Oracle Fusion Cloud SCM

Using Product Master Data Management

25A

Oracle Fusion Cloud SCM
Using Product Master Data Management

25A

G17770-01

Copyright © 2011, 2025, Oracle and/or its affiliates.

Author: Shruthi Bollamma, Mark Sawtelle, Lisa Brown, Venkat Karthik, Dhruba Jyoti Pokhrel

Contents

Get Help i

1 Overview of Product Management 1

How You Use the Product Information Management Work Area 1
Overview of the Product Information Management Work Area 2
How You Use and Personalize Infolets in Oracle Fusion Cloud SCM and Procurement 3
What You Can Do in Product Master Data Management 4
Manage Worklist from the Product Information Management Work Area 7

2 Item Creation 9

Item Lifecycle Phases 9
Create Items 10
Public Items 11
View Item Details 11
Copy Items 12
Created From 13
Item Revisions 14
Add Packaging Strings to Items 14
Create and Edit Trading Partner Items 18
Use Clipboard 21
Generate Item Structure Report 22
View Audit History for an Item 23
FAQs for Item Creation 23

3 Item Specifications and Attributes 29

Item Specifications and Attributes 29
Interdependent Item Attributes 40
Item Specification Reference 46
Update UOM Values After Creating an Item 82
Checks Performed for Item Attribute Changes 83

4 Item Relationships and Associations 87
Types of Item Relationship 87
Manage Item Relationships 87
FAQs for Item Relationships and Associations 95

5 Structures and Structure Types 97
Overview of Structures 97
Structure Types 97
Valid Component Attributes and Structure Types 98
Validation Rules for Structures and Components 100
Item and Operation Sequence 101

6 Create Structures 103
How You Create Structures 103
Common Structures 105
Structure Details 106
View Structure Details—Classic 106
View Structure Details—New 111

7 Manage Structures 115
Update Product Structures 115
Replace a Component 116
Perform Guided Task Flow to Mass Replace Components 119
Delete Structures 120
Valid Parent Component Relationships 120
Criteria for Editing Structures 121

8 FAQs for Product Bundles and Structures 123
What's a structure attachment? 123
What are item and component attachments? 123
What's a substitute component? 123
How can I reinstate a parent item in a structure that contains obsolete components? 123
How can I remove an obsoleted component from an item structure? 123
What happens to structure creation if I enable lifecycle validation? 124
What's a reference designator? 124
What's a structure loop? 124

How can I compare item structures? 124
How can I create development structures for an item? 125
What's the difference between common item structures and copied item structures? 125
What happens if I associate an item attachment category with the item structure type? 125
What happens if I enable Use Primary for Expansion validation? 126
How can I define additional attributes? 126
What's the significance of start and end dates on a structure name? 126
What happens if I select Default WIP Supply Value for Components? 126
How can I control the loading of item data into the configurator? 127
In a structure, how can I manage mismatches in lifecycle phase? 127
Why are the Operation Sequence and Material Control attributes unavailable in item structure? 127

9 Item Packs 129
Pack Types 129
Manage the Packaging Hierarchy 129
FAQs for Item Packs 132

10 Item Attachments 133
Overview of Item Attachments 133
What's the difference between item attachments in the Product Hub and Product Development? 135
Will attachments I add in Product Development show up in Product Information Management? 135

11 Data Security 137
Data Security Privileges for Accessing Items 137
Data Security Privileges for Creating Items 140
Data Security Privileges for Updating Items 142
Data Security Privileges for Viewing Items 143
Data Security for Trading Partners 144

12 Function Security 147
How to Define View-Only Access for Items 147

13 Catalogs and Categories 151
Create Catalogs 151
Manage Catalogs 155

FAQs for Catalogs and Categories 167

14 Item Quality 169
Overview of Quality Issues and Actions 169
Create Problem Reports and Corrective Actions 169
View Quality Issues and Actions for Items 170

15 Search 173
Search the Work Area (Classic) 173
Use Product Management Search (New User Experience) 182
Access Key Product Management Information and Tasks Using Product Management Landing Page 192
Product Lifecycle Management Navigator 193
FAQs for Search 194

16 Item Mass Changes 197
How You Make Item Mass Changes 197
How You Purge Automatically Generated Import Maps 200
Commit Options for Item Mass Changes 200
FAQs for Item Mass Changes 201

17 Guided Task Flows 203
Perform Guided Task Flows 203

18 New Item Requests 207
Create New Item Requests 207
New Item Request Workflow 209
Understand New Item Request Notifications 211
New Item Request Notifications — New Format 212
Define Items 212
Infolets for New Item Requests 214
What Happens to New Item Requests Without Approvers 214
FAQs for New Item Requests 215

19 Supplier Collaboration 225
Manage Item Supplier Associations 225

How to Manage Supplier Access 226
FAQs for Supplier Collaboration 226

20 Item Status 229
Overview of Item Status 229
FAQs for Item Status 230

21 Change Orders 233
Overview of Change Orders 233
Create Change Orders 233
Manage Change Orders and Change Requests 234
Modify Assignee 235
Use Similar Interface for Engineering and Commercialization Changes 236
What Change Orders Modify 238
Manage Tasks in Change Orders and Change Requests 239
Change Order Attachments 240
Propagate Changes for Each Organization 241
Edit Items from Change Orders 242
Edit a Change Order 243
Change Order Workflow 245
Change Order Actions 246
How to Use the Action Log on a Change Order 247
How Application Validates Change Assignee 247
Cancel Change Lines 247
Move Change Lines 251
Change Order Approval Process 254
Add or Remove Participants in Current Status 256
Understand Role Expansion in Change Orders 257
Change Order Notifications 257
Approve Selected Change Lines 261
Considerations for Managing Flexfields in Items and Change Orders 261
Considerations for Managing Attachments in Items and Change Orders 262
FAQs for Change Orders 263

22 Data Imports 273
Overview of Manage Imports 273

Import Style and SKU Items with Import Maps 274

23 Batch Imports 275

Create Item Import Batches 275
Manage Item Batch Details 293
FAQs for Batch Imports 301
Import Items Using Import Maps 301
Import Item Attachments 320
Import Descriptive Flexfields 329
FAQs for Item Import 330

24 Supplier Products 335

Overview of Managing Supplier Products 335
Overview of Creating Supplier Products 336
Create Supplier Products 336
Supplier Product Uploads 337
Upload Products with Smart Spreadsheets 339
Review Supplier Uploads 341
How You Can Schedule File Uploads in Product Hub Portal 342
Worklists and Notifications in Product Hub Portal 343

25 Data Quality 345

Check Data Quality 345
Matching 347
FAQs for Data Quality 350

26 Item Identification 353

Numbers, Descriptions, and Rules 353
Number Generation Methods 354
Generate Numbers and Descriptions with Rules 356
What are the Various Methods for Submitting Items to the Update Process 361
FAQs for Item Identification 362

27 Item Publication 363

Publish Item Objects 363

Define Publication Options for a Spoke System 363
Define the Schedule and Parameters for the Scheduled Process 364
Define Profile Options to Publish Items 366
Access Payload Generated by the Publication Scheduled Process 367
Purge Publication History Records for Spoke System 367
What's Published in the Publication Payload 368
Manage Publication Maps 372
FAQs for Item Publication 374

28 Item Deletion 377
Obsolete Products and Services Using Delete Groups 377
Identify Deleted Entities Using Deletion Business Events 381

29 Healthcare Integration 385
Enrich Your Product Information From an External Healthcare Catalog 385
Sync Item Information With Oracle Health 387
Sync Item Information With Epic 389

Get Help

There are a number of ways to learn more about your product and interact with Oracle and other users.

Get Help in the Applications

Some application pages have help icons to give you access to contextual help. If you don't see any help icons on your page, click your user image or name in the global header and select Show Help Icons. If the page has contextual help, help icons will appear.

Get Support

You can get support at *My Oracle Support*. For accessible support, visit *Oracle Accessibility Learning and Support*.

Get Training

Increase your knowledge of Oracle Cloud by taking courses at *Oracle University*.

Join Our Community

Use *Cloud Customer Connect* to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, suggest *ideas* for product enhancements, and watch events.

Learn About Accessibility

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

Share Your Feedback

We welcome your feedback about Oracle Applications user assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we'd like to hear from you.

You can email your feedback to *oracle_fusion_applications_help_ww_grp@oracle.com*.

Thanks for helping us improve our user assistance!

1 Overview of Product Management

How You Use the Product Information Management Work Area

Watch video

From the Product Information Management work area, you can scan the status of your product workflow using infolets, and also view event notifications. You can use the Tasks pane to manage items, new item requests, item batches, and import items from external data systems using import maps.

> **Note:** If the **Product Information Management** work area is not available in the Navigator's **Product Management** menu, then navigate to the **Configuration** menu, click **Structure**, and expand **Product Management**. For **Product Information Management**, the **Navigator** and **Springboard** columns must have a green check mark. If it doesn't have the green check mark, see *Configure the Navigator and Page Entries on the Home Page for Navigation* for more information.

Product Information Management Landing Page

The Product Information Management landing page contains infolets to manage product information. For example, the Items for Definition infolet lets you view any new item requests. The Details tab in a new item request has detailed information for your analysis. After you have analyzed the request, you can decide to act on the request immediately or you can decide to come back to it later.

Apart from the infolets, you also receive notifications about events and workflow that need your attention. You can also search for items, catalogs, and so on from the Quick Search pane in Product Information Management work area. The Tasks pane has all the tasks that will help you manage your product data.

Manage Items

Use the **Manage Items** task to search for items. Open the desired item from the Search Results table and edit or view the attributes for item.

Manage New Item Request

Use the **Manage New Item Request** task to see what new items are there for you to introduce in the product workflow. Open a new item request to view the item details and its priority, and take appropriate actions.

Manage Item Batches

Use the **Manage Item Batches** task to view the batches of items imported from other data systems. The Search Results table gives you an overview of the status of the item batch. You can analyze a batch and look for any errors. For example, if the number of items available in the batch and the number of items imported don't match, it indicates that

you have an error. Click the batch number to see the details of the import and analyze any error. You can also export the result of an item batch to a spreadsheet for offline analysis.

Manage Import Maps

Use the **Manage Import Maps** task to search for an import map and look at the mapping detail for the import map. Before creating a mapping of items, it's a good practice to view the source file details. To map your item entries, you can drag a column header from the source data to a corresponding attribute name in the master data. Refresh the preview table to see how the external data maps to the master data attributes.

Overview of the Product Information Management Work Area

You can use the Product Information Management work area to manage a broad range of common tasks related to product information.

This work area provides you with this specialized set of tools (in addition to the global tools such as favorites, watchlist, and notifications):

Tool	What It Does
Infolets	Infolets are interactive panels on the work area page that present important data and help you take action based on it. In the Product Information Management work area, infolets summarize data from detail pages for working with your products. You can set a filter to change what's displayed in an infolet, or drill down into the corresponding detail page. Example: You can click a segment of the chart in the Import Batches infolet to work with the import batches from the associated source system. You can also move or hide infolets, to personalize the page for your own style of working.
Tasks	Use the **Tasks** list in the panel drawer to perform tasks specifically for the current work area. Click a task name to navigate directly to the task detail page.
Search	Use the **Search** in the panel drawer to search for many types of product information (such as items, catalogs, categories, trading partner items, change order requests, new item requests and item batches) directly from the work area, without needing to navigate to a specific task page. You can search using key words, names, ID numbers, or other criteria, depending on what you're searching for. Example: If you're searching for a specific item, you can enter the specific item ID, if you know it, or you can type in a few words from the description. If you enter **red** in the search field, the search returns items containing the word red in the item data. You can only access the data for which you have the correct permissions.
Clipboard	Use the **Clipboard** to speed up your work in the Product Development and the Product Information Management work areas. Copy items and documents to the clipboard and paste them onto other items, documents, and change orders. You can also do this from the **Favorites and Recent Items** available on the clipboard. Use the clipboard icon that appears on the Affected Objects tab and Relationships tab to copy items to the clipboard.

Tool	What It Does
Reports and Analytics	Use the **Reports and Analytics** control in the panel drawer to run existing reports and analytics. If you need to define a new report, then navigate to the Reports and Analytics work area itself from your home page or through the navigator.

Related Topics

- What You Can Do in Product Master Data Management

How You Use and Personalize Infolets in Oracle Fusion Cloud SCM and Procurement

Oracle Fusion Cloud Supply Chain & Manufacturing (SCM) and Oracle Fusion Cloud Procurement infolets are visual, actionable, and personalized information cards summarizing critical data about specific objects.

These infolet cards are combined in a SCM or Procurement home experience or work area home page to make key performance indicators easy to view, understand, and act upon.

You can do these with infolet cards:

- Flip or expand the card to view additional details about the object featured in the infolet card.
- Drill down to more details by navigating to relevant manage pages from the infolet view.
- Change the context of the card either at page level or at view level.
- Hide infolet cards.
- Reorder infolet cards.

Flip and Expand Card

Some infolet cards have a back view or an expanded view that provides additional information relevant to specific aspects of the object being featured in the infolet card. The back and expanded views of the infolet card display additional levels of detail and expose useful information relevant to the object. Based on how the infolets have been configured, you can then navigate to either the back view or the expanded view.

To see different views of the infolet card, do the following:

- Click the **Back View** icon present on the infolet card to see the back view with additional information about the object.
    - To return to the front view, click the **Front View** icon present on the infolet card.
- The expanded view is available from either the front view or the back view. Click the **Expanded View** icon to see useful information about the objects. Click the **Front View** or **Back View** icon to return to the view you started with.

Additional Pages

Click the number or an element like a segment on the pie chart of the infolet card to navigate to relevant manage pages with additional, in-context information. Drill down to view additional relevant information on related objects that will help you to act on the latest and critical data points. For example, suppose you've an infolet card that displays draft orders with errors. Each number or the segment of the graphical element represents the different error conditions such as pricing errors, processing constraint errors, and so on. Click the segment that represents draft orders in pricing errors to see the names and additional details of all the draft orders with pricing error.

Context Selector

To view different perspectives of the same data, use context selectors. Two types of context selectors are available: at the page level, and at the view level. Only some of the infolet cards have the view-level context selectors, while only some pages with infolet cards have page-level context selectors. Context selectors aren't present on all infolet cards and pages. If you change the context of the card on any view of the card, these changes may not necessarily reflect on the alternate views of the infolet card.

- Each view of the infolet card may have a view-level context selector located after the title of the card. Select from the list of available contexts and the view is updated based on that context. The view-level context can be different on each view of the card.

  For example, you may have an infolet card that displays information about fulfilled orders for different time periods. Use the context selector to see information about orders that were fulfilled in the last three months.
- The page-level context selector is available on a tool bar of the page. The page-level context selector is similar to the view-level context selector, except that all the cards on the page will display data as per the filters set in the page-level context list. Click the **View By** icon on the tool bar of the page. Select the contexts from the two available lists in the Page Context dialog box.

  Examples include updating all of the cards to show data only for the last week, or only for a particular business unit.

Hide Card

Click the **Actions** icon present on the infolet card, and select **Hide**. The selected card is hidden. You can also hide cards by clicking the **My Infolets** icon present on the page. A list of infolet cards is displayed. Deselect the check box of the infolet card that you want to hide.

Rearrange Cards

The infolet cards can be moved around and can be rearranged or re-ordered on the page in any way you want.

Related Topics

- Infolets for New Item Requests

What You Can Do in Product Master Data Management

You perform tasks for Product Master Data Management in the Product Information Management work area.

Product Information Management Work Area Tasks

The Product Information Management work area provides these lists of tasks in the panel drawer:

- Item Management
- Data Governance
- Data Consolidation

The tasks related to these lists are described in the following tables.

Item Management Tasks

These tasks enable you to create and modify items, and the entities built with items. Items are the basic unit of product information data.

Task	What you do in this task
Define Product	Create items and apply predefined templates that provide all of the basic information to help you get started quickly.
Manage Product Specifications	Specify values for product operational attributes at a product level as well as product revision level, allowing you to control how an item is processed by downstream applications.
Manage Product Relationships and Associations	Define item relationships to relate two internal items using predefined as well as user defined relationship types. Capture attributes to further qualify the relationship as well as specify effectivity dates to phase the relationships in or out. Define and maintain GTIN (Global Trade Identification Number) cross references to relate items using the industry standard allowing for tracking and identification of trading partner items. Assign items to multiple organizations to manage them in context of locations they're manufactured, stocked, and distributed from.
Manage Product Packs	Define and manage product pack information by creating homogeneous and heterogeneous packaging configurations of sellable items.
Manage Product Bundles and Structures	Define and manage product structures to represent various product hierarchies. Copy product structures from existing structures with the ability to preview the components you're copying. Associate common product structures to a master product structure to maintain a single definition across multiple organizations.
Manage Product Attachments	Associate unstructured content as attachments to a product. Categorize attachments in various predefined and user defined categories to organize and provide quick access to important documents for the product.
Manage Product Revisions	Manage item revisions to track major changes to an item in terms of its form, fit, or function. Introduce new item revisions through a formal change order framework to generate an audit trail as well as streamline implementation of new revisions.
Define Catalogs	Define and manage catalogs to categorize items in a structured hierarchy. Associate images and attachments to catalogs and categories to help you quickly build rich catalog content. Share category and item associations from a source or master catalog with multiple catalogs enabling you to reuse existing data and ease administration of catalogs.

Task	What you do in this task
Define Advanced Catalogs	Manage catalog mapping between two catalog hierarchies as well as attributes for the catalog and categories.
Access and Search Product Master Data	Quickly search for items using single keywords. Perform advanced searches by specifying various parameters and criteria as well as building more complex searches using search operators to quickly find products. Define saved searches enabling you to promote reuse and provide quick access to searches that need to be performed frequently.
Manage Product Mass Updates	Perform mass updates on item information including changes to item attributes, item supplier associations, item reclassification, and organization assignments.
Manage Product Security	Assign role based security at a product level to control access to items. Assign data level security at each individual attribute group level to further control access to sensitive information. Assign appropriate functions and privileges to users or groups of users to control who can create, edit, and view item data.
Obsolete Products and Services	Define and manage deletion groups to process purging and obsoleting products and services that are no longer being transacted in the enterprise. Create deletion constraints to identify and account for all transactions and entities that reference a product, thus maintaining integrity before a product can be purged.

Data Governance Tasks

These tasks enable you to govern the currency and integrity of your product information data.

Task	What You Do in This Task
Manage Product Revisions	Manage item revisions to track major changes to an item in terms of its form, fit, or function. Introduce new item revisions through a formal change order framework to generate an audit trail as well as streamline implementation of new revisions.
Manage New Product Definition and Approval	Define and manage new item requests to enable a formal definition and approval workflow. Definition steps can include product attributes, product structures, item relationships, item attachments, and organization assignment. Manage multiple item definition belonging to different item classes in a single new item request.
Manage Product Change Orders	Create product change orders to process changes to product attributes, lifecycle phases, item statues and product structures. Submit changes through a formal review and approval workflow to ensure successful and validated implementation of change orders. Implement changes through multiple organizations by propagating change orders to organizations while still having the flexibility to adapt implementation schedule based on individual organizations. Move or split change order lines to new or existing change orders to avoid bottlenecks in processing and implementation.
Define Product Rules	Create and edit rules for products. Rules can be used to assign values to attributes, validate dependencies between attributes and require approval through change orders for certain types of attribute updates.

Data Consolidation Tasks

These tasks enable you to consolidate product information data from external sources with your internal master data.

Task	What you do in this task
Manage Imports	Manage the import of items and related entities using industry standard open interface tables allowing you to quickly import data into the production schema as well as enabling migration of data from existing applications.
Manage Import Batches	Define item batches to import sets of item data including product structures and packaging hierarchies from multiple product source systems. Specify import options for an item batch to schedule batch loads, governance and workflow policies for new item definition and approval and product changes. Specify data quality options for matching and standardization for an item batch to cleanse product data during batch import.
Manage Supplier Collaboration	Collaborate with trading partners on item data including item attributes, product structures, and packaging configurations. Secure trading partner access by assigning privileges. Communicate critical changes with suppliers through change order workflows to review, validate accuracy, and approve changes for supplier items. Associate external items such as supplier items and specify supplier item attributes to capture rich detail for the supplier items. Extend the supplier item relationships to associate supplier items to multiple organizations from which they're supplied and received.
Manage Trading Partners' Products	Define and manage trading partner items such as customer items, and associate them with an internal item. Define and manage manufacturer part numbers and associated attributes, which enables you to relate multiple manufacturer parts to an internal item. Define and manage competitor items to relate similar items that might be sold or manufactured by your competitors.
Standardize Product and Service Data	Eliminate potential duplicates by standardization of product numbers and descriptions based on user defined rules and formats.

Manage Worklist from the Product Information Management Work Area

Use the Manage Worklist task in the Product Information Management work area to access the BPM Worklist page.

The BPM Worklist page opens in a new tab within the Product Information Management work area. Alternatively, you can also open the BPM Worklist page by clicking the Notifications button.

Here are the statuses that you can apply to your tasks from the Worklist tab:

Status	Description
Approve	Once a task is sent for approval, the approver can use the approve action to continue the task.
Reject	Task assignee can reject the task to prevent further approval.

Status	Description
Request More Information	If the task assignee wants more clarification from the requester, the task can again be sent to the requester. Users can also specify who requested the information. At this stage, the task is not rejected. Once the required information is provided, the approval flow begins again.
Reassign	The task assignee can send the task to another user for approval. The new user's hierarchy is used for approval. For example, if a user thinks that the task is relevant to another department, he can reassign it.
Delegate	A user can delegate the task to another user. After approval by the delegate, the initial user's hierarchy is used for approval. The delegate can still act on the task after task expiry.
Withdraw	The task initiator can withdraw the task after the approval has been initiated.
Escalate	A user can escalate the task from the current assignee to the supervisor.
Claim	A task that is assigned to a group or multiple users must first be claimed. Claim is the only action available in the task action list for group or multi-user assignments. After the task is claimed, all applicable actions are listed. Claim is available only if auto claim is disabled and the response required from is set to One.
Dismiss	Used for a task that requires the person (acting on the task) to acknowledge the receipt. This is similar to an FYI notification, which does not involve any action.
Resume	A task that was halted by a Suspend action can be worked on again.
Release	Releasing a claimed task makes it available to other assignees. A task assigned to a group or multiple users can then be claimed by the other assignees.
Suspend	The expiration date remains suspended until the task is resumed. After suspension, options to update a task are disabled.

Note: The Suspend and Resume tasks are only available for application implementation management users.

2 Item Creation

Item Lifecycle Phases

Item Lifecycle Phases are used as an indicator of the stage for an item within the lifecycle process. Each phase represents a set of tasks and deliverables that are required before promoting an item to the next phase.

Each item must have a lifecycle phase associated with it.

Four lifecycle phase types are predefined in the application: Design, Preproduction or Prototype, Production and Obsolete. You can use the predefined phase types to create new values for the lifecycle phases.

Companies can use different terms to describe the same item lifecycle phase. For example, the phases named Production and In Manufacturing both refer to the lifecycle phase during which an item can be used to build and ship products.

Lifecycle phases are associated with item classes. The items in an item class can be assigned to any of the lifecycle phases associated with that item class.

Note:

- The lifecycle phase of a child item is not automatically promoted when the parent item is promoted.
- The best practice is to make items Effective on Approval, if they are in the design lifecycle phase.

Before you create or import items, create lifecycle phases. Assign phases to the item class used to create the items. You can also assign them to a parent item class of the item class used to create the item. When an item is assigned to a lifecycle phase, that phase is visible as part of the item's attributes. In item structures, lifecycle phases are used to control specific processes.

Effective Date in the Design Lifecycle Phase

The effective date for items in the Design lifecycle phase can't be modified.

If the item is in the Design lifecycle phase, the item on the change order is effective on approval.

If a future effective date is set for the affected object in a change order, a warning message appears with the following buttons:

- Continue: To continue with the future effective date.
- Edit: To cancel the current Save action, return to edit mode and correct the future effective date.

Change the Lifecycle Phase

In the Product Information Management work area, you can change the lifecycle phase directly on the item or by assigning it to a change order for a commercial item.

In the Product Development work area, you can change the lifecycle phase of an item by assigning it to a change order.

Create Items

Create single or multiple items and apply predefined templates.

Creating Single Items

You can begin creating an item from multiple places in the UI. Start by providing basic information such as master organization, number of items (in this case, one item), and item class. Then you will select the templates which will be applied to the items. The templates will be applied sequentially, meaning options in the second template will overwrite any options in the first and so on. Next, required attributes must be provided. If mandatory attributes were defined in the item class, then they must be provided.

Use the data level attributes in the **specifications** tab to enter or view different aspects of the item, such as the base standard operational attributes. You can optionally specify descriptive flexfields at the Item or Item Revision levels. If you are licensed to use Oracle Product Hub, you can specify extensible flexfields to capture attributes of the item at the Item, Item Revision and Item Supplier Site levels.

While creating items in the user interface, you can optionally:

- Define an item structure
- Assign to organizations
- Create relationships
- Assign catalog categories
- Add attachments

> **Note:** While creating items based on certain attribute values, automated processes for item category assignments may be performed. If functional area catalogs are not defined, item assignments for those functional areas are skipped. When creating items, item rules are evaluated and appropriate messages are displayed. If data quality checking is enabled, the results of the check are displayed. If an item's item class has variant attribute groups, the Style Item option is selected by default in the Create Item dialog.

When assigning an item to an organization, you can apply the required templates for the child organization item. The attribute values available in the templates are applied to the child organization item. You can apply templates associated with the selected child organization or the templates from the master organization.

To assign an item to an organization:

1. On the Create Item or Edit Item page, click **Associations**.
2. Click **Actions** > **Select and Add**.
   The Select and Add: Organizations window is displayed.
3. Search and select the required organization.
   The templates associated with that organization are displayed in the **Available List**.
4. Select the required template from the **Available List** and move it to the **Selected List**. If you want to apply multiple templates, select another template from the **Available List** and move it to the **Selected List**. Do this for each required template. You can select templates either from the same organization or a different organization. After you have selected all the required templates, click **Apply**.

Creating Multiple Items

When creating a new item, you have the option of creating more than one item simultaneously. In situations where you have to create numerous items that share some common characteristics, it is best to use this procedure.

Creating multiple items begins much the same as creating a single item. Where you enter one for the number of items in the single item scenario, for multiple items you enter a number greater than one. You will be taken to the **Create Multiple Items** page where you must specify the details for each of the items in the table.

Related Topics

- Manage Item Templates

Public Items

Public items are those items that you create in an item class, where the **Public** check box is preselected.

Data security is not enabled for public items, except in the case of user-defined attributes. If you want to control the access to attribute groups, you must define the data security for user-defined attributes.

When editing an item, on the **Security** tab, in the **Actions** section, click **Actions: Select and Add**, Data Security won't be available in the Basic or Advanced search for any of the seeded attributes except for user-defined attributes.

All internal users have access to items that are public. You can also control the access to specific items in public item classes at the item level. For example, if you want to introduce a new product for an existing line of products, you may want the new product to have restricted access until the product is released. You can create the new product as an item and then mark the products as private at the item level in the Item Security dialog box. The Item People tab on the Edit Item page is hidden. Use the Item Security dialog box to set up data security for the item.

Follow these steps to open the Item Security dialog box and provide data grants:

1. From the Product Information Management work area, click the Tasks panel drawer, and select Manage Items.
2. Search for the item and click on the item number link in the Search Results table.
3. On the Edit Items page, click Actions> Manage Item Security. The Item Security dialog box opens.
   You now can provide data grants for the item.

For each new item, you can deselect the Public check box to make the item a private item and the data security for this item is generated automatically for the logged in user. The owner of the item can add additional data security to provide limited access to other users to the new product.

View Item Details

Use the tabs on an item for a quick overview about the item. The General Information tab is where you start to access an item's basic information.

Here are the tabs available on items:

- General Information - the default or cover page of an item. You can view an item's revision number and the corresponding change order from the Revision list on any item page. The current effective revision is marked with an asterisk (*) character.

- Attachments - text or graphic files, or URLs, with more information about the item; classify attachments into a category. Includes revision-specific content.
- Structure - the Bill of Materials for assemblies, products, and other collections of items. Includes revision-specific content.
- Quality - displays those quality issues or quality actions to which this item has been added. Includes revision-specific content.
- Changes - lists change orders or change requests that the item is on.
- Relationships - user-set association between any two business objects or structures. Includes revision-specific content.
- Team - users and groups who have access to the item.
- Where Used - displays those item-structures to which this item is added.
- History – shows data changes made to audit-enabled item attributes.

The Edit Item page displays the attributes of the item as per the privileges you hold. The following is a list of attributes that appear when you login as an analyst.

- Item: name of the item
- Description: description of the item
- Item Class: class you've chosen while creating the item
- Completeness Score: indicates the percentage of completeness for an item and it's based on the values that are returned for specific attributes
- Created By: creator of the item
- Created From: source item name along with the organization name (as a link) from which the item was copied. This is hidden by default, but you can enable it through Page Composer.
- Lifecycle Phase: current lifecycle phase of the item
- Item Status: set item status codes. predefined item status codes are Active and Inactive
- Pack Type: trade item unit descriptors used to describe the Global Trade Item Number (GTIN) hierarchy level
- Revision: revision of the item
- Creation Date: date of creation of the item.

Copy Items

The Create Item action allows the user to select the **Create from Copy** option and specify the item you want to copy from. One or more items can be created by copying.

If the item wasn't created using **Create from Copy**, the attribute value for Created From is blank. You can select **Revision** to copy the revision level attributes of the specific revision. All item attributes will get the details from the latest revision of the item.

Create an Item by Copying

The following can be copied from an existing item:

- Attributes

- Relationships
- Structures
- Organization assignments
- Attachments
- Supplier organization assignments
- Catalog Category assignments

Attributes

Indicate whether you want to copy the attributes and then apply the templates or apply the templates and then copy the attributes. On the **Specification** tab, select the list of attribute groups available for copying attribute values.

Note: Any duplicate rows are also copied along with the Find Number and Suggested Operation Sequence values.

Relationships

On the **Relationships** tab, select the relationships, organization assignments, and attachment categories to be copied to the new item.

Structures

On the **Structures** tab, select the structure to be copied to the new item. You can also decide to create a common structure instead of copying it.

Attachments

You can also select attachments.

Created From

The **Created From** attribute on the item page displays the source item name along with the organization name (as a link) from which the item was copied.

Though it's hidden by default, you can enable it through Page Composer. When you click the link, the source item details appear in the current active revision in a new tab. You can view the details of the **Created From** attribute in the item history. If you delete the source item, an ID is displayed as the attribute value instead of the item name.

If you don't have access to the source item, an error message appears when you click the hyperlink. And, if you delete the source item a message on the General Information page informs you that no matches were found.

Item Revisions

When you create an item, a default revision is automatically created. Also, you can create item revisions based on item definition changes. Generally, if there is a change in the form, fit, and function for an item, then a new revision is automatically created.

You can capture revision level changes using revision level attributes. To use revision level attributes, you have to create a new revision.

Item revisions are specific to the organization the item is assigned to. So, the same item can have 10 revisions in Organization A and only 5 revisions in Organizations B. In Product Hub, when you create a revision, you must specify an effective date. The effective date of a new revision also signifies the end date of the prior revision. Therefore, at a given time only one revision can be effective.

Item-revision-level attributes can have different values for different revisions. However, item structures aren't revision specific. If the start and end dates of the structure components match with the start and end dates of an item revision, then item structures act as revision-effective structures. Revision-effective structures are structures that are valid from a start revision to an end revision. You can also create an item revision in the context of a change order. In such cases, the new item revision becomes effective when you implement the change order.

In Product Development, you can create item revisions only in the context of a change order.

Add Packaging Strings to Items

If one of your items has a non-standard UOM conversion specific to that item itself, you can add a predefined packaging string when you create or edit an item, or define a new packaging string to fit your requirements.

Select Packaging Strings

If your item needs to specify a packaging string, you might be able to select one from a list of packaging strings that have already been defined.

1. On the Create Item or Edit Item page, select a **Primary Unit of Measure** for the item.

   > **Tip:** If you're not sure what unit of measure to select, open the Search and Select: Primary Unit of Measure dialog and try searching in the **UOM Class Description** field, which provides fuller naming information for the units in use.

2. Select a **Packaging String** for the item.

   The packaging strings available for selection are restricted to those that include the Primary Unit of Measure that you selected. This restriction also applies to the packaging strings that you can select in the Search and Select: Packaging String dialog. It's possible that the desired packaging string hasn't been defined yet.

Create Packaging Strings

If the list of packaging strings available for an item doesn't include the one you need, you can create one directly while creating or editing the item, without going to the Setup and Maintenance work area.

To create a packaging string:

1. On the Create Item or Edit Item page, select the **Primary Unit of Measure** needed for the item.
2. Click the plus icon (+) on the **Packaging String** field.
3. The Define Packaging String wizard dialog displays these fields on the **Select UOMs** step:
    - **Base UOM Name**, which is the base UOM of the UOM class of the available UOMs
    - **UOM Class**, which is the UOM class of the Primary Unit of Measure that you selected for the item
    - A list of **Available UOMs** for the new packaging string, comprised of all the UOMs defined for the UOM class.

      You can't add UOMs directly to the list here. To add UOMs to the list of available UOMs, you must use the Manage Units of Measure task in the Setup and Maintenance work area.
4. Add the UOMs that you want to include in the new packaging string by using the shuttle control to move them from the list of available UOMs to the list of selected UOMs.

   The base UOM is automatically a selected UOM, because it must always be part of the packaging string.

   You can't define a packaging string with more than 10 UOMs.
5. Use the controls on the **Selected UOMs** list to determine the order of the UOMs in the packaging string. The base UOM must always be the first UOM in the packaging string. You should arrange the UOMs from smallest at the top of the shuttle control field to largest at the bottom, following your desired progression of packaging.

   Click **Next** when the selection and order of UOMs is what you need for your new packaging string.
6. The **Define Multipliers** step of the wizard displays a default Packaging String composed of the UOMs you selected, but only if the UOMs have standard conversions that divide evenly between each other. The Define Multipliers table contains a row for each UOM conversion in the packaging string, each with a default multiplier.

   Note that the sequence of the UOMs in the table matches the sequence that you selected in the previous step. Click **Back** if you need to adjust the sequence.
7. In the **Multiplier** field for each row, enter the number that defines how many of the UOM in the **Content UOM** field equals the UOM in the **UOM Name** field.
8. Repeat the previous step for each UOM that makes up the packaging string. After you enter all new multipliers or accept the defaults, click **Recalculate**, which updates all the displayed UOM conversions, and enables the **Save and Close** button.
9. Click **Save and Close**. The new packaging string appears in the **Packaging String** field of the item details page.

Example of a Packaging String

Assume that your item is a medical glove used in hospitals. You need a packaging string that tracks how the gloves are ordered and dispensed.

The units used in your customer's hospital are:

- 1 glove is dispensed as each.
- 120 gloves are stored in each room, in a box.
- 24 boxes are stored in a unit, in a carton.

- 16 cartons are stored in the supply room, in a case.
- The hospital orders gloves by the case.

The UOMs and conversion multipliers required for this example are:

Base Unit of Measure	Conversion Multiplier	Units of Measure	Unit of Measure Class
Glove	1	Each	Quantity
Each	120	Box	Quantity
Box	24	Carton	Quantity
Carton	16	Case	Quantity

1. On the Create Item page, select the **Primary Unit of Measure** as **Each**.
2. Click the plus icon (+) on the **Packaging String** field.
3. In the Define Packaging String wizard, in the Select UOMs step, select these UOMs:
    - Each
    - Box
    - Carton
    - Case

    For this example, assume that these UOMs have been defined for your organization.
4. In the Define Multipliers step:
    - The **UOM Class** is Quantity
    - The **Base UOM Name** is Each

    Enter these multipliers and click **Recalculate**:

Multiplier	Content UOM	UOM Name	Base Unit Conversion
120 X	Each	= Box	120
24 X	Box	= Carton	2,880
16 X	Carton	= Case	46,080

    You should see the numbers shown in the Base Unit Conversion.

5. The **Packaging String** field should display a packaging string similar to this:

   `Ea 120/BX 24/CTN 16/CS`

6. Click **Next**, then click **Save and Close**.
7. Your new packaging string appears in the **Packaging String** field on the Create Item page.

Use Packaging Strings

You can use packaging strings:

- In item definitions:

  On the Create Item or Edit Item page, you can select an existing packaging string for the for the item, or create a new packaging string. See the preceding sections of this topic for details.

- In import maps and FBDI:

  You can import an existing packaging string for items, in the **Packaging String** attribute in an import map, or in the **Packaging String** column of the `ItemImportTemplate.xlsm` FBDI template file. You can't create a new packaging string through item import.

- In publications:

  Packaging strings are available in the item XML generated by the Publication process.

- In product rules:

  You can refer to packaging strings in assignment and validation rules.

- In REST services:

  You can use the `packagingStrings` REST resource in the SCM Common group to create or get packaging strings. For details, see the REST API for Oracle Fusion Cloud SCM guide.

Autocreate Item-specific Intraclass UOM Conversions Using Packaging Strings

Earlier to define item-specific intraclass UOM conversions you had to follow a two-step process:

1. Make sure the item is created in the Product Information Management work area.
2. Populate the computed UOM conversion using the Manage UOM Intraclass Conversions page in the Setup and Maintenance work area.

Now, you can define the item-specific intraclass UOM conversions in a single step by assigning a packaging string to the item when the item is created or updated. When saving the item record, based on the item's packaging string definition, Oracle Product Hub automatically stores the item-specific UOM conversion for every UOM present in the packaging string. For example, if you assign the packaging string *Ea 12/CRD 5/PK 4/CTN* to the item *RXJY 17 mg Tablet*, then Product Hub adds the following item specific UOM conversions to the database.

