workflow templates to use when requesting approval or review of an issue, change request, or change order. This enables reviewers and approvers to select the template with the steps that best meets their needs and specific people, based on role, group, and person filters. You can have multiple templates at any status.

To change templates before moving to Approval status:

1. Navigate to the Change Simple Search page.
2. Search for a Change Request record using the query ECR%.
3. Select Number for a specific change request.

4. In the Change Request Summary page, select Change Request Number.
5. Select the Workflow tabbed region, and select the Approval status.
6. In the Approval Status region, select Switch Template.
7. In the Workflow field, select a different template using the pull-down list. The workflow steps for the selected template are displayed.
8. Select Apply to save your work.

The selected workflow template is ready for use on the Approval Status for this particular Change Object. Restart the Workflow and the Change Object flows through the steps for this template for the Approval Status.

You have the option to designate new assignees based on the new workflow template.

To change templates when the Approval status is in process:

1. Navigate to the Abort Workflow page.
2. Select Abort Workflow.
3. Select Switch Template.
4. In the Workflow field, select a different template using the pull-down list. The workflow steps for the selected template are shown below.
5. Select Apply.
6. Select Start Workflow.
7. Optionally, select Refresh Assignees to designate new assignees before starting the new workflow.

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 (ENGCSSTEP), 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.

Creation of a Task Template

Create Task Template

• Indicates required field

Cancel Apply

* Name

Description

* Organization

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

End Date
(example: 17-Mar-2005)

Change Tasks

Select a Task(s) and... Remove

Select All | Select None

Select	Sequence	Task	Assignee Type	Assignee	Description	Mandatory
<input type="checkbox"/>	10	Unit cost analysis	Person	Mary Robinson	Perform unit cost analysis	<input checked="" type="checkbox"/>
<input type="checkbox"/>	20	Implementation cost analy	Person	Ravi Patel	Perform implementation ci	<input checked="" type="checkbox"/>
<input type="checkbox"/>	30	Affected products/assemb	Person	Mary Robinson	cted products/assemblies	<input checked="" type="checkbox"/>

Add Another Row

Cancel Apply

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.

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 Update

Internal Name: **cust_priorities**
 Display Name: **Customer Priorities**
 Description:
 Multi-Row: **Yes**

Data Security

View Privilege
 Edit Privilege

Attributes Maintain Unique Key Add Attribute

Select Object: Delete

Select All | Select None

Select Sequence	Name	Internal Name	Display Name	Data Type	Display As	Value Set Name	Part of Unique Key	Enabled	Required	Indexed	Column	Edit
<input type="checkbox"/>	10	Customer	Customer	Char	Text Field	Customer	Yes	Yes	No	No	C_EXT_ATTR1	
<input type="checkbox"/>	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 Priority ☐ High ☐ Medium ☐ Low

Review ☒ Date

(DD-MON-RRRR)

Cancel Apply Add Another

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 Assignment 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. Associated with each status you can specify the valid statuses for promotion and demotion as well associate a workflow 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 will allow 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

Cancel

Apply

Organization
• Indicates required field





Select	Organization	Organization Name	Delete
<input checked="" type="radio"/>	V1	Vision Operations	
<input type="radio"/>	M1	Seattle Manufacturing	

Add Another Row

Organization : V1

Task Templates

Propagation Rules

Task Template	Start After Status	Complete Before Status	Delete
CO Analysis	<input type="text"/>	Approval	
CO Release	Approval	Released	
CO Schedule Global	Approval	Scheduled	
CO Implementation Global	Released	Implemented	

Add Another Row

Task Templates

Propagation Rules

Cancel

Apply

- **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

ORACLE® Item Catalog Administration

Home Logout Preferences Help

Items Documents Structures Change Management Security Functions Catalogs Value Sets

Categories | Statuses | Codes | Workflow | Task Templates | Header Attributes | Line Attributes

Basic Information
Attribute Groups
Pages
Codes
Configuration
Workflow
Organization Policies

Organization Policies

Change Category Change Order Type Prod Chg

Organization

* Indicates required field

Select *Organization	Organization Name
<input checked="" type="radio"/> M1	Seattle Manufacturing

Add Another Row

Organization : M1

Task Templates Propagation Rules

☒ Auto Propagate * Status for Auto Propagation Approval

Organization Hierarchy for Propagation

*Organization Hierarchy	Default Organization Hierarchy
SEATTLE ECO HIERARCHY	<input checked="" type="checkbox"/>
Vision Corp EBI Hierarchy	<input type="checkbox"/>

Defining Line Types

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: Previous 1-5 Next 5

Select Name	Description	Created By	Start Date	End Date	Search Criteria	Display Format
<input type="radio"/> Change Order	Change Order	SYSADMIN SYSADMIN	01-Jul-2004			
<input type="radio"/> New Item Request	New Item Request	SYSADMIN SYSADMIN	01-Jul-2004			
<input checked="" type="radio"/> Change Request	Change Request	SYSADMIN SYSADMIN	01-Jul-2004			
<input type="radio"/> Issue	Issue	SYSADMIN SYSADMIN	01-Jul-2004			
<input type="radio"/> Enhancement Request	Enhancement Request	Steve Williams	04-Aug-2003			

Category: Change Request

Select Line Type:

Select Name	Description	Subject Type	Created By	Start Date	End Date
<input checked="" type="radio"/> A Part	Supplier / Manufacturer Part	None	Steve Williams	04-Jan-2005	
<input type="radio"/> Comp Redsg	Component Redesign	Item Revision	Steve Williams	31-Jul-2003	
<input type="radio"/> Dsgn Chng	Design Change	Item Revision	Steve Williams	31-Jul-2003	
<input type="radio"/> Dwg Change	Drawing Change	Miscellaneous	Steve Williams	31-Jul-2003	
<input type="radio"/> Sfter Chng	Software Change	Item Revision	Steve Williams	31-Jul-2003	
<input type="radio"/> Spec Chng	Specification Change	Item Revision	Steve Williams	31-Jul-2003	

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

(example: 17-Mar-2005)

End Date

(example: 17-Mar-2005)

Subject Selection Criteria

* Subject

Select	Attribute	Value	Allowed
	No data exists.		
<input type="button" value="Add Another Row"/>			

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.

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		Header Type ECO				
Change Category	Change Order					
Select Attribute Groups and...		Add Attribute				
Select All Select None		Delete				
Select Display Name	Description	Data Level	Classification	Pages	Update Actions	
<input type="checkbox"/> Unit Costs		Change	ECO	Cost Information		
<input type="checkbox"/> 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		Type ECO		
Change Category	Change Order			
Select Object: Delete		Create Page		
Select All Select None				
Select Sequence	Display Name	Internal Name	Description	Data Level
<input type="checkbox"/> 5	Classification	Classification	Classification	Change
<input type="checkbox"/> 10	Impact Analysis	Cost Information		Change

Change page for attributes on change order overview page

ORACLE Change Management

Change Order: EC0101
Organization: Vision Operations (V1)

Summary | Lines | Relationships | Lifecycle

Overview | Action Log | Attachments | Revisions | People

Summary Overview > Cost Information

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

Update

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					

Update

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

Basic Information | Attribute Groups | Pages

Change Category: Change Request | Line Type: A Part

Add Attribute Groups

Select Attribute Groups and... Delete

Select All | Select None

Select Display Name	Description	Data Level	Pages	Update Actions
<input type="checkbox"/> Part Information		Change Line	Part Information	

Setting Up Change Attribute Group Security

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.

To implement attribute group security for change management:

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.
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 Data Security section.
3. On the **Change Role Detail** page, grant the privileges that you defined as Form Functions in the previous steps.

For more details about setting up attribute group security for Change Management, see and the following topics in the Oracle Product Lifecycle Management User's Guide or Oracle Product Information Management Distribution Librarian User's Guide:

- Setting Up Item Attribute Group Security
- Creating Custom Privileges
- User Defined Attributes
- Managing Roles

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	--à ---à ---à	Cost 1	Number	Input
2	Manufacturing	Number	--à ---à ---à	Cost 2	Number	Input
3	Engineering	Number	--à ---à ---à	Cost 3	Number	Input
4	Field/Repair	Number	--à ---à ---à	Cost 4	Number	Input
5	Total Implement Cost	Number	--à ---à ---à	Cost Result	Number	Return Value

First, register the PL/SQL function "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.
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, if 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	Suppliers Charges	175	Dollars
Costs related to material scrap plus rework			Costs related to supplier network, scrap, tooling, cancel fees, and return credits		
Manufacturing	150.65	Dollars	Engineering	120.87	Dollars
Costs related to manufacturing tooling, test equipment, facilities			Costs related to engineering design and drafting		
Field / Repair	250.45	Dollars	Quality Assurance	160	Dollars
Costs related to field service and repair labor, network, and scrap			Costs related to quality assurance		
Total Implement Cost	994.47	Dollars			

Result

Calculate Cost

Cancel Apply

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, 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.