Item	From UOM	To Base UOM (Each)
RXJY 17 mg Tablet	Card	12
RXJY 17 mg Tablet	Pack	60
RXJY 17 mg Tablet	Carton	240

The autocreated item-specific conversion will be available in the Manage UOM Intraclass Conversions page in read-only mode. To change the conversion factors, you must change the packaging string assignment to the item as needed.

The following table shows the conversions for the packaging string on the Manage UOM Intraclass Conversions page.

Item	Item Description	From UOM	Class Name	Conversion	Base UOM Name
RXJY 17mg Tablet	RXJY 17mg Tablet	Card	Quantity	12	Each
RXJY 17mg Tablet	RXJY 17mg Tablet	Pack	Quantity	60	Each
RXJY 17mg Tablet	RXJY 17mg Tablet	Carton	Quantity	240	Each

You can view the assigned packaging string to the item on the Edit Item page > **Overview** tab > **Packaging String** attribute.

To avail this feature, you must opt-in to the **Automate UOM Conversion Set Up with Packaging Strings that Specify Eligible Units for the Item** feature. After availing this feature, if you update a packaging string assignment for an item, the update must meet the data validation constraints. If you aren't availing this feature, Product Hub won't autocreate the item specific UOM conversion even if you assign a packaging string to the item.

If you've opted into the **Create Packaging Strings for Items** and the **Calculate Runtime Transaction UOM Conversions with Generated Item Data** features, (a parent feature of the **Autocreate UOM Conversions When Adding a Packaging String to an Item** feature), the LOVs for the Secondary UOM field and the Unit Of Issue field will restrict the UOMs only to the collection of UOM elements in the Packaging String assigned to the item.

Related Topics

- Overview of Packaging Strings
- How Units of Measure, Unit of Measure Classes, and Base Units of Measure Relate to Each Other
- How to Assign Base Units of Measure to Unit of Measure Classes
- Standard Conversions for Units of Measure
- What's a UOM intraclass conversion?

Create and Edit Trading Partner Items

Trading partner items are items that are external to the Product Hub application.

The Manage Trading Partners and Trading Partner Items task allows these trading partner items to be added to the Product Hub as a trading partner item and then related to a Product Hub item as needed. Create trading partner items using the Manage Trading Partners and Trading Partner Items task available in the Product Information Management work area.

Search for Trading Partner Items

The list search model is used with autosuggest search to find trading partner items. The Show Filters action opens a panel that lets you provide additional filters. Autosuggestion results show the search results in the following regions:

- Trading Partner Items

- Trading Partner
- Related Items

The search results from the list search can be displayed with two different views, table view and card view. In table mode each row in the table provides information for a specific trading partner item. The following fields appear in the table view:

- Attachments: this column contains quick access to the attachments for a trading partner item. When a blue dot is shown, the trading partner item has attachments. Clicking on the blue dot will open the right panel with the trading partner item details shown and the attachment region will be expanded. If the column contains a plus sign, the trading partner item doesn't contain attachments.
- Relationships: this column contains quick access to the relationships between the trading partner item in the row and a product item. When a blue dot is shown, the trading partner item has relationships. Clicking on the blue dot will open the right panel with the trading partner item details shown and the Relationships region will be expanded. If the column contains a plus sign, the trading partner item doesn't contain relationships.
- Favorites: this column indicates if the trading partner item has been designated as a favorite when the icon is shown as yellow star. If a grayed out star appears, the user can click on the icon to mark the trading partner item a favorite.
- Image: A small rendering of the image is shown in the row when an image has been setup for the trading partner item. An image indicating that the image needs to be setup up will be shown if no image is setup.
- Trading Partner Item: the trading partner item number for the row.
- Trading Partner: the trading partner for the trading partner item.
- Type: the trading partner item type, with values of Manufacturer, Customer, Competitor or Supplier.
- Start and End Dates: the dates the trading partner item is available.
- Status: the trading partner item type status, with values of Active, Inactive, or Pending.

Create Trading Partner Items

In both search results views, click the Add icon to create a new trading partner item, assuming the user has the functional privilege to Manage Trading Partner Items and has a data grant for the trading partner items with the View and Maintain privilege (if data security is enabled). When the user clicks on the add action, the right hand panel expands and contains the Create Trading Partner Item content. Select a Trading Partner and Type. The Trading Partner Type has these values: Manufacturer, Customer, Supplier and Competitor. The fields will be read-only when the user only has the View data privilege for the trading partner item or for all trading partner items for a trading partner.

- Relationships: Use this section to view, edit or add related items to this trading partner item. The Status and Relationship Status for the trading partner item are included.
- Attachments: Use this section to maintain attachments related to this trading partner item. Ensure that you don't inadvertently add the same attachment more than once. It's possible to add attachments with the same title, description, file, or attachment category to the same trading partner item.
- Security: If security is enabled, use this section to maintain privileges for users or user groups.

  Note: The security region will be hidden when the trading partner item is marked public.

Enable Editing Trading Partner Item Number

You can update the number for the trading partner item if editing the trading partner item number is enabled. This number refers to customer item number, manufacturer part number, competitor item number, or supplier item number.

To enable editing the trading partner item number:

1. In the **Setup and Maintenance** work area, use this navigation to access and manage the item profile options:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Item Profile Options
2. On the Manage Item Profile Options page, click **ORA_EGP_TPI_UPDATEABLE** and set the profile value to **Yes**. You can set the profile value at the site level or at the user level

Identify and Fix Duplicate Trading Partner Item Numbers

You can maintain unique trading partner item numbers and avoid duplicates. For example, earlier you were able to create trading partner items with numbers such as ITEM123 and item123. You can no longer create such duplicate trading partner items. The validation isn't case-sensitive and will consider CABLE123 and cable123 as duplicates.

To identify and fix any duplicate trading partner item numbers that were created previously:

1. Run the **Upgrade Product Management Data** scheduled process with these parameters:
    - Update Process: Analyze
    - Functional Area: Trading Partner Items
    - Feature: Ensure Uniqueness in Trading Partner Item Numbers
2. Submit the analysis job.
3. After the process is completed, view the logs for the duplicate trading partner item records.
4. If there are duplicate numbers, then you must delete one of the duplicate records or change one of the trading partner item numbers.

    You can delete the duplicate trading partner item using the user interface or FBDI import. You can change the trading partner item number using import.

    > **Note:** To change the duplicate trading partner item, set the **Edit Trading Partner Item Number Allowed (ORA_EGP_TPI_UPDATEABLE)** profile option to **Yes**, and then change the trading partner item number.

5. Run the **Upgrade Product Management Data** scheduled process again with these parameters:
    - Update Process: Execute
    - Functional Area: Trading Partner Items
    - Feature: Ensure Uniqueness in Trading Partner Item Numbers
6. Submit the execution job.
7. If you don't have any duplicate trading partner items created previously, you don't have to perform any action. If there's no duplicate data, a message is available in the log that indicates the trading partner item uniqueness is enforced

Related Topics

- Manage Item Relationships
- Data Security for Manufacturers and Manufacturer Parts

Use Clipboard

You can copy items to the clipboard for repeated later use. Working with the clipboard, you can leverage previously viewed items or favorites, eliminate unnecessary searches, and improve productivity.

Clipboard

Copy items and documents from the Favorites and Recent Items tabs available on the clipboard to speed up your work. Use the clipboard icon that appears on the Affected Objects tab and Relationships tab to copy items to the clipboard.

The clipboard contains:

- **Clipboard**: a cumulative list of multiple copied items. The most recently copied item appears at the beginning (top) of the list. The contents of the clipboard are now retained when you sign out of the application and sign back in.
- **Favorites**: a list of items that have been specified as favorites by clicking the Add to Favorites (star) icon in the item header. Click the Refresh icon to display recently added favorites; the most recently added one appears at the start (top) of the list.
- **Recent Items**: a list of items that you've visited. Click the Refresh icon to display recently visited items. The most recently visited item appears at the beginning (top) of the list.

> **Note:** The use of the clipboard is subject to security controls. If you've privileges only to search for and view items, then you can copy and paste the items but not edit them. If you don't have privileges to search for and view items, then you can't copy the items, and they don't appear on the clipboard.

You can quickly create a structure by using an item on the clipboard. Here's how the **Copy** and **Paste** actions work with the clipboard:

- In the source structure, select items or documents and use the Copy icon, or Actions > Copy. The items appear on the clipboard.
- Open the destination structure and click Clipboard on the side panel.
- Review the item (or structure) you want to copy.
- Select the items and drag (move) or use the Paste icon or Actions > Paste.

The following notes about clipboard are applicable to change orders, change requests, problem reports, and corrective actions:

- The clipboard retains its content when you sign out of the application and sign back in.
- The clipboard can hold up to 500 items and you can sort the items by the date you added them, from latest to oldest.
- Select one or multiple items from the clipboard and use the drag and drop (select and move) or paste icon to add them to the Affected Objects tab, Item Structure tab, or Relationships tab.
- The selections you make on the clipboard are deselected when you:
  - add more items to the clipboard.
  - sign out and sign back in.

Points to Remember:

- Note that you must first copy the items to the clipboard, select them from the clipboard, and paste them to the Affected Objects tab or Item Structure tab.
- When you copy the items from the search results table to the clipboard, the items in the clipboard are deselected.
- When you select items on the clipboard and move either to the Favorites or Recent Items tabs and return to the clipboard, the selection persists.

The contents of the clipboard aren't cleared out when you sign out. To remove items from the clipboard, you can select a single item or several items and click **Remove** (the X icon). Click **Clear All** to clear the clipboard.

Generate Item Structure Report

You can generate and view the item structure report from both the Product Development and Product Information Management work areas.

1. Navigate to the Edit Item page of an item.
2. Click **Generate Report** from the Actions menu.
3. In the Item Structure Report dialog, select the fields which must appear in the report.
    - Levels - Single or all levels of the structure
    - Columns - Main, Main and AML, All
    - Templates - Default Item Structure Report. You can also include templates you've configured.

      If you're unable to view the Default Item Structure report template, ensure that you have the following privilege: Generate Item Change Order Report (EGO_GENERATE_ITEM_CHANGE_ORDER_REPORT_PRIV)
    - Format - Format of the file here by default is Microsoft Excel.
4. Click **Submit**.
5. Click **OK** to confirm the message which shows the Scheduled Process Request ID.
6. Navigate to **View Scheduled Processes** in the Tasks panel.
7. Enter the **Process Name** or **Process ID** and check the status of the report.
8. Click the output that appears in the **View Output** column.
9. Click the file name or URL in the **Attachments** dialog and you can view the columns and levels that you selected.

Note:

- The columns in the item structure report only display the attributes that you have configured in the template.
- You can generate the report only in Product Development or the Product Information Management work area and not within Oracle Analytics Publisher; configuration of the template is done in Oracle Analytics Publisher.

Related Topics

- Configure the Template for the Item Structure Report with Additional Attributes
- Configure the Template for the Item Structure Report with the Main and AML Attribute

View Audit History for an Item

You can view the data changes made to the audit-enabled item attributes using the **History** tab on the Edit Item page. The audit data is available only for the item that you are currently viewing or editing. By default, this tab displays the changes made in the recent week for the item. It also shows the **Context Name** and **Context Value** columns that provide additional information for the data that requires context information. For example, if Category is the audited attribute, then Context Name is Catalog Name and the Context Value is the catalog name to which the category belongs to.

You can access audit data related to the item, item level EFF, item level EFF security, item structure, item structure component, pack component, and related item relationship operational attributes. You can access the same data using the existing **Audit Reports** available in the Navigator's **Tools** menu.

To view the audit data for an item and all the applicable child objects on the **History** tab, you must have the **View Item Basic** data privilege and the **View Selected Item Audit History** function security privilege. Make sure that your audit policy includes the item data attributes that you need. Additional data security is not needed. Hence, when granting access to the **History** tab for your users, you may carefully review their item data security restrictions as applicable.

You can also perform searches for the audit data based on a combination of search criteria such as time period, the type of data changes (add, update, or remove), a specific field, a specific value in a field, and a specific portion of data such as item level extensible flexfields (EFFs). You can export the search results to a spreadsheet for further analysis.

FAQs for Item Creation

What's an item?

Items are used to represent products and services that you sell or transact and components that make up your products and services.

Each *item* that you create has several standard operational attributes that determine the behavior of the item with respect to various functions, such as Purchasing, and Inventory Management. In addition to these operational attributes, the item has several user-defined attributes defined by its item class. These user-defined attributes capture item specifications and other information relevant to the product definition.

What's an engineering item?

Any item that you create in the Product Development work area is an engineering item.

If you create an item using an import service, a SOAP web service, or a REST API, with the Engineering Item attribute set to **Y** (yes), that item is also considered an engineering item.

Related Topics

- Are there any restrictions when viewing or editing engineering items ?
- How can I change an item to an engineering item?

Are there any restrictions when viewing or editing engineering items ?

Yes. For engineering items that are in the Design lifecycle phase, you can't view or edit the Structure components and MPN relationships in the Product Information Management work area.

For engineering items that are in any lifecycle phase other than Design, you can't add or modify the Structure components and MPN relationships in the Product Information Management work area.

However, you can view, edit, or add engineering items using a change order from the Product Development work area.

Related Topics

- What's an engineering item?
- How can I change an item to an engineering item?

How can I change an item to an engineering item?

If you create items in the Product Information Management work area, and later change the value of the Engineering Item attribute for the items to Yes, then you can manage the items in the Product Development work area.

You can also use these items as components within a bill of materials.

An item created in the Product Development work area becomes an engineering item, and the value of its Engineering Item attribute is Yes. If you didn't create the item in the Product Development work area, then you can't update the value of the Engineering Item attribute in the Product Information Management work area, but you can update the value by one of these methods:

- Import map

  In an import map, map your source data column for updating the Engineering Item attribute to the following column in the Master Data table:

  - Attribute group: `Main`
  - Attribute: `Engineered`
  - Internal Name: `ENGINEERED_ITEM_FLAG`
  - Data Type and Length: `VARCHAR2(1)`
  - Column Value: `Y` or `N`

- File-based data import (FBDI)

  In a file-based data import template, enter your upload data for updating the Engineering Item attribute in the following column:

  - XLSM template: `ItemImportTemplate.xlsm`
  - Worksheet: `EGP_SYSTEM_ITEMS_INTERFACE`
  - Transaction Type: `UPDATE`
  - Column header: `Engineered Item Flag`
  - Column value: `Y` or `N`

- Items Version 2 REST resource

  In your call to the Items Version 2 REST resource, specify the value for the EngineeredItemFlag parameter:

  - Method: `PATCH`
  - Path:`/fscmRestApi/resources/11.13.18.05/itemsV2/{itemsV2UniqID}`
  - Body parameter: `EngineeredItemFlag`
  - Parameter value: `true` or `false`
  - Example of JSON request body (partial):

```
{
...
 "EngineeredItemFlag": true,
...
},
```

Related Topics

- What's an engineering item?
- Importing Item Data Using Import Maps

What happens if I select more than one item template?

If more than one item template is selected, they will be applied sequentially.

It means that if the same attribute is defined in more than one template, the value of the attribute as set in a subsequent template in the sequence will override the previously set value for that attribute. For example, if template 1 sets the Order Enabled attribute to Yes and template 2 set the same attribute to No, then attribute value will be set to No.

Can I change the lifecycle phase on an obsoleted item?

You can change the lifecycle phase on an obsoleted item from update 23A onward. Here's how:

In the Product Development work area, assign the item to a change order. On the Affected Objects tab, use the **New Lifecycle Phase** column.

In the Product Information Management work area, use the item page or a change order for a commercial item. On the item click **Actions** > **Change Lifecycle Phase**.

How can I create a new revision?

You create new revisions from the Manage Revisions dialog box. Revisions can also be created by a change order.

Can I Delete Trading Partners?

A trading partner can be deleted only if no trading partner items are assigned to the trading partner. Only Manufacturer, Customer, and Competitor trading partners can be deleted.

Will the approved manufacturers list (AML) I add in Product Development show up in Product Information Management?

The AML you add for an item in Product Development is visible in Product Information Management only if the Product Development item is in a lifecycle phase higher than design.

Related Topics

- Overview of Manufacturers

Sometimes why aren't new items visible after creating multiple items or importing items?

Items are generated in a sequence but a few of the items are not visible because the sequence numbers were skipped. It is difficult to determine the cause of the failure. It may be because the process wasn't completed due to server issue, it isn't closed due to database issue, or may be the item is still under approval (that is, it is in draft state). This results in the sequence numbers not being used and you can't reclaim those skipped numbers.

For example, when a new item is created, the new item uses the next sequence number. Let's assume the first item isn't approved and the new item request was cancelled or rejected, but the subsequent item was approved. Hence, one item number is skipped. It isn't possible to identify the causes.

What's the difference between manufacturers and trading partners?

The Product Development work area uses manufacturers and manufacturer parts.

The Product Information Management work area uses trading partners and trading partner items.

3 Item Specifications and Attributes

Item Specifications and Attributes

Item Specifications and Attributes

Item specifications are groups of attributes that determine item characteristics such as item cost or lead time. You set these attributes when you define or update items.

From the Specifications tab on the Edit Item or Create Item pages, you can navigate through attribute groups to access and modify item attributes.

The types of attributes that are accessible from the specifications tab include the following:

- *Operational attributes:* These are organized into the following specification groups:
    - Asset Management
    - Costing
    - General Planning
    - Inventory
    - Invoicing
    - Lead Times
    - MRP and MPS Planning
    - Order Management
    - Physical Attributes
    - Main
    - Overview
    - Process Manufacturing
    - Purchasing
    - Receiving
    - Service
    - Structures
    - Web Store
    - Work in Progress
- *User-defined attributes:* These can be accessed through links on the Specifications tab.
- *Transactional attributes:* These can be viewed for a specific date.

There are particular relationships enforced between some of the item attributes: These relationships fall into two groups:

- *Required attributes:* You must enter values for certain attributes if some related attributes have values
- *Interdependent attributes:* You can enter only certain values depending on other attribute values. For example, **Planning Method** must be **Not Planned** if **Pick Components** is set to **Yes**. These interdependencies may be between attributes within the same specification group or between attributes in different specification groups.

Related Topics

- Required Item Attributes
- Interdependent Item Attributes
- Additional Item Attributes
- User-Defined Item Attributes and Attribute Groups

Item Attributes

Attributes are named entities whose values describe various qualities of a product item.

The following types of attributes are available:

- Main attributes
- Operational attributes
- User-defined attribute groups and attributes
- Additional information attributes
- Transactional attributes

Main Attributes

Main attributes are common to all items, and are part of the item's data model. They describe essential aspects of the item. Main attributes appear on the Overview tab of the Create Item and Edit Item pages.

Examples of main attributes are:

- Item Number
- Description
- Long Description
- Status
- Lifecycle Phase
- User Item Type
- Approval Status
- Revision
- Pack Type
- Item Class
- Unit of Measure (a group containing eight attributes)

Operational Attributes

Operational attributes are part of the item's data model. They determine the behavior of the item with respect to various applications outside Oracle Product Hub, such as Oracle Purchasing or Oracle Inventory Management. You choose the control level for operational attributes on the Manage Operational Attributes Control page. For each listed operational attribute group, you select the control level for each of the group's attributes. You can control the operational attributes at the master organization level or at the organization level. You can define operational attributes as part of a new item request.

Examples of operational attributes, with the attribute groups they belong to, are listed in the following table.

Operational Attribute Group	Example Attribute
Inventory	Shelf Life Days
Order Management	Shippable
Purchasing	Negotiation Required
Receiving	Allow Substitute Receipts

User-Defined Attribute Groups and Attributes

You can define attribute groups and attributes to capture item specifications and other information relevant to a product's definition that you want to add to the item's data model. Values for such user-defined attributes are defined when you create the item, but can be changed over the life cycle of the item.

Oracle Fusion Cloud Applications uses the structure of extensible flexfields to support attribute groups (by using flexfield contexts) and attributes (by using flexfield segments).

You create attribute groups and attributes on the Manage Attribute Groups page, where you create an attribute group for a set of one or more attributes and then create the attributes in the context of the attribute group.

You select the behavior for the attribute group as multiple-row or single-row, which affects the later display and use of the attributes, as described elsewhere in this topic. If the behavior you chose for the attribute group is multiple-row, then the attribute has multiple values each represented by a row in a table whose columns are context-based segments (attributes).

For each attribute, you select the data type and related validation and display options. The attribute groups are then accessed as sections listed on the Specifications tab of the Edit Item page. You also map the attribute to a column in a dedicated database table.

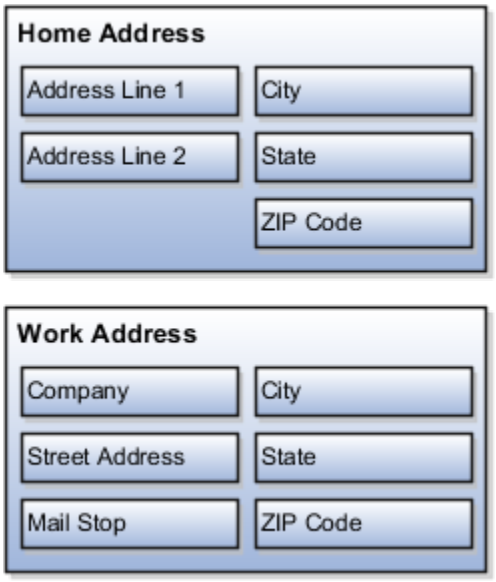
After you have created attribute groups and attributes, you associate user-defined attributes with items by adding attribute groups to item classes, on the Pages and Attribute Groups tab of the Edit Item Class page. When an item is created, it inherits the attributes from the attribute groups associated with the item class on which the item was based.

Multiple-Row Attribute Groups

Attribute groups can be either single-row or multiple-row. The selected behavior determines how the attributes will be displayed in the user interface as well as how they are used. When you create an attribute group on the Manage Attribute Groups page, you select its **Behavior** as being **Multiple Rows** or **Single Row**.

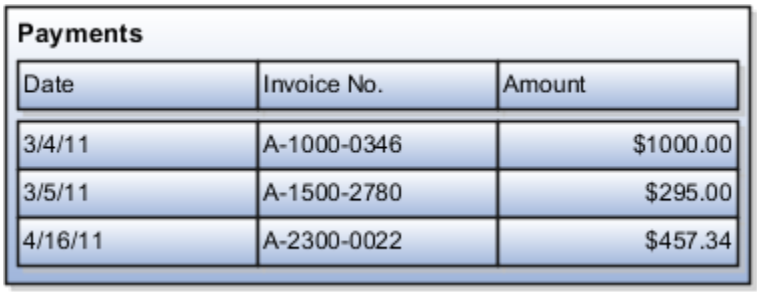
A single-row attribute group contains a collection of attributes that will be displayed as separate fields in region named for the attribute group. For example, a single-row attribute group named Home Address contains the attributes appropriate for a home address. Another single-row attribute group named Work Address contains similar attributes appropriate for an office address. When these attribute groups are displayed in the user interface, the attribute fields for each group are arranged compactly within a region titled with the name of the attribute group.

The following figure shows the compact user interface layout for the single-row attribute groups named Home Address and Work Address.



In a multiple-row attribute group, the attributes are displayed as columns in a table that represents the attribute group. Each row of the table is considered to be an attribute in the attribute group. The collective set of values contained in a row is considered the meaning of the attribute. The table is displayed in the user interface within a region titled with the attribute group name. No other fields are displayed in the table. For example, a multiple-row attribute group named Payments contains the attributes Date, Invoice No., and Amount. Each row of the table describes a payment, and is a value of the Payments attribute group.

The following figure shows the tabular user interface layout for the multiple-row attribute group named Payments.



Additional Information Attributes

You can create additional information attributes, which are based on descriptive flexfields rather than extensible flexfields . Descriptive flexfields can only have one context available at a single time, while extensible flexfields can have multiple contexts available. If you only need a single category and usage, then descriptive flexfields are sufficient. You create descriptive flexfields using tasks in the Setup and Maintenance work area. For example, use the task Manage Catalog Descriptive Flexfields to define descriptive flexfields for catalogs. The Additional Information region on the

Specifications tab of the Edit Items page then displays the flexfield context segments based on the current value of the context.

Transactional Attributes

Transactional attributes capture values that are generated during transaction flows involving an item, rather than when the item is created. Create transactional attributes on the Transactional Attributes tab of the Edit Item Class page. For each attribute, specify its effective dates. Based on these effective dates, choose the downstream applications where the attribute is effective, associate the attribute with a predefined set of allowed values, and specify an optional default value and unit of measure. You can also set the attribute to be inactive, required, read-only, or hidden during the effective dates. The transactional attributes of an item class are inherited by its item class descendants. You can overwrite the metadata for a transactional attribute in a child item class, but doing so breaks the inheritance. Transactional attributes can be defined on all types of items.

Related Topics

- What's an item?
- Create Items
- Item Specifications and Attributes
- Manage Transactional Attributes
- Item Main Specifications

Manage Transactional Attributes

A transactional attribute is an attribute that gets its value during a transaction at runtime instead of during setup at design time. Use it when you can't predict what value the attribute will have at runtime.

What makes a transactional attribute different from other types of attributes is that a transactional attribute doesn't usually have a set of predefined values. Instead, the value of a transactional attribute is often different for each transaction, and you usually don't know what that value is until your end user does the transaction.

Here are some examples where you might want to use a transactional attribute:

- Greeting cards. The text is unique each time that you have a transaction for that item.
- Digital artwork. Your customer uses a color picker to pick a color for the item from over 16 million different values.
- Auto service. You record the mileage and the license plate number each time you service your customer's car. The mileage is unique for each transaction. The license plate number is unique for each customer.
- Window shades. The height and width of each shade is unique for each customer.

An application that's downstream of the Product Information Management work area captures the value for the transactional attribute during the actual transaction. For example, Oracle Order Management is a downstream application. Let's say you sell configurable greeting cards where your customer can select different card sizes, style, artwork, font, the greeting, and so on. The Order Entry Specialist, an end-user, creates a sales order in Order Management, adds a greeting card to an order line, and uses a transactional attribute to enter a unique greeting that the customer dictates. The greeting is different for each card.

Use a transactional attribute when you can't predict what value the attribute will have at runtime, or when maintaining values for it isn't realistic. In the digital art example, you could theoretically create a list of values that contains the

16,777,216 possible color values, but that's not realistic. Instead, consider each of those values as unique, and use a transactional attribute to capture it at runtime.

Sometimes you have to make a judgment call on whether to use a transactional attribute. In the window shade example, assume you sell shades in 1/8" increments, from 8 inches up to 120 inches wide. Instead of using a transactional attribute for the width, you could use an inches attribute and a fractions attribute. The list of values for the Inches attribute would contain 112 values, and the list of values for the Fraction attribute would contain 8 values. That's a realistic scenario.

Note

- You must associate each transactional attribute with a value set.
- You specify a transactional attribute on the item class.
- You use the item class to specify attributes for the transactional attribute. Here are some of the attributes of a transactional attribute.

Attribute	Description
Required	Specify whether the downstream application must include a value for the transactional attribute.
Default Value	Specify the default value of the transactional attribute.
Value Set	Value set that you can use with the transactional attribute.
Read Only	Specify whether the downstream application can only read the transactional attribute or can change its value too.
Hidden	Specify whether to show or hide the transactional attribute.
Active	Specify whether the attribute is active or not active.

A transactional attribute is also known as a transactional item attribute, or TIA. They mean the same thing.

Inheritance

Transactional attributes are inherited across the item class hierarchy. If you change the parent item class, then the child item class immediately inherits that change. For example:

- Metadata of a transactional item attribute is part of a domain. If you modify the metadata in the child item class, then you'll break the inheritance. Any change you make at the parent item class for the transactional item attribute won't get inherited. Multiple records with same date range can exist if they belong to different domains. For example, the transactional item attribute **Memory** is associated with a **Domain** and order capture. Each of the domains may use a different set of metadata for its own purpose. So, two different records can exist for the same date range. You would enter only a start date for a transactional attribute. Product Information Management will automatically calculate the end date according to the next Date Effective value.

- You can modify the Start Date or the metadata of a future effective record. If the starting date has already occurred, then you can't modify the record.

Pages and Attribute Groups

Use pages and attribute groups to structure your data.

- Combine and sequence attribute groups into pages.
- There's no limit on the number of attribute groups that you can associate with a page
- Create a page for an item class and inherit it further down in the item class hierarchy.
- Add an attribute group to pages sequentially. Use the sequence to determine how to display attribute groups in an item.
- Add an attribute group for an inherited page in a child of the item class.

A Functional Item page is another type of page that you can use to to associate a page in the application. The application scope identifies the application that uses these pages.

Data Quality

You can associate attributes for the purpose of standardization and matching, to be performed when items are created. You restrict the attributes to be processed for standardization or matching or both. Selecting Standardization allows the data quality engine to return the standardized values for these attributes. Matching allows the data quality engine to return any existing items which matches the value of these attributes and are potential duplicates.

Lifecycle Phases

Sequential lifecycle phases enable you to track and control the lifecycle phases of items. Each phase represents a set of tasks and deliverables that are required before promoting the item to the next phase. You can associate lifecycle phases to an item class which are created elsewhere. Lifecycle phases are inherited down the item class hierarchy and new lifecycle phases can be added to child item classes. For example, the lifecycle phases for a computer component item class might be: Concept, Prototype, Production, and Retirement.

Templates

Template is a defined set of attribute values used during item creation. When you apply a template to an item, you overlay or default-in the set of attribute values to the item definition. For example, every time users in a particular organization create new items, the attributes, as defined and approved by the organization appear in the appropriate fields. No user guesswork is required, and time is saved during the creation of items with a similar form, fit and function. Templates are created for each item class. Templates are specific to organization. Templates are inherited down the item class hierarchy. You can define both operational attributes and user defined attributes for each template.

Search and Display Format

Search formats provide a convenient way to save frequently used search criteria. Search formats created at item class will be available to all users. Search formats are always created in the context of item class. Display formats enable you to predefine search display views. You can use these views to look at different sets of item attributes that are returned by the search. Display formats created at item class will be available to all users. Display formats are always created in the context of item class.

Import Format

An import format identifies the base and user-defined attributes in an item class that are imported into the application using a spreadsheet. Consequently, when you import item business entities from a spreadsheet, the items are all

imported into the particular item class defined in the import format. These imported item business entities inherit all the attribute groups defined for the specific item class. You can't edit the layout of an import format once its created.

Related Topics

- Item Attributes

Required Item Attributes

When you define items, you must enter values for certain attributes if the related attribute contains a value. The following table lists attributes that are required to be defined if the related attribute has also been defined.

Table listing the attributes that must be defined if other related attributes contain values.

Required Attribute	Related Attribute
Service Duration	Required if **Contract Item Type** is set to **Service** or **Warranty**.
Service Duration Period	Required if **Contract Item Type** is set to **Warranty**.
Demand Time Fence Days	Required if **Demand Time Fence** is set to **User-defined**.
Outside Processing Unit Type	Required if **Outside Processing Item** is set to **Yes**.
Planning Time Fence Days	Required if **Demand Time Fence** is set to **User-defined**.
Planning Time Fence Days	Required if **Planning Time Fence** is set to **User-defined**.
Release Time Fence Days	Required if **Release Time Fence** is set to **User-defined**.
Service Duration	Required if **Service Duration Period** is not **Null**.
Shelf Life Days	Required if **Lot Expiration (Shelf Life) Control** is set to **Item shelf life days**.
Source Organization	Required if **Replenishment Source Type** is set to **Inventory** or **Subinventory**.
Starting Lot Number	Required if **Lot Control** is set to **Full** lot control, and **Lot Generation Organization** Parameter is set to **Item Level.**
Starting Lot Prefix	Required if **Lot Control** is set to **Full** lot control, and **Lot Generation Organization** Parameter is set to **Item Level.**
Starting Serial Number	Required if **Serial Number Control** is set to **Predefined** serial numbers.
Starting Serial Prefix	Required if **Serial Number Control** is set to **Predefined** serial numbers.

Required Attribute	Related Attribute
Substitution Window Days	Required if **Substitution Window** is set to **User Defined**.

Related Topics

- Interdependent Item Attributes
- Item Specifications and Attributes

Additional Item Attributes

Additional item attributes are based on descriptive flexfields and are used to capture detailed information about an item, such as characteristics and specifications, as well as business process information.

Descriptive flexfield definitions for additional attributes include the name of the attribute and attribute values.

Additional attributes are associated to items or item revisions and are listed in **Additional Attributes** on the Item Specification tab.

The Completeness Score indicates the percentage of completeness for an item and it's based on the values that are returned for specific attributes. This will appear based on the rule that your administrator configures.

Related Topics

- Item Specifications and Attributes
- User-Defined Item Attributes and Attribute Groups
- Overview of Descriptive Flexfields
- Set Product Rules to Update the Completeness Score

User-Defined Item Attributes and Attribute Groups

User-defined attributes are based on extensible flexfields. Create an attribute group to determine which attributes are used at runtime. Extensible flexfields or user-defined attributes aren't available to customers who only license Product Model.

User-defined attributes can have a static or dynamic list of valid values, or a range of values. You can define the values for user-defined attributes when you create the item and the values remain the same for the life cycle of the item.

You can save user-defined attributes within attribute groups. You can associate user-defined attributes with items by adding attribute groups to item classes.

For example, items that are part of the Small Gasoline Engines item class include the following specifications:

- RPM
- Power
- Oil and fuel mixture

- Weight

You can define an attribute for each of these specifications and then group these attributes together as the Engine Performance attribute group.

You can create attribute groups on the Manage Attribute Groups page.

Note:

- Avoid creating similar names for the item class and flexfield attribute groups. Distinct names help ensure that rules run without error.
- Avoid using ItemCategory in the Display Name and API name fields for extensible flexfields and extensible flexfield attribute groups created on items.
- For user-defined attributes, you can optionally define validation rules to be applied when the user inputs data.
- When you create an attribute group, make sure you specify the API name.

An attribute group can be a single row, multirow, or variant.

Multirow attribute groups enable you to associate multiple sets of attribute values with the same object instance. It gives you the ability to store multiple additional attributes that are dependent on the item, organization, attribute group, and a unique value within the attribute group.

For example, if your item is a book, you can create an attribute group named Chapters that contain the following attributes:

- Chapter number
- Name
- Number of pages

You can associate multiple rows of Chapters with a book, while Name and Number of pages require a single row each. The Chapter number attribute is identified as a part of the unique key.

Note: Don't add more than 20,000 rows of data to a multirow attribute group for a single item. For optimal performance, it's recommended not to add more than 1000 rows. If you've to add more rows, consider configuring additional multirow attribute groups or custom objects.

After you create the attribute group and attributes, perform these tasks to complete the extensible flexfield setup:

- Associate the attribute to the item class using the Manage Item Class task.
- Deploy the attribute using the Deploy Item Extensible Flexfields task.

Tip: Sets of user-defined attribute groups can be organized on a single page that can then be linked from the **Specifications** tab.

Related Topics

- Item Specifications and Attributes
- Additional Item Attributes
- Overview of Extensible Flexfields
- Create Extensible Flexfields or User-Defined Attributes
- Associate Attribute Groups and Pages to Item Classes

Healthcare Attributes

You can store healthcare product data using the predefined extensible flexfield attributes for an item.

Use this feature to:

- Track the medical device and medical surgical device manufacturing in Global Unique Device Identification Database (GUDID) compliance standards.
- Expedite any necessary configuration for the medical device, medical surgical device manufacturing, and healthcare provider industries.
- Easily integrate or communicate with the U.S. Food and Drug Administration (FDA) GUDID database and Electronic Health Records (EHR)/Electronic Health Records (EMR) systems by having an allotted OOTB attribute.

These privileges must be assigned to your role to access this feature:

- Edit Healthcare Extensible Flexfields (ORA_HC_EFF_VIEW_PRIV)
- Manage Healthcare Extensible Flexfields (ORA_HC_EFF_EDIT_PRIV)

For information about the list of extensible flexfield attributes for healthcare, see *Item Healthcare Specifications* .

To associate healthcare attributes with items, see *Associate Healthcare Attributes With Items* .

Associate Healthcare Attributes With Items

You can associate the healthcare attributes with items by adding the healthcare attribute groups to item classes. When you create an item, you can specify the values for these attributes.

To add the healthcare attributes to a page so that they display as a separate section called Healthcare attributes for an item, associate contexts with pages, add pages to categories (item class), and perform flexfield deployment.

Related Topics

- Healthcare Attributes
- Additional Item Attributes
- Create Extensible Flexfields or User-Defined Attributes
- Associate Attribute Groups and Pages to Item Classes

Interdependent Item Attributes

Certain attribute values depend on other attribute values. For example, **Planning Method** must be **Not Planned** if **Pick Components** is set to **Yes**.

The item attribute interdependencies are:

Attribute	Must be	If
Allow Use of Common Supplies	**Null**	**Hard Pegging Level** is **None**.
Assemble to Order	**No**	**Pick Components** is set to **Yes** or **Structure Item Type** is set to **Planning**
Assemble to Order or Pick Components	**Yes**	**Structure Item Type** is set to **Model** or **Option Class**
AutoCreated Configuration	**Null**	**Base Model** is **Null**
Base Model	**Null**	**Structure Item Type** doesn't equal **Standard** or **Pick Components** is set to **Yes**
ATP Components	**None**	**Pick Components** is set to **No**, and **Assemble to Order** is set to **No**, and **WIP Supply Type** is set to anything other than **Phantom**
Billing Type	**Null**	**Contract Item Type** is set to anything other than **Subscription**
Billing Type	**Not Null**	**Enable Service Billing** set to **Yes**
Structure Item Type	**Standard**	**Effectivity Control** is set to **Model / Unit Number**
Structure Item Type	**Model**	**Configurator Model Type** is set to **Container**
Structure Model Type	**No**	If the organization is process manufacturing enabled, and tracking is set to primary and secondary.
Build in WIP	**No**	**Inventory Item** is set to **No** or **Structure Item Type** doesn't equal **Standard**
Check ATP	**Null**	**Contract Item Type** is set to anything other than **Subscription**

Attribute	Must be	If
Check Material Shortage	**No**	**Transactable** is set to **No** **Note:** This attribute is reserved for future use.
Container Type	**Null**	Container is set to **No**
Contract Coverage Template	**Null**	**Contract Item Type** is set to **No**
Contract Duration	**Null**	**Contract Item Type** is set to **No**
Contract Duration Period	**Null**	**Contract Item Type** is set to **No**
Contract Item Type	**Null or Subscription**	**Inventory Item** is set to **Yes**
Contract Item Type	**Subscription**	**Subscription Dependency enabled** is set to **Yes**
Create Configured Item, Structure	**Null**	If the item isn't an ATO model.
Costing Enabled	**Yes**	**Inventory Asset** is set to **Yes**
Customer Ordered	**No**	**Structure Item Type** is set to **Planning** or Product Family
Customer Ordered	**No**	**Contract Item Type** is Warranty
Customer Orders Enabled	**Yes**	**Configurator Model Type** is set to **Container**
Customer Orders Enabled	**No**	**Customer Ordered** is set to **No** or **Yes**
Customer Orders Enabled	**Yes**	**Customer Ordered** is set to **Yes**
Cycle Count Enabled	**No**	**Contract Item Type** is set to anything other than **Subscription**
Defaulting	**Fixed, Default, or No Default**	**Tracking** is set to **Primary and Secondary**
Defaulting	**Default or No Default**	**Tracking** is set to **Primary** and **Pricing** is set to **Secondary**
Default Lot Status	**Null**	**Lot Status Enabled** is set to **No**

Attribute	Must be	If
Default Serial Status	**Null**	**Serial Status Enabled** is set to **No**
Default SO Source Type	**Internal**	**Ship Model Complete** is set to **Yes**
Demand Time Fence Days	**null**	**Demand Time Fence** isn't **User-defined**
Deviation Factor +	**Null**	**UOM Dual Control** is set to **No Control**
Deviation Factor -	**Null**	**UOM Dual Control** is set to **No Control**
Expense Account	**Yes**	**Inventory Asset Value** is **No** and **Inventory Item** is **Yes**
Grade	**N**	If **Lot Control** is **Null**
Height	**Null**	Dimensions UOM is **Null**
Inspection Required	**No**	Receipt Routing is set to anything other than Inspection
Internal Ordered	**No**	**Structure Item Type** doesn't equal Standard
Internal Orders Enabled	**No**	Internal Ordered is set to **No**
Internal Volume	**Null**	Container, Vehicle, or Weight UOM are set to **Null**.
Internally Transferred	**Yes**	Shippable is set to **Yes**.
Inventory Item	**No**	**Contract Item Type** is set to anything other than **Null** or **Subscription**
Inventory Item	**Yes**	**Default Receiving Subinventory**, **Default Move Orders Subinventory**, **Default Shipping Subinventory** are set to anything other than **Null**; or **Structure Item Type** is set to Product Family,
Invoice Enabled	**No**	**Invoiceable Item** is set to **No**
Lead Time Lot Size	**1**	**Repetitive Planning** is set to **Yes**
Length	**Null**	**Dimensions UOM** is **Null**

Attribute	Must be	If
Lot Status Enabled	**No**	**Lot Control** is set to **No Control**
Lot Split Enabled	**No**	**Lot Control** is set to **No Control**
Lot Merge Enabled	**No**	**Lot Control** is set to **No Control**
Lot Substitution Enabled	**No**	**Lot Control** is set to **No Control**
Lot Translation Enabled	**No**	**Lot Control** is set to **No Control**
Match Configuration	**Null**	If the item isn't an ATO model
Maximum Load Weight	**Null**	**Container**, **Vehicle**, or **Weight UOM** is set to **Null**
Minimum Fill Percentage	**Null**	Container and Vehicle are both set to **No**
Move Order Receipts Subinventory	**Null**	**Transactable** is set to **No**
Orderable On Web	**No**	**Customer Orders enabled** is set to **No**
Outside Processing Item	**N**	If **Purchased** is set to **No** or if ASL has VMI.
Outside Processing Unit	**Y**	**Outside Processing Item** is **Yes**
Pick Components	**No**	**Assemble to Order** is set to **Yes** or **Structure Item Type** is set to **Planning** or **Planning Method** doesn't equal **Not planned**
Pick Components	**Yes**	**Ship Model Complete** is set to **Yes**
Planning Time Fence Days	**null**	**Planning Time Fence** isn't **User-defined**
Planning Method	**Not Planned**	**Pick Components** is set to **Yes**
Purchasable	**No**	Purchasing Item is set to No or **Contract Item Type** is set to anything other than **Subscription**
Purchasable	**Yes**	**Default Source Type** is set to **External**
Purchasing Tax Code	**Null**	**Taxable** is set to **Null**
Recovered Part Disposition	**Null**	**Billing Type** is **Labor**

Attribute	Must be	If
Release Time Fence Days	**Null**	**Release Time Fence** isn't **User-defined**
Replenishment Point	**Minimum Quantity**	Either **Maximum Quantity** or **Fixed Quantity Attributes** is enabled.
Replenishment Point	**Minimum Days of Supply**	Either **Maximum Days of Supply of Fixed Quantity** is enabled.
Restrict Locators	**Locators not restricted to predefined list**	**Restrict Subinventories** is set to **Subinventories** not restricted to predefined list or **Stock Locator Control** is set to **Dynamic Entry Locator Control**
Restrict Subinventories	**Subinventories restricted to predefined list**	**Restrict Locators** is set to **Locators** restricted to predefined list
Returnable	**No**	**Contract Item** is set to anything other than **Subscription**
Safety Stock Method	**Non-MRP Planned**	**MRP Planning Method** is set to **Not Planned**
Secondary UOM	**Null**	**UOM Dual Control** is set to **No Control**, or **Tracking** and Pricing are both set to Primary
Serial Number Generation	**At Receipt or Predefined**	**Equipment** is set to **Yes** or **Effectivity Control** is set to **Model / Unit Number**
Serial Status Enabled	**No**	**Serial Control** is set to **No Control**
Service Request	**Null. Disabled, or Inactive**	**Contract Item Type** is **Service**, **Warranty**, or **Usage**
Service Importance Level	**Null**	**Contract Item Type** is set to Service
Serviceable Product	**No**	**Support Service** is set to **Yes**
Shippable	**No**	**Structure Item Type** is set to **Planning** or **Contract Item Type** is set to anything other than **Subscription**
Source Organization	**Null**	**Inventory Planning Method** is set to **Vendor-Managed Inventory**
Source Type	**Null**	**Inventory Planning Method** is set to **Vendor-Managed Inventory**

Attribute	Must be	If
Stockable	**No**	**Inventory Item** is set to **No**
Stockable	**No**	**Billing Type** is **Labor** or **Expense**
Stockable	**Yes**	ASL is VMI
Stock Locator Control	**No locator control or Pre-specified locator control**	**Restrict Locators** is set to **Locators** restricted to predefined list
Support Service	**No**	**Serviceable Product** is set to **Yes**
Taxable	**Yes**	**Tax Code** is set to anything other than **Null**
Transactable	**No**	**Stockable** is set to **No**
Transactable	**No**	**Billing Type** is **Labor** or **Expense**
Transactable	**Yes**	ASL is VMI
Unit Volume	**Null**	**Volume UOM** is **Null**
Unit Weight	**Null**	**Weight UOM** is **Null**
Width	**Null**	**Dimensions UOM** is **Null**
WIP Overcompletion Tolerance Value	**Null**	**Overcompletion Tolerance Type** is set to **Null**
WIP Supply Locator	**Null**	On Organization Parameters window, **Locator** is set to **None** or **Locator** controls is **Subinventory Level** and **Selected WIP Supply Subinventory** has **Locator Control** as **None** or **Locator** controls is **Subinventory Level**, **Selected WIP Supply Subinventory** has **Locator Control** as **Item Level**, and **Item Locator Control** is **None**

Related Topics

- Required Item Attributes
- Item Specifications and Attributes

Item Specification Reference

Item Asset Management Specifications

The following are the Item Asset Management specification attributes and their possible values. You set these attributes when you define or update items.

Item Asset Management Specification Attributes

Attribute Name	Description
Asset Class	Indicates the asset class an item belongs to.
Create Fixed Asset	Indicate when the item is asset capitalized. Options are post receipt of the item or at invoice.
Default Repair Transaction Code	Set the default repair transaction codes that are used in the warranty coverage, warranty contracts, work order resources, and material transactions of an asset item as a part of supplier warranty. Before setting this code, define the repair transaction codes of type Transaction Code (TXN_CODE) in the **Manage Condition Event Codes** task in the Setup and Maintenance work area.
Enable Asset Tracking	Indicate whether the item is tracked as an asset in installed base.
Enable Asset Maintenance	Indicate whether asset maintenance is enabled for an item.
Enable Genealogy Tracking	Indicate that the item is enabled for genealogy tracking. Product genealogy provides complete transaction tracking from raw materials through production and shipment for a product instance. It also provides the structure history of a product instance for source and where-used tracing.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Costing Specifications

The following are the item costing specification attributes and their possible values. You set these attributes when defining or updating items.

Item Costing Specification Attributes

Attribute Name	Description
Costing Enabled	Indicates whether to report, value and account for any item costs

Attribute Name	Description
	For example, you might disable costing for reference items, or for invoice only (non-stock) items that you never ship and never hold in inventory.
Include in Rollup	Indicate whether to include an item in the cost rollup.
Inventory Asset Value	Indicate whether to value an item as an asset in inventory Turning this option off indicates an expense item.
Standard Lot Size	The amount of a particular item that is ordered from the plant or a supplier or issued as a standard quantity to the production process.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item General Planning Specifications

The following are the attributes that make up item general planning specifications and their possible values. You set these attributes when defining or updating items.

Item General Planning Specification Attributes

Attribute Name	Description
Apply Order Modifier to Start Quantity	Determine whether to apply the item order modifier settings to the calculation of planned order start quantities. This attribute is a part of the Planning Order Modifiers attribute group. Select one of the following: • Yes • No
Autoexpire ASN	Indicate whether the advance shipment notice expires automatically. This attribute is reserved for future use.
Bucket Days	Enter the number of days to dynamically calculate safety stock quantities. The planning process multiplies the **Safety Stock Percent** by the average gross requirements and divides by the number of days that you enter here.
Carrying Percentage	Enter the percentage used to calculate the annual carrying cost. This is the percentage of the unit cost that represents your internal cost to stock one unit for one year.
Consigned	If selected, the item is consigned, meaning residing at your location, but owned by the supplier
Days of Cover	Number of days times average demand that defines the safety stock level.
Demand Period	Number of days to use for average daily demand calculation.

Attribute Name	Description
Fixed Days Supply	Enter the number of days used to modify the size and timing of planned order quantities. The planning process suggests planned order quantities that cover net requirements for the period defined by this value. The planning process suggests one planned order for each period. For example, use this to reduce the number of planned orders for a discrete component of a repetitive item.
Fixed Lot Multiplier	Enter the fixed lot multiple quantity or repetitive rate (units per day). Planning algorithms (reorder point, min-max, MPS, and MRP) use this to modify the size of planned order quantities or repetitive daily rates. When net requirements fall short of the fixed lot size multiplier quantity, planning algorithms suggest a single order for the fixed lot size multiplier quantity.
Fixed Order Quantity	Enter the quantity used to modify the size of planned order quantities or repetitive daily rates. When net requirements fall short of the fixed order quantity, the planning process suggests the fixed order quantity. When net requirements exceed the fixed order quantity, the planning process suggests multiple orders for the fixed order quantity. For discrete items, use this attribute to define a fixed production or purchasing quantity. For repetitive items, use this attribute to define a fixed production rate. For example, if your suppliers can provide the item in full truckload quantities only, enter the full truckload quantity as the fixed order quantity.
Fixed Quantity	Indicate the fixed quantity for reorder.
Forecast Type	Indicate the forecast type. This can be one of the following values: • Order Forecast • Sales Forecast • Historical Forecast
Inventory Planning Method	Select an option for organization level planning: • **Min-max**: You define a minimum quantity that you want on hand. When you reach this quantity, you reorder. You also define a maximum on-hand quantity that you don't want to exceed. • **Not planned**: No planning method used. Select this option for MRP or MPS planned items. • **Reorder point**: The reorder point is calculated based on the planning information you define for this item.
Make or Buy	Select the option that applies to items with the Inventory Item set to **Yes**. The Planner Workbench uses this to populate the appropriate value for the implementation type. You can't change this value if open orders exist for the item. • **Make**: Usually manufactured. The Planner Workbench populates the implementation type Discrete job. The planning process passes demand down from manufactured items to lower level components. • **Buy**: Usually purchased. The Planner Workbench populates the implementation type to Purchase Requisition. The planning process doesn't pass demand down from purchased items to lower level components.
Maximum Days of Supply	Indicates the maximum allowed days of supply for replenishment reorder.
Maximum Min-Max Quantity	Indicate the maximum on-hand quantity that you don't want to exceed for **Min-Max Planning**.
Maximum Order	Enter the maximum order quantity or repetitive rate (units per day) of the item. Planning algorithms (reorder point, min-max, MPS, and MRP) use this to modify the size of planned order quantities or repetitive daily rates.

Attribute Name	Description
	For discrete items, when net requirements exceed the maximum order quantity, planning algorithms suggest the maximum order quantity. For repetitive items, when average daily demand for a repetitive planning period exceeds of the maximum order quantity, planning algorithms suggest the maximum order quantity as the repetitive daily rate. For example, use this to define an order quantity above which you do have insufficient capacity to build the item.
Maximum Order Quantity	Enter the maximum order quantity or repetitive rate (units per day) of the item. Planning algorithms (reorder point, min-max, MPS, and MRP) use this to modify the size of planned order quantities or repetitive daily rates. For discrete items, when net requirements exceed the maximum order quantity, planning algorithms suggest the maximum order quantity. For repetitive items, when average daily demand for a repetitive planning period exceeds of the maximum order quantity, planning algorithms suggest the maximum order quantity as the repetitive daily rate. For example, use this to define an order quantity above which you do have insufficient capacity to build the item.
Minimum Days of Supply	Indicate the minimum allowed days of supply before replenishment must occur.
Minimum Min-Max Quantity	Indicate the minimum on-hand quantity before replenishment for **Min-Max Planning**.
Minimum Order	Enter the minimum order quantity or repetitive rate (units per day). Planning algorithms (reorder point, min-max, MPS, and MRP) use this to modify the size of planned order quantities or repetitive daily rates. For discrete items, when net requirements fall short of the minimum order quantity, planning algorithms suggest the minimum order quantity. For repetitive items, when average daily demand for a repetitive planning period falls short of the minimum order quantity, planning algorithms suggest the minimum order quantity as the repetitive daily rate. For example, use this to define an order quantity below which it's unprofitable to build the item.
Minimum Order Quantity	Enter the minimum order quantity or repetitive rate (units per day). Planning algorithms (reorder point, min-max, MPS, and MRP) use this to modify the size of planned order quantities or repetitive daily rates. For discrete items, when net requirements fall short of the minimum order quantity, planning algorithms suggest the minimum order quantity. For repetitive items, when average daily demand for a repetitive planning period falls short of the minimum order quantity, planning algorithms suggest the minimum order quantity as the repetitive daily rate. For example, use this to define an order quantity below which it's unprofitable to build the item.
Organization	Optionally enter the organization from which an internal requisition draws the item. This applies only when Inventory is the replenishment source type. You can choose organizations that meet the following criteria: • The item is assigned to the source organization • The source organization has a valid inter-organization relationship with the current organization The source organization can be your current organization if the item is MRP planned and you choose a non-nettable Source Subinventory.

Attribute Name	Description
Percent	Enter the percent to dynamically calculate safety stock quantities for the item. The planning process multiplies this percent by the average gross requirements. The planning process uses this attribute when you set **Safety Stock** to **MRP planned percent**.
Planner	Enter the material planner assigned to plan this item. You must define planner codes for your organization before updating this attribute. The planner defined here's responsible for approving all move order lines requesting the item if move order approvals are used. If an item is supplier managed, you must enter a planner for the item.
Release Authorization Required	Authorization is requireD before a sales order is created. You can set the authorization as follows: • **Customer**: You must obtain release authorization from the customer. • **Supplier**: You must obtain release authorization from the supplier. • **None**: Release authorization isn't required
Safety Stock Planning Method	Planning method to be used in calculating safety stock levels.
Subcontracting Component	Indicate the subcontracting type associated to this item when it's used as a subcontracting component in **Chargeable Subcontracting**. The available choices are: • **Pre-positioned**: The item is a subcontracting component sold to a manufacturing partner independently of subcontracting components • **Synchronized**: The item is a subcontracting component sold to a manufacturing partner and is synchronized with a specific order.
Subinventory	Enter the subinventory within the source organization from which an internal requisition draws the item. This applies only when **Inventory** or **Subinventory** is the replenishment source, and only when you specify a source organization. For MRP planned items, you must enter a non-nettable source subinventory when the source organization is the current organization.
Replenishment Type	Indicate the way in which the requests are fulfilled. • **Organization**: Fill requests by generating an interorganization or intraorganization transfer order pulling stock from existing inventory. • **Supplier**: Fill requests by generating a purchase requisitions. • **Subinventory**: Fill requests by generating a movement requests. **Note:** If you are using Supplier Scheduling, it's generally recommended that this field be left blank. Otherwise, it could override your sourcing rules.
Window Days	Enter the period for which a forecast is considered by the planning engine.

Related Topics

- Item Specifications and Attributes
- Required Item Attributes
- Interdependent Item Attributes

Item Inventory Specifications

The following are the item inventory specification attributes and their possible values. You set these attributes when defining or updating items.

Item Inventory Specification Attributes

Attribute Name	Description
Bulk Picked	Enables you to pick items in bulk.
Check Material Shortage	Indicates to check for material shortages for the item. Enable this option to trigger a material shortage alert and a shortage notification during transactions of the item. **Note:** This attribute is reserved for future use.
Child Lot Enabled	Indicates whether an item is subject to lot control for transactional purposes when a parent lot is specified for transactional purposes. If you enable child lot control, you can specify a parent lot and a child lot for transactional purposes. The application processes transactions for the lot regardless of whether you specify the parent lot for the transaction. You can't modify this field if inventory transactions or reservations exist for the item. If you choose to control this attribute at the master organization level, then you can modify this attribute only if no transactions or reservations exist for the master organization or any child organizations that are associated with the master organization.
Control: Lot	Indicates the ability to use lot numbers during material transactions for tracking of batches of Item. • **No control**: Don't establish lot control for the item. • **Full control**: Track inventory balances by lot number. You must specify a lot number for issues and receipts. You can establish lot number control only for an item that has no quantity on hand. If lot control is controlled at the master item level, the application checks for on hand quantity in all child organizations.
Control: Shelf Life	Indicates how long items in a given lot remain available. • **Shelf life days**: Specify the shelf life of the item in days. The application starts counting the shelf life on the day you receive the lot into inventory. After the specified number of days, the application sends a warning message. • **No control**: Shelf life control not established for this item. • **User-defined**: Specify an expiration date as you receive each lot. You receive a warning but aren't prevented from using the lot after expiration. **Note:** You can't change lot expiration control when on-hand quantity of the item exists. If lot expiration is controlled at the master level, the check for on-hand quantity is against the sum of on hand quantities in all child organizations.
Copy Lot Attributes	Indicates whether the child lot inherits all the specifications of the parent lot, except descriptive flexfield attributes. Descriptive flexfield attributes aren't copied.

Attribute Name	Description
	Select this check box to ensure that a new child lot inherits all the attributes of the parent lot, except descriptive flexfield attributes. If you don't select the check box, then the child lot doesn't inherit the parent lot attributes.
Cycle Count Enabled	Indicates whether the item is on for automatic cycle count scheduling.
Default Grade	Enter a default grade for the item. All items in grade control must have a default grade. You can use the grade change transaction to change the default grade of an item. **Note:** You can change the default grade even if you performed transactions for the item.
Default Lot Status	Indicate the default lot status for the item.
Default Serial Status	Indicate the default serial status of the item.
Expiration Action	Enter the default action code for this item. This is the action listed on the expiration notification when the lot expires, fails quality inspection, or falls within the experimental error results region.
Expiration Action Interval	Enter the number of days the application adds to the expiration date before it performs an action on the lot. **Lot Expiration Date** + **Lot Expiration Action Interval** = **Default Expiration Action Date**
Format Validation	Select this check box to ensure the child lot number conforms to the child lot parameters that you define for the organization or the item. If you select this check box, then the application verifies the child lot number is the lot number concatenated with the child lot prefix and a numeric suffix for the lot number of the correct zero-padded length, if you enable zero padding at the item level.
Generation	• **Dynamic entry at inventory receipt**: Create and assign serial numbers when you receive the item. Thereafter, for any material transaction, you must provide a serial number for each unit. • **Entry at sales order, transfer order or work order issue**: Create and assign serial numbers when you issue (ship) the item against a sales order or transfer order. If you select this option, serial numbers are required at ship confirm. If you receive an item on an RMA (return material authorization), you must specify the same serial numbers that you used at the sales order issue. Serial numbers are also required when you issue components to a work order using a Work in Process Material Issue transaction. If you receive the item back into inventory using a Work in Process Material Return transaction, then you need to reference the same serial numbers used when the component item was issued to the work order. When using this serial generation option, serial number entry isn't required for material transactions other than sales order, transfer order, or work order issue for this item. For example, serial number entry isn't required for a receipt or a subinventory transfer for an item. • **No serial number control**: Serial number control not established for this item. All material transactions involving this item will bypass serial number information. • **Predefined serial number**: Assign predefined serial numbers when you receive the item. Thereafter, for any material transaction, you must provide a serial number for each unit. • **Entry at inventory pick**: Create and assign serial numbers at pick confirmation for an item. If you select this option, you must enter a serial number at pick confirmation for inventory transactions such as sales order pick, transfer order pick, transfer order return pick, or movement request issue. If serial generation is controlled at the item level, the check for on-hand quantity is against the sum of on-hand quantities in all child organizations.

Attribute Name	Description
	Note: The lot substitution feature isn't supported for items with serial control or any combination such as lot serial, lot revision, or LSR combinations
Grade Controlled	Indicate whether the item is grade controlled in addition to lot controlled. A grade code represents specific characteristics of a lot. If you select the **Grade Controlled** check box, then you must specify a default grade for the item. **Note:** You can't modify this check box if you have transacted the item.
Hold Days	This is the number of days added to the lot creation date before you can release the lot. If you don't enter a number, the application assumes that you can use the lot immediately. **Lot Creation Date** + **Hold Days** = **Default Hold Release Date**.
Inventory Item	This attribute enables you to stock and transact this item. You must turn this option on if you want to enable the following item attributes: • Stockable • Transactable • Build in WIP This is an item-defining attribute. If you enable this option, the item is automatically assigned to the default category set for the Inventory functional area.
Stock Locator Control	Indicates the physical area within a subinventory where you store material, such as a row, aisle, bin, or shelf. • **Dynamic entry**: Define locators when you use them, either as you receive or ship items. • **No control**: Locator control not established. • **Prespecified**: Define locators before you use them.
Lot Divisible	Select this check box to enable you to allocate, reserve, or move partial lot quantities. If you don't select this check box you must transact the full lot quantity for this item. You can't modify this field if transactions exist for the item.
Lot Merge Enabled	Indicate whether many lots of a lot controlled item may merge into one lot.
Lot Split Enabled	Indicate whether a lot-controlled item may split into many lots.
Lot Status Enabled	Indicate whether an item is subject to status control at the Lot Level. For example, a lot may be **In Test**. A company may have a policy of allowing **Lots In Test** to be used in planning and reserved, but not shipped. A lot may also be **In Quarantine**. For example, a company may have a policy of not allowing lots **In Quarantine** to be used in planning. If an item is lot-controlled, you can indicate the **Default Lot Status**. For example, a lot of microprocessors may be at the Quarantine status until a soak test is complete.
Lot Substitution Enabled	Indicates whether lots can be substituted in a transaction. **Note:** The lot substitution feature isn't supported for items with serial control or any combination such as lot serial, lot revision, or LSR combinations.
Lot Translate Enabled	Enables you to translate lots within a lot controlled item.

Attribute Name	Description
Maturity Days	This is the number of days added to the lot creation date to determine the lot maturity date. If you don't enter a number, the application assumes the lot is mature at creation. **Lot Creation Date** + **Maturity Days** = **Default Lot Maturity Date**.
Negative Measurement Error	Enter the percentage of negative variance acceptable before cycle count creates an adjustment transaction. Your physical cycle count can be less than the quantity on hand by an amount less than or equal to this percentage. For example, suppose quantity on hand is 100 and negative tolerance is 10%. Inventory doesn't require approval for if the counted quantity is within tolerance. For physical counts that are less than 90 units, Inventory creates an adjustment, changing the quantity on hand to the physical count.
Parent	This field determines how the application generates child lot numbers at the item level. You can choose to generate child lot numbers across the organization level or at the item level. The available choices are: • **Parent and Child**: When set to parent and child, the parent lot number acts as a prefix, and the next available lot number is added to form the child lot. For example if the parent lot is **P1**, then the child lot would be **P1-1**. • **Parent**: When set to parent, child lot numbers are based on the same sequence as the lot number. For example, if the parent lot is **P1**, then the child lot is **P2**.
Positive Measurement Error	Enter the percentage of positive variance acceptable before cycle count creates an adjustment transaction. Your physical count can be greater than the quantity on hand by an amount less than or equal to this percentage. For example, suppose quantity on hand is 100 and positive tolerance is 10%. Inventory doesn't require approval for if the counted quantity is within tolerance. For physical counts over 110 units, Inventory creates an adjustment, changing the quantity on hand to the physical count.
Prefix	If you choose to generate child lots at the item level, you can optionally choose to enter a child lot prefix.
Reservable	This attribute enables you to create material reservations for the item. You can reserve an item only when you have sufficient inventory. **Note:** You can't turn off reservation control if reservations exist.
Restrict Locators	Indicate whether to restrict transaction of this item to or from a locator specified in the list you define with the **Subinventory Information** window. You can't restrict locators unless you also restrict subinventories.
Restrict Subinventory	Indicate whether to restrict transactions of this item to or from a subinventory specified in a list you define with the **Subinventory Information** window. This option must be turned on if you choose to restrict locators.
Retest Interval	Enter the number of days after the creation date before you need to retest the lot. The application adds this number to the lot creation date to determine the default retest date. **Lot Creation Date** + **Retest Interval** = **Default Lot Retest Date**.
Revision Control	This attribute enables you to create item revisions. If you enable this option, you must specify an existing revision number for issues and receipts on the **Revisions** tab.
Serial Status Enabled	Indicate whether an item is subject to status control at the serial Level. For example, a company may have a policy of allowing all functions on serial numbers that are new, and a policy of allowing reservations to reworked serial numbers, not including reworked items. If an item is serial-controlled, you can indicate the **Default Serial Status**. For example, a serial number of analytical equipment may be at the **Quarantine** status until a soak test is complete.

Attribute Name	Description
Shelf Life Days	Enter the number of days each lot is active. At receipt, the application adds the shelf life days to the application date to determine the expiration date. This is used only when you choose **Shelf life days** for **Lot Expiration Control**.
Starting Number: Child Lot	Enter the starting number for each child lot. This field is enabled only if the item is child lot enabled.
Starting Number: Lot	Enter a starting lot number for the item. When you set **Lot Number Generation** to **At item level** in the **Organization Parameters** window, the application uses this number as the starting lot number. When you create additional lots for the item, the application increments each succeeding lot.
Starting Number: Serial	Enter a starting numeric suffix for all serial numbers for this item only. You must enter a value when you choose **Predefined** and when **Serial Number Generation** is **At item level** in the organization parameters. This starting numeric suffix is used when you define your serialized units. Thereafter, this number is incremented for each succeeding serial number.
Starting Prefix: Lot	Enter a starting prefix for all lot numbers you define for this item. When you set **Lot Number Generation** to **At item level** in the **Organization Parameters** window, then the application uses this prefix when you define a lot number for the item.
Starting Prefix: Serial	Enter a starting alpha prefix for all serial numbers you define. You must enter a value when you choose **Predefined** and when **Serial Generation** is **At item level** in the organization parameters. This prefix is used when you define your serialized units.
Stocked	Indicate whether an item can be stocked. This attribute enables you to stock the item. You can set this attribute only when you enable the **Inventory Item** attribute. You must enable this item attribute if you want to transact the item.
Transaction Enabled	Indicates whether transactions can be performed on an item.

Conditions where you can change back and forth between certain serial number generation options

The following table presents conditions where you can change back and forth between certain serial number generation options:

Change To or From	Change to or From	When Allowed
Dynamic entry at inventory receipt	Predefined serial number	Any time
Predefined serial number	No serial number control	Any time
Dynamic entry at inventory receipt	No serial number control	Item has no on-hand quantity
Entry at sales order, transfer order or work order issue	Predefined serial number	Item has no on-hand quantity
Predefined serial number	No serial number control	Item has no on-hand quantity
Dynamic entry at inventory receipt	Entry at sales order, transfer order or work order issue	Item has no on-hand quantity

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Invoicing Specifications

The following are the item invoicing specification attributes and their possible values. You set these attributes when defining or updating items.

Item Invoicing Specifications

Attribute Name	Description
Accounting Rule	Enter an accounting rule to identify special revenue recognition rules for an item, such as recognizing revenue over time. This attribute is for reference information only.
Invoice Enabled	Indicate whether to activate an item. If **Invoiceable Item** is enabled, you can temporarily exclude the item from invoicing by leaving the **Invoice Enabled** cleared. This attribute is optionally set by the **Item Status** code.
Invoiced	Indicate whether to include an item on an invoice. If you turn this option on, you can temporarily exclude from invoicing when **Invoice Enabled** is turned off. This option must be selected if **Invoice Enabled** is selected.
Invoicing Rule	Enter an invoicing rule to determine the period in which you send an invoice when you recognize revenue over time.
Output Tax Classification Code	Enter a tax code to use when calculating tax based on location and tax codes.
Payment Terms	Enter a valid payment terms code. This attribute is for reference information only.
Sales Account	Enter the general ledger account used to record revenue when you bill the customer. If **AutoAccounting** is based on items, accounting entries are created at that time.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Lead Times Specifications

The following are the item lead time specification attributes and their possible values. You set these attributes when defining or updating items.

Item Lead Times Specifications

Attribute Name	Description
Cumulative Manufacturing	Enter the manufacturing lead time of an assembly (in days) plus the largest adjusted cumulative manufacturing lead time of its components, where each is adjusted by subtracting the operation lead time offset. Purchased items have no cumulative manufacturing lead time.
Cumulative Total	Enter the total lead time of the assembly plus the largest adjusted cumulative total lead time of its components, where each is adjusted by subtracting the operation lead time offset.
Fixed	Enter the days required to make an assembly independent of order quantity, such as setup or tear down time.
Lead Time Lot Size	Enter the quantity used to compute processing lead time (as well as fixed and variable lead times). The default value is the item's standard lot size or, if a standard lot size is not defined.
Postprocessing Days	Enter the days required to receive a purchased item into inventory from the initial supplier receipt. You cannot enter a value if the **Make or Buy** attribute is set to **Make**.
Preprocessing Days	Enter the days you must add to purchasing or manufacturing lead time to place an order.
Processing Days	Enter the days required to procure or manufacture an item. For manufactured assemblies, processing days equals manufacturing lead time.
Variable	Enter the time to produce one additional unit of an assembly. Total lead time is variable lead time multiplied by order quantity, plus fixed lead time.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Main Specifications

The following are the item main specification attributes and their possible values. You set these attributes when defining or updating items.

Item Main Specification Attributes

Attribute Name	Description
Approval Status	The approval status of the item.
Engineered	Indicate whether the item was created in Product Development or Product Information Management. If the value is **Yes**, then the item was created in Product Development. If the value is **No**, then the item was created in Product Information Management. You can't change the value of this attribute. However, if you create an item in Product Information Management, you can't set the **Engineered** option to **Yes**. The following validations and rules apply to the **Engineered** option: • If the **Engineered** option is **Yes** for an item, then you can't change the lifecycle phase of the item from Design lifecycle phase to any other phase in Product Information Management. The Change Lifecycle Phase action is disabled and unavailable on the UI. • You can't create a new item revision when the **Engineered** option is **Yes** for the item and the lifecycle phase is Design. The **Manage Revision** action is disabled and unavailable on the UI. • If the **Engineered** option is **Yes** for an item, then in the Design Lifecycle Phase, the following objects are disabled and unavailable on the UI: o Structures tab o MPN (Manufacturer Part o Item Revision Attachment Number) These constraints are applicable only from the UI perspective. • You can create, edit, or query the previous objects using web services and imports from Product Development. • If the **Engineered** option is **Yes** for an item, such items aren't visible in other modules. • In the create item by copy flow, you can't view items in the source list of values when the **Engineered** option of the item is **Yes** and the item is in the Design lifecycle phase.
Item Description	Enter a description for the item.
Formatted Description	Indicate the description of the item using a rich text component, that can be displayed by various downstream applications.
Item Status	Item status codes set or default the values for attributes in status control. Predefined item status codes are **Active** and **Inactive**. Both predefined and user-defined item status codes control certain item attributes designated as status-controlled attributes. All of the status-controlled attributes have the values Yes and No. The status-controlled attributes are available in the **Status Controlled Attributes** table in the section. These attributes control the functionality of an item over time
Lifecycle Phase	Each phase represents a set of tasks and deliverables that are required before promoting the object to the next phase of the item life cycle For example, the life cycle phases for a computer component life cycle might be: • Concept • Design • Prototype • Pre-Production • Production • Retirement

Attribute Name	Description
Pack Type	Also known as Trade Item Unit Descriptor (TIUD) Describes the Global Trade Item Number (GTIN) hierarchy level. Hierarchy is used as link between different levels of a product (item) logistical chain.
Style Item	A Style represents a silhouette or model item use to group multiple similar items (SKUs) within. Generally, the items group in a particular style item will be differentiated by 1 or more product variant attributes. Examples include color and size for fashion, flavor and size for grocery.
User Item Type	Oracle provides several types by default at installation. These types correspond to the item templates. Select one of these values: • ATO model • Freight • Inventory Type • Kit • Model • Option class • Outside processing model • PTO model • Phantom item • Planning • Product Family • Purchased item • Reference item • Subassembly **Note:** When creating an item, **User Item Type** lists only the enabled user item types and doesn't list the disabled user item types. When updating an existing item, **User Item Type** lists both the enabled and disabled user item types. However, if you select a disabled item type, it displays an error.
Conversions	Indicate the conversion of the transactions: • **Item specific**: Use only unit of measure conversions unique to this item. • **Standard**: Use only standard unit of measure conversions. If you want to use only standard conversions don't create item specific conversions. **Note:** To redline user item type for both engineering and commercialization change orders, use the simplified change management interface.
Defaulting Control	• **Fixed**: The application stores inventory in both the primary and secondary units of measure. You can enter an item quantity in one unit of measure, and the application converts the quantity to the secondary unit of measure and displays both quantities. • **Default**: The application stores inventory in both the primary and secondary units of measure. You can enter an item quantity in one unit of measure, and the application converts the quantity to the second unit of measure and displays both quantities. You can change the quantity in the secondary unit of measure, without changing the quantity in the primary unit of measure.

Attribute Name	Description
	• **No Default**: The application stores inventory in both the primary and secondary units of measure. Use this option when the default conversion between the two units of measure is usually not the same. The application doesn't automatically display in the secondary unit of measure when you specify the quantity for the primary unit of measure. You manually enter the quantity of the secondary unit of measure before you process a transaction. The secondary quantity can fluctuate from the default conversion by the factors that you specify in the Deviation + and Deviation - attributes.
Negative Deviation Factor	You can enter acceptable deviations as decimal values. This attribute is assigned at the organization level. This produces a plus or minus tolerance of acceptability. For example, if the allowable transaction quantity deviation for the item is ten percent lower than the established conversion, you would enter **10** in this field.
Positive Deviation Factor	You can enter acceptable deviations as decimal values. This attribute is assigned at the organization level. This produces a plus or minus tolerance of acceptability. For example, if the allowable transaction quantity deviation for the item is ten percent higher than the established conversion, you would enter **10** in this field.
Primary Unit of Measure	This is the stocking and selling unit of measure. Any necessary conversions are based on this unit of measure. This attribute isn't updatable and assigned at the organization level.
Secondary Unit of Measure	This attribute may be controlled at the Master or Organization level based on the setup. If the item is dual unit of measure controlled, or priced in a secondary unit of measure, you can specify a secondary unit of measure.
Tracking Unit of Measure	This attribute controls how on-hand balances are tracked. This attribute is assigned at the organization level. The available values are: • **Primary**: The application tracks the on-hand balances by the primary unit of measure. • **Primary and Secondary**: The application tracks the on-hand balances by both the primary and secondary units of measure.
Long Description	Indicate the long description for this item. This long description is supported in multiple languages.
Pricing	This attribute is assigned at the organization level. Indicate if pricing is based on the primary or secondary unit of measure. If you set the value to secondary, the application reprices the orders line at ship confirmation. You can change the Pricing Unit of Measure (UOM) from **Primary** to **Secondary** but not conversely. You can change the pricing UOM only when there are no orders. When the secondary UOM is available for the item, the **Defaulting Control** value will determine whether the conversion from primary to secondary quantity is defaulted by the application and that can be over written or fixed. In this case, you can't edit the converted quantity. The positive and negative deviation factors allow the flexibility to deviate from the converted quantities. When **Defaulting Control** is set to **No Default**, it does not default a value in the down-stream applications. In this case, dual UOM items aren't supported in order management. Dual UOM items are supported in order management only when the type of the Item Structure is set to **Standard**.