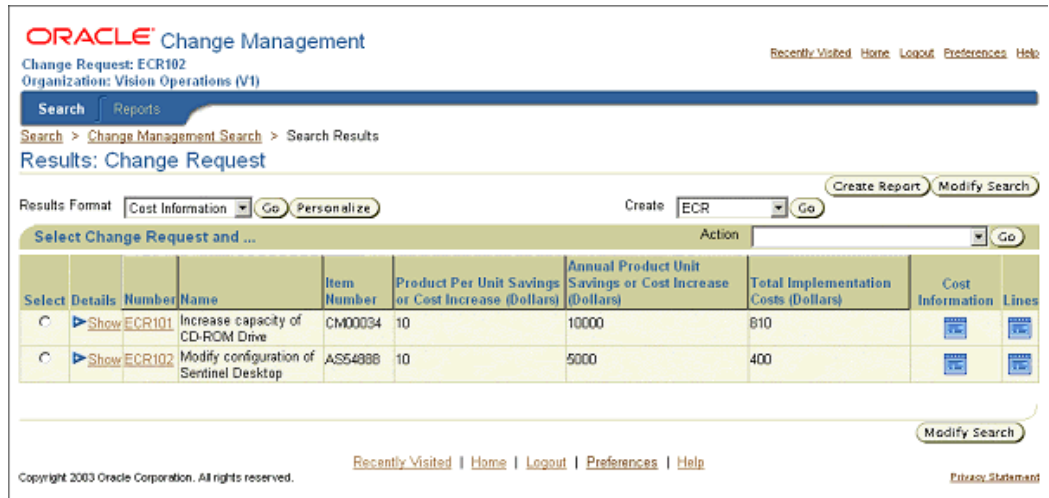
Because criteria templates contain user-defined attributes, you must always define them in the context of a change category. You can define as many criteria templates as you wish, and you can also denote the most commonly used as the default criteria template. For example, you may define criteria templates to quickly find Open Change Requests, My Issues, or Scheduled Change Orders.

Defining Change Category Display Formats

Results 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 results formats. Administrator-created results formats are available to all users. User-created result formats are available only to the users who created them. You can define as many results formats as you wish, and you can also denote the most commonly used as the default results format.

You can include any base or user-defined attributes in your results format definitions. You can include display sections in your results 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.

Change request search results using Cost Information results format



ORACLE Change Management

Change Request: ECR102
Organization: Vision Operations (V1)

Search Reports

Search > Change Management Search > Search Results

Results: Change Request

Results Format: Cost Information Go Personalize Create ECR Go Create Report Modify Search

Select Change Request and ... Action Go

Select	Details	Number	Name	Item Number	Product Per Unit Savings or Cost Increase (Dollars)	Annual Product Unit Savings or Cost Increase (Dollars)	Total Implementation Costs (Dollars)	Cost Information	Lines
<input type="radio"/>	Show	ECR101	Increase capacity of CD-ROM Drive	CM00034	10	10000	810		
<input type="radio"/>	Show	ECR102	Modify configuration of Sentinel Desktop	AS54886	10	5000	400		

Modify Search

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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.

[Cancel](#) [Apply](#)

• 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** [Go](#)

Select Criteria: [Clear](#) [Delete](#) [Duplicate](#) | [Add Criteria](#)

[Select All](#) | [Select None](#)

Select Attribute Group	Attribute	Operator	Value	
<input type="checkbox"/> Primary	^ Number	is		Edit
<input type="checkbox"/> Primary	^ Name	is		
<input type="checkbox"/> Primary	^ Assigned To			Edit
<input type="checkbox"/> Primary	^ Status	is	Open	
<input type="checkbox"/> Primary	^ Approval Status	is		
<input type="checkbox"/> Primary	^ Priority	is	High	
<input type="checkbox"/> 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** [Go](#)

Type	Number	Name	Status	Approval Status	Priority	Assigned To	Need By Date	Action Log
------	--------	------	--------	-----------------	----------	-------------	--------------	------------

Defining Item Structures

This chapter covers the following topics:

- Overview of Item Structures
- Defining Structures
- Display Formats and Search Criteria for Structures
- User Defined Attributes for Structures and Components
- Valid Component Type Rules

Overview of Item Structures

Important: The seeded structure type of Packaging Hierarchy is only available to customers who have licensed Product Information Management, and it is not available to licensees of Product Lifecycle Management except those that have licensed both Product Lifecycle Management and its option, Product Data Synchronization for Global Data Synchronization Network and ISYNC Services.

Use the following tasks to define item structures.

Task	Required?
Defining Structure Types	Yes
Defining Structure Names	Yes
Defining Item Attachment Categories for a Structure Type	

Defining Structures

Defining Structure Types

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 attachments categories, criteria templates and results formats inherited throughout the hierarchy.

Defining Structure Names

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 Bill 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

Defining Item Attachment Categories for a Structure Type

Associating attachment categories with a structure type enables you to view item attachments to structure components within a BOM. Suppose you have a CAD drawing attached to each of the major subassemblies in each of your engineering BOMs. You can associate the attachment category CAD Drawing to the structure type Engineering BOM. The CAD drawings for each of the subassemblies will then appear in the EBOM structures.

Defining a Criteria Template for a 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.

Administrator-created criteria templates are available to all users. This helps users quickly find components within a structure without having to create their own criteria templates. You can specify a default criteria template for each structure type.

Defining Results Format for a Structure Type

Results formats enable you to predefine search results views for a structure type. You can use these views to look at different sets of attributes of component items within a structure. Both administrators and users can create results formats.

Administrator-created results formats are available to all users. User-created result formats are available only to the users who created them. You can define as many results formats as you wish, and you can also denote the most commonly used as the default results format.

You can define a results format by listing the common information a typical user might wish to view for components in a structure. For example, you might select the attributes Item Name, Description, Component Quantity, Capacitance Value, or Tolerance.

Results formats for structures enable you to include navigation links for actions such as item Where Used, First-Level components, and View Components in Hierarchy.

Related Topics

Creating Structure Names, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management User's Guide*

Display Formats and Search Criteria for Structures

Search Criteria

Administrators 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. 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 base and user defined attributes.

Display Formats

Administrators 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. Display formats allow user to view attribute information across an entire structure. The display formats can include item and component base attributes and user defined attributes.

Oracle Product Lifecycle Management 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

User Defined Attributes for Structures and Components

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.

Valid Component Type Rules

The system enables you to add valid component user items to a structure. It also enables you to copy a structure to a new structure when the item list of values includes only valid items that have defined component types for the parent item type.

Adding Components to a Structure

When adding components to a structure using the 'Add' right click action, the Item Search and Item Advanced Search restricts the list of component items that can be added as components to an item. This list will include only the valid component user items configured for the item type of the parent/subassembly.

When adding components to a structure by dragging and dropping components from Favorites, Item Search Results, the system restricts the list of component items that can be added as components to an item. The component items, which can be dragged and dropped, include only the valid component user items configured for the item type of the parent/subassembly.

Structure Copy

When copying a structure to a new structure, the Item list of values (LOV) for the target structure includes only the valid items that have defined component types for the parent item type. Therefore, when you are defining the valid component item types for parent item types, if the parent item type is also a valid component item type, define it as a component item type, as well. Complete the same validation when copying a structure for a subassembly, which is added by dragging from another structure window.

Structure Bulkload and Open Interface

When importing a structure through bulkload or the open interface, the system automatically considers item type validations.

Functional Rules

- Define User Item Types in the Item Master
- Define Valid Component Item Types for a Parent User Item Type
- Validate a parent item type with multiple component types in an OR condition
- Item LOV's in Add Component and Item Advanced Search will validate the valid

component item types for a parent item type to which the component is being added

- Target Structure Item LOV will validate the valid component item types for a parent item type
- Structures created through bulkload or Open interface need to validate the valid component item types
- Once structures have been defined with existing valid component types on deletion of a component user item type for a parent item type, all new structures will honor the new component user item types definition.

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 8-4

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.

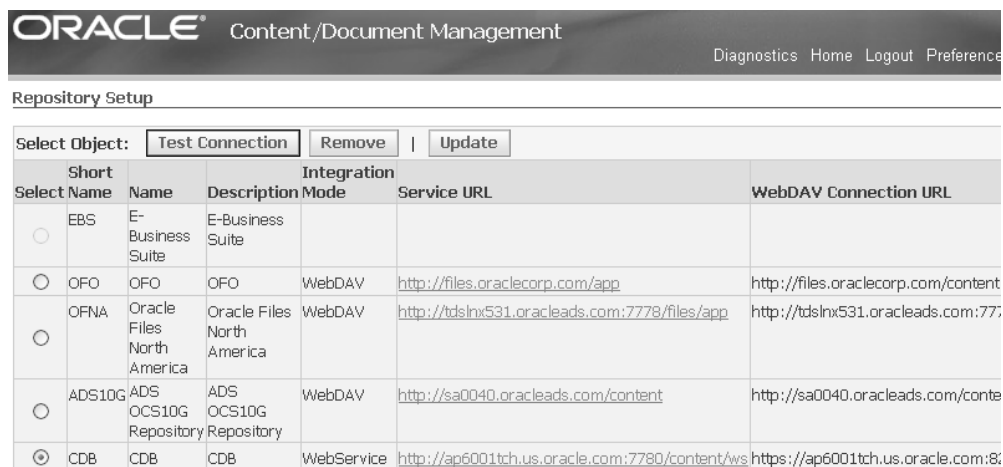
The following instructions also apply to setting up repositories other than Oracle Content DB, although Oracle only certifies the use of the Oracle content management repositories for the Oracle applications listed in Integrating Oracle E-Business Suite Applications with Content Management Repositories, page 8-1.

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.