Status Controlled Attributes

Attribute Group	Attribute
Costing	Costing Enabled

Attribute Group	Attribute
Costing	Inventory Asset Value
Inventory	Inventory Item
Inventory	Stocked
Inventory	Transaction Enabled
Invoicing	Invoice Enabled
Invoicing	Invoiced
Process Manufacturing	Hazardous Material
Process Manufacturing	Process Execution Enabled
Process Manufacturing	Recipe Enabled
Purchasing	Purchasable
Purchasing	Purchased
Purchasing	Taxable
Sales and Order Management	Customer Ordered
Sales and Order Management	Customer Orders Enabled
Sales and Order Management	Internally Transferable
Sales and Order Management	Transfer Orders Enabled
Service	Enable Contract Coverage
Web Store	Orderable on the Web
Work in Process	Build in WIP

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes
- Set Up Dual Units of Measure

Item MRP and MPS Planning Specifications

The following are the item MRP and MPS Planning specification attributes and their possible values. You set these attributes when you define or update items.

Item MRP and MPS Planning Specification Attributes

Attribute Name	Description
Acceptable Early Days	Enter the number of days before which the planning process won't reschedule orders. The planning process only suggests rescheduling out if: • The new calculated order date is later than the original order due date plus the acceptable early days • The new calculated order doesn't violate the order of current schedule receipts. For example, if the original order due date is **10-JUN**, and **Acceptable Early Days** is **3**, the planning process not suggest rescheduling if the new due date is less than or equal to **13-JUN**. When rescheduling doesn't occur (because of **Acceptable Early Days**), a second order, due before the first, won't be rescheduled past the first order This lets you reduce plan nervousness and eliminate minor reschedule recommendations, especially when it's cheaper to build and carry excess inventory for a short time than it's to reschedule an order. This applies to discrete items only.
Calculate ATP	Indicate whether to calculate and print available to promise (ATP) on the Planning Detail Report, using the following formula: **ATP** = **planned production** - **committed demand** Where: • **Planned production** = planned orders, scheduled receipts (purchase orders, jobs, and repetitive schedules), suggested repetitive schedules, nettable quantity on hand. • **Committed demand** = sales orders, component demand (from planned orders, discrete jobs, suggested repetitive schedules, and lot expiration). Committed demand doesn't include forecasted demand. **Note:** You can use this attribute only when you integrate Product Hub with Oracle E-Business Suite. This attribute is invalid in an Oracle Fusion Cloud Applications only scenario, where Product Hub interacts with the Fusion Applications source system.
Create Supply	Indicates if the application can suggest supply for this item. If you use an item as a substitute to meet demand for another item, then this attribute indicates whether you can create new supply for the item as part of meeting the demand for the original item.
Create Supply After	Indicates the date after which you can use the item to create supply for Oracle Fusion Cloud Supply Chain Planning. You can't set a past date for this attribute. You can specify this date only if **Create Supply** is set to **Yes**.
Critical Component	If selected, marks the item as a critical component for MPS and DRP planning. This lets you plan master scheduled items with respect to only critical component and their material resource constraints. Hidden by default.
Demand Time Days	Calculates the demand time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you enter here.
Demand Time Fence	Select an option to determine a point in time inside which the planning process ignores the forecast demand and considers only the sales order demand when calculating gross requirements. This reduces the risk of carrying excess inventory. Calculate the demand time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you select here. The demand time fence values are:

Attribute Name	Description
	• **Cumulative manufacturing lead time**: The cumulative manufacturing lead time for the item. • **Cumulative total lead time**: The total manufacturing lead time for the item. • **Total lead time**: The total lead time for the item. • **User-defined**: The value you enter for **Demand Time Fence Days**.
Distribution Planned	Indicate the kind of planning to be used for the item. It's the application of replenishment inventory calculations to assist in planning of key resources contained in a distribution system, such as sourcing and transport. Hidden by default.
Exclude from Budget	Indicate whether the item is to be excluded from the budget. Hidden by default.
Forecast Control	Select an option to determine the types of demand you place for the item. This guides the key processes of two-level master scheduling: forecast explosion, forecast consumption, planning, production relief, and shipment relief. This is appropriate only for items that are models, option classes, options, or mandatory components of models and option classes. • **Consume forecast**: You forecast demand directly, rather than by exploding the forecast demand. You can use this value only with Oracle E-Business Suite Supply Chain Planning Applications. • **Consume and derive forecast**: You forecast demand directly, explode the forecast demand, or use a combination of both methods. You can use this value only with Oracle E-Business Suite Supply Chain Planning Applications. • **Consume then explode**: You first forecast demand directly, then by exploding the forecast demand. • **Explode then consume**: You first explode the forecast demand, then directly forecast demand. • **None**: You place sales order demand but don't forecast demand.
Maximum Inventory Days of Supply	Enter the maximum amount necessary of any materials and supplies in the application that are needed to achieve the desired business metric like throughput rate, cost, due date performance, inventory, days of supply, and so on. Hidden by default.
Maximum Inventory Window	Enter the maximum amount necessary (in terms of quantity) of any materials and supplies in the application that are needed to achieve the desired business metric like throughput rate, cost, due date performance, inventory, days of supply, and so on. Hidden by default.
Pegging	Indicate the planning process uses to decide when to calculate and print end assemblies for the item. Hidden by default. • **Soft Pegging**: This option allocates supply to demand based on the Reservation Level option set in the MRP Plan options. • **End Assembly Pegging**: This option traces the end assembly the item is pegged to at the top of the bill of material. Even if you don't select end assembly pegging, you can still calculate and view end assemblies on-line. • **End Assembly / Soft Pegging**: Choose this option for both soft pegging and end assembly pegging. • **Hard Pegging**: This option allocates supply to demand based on the Reservation Level option set in the MRP Plan options. This pegs supply to demand and demand to supply by project at all levels of a bill of material. This lets you allocate supply to demand and generate planned orders based on the plan-level options. • **End Assembly / Hard Pegging**: Choose this option for both hard pegging and end assembly pegging. • **None**: This option disables project material allocation, end assembly pegging, and full pegging.

Attribute Name	Description
Planned Inventory Point	Indicate if the item is an Inventory Point item. This means that material can be stored at the item level without losing materials or quality characteristics. Inventory Points generally point to major stocking phases in the manufacturing cycle. Hidden by default.
Planning Method	Select the option that decides when to plan the item: • **Not planned**: The item doesn't require long-term planning of material requirements. Choose this option for high volume and or low cost items that don't warrant the administrative overhead of MRP; typically dependent demand items. You can't use this option unless the Pick Components attribute is checked. • **MRP planning**: Choose this option for non-critical items that don't require manual planning control, typically dependent demand items. • **MPS planning**: You master schedule the item and require manual planning control. Choose this option for items with independent demand, items that are critical to your business, or items that control critical resources. • **MRP/DRP Planned**: Choose this option when you want both MRP and DRP planning for the item. • **MPS/DRP Planned**: Choose this option when you want both MPS and DRP planning for the item. • **DRP Planned**: Choose this option when you have multiple organizations for which you're exercising Distribution Requirements Planning for the item.
Planning Time Days	Calculates the planning time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you enter here.
Planning Time Fence	Choose one of the following options to determine a point in time inside which certain restrictions on planning recommendations apply. For discrete items, the planning process can't suggest new planned orders or rescheduling existing orders to an earlier date. For repetitive items, the planning process can only suggest new daily rates that fall inside the acceptable rate increase and decrease boundaries. A time fence increases manual control of the plan, minimizing short term disruption to shop floor and purchasing schedules. Calculate the planning time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you select here. The planning time fence values are: • **Cumulative manufacturing lead time**: The cumulative manufacturing lead time for the item. • **Cumulative total lead time**: The total manufacturing lead time for the item. • **Total lead time**: The total lead time for the item. • **User-defined**: The value you enter for **Demand Time Fence Days**.
Preposition Point	The preposition point represents the push type relationship with a trading partner. When planning arrives at a preposition point for an item, it pushes all the existing supply downstream until this point. In the case of multi-souring repair, you should not set the preposition point for the item-repair supplier. If you set select this check box for a multi-sourced item, then the application pushes the entire inventory to the first trading partner it encounters in the planning process. Hidden by default.
Release Time Days	Calculate the demand time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you enter here.
Release Time Fence	Choose an option to determine a point in time inside which planned orders for discretely planned items are automatically released as WIP jobs or purchase requisitions. The planned orders must meet the following auto-release criteria:

Attribute Name	Description
	• The new order date lies within the auto-release time fence for any order type (make or buy). **Order Date = Start Date - Preprocessing Lead Time.** For example, if the **Order Date** is **April 5** and the **Start Date** is **April 7**, if the preprocessing lead time is 2 days. When the order date falls inside the release time fence, the planned order is released. • The lead time isn't compressed • The orders are for standard items (won't release models, option classes, and planning items) • The orders aren't for Kanban items • The orders are for DRP planned items in a DRP plan, MPS planned items in an MPS plan, or MRP planned items in an MRP plan. • The release time fence option is defined as anything other than Do not auto-release, Do not release (Kanban), or Null • DRP, MPS, and MRP plans must be run with the Memory-based Planning Engine Auto-release of repetitive schedules isn't applicable for repetitively planned items. No material availability check is performed before WIP jobs are released. Calculate the release time fence as the plan date (or the next workday if the plan is generated on a day that's not a workday) plus the value you select here. • **Cumulative manufacturing lead time**: The cumulative manufacturing lead time for the item. • **Cumulative total lead time**: The total manufacturing lead time for the item. • **Total lead time**: The total lead time for the item. • **User-defined**: The value you enter for **Demand Time Fence Days**. • **Do not auto-release**: The item can't be auto-released. • **Do not release (Kanban)**: For Kanban items, prevent release of planned orders manually or automatically.
Repair Lead Time	Time, in days, to repair the part at the supplier site. The definition is in context with the final usable part of product and not based on the defective part. For example, if you can repair an item A from a defective item B, planning assumes the repair lead-time from item A when it calculates the repair of defective item B. A repair organization requires the time equal to the repair lead-time to convert a defective part to a usable part. You define the repair lead time in the repair organization. Valid values are decimal numbers greater than or equal to 1.
Repair Program	Indicates the relationship with the supplier for the repair of an item. Hidden by default. The available choices are: • Advanced Exchange on Defective Receipt • Advanced Exchange on PO Issue • Repair Return
Repair Yield	Indicates the yield percentage when you upgrade or repair a defective part. For example, a repair yield of 23% is entered as 0.23. The repair yield is always in context with the final usable part or product and not based on the defective part. The repair yield represents the yield of the repair process. You define the repair yield in the repair organization. Valid values are decimal numbers greater than zero and less than 1.
Round Order Quantities	Indicate whether the planning process uses decimal or whole number values when calculating planned order quantities or repetitive rates. When this option is turned on, decimal values round up (never down) to the next whole number. The planning process carries any excess quantities and rates forward into subsequent periods as additional supply.
Shrinkage Rate	Enter a factor that represents the average amount of material you expect to lose during manufacturing or in storage. The planning process inflates demand to compensate for this expected loss. For

Attribute Name	Description
	example, if on average 20% of all units fail final inspection, enter 0.2; the planning process inflates net requirements by a factor of 1.25 (1 / 1 - shrinkage rate).
Substitution Window Days	If the substitution window type is User-defined, then you specify the number of days a substitute is considered for an item. Hidden by default.
Substitution Window Code	Hidden by default. Enter a value that calculates the time a substitute can be considered for an item. • **Cumulative manufacturing lead time**: The cumulative manufacturing lead time for the item. • **Cumulative total lead time**: The total manufacturing lead time for the item. • **Total lead time**: The total lead time for the item. • **User-defined**: The value you enter for **Demand Time Fence Days**.
Target Inventory Days of Supply	Enter the target inventory (in terms of days of supply) to be achieved by the planning engine. Hidden by default.
Target Inventory Window	Enter the target inventory (in terms of quantity) to be achieved by the planning engine. Hidden by default.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Order Management Specifications

The following are the item order management specification attributes and their possible values. You set these attributes when you define or update items.

Item Order Management Specifications

Attribute Name	Description
ATP Components	Indicate whether to include, in available to promise checking, additional components in the bill of material for ATO and PTO items. These components are included in ATP checking if **Check ATP** for the component is turned on.
ATP Rule	Enter a user-defined available to promise rule. ATP rules define supply and demand sources, time-fence parameters, and available-to-promise calculation methods. You can give ATP rules meaningful names, such as **ATO ATP Rule**. If there is no ATP rule for the item, the organization's default ATP rule is used.
Back-to-Back Enabled	Indicate how items are handled downstream. Set value to Yes to enable constant back-ordering, so that downstream applications automatically order items before they go out of stock. If this attribute is set to Yes, then you must also set the following attributes to Yes: • Inventory Item • Reservable

Attribute Name	Description
	• Customer Ordered, Customer Orders Enabled (if Autocreated Configuration is set to No)
Charge Periodicity	This attribute is controlled at the master organization level. The time the application uses to price a persistent or recurring service or product. Each unit of measure in this class is a periodicity value. An item has only one periodicity value. Default value: null
Check ATP	Indicate whether to check available to promise or capable to promise information when placing demand. • Check Material Only • Check Material and Resources • Check Resources Only • None This attribute also determines whether you can view component ATP information for material requirements in Work in Process.
Customer Ordered	Indicate whether to allow an item to be ordered by external customers. This attribute must be turned off if the **Structure Item Type** attribute is set to **Planning**. If you turn this attribute on, you can temporarily exclude an item from being ordered by turning **Customer Orders Enabled** off.
Customer Orders Enabled	Indicates whether an item is currently customer orderable You can initially define an item with **Customer Ordered Item** turned on and **Customer Orders Enabled** turned off. This means prices can be defined for the item, but no orders can be placed for it. This attribute is optionally set by the Item Status code.
Eligibility Rule	This attribute is no longer used to determine product eligibility.
Internally Transferable	Indicate whether to allow an item to be ordered on an internal requisition. If you turn this attribute on, you can temporarily exclude an item from being ordered on an internal requisition by turning **Internal Orders Enabled** off.
Transfer Order Enabled	Indicate whether you can currently order an item internally. If you turn this attribute on, you can specify the item on an internal requisition, if **Internal Ordered Item** is also on.
Order Management Transaction Enabled	Indicates whether demand can be placed for an item and whether shipment transactions are interfaced.
Order Management Indivisible	Indicates whether or not the item can be ordered in fractions. Select **No** to enable ordering in decimal or fractional quantities.
Overshipment Tolerance	Indicates the amount of the shipment you can ship below at the time of ship confirmation.
Picking Rule	Indicate picking rule that defines the order in which subinventories, locators, lots, and revisions are picked.
Returnable	Indicate whether to allow customers to return an item.

Attribute Name	Description
RMA Inspection Required	Indicate whether inspection is required for items returned by the customer. The item then must be separately transferred to inventory.
Ship Model Complete	Indicate whether any configuration derived from this model can ship only when all required quantities of all configuration components (options or included items) are available.
Undershipment Tolerance	Indicate the amount of the shipment that can be shipped below at the time of ship confirmation.
Shippable	Indicate whether to ship an item to a customer. A warning is issued if you change the value of this attribute when open sales order lines exist. This attribute must be turned off if the **Structure Item Type** attribute is set to **Planning**.
Sales Product Type	Indicates whether this product can participate in specific sales management processes by default, without customization. For example, if the value is **Subscription**, the products will follow Subscription Management (that is, Subscription Sales Management process). If the value is **One Time service**, they are the service products and will be referred in the Service Sales Management process. The available options are: • Goods • Subscription • One Time Service • Training • Included Warranty • Extended Warranty • Service Level Agreement • Software Maintenance • Preventative Maintenance • Installation For more information about sales product types, see *Significance of the Sales Product Type Field*.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Physical Specifications

The following are the item physical specification attributes and their possible values. You set these attributes when you define or update items.

Item Physical Specifications

Attribute Name	Description
Collateral	Indicate whether the item is collateral.
Container	Identify that items are containers used for shipping sales orders.
Container Type	For items identified as containers, indicate the type of the container.
Downloadable	Indicate whether the item can be downloadable.
Electronic Format	Indicate whether the item exists only in an electronic format and not physical.
Event	Indicate whether the item is event.
Dimensions: Height	Enter the height of the item.
Dimensions: Length	Enter the length of the item.
Dimensions: Width	Enter the width of one unit of item.
Indivisible	Indicates whether the item can be ordered in fractions.
Internal Volume	Enter the internal volume of the container or vehicle in the same UOM as the Unit Volume. This attribute is used by shipping to calculate container capacity restrictions.
Maximum Load Weight	Enter the maximum load weight of the container or vehicle.
Minimum Fill Percent	Enter the minimum fill percentage under which the container or vehicle should be used.
Unit	Indicate the unit of measure for the dimension of the item.
Unit Volume	Enter the volume of one unit of item.
Unit Weight	Enter the weight of one unit of item.
Vehicle	Indicate whether vehicles are used for shipping the items.
Warehouse Equipment	Indicate whether the item is equipment.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Process Manufacturing Specifications

The following are the item process manufacturing specification attributes and their possible values. You set these attributes when you define or update items.

Note: You can use these attributes only when you integrate Product Hub with Oracle E-Business Suite. These attributes are invalid in an Oracle Fusion Cloud Applications only scenario, where Product Hub interacts with the Fusion Applications source system.

Item Process Manufacturing Specification Attributes

Attribute Name	Description
CAS Number	Indicate the Chemical Abstracts Service (CAS) registry number. The CAS number uniquely identifies a chemical substance. The CAS scientists assign a CAS registry number to a substance when it enters the CAS registry database. The CAS scientists identify new substances and assign them in sequential order in the database.
Hazardous Material	Indicate if the item is hazardous.
Process Costing Enabled	Select this check box if you plan so use the process costing module with this item. You must enable the Inventory Asset Value attribute to enable process costing. If the organization is process manufacturing enabled, the master level and organization level control doesn't apply for costing. The application stores costs for each organization and if multiple organizations need to use the same cost, then you must perform the setups in process costing.
Process Execution Enabled	Select this check box if you plan to use this item in a production batch as an ingredient, product, or by-product. This attribute isn't mutually exclusive of the Build in WIP attribute. You can set both attributes to yes to use the item in both WIP and process manufacturing.
Process Quality Enabled	Select this check box if you plan to use the process manufacturing quality module with this item. You must select this check box if you plan to create samples and specifications for this item.
Process Supply Locator	Enter a locator from which the item is normally consumed as an ingredient in process manufacturing.
Process Supply Subinventory	Enter a subinventory from which the item is normally consumed as an ingredient in process manufacturing. This subinventory represents the production shop floor or the staging area.
Process Yield Locator	Enter a locator in which you place the results of a production batch.
Process Yield Subinventory	Enter a subinventory in which you place results of a production batch.
Recipe Enabled	Select this check box to enable use of this item in recipes or formulas in process manufacturing. You can modify this attribute at any time, however; if you deselect the check box you can't use this item in future recipes.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Purchasing Specifications

The following are the Item Purchasing specification attributes and their possible values. You set these attributes when you define or update items.

Item Purchasing Specification Attributes

Attribute Name	Description
Allow Purchasing Document Description Update	Enables the item description to be updated in a purchase order.
Default Buyer	Enter the buyer assigned to purchase an item.
Hazard Class	Use hazard classes to identify categories of hazardous materials for international trade purposes.
Input Tax Classification Code	Select the appropriate tax code for the item. The tax code shows the tax authorities and rates that are available to use for this item. You must select the taxable attribute to enable this field.
Inspection Required	Indicate whether to inspect an item upon receipt from the supplier, before paying the corresponding invoice.
Invoice Close Tolerance Percentage	Enter the percentage tolerance to automatically close purchase order shipments. Closed for Invoicing is a status change only. You can invoice match additional items against the shipment later.
Invoice Match Option	Indicate the invoice matching used. Values can be: • Order • Receipt
Last Contract Price	Track the most recent price at which an item was purchased and sync item cost with EHR systems.
List Price	Enter the value that used as the default price on a purchase order, requisition, RFQ, or quotation. When performing supplier inventory replenishment, a list price must be specified in order to automatically generate a requisition.
Market Price	Enter the market value for an item. This attribute isn't currently used.
Match Approval Level	Status of the Match Approvals. It can be either: • Null (blank) • 2 Way • 3 Way • 4 Way
Negotiation Required	Indicate whether negotiation is required.
Outside Processing	Indicate whether you can add the item to an outside processing purchase order line. You can select this option only if **Purchased** is also selected.
Outsourced Assembly	Indicate whether this is an outsourced assembly item. Selecting this check box indicates that the assembly item has subcontracting components. You can select this attribute only if you enabled charge base chargeable subcontracting.
Price Tolerance Percentage	Enter the price tolerance percent, the maximum price percentage over the normal price range for an item. For example, if the tolerance percent is 5, the maximum acceptable price on a purchase order is 5% over the requisition price. Any purchase order price 5% above the requisition price is unacceptable, and you can't approve the purchase order.
Purchasable	Indicate whether to order an item on a purchase order. You can set this only when **Purchased** is enabled.

Attribute Name	Description
	Clearing the Purchasable check box enables you to temporarily restrict the ability to buy. If **Purchasable** is set to **Master Level** control, then **Purchased** must be set to Master Level control. This attribute is optionally set by the Item Status code.
Purchased	Indicate whether to purchase and receive an item. Turning this option on lets you set the **Purchasable** attribute. If an item is vendor managed, you must select this option.
Receipt Close Tolerance Percentage	Enter the percentage tolerance used to automatically close purchase order shipments. You can receive additional items against the shipment later.
Receipt Required	Indicate whether you must receive an item before you can pay the invoice.
Rounding Factor	Enter a number between 0 and 1. This factor determines how to round the quantity on an internal requisition that results from conversions between the requisition line unit of measure and the item unit of issue. This factor insures that the unit of issue resolves to an integer, rather than a fractional amount.
Taxable	Indicate whether the supplier charges a tax.
UN Number	Enter the United Nations identification number. UN numbers are used to identify specific materials (hazardous materials, for example) for international trade purposes.
Unit of Issue	Enter the unit of measure you typically use to issue the item from inventory. You use units of issue to round order quantities, minimizing shipping, warehousing, and handling costs. The unit of issue must be the same for all units of measure belonging to the same unit of measure class as the primary unit of measure.
Unit Type	Indicate the type of unit which is processed outside.
Use Approved Supplier	Indicate whether to use only approved suppliers.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Receiving Specifications

The following are the item receiving specification attributes and their possible values. You set these attributes when you define or update items.

Item Receiving Specification Attributes

Attribute Name	Description
Action	Indicates action to be performed when the receive date is outside the range defined by **Quantity Received Tolerance**. • **None**: No over tolerance enforced. • **Reject**: Reject receipts over the tolerance quantity. An error message displays and you are prevented from receiving quantities exceeding the order quantity by more than the **Quantity Received Tolerance** percent. • **Warning**: A warning message displays if you accept receipts over the quantity determined by the **Over-Receipt Quantity Control Tolerance** percent, but does perform the receipt.
Allow Express Transactions	Indicate whether you can deliver all distributions for this item with one data entry transaction if the quantity to deliver equals the purchase order line balance. If this option is cleared, you must deliver individual distributions separately. Leave this field blank if you want Inventory to use the value defined in the **Receiving Options** window for transactions involving this item.
Allow Substitute Receipts	Indicate whether to allow receipt of defined substitutes in place of this item. You define valid substitutes with the Item Relationships window. Leave this field blank if you want Inventory to use the value defined in the **Receiving Options** window for transactions involving this item.
Allow Unordered Receipts	Indicate whether you can receive an item without a purchase order. If this option is **on**, you can later match the receipt to the appropriate purchase order. If this option is **off**, all receipts for an item must have a corresponding purchase order. Leave this field blank if you want to use the value defined in the **Receiving Options** window for transactions involving this item.
Days Early	Enter the number of days before the promise date you can receive an item without warning or rejection. For example, if you enter **3** and the promise date is a Friday, you can receive the item on Tuesday.
Days Late	Enter the number of days after the promise date you can receive an item without warning or rejection. For example, if you enter **2** and the promise date is a Monday, you can receive the item on Wednesday.
Enforce Ship-to Location	Select an option to control whether the supplier can deliver to a location that differs from the ship-to location defined on the purchase order: • **None**: No ship-to location enforced. • **Reject**: Prevent receipt of items not received to their purchase order ship-to location. • **Warning**: Display a warning message if you attempt to receive an item to a location that differs from the purchase order ship-to location, but perform the receipt, anyway.
Receipt Date Action	Indicate action to be performed when the receive date is outside the range defined by **Days Early Receipt Allowed** or **Days Late Receipt Allowed**. Choices: • **None**: No receipt date exception enforced. • **Reject**: Reject receipts when the receive date is outside the range defined by Days Early Receipt Allowed or Days Late Receipt Allowed. • **Warning**: Display a warning message if you attempt to receive an item outside the range defined by Days Early Receipt Allowed or Days Late Receipt Allowed, but perform the receipt, anyway.
Receipt Routing	Indicates routing of the items at the time of receipt. • **Direct**: At receipt, deliver an item directly to its location. • **Inspection**: Receive an item first, inspect it, then deliver. • **Standard**: Receive an item first, then deliver without inspection.

Attribute Name	Description
Tolerance Percentage	Enter the quantity received tolerance percent, the maximum acceptable over-receipt percentage, used by the **Over-Receipt Quantity Control Action** attribute. For example, if the tolerance percent is **5**, then the acceptable quantity on a receipt transaction is within 5% of the quantity you order on a purchase order line. Any quantity more than 5% over the order quantity is unacceptable.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Service Groups Specifications

These are the Item Service Groups specification attributes and their possible values. You set these attributes when you define or update items.

Item Service Groups Specification Attributes

Attribute Name	Description
Billing Type	Indicates user definable and must be tagged with one of these Billing Category Codes: • Material (M) • Labor (L) • Expense (E) • Consumable (C) Billing Types are used in contracts to define discount percents.
Duration	Enter a positive number to indicate the service duration. Duration and Duration Period are required for warranty and service contract item types only. The number you enter here, along with the duration period, provide defaults when you order the service. You can select any period or unit of measure as long as it's associated with the Time unit of measure class.
Duration Period	Enter a number to indicate the service duration period. Duration and Duration Period are required for warranty and service contract item types only.
Enable for Customer Self Service	Indicate whether the item is eligible for customer self service. The digital customer self service applications use this option to determine which product items are displayed to customer self service users. For example, when the customer is creating a service request, they are shown a product selector dialog box. If **Enable for Customer Self Service** is enabled for the item, then the customer can see this item in the product selector dialog box.

Attribute Name	Description

	Note: On the REST API this translates to an attribute called CSSEnabled.
	`{`
	`"name" : "CSSEnabled",`
	`"type" : "string",`
	`"updatable" : false,`
	`"mandatory" : false,`
	`"queryable" : true,`
	`"allowChanges" : "never",`
	`"precision" : 1,`
	`"title" : "Enable for Customer Self Service",`
	`"maxLength" : "1"`
	`}`

Enable Contract Coverage	Indicate whether the item is eligible to be covered by a service contract. Items eligible for contract coverage must also be defined as Track. When you enable this option, you can order service for this item.
Enable Defect Tracking	Indicate if defects of this item can be tracked.
Enable IoT	Indicates whether the asset item is enabled for IoT.
Enable Provisioning	Select the check box to make the item eligible for electronic fulfillment by the service fulfillment manager. Additional setup is required in the service fulfillment manager.
Enable Service Billing	Select the check box to enable the Billing Type field.
Parts Sourcing	Indicate from where the field service parts are sourced. This attribute is a part of the Service Logistics attribute group. Select any of the following: • **Buy Only**: Service parts will always be bought. • **Inventory then buy**: Service parts will be first sourced from the inventory and if it's not available, will be bought. • **Inventory Only**: Service parts will always be sourced from the inventory.
Recovered Part Disposition	This field is reserved for future use. Currently all three disposition types cause the part to be transacted into the technician's default or designated subinventory. In the future, this field will control the process for returning defective or unused parts to a warehouse consolidation point.
Service Request	Select if you can create a service request for the item. The available choices are: • **Enabled**: You can create a service request for the item. • **Disabled**: Service requests are disabled for the item. • **Inactive**: Service requests are inactive for the item. • **Null**: You can't create a service request for the item.
Service Start Delay	Enter a positive number indicating how many days after shipment the warranty should start.
Standard Coverage	Select the relevant coverage associated with this item only if the Sales Product type is **Included Warranty**. The coverage template is created in Oracle Contract Management Cloud with the appropriate Entitlement type.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Structure Specifications

The following are the item structure specification attributes and their possible values. You set these attributes when you define or update items.

Item Structure Specification Attributes

Attribute Name	Description
Assemble to Order	Indicates that the item is generally built for sales order demand; a final assembly work order is created based on sales order details.
Autocreated Configuration	Indicates whether the item is automatically created. If the base model is null, you can't select this attribute.
Base Model	This attribute may be controlled at the master or organization level, depending on your setup. Displays the model from which an ATO configuration was created. The configuration item lists the ordered model item as its base model.
Create Configured Item	This item attribute is available only for ATO items. The attribute enables you to create configured item bills of materials based on the following options: • Based on Sourcing • Items based on model, structures based on sourcing • Based on Model
Pick Component	Indicates whether an item has a bill of material with options, classes, or items picked from finished goods inventory.
Effectivity Control	Indicates whether the structure of the item is a date effective structure or a model and unit effective structure. Model effective structures are typically associated with project manufacturing. **Note:** You can use the model and unit effectivity control attribute only when you integrate Product Hub with Oracle E-Business Suite. These attributes are invalid in an Oracle Fusion Cloud Applications only scenario, where Product Hub interacts with the Fusion Applications source system. Also, ATO and PTO items can't be model or unit effective.
Structure Item Type	Indicates the type of bill of material the item can include, such as standard, model, planning, and so on.
Configurator Model Type	Indicates the capability to match to one of the following existing configurations of the models: • Standard

Attribute Name	Description
	• Container • Null
Match Configuration	Indicate to match the item structure to one of the existing configurations of the models. Select one of the following: • **No**: Don't match • **One Time**: Match once • **Standard match**: Match using existing configurations of the model. • **User defined match**: Use a user defined logic to determine the match for a newly configured item
Supply Type	When a structure component is created, the supply type is inherited from the parent item. When you create an item by copying another item, the supply type is also copied. You can change the supply type as required.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Web Store Option Specifications

The following are the item web option specification attributes and their possible values. You set these attributes when you define or update items.

Item Web Store Option Specification Attributes

Attribute Name	Description
Back Orderable	Indicate whether this item can be back-ordered, if ATP fails.
Minimum License Quantity	Indicates the minimum number of licenses a customer must order for products ordered and distributed based on licensing.
Orderable on the Web	Indicates whether this item can be ordered from the web.
Web Status	Indicates the web status of this item: • **Disabled**: This item is not web enabled. • **Published**: This item is web enabled and published. • **Unpublished**: This item is web enabled and unpublished.

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Work in Process Specifications

The following are the Item Work in Process specification attributes and their possible values. You set these attributes when you define or update items.

Item Work in Process Specification Attributes

Attribute Name	Description
Build in WIP	Indicate whether to create discrete jobs or repetitive assemblies. This attribute must be disabled if the **Inventory Item** attribute is disabled or if the **Structure Item Type** attribute is not set to **Standard**. This attribute is optionally set by the item status code.
Inventory Carrying Penalty	Specify, in units per day, an inventory carry penalty for jobs that are not completed before they are scheduled to be finished. For example, the inventory carry penalty for a job that is not completed for an item might be 10 per day. **Note:** This attribute is no longer used in Oracle Fusion Cloud Applications.
Locator	Enter the supply locator from which to issue (push) or backflush (pull) an item to work in process. You can also define a WIP supply locator for any bill that uses this item; the bill supply locator overrides the supply locator you define here. You must enter a WIP supply subinventory before you can enter a locator.
Operation Slack	Indicate, in units per day, the operation slack penalty for items having lag time between operations. **Note:** This attribute is no longer used in Oracle Fusion Cloud Applications.
Supply Subinventory	Enter the primary subinventory from which to issue (push) or backflush (pull) an item to work in process.
Tolerance Type	Specify the tolerance type for overcompletion or undercompletion as either percentage, quantity, or leave the field blank. This will be used as the default value when a work order is created for this item in Oracle Fusion Cloud SCM. If you do not select the tolerance type, the tolerance defaults to the tolerance that you set at the organization level. If you din't set a tolerance at the organization level, the default is Null, which signifies that overcompletions or undercompletions aren't allowed.
Tolerance Value	Specify the tolerance value for the selected tolerance type. It determines the acceptable percent or quantity of assemblies that you allow to be overcompleted or undercompleted. For example, if you choose Percent as the Tolerance Type, and enter 100 as the Tolerance Value, you allow overcompletions or undercompletions up to 100 percent of the original job or schedule quantity.

Attribute Name	Description
Type	Indicate a supply type for components. Choices are: • Operation pull • Bulk • Assembly pull • Phantom • Push • Supplier

Related Topics

- Item Specifications and Attributes
- Interdependent Item Attributes
- Required Item Attributes

Item Healthcare Specifications

The following are the Item Healthcare specification attributes. You can set these attributes when you define or update items.

Item Healthcare Specification Attributes

Attribute Group	Attribute Name	Description
Device Status	Combination Product	Indicates that the product contains two or more regulated products that are physically, chemically, or otherwise combined or mixed and produced as a single entity; packaged together as a single package; or packaged separately for the intended use together as defined under 21 CFR 3.2(e). At least one of the products in the combination product must be a device.
	HCT/P Product	Indicates that the product consists of human cells or tissues intended for implantation, transplantation, infusion, or transfer into a human recipient as defined under 21 CFR 1271.3.
	Kit	Indicates that the device is a convenience, combination, in vitro diagnostic (IVD), or medical procedure kit. Kits are a collection of products that are packaged together to achieve a common intended use.
GUDID Miscellaneous Attributes	Contains Natural Rubber Latex	Indicates that the device or packaging contains natural rubber that contacts humans as described under 21 CFR 801.437. Selecting Yes indicates that the device label or packaging contains one of the following statements: • Caution: This Product Contains Natural Rubber Latex Which May Cause Allergic Reactions. • This Product Contains Dry Natural Rubber

Attribute Group	Attribute Name	Description
		• Caution: The Packaging of This Product Contains Natural Rubber Latex Which May Cause Allergic Reactions. • The Packaging of This Product Contains Dry Natural Rubber.
	Not Made With Natural Rubber Latex	Indicates that natural rubber latex wasn't used as materials in the manufacture of the medical product and container and the device labeling contains this information. Only applicable to devices not subject to the requirements under 21 CFR 801.437.
	Prescription Use	Indicates that the device requires a prescription to use.
	Over-the-Counter	Indicates that the device doesn't require a prescription to use and can be purchased over the counter (OTC).
	What MRI Safety Information Does Labeling Contain?	Indicates the MRI Safety Information, if any, that's present in the device labeling. See the ASTM F2503-13 standard for more information.
	Requires Sterilization?	Indicates that the device requires sterilization prior to use.
	Public Device Record Key	A unique key generated by the system to identify a device record, even if the primary DI changes.
	Public Version Number	A number generated by the system to track the public release updates to a device record.
	Public Version Date	Public release date of the device record.
	Public Version Status	The status of a device record associated with a record version change.
GUDID Package Device Identifiers	Package DI Number	A device identifier for the package configuration that contains multiple units of the base package (doesn't include shipping containers).
	Package Discontinue Date	Indicates the date a particular package configuration is discontinued by the labeler.
	Package Status	Indicates whether the package configuration is available or discontinued: • Package Discontinue Date > today or null, Package Status = In Commercial Distribution • Package Discontinue Date =< today, Package Status = Not In Commercial Distribution
	Package Type	Type of packaging of the product (box, carton, and so on)
	Quantity Per Package	Number of packages contained within the particular package configuration with a unique DI.
Healthcare Pricing Attributes	Chargeable	Indicates whether a patient can be charged for the inventory item.
	Charge Code	Charge code of the item.
	Charge Per Unit	Full price of the part including markups.

Attribute Group	Attribute Name	Description
	Base Price:	Base price for the part excluding markups.
	Markup	Distributor markup for the item.
	Revenue Code:	Revenue code of the item.
Healthcare GUDID Primary	UDI Enabled	Indicates if the item is UDI enabled.
	Issuing Agency	Organization accredited by FDA to operate a system for the issuance of UDIs.
	Primary DI Number	Main identifier for a medical device and uniquely identifies a device through its distribution and use. The primary DI number will be located on the base package, which is the lowest package level of a medical device containing a full UDI. For medical devices without packaging, the primary DI number and full UDI may be on the device itself.
	Device Count	Number of medical devices in the base package. For example: Base Package =Box of 100 gloves; Primary DI = 101; Device Count =100
	Unit of Use DI Number	Identifier used by the hospital staff and materials management to account for a single device when the UDI is labeled on a higher level of packaging. The Unit of Use DI doesn't appear on the label.
	Labeler D-U-N-S Number	Identifies the labeler for a version or model of a device. Business number issued by Dun & Bradstreet (D&B) that's used to associate the labeler (company) name and address to a given version of model of a device in GUDID.
	Company Name	Company's name associated with the labeler DUNS number entered in the DI record.
	Company Address:	Company's physical address associated with the labeler DUNS number entered in the DI record.
	Brand Name	The Proprietary/Trade/Brand name of the medical device as used in device labeling or in the catalog. This is recognizable by the consumer. This name is typically registered with USPTO and have the ® and/or TM symbol. This information may: • Be on a label attached to a durable device • Be on a package of a disposable device • Appear in labeling materials of an implantable device
	Device Version	The version or model found on the device label or accompanying packaging used to identify a category or design of a device.
	Catalog Number	The catalog, reference, or product number found on the device label or accompanying packaging to identify a particular product.
	Device Description	Additional relevant information about the device that's not already captured as a distinct GUDID data attribute.
	Device Exempt From Premarket Submission	Device is exempt from FDA Premarket regulations; or a preamendment device.

Attribute Group	Attribute Name	Description
	FDA Listing Number	Number assigned by FDA during registration and listing to all devices in commercial distribution, regardless of pre-market authorization requirements per 21 CFR 807.28(f).
	For Single-use	Indicates that the device is intended for one use or on a single patient during a single procedure.
Healthcare Standardized Codes	UNSPSC	The United Nations Standard Products and Services Code® (UNSPSC®) is a global classification system of products and services. These codes are used to classify products and services.
	UNSPSC Segment	UNSPSC segment of the item.
	UNSPSC Family	UNSPSC family of the item.
	UNSPSC Class:	UNSPSC class of the item.
	UNSPSC Commodity:	UNSPSC commodity of the item.
	HCPCS	The Healthcare Common Procedure Coding System (HCPCS) code of the item. It's a collection of standard codes for medical procedures, supplies, products, and services. The codes help to process health insurance claims by insurers.
	HCPCS Description:	HCPCS description of the item.
	HCPCS Status:	HCPCS status of the item.
Healthcare Additional Attributes	Implantable	Indicates whether the part can be implanted.
	Color	Color of the item.
	Latex Product	Indicates if the item contains latex.
	Sterility	Sterility of the item.
	Breakable Pack?	Indicates if the item can only be used in a pack and not individually.
	Clinical	Indicates whether the item is clinical.
GUDID Sterilization Method	Sterilization Methods	Indicates the method(s) of sterilization that can be used for this device.

Update UOM Values After Creating an Item

You can update the primary unit of measure of a new item request-enabled item, in the draft status.

If the item is a part of a structure, after you update the UOM, you must check and manually update items in any impacted structures.

Note: The primary unit of measure won't be editable for approved items on new item request classes and non-new item request classes. For information about the checks performed when the primary UOM is updated, see Checks Performed for Item Attribute Changes section.

Checks Performed for Item Attribute Changes

The following attributes aren't updated during validation of item attribute changes.

Condition	Affected Attributes
If shipment lines in the transfer order, sales order, or transfer order returns for the item exists	• The following attributes aren't updated: o Transaction Enabled o Shippable o Reservable
If shipment lines in the transfer order, sales order, or transfer order returns for the item exists	• The following attributes aren't updated: o Transaction Enabled o Shippable o Reservable
If there are on hand inventory, pending transactions, pending in transit shipment, cycle count, and physical inventories	The Serial Number Control attribute isn't updated.
If the following are present: • On hand quantity in the org. • Pending transactions. • Cycle count entries are present for the item. • Pending physical adjustments. • Existing shipment lines in the transfer order, sales order, transfer order returns for the item. • Existing RMA lines for (Sales Order Return) the item. • Pending in transit shipments and transfer orders. • Open purchase orders.	The following attributes aren't updated: • Primary Unit of Measure • Secondary Unit of Measure • Positive Deviation Factor • Negative Deviation Factor • Defaulting Control • Revision Control • Track in Installed Base • Child Lot Enabled • Grade Controlled • Stock Locator Control The value for the Lot Divisible attribute isn't changed from Yes to No. However, the value can be changed from No to Yes.

When you update the Primary UOM attribute through import using FBDI, then the following validations are performed.

Downstream Application	UOM Update is Prevented If
Oracle Manufacturing	Work Order and Work Definition is checked regardless of the supply type in Manufacturing – Contract Manufacturing, Direct Item Procurement, or Outside Processing. If the item is existing in any of these, the UOM update is prevented.
Oracle Asset Management	Items classified as an Asset or if associated with an Asset in the Asset Management.
Oracle Costing	Item cost profile exists for the inventory organization that's assigned to the cost organization.
Oracle Shipping	Open shipment lines exist for the item in shipping.
Oracle Receiving	Pending receipts or completed receipts exists for the item in the organization.
Oracle Inventory	Completed inventory transactions exists for the item in the organization.
Oracle Procurement	A purchasing transaction exists for the item.
	A self-service procurement transaction exists for the item.
	A sourcing transaction exists for the item.
Oracle Order Management	Any sales orders references the item.
Oracle Sales Catalog	Item exists in the price book in sales catalog.
Oracle Opportunities	Item is referenced in any sales opportunities.
Oracle Sales Lead	A sales lead exists for the item.
Oracle Sales Forecasting	Item exists in any sales forecast.
Oracle Subscriptions	Item is referenced in subscriptions.
Oracle Fusion Cloud: Supply Chain Orchestration	Open transfer order lines are there for the item in the organization in Oracle Fusion Cloud: SCM Supply Chain Orchestration.
	Supply order references the item in Oracle Fusion Cloud: Supply Chain Orchestration.
Oracle Projects	Item is associated with a project cost transaction.
	Item is associated with a project resource.
	Item is associated with at least one requisition object in a project.
Oracle Fusion Cloud: Supply Chain and Manufacturing Common	Interclass UOM conversion exists for the item.
	Item specific Unit of Measure conversions exists.
Oracle Configurator	A configured order exists for the item.
	Item is already existing in configurator.
Oracle Pricing	Item exists in the pricing lists and other pricing entities.
Oracle Product Hub	Structure exists for the item.

Downstream Application	UOM Update is Prevented If
	Substitute components exists for the item.
	Item is referenced in a change order.
	Existing substitute item relationship has a different UOM class.

4 Item Relationships and Associations

Types of Item Relationship

Item relationship types let you relate an item to another item for various contexts.

The item relationship types are:

- Related Items: A relationship between two items.
- Trading Partner Item Relationships: A relationship between an item and a Trading Partner Item, such as a customer item, a competitor item, or a manufacturer part number.
- Global Trade Item Number (GTIN) Relationships: A relationship between an internal item and Global Trade Item Number.
- Source System Item Relationships: A relationship between an internal item and source system item that enables you to map and identify items that have been consolidated from multiple source systems into a single master item.
- Item Cross-References: Cross-reference types define relationships between items and entities, such as old item numbers.

Manage Item Relationships

Managing item relationships includes defining, editing, and deleting item relationships.

You can create, edit, and delete item relationships in these ways:

- On the Manage Item Relationships page, search for and select items that have a specified item relationship type. Use this page for managing relationships across many items.
- On the Edit Item page, select the **Relationships** tab and the subtab for the item relationship type. Use this page for managing item relationships for a particular item.

In addition to those ways of creating item relationships, you can create trading partner item relationships from the Create or Edit Trading Partner Item pages.

The item relationship types are:

- Related Items
- Trading Partner Item Relationships
- Global Trade Item Number (GTIN) Relationships
- Item Cross-References
- Source System Item Relationships

You can search for different relationships across items on the Manage Item Relationships page. Before specifying item criteria, select the **Item Relationship Type** to search in and click **Go**. The item search criteria fields change automatically

to reflect the relationship type that you selected. You can also perform keyword and parametric searches using various criteria to quickly locate any relationship of any item.

When creating or editing a related item relationship for an item, you can specify whether a related item relationship must be controlled at the master organization level or at an organization level. When you navigate to the related item relationships user interface for the organization item, you can find any org-specific relationships and the master-controlled relationships inherited from the master organization.

If a relationship is controlled at the master organization level, then it means that the relationship is applicable to all the child organizations to which both the FROM and TO items are assigned to. Any changes to the item relationship will be inherited by all child organizations.

If cyclic relationship isn't allowed for a relationship type, you must use the import process to create a master-controlled relationship of this type.

Prior to this enhancement the audit log value for the **Controlled-At** field was **Null**. So, the records created prior to the enhancements shows the **Null** value in the audit. This is equivalent to the **Master-level** value for the **Controlled-At** field.

Optionally, you can specify the rank for the related item relationship. Rank must be unique for a combination of From item and the relationship type. For example:

- From item X to item Y, Substitute type of relationship - Rank 1
- From item X to item Z, Substitute type of relationship - Rank 2
- From item X to item Y, Cross-sell type of relationship- Rank 1

Note: Rank-uniqueness validation is enforced across the org-controlled relationships and the relationships inherited from the master organization.

Related Items

Predefined relationship types are listed in the following table.

Relationship Type	Definition
Accessories	This indicates the item is an accessory of another item.
Collateral	This relationship indicates collateral, such as marketing brochures, that you have for an item.
Complimentary	This relationship indicates if a customer purchases one item, the other item is received for free.
Conflict	This relationship indicates that these items may never be used together.
Cross-Sell	This relationship indicates that one item may be sold in lieu of another item.
Fulfillment	Indicates if the item is a fulfillment item.
Impact	This relationship is used to relate items to each other, but only under special conditions.

Relationship Type	Definition
Mandatory Charge	This relationship indicates a mandatory charge if a customer purchases both items.
Merge	This relationship enables rules based on the consolidation of contracts. You may use the earliest or latest target end date for consolidation. This enables you to choose how contracts are consolidated.
Migration	During contact renewal you're given the option of renewing contracts based on new licenses, or old licenses.
Optional Charge	This relationship indicates an optional charge if the customer purchases both items.
Prerequisite	This relationship indicates that you must mark one of the items as a requirement to using the other item.
Promotional Upgrade	This relationship enables a customer to upgrade from one item to another item or equal or higher value, without an additional charge.
Regulatory	This type relates a regulatory item with the context item.
Related	The items are related in a nonspecific way.
Repair To	You use the Repair To item relationship with field service operations that use spares management functionality. If a part has been superseded by another part, the Repair to item relationship determines the replacement part.
Service	This relationship establishes service items for a repairable item.
Split	This relationship enables you to split support for an item so you don't have to manually split support at contract renewal.
Substitute	One item is a substitute for another. You can't add a dual UOM item as a substitute of a non-dual UOM item and in reverse. If the item has dual UOM, then make sure that the respective primary and secondary UOMs of the dual UOM item and its substitute are the same. **Note:** These validations are enforced in the respective organizations. The validations make sure that the respective primary and secondary UOMs of a dual UOM item and its substitute are the same in the respective inventory organizations.
Superseded	This relationship indicates that one item has replaced another item that's no longer available.
Upsell	This relationship indicates that a newer version of the item exists, and can be sold in place of the older item.

Relationship Type	Definition
Warranty	This relationship enables you to relate a warranty item with the item.

Effective Dates for Related Item Relationship: Enter the Effective Dates. For example, start date and optionally an end date.

Reciprocal: Indicates whether the item relationship is reciprocal.

Planning Enabled: When the item relationship type is substitute or superseded, it indicates if planning is enabled for the substitute item or superseded item, respectively.

Note: Your System Administrator can set up additional relationship types based on your business needs.

Trading Partner Item Relationships

These are the subordinate relationships for trading partner items:

- Customer Item Relationships are used to associate an internal item with one of your customer items.
- Competitor Item Relationships are used to associate an internal item with one of your competitor items.
- Manufacturer Part Number Relationships are used to associate an internal item to a manufacturer part number.
- Supplier Item Relationships are used to associate an internal item with your supplier item.

For each trading partner item relationship, you can define its Status as Preferred, Alternate, or Obsolete.

Manage Links Between MPN Relationships and Supplier Item Relationships for an Item

You can create and manage links between Manufacturer Part Number (MPN) relationships and supplier item relationships for an item. The allowed linking is N:N. You can link one MPN relationship with one or more supplier item relationships and link one supplier item relationship with one or more MPN relationships. It helps to increase tracking and allows for a more robust digital thread among your product number, supplier part numbers, and manufacturing part numbers.

You can set one of the linkages of an MPN relationship or a supplier item relationship as primary. The reciprocal of the linkage will also be considered as primary.

Note:

- The feature is available only for manufacturer and supplier relationships; customer and competitor relationships aren't applicable for this feature.
- You can link multiple supplier items belonging to the same supplier with an MPN and vice versa.
- Linkage for trading partner item relationship is currently supported only on the Edit Item page.
- You can't delete an MPN relationship or a supplier item relationship that has a linkage present. You must first delete the corresponding linkages before deleting the parent relationship.
- You can publish, audit, and report the links between the manufacturer part number relationships and supplier item relationships for an item.

To link MPN relationships and supplier item relationships:

1. Browse to the item for which you want to create a link between the MPN relationship and supplier item relationship.
2. On the Edit Item page, click the Relationships tab, and then click the Trading Partner Items subtab.
3. Select a manufacturer or supplier relationship. Based on your selection, the **Linked Supplier Items** or **Linked Manufacturer Part Numbers** table is displayed.
4. On this table, click the **+** icon, or from **Actions**, click **Select and Add**. The Select and Add dialog box is displayed.
5. Search for an existing supplier item relationship or MPN relationship (associated with the context item).
6. Select one or more rows (multiselect) from the search results and click **OK**.
   The dialog box is closed, and the selected relationships are added to the linkage table.
7. (Optional) Select a relationship from the linkage table and make it the primary by selecting the check box in the **Primary Linkage** column.
8. Click the page-level **Save** button to save the linkage between the trading partner item relationships

Global Trade Item Number (GTIN) Relationships

Relationship between an internal item and a Global Trade Item Number (GTIN).

When creating a GTIN Relationship, you must specify the Unit of Measure (UOM), and also specify whether you're adding to a new GTIN or one that already exists.

You can associate the same GTIN with more than one item when the GTIN UOM and the item's primary UOM are the same. For example, when two or more items vary only by labels, you may want to use the same GTIN for those items. In such cases, you can create item relationships by associating the same GTIN to those items. To do this, you must enable the **Allow Multiple Item Relationships to Same GTIN** profile option in the **Manage Administrator Profile Values** task in the **Setup and Maintenance** work area.

Spoke System Item Relationships

Establishes a relationship between an internal item and a spoke system item. This relationship is helpful in mapping and identifying items that have been consolidated from multiple source systems into a single master item.

Item Cross-References

Cross-referencing an item with something like an old part number. While creating a Cross-Reference Relationship, you first select a Cross-Reference type and you specify whether the relationship is applicable to all organizations or whether it specific to only a selected organization. If it's specific to one organization, you select the organization.

Cyclic Relationships

A cyclic relationship is a relationship between items that forms a loop with other existing relationships. This can be undesirable, so you can disallow cyclic relationships from being created for specified relationship types.

It's possible to create a relationship between two items that forms a loop with other existing relationships, which can be undesirable. For example, consider these scenarios:

- Item A has a Substitute relationship to Item B. When a user tries to create a new Substitute relationship from Item B to Item A, that forms a loop.
- You discover that item XY-100 is defective. You introduce item XY-101 to remedy the defect. You create an item relationship of type Superseded from XY-101 to XY-100. If another user were to create a Superseded relationship from XY-100 to XY-101, that would form a loop in which the defective item is a replacement for itself.

Cyclic relationships can also form in chains of relationships. For example, assume that Item A has a Substitute relationship to Item B, and Item B has a Substitute relationship to Item C. If a user tries to create a new Substitute relationship from Item C to Item A, that forms a loop.

By default, cyclic relationships are allowed. You can disallow cyclic relationships for a relationship type by using either of these methods:

- Setup: Use the Manage Related Item Types task in the Setup and Maintenance work area
- REST: Use the Related Item Types REST resource

Procedure Using Setup

To disallow cyclic relationships for a relationship type:

1. In the Setup and Maintenance work area, use the **Manage Related Item Types** task:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Related Item Types
2. On the Manage Related Item Types page, select the relationship type.

    You can enter a type name in the filter field to narrow the list of available types.
3. In the **Allow Cyclic Relationships** column for the relationship type, click the toggle control.

    A message informs you whether cyclic relationships are now disallowed or allowed for the selected relationship type. You don't need to explicitly save your selections.
4. To return to the setup page for the Product Management offering, click the **Parent page** control in the page header.

Procedure Using REST

To disallow cyclic relationships for a relationship type:

- Use the Related Item Types REST resource to specify the relationship type and set the value of the property `cyclicRelationshipFlag` to `false` for that type.

Example request body:

```
{
 "cyclicRelationshipFlag": false
}
```

Example

This example shows the effect of disallowing cyclic relationships on item maintenance:

1. The item AS54888 has an existing related relationship type of **Substitute** with item KM2584.
2. You disallow cyclic relationships for the relationship type **Substitute**.
3. A user tries to create a related item relationship of type Substitute with the FROM item as KM2584 and the TO item as AS54888.
4. An error message informs the user that the relationship she's trying to create between items KM2584 and AS54888 forms a loop, and that the relationship type Substitute doesn't allow cyclic relationships.

Considerations

- Cyclic relationships for a relationship type are allowed by default until you explicitly disallow them:
  - By toggling the **Allow Cyclic Relationships** control in the Manage Related Item Types task
  - By changing the `cyclicRelationshipFlag` to `false` with the REST resource
- The start date and end date of relationships (their effectivity range) is taken into account when determining whether a relationship is cyclic.
- Cyclic relationships can only be disallowed between relationships of the same relationship type. For example, if A has a Substitute relationship to C and you try to create a Cross-Sell relationship of C to A, that's not considered a cyclic relationship.
- The Reciprocal setting isn't considered when checking for cyclic relationships.
- After you disallow a relationship type, you must query any existing cyclic relationships created before you disallowed and modify them to be valid. The following query example fetches all the existing relationships of type Substitute that are cyclic. You can substitute another relationship type, using the internal name of the relationship (which is `'Substitute'` in this example).

```
SELECT * FROM (

SELECT item_relationship_id,

 inventory_item_id,

 (SELECT fi.item_number FROM egp_system_items_b fi WHERE fi.inventory_item_id = c.inventory_item_id AND
 ROWNUM = 1) FromItemNumber,

 related_item_id,

 (SELECT ti.item_number FROM egp_system_items_b ti WHERE ti.inventory_item_id = c.related_item_id AND
 ROWNUM =1) ToItemNumber,

 start_date_active,

 end_date_active,
```

```
 sub_type, CONNECT_BY_ISCYCLE iscycle,

 level

 FROM (SELECT item_relationship_id,

 inventory_item_id,

 related_item_id,

 start_date_active,

 end_date_active,

 sub_type

 FROM egp_item_relationships_b RelatedItemEO

 WHERE item_relationship_type = 'RELATED_ITEM'

 AND sub_type = (SELECT lookup_Code FROM fnd_lookup_values_vl WHERE lookup_type =
 'EGP_RELATIONSHIP_TYPES' AND meaning = /*:BindSubType*/ 'Substitute')

 AND ( start_date_active <= Nvl(NULL /*:BindEndDateActive*/, To_timestamp('9999/12/31 23:59:59', 'YYYY/
MM/DD HH24:MI:SS'))

 AND Nvl(end_date_active, To_timestamp('9999/12/31 23:59:59', 'YYYY/MM/DD HH24:MI:SS')) >= Nvl(/
*:BindStartDateActive*/ null, sysdate))

 ) c

CONNECT BY NOCYCLE PRIOR related_item_id = inventory_item_id ) WHERE iscycle = 1;
```

Descriptive Flexfield Context

A system administrator can configure descriptive flexfields for item relationships that are used to maintain additional details about relationships.

When you configure new descriptive flexfields for item relationships, you must use the following prefix to descriptive flexfield context codes in order for the segments to show up for the respective relationships.

Relationship Type	Prefix
Related	RELATED
Item Cross-reference	XREF
GTIN	GTIN
Source System	SYS
Customer	CUST
Manufacturer Part Number	MFG

Relationship Type	Prefix
Competitor	COMP

For example, you could setup a descriptive flexfield with the context code RELATED_RELATIONSHIP_ATTRIBUTES, and the segments of this context will display for the related item relationships on the transaction side.

When creating item relationships, you must provide values for the mandatory descriptive flexfield segments such as context segment and context sensitive segments when using the Item Relationships user interface, during import, or when using web services. If you don't provide values for these segments, an error occurs, and you won't be able to create item relationships.

Related Topics

- Create and Edit Trading Partner Items
- How do I create Trading Partner Items with FBDI?
- Data Security for Manufacturers and Manufacturer Parts
- Overview of Setting Up Dual Units of Measure
- Item Descriptive Flexfields

FAQs for Item Relationships and Associations

What are item relationships?

Item relationships enable you relate your internal item with another item or reference the item with a Global Trade Item Number (GTIN), source system item, or cross-reference.

How are cross-reference types created?

The administrator creates cross-reference types using the Manage Cross-Reference Types task in the Setup and Maintenance work area.

How can I create my own related item relationship type?

There are several seeded related item relationship types available. If you want to create your own types, an administrator can create additional types using the Manage Related Item Subtypes task in the Setup and Maintenance work area.

How can I validate Global Trade Item Numbers (GTIN) ?

You can use item rules to validate GTIN numbers.

- You can access the attributes of a GTIN relationship row (such as GTIN, UOM, or Party Type) by using the attribute group [GTIN].[GTIN Main]. This attribute group is available to rule sets associated with an item class.
- You can define item rules using the functions `exists()` and `isNull()` to validate the presence of GTIN values.
- You can define item rules using the function `substring()` to validate the formation of GTIN values.

Related Topics

- Manage Item Relationships
- Item Rule Logical Functions and Operators
- Item Rule String Functions

5 Structures and Structure Types

Overview of Structures

In Oracle Product Development, a Bill of Materials is called a structure.

When you add an item to a parent item, you create a simple structure. As items are added, the structure is always named and referred to by its top-level item.

A structure holds all the items and documents that make up an assembly or subassembly. Items and documents might be in the same structure; there's no restriction on the maximum or minimum number of either type of business object.

Any item on a structure might be associated with one or more manufacturer parts. On the Structure table, an icon next to an item indicates the presence of manufacturer parts. So, a structure populated with items will likely comprise associated manufacturer parts.

A document structure holds all the documents that make up a meaningful document, such as a specification for a product. When you add a document to a parent document, a simple structure is created. A structure of documents will be named and referred to by its top-level document. A document structure might be only one document.

Structure Types

Structures, also known as Bills of Material (BOM), are used to store lists of items that are associated with a parent item and information about how each item is related to its parent.

Supported structures are standard, model, option class, and planning. The type of structure that can be defined for an item depends on the value specified against the item's item structure type attribute.

Standard Structure

A standard structure is the most common type and lists the required components, the required quantity of each component, and information to control work in process, material planning, and other manufacturing functions. Examples include structures for manufacturing assemblies, pick-to-order bills, kit bills, and phantoms.

Model Structure

A model structure defines the list of options and option classes that you can select when ordering a product that can be configured. A model structure also specifies required components or included items that are required for each configuration of that model. You don't order or build the model itself; you order and build configurations of the model. A model structure can be either assemble-to-order or pick-to-order.

Option Class Structure

An option class is an item that groups optional components on a structure. An option class is an item that becomes a level in your model structure. Option classes can also have required components that apply for all of its options. For

example, when you order a computer, the monitor is an option class, and the specific type of monitor that you order is an option within that option class. An option class structure can be either assemble-to-order or pick-to-order.

Option class structures can contain standard components and options, as well as other option classes. You can structure any number of levels of option classes within option classes to create an indented hierarchy of choices. You can also specify a required component in an option class in the indented structure that would automatically be included anytime that you choose an option from that option class (or a lower-level option class).

Planning Structure

A planning structure is a structure that includes a percentage distribution for its components. The percentages associated with the components on a planning structure don't need to add to 100 percent. You can define alternate and common planning structures, where the structure that you reference as common must be another planning structure.

Planning items can be nested within one another any number of times. When you nest planning items, scheduling applications can explode forecasts level by level and apply planning percentages at each level.

Phantom Structure

A phantom assembly is a non-stocked assembly that lets you group together material needed to produce a subassembly. When you create a structure for a parent item, you can specify whether a component is a phantom. One structure can represent a phantom subassembly for one parent item, and a stocked subassembly for another parent item.

Work in Process applications explode through a phantom subassembly to the components as if the components were tied directly to the parent assembly. Work in Process applications ignore phantom assembly routings when you define a job or repetitive schedule.

You can compute manufacturing and cumulative lead times for phantom assemblies that have routings. If you don't want to offset the components of a phantom assembly in the planning process, exclude the phantom item from the lead time calculations.

In general, phantom assemblies act like normal assemblies when they represent a top-level assembly, such as when you master schedule them or manufacture them using a discrete job. As a subassembly, however, they lose their identity as distinct assemblies and instead represent a collection of their components. The components of the phantom subassembly are included on the job and on the pick list of the job, not the phantom itself.

Valid Component Attributes and Structure Types

Each structure can have many components. For each component, you specify attributes, such as operation sequence, item sequence, usage quantity, yield, supply type, supply subinventory and locator, and others.

The table lists component attributes and their validity for each type of structure.

Component Attribute	Standard Parent Item	Model Parent Item	Option Class Parent Item	Planning Parent Item
Item	Yes	Yes	Yes	Yes
Item Sequence	Yes	Yes	Yes	Yes

Component Attribute	Standard Parent Item	Model Parent Item	Option Class Parent Item	Planning Parent Item
Operation Sequence	Yes	Yes	Yes	No
Effective Date Range	Yes	Yes	Yes	Yes
Planning Percentage	No	Yes	Yes	Yes
Yield	Yes	Yes	Yes	No
Enforce Integer Requirements	Yes	Yes	Yes	Yes
Include in Cost Roll up	Yes	Yes	Yes	No
Supply Type	Yes	Yes	Yes	No
Supply Subinventory	Yes	Yes	Yes	No
Supply Locator	Yes	Yes	Yes	No
Mutually Exclusive Options	No	Yes	Yes	No
Optional	No	Yes	Yes	No
Check ATP	Yes	Yes	Yes	No
Minimum Quantity	No	Yes	Yes	No
Maximum Quantity	No	Yes	Yes	No
Basis	No	Yes	Yes	No
Include in Shipping Document	Yes	Yes	Yes	No
Use Placeholder	No	No	Yes	No
Required to Ship	Yes	Yes	Yes	No
Required for Revenue	Yes	Yes	Yes	No
Quantity	Yes	Yes	Yes	No

Component Attribute	Standard Parent Item	Model Parent Item	Option Class Parent Item	Planning Parent Item
Inverse Quantity	Yes	Yes	Yes	No
Descriptive Flexfield	Yes	Yes	Yes	Yes
Comments	Yes	Yes	Yes	Yes

Validation Rules for Structures and Components

Your ability to create, copy, or change structures is affected by a number of validation rules; predefined and user-configured.

How Structures and Components Are Validated

When you create, copy, or modify a structure, the following validation rules are applied:

- You can't add a component to a structure where the component item is the same as the parent.
- You can't add a component to a structure where the same component, with the same operation sequence and effectivity, already exists on the structure.
- Lifecycle validation rules, when enabled, ensure that only components in the same lifecycle phase or higher lifecycle phase than the parent item can be added. The only exception is made for a deprecated lifecycle phase. Component items in this lifecycle phase can't be added to an effective structure.
- You can't add a component to a structure that's being referenced as a common structure from another organization, where the component doesn't exist in the other organization.
- You can't add components to common structures. Changes should be performed on the referenced structure only.
- For Assemble to Order (ATO), Pick to Order (PTO), and phantom structures where the parent item has Available to Promise (ATP) Components set to No, you receive a warning when you add a component that has either the item attributes Check ATP set to Yes or ATP Components set to Yes. The warning says "Order details for the parent item specify NO for ATP Components", but you can add the component.
- You can't add an optional component to a structure that's neither model nor option class.
- You can't add a component whose planning percentage isn't equal to 100 to a standard structure.
- You can't add a required component whose planning percentage isn't equal to 100 and that has the Forecast Control attribute set to Consume or None to a model or option class structure.
- When adding a component to a structure, Check ATP component attribute is set to No if the component quantity is less than or equal to 0.
- If the Use Placeholder attribute is enabled for the selected option class item, the item isn’t loaded into the configurator model during structure import. A placeholder is created for the selected option class item in the configurator model when:
  - You select the check box for this attribute on the Edit Item Structure page.
  - You select **Yes** for this attribute on a change order.

You can replace the placeholder with the actual data during order import (when required).

Note: Routings-based validation aren't supported. The only check made is to ensure that an integer value is entered for the operation sequence.

Here is a guide to the various table values:

- Yes: You can add this component type to this structure type.
- No: You can't add this component type to this structure type.
- *: These components must be optional.
- **: These components are treated as standard subassemblies.

This table presents the validation rules used for adding components to different structure types.

Description	Planning	PTO Model	PTO Option Class	PTO Option (kit)	ATO Model	ATO Option Class	ATO Item	Standard Item
Planning Structure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PTO Model Structure	No	Yes	Yes	Yes	Yes	No	Yes*	Yes
ATO Item	No	No	No	No	No	No	Yes**	Yes
ATO Model Structure	No	No	No	No	Yes	Yes	Yes	Yes
ATO Option Class Structure	No	No	No	No	Yes	Yes	Yes	Yes
ATO Item Structure	No	No	No	No	No	No	Yes**	Yes
Standard Item Structure	No	No	No	No	No	No	Yes	Yes

Item and Operation Sequence

Item sequence indicates the sequence of an item on a structure.

Item Sequence

You can use item sequence to sort components on reports and when choosing options from a model bill in Oracle Fusion Cloud Order Management. The default item sequence value includes value of the highest existing component item sequence plus the value of the **BOM: Component Item Sequence Increment profile option**. If this profile option isn't set, the default is 10. You can override or change this number.

Operation Sequence

You can use the Routings form to assign operations to routings. Each operation must have a sequence number called the **Operation Sequence Number**.

On a structure, the operation sequence indicates the order in which you perform operations on a routing. You can configure the **Operation Sequence Numbers** to be generated automatically by using a user-defined increment factor. A profile must be created where you can indicate how much the **Operation Sequence Number** will increment every time a new operation is generated. You can change the generated value, if necessary, in the Routings form. Valid values range from 1 to 9999999.

You can assign any component to any operation on the routing, including all components to the same operation (such as the first operation). The planning process assigns material requirement dates based on the operations to which you assign each component.

You can define structures for items with or without routings. If you use routings, you can either define the structure first or the routing first.

With component-to-operation assignments, you can schedule and issue component material to the operation that requires the component on the exact requirement date. You can also assign the same component on the structure to different operations on the routing, with different usage quantities for each assignment.

If no routing exists for the item, all components default to operation sequence 1. You can't change this value until you define a routing for the item. After you define the routing, you can update your structure with routing operations, if you want specific component-to-operation assignments.

If you define the routing before you define a structure, assign components to valid routing operations or operation sequence 1 when you define the structure. If you define an alternate routing and then define the alternate structure, you can assign components to the alternate routing operations. If you define an alternate structure and no alternate routing exists, you can assign components to the primary routing operations.

6 Create Structures

How You Create Structures

A structure contains information on the parent item, components, attachments, and descriptive elements using descriptive flexfields.

Each standard component of a structure can have multiple reference designator and substitute components. Also, each component can have a different unit of measure.

A product manager or product data steward is normally responsible for defining and managing product (item) structures. Note that the terms product and item are used interchangeably.

Product structures can be created in various ways. If the new structure is similar to an existing structure, you may copy and modify this new structure. If the new structure is an exact copy of another structure and its assembly details need not be maintained separately, you can link the new structure to an existing structure by using the **Create from Common** option. Alternately, you can create a new structure by adding the required components and their information.

You can create structures from the Structure tab on the item. Use one of the following options in the **Actions** menu:

- **Create** - lets you create a new structure.
- **Create from Copy**
- **Create from Common**

Create as New Structure

Here's how you create a new structure:

1. Open the item in which you want to create the structure.
2. On the Structures tab, click **Actions** > **Create**.
3. In the Create New Item Structure dialog box, enter the details of the new structure:
    - **Name**: Select the type of item structure.
    - **Effectivity control**: Select the type of effectivity for the structure.

      Date: Effective on a specified date.

      Model or Unit Number: Effective based on unit number.

      The options that appear in this list depend on the item for which you're creating the structure.
4. Click **Ok**.
5. In the Structure Details section, add the details of the structure and click **Save**.

Note: An item structure exists only in the organization in which it was created. To use a structure in another organization, you must either copy it or reference it as common.

Create from Copy

Here's how you create a structure by copying an existing structure:

1. Open the item in which you want to create the structure.
2. On the Structure tab of the item, click **Actions** > **Create from Copy**.

   The Create New Item Structure from Copy dialog box appears.
3. In Existing Structures, select an item and its structure you want to copy.
4. In New Structure, enter the details of the structure you want to create.
5. Click **OK**.

The table shows whether the copy action is allowed based on the effectivity control settings in source and target structures.

Effectivity Control in Source	Effectivity Control in Target	Copy Allowed?
Date	Date	Yes
Date	Serial	Yes
Date	Unit	Yes
Serial	Date	No
Serial	Serial	Yes
Serial	Unit	No
Unit/Lot	Date	No
Unit/Lot	Serial	No
Unit/Lot	Unit	Yes

Create from Common

When you create a common or referenced structure, the target structure will be created with the same effectivity as the source structure.

1. Open the item in which you want to create the structure.
2. On the Structure tab of the item, click **Actions** > **Create from Common**.

   The Create New Item Structure from Common dialog box appears.
3. In Existing Structures, select an item and its structure you want to retain as the common structure.
4. In New Structure, enter the details of the structure you want to create.
5. Click **OK**.

Related Topics

- How can I create a new item structure type?

Common Structures

If two or more organizations use the same item structure, you can define the structure in one organization and reference it from the other organizations, creating what's known as a common structure in those organizations.

Common structures share a component hierarchy, including the substitute components and reference designators defined for the components.

How Common Structures Work

Here are some things you must know about creating common structures.

When you create common structures, you can:

- Define a structure in one organization and reference it from other organizations, creating what's known as a common structure in those organizations, if two or more organizations use the same item structure.
- Reference another structure as a common structure only if the referenced structure has the same structure name.
- Reference structures only from organizations that have the same item master organization as the current organization.
- Create a common structure within the same organization, as well as across multiple organizations. Sharing structures across multiple organizations minimizes the maintenance of your item structures.
- Create component items in the target organization without any additional or explicit privileges. But you will require access to the root item in that organization.
- Create a common structure using FBDI only at the first level of the structure.

When you create common structures, you can't:

- Update the structure of common items in a common structure. However, you can update the fields and descriptive flexfields in the header for a structure that's common. Any maintenance, such as removing or adding components or changing component attribute values, has to be made against the source (referenced) structure.
- Reference another structure as common if that structure also references a common structure.

Substitute Components in Common Structures

Here are some things you must know about substitute components in common structures.

- When you use a structure as a common structure, the substitute components that you use for items in the source organization are automatically added to any target organizations where the component doesn't exist.
- Substitute components in the source organization are automatically added to target organizations when you:
  - Create a structure in the target organization using the Create from Common action.
  - Add a substitute to a component of a structure that's already used as a common structure.

- Once the organization is automatically assigned, you can't undo the assignment when the substitute component is deleted. You must manually delete the association.

Publish Common Structures

You can include common structures in item publications.

To publish common structures, you must select **Structures** as an entity of the item object to publish.

- If there are changes in the header details or descriptive flexfields for the common structure in an item, then any common structure is published.
- The master item and its structure are only published when changes occur to the item or structure content.
- If there are changes to the master structure, or to the header attributes of the master structure, then the item containing the master structure is published.

  For example, if you add a new component to an item, the item record containing the structure for the master item is published.
- If there are changes to an item or common structure header, then the item is published.
- If there are changes to items that have common structure, or to the header attributes of the common structure, then the items that have common structure are published.

  If there are no changes to the items, or to the header attributes, then the items aren't published.
- You can set the first level as common or specify the number of common levels starting from the first level.

Related Topics

- What's Published in the Publication Payload
- Define Publication Options for a Spoke System

Structure Details

This feature is available in both the classic user interface (pre-24A) and the new interface. You'll see Classic or New in the topic title for easy identification.

View Structure Details—Classic

Structure information is available as part of the item details. You can view structure details by navigating to item details and selecting the Structures tab.

All structures created for items are listed in the structure table within the **Item Structures** sub tab. Clicking the structure name enables you to drill into the structure details page to view the component information.

The Item Structure Details page shows multilevel structure components in a hierarchical table and provides you with a complete view of all the components and assemblies of the structure.

View the Item for a Particular Revision

To view the item for a particular revision, use **Actions** > **Open Another Revision**. The structure appears based on a reference date. The table shows how the default reference date differs based on the selected revision.

Selected Item Revision	Default Reference Date
Past effective	Revision end date
Current effective	Current date
Pending	Current date
Future effective	Future effective date

Here's some information on structures and components:

Date Filter

Enables you to see what the structure looks like at a given date.
Let's say that you enter 7/18/19 and click **Go**. Then it shows the structure as on 7/18/19.

Note:

You can't edit the component entities for a past date.

The Total Quantity in the summary table is calculated as a ratio of quantity to the yield factor.

Use Placeholder

The **Use Placeholder** column indicates whether a placeholder is set for the component. Here's what happens if the value is set to Yes:

- A placeholder is created for such items in the configurator model.
- The items aren't loaded into configurator models during structure import.