ORACLE® Content/Document Management					
Repository Setup					
Select Object: <input type="button" value="Test Connection"/> <input type="button" value="Remove"/> <input type="button" value="Update"/>					
Short Select Name	Name	Description	Integration Mode	Service URL	WebDAV Connection URL
<input type="radio"/> EBS	E-Business Suite	E-Business Suite			
<input type="radio"/> OFO	OFO	OFO	WebDAV	http://files.oraclecorp.com/app	http://files.oraclecorp.com/content
<input type="radio"/> OFNA	Oracle Files North America	Oracle Files North America	WebDAV	http://tdslinx531.oracleleads.com:7778/files/app	http://tdslinx531.oracleleads.com:7778/files/content
<input type="radio"/> ADS10G	ADS OCS10G Repository	ADS OCS10G Repository	WebDAV	http://sa0040.oracleleads.com/content	http://sa0040.oracleleads.com/content
<input checked="" type="radio"/> CDB	CDB	CDB	WebService	http://ap6001tch.us.oracle.com:7780/content/ws	https://ap6001tch.us.oracle.com:8443/content/ws

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 8-1

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*

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	I 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
/ <u>CADView</u>	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 <u>Ver A</u>	Sub Folder	Item Revision
/Functional Specification	Sub Folder	Document Type
/ <u>CADView</u>	Sub Folder	Document Type
/M10000 <u>Ver B</u>	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
/ <u>CADView</u>	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 6-10.

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*

Defining Roles

This chapter covers the following topics:

- Overview of Roles
- Defining Roles

Overview of Roles

Oracle provides role-based security to specify the privileges assigned to each user on an item, catalog, catalog category, and change category. A *role* consists of a set of privileges granted to a user on a specific object, such as an item. For example, you may assign the Design Engineer role to some of the engineers within your organization for a set of items. The Design Engineer role grants them the privilege to view and edit the item. To simplify the maintenance of role-based security, you can define groups of users. You can assign to an item or set of items (for example, all items in an item catalog category) a role for a person, group, company, or all users.

Task	Required?
Defining Change Roles	Yes
Defining Item Roles	Yes
Defining Item Catalog Category Roles	
Defining Catalog Roles	

Defining Roles

Defining Change Roles

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 (see "Setting Up Change Attribute Group 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 header or change lines. 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 or lines 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*.

Following are the seeded change roles:

- Approver
- Assignee
- Creator
- Requestor
- Reviewer

For more details on creating change roles, see People and Roles Administration, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Item role to change role mapping

Item Role Detail

Name **Design Engineer**

Description **PLM Design Engineer**

Object Name **Item**

Item Privileges

Name	Description
View Target Markets	View Target Markets
Add/Delete Item Attachment	Add/Delete Item Attachment
Add/Delete Item Project/Task Association	Add/Delete Item Project/Task Association
•	•
•	•
•	•
View Item/Item Revision LifeCycle	View Item/Item Revision LifeCycle
View Key Metrics	View Key Metrics

Role Mappings

Edit

Type	Role Name
Issue	Change Design Engineer
Change Order	Change Design Engineer
Change Request	Change Design Engineer

Defining Item Roles

The item role assigned to a user for an item determines which actions that user can perform on the item. For example, a user with the Design Engineer role is granted the View Item and Edit Item privileges, among other privileges.

You can assign item roles to a person, group, company, or all users. To simplify maintaining item security, you can assign item roles at the item, item catalog category, or organization level. For example, you can assign a user the Design Engineer role for the Motherboard item catalog category; this in turn assigns the Design Engineer role to the user for all Motherboard items. A role that is explicitly granted to a user for an item is a *direct role assignment*. Roles assigned at the organization or item catalog category level are *inherited role assignments*. You can map an item role to a change role for each change category. For example, you can map the item Design Engineer role to the Change Design Engineer role for issues, change requests, and change orders. So users with the Design Engineer role on the subject of the change request header or lines will inherit the Change Design Engineer role as well.

Following are the seeded item roles:

- Item Author

- Design Engineer
- Design Reviewer
- Supplier Engineer

For more details on creating item roles, see People and Roles Administration, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*.

Defining item roles

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People Groups Companies Roles

Welcome

Welcome [Return to Portal](#) [Logout](#) [Preferences](#) [Help](#)

[Roles](#) > [Roles Search Results](#) > Role

Item Role Detail

Edit

Name **Design Engineer**

Description **PLM Design Engineer**

Object Name **Item**

Item Privileges

Name	Description
View Target Markets	View Target Markets
Add/Delete Item Attachment	Add/Delete Item Attachment
Add/Delete Item Project/Task Association	Add/Delete Item Project/Task Association
Add/Update Item Revision	Add/Update Item Revision
Change Item Status	Change Item Status
Demote Item/Item Revision LifeCycle Phase	Demote Item/Item Revision LifeCycle Phase
Edit Item	Edit Item
Edit Item Catalog Assignments	Edit Item Catalog Assignments
Edit Item Organization Assignments	Edit Item Organization Assignments
Grant/Revoke Role on the Item	Grant/Revoke Role on the Item
Promote Item/Item Revision LifeCycle Phase	Promote Item/Item Revision LifeCycle Phase
View Competitors	View Competitors
View Item	View Item
View Item Attachments List	View Item Attachments List
View Item Catalog Assignments	View Item Catalog Assignments
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

Role Mappings

Edit

Type	Role Name
Issue	Change Design Engineer
Change Order	Change Design Engineer
Change Request	Change Design Engineer

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Defining Item Catalog Category Roles

The item catalog category role assigned to a user determines who can create items in a specific item catalog category. For example, a user with the Catalog Category User role on the Motherboard item catalog category is granted the "Create Item of this Catalog Category" privilege, which enables him or her to create Motherboard items.

For more details on creating item catalog category roles, see *People and Roles Administration*, *Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*.

Defining Catalog Roles

The catalog role assigned to a user determines who can view and assign items to a catalog. For example, a user with the Catalog Manager role on the Purchasing Catalog is granted the View Catalog and Manage Catalog privileges. The user can view the items in the Purchasing Catalog and add items to the Purchasing Catalog.

Following are the seeded catalog roles :

- Catalog Manager
- Catalog Viewer

Implementing Role Based Security

This chapter covers the following topics:

- Overview Role Based Security
- Defining Role Based Security

Overview Role Based Security

Task	Required?
Defining Groups	
Implementing Item Catalog Role-Based Security	Yes
Implementing Catalog Role-based Security	Yes
Implementing Change Management Role-based Security	Yes

Defining Role Based Security

Defining Groups

You can create groups of people that include internal users, suppliers and customers. Groups are extremely 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 for different teams or

departments that serve similar business functions. You can also create groups for different suppliers or customers.

A group consists of one or more members. 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 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

ORACLE Home Logout Help Preferences

People Company **Groups** Roles

Groups > My Own Groups > Group Details

Group Detail

Name: Vision Engineering
 Description: Vision Engineering
 Group Email Address: steve.williams@oracleads.com

Send Email to Members Update

Members

Add

Select Users and... Delete

Select All | Select None

Select Name	Company
<input type="checkbox"/> Steve Williams	Vision Enterprise
<input type="checkbox"/> Mary Robinson	Vision Enterprise
<input type="checkbox"/> Ravi Patel	Vision Enterprise
<input type="checkbox"/> Rebecca Swanson	Vision Enterprise

Group People

Update Delete

Select Users and...

Select All | Select None

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> View Group Members	Group	Vision Engineering		31-Jul-2003	
<input type="checkbox"/> Group Administrator	Person	Steve Williams	Vision Enterprise	31-Jul-2003	
<input type="checkbox"/> Group Reviewer	Company	Vision Enterprise	Vision Enterprise	31-Jul-2003	

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Implementing Item Catalog Role Based Security

Role-based data security is provided, enabling users to secure individual data elements. Every item is secured using role-based data security. Your ability to view, edit and perform certain actions on an item is determined by your role on it. At the item level, roles are assigned to users by anyone who has the privilege to add people. You can assign roles at the organization, item catalog category, or item level.

Privileges

A privilege defines a user's access to an item. For example, a user's ability to view an item, edit it, and promote its lifecycle phase is determined by his or her privileges on that item. You can define additional privileges to secure user-defined attribute groups.

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 item roles to a person, group, company, or all users. To simplify maintaining item security, you can assign item roles at the 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 NPI 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 may assign the role of Supplier Engineer to suppliers with whom you are collaborating on specific items.

Organization level item role assignments

Organization Roles

☑ TIP Default Role Assignments for all objects in the selected organization

Organization

Object Type

Update

Delete

Select Users and...

Select All | Select None

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> Engineering Manager	Person	Steve Williams	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Product Manager	Person	Steve Williams	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Design Engineer	Person	Mary Robinson	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Manufacturing Engineer	Person	Ravi Patel	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Marketing Manager	Person	Cathy Price	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Quality Manager	Person	Sally Martin	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Service Engineer	Person	Jay Shankar	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Safety Engineer	Person	Rebecca Swanson	Vision Enterprise	04-Aug-2003	
<input type="checkbox"/> Buyer	Person	Catherine Baker	Vision Enterprise	04-Aug-2003	

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).

[Update](#)

[Select Users and...](#)

[Delete](#)

[Select All](#) | [Select None](#)

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> Catalog Category User	Person	Steve Williams	Vision Enterprise	31-Jul-2003	

Item People

✓ **TIP** The following are default User role assignments for all items in this Item Catalog Category in the selected organization.