Note that:

- The Use Placeholder column is editable if **Structure Item Type** specification for an item is set to **Option Class**. You must also make **Component Order Management** fields visible from **Item Structure Details** > **View**.
- To change the placeholder value, on the **Actions** menu for a component select **Edit**. Select or deselect the **Use Placeholder** check box.
- You can replace the placeholder with the actual data during order import when required.
- The placeholder structure can be loaded on demand from the Configurator.
- The value for **Use Placeholder** attribute can be set from both the item context and the change order context.
- You can use SOAP and REST services to set or retrieve the **Use Placeholder** attribute.
- Import and FBDI support **Use Placeholder** attribute.

Change Control

The **Change Control** column indicates whether structure changes are allowed. Change control permission is based on the business rules written for the structure name. The change orders column presents the number of change orders pending for the structure. Structure details, including header attachments and configured attributes, are presented in the details region.

Find Number

You can differentiate duplicate components in an assembly using the Find Number attribute.

The find number identifies a specific instance of an item in a structure. When a duplicate component is added, the application will automatically increment the find number, but you can modify it before you save your changes. Once the item is saved, here's how you can change the find number:

Delete the component and add it again with the new find number.

Or

Use the **Replace** action to replace a component with the same component and provide a different find number.

Example: Consider that a server containing 4 similar processors is positioned at the same level in the structure. Each instance of the processor will have a unique find number. This will allow you to have duplicate instances at the same level in the BOM, and differentiate each instance.

Here are some additional details:

- You'll be prevented from creating duplicate find numbers for Model and Option Classes. The **Find Number** column will be displayed and defaulted to 1. Also, you can't add the duplicate component row.
- You can't create overlapping effectivity dates for the combination of component and find number.

  You must ensure that the date range of the duplicate component is outside the date range of the initial component. Note that the date range is calculated based on the start and end dates of the component.
- Attributes such as Quantity, Basis Type, and Supply Type can have a different value in the duplicate row. Similarly, structure entities such as substitute components and reference designators can also have a different value in the duplicate row.
- Find Numbers are automatically incremented when you add duplicate components in the user interface, but not when you update structures using REST services or import.
- In the item structure import, if the find number value isn't provided, it will be defaulted to 1. If you have a duplicate instance of the component in your structure, you must provide a unique find number value in import. In the absence of the unique find number, the import will create a single component with the find number value defaulted to 1 and the other components won't be created. This is applicable for REST APIs and SOAP Services as well.
- If you perform a **Replace** action to update the New Find Number value using import, it's recommended not to import changes to other attributes in the same import batch.

Here are the best practices and recommendations:

- All existing and new customers should use Item Sequence for sequencing the structure. It's recommended not to use Find Number for sequencing of the structure. Find number should only be used to include duplicate components in a structure.
- Agile PLM customers migrating to Oracle Fusion Cloud should map Agile PLM Find Number to Item Sequence.

- CAD integration customers should map Agile PLM Find Number to Item Sequence.
- Agile PLM MCAD customers using the find number feature must map Find Number to structure component descriptive flexfields.

Suggested Operation Sequence

You can use the **Suggested Operation Sequence** column to record a design engineer's suggestion for the operation sequence of components in a manufacturing work definition. This doesn't have a default value and isn't automatically incremented.

Note: Suggested operation sequence isn't a required value.

Example: In an assembly that includes 3 components, you can suggest an operation sequence for component A as 1, component B as 2, and component C as 3. The manufacturing team can refer to this to specify a sequence for assembly of components (in the manufacturing work definition).

Component Details

For each component in a structure, the component item and component information are provided in a component details region. To view component details, select the component. You can also view component details using the item search page available in Product Management Experience.

Click Tasks > Product Management Experience > Search Products.

Here's what you see in the Component Details region:

- **Substitutes**: Lists items that you can use in place of the component.
- **Reference Designator**: Lists the component placement during assembly.

- **Where Used**: Lists items based on the level in which this item is used in another structure.

  Note that the following data security privileges are required to view the where used report: View Item Basic, Maintain Item Basic, and View Item Structure or Maintain Item Structure.

  - Show Structure Levels:
    - First level: view first level of the structure in which the item is used.
    - level: view topmost level of the entire bill of material in which the item is used.
    - All levels: view all levels from the item to the topmost level in which the item is used.
  - Show Items: Filter items based on their approval status in a change order.
    - Implemented: view items that are already effective.
    - All: view items that are effective and the items that are yet to go through change order approval.
  - Include Substitute Components: Select Yes to identify where the item is used as a substitute component. Here are the important columns for substitutes:

    - Item: Shows the structure in which the context item is used as substitute. The number of structure levels shown in the item depends on what you select in the Show Structure Levels filter.
    - Substitute For: Shows the components for which the context item is marked as a substitute. Appears only if you select **First level** and **Include Substitute Components** filters.

    Here are some extra details on substitutes:

    - You can view substitute components only for first level structure in the UI and all levels in the OTBI report.
    - The component number displayed in the **Substitute For** column is read-only.

      When you click the information icon (orange triangle) on the item, a panel that includes links to item entities appears. Note that you'll only see items for which you're granted access.
    - You can enable substitute component search by default using the profile option **Include Substitutes in Item Where Used Data**.
    - When you select **Include Substitute Components**, the Where Used results are restricted to:

      the master organization and primary structure in Product Development, and to the context item's organization in Product Information Management.
    - You can perform a search on primary, alternate, or all structures based on the search filters in Product Information Management.
    - The change order details report (in Product Development) includes the following substitute component attributes: Primary UOM, Enforce Integer Requirement, Priority, and Global descriptive flexfields.
- **Change Orders**: Lists pending changes for the component (item).
- **Additional Attributes**: Lists extra attributes and their values that you might have configured for the structure type and name.

> **Note:** Only the first-level components can be managed from the Structure Details page.

Set Use-Up Date as the Effective Date

When you remove or replace a component, you can view and select a use-up date specified in a supply plan as the effective date for the affected object. The use-up date calculation helps you identify the optimal effectivity dates for structure components that are being removed or replaced on engineering and commercialization change orders.

Here's how you set the use-up date when you remove (or replace) a component:

1. Click the Affected Objects tab on the change order.
2. Open the affected object that contains the component you want to remove (or replace).
3. Navigate to the Structure tab.
4. Select the component you want to remove and click **Actions** > **Remove**.
5. Click **Save and Close**.
6. Click **Actions** > **Calculate Use-up Date** on the Affected Objects tab.
   The Select Use-Up date dialog box appears with the use-up dates defined in the referenced plans for the component (in the Supply Planning work area).
7. Select the use-up date and click **OK**.
   The date you select is populated in the **Effective Date** column on the Affected Objects tab. If you manually update the effective date, any existing values for Plan Name and Use-Up Item are cleared out.
8. Save your changes.

Some additional considerations:

- The **Calculate Use-Up Date** action is only visible if the **Supply Chain Planning** offering is enabled.
- If you've enabled **Supply Chain Planning** but aren't using Planning use-up dates, the **Calculate Use-Up Date** action won't retrieve any use-up dates.
- The **Plan Name** and **Use-Up Item** columns are hidden by default. You can use **View** > **Columns** to show these columns if you're using planning use-up dates.
- When you add the effective date using the **Calculate Use-Up Date** action, the time is set to 00:00:00, because Use-Up Date is a date-only attribute.
- The affected item's effective date automatically changes to Effective on Approval if the specified effective date is in the past by the time the final approver (for the final approval status) approves the change order. If this happens, the Plan Name and Use-Up Item values are cleared out.
- If you update the affected object's lifecycle phase, you must first save the lifecycle phase change before updating the effective date using **Calculate Use-Up Date**.

Related Topics

- Replace a Component
- Can I modify the find number when the item is on a change order?
- Import Items Into Configurator Models

View Structure Details—New

You can view the structure details using Product Management Search, with the component details appearing in a side panel.

Navigate to Tasks > Product Management Experience > Search Products and use the new interface to find and view item structures.

> **Note:** To use this feature, you must enable the feature Search Product Management Content Using the Redwood User Experience.

In the search results, you'll see a structure presence indicator (structure icon) that lets you access the item structure. On navigating to the structure, you can use additional indicators to explore subassemblies. You can choose to view the entire structure or focus on specific levels.

The item structure grid shows current effective revision of the parent item and each component. These entities of each component display values of the component's current revision - item attributes, extensible flexfields, reference designators, substitutes, and component attributes including read-through attributes from the item.

Here's how you view structure details:

1. In the **Tasks** panel drawer, click **Product Management Experience** > **Search Products**. The Product Management Item Search Page appears.
2. Select **Item** from the Product Management Search drop-down list.
3. Select a view that's configured to show structure data presence indicators.
4. Search for the item on which you want to view the structure details.
5. In the search results click the **Item Structures** structure icon in the **Has structures** column, to view the structure.
6. You can sort and filter the structure based on these read-through attributes to analyze the structure without exporting to Excel.
7. You can also resize or hide, columns in the structure table. However, the modification doesn't persist when you navigate away from the page.

Structure Grid

Here are some actions you can perform from the structure grid:

- View the basic details of the component on the header, including the lifecycle phase of the item and the revision.
- Select different views created by your administrator through Configure Views. The view can contain item operational attributes, item extensible flexfields, component level attributes, or component descriptive flexfields.
- Toggle between the first level and level view.
- View the levels displayed on a structure.
- View the progress indicator when the data is loading.
- Apply filters on the structure (filter supports item and item description).
- Export the selected columns and rows or all.
- Detach the table to view in full screen mode.
- Navigate to the classic item interface using the link on the item.
    - If you've navigated to the structure grid from the Product Development work area, the item will be displayed in Product Development.
    - If you've navigated to the structure grid from the Product Information Management or the Concept Design work area, the item will be displayed in Product Information Management.
- Copy items to the clipboard.
- View the total count of rows in the structure and the number of selected rows.
- Hide and unhide columns.
- Resize rows and columns.
- Sort columns in an ascending or descending order.
- Select multiple rows, columns, or cells.

Reference Designators and substitute components are additional attributes available in the structure grid. Use these attributes in existing views or to create new views. Select and click the data presence indicator on the reference designator and substitute component columns of a structure to view details in the side panel drawer. Separate tabs are available for reference designators and substitute components. Though global descriptive flexfields are always visible for both reference designators and substitute components in the side panel drawer, the context-sensitive descriptive flexfields aren't visible for both these entities in this release.

You can also:

- View reference designators as a range, if a range indicator has been configured in Manage Items Structure Type Details page. For more details, see *Configure Reference Designator Options*.
- Search for the structure component based on the reference designator. However, remember to include the Reference Designator Search attribute in the views you create to search for components using the reference designator.

Note: If you've configured range indicators for reference designators before 24D, you must run the Product Management Search Ingest Job.

Use the **Enterprise Scheduler Service** job: **Product Management Search Ingest Job** to ingest the new range indicator and replace the existing range indicator:

- Ingest Object = Item Structure
- Object Type = Reference Designators
- From Date = Enter a date
- To Date = You can select the current date

After this job is completed, the **Enterprise Scheduler Service** job to run Bulk ingest to OSCS job starts automatically. When both jobs are completed, the range indicator will show the latest selected range indicator.

If the range indicator is enabled, you can see the configuration for quantity and the reference designators with the range indicator in the reference designator tab.

Additional details of substitute components:

- Search for the structure component based on the substitute component.
- Click the item link to navigate to the item in the classic user interface.

Side Panel View in a Structure

The drawer appears when you click the presence indicators on the rows of a structure and provides you more information about the structure (component details). You can quickly navigate to the next or previous component row details without closing the drawer using the navigation buttons displayed in the drawer region.

Here's the data you can view and actions you can take from the drawer:

In Product Development	In Product Information Management	Actions
Item Revision Attachments	• Item Attachments • Item Revision Attachments	Download attachments
Pending Changes	Pending Changes	Navigate to change orders or change requests

In Product Development	In Product Information Management	Actions
Quality	Quality	Navigate to open quality issues, quality actions, problem reports, and corrective actions
Product Development Relationships	NA	Navigate to related objects created in the Product Development work area
AML	NA	Navigate to manufacturer parts
Reference Designators	NA	View details of the reference designator. Search for specific reference designators
Substitute Components	NA	View details of substitute components

Notes on the side panel view:

- **Has Pending Change**: Displays only pending change orders and change requests, not the released changes.
- **Has Quality Issue**: Displays pending quality issues, quality actions, problem reports, and corrective actions.
- **Has Relationships**: Displays relationships added through the Product Development work area. When you click the concept component or the requirement specification that you added as a related object, the parent concept or requirement opens.
- **Has Item Attachment**: Displays attachments that you can download. You must select only a single row to download attachments. Selecting multiple rows will disable the **Download** button.
- **Has Reference Designators:** Displays all the details of reference designators. You can even search for specific reference designators.
- **Has Substitute Components**: Displays all the details of substitute components.

Related Topics

- View Data Presence Indicators
- Display Data Presence Indicator in Search Results

7 Manage Structures

Update Product Structures

Managing product structures involves updating the structure.

This includes adding or removing components in the structures, making changes to first-level component attributes, and maintaining substitute and reference designator information for first-level components. Managing product structures also includes deleting product structures that you no longer use.

Update Components

Structure component updates include the following actions:

- Add: Search for items and add them as first-level components to a structure.

  You can't add duplicate components to a structure or a parent component to a child component using commercialization change orders.

  You can add duplicate components to a structure if you opt in to the feature Add Find Number and Suggested Operation Sequence for Structure Components. This feature allows you to differentiate between multiple instances of a component within a structure using find numbers.
- Update: Select component rows and update their attributes. You can update multiple components with the same attribute changes using a single action.
- Delete: Remove the component from the structure permanently and integrate the component into a delete group. You must add the component deletion request to the delete group.
- Disable: Specify an end date to a component. You can also edit the component to specify the end date.

Update Substitutes

You can assign any number of substitute items to each structure component, and you can assign the same substitute item to more than one component. The substitute item quantity is the quantity needed to replace the full component quantity. The quantity can differ from the component usage quantity.

Planning bills and model, option class, and planning components can't have substitute components.

You can add substitute components with or without a change order. When you add the substitute component:

- in the change context - the organization is assigned only when the affected item is in the Completed status.
- through import - the organization is assigned on the completion of the job, or on the completion of the change order if the item is added to a change order.

You can't assign substitutes to inactive organizations.

Component Reference Designators

A reference designator is a sequence of comments and instructions that pertain to a component. For example, drawings that clarify the assembly process for certain components, or further instructions for the use of a large quantity of the

same component. You can specify whether to assign one reference designator for every usage of the component or assign more than one reference designator to the component.

You can indicate whether the reference designator is related to component quantity.

Planning bills and model, option class, and planning components can't include reference designator.

Component Item Usage

The Where Used tab enables you to view component item usage in other structures.

Replace a Component

You can replace a component in your item structure, copying over key data from the original component to the replacement component.

You can replace a component from:

- an item structure page in the Product Information Management work area
- a change order's Affected Objects Structure tab in the Product Development work area

How You Replace a Component

1. Depending on your work area, here's how you select the component you want to replace.
   In Product Development,
   - Open the change order that contains the component you want to replace.
   - Click the Affected Objects tab and select the component you want to replace.

   In Product Information Management,
   - Open the item that contains the component you want to replace.
   - Click the Structures tab and select the component you want to replace.
2. Click **Actions** > **Replace**. You can also use the **Replace** icon on the toolbar.
3. Search for and select the replacement component.
   The original component is redlined and the replacement component appears in green (which is different from the initial color). The original component also appears in the **Replaces** column for your reference.
   End date of the original component becomes the start date of the replacement component.
4. Save your changes.
   In the Product Information Management work area, you can save your changes to the item or save the changes to a change order and route it for approval.

How Start and End Dates are Derived

The table lists how the start and end dates are derived upon replacement.

In Product Development	In Product Information Management
Upon replacement, the end date of the original component and the start date of the replacement component will be the same as the effective date of the affected object. If the affected object is effective on approval, this will be the date when the change order is moved to Scheduled status. If the affected object has a future effective date, this will be the same as the effective date.	Upon replacement, the end date of the original component and the start date of the replacement component will match the date in the **Date** field on the toolbar of the item structure page. If a replacement is to be effective only in the future, select a future date in the toolbar and then perform the **Replace** action. The replacement is visible in the structure when the date selected is after the start date of the replacement component.

What's Copied Over to the Replacement Component

When you replace a component, item sequence, structure component attributes, substitutes, and reference designators are copied over from the original component to the replacement component.

Here are the attributes that are copied over:

Component Attributes

- Item Sequence - Read-only
- Quantity
- Yield
- Comments
- Start Date
- End Date
- Planning Percent
- Check ATP
- Required to Ship
- Required for Revenue
- Include on Shipping Documents
- Automatically Request Material
- Basis
- Enforce Integer Requirement
- Supply Type
- Component UOM

Substitute Components

- Item
- Description
- Primary UOM

- Quantity
- Inverse Quantity
- Priority
- Enforce Integer Requirement
- Descriptive flexfields

Reference Designator

- Reference Designator
- Description
- Descriptive flexfields

Considerations for Replacing Components

The table shows considerations for replacing components based on the work area.

In Product Development	In Product Information Management	Across Product Development and Product Information Management
• You can't replace a component that's already a replacement for another component in the same change order. • You can use the **Undo Redlines** action to revert the replacement action when the change order is in Open or Interim Approval status, provided you have the permission to perform the action. This permission is defined in the Additional Workflow Controls table in the change type setup. • If you're replacing an item with a document, then the reference designators aren't copied to the replacement. • The replacement attributes are displayed in the Change Order Details report.	• Once a replacement is selected, neither the original nor the replacement component can be edited. • The **Replaces** column is visible by default and retains the record of replaced components even when you enter future dates in the **Date** field. The original component is shown in the **Replaces** column until it's replaced with another component.	• If a component has redlines, for example, the quantity is updated, the component can't be replaced. • If the replacement component selected has a different UOM from the original component, a warning message appears and the quantity is reset to 1. Reference designators and substitute components aren't copied over. The replacement component's UOM will show the item's primary UOM. • If the replacement component was defined as a substitute component of the original component, then it isn't copied to the substitute component table of the replacement component.

Related Topics

- Items and Documents in Product Development
- Define a Change Order
- View and Edit Change Details

Perform Guided Task Flow to Mass Replace Components

You can perform a mass replacement of components across multiple structures using a guided task flow. Your administrator can configure the guided task.

You can view all the items where a component is used and replace it with a different component across one or more selected structures. Here's how:

1. On the **Tasks** panel tab click **Perform Guided Tasks**.
2. On the Explore page, search for a component replacement journey and select it or select a component replacement journey appearing on the page.
3. Click **Start This Journey**.
4. Search and select the original component you want to replace and the replacement component. Click **Done**. During the selection, the components will be filtered based on the organization selected in the configuration.
5. Select for one or more structures from the where used list that shows where the original component is used. You can refine the search within the displayed list, if the list returns too many results. Click **Done**.
   Notes:
   - If the replacement component is configured to be routed through an engineering change order, the search results will only include engineering structures created in the Product Development work area.
   - If the replacement component is configured to be routed through a commercialization change order, the search results will include commercial structures created in the Product Information Management work area and engineering structures in the Prototype or Production lifecycle phases. The results will exclude Packaging Structures.
   - If the replacement component isn't configured to be routed through any change order at all, the search results will include both engineering structures and commercial structures.
6. Review the summary of the selections from your previous tasks and click **Done** to submit the mass replacement action.
   Notes:
   - You can create a new engineering or a commercialization change order. You also select an existing change that's in the Draft or Open status.
   - Depending on the configuration of the guided task, the changes will be applied directly to the selected structures of the commercial items or added as affected items to the change order through the scheduled process for engineering and commercial items.
   - When the scheduled process is complete, the change order is created in the open status.
     If the guided task isn't configured for the change type, then there's no need to select the change type or create the change order. The replacement will be made directly on the item.
   - When the components are replaced, the reference designators will also get replaced.
7. View the change order status.
   You can view the details such as batch name, change order name, job ID, and job status.

   > **Note:** To view the status of the tasks on a later date, you can click the **View Guided Tasks** link in Product Management Experience in the Tasks panel tab.

Delete Structures

You can use delete groups to delete item structures or specific components within structures.

Deleting a structure or a component from a structure removes the record without any reference to its earlier usage or existence. When you delete an entire structure, you delete all the components for the assembly, along with their reference designator and substitute item.

When you delete a structure or component, that delete action passes through several deletion constraints and statements defined for structures. Additionally, you can define your own deletion constraints and statements.

> **Note:** You're restricted from deleting a component (or its parent) if the item is released through an engineering change order, assigned to a pending change, or part of a canceled change. However you can delete components (and items) assigned to commercialization change orders and that aren't part of a structure on an engineering item using the delete group.

Define Deletion Constraints and Statements

Along with predefined deletion constraints, you can also define your own constraints using the Service Oriented Architecture (SOA) Business Process Execution Language (BPEL).

If what you're attempting doesn't pass deletion constraints, it's not deleted. For example, you can define a constraint that prevents you from deleting a structure for an assembly that includes an item in the active status.

Related Topics

- Group Deletions of Items, Structures, New Item Requests, and Change Orders

Valid Parent Component Relationships

Structures restrict the types of items you can assign as components based on the type of structure you are defining.

The table presents the validation rules used for adding components to different structure types.

Parent Structure Item Type	Component Structure Item Type
Standard Item	Standard Item
Model Item	Standard Item, Model Item, Option Class Item
Option Class Item	Standard Item, Model Item, Option Class Item
Planning Item	Standard Item, Model Item, Option Class, Planning Item

Criteria for Editing Structures

This table lists the criteria for editing structure types in the Product Information Management work area:

Work Area in which the Item Originated	Structure Type	Organization	Editing Allowed
Product Development	Primary structure	Master organization	Only the following attribute groups can be edited: • Component material control. • Component order management. • Component shipping details.
Product Development	Alternate structure	Master organization	Yes
Product Development	Primary and alternate structure	Child organization	Yes
Product Hub	Primary and alternate structure	Master organization	Yes
Product Hub	Primary and alternate structure	Child organization	Yes

8 FAQs for Product Bundles and Structures

What's a structure attachment?

When creating a structure, you can attach various documents pertaining to that item structure, such as drawings and reference materials. These attachments are available to view as part of structure header details.

What are item and component attachments?

Item and component attachments are attachments that you can view at the item level as part of the structure details view.

Only those attachments whose categories have been associated with the structure name will be available.

What's a substitute component?

Substitute components are items that can be used in place of a component.

You can associate any number of substitute items to each structure component and the same substitute item can be associated to more than one component. The substitute item quantity is the quantity needed to replace the full component quantity. The quantity can differ from the component quantity. Planning bills and model, option class, and planning components can't have substitute components.

How can I reinstate a parent item in a structure that contains obsolete components?

You must first reinstate the obsolete components and then reinstate the parent item.

How can I remove an obsoleted component from an item structure?

Change the lifecycle phase to Production and remove the component from the item structure. Then change the lifecycle phase to Obsolete.

To change the lifecycle in the Product Development work area you must create a change order and release it. But in the Product Information Management work area you don’t have to create the change order.

What happens to structure creation if I enable lifecycle validation?

When lifecycle validation rules are enabled, they ensure that only components in the same lifecycle phase or higher lifecycle phase than the parent item can be added.

The only exception is made for a deprecated lifecycle phase. Component items in this lifecycle phase can't be added to an effective structure. For example, the parent item has lifecycle phases of Concept, Design, Prototype, Production, and Obsolescence. It's currently in Prototype lifecycle phase. When adding a component to this item's structure, the component should have a cycle phase of Prototype (same as the parent item) or Production (higher life cycle than the parent item).

What's a reference designator?

Reference designators are sequenced comments and instructions that pertain to a component.

For example, you may have drawings that clarify the assembly process for certain components, or further instructions for the use of a large quantity of the same component. You can specify whether to assign one reference designator for every usage of the component or assign any number of reference designators to the component. Planning bills and model, option class, and planning components can't have reference designators. You can also specify a comment for each reference designator.

What's a structure loop?

Structure loops occur when a structure is assigned as a component of itself somewhere in the multilevel structure of a defined item. By default, a check for structure loops is run when creating or editing a structure.

How can I compare item structures?

Initiate a structure comparison from the structure list table by selecting two structures to compare and then selecting component attributes.

Structure comparison results are presented in a hierarchical table with the selected structure component details. You can change the attributes or structures being compared quickly using the Actions menu.

How can I create development structures for an item?

You can create development structures in the Product Development work area.

Note that you can't create, edit, or delete development structures from the Product Information Management work area.

Related Topics

- How You Create Structures
- Structure Types

What's the difference between common item structures and copied item structures?

If you need to create an item structure that's very similar to an existing structure, then it's easier to copy the item structure and make the necessary modifications rather than create a new one.

If you need to create an item structure that's identical to an existing structure so that it doesn't require any component changes, then make the item structure common. This helps reduce maintenance and the risk of errors.

Related Topics

- How You Create Structures

What happens if I associate an item attachment category with the item structure type?

If you associate an item attachment category with an item structure type, you can filter your view when viewing or managing item structures to reveal only relevant item attachments.

From the attachments available at the item or component item level, only those attachments that are of the specified attachment categories appear when viewing or managing an item structure.

What happens if I enable Use Primary for Expansion validation?

If you enable Use Primary for Expansion for alternate structures for a subassembly that doesn't have an alternate structure of the same name defined, its primary structure, if available, will be used when viewing a multilevel item structure.

How can I define additional attributes?

You can define additional attributes at the item structure header or component level using descriptive flexfields. Product Managers can capture the required information for these attributes when managing item structures.

Related Topics

- Item Attributes

What's the significance of start and end dates on a structure name?

Start and end dates signify the usage of a structure name. You can create a structure of that name for an item during that date range, but not outside that date range.

Note: Primary structures can't have an end date.

What happens if I select Default WIP Supply Value for Components?

If you select Default WIP Supply Value, and no supply value at the component level is specified, the default item-level work in process (WIP) supply value is used for the component.

How can I control the loading of item data into the configurator?

On the item structure, select the component, and click **Actions** > **Edit**. In the Edit Components dialog box, select the **Use Placeholder** check box.

Related Topics

- View Structure Details—Classic

In a structure, how can I manage mismatches in lifecycle phase?

To manage the lifecycle phase for a structure type, use the Enable Lifecycle Phase option available in the Manage Item Structure Type task.

To access the Manage Item Structure Type task, navigate to the Setup and Maintenance work area. Select the Product Management Offering, and Structures functional area.

Select the **Enable Lifecycle Phase** option to manually correct any mismatches in lifecycle phase. Deselect the option to allow creation of item structures with components at a lower lifecycle phase than the parent item.

The changes you make to the **Enable Lifecycle Phase** option don't impact existing structures. For such structures you must manually correct the mismatches in lifecycle phase.

Why are the Operation Sequence and Material Control attributes unavailable in item structure?

Operation Sequence and Material Control attributes such as Sub Inventory and Locator have been removed from the Product Information Management work area; they're available in the work area named Work Definition.

But you can view similar values defined at the item level. To do so, select the item structure and view the values for the attribute group named Work in Progress.

9 Item Packs

Pack Types

Pack types, also known as trade item unit descriptors, are used to describe the Global Trade Item Number (GTIN) hierarchy level.

Hierarchy is used to establish relationships between different levels of an item's supply chain. For information on trade item unit descriptors, see the GDSN trade item implementation guidance.

Related Topics

- GDSN Trade Item Implementation Guidance

Manage the Packaging Hierarchy

You create a packaging hierarchy to define the various pack configurations in which you can package a base item.

For example, you sell flash memory sticks (the base item, VI11416) in packs of 3 at retail stores, but ship 20 of the 3-packs in a case to the store. The packaging hierarchy looks like this:

- Case: Item = Case1_VI11416
    - Pack or Inner Pack: Item = Pack1_VI11416, Quantity = 20 Each
        - Base Unit or Each: Item = VI11416, Quantity = 3 Each

A packaging hierarchy can have any number of levels. The pack type defines each level in a hierarchy. The pack types used in the above example are Case, Pack or Inner Pack, and Base Unit or Each. The pack type of any item above the base unit or each level is stored as the pack item's primary attribute Trade Item Unit Descriptor (TIUD). The base item defines the lowest level in a packaging hierarchy. A base item can belong to multiple pack hierarchies.

The following pack type validations apply.

Pack Type (TIUD)	Description	Parents	Parent Instance	Children	Child Instance
Transport Load (TL)	The trade item above the pallet level used for transporting trade items. This level can be used to define truckloads, shipping containers, rail cars, ships, and so on. For example, a product is manufactured overseas and the manufacturer communicates that	TL, None	Single	TL, PL, MX, CS, DS, PK, EA	Single or Multiple

Pack Type (TIUD)	Description	Parents	Parent Instance	Children	Child Instance
	10,000 units will fit in a container which is assigned a GTIN as it's a standard configuration.				
Mixed Module (MX)	A unit load that's a display ready pallet that may contain a single GTIN or several unique GTINs that's intended to go directly to the selling floor. For example, a configuration that consists of several related products; brooms, mops, brushes and cleansers as a spring cleaning display.	TL, MX, None	NA	CS, PK, Setpack, Multipack, EA	Single or Multiple
Pallet (PL)	A unit load that contains a single or multiple GTINs that's not display ready. Includes box pallet. For example, soap powder in standardized pallet quantities of 100 cases per pallet	TL, PL, None	NA	DS, CS, PK, Setpack, Multipack, EA	Single or Multiple
Display Shipper (DS)	A display which can contain a single instance of a GTIN or more than one unique instance of a GTIN. For example, a counter top display of lipsticks and nail polish.	TL, DS, PL, None	Single	CS, PK, Setpack, Multipack, EA	Single or Multiple
Case (CS)	A standard trade item shipping unit. Includes a 1/2 or 1/4 pallet and a 1/2 or 1/4 box pallet. For example, 1 liter orange juice bottles are packed in a standard 24 pack configuration within a cardboard case.	TL, PL, MX, Display Shipper, CS	Multiple	CS, PK, Setpack, Multipack, EA	Single or Multiple
Setpack	a consumer unit that contains multiple instances of lower level GTINs that are typically bar-coded.	PL, MX, DS, CS	Multiple	PK, EA	Single or Multiple

Pack Type (TIUD)	Description	Parents	Parent Instance	Children	Child Instance
Multipack	A group of trade items (the same or different) that are intended to be sold as a single consumer unit at the point-of-sale For example, a three-pack of men's white T-shirts or a 12-piece set of glassware.	PL, MX, DS, CS	Multiple	PK, EA	Single or Multiple
Pack or Inner Pack (PK)	A logistical unit or a consumer unit between a case and each. This level can contain a single GTIN or multiple GTINs. For example, a pack consisting of three of the same canisters of potato chips with a unique bar code that represents the three pack. The canisters that are the components of the bundle pack are physically bar coded with the GTIN that represents a single canister.	TL, PL, MX, DS, CS	Multiple	EA	Single or Multiple
Base Unit or Each (EA)	The lowest level of the item hierarchy intended or labeled for individual resale. Such as an individual box of cereal.	TL, PL, MX, DS, CS, PK, Setpack, Multipack	Multiple	NA	NA

Creating a Packaging Hierarchy

You can only create and update a packaging hierarchy in the item's master organization. Once you create the packaging hierarchy in the master organization, assign it to the child organizations.

To create a packaging hierarchy:

- Select Create Pack.
- On the Create Pack pop up, select an organization and select or search for your item.
- Select OK.
- On the Create Pack: Select Pack Type pop up, select a pack type and click OK.
- On the Edit Item page, Structures tab, Packs sub tab, review your pack and save.

FAQs for Item Packs

What's managing packaging information?

Managing item packs information is key to facilitating order and inventory tracking.

You manage packaging information using a hierarchical representation of items representing the logical structure of the product packaging needs. Each packaging level is modeled as an item so you can easily track inventory and orders against them.

What attributes participate in a rollup?

Item attributes can be rolled up from base items to higher pack items. This enables you to calculate the dimensions of higher pack items from lower pack items.

The attributes for which roll-ups are performed are:

- Quantity
- Weight
- Weight UOM

How can I create item packs?

Initiate pack creation for an item from regional task pane using create pack task.

Select an item within a master organization and specify a pack type for the item, if not defined. Select the **Packs** tab on the Item Details page to specify pack items. Based on the pack type of the selected item, you can associate child or parent pack items.

Select the **Create packs** action from the search results table. The Actions menu provides the ability to create multiple packs for all the selected items of type Base Unit or Each in a single flow. It enables you to create a representative pack structure which is then replicated for all the selected items, creating individual pack structures for each of the items.

The **Create Packs** page has three main regions:

- Items: The items selected in the search results table are presented in a table. You can add additional items or remove items from this table.
- Item Class: Enables you to specify the item class for the new pack items created based on the pack template.
- Pack Template: Enables you to define a representative structure to be duplicated for all the selected items. Each level defined represents a pack item. New pack items will be created based on the levels defined and the number of selected items.

After you save your pack, click next and assign your pack to an organization. Note, all child pack items of a selected row will be assigned to the specified organizations.

10 Item Attachments

Overview of Item Attachments

An item attachment is unstructured information related to an item. Examples of item attachments include CAD drawings, test results, specification sheets, or URLs.

Attachments can be any type of file including:

- Files and folders from your desktop or a configured repository.
- Text files generated during the attachment process.

> **Note:** Executable (.exe) files aren't supported.

Attachments can be managed for specific items or revisions of items, all the items for a Master Organization, or all the items for a specific organization.

Managing Item Attachments

Manage attachments for individual items using the following procedure:

1. Search for and access the item whose attachments you want to manage.
2. On the Edit Item page, access the Attachments tab and select **Item** or **Item Revision**.
3. From the **Actions** menu, you can associate new attachments with the item or revision, delete attachments, or modify existing attachments. When you add an attachment, select the file type and attachment category for the attachment and specify a title and description.

   The attachment categories listed in the **Category** field are restricted to those that are associated with the item class of the item.

   Ensure that you don't inadvertently add the same attachment more than once. It's possible to add attachments with the same title, description, file, or attachment category to the same item or item revision.

   To associate the same file to multiple items as an attachment, select the **Shared** attribute of the attachment. Once the Shared attribute is selected for an attachment on one item, you can then associate the same file to another item by creating a **Repository File/Folder** type attachment on the second item and specifying the file's location in the repository.

Item attachments will be available for all the revisions of the item in a particular organization.

Checking Out Item Attachments

To modify an existing attachment, you must first check the attachment out of the file repository.

Only one user can check out a file at any given time. You can only check out the latest version of the file. During checkout, you have the option to download the latest version of the file. When you check in the file, you must upload the modified content from your desktop. If no changes have been made and there is no need to upload a file from your desktop, you can cancel the checkout. The application maintains a version history, displaying a list of all previous versions of the file as well as indicating the attached version. You can open an earlier version to access discarded

information or use the earlier version as a basis for creating a new version. Highlight the appropriate attachment and Click the **Check Out** icon. A message appears, informing you of the version and file that you're checking out.

Download Attachments Using Web Services

You can programmatically download attachments using the GET_FILE request available in the Oracle WebCenter Content service using the following steps:

1. Get the DocumentURL of the attachment using the Oracle Product Hub Web Services. For example, when you query an item attachment using Items V2 SOAP or REST service, you will get the DocumentURL similar to the following:

```
https://server:port/fscmUI/content/conn/FusionAppsContentRepository/uuid/dDocID%3aXXXX74?
XFND_SCHEME_ID=1&XFND_CERT_FP=432XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX9F2&XFND_RANDOM=-79XXXXXXXXXXXXXX43&XFND_EXP
IkyXXXXXXXXXXXXXXXXXXX
```

Note:

- The digital signature expires after 10 minutes. Therefore, you must download the attachment file before the digital signature expires. If the digital signature expires, then you can call Oracle Product Hub web services once again to get the DocumentURL with the new digital signature.
- Only the user who gets the DocumentURL by calling the Oracle Product Hub web service can use the digital signature properties to perform the GET_FILE request to download the attachment.

Related Topics

- Create Items
- Attachments
- How Attachment Entities and Attachment Categories Work Together
- Attachment Entities
- What's an attachment category?
- GET_FILE Request

What's the difference between item attachments in the Product Hub and Product Development?

Product Hub supports item-level and item revision-level attachments. Product Development supports only item revision-level attachments.

Item revision attachments can only be edited through a change order in Product Development once the item is under change control. Item and item revision-level attachments can be edited in Product Hub through the item. Neither item-level nor item revision-level attachments can be edited in Product Hub through a commercial change order.

In Product Development, item revision attachments flow automatically to the next revision, unless deleted.

In Product Hub, item revision attachments don't flow to the next revision if the revisions are created outside the context of a commercial change order. If the revision is created in the context of a commercial change order, the revision attachments flows through from the previous revision automatically.

Item images are stored and shared as item-level attachments in both Product Development and Product Hub.

Will attachments I add in Product Development show up in Product Information Management?

The attachment you add for an item Product Development is visible in Product Information Management only if the Product Development item is in a lifecycle phase higher than design.

Note that the attachment appears as an item revision attachment in Product Information Management.

11 Data Security

Data Security Privileges for Accessing Items

Using the data security privileges available for items, you can authorize users to create, view, and edit item details.

A product data steward or product manager is typically responsible for managing the item data security by entering data grants for the item. Access to an item and it's details is controlled at either the item class or item level.

Data Security and Function Security

Item information is controlled through function security and data security.

- Function security is a statement of what tasks and actions users can perform in pages.
- Data security is a statement of what action users can take against which data. In Oracle Product Hub, data security involves providing users with item data grants to perform operations on certain items.