Organization: [Go](#)

[Update](#)

[Select Users and...](#)

[Delete](#)

[Select All](#) | [Select None](#)

[Previous](#) [Next 10](#)

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> Design Reviewer	Group	Vision Engineering		06-Aug-2003	
<input type="checkbox"/> Engineering Manager	Person	Steve Williams	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Product Manager	Person	Steve Williams	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Design Engineer	Person	Mary Robinson	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Manufacturing Engineer	Person	Ravi Patel	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Marketing Manager	Person	Cathy Price	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Quality Manager	Person	Sally Martin	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Service Engineer	Person	Jay Shankar	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Safety Engineer	Person	Rebecca Swanson	Vision Enterprise	06-Aug-2003	
<input type="checkbox"/> Buyer	Person	Catherine Baker	Vision Enterprise	06-Aug-2003	

[Previous](#) [Next 10](#)

[Select Users and...](#)

[Delete](#)

Item-specific role assignments

People

Direct Item Roles

[Update](#)

[Select Users and...](#)

[Delete](#)

[Select All](#) | [Select None](#)

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> Supplier Engineer	Person	James Indus	Industrial Dressler	06-Aug-2003	
<input type="checkbox"/> Item Author	Person	Steve Williams	Vision Enterprise	31-Jul-2003	

Inherited Item Roles

[Show Inherited Roles](#)

Implementing Catalog Role Based Security

For each catalog you create you can specify which people can view and manage the catalog. Suppose you've set up a Product catalog, Purchasing catalog, and Service catalog. You can assign the Catalog Manager role to your marketing managers to

maintain the Product catalog, while assigning the Catalog Viewer role to All Users so that everyone can view the Product catalog. You can assign your buyers the Catalog Manager role to maintain your Purchasing catalog.

Assigning Catalog Roles

People

Catalog Product Catalog

Catalog People

Select Users and... Delete

Select All | Select None

Select Role	Type	Name	Company	Start Date	End Date
<input type="checkbox"/> Catalog Viewer	All Users	All Users		04-Aug-2003	
<input type="checkbox"/> Catalog Manager	Person	Steve Williams	Vision Enterprise	04-Aug-2003	
<input checked="" type="checkbox"/> Catalog Manager	Group	Product Marketing		03-Sep-2003	

Add People Cancel Apply

Implementing Change Management Role Based Security

You can set up change management security so that most if not all the role assignments are inherited from the subject item of the change object header and lines, the approval routing, and default assignments. You can also assign a default role to all internal users with the site level profile ENG: Internal User Default Role for Changes.

When defining an item you specify a role mapping for each change category: issue, change request, and change order. For example, suppose a supplier creates a change request for a Motherboard item. Then all people with a Design Engineer role on the Motherboard item will get the Change Design Engineer role on the change request. This is the most efficient way to set up change management security.

When you defined your change types in "Step 4: Defining Change Categories and Types," you specified one or more valid approval routings. Each person in the approval routing 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.

Item role to change role mapping

Item Role Detail

Name **Design Engineer**
Description **PLM Design Engineer**
Object Name **Item**

Item Privileges

Name	Description
View Target Markets	View Target Markets
Add/Delete Item Attachment	Add/Delete Item Attachment
Add/Delete Item Project/Task Association	Add/Delete Item Project/Task Association
•	•
•	•
•	•
View Item/Item Revision LifeCycle	View Item/Item Revision LifeCycle
View Key Metrics	View Key Metrics

Role Mappings

[Edit](#)

Type	Role Name
Issue	Change Design Engineer
Change Order	Change Design Engineer
Change Request	Change Design Engineer

Understanding Product Data Synchronization

This chapter covers the following topics:

- Overview of Product Data Synchronization
- Overview of Global Data Synchronization Network and 1SYNC
- Global Data Synchronization Network
- Managing Global Trade Item Number Information
- Oracle 1SYNC Registry Messages
- Support 1SYNC Supplier Synchronization Suite
- Notification Processing
- Publish the Registered Information to Trading Partners

Overview of Product Data Synchronization

Important: The seeded structure type of Packaging Hierarchy is only available to customers who have licensed Product Information Management, and it is not available to licensees of Product Lifecycle Management excepting those that have licensed both Product Lifecycle Management and its option, Product Data Synchronization for Global Data Synchronization Network and 1SYNC Services.

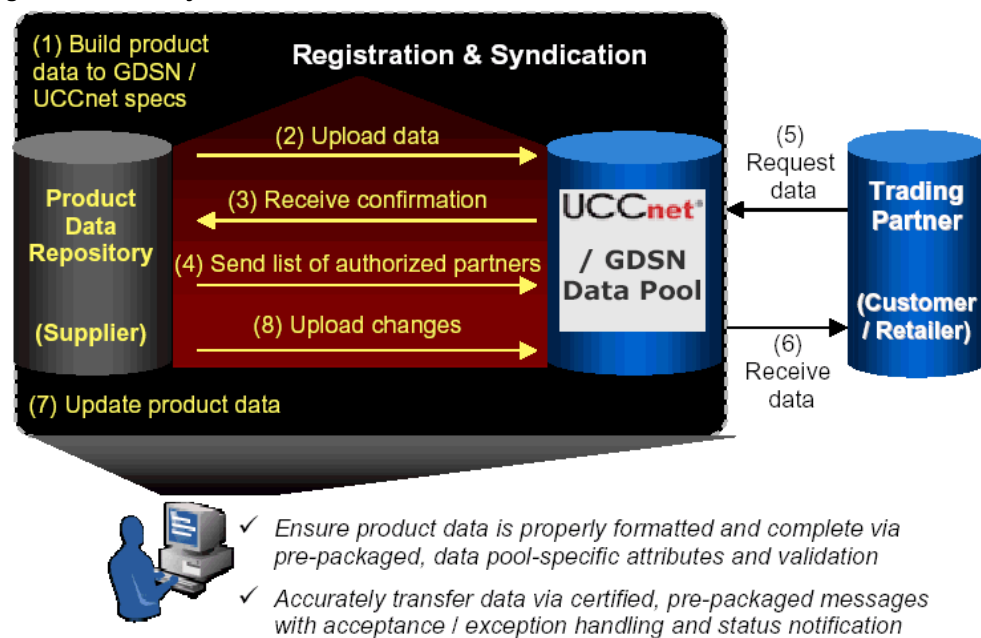
Oracle Product Data Synchronization for Global Data Synchronization Network (GDSN) and 1SYNC Services enables companies to securely deliver product information to 1SYNC and via the Global Data Synchronization Network (GDSN), and then to syndicate that data to trading partners.

Product Data Synchronization (PDS) comes with pre-built item attributes that map to the attribution defined for product data synchronization by GDSN and 1SYNC. PDS

also provides extensive validation checks against the approved formats for these attribute definitions to help assure that only clean data is sent. Besides, PDS provides a complete messaging solution that is built to the format mandated by GDSN and 1SYNC.

PDS is designed to help make sure that companies avoid both the direct and indirect costs of sending incorrect product data to 1SYNC and their trading partners. Direct costs include the fines imposed by 1SYNC for sending 'dirty data', and indirect costs include delayed or lost sales, etc. PDS' item attributes come with extensive data validation checks to make sure that input data is clean. The messaging system provides a complete transaction history of all messages to provide a full audit trail of all communications with data pools and trading partners.

Registration and Syndication



Overview of Global Data Synchronization Network and 1SYNC

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. These services allow companies to synchronize item information across their entire supply chain. Manufacturers can register and update their product information with GDSN through standard processes, and any of the manufacturer's trading partners – distributors, sellers, retailers, etc. can access that information.

Oracle PDS allows companies to efficiently synchronize accurate product data with customers and suppliers. PDS provides companies with a complete solution for managing their product information and then for delivering their relevant product data to their trading partners by enabling them to register Global Trade Item Numbers (GTINs) associated with one or many customer sites (Global Location Numbers) to 1SYNC.

The key features of PDS are:

- Author and manage items/GTINs, attributes and associated packaging hierarchies
- Manage registration process of items/GTINs to the Global Registry (GDSN/1SYNC)
- Manage trading partner subscriptions
- Manage publication/syndication of items/GTINs to trading partners
- Manage ongoing changes to product data and appropriate re-syndications to trading partners

Global Data Synchronization Network

Profile Options

Oracle provides several system profile options to enable or change the behavior of certain features in the application.

Following is a description of the GDSN profile option:

Profile	Description	Default Value
---------	-------------	---------------

EGO GDSN ENABLED	<p>Governs the GDSN Synchronization functionality. Changing the value to Yes enables GDSN functionality.</p> <p>Once you turn the flag to yes, then:</p> <ul style="list-style-type: none"> • GDSN default functional area appears • GDSN attributes appear in setup list page • GDSN attributes get associated to Item Catalog Category • GDSN Syndicated functional area flag on the Create Item and Functional Classification page gets enabled. 	Null
---------------------	---	------

Lookups

System level lookups store values for the entire site.

Look up	Description	Default Value
EGO_UCCNET_DATA_SOUR RCE_GLN <ul style="list-style-type: none"> • GLN • Name 	<p>This lookup allows you to enter the Information provider GLN number and name.</p> <p>Important: To specify the GLN and the name of the Information Provider, you need to update a lookup:</p> <p>LOOKUP_TYPE = EGO_UCCNET_DATA_SOUR RCE_GLN</p> <p>LOOKUP_CODE = GLN</p> <p>Meaning = <i>Actual GLN</i></p> <p>LOOKUP_CODE = NAME</p> <p>Meaning = <i>Actual Name</i></p>	Null

Setting Up a GDSN Catalog

There are two GDSN catalogs:

- GDSN Syndication – UDEX
- GDSN Syndication – GPC

For details on creating catalogs, see the Defining Catalogs section.

You can then use the Import from Excel Item Catalog Category assignments functionality to mass assign items/GTINs to a GDSN Catalog.

GDSN Syndication – UDEX

You must associate the UDEX catalog to this functional area. You also must associate the UDEX category to an item in order to register an item with 1SYNC.

GDSN Syndication – UDEX is similar to other functional area default catalogs that exist in the Oracle E-Business Suite. For example, the inventory and purchasing catalogs are similar. When you associate an item/GTIN to a GDSN syndicated functional area, the item/GTIN gets assigned to a default catalog associated with the GDSN Syndication - UDEX.

You can associate an existing catalog to this functional area or you can create a new catalog and associate it.

1SYNC data pool requires use of the UDEX catalog as its item/GTIN classification. For example, to communicate with the 1SYNC data pool, you can create the GDSN catalog - UDEX using the UDEX catalog category taxonomy. The UDEX category follows a 3 segment flex structure.

You can set up the entire UDEX catalog in the GDSN catalog or just set up certain categories that you need for your business requirements. For example, Safety/Security & Surveillance/Survival has two subcategories: Security Other, and Fire/Chemical Safety products. If the company makes locks and does not make any fire or chemical safety products, then the catalog administrator can set up only one child category as Security Other.

GDSN Syndication Functional Area

The screenshot shows the Oracle Item Catalog Administration web interface. The top navigation bar includes links for Home, Logout, Preferences, Help, and Diagnostics. Below this is a menu with tabs: Items, Documents, Structures, Change Management, Security, Functions, Catalogs, and Value Sets. The 'Catalogs' tab is selected, and a sub-menu on the left shows 'Default Catalogs' as the active option. The main content area is titled 'Default Catalogs' and features a table with three columns: Functional Area, Description, and Catalog. The table lists various functional areas and their associated category sets and catalogs. At the top right of the table, there is a pagination control showing '1-20 of 21' and a 'Next 1' link. An 'Update' button is located at the top right of the table area.

Functional Area	Description	Catalog
Inventory	Inventory Category Set	Inv.Items
Purchasing	Purchasing Category Set	Purchasing
Planning	Inventory Category Set	Inv.Items
Service	Inventory Category Set	Inv.Items
Cost	Inventory Category Set	Inv.Items
Engineering	Inventory Category Set	Inv.Items
Order Entry	Inventory Category Set	Inv.Items
Product Line Accounting	Inventory Category Set	Inventory
Asset Management	Enterprise Asset Management Category Set	Enterprise Asset Management
Contracts	Category Set for Contract Item Categories	Contracts
Product Reporting	Product Category	Product
GDSN Syndication - UDEX	UDEX Catalog	UDEX Catalog
GDSN Syndication - GPC		

GDSN Syndication – GPC

You must associate the GPC catalog to this functional area. This is mandatory if the supplier synchronizes data with a retailer who is connected to the GDSN network. If the supplier and retailer use 1SYNC as their data pool, then the UDEX Category is sufficient. The GPC catalog is in addition to GDSN Syndications - UDEX.

GPC works by defining a hierarchy, starting by industry sector or segments. The foundation of GPC is the Brick which defines categories of like products. Bricks can be further characterized by Brick attributes.

You can associate an existing catalog to this functional area or you can create a new catalog and associate it.

Similar to UDEX, you can set up the entire GPC catalog and associate it to GDSN Syndication – GPC or set up only the categories that are needed to meet your business requirements.

Example

The Food/Beverage/Tobacco category includes two types of cookies. You must define the following brick codes/categories for the cookies:

- Chocolate: 30000641
- Gingerbread: 30006738

There is no need to set up additional brick codes within the Food/Beverage/Tobacco category.

Setting up GDSN Attributes

Oracle Product Data Synchronization seeds 150+ GDSN attributes in various GDSN Attribute Groups. GDSN attribute groups are similar to the existing User-defined attribute group functionality.

List of seeded GDSN Attributes

Select All Select None							
Select	Display Name /	Internal Name	Description	Attribute Group Type	Multi-Row	Database View	Edit
<input type="checkbox"/>	Bar Code	Bar_Code	UCCnet: Bar Code	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Country Of Origin	Country_Of_Origin	UCCnet: Country Of Origin	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Date Information	Date_Information	UCCnet: Date Information	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Delivery Method Indicator	Delivery_Method_Indicator	UCCnet: Delivery Method Indicator	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	FMCG Identification	FMCG_Identification	UCCnet: FMCG Identification	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	FMCG Marking	FMCG_MARKING	UCCnet: FMCG MARKING	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	FMCG Measurements	FMCG_Measurements	UCCnet: FMCG Measurements	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	GTIN Color Description	Gtin_Color_Description	UCCnet: GTIN Color Description	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Handling Information	Handling_Information	UCCnet: Handling Information	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Handling Instructions	Handling_Information	UCCnet: Handling Instructions	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Hazardous Information	Hazardous_Information	UCCnet: Hazardous Information	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Manufacturing Information	Manufacturing_Info	UCCnet: Manufacturing Information	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Material Safety Data	Material_Safety_Data	UCCnet: Material Safety Data	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Order Information	Order_Information	UCCnet: Order Information	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Packaging Marking	Packaging_Marking	UCCnet: Packaging Marking	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Price Date Information	Price_Date_Information	UCCnet: Price Date Information	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Price On Trade Item	Price_Information	UCCnet: Price On Trade Item	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Size Description	Size_Description	UCCnet: Size Description	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Size Description	Uccnet_Size_Description	UCCnet: Size Description for the Item	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Temperature Information	Temperature_Information	UCCnet: Temperature Information	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Trade Item Description	Trade_Item_Description	UCCnet: Trade Item Description	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Trade Item Harmonized System Identification	TRADE_ITEM_HARMN_SYS_IDENT	UCCnet: Trade Item Harmonized System Identification	Item GTIN Multi Row Attributes	Yes		
<input type="checkbox"/>	Trade Item Hierarchy	Trade_Item_Hierarchy	UCCnet: Trade Item Hierarchy	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Trade Item Marking	Trade_Item_Marking	UCCnet: Trade Item Marking	Item GTIN Single Row Attributes	No		
<input type="checkbox"/>	Trade Item Measurements	Trade_Item_Measurements	UCCnet: Trade Item Measurements	Item GTIN Single Row Attributes	No		
Select Object: <input type="button" value="Generate Database View"/> <input type="button" value="Delete"/> Previous 1-25 Next 25							

You can customize these GDSN Attributes within the GDSN attribute groups. For example –

- You can create value sets and associate it to the attribute as appropriate. For example if you have few selected brand names, you can create a value set for the brand names and associated to the Brand Name attribute.
- Certain Value sets are seeded. For example EANUCC type. If you only use certain types you can customize the value set by disabling the not required ones.

- You can specify default values for any attribute.
- You can disable these GDSN attributes. For example, Drained Weight is an attribute in the Trade Item Measurements attribute group. Drained weight is not a mandatory GDSN attribute and may not be needed for a company in the Hardlines business.

Customer GDSN Attribute

Edit Attribute

* Indicates required field

Internal Name: **Drained_Weight**

* Display Name:

* Sequence:

Tip:

Data Type: **Number**

Column: **DRAINED_WEIGHT**

☒ Enabled

☐ Required

Display as: **Text Field**

☐ Indexed

Unit of Measure

Unit of Measure Class:

Value Set

Value Set Name:

Default Value

Default Value:

Following are some of the GDSN attribute setups you might want to evaluate per your business needs. You need to set up UOMS for these attributes before you can start entering the values. If you have already entered a value for these attributes, you may not be able to set a UOM. In such cases, clear the values for those attributes (for all the items), and then set up the UOM.

Attribute Group	Attribute Name	Unit of Measure Class
Trade Item Measurements	Diameter	Length
Trade Item Measurements	Gross Weight	Weight
Trade Item Measurements	Drained Weight	Weight
Trade Item Measurements	Peg Horizontal	Length
Trade Item Measurements	Peg Vertical	Length
Order Information	Order Lead Time	Time

Handling Information	Maximum Stacking Weight	Weight
Hardlines Industry	Pieces Per Trade Item	CNT
Hardlines Industry	Nesting Increment	CNT

Setup of Value sets for the following attributes:

Attribute Group	Attribute
Trade Item Description	Coupon Family Code
Trade Item Measurements	Net Content Value – Net content Unit of Measure
GTIN Color Description	Color Code Description
GTIN Color Description	Color Code List Agency
Size Description	Size Code List Agency
Size Description	Size Code Value
Handling Information	Handling Instructions Code
Hazardous Information	Class Of Dangerous Code
Hazardous Information	Dangerous Goods Hazardous Code
Hazardous Information	Dangerous Goods Regulation Code
Hazardous Information	Dangerous Goods Packaging Group
Trade Item Harmonized System Identification	Harmonized Tariff System Identification Code

PDS supports hardlines and FMCG industry extensions. These industry extension attributes are not associated to the Item Catalog Category when the EGO GDSN ENABLED profile option is changed to yes. You need to associate these attributes to the Item Catalog category and then create or update the existing page to display the hardlines or the FMCG attributes.

Setting Up Packaging Structure

Oracle seeds Packaging BOM as the structure type. Packaging configuration that is created for this structure type is being sent to GDSN data pool as part of the publication message. You can create Structure name for the Packaging Hierarchy for this structure type.

User can use this structure type and structure name to create their packaging configurations.

For more information about structure type and structure names, see the Defining Item Structures section.

Setting up GTIN Number Generation

The Global Trade Item Number (GTIN) encompasses existing UPC and EAN identifiers, uniquely identifying all levels of the product hierarchy and delivering data in a consistent format and structure. The GTIN is a 14-digit number that contains information about your company and item, as well as how it is packaged.

Oracle Product Data Synchronization provides the ability to automatically generate and assign GTIN to your product depending on the user-defined function or allow users to enter by providing free form number field.

Depending upon your User-defined functions, the product classification or attributes like UPC or EAN codes can be set as function input parameters.

Oracle validates the GTIN check digit, during GTIN creation process.