For complete information on function security, data security, and their associated privileges, refer to the Oracle Fusion Cloud SCM Security Reference for Product Management guide and the Oracle Fusion Cloud Applications Security Reference for Common Features guide.

Job Roles, Duty Roles, and Security

Functional privileges are associated to different duty roles and jobs, and these privileges control the access to the tasks. If you have functional privileges, you can grant data security to other users.

- The Manage Item Classes privilege allows the user add data grants at the item class level.
- The Manage Item People privilege allows the user to add data grants at the item level.

These privileges are available for product data stewards and product managers.

For complete information on job roles, duty roles, and their associated privileges, refer to the Oracle Fusion Cloud SCM: Security Reference for Product Management guide and the Oracle Fusion Cloud Applications Security Reference for Common Features guide.

Managing Item Extensible Attributes Data Security

The IT security manager provides access to the Oracle Authorization Policy Manager application where security is managed. Using the relevant job role, you can create data security privileges on the required item EFF tables.

- The Enable Database Resource Management privilege provides you the access to:
    - Edit database resources in Authorization Policy Manager. You can create data security privileges on the required item EFF tables.
    - Manage item EFF attribute groups. You can create required attribute groups and define security conditions. The data privileges created in APM can be associated with the EFF attribute groups.

- The Manage Item Class functional privilege provides you the access to the Manage Item Classes task. This task manages the item-class level data security. The Manage Item People functional privilege provides access to the Manage Item security task. This task manages the item-level data security and you can access the task from the Actions menu in the Edit Items page.

Notes on Item Data Security Privileges

The following list contains important information on significant item data security privileges and granting privileges for items:

- The **Create Item Class Item (Data)** privilege is granted at the item class level and gives you the access to create items within the item class.
- The **View Item Basic Data** is a basic privilege that you should have in order to search for the item and access it.
- For managing item details such as relationships, attachments, or associations, you must have the **View Item Basic Data** and the **Maintain Item Basic Data** privilege in addition to the required functional privileges.
- **EFF Privilege** is user-defined and controls access to item EFF attribute groups.
- All operational attributes require specific attribute group-level privileges to edit the attributes within the group. **View Item Basic Data** privilege provides access to view all the operational attributes.

  > **Note:** To control the access to extensible attributes groups, you can create a separate and specific view and edit privileges through the Oracle Security Console.

- The **View Item Structure Data** and the **Maintain Item Structure Data** privileges are required to view and manage item structures. In addition, users must have the **View Item Basic Data** privilege in order to access the item.
- The **View Item Pack Data** and the **Maintain Item Pack Data** privileges are required to view and manage item packs. In addition users must have the **View Item Basic Data** privilege in order to access the item.
- The **Maintain Item People Data** privileges allow users to view and manage item data security at the individual item level. In addition users must have the **View Item Basic Data** privilege in order to access the item.

> **Note:** For operational attribute groups, the **Maintain privileges** don't include view access. Corresponding view privileges needs to be granted to user explicitly so users can view and make required updates.

Managing Data Security Privileges at the Item Class Level

You can manage the item access at the item class level. You can provide access to a user or a user group for all items created within an item class at the item class level. The Public check box at the item class level indicates the state of the data security for the items created within the item class. When the item class Public check box is selected, then all users and groups can access the items created within the item class. If you want to access the extensible attribute group, then you must setup data grants for the extensible attribute groups.

When the Public check box for the item class is deselected, then you must set up data security for all users and groups that want to control access to the items created within the item class.

1. Navigate to the Security tab on the Edit Item Class page to add users and specify security privileges.
2. For each user or user group, grant specific item security privileges allowing them to gain access to only relevant information.

You must specify an organization for the item data grants. The data grant will provide users and user groups with access to the items in that organization. This allows multiple users and user groups to access the same item in different organizations.

The privileges that you grant at the parent item class are inherited by the child item classes. You can't alter the inherited privilege grants at child item-class levels. However, you can manage additional grants at the child item-class levels.

Managing Data Security Privileges at the Item Level

You can also manage the Item access at the individual item level.

1. Click Item Security from the Actions drop-down list. The Item Security dialog box opens.

   > **Note:** If the Public check box is selected, it indicates that the item is publicly accessible. You can deselect the Public check box to enable data security for the specific item. The item becomes private and the owner data grants are created for the logged in user. Only the owner can access the item at this time.

2. If the item is private, then for each user or user group, grant specific item-security privileges allowing the user or the user group to gain access to only the relevant information.
3. If the item is public, then for each user or user group, grant specific item-security privileges allowing the user or the user group to gain access to extensible attributes.

Privileges granted at the item-class level are inherited by all items and can't be edited at the item level. However, you can manage additional privilege grants at the item level.

> **Note:** Organization stripping isn't available at the item level. This is because you're managing grants at the individual item level, which is always in the context of an organization.

Managing Security Privileges for Product Hub Portal

The product data stewards provide the required supplier product administration privileges to the supplier users to access the Product Hub Portal.

The assignment of the job role to the supplier can be done in following ways:

- From Oracle Fusion Cloud Procurement Supplier Portal, while setting up the supplier and its users. This flow is specific to Supplier Portal and not controlled by Product Hub.
- From Security Console, by searching the supplier user and assigning the relevant supplier product administration role to the user. This role is common to all Oracle Fusion Cloud Applications.

You also need to provide data security privileges at the item class level to the supplier product administrators. Refer to the preceding section, Managing Data Security Privileges at the Item Class Level, for information on how to assign data security privileges to users.

Related Topics

- Data Security

Data Security Privileges for Creating Items

When you create an item, you can enter the basic data required or add additional data to enrich item information.

The following data security privileges are required to add various item details while creating an item. If you need to enter a combination of the item details identified in the following paragraphs when creating an item, then you need the corresponding combination of data security privileges.

- The following set of data security privileges are required to create an item by entering the minimum required data:
    - **Create Item Class Item Data**

      Required for the item class in which the item is created.
    - **View Item Basic Data:**

      Required to view the item details page.
    - **Maintain Item Primary Data:**

      Required to author the required attributes in Main attribute group such as **Item Name**, **Description**, or **Primary Unit of Measure**.
- The following set of data security privileges are required to create items by entering additional operational attributes:
    - **Create Item Class Item Data**
    - **View Item Basic Data**
    - **Maintain Item Primary Data**
    - **Maintain Operational Attribute Group Data**

      Where **Operational Attribute Group** is the operational attribute group name.

      > **Note:** Each operational attribute group has a separate maintain privilege

- The following set of data security privileges are required to create items by entering user-defined attributes:
  - **Create Item Class Item Data**
  - **View Item Basic Data**
  - **Maintain Item Primary Data**
  - **View Additional Attribute Group Data**
    Where **Additional Attribute Group** is the name of the user-defined attribute group.
  - **Maintain Additional Attribute Group Data:**
    Where **Additional Attribute Group** is the name of user-defined attribute group.

    > **Note:** Privileges for user-defined attribute groups are created by the end user as part of the configured attributes setup and are based on end user security requirements

    > **Note:** Each user-defined attribute group can have separate maintain and view data privileges
- The following set of data security privileges are required to create an item by entering item structures:
  - **Create Item Class Item Data**
  - **View Item Basic Data**
  - **Maintain Item Primary Data**
  - **View Item Structure Data**
  - **Maintain Item Structure Data**
- The following set of data security privileges are required to create items by entering packs:
  - **Create Item Class Item Data**
  - **View Item Basic Data**
  - **Maintain Item Primary Data**
  - **View Item Pack Data**
  - **Maintain Item Pack Data**
- The following set of data security privileges are required to create items by entering Item People (data security grants):
  - **Create Item Class Item Data**
  - **View Item Basic Data**
  - **Maintain Item Primary Data**
  - **Maintain Item People Data**
- The following set of data security privileges are required to create items by entering any or all of the following: Attachments, relationships, associations and category assignments
  - **Create Item Class Item Data**
  - **View Item Basic Data**
  - **Maintain Item Primary Data**

- **Maintain Item Basic Data**

> **Note:** Supplier associations support user-defined attributes. To enter these attributes during item creation, users need the corresponding privileges for the user-defined attribute group.

Related Topics

- Data Security Privileges for Accessing Items
- Data Security Privileges for Updating Items
- Data Security Privileges for Viewing Items
- Data Security
- What's the difference between function security and data security?

Data Security Privileges for Updating Items

The following sets of data security privileges are required to update various item details. If you need to update a combination of the item details identified below when updating an item, then you need the corresponding combination of data security privileges.

- The following set of data security privileges are required to update item operational attributes:
  - **View Item Basic Data**

    Required to view the item details page
  - **Maintain Operational Attribute Group Data**

    Where **Operational Attribute Group** is the operational attribute group name.

    > **Note:** Each predefined attribute group has a separate maintain privilege.
- The following set of data security privileges are required to update user-defined attributes for an item:
  - **View Item Basic Data**
  - **View Additional Attribute Group Data**

    Where **Additional Attribute Group** is the user-defined attribute group name.
  - **Maintain Additional Attribute Group Data**

    Where **Additional Attribute Group** is the user-defined attribute group name.

    > **Note:** Each user-defined attribute group can have separate view and maintain privileges.
- The following set of data security privileges are required to update item structures for an item:
  - **View Item Basic Data**
  - **View Item Structure Data**
  - **Maintain Item Structure Data**

- The following set of data security privileges are required to update packs for an item:
    - **View Item Basic Data**
    - **View Item Pack Data**
    - **Maintain Item Pack Data**
- The following set of data security privileges are required to update Item People (data security grants) for an item:
    - **View Item Basic Data**
    - **Maintain Item People Data**
- The following set of data security privileges are required to update any or all of the following for an item:

  Attachments, relationships, associations and category assignments
    - **View Item Basic Data**
    - **Maintain Item Basic Data**

    > **Note:** Supplier associations support user-defined attributes. To update these attributes, you need the corresponding privileges for the user-defined attribute group.

Related Topics

- Data Security Privileges for Accessing Items
- Data Security Privileges for Creating Items
- Data Security Privileges for Viewing Items
- Data Security
- What's the difference between function security and data security?

Data Security Privileges for Viewing Items

The following data security privileges are required to view various item details. If you need to view a combination of the item details identified below, then you need the corresponding combination of data security privileges.

- The following set of data security privileges are required to search and view data.
    - **View Item Basic Data**

      Item basic data details include operational attributes, item people, attachments, relationships, associations, and category assignments.

- The following set of data security privileges are required to view :
    - **View Item Basic Data**
    - **View Additional Attribute Group Data**

      Where **Additional Attribute Group** is the name of the user-defined attribute group.

      > **Note:** Each user-defined attribute group has a separate maintain and view data privilege
- The following set of data security privileges are required to view :
    - **View Item Basic Data**
    - **View Item Structure Data**
- The following set of data security privileges are required to view :
    - **View Item Basic Data**
    - **View Item Pack Data**

> **Note:** Supplier associations support user-defined attributes. To view these attributes, you need the corresponding view data privilege of the user-defined attribute group.

Related Topics

- Data Security Privileges for Accessing Items
- Data Security Privileges for Creating Items
- Data Security Privileges for Updating Items
- What's the difference between function security and data security?

Data Security for Trading Partners

The trading partner item data security lets you control access to trading partner items data sets. The privileges for trading partner items are managed through the Manage Trading Partner and Trading Partner Item task available in the Product Information Management work area.

By default, trading partners are set to public. To enable data security, select the Private check box and enter privileges using the security section. Data security that's applied at the trading partner level applies to all trading partner items for that trading partner. The owner or administrator of the trading partner item type or person with view and manage data grants can access the content. If data security is enabled for trading partner items for a given trading partner items, all trading partner items created will inherit the data grants from the trading partner level.

A private trading partner item can only be viewed by a specific set of users or groups that have been granted the data grants to view the object. Once a trading partner item is marked private, it can't be made public again. If you mark or enable data security at the trading partner level, all existing trading partner items for the trading partner will inherit the data grant created for the person logged in as the owner.

Note: The security subsection in the Edit Trading Partners page is only displayed for trading partner items when data security is enabled for the trading partner items.

Privileges

Privileges available at the trading partner level:

- View: Users with this privilege can view trading partner items for the trading partner.
- Maintain: Users with this privilege can edit the trading partner items. Users must also have the View privilege.
- Administer: Users with this privilege can create additional data grants at the trading partner level and add additional owners.

Note: A person or group with the Administrator privilege can add another user with the Administer privilege and add a second owner. A data grant for the original owner can then be removed. There must always be one owner for the trading partner items.

Privileges available at the trading partner item level:

- View: Users with this privilege can view the trading partner item.
- Maintain: Users with this privilege can edit the trading partner item. Users must also have the View privilege.

12 Function Security

How to Define View-Only Access for Items

You can define a custom role that provides view-only access to items.

As described in more detail elsewhere, the security model requires a three-way relationship between users, roles, and data, summarized as: who can do what on which data. For the case of providing view-only access for items, this table summarizes the elements of that relationship:

Security Relationship Element	How To Implement the Element
Do What	1. Create a custom role with only those privileges that provide view access to items.
Who Can	2. Assign the custom role to the users that need view-only access.
On Which Data	3. In the item class for the items that need view-only access, assign only those actions to users that provide view access to items and certain of their components. Provide view-only data access to items in an inventory organization to users assigned the custom role.

Create a Custom Role

Create a custom role with only those privileges that provide view access to items.

To create the custom role:

1. Click **Navigator** > **Tools** > **Security Console**.

   You must have the IT Security Manager role to use the Security Console.
2. Select the Roles tab, then click the **Create Role** button.
3. Enter a **Role Name**. Example: `Custom View-Only Item Viewer`.
4. Enter a **Role Code**. Example: `View_Only_Item`.
5. Select this **Role Category**: **SCM-Job Roles**
6. Enter a **Description**. Example: `Custom role that allows view-only access to items.`
7. Click **Next** to advance to the Function Security Policies role component.
8. On the Privileges tab, click **Add Function Security Policy**.
9. In the Add Function Security Policy dialog box, search for and select privilege names that provide view-only access to items.

   To find and select privileges:

   a. Optionally, set the Search filter to **Privileges**.
   b. Enter at least 3 characters in the search field until you match the name of the desired privilege.
   c. Select the privilege in the search results, then click **Add Privilege to Role**.

Select and add these privileges:

Privilege	Purpose
Monitor Item Work Area	Allows access to the Product Management group containing the Product Information Management work area from the home page and the Navigator. View-only access to the items themselves is governed by other privileges.
Browse Item	Allows access to the Manage Items and Browse Items tasks in the Product Information Management work area, using item class and catalog hierarchies. View-only access to the items themselves is governed by other privileges.
View Item	Allows view-only access to item details. The user must have rights to search and view items under your data security policies. Allows view-only access on the item detail page to the Overview, Specifications, Structures, Associations, and Quality tabs. The Categories tab isn't available for view-only access. You can add the Manage Item Catalog privilege to your custom role to make the Categories tab available, but that privilege makes categories editable, and defeats the view-only purpose of the role. In addition, that privilege adds the Manage Catalogs task to the task panel of the Product Information Management work area, since it makes catalogs editable.
View Item Relationship	Allows access to view item relationships. Allows view-only access on the item detail page to the subtabs of the Relationships tab, with the exception of the Trading Partner Items and GTIN subtabs.
Manage Item Attachment	Allows access to view and manage item attachments.

These privileges are a starting point for defining a custom role with view-only access to items. You can add more privileges to your function security policy for this custom role, as necessary for your business needs.

10. You can click **Next** to skip through defining the other components of the new role:
    - Data Security Policies
    - Role Hierarchy
    - Segregation of Duties
    - Users
11. On the Summary page, click **Save and Close**.

Assign the Custom Role to Users

Assign the custom role to users that require view-only access to items.

To assign the custom role to a user:

1. In the Security Console, select the Users tab, then create or update a user account.

- To create a user, click the **Add User Account** button. Then, the User Information page, enter the required basic information for users, such as name, email address, user name, and password, as needed.
- To update a user, search for the user name, then click the display name in the search results.

2. Click **Add Role**.
3. In the Add Role Membership dialog box, search for and select the name of the custom role that you created. Then click **Add Role Membership**. The role is added to the user account.

Assign View Actions to Users

As you normally do when you set up data security for item classes, assign actions to users and organizations, but this time select only the actions for viewing. This assignment of actions is required for non-public item classes, but not for public item classes. (An item class is public if its **Public** check box is selected.)

> **Note:** This section applies only if you have enabled either the Data Governance or Data Consolidation functional area within the Product Management offering in the Setup and Maintenance work area. These functional areas are available to users of Oracle Fusion Cloud Product Management.

To assign view-only actions to users for items in an item class:

1. In the Setup and Maintenance work area, use the **Manage Item Classes** task:
   - Offering: Product Management
   - Functional Area: Items
   - Task: Manage Item Classes
2. Select the item class and click **Actions** > **Edit**.
3. On the Edit Item Class page, click the Security tab.
4. Click **Actions** > **Add Row**.
5. In the **Principal** field, select **Group** or or **Person**, depending on the requirement.
6. In the **Name** field, search for and select the view-only custom role you created.
7. In the **Organization** field, search for and select the organization in which the custom role's actions apply.
8. In the Actions table for the custom role, click **Actions** > **Select and Add**.
9. In the Select and Add Actions dialog box, search for and select all the actions that begin with `view`. You should select these actions:
   - View Item Basic
   - View Item Structure
   - View Item Attribute
   - View Item Pack
10. Click **OK** to assign the actions to the role or user in this item class and its child item classes.
11. Click **Save** to save your changes to the item class definition.

Synchronize Users and Roles

When you make changes to users and groups in the Security Console, you must synchronize those changes with the HCM tables used by Oracle Fusion Cloud Applications.

To synchronize your custom role and the users you assigned it to with the HCM tables, in the Setup and Maintenance work area use the **Run User and Roles Synchronization Process** task:

- Offering: Product Management
- Functional Area: Initial Users
- Task: Run User and Roles Synchronization Process

Runtime Access to Items

At runtime, the affected users have only view access to the affected items.

For example, assume that you're the user account described here:

1. Sign in with the user name defined as having the custom view-only role.
2. The only tasks available in the task panel are:
    - Manage Items
    - Browse Items
    - Manage Item Relationships
3. Select the Manage Items task.
4. Set the current item class to the one that you added view actions for.
5. Add the search field **Organization**.
6. Query for items by these criteria:
    - An organization from the set for which you provided data access.
    - An item belonging to the item class that you defined view actions for.
7. Select one of the items.
8. On the item details page, all of the fields are view-only.
9. Select any of these tabs: Overview, Specifications, Structures, Associations, or Quality.

    All of the fields are view-only.
10. Sign out.

Related Topics

- Set Up Data Security for Item Classes
- Data Security
- Data Access
- Assign Data Access to Users

13 Catalogs and Categories

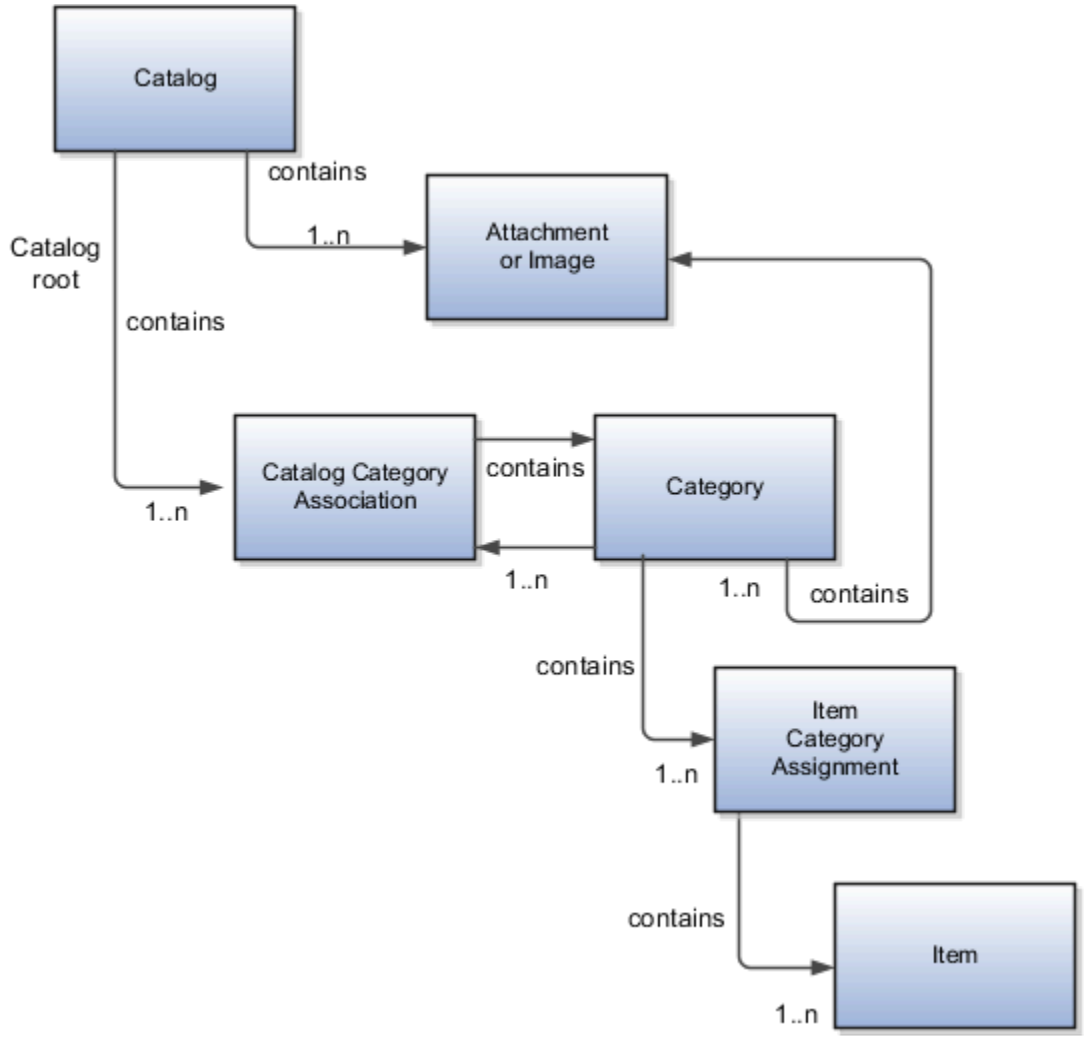
Create Catalogs

How Catalogs Work Together

A catalog is a collection of categories that you use to classify items.

You can organize the categories into a hierarchy that represents a taxonomy. You create new categories only in the context of a catalog. You can add existing categories to one or more catalogs, either from another catalog or as shared categories from a source catalog. You can control the assignment of items and categories in the catalog by controlling the catalog content. For example, you can set the value of the **Catalog Content** field on the Edit Catalog page to **Items at all levels**, which allows items to be assigned to any level within the category hierarchy, not only to the leaf levels.

This figure shows the relationships of the catalog components to each other.



Catalog

A catalog is a collection of categories that are organized to define a classification of items. The top most level of a catalog is the catalog root. All categories for the first level in the category hierarchy are associated with the catalog root through the catalog category association component.

Category

A category is a component of a catalog that represents a set of items. You can associate a category to a catalog through the catalog category association. Both the shared category and the native category are associated thorough the catalog category association.

Catalog Category Association

Catalog category association represents the relationship between a catalog and a category, or a parent category and a child category. Each catalog category association represents one relationship between the catalog and a category or one relationship between a parent category and a child category.

Item Category Assignment

Item category assignment represents the assignment of the item to a category in a catalog. Each item category assignment represents the relationship between a category and an item.

Item

An item represents objects such as a product, service or template. An item is assigned through the item category assignment component.

Attachment or Image

Information is associated to the catalog or category through the attachment framework. Multiple attachments are supported but you can only associate a single attachment or attachment type image with a catalog or category for viewing in the UI.

Catalog Details

You can view and edit a catalog on the Edit Catalog page when you have the appropriate permissions.

The following parts of the Edit Catalog page provide important capabilities for managing and editing catalogs:

- Catalog header region
- Catalog details tab
- Category hierarchy tab

Catalog Header Region

The header region for the Edit Catalog page contains the catalog name and description, the selection of the default category and the start and end date for the catalog.

You can change the default category for a catalog so that the category is used for the item creation process, based on the values of attributes for the item. The choice of default category also enables other Oracle Fusion Cloud Applications to assign items to a category.

You can modify the start and end dates for a category as you update a catalog in order to control when the category is used.

You can revise or reclassify the category to reflect shifting relationships within the category hierarchy.

Catalog Details Tab

The Details tab contains:

- The configuration attributes for the catalog, which control the runtime behavior for the catalog.
- The sharing attributes for the catalog, which control the source catalog that will be used for sharing from and what content can be shared.
- The additional information for the catalog, which contains the descriptive flexfields that support the catalog metadata.

Category Hierarchy Tab

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

Related Topics

- Catalog Formatting
- How Various Catalog Hierarchies Fit Together
- Create Categories
- Category Sharing
- Category Descriptive Flexfields

Catalog Formatting

The format of a catalog is defined at the time the catalog is created and controls the behavior of the catalog at runtime.

When you format a catalog, the layout controls three main areas and includes the following tasks:

- Catalog configuration
- Date enablement
- Category sharing

Some fields are required, and others are optional.

Catalog Configuration

You can configure the catalog, and this affects how the content behaves. The catalog configuration contains a set of attributes that define the catalog configuration. These attributes interact to define the runtime behavior of the catalog.

The configuration functions are:

- Catalog code: A unique identifier that's used.
- : Controls how items are assigned to categories and has two values. The first value is master level, which enables the automatic assignment of items to all child organizations associated with the master organization, if the current context is a master organization. The second value is organization level, which assigns the item only to the organization in the current context.
- Default category: A newly created item is automatically assigned to the default category if specific operational attribute values are entered for the new item. The automatic assignment is controlled by the functional area. Each functional area has specific rules about which operational attribute values are used to trigger the automatic assignment process. For example, an item will be assigned to the catalog assigned to the functional area called Purchasing if the Purchased specification is turned on or if the Internal Ordered Item specification is enabled.
- : Allows items to be added only to the bottom level categories in the hierarchy.
- Catalog content: Controls what content can be added to the catalog and where the content can be added.
- : When this option is selected, you can assign an item to one or more categories in the catalog. The default is deselected, which means that each item can be assigned to only one category in the catalog.
- Public Catalog: Select to mark this catalog as public. All users with access to view catalogs will have access to this catalog.
-
- Enable duplicate category names
- Enable deletion of item category assignments
- Enable hierarchy for catalog
- Enable date level control for item category assignments

Note: The catalog behavior for functional area catalogs is defined through the combination of fields within the pages and the seeded functional area rules.

Catalog Date Enablement

The date enablement function controls when the catalog is in an active state or inactive state by using the start date and end date attributes.

Category Sharing

The category sharing function enables sharing categories from a designated source catalog.

The sharing function has these attributes:

- Share by Reference: Catalog elements that are shared by reference are read-only in the target catalog. Multiple source catalogs can be used in this type of sharing.
- Copy: Content from other catalogs can be added to the current catalog by creating a copy of the content. The copied content can be edited within the current catalog.
  - Include child categories: Indicate whether to copy child categories when copying categories.
  - Copy item category assignments: Indicate whether to copy items assigned to the category into the catalog.

Related Topics

- Date Enablement for Catalogs and Categories
- Default Catalog Assignment
- Automatic Assignment Catalogs

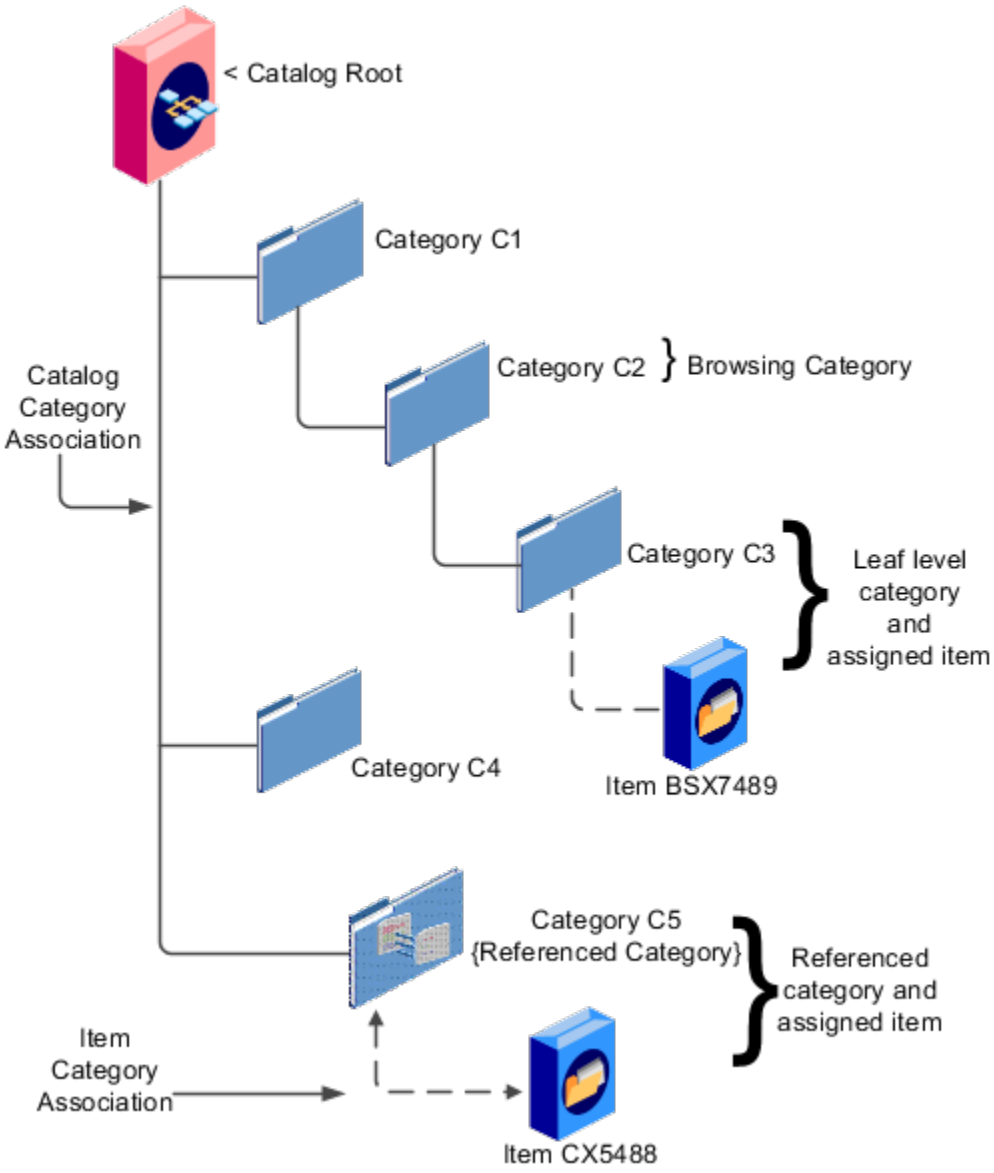
Manage Catalogs

How Various Catalog Hierarchies Fit Together

You use catalogs to organize and classify collections of items by associating categories with the catalog.

You organize the categories to form a taxonomy and assign items to the categories. When you associate a category with the catalog, a catalog category association is created which specifies the relationship of the association. The catalog category association may also represent the relationship between two categories, for example, a relationship between a parent category and a child category.

The following figure shows the relationships of the category hierarchy components.



Components

The components of a category hierarchy are:

- Catalog root: The topmost node in category hierarchy that represents the object called catalog.
- Category: The catalog component that is used to represent the classification structure.
- Catalog category association: The line in the diagram represents the relationship between a catalog and category or between a parent category and child category.
- Item category assignment: The dotted line in the dialog represents the relationship between a category and an item.
- Reference category: The category, C5 in this diagram, is shared as a reference category from a source catalog.
- Leaf level category: The lowest or bottom-level category in a category hierarchy. You can assign items to all levels in a category hierarchy if you configure the catalog to support this.

- Browsing category: The category, C2 in this diagram, is a browsing category. Browsing categories are categories that you add to the category hierarchy for the purpose of classification and do not have items assigned to them.

The category hierarchy does not have a limit on how many levels can be represented. The category hierarchy can have multiple hierarchies within a single category hierarchy.

Relationship Between Categories and Catalogs

Catalogs are used to organize and classify collections of items by associating categories to the catalog.

The categories are organized to form a taxonomy and items are assigned to the categories. When a category is associated with the catalog a catalog category association is created which specifies the relationship of the association. The catalog category association may also represent the relationship between two categories, for example a relationship between a parent category and a child category.

Catalog Category Association

The date enabled attribute value is important regarding catalog category association. The catalog category association is date enabled providing the control of when the catalog category association is active in the catalog and when the catalog category association is inactive. The catalog category association has two attributes to support enabling dates; the start date and the end date. The start date is value is the first day that the catalog category association is available or active for use and the end date is the last day the catalog category association can be used, after this date the catalog category association is inactive. The date enabled attribute values are also used to control the visibility of content and the behavior of the category in the catalog. If a category association is inactive or end dated, having the value of the end date attribute past the current date, then the items can't be assigned to the category.

A catalog category association will be set to inactive state when the category referenced by the catalog category association is set to an inactive state automatically, but the display won't be refreshed automatically.

Category Hierarchy Reports

You can use reports produced by transactional business intelligence to monitor your category hierarchy changes.

If you make changes to the catalog category hierarchy, you can use the **Product Management - Item Catalog Category Hierarchy Real Time** subject area to create reports that include multiple levels of category hierarchy data. See the Subject Areas for Transactional Business Intelligence in SCM guide for details. When you make hierarchy changes, you must run the **Refresh Product Hub Snapshots** scheduled process before creating or viewing subject area reports.

If you make changes to the catalog category hierarchy through the import process, then the **Refresh Product Hub Snapshots** scheduled process runs automatically when the import is complete. If you make changes to the hierarchy through the Item Categories REST resource or through the Manage Catalogs task in the Product Information Management work area, then the scheduled process is automatically submitted in the next scheduled time window on that day. You can also run the scheduled process yourself, to refresh the business intelligence reports immediately.

Related Topics

Catalog Category Association

The catalog category association assigns the category to the catalog or parent category. This association lets you manage when a category is assigned to a catalog, by setting the start and end dates for the association.

The catalog category association can be edited only within the Edit Catalog page, in the category hierarchy tab. The catalog category association start date and end date attributes can be edited in the details region. The association can't be deleted, only end dated.

Category Catalog Associations

You select the category in the category hierarchy table for the catalog category association that you're editing, the category details are displayed in the side panel. The association start date and association end date are the only editable fields.

After you make changes, clicking the **Save** button saves the changes to the database but doesn't close the Edit Catalog page. Clicking the **Save and Close** button saves the changes to the database and closes the Edit Catalog page.

Date Enablement for Catalogs and Categories

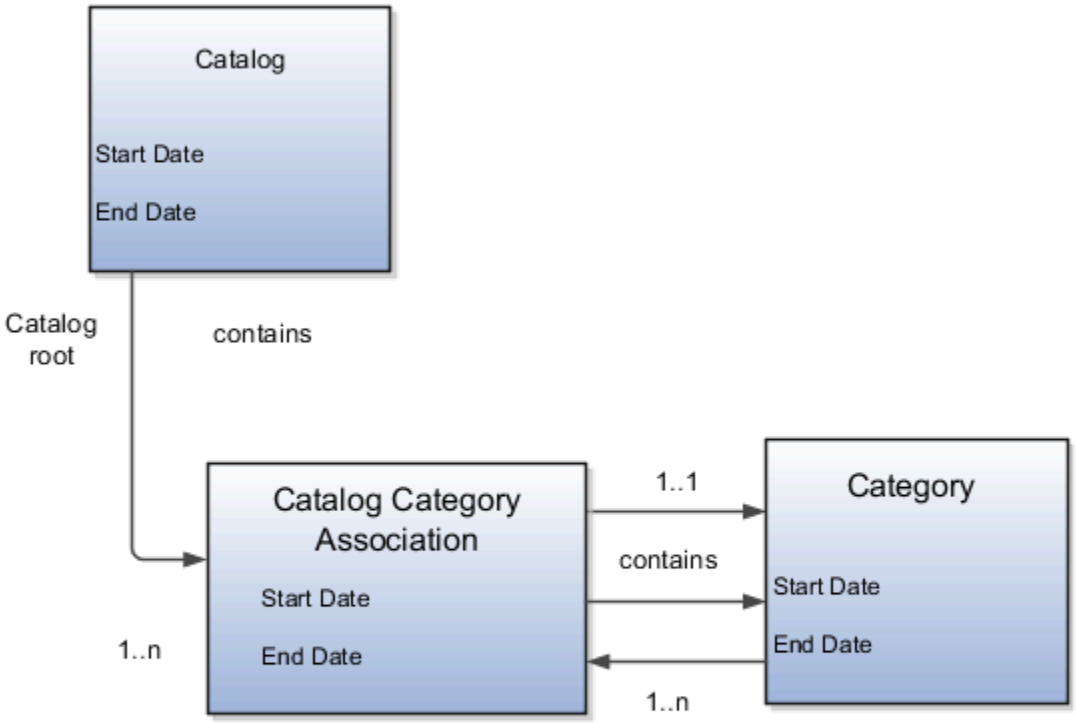
The catalog, categories, and catalog category association use date enablement to determine if the object specified is active or inactive based on the start date and end date. The following are date enablement definitions:

- **Active**: An object is active when the current date is later than or equal to the value of the start date, but earlier than or equal to value of the end date.
- **Inactive**: An object is inactive when the current date is later than the value of the end date.
- **Future dated**: An object is future dated when the current date is earlier than the value of the start date.