GTIN Number Generation

GTIN Numbering

Function Generated

Function Generated

User Entered

Go

Generation Function

Indicates required field

Function

GTIN Number Generatic

Mappings For Function

Function Parameter	Attribute Group	Attribute
Parameter1	GTIN Attributes	Company Prefix
Parameter2	GTIN Attributes	Bar Code

Setting up GLN for Customers

GLN is the Global Location Number that is assigned to a company for any of its physical locations. GLN is 13-digit number with last digit being a check digit. Oracle allows you to assign GLN numbers to each customer addresses using Customer Online screens.

Setting Up GLN

ORACLE[®] Customers Online

Home Logout Preferences Help

Home Customers Reports Data Quality Import

Organizations | Persons | Hierarchies

Customers Organizations Addresses >

Home Depot Inc.: Update Address

* Indicates required field

* Country: United States

* Address1: 1560 Francisco Blvd.

Address2:

Address3:

Address4:

City: San Rafael

State: CA

Postal Code: 94913

Global Location Number:

Status: Active

☒ Identifying Address

Cancel Apply

Global Location Number is not displayed by default, as it is primarily used for the purpose of Product Data Synchronization. Using personalization framework you can display the field.

Note: If the Global Location Number field doesn't appear on the update customer address screen, then please use OA personalization option to display it.

To display Global Location Number:

1. Using system administrator responsibility set the profile option "Personalize Self-Service Defn" to Yes.
2. Login using your user id and navigate to profile option and set the "FND: Personalization Region Link Enabled" to Yes.
3. Navigate to the Customer Update Address screen page for any customer using Customer Online Super User responsibility.
4. Click the personalize region link next to the country list of values attribute.
5. On the Choose Personalization Context page accept the default values for the fields and click apply.
6. In the Personalization Structure section, click the personalize icon for "RowLayout: (glnRowLayout)"
7. In the Personalize properties section, for Rendered row, change the site setting to true. (Notice: Original Definition is set to False).
8. Click Apply to save the changes

Managing Global Trade Item Number Information

Important: To use these features except GTIN Cross References, you must have licensed Oracle Product Data Synchronization for GDSN and 1SYNC Services. You must also set the "EGO GDSN Enabled" profile option to "Yes."

Any item in your item catalog can be enabled for GDSN syndication by assigning it to the catalog associated with the GDSN Syndication Functional Area. Once an Item is classified as GDSN Syndicated, GDSN attributes are displayed and you can begin defining GDSN attributes.

To create an item for GDSN syndication:

1. On the create Item page, select Item Catalog Category or existing Item.
2. Select GDSN syndicated
3. On the Create Item: Enter Item/Description page, select Trade Item Unit Descriptor.
4. Add or copy GDSN attributes in the copy step.
5. In the Review Item information, view and update GDSN attributes.
6. In the Categories sub tab, view default GDSN Catalog and category assignments. You can update the category assignment, but cannot delete the GDSN Catalog assignment.
7. In the Association sub tab, add GTIN Cross-References. See: *Managing GTIN Cross-References, Oracle Product Lifecycle Management User's Guide* or *Oracle Product Information Management Distribution Librarian User's Guide*

Note: The GDSN Syndicated flag applies only when the Item you are creating is an approved Item and doesn't require a New Item Request approval.

The GDSN Syndicated flag does not apply when creating multiple Items.

To enable an existing Item for GDSN syndication:

1. Find the item that you want to enable for GDSN syndication.
2. On the Item's overview page, click the Classification and Categories tab.

3. Check whether the item has been already enabled.
4. Click Update
5. On selecting the GDSN Syndicated check box, the categories assignments region gets refreshed with GDSN Catalog and default category assignment.
6. You can update the category assignment, however you cannot delete the GDSN Catalog assignment.
7. Adding a GDSN Catalog Category assignment automatically selects the GDSN Syndicated checkbox.
8. Click Apply to save your changes.

Note: Once you enable an Item for GDSN Syndication, you cannot remove it. You cannot clear the GDSN Syndication, nor delete the GDSN Catalog Category assignment. You can update the GDSN Catalog category assignments to a new GDSN category.

Import of Item Catalog Category assignments to the GDSN Catalog using Microsoft Excel automatically enables Items for GDSN Syndication.

Oracle 1SYNC Registry Messages

Global Registry is a repository for registry messages. Oracle Messages for 1SYNC Registry offers a bundle of pre-configured, certified 1SYNC XML messages to support Supplier and Retailer data synchronization, along with message management tools to give customers a 360 degree overview of the electronic exchange. These messages allow subscribers to register item attribute information as well as send and receive requests and notifications. XML Gateway, in conjunction with the Workflow business event system (WF BES) is used to generate the messages based on the user initiated actions. Specific XML Gateway maps are built for each of the 1SYNC specified XML messages which are then used to communicate with 1SYNC registry. 1SYNC also provides XML schema definitions to allow validation of the XML messages , prior to their propagation to 1SYNC for the necessary action.

Oracle Messages For 1SYNC Registry is tightly integrated with Oracle Advance Product Catalog. Advance Product Catalog is the base application that stores item information by GTIN, and GTIN hierarchy that mimics 1SYNC data structure, for manufacturing and retail companies. Advance Product Catalog is the initiation point for the Registry messages if the customers are Suppliers.

Important: For details on implementing Oracle 1SYNC Registry

Messages, see *Oracle Applications Installation Guide*.

The following pre-built XML messages are used in the supply-side functionality in 1SYNC

- Register Catalog Item Registry (RCIR)
- Catalog Item Notification (CIN)
- Query Worklist Messages

Register Catalog Item Registry

Register Catalog Item Registry (RCIR) messages add products to the 1SYNC data pool. It updates the brand owner registry if it is the first occurrence. Possible actions are add, change, correct, and delete. Using RCIR, items can be registered in synchronous or asynchronous modes. When a single message is sent to the registry, the 1SYNC registry response is in the synchronous mode. However, when multiple messages (batch mode) are sent, only an acknowledgement is received from the 1SYNC registry synchronously. To obtain processing details of the batch, the query message transaction is initiated.

Catalog Item Notification

Catalog Item Notification (CIN) messages are delivered to the recipient. Since each CIN is targeted to a single recipient, CIN allows individual values of the product. It includes extensions as well as industry specific attributes like those for hardlines, FMCG etc. Possible actions for CIN are add, change, correct, delete, and withdraw.

Query Worklist Messages

Query messages are used to retrieve information from the GLOBALRegistry or notifications received from trading partners/recipients. XML schema messages are used to transmit the query request. The different query messages used are RCIR in batch mode, Request For Catalog Item Notification (RFCIN), and CIC. Besides, GTIN query is also used.

RCIR in batch mode is used to collect the processing status for asynchronous messages back from registry.

RFCIN is an XML message request for information pertaining to an item. A 1SYNC recipient trading partner (commonly a retailer) who wants to examine the attributes of an item that has been published in the GDSN (Global Data Synchronization Network), but does not yet want to set up a permanent subscription, sends an RFCIN to request a one-time publication of item information from a source trading partner (commonly a supplier) within the GDSN. The GTINs (Global Trade Item Numbers) included in the RFCIN would have been registered in the 1SYNC Data Pool (called 'GS1 USA') and the

GS1 Global Registry. The recipient trading partner sends an RFCIN to the 1SYNC Data Pool. Item data can be requested for one or more of the following criteria:

- GTIN
- Category
- Target Market
- Global Location Number (GLN)

The 1SYNC Data Pool receives the RFCIN information, and forwards a copy to the source trading partner. In case the supply trading partner uses a different data pool, 1SYNC Data Pool submits the RFCIN message to the GS1 Global Registry. In response to an RFCIN, the source trading partner submits a Catalogue Item Notification (CIN) to 1SYNC. CIN contains Item attribute details, including those of industry extensions. 1SYNC receives the CIN document and sends it to the recipient trading partner's Worklist. For the first thirty-day period after submission of the RFCIN message, the recipient trading partner will receive item information including changes and/or corrections to the items. If the recipient submits a "Reject" confirmation action prior to the expiration of the thirty-day period, changes to the item data will no longer be received. If no action is taken within the thirty-day period, the recipient trading partner will continue to receive the requested Catalogue Item data, even after the thirty-day period has ended, unless a Catalogue Item Confirmation (CIC) message with an action of "Reject" is submitted in response to the CIN. It is the recommended practice for recipient trading partners to submit a CIC message as soon as they decide on the confirmation action they want to take viz. Accepted, Synchronized, Rejected, or Review. The GS1 Global Registry validates the message, determines the Source Data Pool to route the message to, and delivers the message appropriately.

GTIN Query retrieves the elements defining the GTIN from the 1SYNC registry.

Support 1SYNC Supplier Synchronization Suite

The initial release of Oracle Messages for 1SYNC Registry offers the entire Supplier Synchronization Suite. Oracle customers who are suppliers or manufacturers use the entire Synchronization Suite to send item information to 1SYNC or to retrieve synchronization feedback from their trading partners. Oracle Messages for 1SYNC Registry is certified on the 3.0 version of Supplier Synchronization Suite.

The following figure shows the components for 1SYNC integration for suppliers. Oracle Messages for 1SYNC Registry and Supply Chain Trading Connector are the messaging components of the integration. 10g PartnerConnect provides the AS2 protocol to transport Registry messages to 1SYNC and to receive Registry messages from 1SYNC.

The following provides further details on the 1SYNC Supplier Synchronization Suite:

- Register Catalogue Item Registry (RCIR) message is the message for registering an

item in Registry or updating core attributes of a registered item. Add, Change and Modify features are supported for this message.

- Catalogue Information Notification (CIN) message is a notification from manufacturers/suppliers to their Trading Partners to notify them of new item registration (GTIN) or item information change.
- Catalogue Item Confirmation (CIC) message is the message returned by the Trading Partner in response to a CIN.
- Request for Catalogue Information Notification (RFCIN) is the message sent by a trading partner to a Supplier to request a CIN for specific GTINs.
- Direct Store Delivery
- Market Group Linking
- Hardline Industry Extension support, other industry extensions are in consideration for future release.

Supply Chain Trading Connector

In addition to the registry messages, Oracle Messages for 1SYNC Registry uses a monitoring/auditing tool called Supply Chain Trading Connector. This tool sits outside of XML Gateway, monitors and audits all incoming and outgoing 1SYNC messages for Oracle E-Business Suite. Two features of the tool Collaboration History and Notification Processing are used by the Oracle Messages for Registry product. Each message exchange is defined as a collaboration in this tool, and is modeled by pre-seeded events and shown as detailed steps in the Collaboration History. When an exception occurs due to message failure or data validation, exception reports are initiated by Notification Processing to notify the Business Users of errors.

The Supply Chain Trading Connector is integrated to provide a comprehensive view of the information and the exchange of the messages. From the Item page, you can view the Collaboration status or jump to the Collaboration History to view the detailed information of that Collaboration. From the Collaboration History screen, a Business User can view the item history after viewing the detailed Collaboration information by displaying the item information page.

Note: For details on Supply Chain Trading Connector, see the *Oracle Supply Chain Trading Connector Implementation Guide*.

Collaboration History

Due to the nature of B2B standards, it is often difficult for business end users to understand the status of their trading activity. They often approve something that they

know is sent to a trading partner but do not know the status. It is a complicated issue due to the number of messages and acknowledgements sometimes exchanged, as well as, the number of software components that processed the messages for a specific collaboration.

The Collaboration History addresses this challenge by tracking all the events and messages exchanged during a collaboration and making it available to the business end user for inquiry. Using Collaboration History you can track all the messages exchanged, any detailed information including exceptions, and the XML Payloads where available.

Major Features of Collaboration History

- Records all key processing events of a unique collaboration or PIP from the initial event or message, receipt or send, to the final message including any exceptions issued by the trading partner or the B2B Gateway in use.
- Enables users to search history by business document number, date, status, document owner, or trading partner
- Permits you to re initiate a collaboration or PIP if allowed by the collaboration
- Enables users to view the XML Payloads associated with a particular collaboration
- Provides Workflow events to create, update, and add details collaboration history for use when implementing a collaboration

Note: For further details on Collaboration History, see *Oracle Supply Chain Trading Connector Implementation Guide*

Notification Processing

The major features of Notification Processing are:

- To capture notification messages from sources outside the applications such as a B2B Gateway or Trading partner.
- To capture Exceptions generated by the XML Gateways
- To record notifications in Collaboration History
- To perform actions based on the Notification settings. Valid actions are:
 - Call API
 - Notify Document Owner
 - Notify Trading Partner

- Notify Administrator
 - Raise Business Event
 - Start Workflow
- To provide predefined Notification Actions for all supported Collaborations.
 - To permit configuration of the predefined Notifications to fit your business requirements.
 - The ability to establish Notification Actions for new Collaborations defined in Collaboration History.

Notification Processing is organized into Notification Types, Notifications and Notification Actions. Notifications are raised to represent the success, exception or error at predefined points within a Collaboration. A Notification can be classified as one of 3 types based upon the Notification Source that raised it: Application, XML Gateway or B2B Gateway. A Notification Action defines the action to be taken at a predefined point within a Collaboration based upon the Notification raised.

Notification Actions

A Notification Action has the following characteristics:

- A Collaboration is an occasion where messages are communicated between an enterprise using the Oracle E-Business Suite and a trading partner usually using the internet, or, between an E-Business Suite application and another application. Collaborations represent business processes such as an Order, Change Order, Forecast, or Work in Process action.
- An Application that owns the collaboration. For example Purchasing or Order Management.
- A Notification Source, which describes the software component generating the Notification.
- A Notification to describe the success, error, or warning.

Important: All Notification Actions required for Supply Chain Trading Connector supported Collaborations have been pre-configured. All pre-configured Notification Actions that handle error conditions are pre-configured with the default action of notifying the Administrator. It is expected that additional business rules are specified, using the Notification Processing system, such as initiating a workflow to place an inbound Purchase Order on hold when, for example, a Trading Partner Identification Error is encountered in a given Collaboration

To create new notifications:

After first determining the messages you plan to receive in the new collaboration, you need to define any new Notifications that are required and finally you define the Notification Actions to be performed when these Notifications are raised for the new Collaboration.

1. Navigate to the **Notification Definition** window.
2. Click **Create Definition**.
3. Choose a Notification Source from the drop-down list.
4. Enter the Notification. This is programmatic value or code that you system passes to representing the notification.
5. Enter Description. This is a textual description of what the Notification means.
6. Click **Apply**..

Note: For further details on Notification Processing, see *Oracle Supply Chain Trading Connector Implementation Guide*

Publish the Registered Information to Trading Partners

Users can register items in 1SYNC and publish the item to trading partners. Using Product Data Synchronization for GDSN and 1SYNC Services, you can publish Item-GTIN information to customers to inform them of:

- New Item-GTINs being offered
- Changes to existing Item-GTINs
- Withdrawal of Item-GTINs from a specific customer, or delisting of Item-GTINs from the market.

Product Data Synchronization for GDSN and 1SYNC Services is an efficient platform for all Item-GTIN publication processing and messaging, allowing you to:

- Find all new or updated Item-GTINs that need to be published to customers
- Track publication event history, with transaction disposition, for each Item-GTIN customer combination

Product Data Synchronization for GDSN and 1SYNC Services allows you to publish a single Item-GTIN, or multiple Item-GTINs in a batch. Upon 'Publication', a CIN message is sent to your customer for each Item-GTIN via a GDSN data pool. Your

customer can review each message, and decide whether to 'Accept', 'Reject', 'Synchronize' or 'Review' the Item-GTIN. The customer's response is returned via a confirming CIC message, and is stored in your work list on the GDSN data pool. These global registry messages are transferred from the data pool to Product Data Synchronization for GDSN and 1SYNC Services, where the message content and disposition status can be viewed for each Item-GTIN customer combination. Disposition statuses are:

- Processed
- Failed
- Customer-Accepted
- Customer-Rejected
- Customer-Review
- Customer-Synchronized

Note: You will need Publication Management function security, View Item privilege, and View Customer Item cross-reference privilege in the Master Organization to perform the following actions on an Item-GTIN for a customer:

- Initial load
- Publish
- Withdraw

You must set up customer subscriptions for each Item-GTIN before you begin the publication process. The publication status for a customer indicates whether the Item-GTIN requires publication. The publication validation status on the GDSN Attribute pages and syndication page indicates whether the Item-GTIN packaging hierarchy is compliant for publication.

Note: Always publish from the top Item-GTIN of a valid packaging hierarchy to a customer, as the entire packaging hierarchy must be included in the CIN message.

A valid packaging hierarchy has these attributes:

- Contains at least one consumable and one orderable GTIN
- Is not a component in a another packaging hierarchy

- Contains only components with positive integer quantities
- Has a base unit of measure assigned for the primary unit of measure

To publish an Item-GTIN to customers:

1. From the top Item-GTIN page, navigate to the Customer Syndication page. This page displays the list of customers to whom you have already published or plan to publish the Item-GTIN packaging hierarchy.

Note: For details about creating and maintaining customer syndication, see "Managing Customer Syndication".

2. For each customer, there is a publication status and a corresponding disposition status. From the Publication status, you can determine which customers the Item-GTIN has not been published to, or requires re-publication. Publication statuses are:

- Published
- Not Published
- Re-publication Needed
- Publication In Progress
- Withdrawn
- Delisted
- Rejected

Note: You cannot publish information to customers to whom you have previously published that information if no new GDSN attribute changes have occurred since your last publication.

3. Click the Publish action icon to publish the Item-GTIN to a customer. On the Publish Items page, you can view the entire packaging hierarchy and the list of customers for each packaging hierarchy.
4. You can review the name and GLN of the data pool to which the Item is being published, as well as the customer's name, address and GLN.
5. After you submit the Item-GTIN for publication, a CIN message is sent for each customer that the Item-GTIN is being published to. A message group id is

generated to track all Item-GTIN publication messages sent in this transaction.

6. The Disposition status for each message is updated with the response that is received from the customer via the data pool.

Note: If a customer rejects an Item-GTIN publication, Product Data Synchronization for GDSN and 1SYNC Services will not allow you to re-publish the Item-GTIN to the same customer.

Note: A first time publication message to a customer is sent with a 'New Item' or an 'Initial Load' action. Subsequent re-publication messages are sent with a 'Data Change' action. Product Data Synchronization for GDSN and 1SYNC Services automatically derives these actions.

Note: When you update the Item-GDSN attributes for a published Item, its publication status is automatically changed to 'Re-publication Needed' for all customers. However, if you update a customer-specific Item-GDSN attribute, then the publication status is automatically changed to 'Re-publication Needed' for that particular customer only.

To withdraw an Item-GTIN from a customer:

The withdraw action allows you to temporarily discontinue an Item-GTIN synchronization process with one or more customers. Once you have successfully withdrawn the top Item-GTIN from a customer, the Item-GTIN is not published to the customer until you explicitly re-publish the Item-GTIN to this customer.

Note: You can only withdraw Item-GTINS whose publication status is 'Published' and disposition status is 'Not Rejected'.

1. From the top Item-GTIN page, navigate to the Customer Syndication page. This page displays the list of customers to whom you have already published or plan to publish the Item-GTIN packaging hierarchy.
2. For the customers that you have already published to, select those from which you want to withdraw the Item-GTIN, and click Withdraw.
3. The Withdraw from Customers page allows you to view the entire Item-GTIN packaging hierarchy and the customers from whom you are withdrawing the Item-GTIN.

4. A CIN message is sent to each customer from whom the Item-GTIN is being withdrawn. A message group id is generated to track all messages sent in this transaction

To delist an Item-GTIN from customers:

The delist action permanently discontinues the synchronization process with all customers for this Item-GTIN. Once you successfully delist the top Item-GTIN, Product Data Synchronization for GDSN and 1SYNC Services does not allow you to publish this Item-GTIN to any customer.

Note: You can only delist the Item-GTINS whose publication status is published and disposition status is not rejected.

1. From the top Item-GTIN page, navigate to the Customer Syndication page. This page displays the list of customers to whom you have already published or plan to publish the Item-GTIN packaging hierarchy.
2. Click Delist from the customer syndication page.
3. All customers to whom the Item-GTIN was previously published will be delisted.
4. A CIN message is sent to each customer from whom the Item-GTIN is being delisted. A message group id is generated to track all messages sent in this transaction.

To publish multiple Item-GTINS to customers:

The publication workbench allows you to view multiple Item-GTINS for a customer. Similar to the registration workbench, you can search for Item-GTINS that are associated with the customer.

Note: You can only search for top Item-GTINS in the publication workbench.

You can Publish, Withdraw, and Delist Item-GTINS from this workbench. These actions are described in the section To publish an Item-GTIN to customers, page 12-21.

1. On the Publication Management page, select the Item-GTINS you want to publish and click Publish.
2. On the Publish to Customers page, a list of all the top Item-GTINS you have selected is displayed with its entire packaging hierarchy.
3. Review the list of customers per each Item-GTIN packaging hierarchy.

You can also select Item-GTINS for Withdraw and Delist.

On the publication workbench, you can select top Item-GTINs and click Check Data Validation to see whether the Item-GTIN packaging hierarchy you plan to publish is compliant.

To publish an Item-GTIN to customers with Initial load action:

If a supplier who has recently joined a data pool, such as 1SYNC, wants to establish item synchronization with an existing Demand Side customer through the data pool, they can use the Initial Item load publication to synchronize data for items currently being traded between the two organizations.

1. On the Publication Management page, find the Items you want to publish.
2. Select the Items you want to publish with the Initial load action, click Initial load.
3. On the Publish (Initial Load) to Customers page, a list of all the top Item-GTINS you selected is displayed with their packaging hierarchy.
4. Review the list of customers for each Item-GTIN packaging hierarchy.

Note: Initial load action is only performed for the first time publication with the customer.

Related Topics

Managing the Packaging Hierarchy, *Oracle Product Lifecycle Management User's Guide*

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 //engchgmt.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(ENGCRRT)	Contains activities, attributes, notifications, and processes used by Change Approval Routing Process	\$ENG_TOP/patch/115/import //engchmgt.wft
Change Workflow Routing Step(ENGCRSTEP)	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 (ENGCRRT)

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 (ENGCSSTEP)

Process Internal Name	Process Display Name	Description
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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_DEFINITION_APPROVAL	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 attribute 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_N OTICE	Change Number	Engineering Change Number	Text	30	Old Primary Key Values
CHANGE_N AME	Change Name	Engineering Change Name	Text	240	Token replacement for messages.
ORGANIZAT ION_ID	Organization Id	Organization Id	Number		Old Primary Key Values
ORGANIZAT ION_CODE	Organization Code	Organization Code	Text	3	Token replacement for messages.

CHANGE_M ANAGEMENT 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_C OMPANY	Assignee Company	Assignee Company	Text	360	Token replacement for messages.
WF_USER_R OLE	WF Owner User Role	Role of Person Who Started the Workflow	Role		Runtime information for the work item
WF_USER_I D	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/c abo/styles/bla f.cssTempora ry 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_CHAN GE_ACTION S.ACTION_I D) Runtime information for the work item
ADHOC_P ARTY_LIST	Adhoc Party List	Adhoc Party List	Text	Runtime information for the work item
ADHOC_P ARTY_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
ATTACHME NTS	Attachments	Attachments	Document	Temporary placeholders for notifications: Notification Detail Page Attachment LinkFND:enti ty==

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: SYSADMINF or WFERROR: DEFAULT_ERROR (Default Error Process.)
WF_SIGNATURE_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 StartWorkflow 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_STATUSES	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===
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ENGCRRT 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_POPLE_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

ENGCRSTEP Specific Item Attributes

Internal Name	Display Name	Description	Type	Length	Misc info (used for etc)
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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_PEO PLE_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_N UM	Workflow Routing Step Sequence Number	Workflow Routing Step Sequence Number	Number		Temporary placeholders for notifications
STEP_PEOPL E_ROLE	Workflow Routing Step People Role	Workflow Routing Step People Role	Role		Temporary placeholders for notifications
STEP_COND ITION	Workflow Routing Step Activity Condition	Workflow Routing Step Activity Condition	Text	30	Temporary placeholders for notifications
STEP_VOTIN G_OPTION	Workflow Routing Step Voting Option for Activity Condition	Workflow Routing Step Voting Option for Activity Condition	Lookup		Standard Voting Option
YES_RESPO NSE_PERCE NT	Yes Response Percentage of Votes	Yes Response Percentage of Votes	Number		Temporary placeholders for notifications

NO_RESPON SE_PERCEN T	No Response Percentage of Votes	No Response Percentage of Votes	Number	Temporary placeholders for notifications
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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_WORKFLOW_ EXT	ENGXWKFS.pls ENGXWKFB.pls	<p>This package contains procedures that serve as "hooks" into the Eng Workflows for customization of the workflows.</p> <p>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.</p> <p>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.</p> <p>Additionally, users can create new procedures in this package for custom workflow activities.</p>	\$ENG_TOP/patch/115 /sql
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Item Business Events

This appendix covers the following topics:

- Business Events

Business Events

Using Oracle Workflow, you can automatically trigger actions based on the following item business events. Examples of actions you can trigger include issuing notifications and launching a workflow.

The following table lists item and item revision events, as well as a description and the event parameters of each event.

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.postCatalogCategoryChange	<p>Catalog category is changed such as when categories are created, updated or deleted</p> <p>Applicable: SSWA, FORMS</p>	<p>DML_TYPE: CREATE, UPDATE, DELETE</p> <p>CATEGORY_NAME: Category Name</p> <p>CATEGORY_ID: Category ID</p>
oracle.apps.ego.item.postValidCategoryChange	<p>Category is added to or is removed from a catalog.</p> <p>This event is also raised when the attributes of catalog are changed.</p> <p>Applicable: SSWA, FORMS</p>	<p>DML_TYPE: CREATE, UPDATE, DELETE</p> <p>CATEGORY_SET_ID: Category Set ID</p> <p>CATEGORY_ID: Category ID</p>
oracle.apps.ego.item.postItemCreate	<p>Item Creation</p> <p>Applicable: SSWA, FORMS, API</p>	<p>INVENTORY_ITEM_ID: Item ID</p> <p>ITEM_NUMBER: Item ID</p> <p>ORGANIZATION_ID: Organization ID</p> <p>ORGANIZATION_CODE: Organization Code</p> <p>ITEM_DESCRIPTION: Item Description</p>
oracle.apps.ego.item.postItemUpdate	<p>Item Update</p> <p>Applicable: SSWA, FORMS, API</p>	<p>INVENTORY_ITEM_ID: Item ID</p> <p>ITEM_NUMBER: Item ID</p> <p>ORGANIZATION_ID: Organization ID</p> <p>ORGANIZATION_CODE: Organization Code</p> <p>ITEM_DESCRIPTION: Item Description</p>

Event Name	Event Description	Event Parameter Names and Descriptions
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
oracle.apps.ego.item.postItemApproved	On Item Approval Applicable: SSWA	INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID
oracle.apps.ego.item.postItemBulkload	Bulk Item processing (creation, update) Applicable: XL import, IOI	REQUEST_ID: Concurrent Request ID that processed the bulk item import
oracle.apps.ego.item.postXrefChange	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

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.postRevisionChange	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
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.item.postCatalogAssignmentChange	Item Catalog assignment or removal Applicable: SSWA, FORMS, IOI	DML_TYPE: CREATE, UPDATE, DELETE INVENTORY_ITEM_ID: Item ID ORGANIZATION_ID: Organization ID CATALOG_ID: Catalog ID CATEGORY_ID: Category ID REQUEST_ID: Concurrent Request ID

Event Name	Event Description	Event Parameter Names and Descriptions
oracle.apps.ego.item.preAttributeChange	Item Attribute group row is created, updated, or deleted.	DML_TYPE: CREATE, UPDATE, DELETE
	This event is raised before the change is committed.	ATTR_GRP_NAME: Attribute Group Name
	Applicable: SSWA	EXTENSION_ID: Extension ID that uniquely identifies the record in the UDA extension table
		INVENTORY_ITEM_ID: Item ID
oracle.apps.ego.item.postAttributeChange	Item Attribute group row is created, updated, or deleted.	ORGANIZATION_ID: Organization ID
	This event is raised after the change is committed.	REVISION_ID: Revision ID
	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

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.

Event Parameter Name	Description
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 Lifecycle Management User's Guide* or *Oracle Product Information Management User's Guide*

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).

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_DESCRPTIVE_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_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.DESCRPTION_DEFAULT :=
l_current_mapping_rec.DESCRPTION_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;
```

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

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