You set the date enablement attributes are used to determine when a catalog, category, or catalog category association is used or visible.

- On the Manage Catalog page, a table filter determines which catalogs appear. The default value for the choice list is **Active**, indicating that only active catalogs will be displayed. You can select the value **All** to view both active and inactive catalogs.
- On the Edit Catalog page, on the category hierarchy tab, two table filters determine what categories and catalog category associations appear. The default values for the two choice lists are **Active**, indicating that only active categories and active catalog category associations will be displayed. You can select the value **All** to view both active and inactive categories and catalog categories associations.
- Other applications also use the date enablement attributes to filter information retrieved through application programming interfaces or services for catalogs.

The following figure provides the date enablement attributes for these objects. The catalog, category, or the catalog category association has an internal state that is active or inactive.



The following aspects are important regarding date enablement for catalogs and categories:

- Start date
- End date
- Catalog and category objects
- Catalog category association
- Catalog and category rules

Start Date

The start date is defined as the first date that the object can be active. The start date can be future dated by setting the value to a date later than the current date. The start date value defaults to the system date if no date is entered during catalog or category creation.

End Date

The end date is defined as the last date that the object can be active. The object is end dated one second after the date specified by the value of **End Date**, that is the next day at 12:00:01 a.m. You cannot set the end date in the past. Also, you can change the end date from a condition when the object is ended to a new end date greater than or equal to the system date, causing the object to go from inactive to active. The end date value is optional during catalog or category creation.

Catalog and Category Objects

The start and end dates have been added for the catalog and catalog category association. The inactive date for categories has been renamed as the end date and the start date has been added.

Catalog Category Association

The catalog category association is used to specify the parent and child relationships between catalogs and categories and for category to category relationships. The catalog category association date enablement is independent of the category data enablement, except for the case where the category is end dated; the association is ended automatically as well. The catalog category association dates represents the state of the category for the catalog in which the category is associated.

Catalog and Category Rules

When a catalog is inactive the following rules apply:

- All operations for the catalog are disabled; the catalog can be edited.
- The catalog cannot be used in other processes.
- The catalog can be viewed only if you set filters on the Manage Catalog page to a value of **All**, enabling you to view active and inactive catalogs.

When a category is inactive the following rules apply:

- All operations for the category are disabled; the category is not able to be edited.
- The category cannot be added to other catalogs.
- The category can be viewed only if you set the filters on the Edit Catalog page to a value of **All**, enabling you to view active and inactive catalogs.
- The application sets the catalog category association for the inactive category to inactive.

When a catalog category association is inactive the following rules apply:

- The category may be inactive or active; if the category is active it can be edited.
- The catalog category associations and related category can be viewed only if you set the association filter on the Edit Catalog page to a value of **All**, enabling you to view active and inactive catalogs.

When a catalog is future dated the following rules apply:

- All the operations of the catalog are enabled and the catalog is can be edited.
- The catalog can be used in other processes, if allowed.
- The catalog can be viewed only if the you set the filters on the Manage Catalog page to a value of **All**.

Create Categories

You can create categories in the context of a catalog, on the Category hierarchy tab on the Edit Catalog page . When you select the Create icon in the category hierarchy table, the Create Category dialog appears.

Create Category Dialog

After you enter a name and tab out of the field, the category code will be automatically populated. You can update this value if required. Enter a meaningful description of the category. Optionally, you can add an image and an attachment to this category.

Date enablement determines if an object is active or inactive based on the start date and end date. When categories are created, the default start date value is the current date. You can move the category start date beyond the current date to a future date within the category. The end date value is optional.

Select the **Restrict category to item assignment only** check box to add only items to the category.

After you complete the required fields for the catalog, clicking **OK** creates the category in the database, adds the category to the point of selection in the category hierarchy, and closes the dialog.

Items to Categories Assignment

You can assign items to categories on the Edit Catalog page, category hierarchy tab, on the category detail item tab.

You can assign items only to active categories. In addition, you can configure catalogs to control item assignment to categories within the catalog by selecting the **Allow multiple item category assignment** check box on the Create Catalog page, which allows items to be added to all levels of the category hierarchy.

To begin, select the item class and enter search information in either the Item ID, Item description or Keyword fields and click the **Search** button. You select items from a choice list and add them to the category.

Controlling Item Assignment

You also control item assignment by selecting the value of the **Controlled at** check box on the Edit Catalog page. If you select the **Master Level** value and the organization context is a master organization, then the assigned items are automatically assigned to all child organizations that are associated with the master organization. The added items will also be assigned to any child organizations that might be created under the master organization, even after the items were assigned to the master-controlled catalog.

Select Category From a Hierarchy and Assign to an Item

You can select a category from a hierarchy and assign the category to an item. When creating or editing an item, on the **Categories** tab, add a row. In the search box, when you type the name of the catalog or category, it automatically

matches the name with the available catalog and category names and displays them as suggestions. Category suggestion also displays the catalog name to help you know the catalog for the category. The format is (category name (catalog name)).

If you select a category from the displayed suggestions, the catalog and category names are populated in the respective fields in the user interface.

If you select a catalog from the displayed suggestions, the Search and Select: Category window shows a list of categories and their paths within the hierarchy for the selected catalog. The hierarchy path allows you to identify the correct category based on the position of the category within the hierarchy. After you select a category from this list, the catalog and category names are populated in the respective fields in the user interface.

If the suggestions don't show the required category, you can use the Search icon to select or search a catalog and display the categories for the selected catalog.

When searching for categories within a catalog with a single level of hierarchy, the suggestions provide an easy way to find the category by typing all or part of the category name.

Duplicate category names will be displayed in the suggestions along with the catalog name. Duplicate category names in catalogs with a multilevel hierarchy will be displayed with their hierarchy path.

You can click the icon in the **Hierarchy** column to view the position of the category in the hierarchy.

Note: The **Hierarchy** icon is only active after you've selected a catalog and category.

What Can You Edit on the Edit Catalog Page

The Edit Catalog page is a shared page that has two modes-view and update. The view mode displays the selected catalog in a read-only file. The update mode displays the selected catalog in an editable file.

You must have edit catalog privileges to access the catalog in the update mode. You can edit only an active or future-dated catalog.

You can edit the following fields in the catalog:

- Catalog Name
- Description
- Start Date
- End Date
- Default Category
- Allow multiple item category assignment
- Addition Information
- Category Hierarchy
- Category Details
- Items assigned to category

Default Category

You can edit this field to select another category as the default category for item creation. You cannot remove the default category if the catalog is assigned to a functional area that requires a default category to be specified.

Allow Multiple Item Category Assignment

This check box is editable only until you assign an item to a category in the catalog.

Addition Information

You can edit the values of the descriptive flexfields attributes.

After you make changes, clicking the **Save** button saves the changes to the database but will does not close the Edit Catalog page. Clicking the **Save and Close** button saves the changes to the database and closes the Edit Catalog page.

Category Details

You can see category details when you select the row with the category in the category hierarchy table of the Edit Catalog page. The category details are displayed in the side pane.

You can edit the details of native categories. The category detail region contains information about the category that's associated to the catalog. It also contains the association start and end dates.

You can view and edit a catalog on the category details tab when you have rights to manage catalogs.

The following parts of the Category Hierarchy tab provide are important capabilities for managing and editing category details:

- Details subtab
- Items subtab
- Attachments subtab

Details Subtab

The details tab contains information about the category that has been associated to the catalog. This information appears in all catalogs, since a category can be associated to one or more catalogs. The details tab contains the category configuration, category date enablement, association date enablement, and the additional attributes for the category.

The details tab contains attributes that define a category. Unstructured information is added through attachments. Images are added to a category and are displayed in the category details tab.

Items Subtab

The Items subtab contains item assignments are local to the catalog that the category is associated with. You can add and delete item assignments.

Attachments Subtab

The Attachments tab contains the list of attachments that the category is associated with.

Category Edits

Categories can be edited only from within the Edit Catalog page, on the Category Hierarchy tab.

To edit a category, expand, or search in, the tree of categories associated with the catalog, then select the row for the category in the category hierarchy table and edit the category's attributes in the category's Details panel. A category can only be edited if the category is active and its associated catalog is active or future dated. If a category is directly shared, the same category can be edited in multiple catalogs, except for the item assignments that are local to the catalog you are editing.

Category information can be edited in both the Details and Items subtabs.

Details and Items Tabs

The following fields are editable in the category:

- **Category name**
- **Description**
- **Attachments**
- **Category start date**
- **Category end date**
- **Items assigned to category**

After changes are made, the **Save** button saves your changes without closing the Edit Catalog page. The **Save and Close** button saves your changes and closes the Edit Catalog page.

Catalog and Category Attachments

Catalogs and categories support attachments and use a common component for managing attachment content. You can add attachments on both the Create Catalog and Edit Catalog pages.

The attachment component displays a plus sign icon indicating that no attachments are available for the object. The Attachment dialog appears when you click the plus sign icon. You define the attachment by selecting the attachment type, file name or Uniform Resource Locator (URL), title, description, and by indicating whether the attachment can be shared with other objects. Once you define the attachments and click the **OK** button, that attachment title appears in the attachment component region of the page along with an X icon that you can click to delete the attachment.

The attachment file types are:

- File
- Repository File or Folder
- Text
- URL

File

You must provide a title for the file and create a description for the attachment. You select a file to upload from your desktop.

Ensure that you don't inadvertently add the same attachment more than once. It's possible to add attachments with the same title, description, file, or attachment category to the same catalog or category.

Repository File or Folder

You click the **Browse** button to attach a repository file or folder from the document repository to a catalog. The attachment repository contains existing attachments and is organized as a set of folders. The **Browse** button launches the Attachment Repository dialog to enable you to select an attachment. You must provide a title for the repository file or folder and create a description for the attachment.

Text

Enter the text string in the field that you want to appear as an attachment. You must provide a title for the text and create a description for the text attachment.

URL

Enter the URL address to a web page that you want to attach to the catalog. You must provide a title for the URL attachment and create a description for it.

The **Share** check box alerts users that you added an attachment and the date that you performed the task.

Category Moves

You use the move category function in the category tree table region of the Edit Catalog page. This is a table row action. The dialog is launched when you select an active or future dated category within the catalog and select this action.

Identifying the New Parent

The dialog provides the current category parent and lets you pick a new category parent. Only the legal category parents are displayed in the choice list.

The category list within the **New Parent** choice list is filtered by based on a set of rules:

- The new parent category must be an active or future dated category; the end date value of the category must be later than the current system date.
- The value of the category content for the new parent category must allow the selected category to be added; the legal values are items and categories and categories only.
- A selected category associated with the catalog at a level below the categories at the root categories can be moved to the root of the catalog.
- The new parent category catalog category association must be active; the end date value of the catalog category association must be later than the current system date.

Category Sharing

Category sharing allows the reuse of categories or a category hierarchy across catalogs. For example, if you were to create spring and fall product catalogs, many of your products would probably appear both catalogs.

The products that are in both catalogs could be assigned to one or more categories that could be shared between the catalogs. Categories can be shared across multiple catalogs, allowing catalog content to be reused and saving the work needed to maintain multiple copies of the categories. In the case of category sharing by reference, the category structure in the source catalog can be different than the structure in the native catalog.

Categories can be shared using sharing by reference.

Sharing by Reference

Sharing by reference means adding a category by reference into the catalog. Sharing by reference allows a category and the items assigned to that category to be added to one or more catalogs. If the category is a parent category, the complete hierarchy for that category is shared. The shared categories and assigned items are read-only in the catalogs where they are added. During the creation of the catalog, sharing can be enabled by specifying a source catalog that will be used for sharing by reference and setting the value of the sharing content to control what content will be shared from the source catalog. The advantage of using sharing by reference is that source catalog content can be shared to multiple catalogs and maintained in a single place, the source catalog. In addition, the referenced content can consist of more than one category. For example, a complete category hierarchy and any items assigned to categories in shared content can also be referenced within the catalog.

In the Category Hierarchy tab in a catalog, each category in the hierarchy is represented by a row in a collapsible table. The style of icon next to a category's name indicates how it is shared. Directly shared categories are marked with a folder icon; categories shared by reference are marked with the icon used for the **Share Categories** control. Categories that are shared by reference are only editable in the source catalog, and the categories and items are read-only in the target catalog where they are shared. A category or a complete category hierarchy, including items assignment, can be shared by reference.

Default Catalog Assignment

You can assign a catalog to a functional area such as Purchasing. When a catalog is assigned to a functional area, the catalog will act based on the rules you defined for that functional area.

Only one default catalog can be assigned to a functional area. During item creation, if certain operational attributes have specific values, then the item being created is assigned to the catalog assigned to the functional area, and then to the default category for the catalog.

To assign a default catalog:

1. Create a catalog based on functional area rules.
2. Create a category and assign it as the default category for this catalog.
3. Assign the catalog to the chosen functional area. Select the Manage Functional Area Catalogs task in the Setup and Maintenance work area, edit a functional area, then select a catalog name.
    - Each functional area has specific rules that the catalog must adhere to, so the assignment process may fail if the catalog does not meet the functional area rules.
    - Some functional areas do not allow the catalog assigned to their area to be changed.

- Some functional areas allow the catalog to be changed only if no items are assigned to the categories in the catalog.

For example, if values of the operational attributes Purchased and Internally Transferable have been set to Yes, the item being created will be assigned to the default category of the catalog assigned to the Purchasing functional area.

Related Topics

- Catalog Details
- Catalog Formatting

FAQs for Catalogs and Categories

How can I define category hierarchies?

Categories can be organized to represent classification taxonomies. The hierarchy organizations for categories have parent and child relationships that form a tree structure.

The category hierarchy is created and maintained within the Edit Catalog page, category hierarchy tab. The category hierarchy is shown in true relationship to the way it is defined.

The category hierarchy can be created using two methods: the first is manually creating the hierarchy by adding referenced categories, duplicating categories or creating category for the catalog.

The second method for creating the hierarchy is by importing the category hierarchy through the spreadsheet interface. The category hierarchy can be exported from another catalog or other sources, edited and imported into a new catalog. The hierarchy can also be added manually to the spreadsheet.

On the toolbar of the Category Hierarchy tab, you can create new categories, using the **Create Category** button. You can add categories, including shared categories, using the **Add Category** button. If a catalog is has a category hierarchy, you can edit it using the **Move Category** button, which opens a dialog box.. You can also modify the hierarchy using drag and drop. The catalog category association cannot be deleted, but can be end dated to make the catalog category association inactive. The category hierarchy table provides a choice list filter that controls what catalog category associations and categories area displayed based on the date enablement.

How can I add categories?

Categories are catalog components that are associated to a catalog for purpose of classification of items.

You can add existing categories to the point of selection, which can be a category in the hierarchy or the root of the catalog. If no category is selected, the default is the root of the catalog.

You can add categories by selecting **Add Category** and selecting **Add Category**. You can then search for existing categories based on the value of the catalog structure for the catalog. You can narrow the search for existing categories by using the **Advance Search** region in the dialog. You can add each selected category by selecting the **Apply** button and the add category region remains open. The **OK** button adds a category, if a category is selected, and then closes the dialog.

How can I add shared categories?

Adding a shared category is similar to adding an existing category except the category is selected from the catalog that has been designated as a source catalog.

The sharing content attribute value determines what content is shared from the source catalog. A category within a source catalog that has been added to a native catalog is also known as a referenced category. You use the list of values from the Add Categories menu. The Shared Category option will be disabled if the catalog has not been configured for category sharing.

How can I add images to a catalog or category?

You can attach an image from your desktop or from a configured repository to a catalog or a category, or both. The image is displayed in the catalog detail and the category detail sections of the catalog page.

Only one image can be associated with a catalog or category. To attach an image, select the **Attachments** control and launch the Manage Attachment dialog. The title you provide for the image attachment will appear after the image that is displayed in the catalog. The description you provide is not displayed. Clicking the **Browse** button will allow you to select the file to be used as the image for the catalog or category. After the information is entered in to the dialog, click the **OK** button to load the image. The image will not initially be displayed until the catalog is saved. The image can be replaced with another image by selecting the X to delete the existing image and adding a new image.

How can I duplicate categories?

You can select and duplicate a category as a quick way to create a similar category configuration.

Select the **Duplicate** icon action to launch the Create Category dialog that has attribute fields populated based on the selected category attribute values. The category name is prefixed with **Copy_** followed by the name of the selected category. Fill in the required field information in the key flexfield segment values. Once the category attributes are updated and the key flexfield segments values are entered, click the **OK** button to add the newly created category into the category hierarchy of the selected category you have configured.

What is catalog mapping?

You can map categories of different catalogs to the reporting categories in other catalogs by using the Manage Catalog Mapping task in the Setup and Maintenance work area. You can map one or more categories within a catalog to category in a second catalog.

For example, suppose that you want to roll up the costs associated with all items assigned to a set of categories in catalog. Catalog mapping lets you select a category in a catalog and map all the categories in the set to that category.

Related Topics

- Default Catalog Assignment

14 Item Quality

Overview of Quality Issues and Actions

The Product Information Management and Product Development work areas integrate with the Quality Management module to help you gain insight to quality issues and actions related to items.

A quality issue is a defect, deficiency, or a significant variation in a product's expected appearance or performance.

Feature for Product Development users.

Feature for Quality Management users.

A quality action is a necessary activity required to mitigate a quality issue and prevent its further occurrences.

> **Note:** On opening an item in the Product Development work area, the Quality tab displays a blue icon, if the item has quality-related data. And on hovering over the Quality tab, the tooltip displays Quality: Has Content.

The Quality tab displays both these tabs:

- Quality Issues and Quality Actions
- Problem Reports and Corrective Actions.

Create Problem Reports and Corrective Actions

You can create problem reports and corrective actions from the:

- **Create** (+) menu on the Overview page in the Quality management work area
- **Actions** menu of an item in the Product Development work area
- **Actions** menu of an item in the Product Information Management work area

You can see that they appear on the Quality tab of items in the Product Development, Product Information Management, and Quality Management work areas. Remember that the **Create Problem Report** and **Create Corrective Action** options appear on the **Actions** menu only after you create and save an item.

For suppliers the page reloads with the newly created object.

> **Note:** The newly created problem reports and corrective actions automatically display organization data from the item.

The workflow of a problem report or corrective action progresses as specified by the statuses defined by the administrator. For more details, see Set Up Problem Reports and Corrective Actions.

Create 8D Corrective Action.

You can choose to create a corrective action from the following two options in the **Type** drop-down list:

- Corrective Action – action to mitigate a quality issue and prevent its further occurrence.
- 8D Corrective Actions – action that uses the 8D methodology. An investigative dive to find the cause of a problem, a solution to fix it and a method to prevent recurrence.

The 8D methodology involves a systematic investigation into the root cause of a problem to prevent recurrence. It uses a structured, preconfigured template based on 8 disciplines to define the problem, identify the root cause, and run the corrective and preventative action (CAPA) to prevent recurrence.

Here's a brief description of the eight disciplines:

1. Plan and form team: Create a plan to minimize or mitigate the problem and establish a team of skillful and knowledgeable people
2. Define Problem: define and describe the problem
3. Interim Containment: define and implement containment actions
4. Determine Root Cause: identify the root cause
5. Verify Correction: verify and choose the most effective corrective action
6. Implement Corrective Actions: implement the corrective actions
7. Prevent Recurrence: implement actions to prevent a recurrence
8. Recognize Team Effort: acknowledge and congratulate the collective effort of the team.

Note: Although the change type 8D Corrective Actions is predefined, the attribute visibility setting is read-only. The change type inherits the configuration from its parent change type, Corrective Action.

Create a Corrective Action from a Problem Report

You can also create a corrective action from the Actions menu of a problem report. The corrective action opens in a dynamic tab for editing. For suppliers the page reloads with the newly created object.

While creating a corrective action from a problem report, you can select to copy over the descriptive flexfields, attachments, relationships, and tasks for the problem report. You can also copy over the affected objects including descriptive flexfields to the new corrective action. The corrective action is automatically linked to the problem report in the Relationships tab.

Related Topics

- Overview of Change Type Setup
- Configure Change Orders
- Understand Change Types

View Quality Issues and Actions for Items

Quality issues and quality actions are managed in the Quality Management work area. You can view issues and actions related to an item in the Product Information Management work area.

You can view the quality issues and actions for an item in the context of its master organization or of its child organizations.

1. In the Product Information Management work area, select the **Manage Items** task and search for an item.
2. On the Edit Item page, select the Quality tab.

3. If there are any quality issues or actions for the item, you can access them by clicking their number in the **Number** column.

   Quality issues and actions are only displayed if the item belongs to the same organization in which the issue was raised.

   Quality issues and actions are revision-specific. Only the issues and actions corresponding to the selected revision are displayed.
4. After you work with the issue or action, you return to the Edit Item page.

Security for Accessing Quality Objects

To work with quality issues and actions, you must have a role with the following privileges:

- Review Quality Issue
- Review Quality Action

Related Topics

- Overview of Quality Issues and Actions
- How You Work with Quality Issues, Quality Actions, and Change Orders
- Access Quality Objects from an Item Structure

15 Search

Search the Work Area (Classic)

In the Product Information Management work area, you can search for important entities in managing product information.

The product information entities that you can search for are:

- Items
- Trading partner items
- Item relationships
- Catalogs
- Categories
- New item requests
- Change orders
- Item batches
- User

You can search for these entities in two ways:

- Task-based search
- Quick search

Task-Based Search

On the page for managing each of the product information entities, you can search for those entities with a comprehensive set of criteria:

1. Click the **Tasks** icon in the panel drawer of the Product Information Management work area, then select the management task for the desired entities, such as **Manage Items** or **Manage Change Orders**.
2. Enter your search terms in the provided fields, which are tailored to the entity you're managing.
    - You can control the search criteria attributes that are used to search for items and display the search results. Some management pages provide an Advanced Search region. To add the search criteria attributes, the **Add Fields** action allows you to browse the list of attributes that you can use to search for items, select the required attributes from the **Available Attributes** list, and move them to the **Selected Attributes** list. After you click **OK**, the attributes are added to the Advanced Search region. You can also use the **Find** option to quickly search an attribute and add it to the Advanced Search region.

      After you click **Search**, the search results are displayed for you to manage. The **Add Columns** action provides a similar user experience and adds the selected attributes as columns in the search result. You can change the order of the attributes in the **Selected Attributes** list. The columns will be displayed in the same order in the search results.

      > **Note:** The search attributes appear for all the user-defined and operational attributes.

To remove an added field, click the deletion control next to it. To remove all added fields, click **Reset**.

- In the **Item** and **Description** search fields, you can use the **Contains** search operator. To preserve search performance, you must also specify a search value for **Organization** when you use the Contains operator for Item and Description.
- In the **Item** search field, you can use the **In** operator to search for multiple items, as described in a following topic.
- Some management pages provide a single search field. When you type at least 3 characters, a list of matching entities is presented. Select one to see its details.

  You can also click **Show Filters** to open a list of search filters tailored to the entity you're managing. If you need to search on a field that isn't there by default, click **Add** and select the additional search fields that you need. You can also click **Reorder** to change the order of the filters.

Quick Search

From anywhere in the Product Information Management work area, you can quickly search for product information entities without first navigating to their management page.

1. Click the **Search** icon in the panel drawer of the Product Information Management work area, then select the product information entity that you want to search for in the **Search** list, such as Item or Catalog.
2. If you selected **Item**, then:

   - You can enter a partial item name directly in the search field. If it matches an indexed keyword, a list of matching items is automatically generated. Selecting an item opens the Edit Item page for that particular item.
   - You can click **Search Multiple Items** to search for a list of specific item names, as described in the topic on searching for multiple items.

   If you selected one of the other product information entities, then a simple set of search fields appears in the search panel.
3. If you want to go directly to the task-based search for the entity you selected, click the **Advanced** link or button.
4. Select the desired search item from the results list.

Search Refinements

See the related topics provided for tips on refinements in search terms, especially for item searches.

Related Topics

- Search for Multiple Items
- Use Quick Search to Find Items in the Work Area
- Choose Parameters for Task-Based Item Search

Choose Parameters for Task-Based Item Search

A task-based search on the Manage Items page of the Product Information Management and Product Development work areas provides modes for general-item searches, including keyword search and parametric search.

Item Search Scope

Item Class

You select the item class in which to search for items. The default is Root Item Class.

Revision

You select the item revision to use for the items returned by your search.

- **Latest released:** The returned items belong to the most recently released revision of the item. This revision might not be currently effective at the time of the search.
- **Current effective:** The returned items belong to the revision that's currently effective at the time of the search. This effective revision might not be the most recently released revision of the item.

Quickly Search for Item Class Using Auto Suggestion

You can now easily search for an item class based on the automatic suggestions that appear when you type a few words in the item class **Search and Select** field. You can either select the item class from the displayed suggestions or perform a full search for an item class.

Item Search Parameters

In the search region of the Manage Items page, you can search for items using one or more required or optional search fields. Click **Add Fields** to search on additional attributes.

The Manage Items search region provides a predefined saved search, which defines the search fields that are displayed when the Manage Items page is initially opened. Click **Save** to save the currently displayed search fields as a personal saved search.. Select predefined or personal saved searches from the **Saved Search** list.

Conditions for the Search Criteria

As you select conditions for a search, drop-down lists will display only values that are appropriate to the scope of your search.

Required Fields

An asterisk (*) indicates a required search field. A doubled asterisk (**) indicates a set of search fields from which at least one is required.

Keyword Search

In the **Keyword** search field, enter at least three characters to search on an indexed keyword. The minimum number of characters required is 3 by default, but can be modified as described in a following section.

The keyword search field on task-based pages uses the same features as the quick search field in the task panel, except that the autosuggest feature isn't available. When you enter values for both the keyword search field and the other (parametric) search fields, the keyword search and the parametric search are performed separately. The results from both are displayed in the search result table.

Oracle Text technology provides keyword searching capabilities that uses data extracted from values in the items table and set up in an indexed file. The indexed data is set up by the administrator. Additional indexes can be added by the administrator as needed. By default, the search uses the following item attributes in the index:

- Item Number
- Description

- Item Class
- Long Description
- Organization Code
- Manufacturer

You can restrict the search to a specific section of the keyword. For example, if you enter "Stove within shortdesc" in the **Keyword** field, the search results will display the items that contain the word "Stove" in the item description. You can also use the same syntax in the Item SOAP and REST resources when querying for items.

The Oracle Text search engine can be configured by the administrator to support features including:

- Word Stemming
- Wildcards

Oracle Text is case insensitive.

Keyword Setup

Before users can perform keyword searches in the Product Information Management work area, the index must be built by a user with privileges to perform tasks in the Setup and Maintenance work area.

1. In the Setup and Maintenance work area, search for and select the task **Manage Item Keyword Search Attributes.**
2. Select the attributes that will be used in the indexing process.
3. In the Scheduled Processes work area, run the Item Keyword Search scheduled process, selecting the **Create** action.

   When a new attribute or language is added to the index by the administrator, the Item Keyword Search scheduled process must be run with the `Sync` action.

Character Minimum For Search

You can control the minimum number of characters that the user must enter when searching for items. You control the minimum number of characters by specifying the value of the profile option **Item Search Character Limit** (ORA_EGP_ITEM_SEARCH_CHAR_LIMIT) at site level. The default value is 3, but you can change it to meet a specific use case. Be aware that searching with fewer than 3 characters decreases the performance of search. The character limit applies to the **Item**, **Description**, and **Keyword** search fields. A warning message is displayed if the user doesn't enter the minimum number of characters. To modify the default, use the **Manage Advanced Item Profile Options** task in the Setup and Maintenance work area:

- Offering: Product Management
- Functional Area: Items
- Task: Manage Advanced Item Profile Options

The Item Search Character Limit profile option is also used to validate query operations using the SOAP service Item Version 2 (`itemServiceV2`) or the REST resource Items Version 2 (`itemsV2`).

Add or Remove Catalog and Category Search Fields

The Application Default search configuration is simplified by removing the catalog and category search attributes. You can add these fields, if needed.

To add the catalog and category search attributes:

1. Click **Add Fields**.
2. In the Select and Add: Attributes window, select and add **Catalog** and **Category** attributes. The **Catalog** and **Category** fields are added in the **Advanced Search** region.

After adding the **Catalog** and **Category** fields, you can remove them from the **Advanced Search** region only if you have selected forced deployment in the **Setup and Maintenance** work area. The forced deployment is necessary only once and it will remove the **Catalog** and **Category** search criteria fields from the search UI. After you run it, the **Catalog** and **Category** search fields won't be visible. You can add them as mentioned in the preceding steps. You can also remove these fields using the X in the search field similar to other added fields that's not in the default saved search.

To perform forced deployment:

1. In the **Setup and Maintenance** work area, go the **Deploy Item Extensible Flexfields** task:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Deploy Item Extensible Flexfields
2. Search and select the EGO_ITEM_EFF flexfield code.
3. From the **Actions** menu, select the **Refresh and Deploy Offline** option.

> **Note:** Removing the catalog and category search fields from the Application Default saved search configuration doesn't affect existing saved searches.

Related Topics

- Search the Work Area (Classic)

Use Quick Search to Find Items in the Work Area

When you use the quick search in the panel drawer of the Product Information Management work area to search for items, you can refine your search with these techniques.

Searching for Items

The following are some of the ways the application searches for items:

Autosuggest Search

As you enter at least three characters into the **Search** field, up to 15 suggested values are automatically displayed in a list. Select a value from the list.

You can adjust the search delay (in seconds) through the Item Search Type Delay (ORA_EGP_ITEM_SEARCH_TYPE_DELAY) profile option. The valid profile values are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, where the value 1 is the standard time to start searching and is the default profile value. To increase the search delay, increase the value.

Keyword Search

In the Manage Items page, you can use a subset of search operators in the **Keyword** search field. The Manage Item Keyword Search Attributes task in the Setup and Maintenance work area allows item attributes and additional attributes for some child objects of items including item relationships, trading partner items, item supplier attributes, and item category assignments. Keyword search will search across all content that's indexed. For example, if you search using the term AC123, it may be found as an item number, item relationship attribute, category name, or trading partner item.

Within Operator

The within operator allows the narrowing of a query into document sections. Document sections can be one of the following:

- Zone Sections
- Field Sections
- Attribute Sections
- Special Sections (sentence or paragraph)

When searching for an item by keyword, it's possible to restrict the search to a specific section of the item keyword index. For example, if you want to search for a term within the Description for an item, the field name of the index section must be used in the search. The attributes you want to search for must be added to the keyword index using the **Manage Item Keyword Search Attributes** task in the Setup and Maintenance work area.

To search keywords within **Description**, use:

```
<keyword> within shortdesc (Capacitor within shortdesc)
```

To search keywords within **Long Description**, use:

```
<keyword> within longdesc (AC11 within longdesc)
```

To search keywords within **Formatted Description**, use:

```
<keyword> within htmlLongDesc (AC12 within htmlLongDesc)
```

To search keywords within **Item Number** use:

```
<keyword> within item (AC1_AUTO_SEARCH within item)
```

To search keywords within **Item Class** use:

```
<keyword> within itemclass (Capacitor within itemclass)
```

To search keyword within a specific **extensible flexfield attribute**, use:

```
<keyword> within <internal code of the extensible flexfield attribute> (Capacitor Type with itemEff)
```

To search keyword within any **Trading Partner Items**, use:

```
<keyword > within tradingPartnerItems (Samsung within tradingPartnerItems)
```

To search keyword within any **Item Relationships**, use:

```
<keyword > within itemRelationships (ASN123 within itemRelationships)
```

OR Operator

The OR operator allows searching where at least one occurrence of any query terms exists. For example, search keyword is:

Capacitor **OR** Resistor

Note: Arithmetic Operator "|" isn't supported (Capacitor|Resistor). The search returns all items that have the term Capacitor or the Resistor.

AND Operator

The AND operator allows searching where at least one occurrence of each query term exists. For example, search keyword is:

Capacitor **AND** Resistor

Note: Arithmetic Operator "&" isn't supported (Capacitor&Resistor). The search returns all items that have both the Capacitor and Resistor terms.

NOT Operator

The NOT operator allows searching where at least one occurrence of the query terms exists excluding one term. For example, search keyword is:

AC123% **NOT** AC1234

If item numbers AC123, AC1234, AC12345 exist, the search returns AC123 and AC12345.

Note: Arithmetic Operator "~" isn't supported (AC123%~AC1234).

Wildcards Operator %

You can use percent sign (%) to enhance your search. It matches 0 or more characters. For example, search keyword is IN1234%.

You can only use "%" as the last character in the search term. The search returns all items that have the starting term before the percent sign. If AC123, AC1234, and AC12345 item numbers exist and the search string is "AC123%", then AC123, AC1234, and AC12345 are returned.

Word Stemming

Word stemming lets word stems such as run to match other parts of speech such as ran, running, and runs. Word stemming requires that a dictionary be installed by the administrator and word stemming enabled for search. The operator stem ($), where $ is the word you want to search using stemming, is used for stemming in search criterion.

Escaped Characters

Some characters are used for additional search types and are escaped or not used in search. For example, "$" is used in word stemming and can't be used in search terms (AS1$1234), the "$" won't be searchable.

Here's the list of escaped characters.

Operator	Operator	Operator	Operator
#	"	[	]
(	)	}	{
;	=	$	\\
*	>	_	~

Operator	Operator	Operator	Operator
,	@	+	:
|	.	&	

Related Topics

- Search the Work Area (Classic)
- Search for Multiple Items

Search for Multiple Items

You can search for multiple items in the same search operation.

In the Advanced Search region of the Manage Items page, use the search operator In to search for a list of comma-separated item numbers. Use standard copy and paste to enter a list of items, then start a search and see results for all items in the list that are searchable.

Note: A forced deployment of extensible flexfields must be performed prior to using this feature.

Search Using the IN Operator

You can search for a comma-separated list of item numbers in the **Item** field of the Advanced Search region of the Manage Items page by using the **In** search operator.

To search for items using the **In** operator:

1. In the panel drawer of the Product Information Management work area, click the **Tasks** icon, then select **Manage Items** from the task panel.
2. In the **Item** field of the Advanced Search region of the Manage Items page, select the search operator **In**.
3. In the search field, enter the list of alphanumeric item numbers that you want to retrieve in your search. Separate each item number with a comma. You can copy and paste a list of numbers into the search field.
4. Click **Search**. The items are displayed in the Search Results list.

   The search only retrieves items identified by valid item numbers.

Keep these facts in mind about using the **In** operator:

- No matching or wildcard characters (such as % or *) can be used in the search. This search is an exact-match search, equivalent to using the **Equals** operator.
- The search field can contain up to 1000 characters, counting commas, spaces, and newline characters.
- The search doesn't validate item numbers. If you enter an invalid number, no item for that number is retrieved.
- The search ignores duplicate item numbers.
- The search ignores empty entries between comma separators.
- Every item number in a search entry must be separated by a comma. Consequently, item numbers can contain spaces, but not commas.

- The set of retrieved items in the search results is subject to data security, and only includes items for which you have access.

Search Using a List of Item Numbers

You can search for a list of item numbers in the **Search Multiple Items** field of the Search panel of the task drawer. This search acts as a springboard into a search using the **In** operator.

To search for a list of items from the Search panel:

1. In the panel drawer of the Product Information Management work area, click the **Search** icon, then click **Search Multiple Items**.
2. In the **Enter Item Numbers** field, enter or paste the list of alphanumeric item numbers that you want to retrieve in your search. You can copy and paste the list of numbers from a text file, spreadsheet, or other document. You can resize the field to accommodate a long or wide list.

   If you enter the list of numbers on separate new lines, then it's not necessary to separate the numbers with commas.
3. Click **Search**. The items are displayed in the Search Results list on the Manage Items page.

   The list of items has been reformatted with the necessary comma separators and automatically entered in the **Item** field of the Advanced Search region, and the item search has been run, as if you had clicked **Search** yourself.
4. When you return to the Search panel, the **Enter Item Numbers** field retains the list of item numbers you entered, so you can reuse or modify the list.

   Click **Clear** to clear the number list, to enter a new list. The list is cleared when you end your session.
5. Click **Search Single Item** in the Search panel to return to using the quick search for a single item at a time, using indexed keyword matching of existing items.

   Multiple item search doesn't use keyword matching. You must specify exact matches for item numbers.

> **Note:** See the list of facts to keep in mind about search using the **In** operator. A search that starts with **Search Multiple Items** behaves the same way.

Related Topics

- Search the Work Area (Classic)
- Use Quick Search to Find Items in the Work Area

Search for Users By Using Actual Names

You can search for users based on their first name, last name, and email address in addition to their user name.

When you create or update an item, Product Information Management records the **Created By** and the **Updated By** user information for the item. In many Product Information Management pages, the user information is available for display and search purposes.

You can also search for items using a complex search criteria that may include the **Created By** and **Updated By** fields. To assign a value for these fields, in the Advanced Search region, use the Search and Select window to quickly find the user using a combination of first name, last name, email address, and login user name.

When you want to secure access for the item data such as catalog categories, Product Information Management allows you to search for users and grant them access using drop-down lists. This drop-down list displays the user name, email address, first name, and last name to help you identify the users. The most recently used entries appear on the top of the list.

Additionally, you can use the **Search** link at end of the list of values to display the Search and Select window. In this window, you can specify the search criteria using a combination of first name, last name, email address, and user name.

In the Search and Select window, all the columns in the results table support dynamic sorting for the displayed data. The search results can be conveniently sorted based on one of the fields to help you identify the required user.

Your saved searches will work correctly if the operator used on a user attribute is **Equals** or **Not Equals**. If not, you must modify the saved search.

Use Product Management Search (New User Experience)

The Product Management Search page is used for many objects within Product Management.

You can select the object that's being searched using the selector next to the page title. The search page automatically configures based on the selected object. Item, manufacturer, proposal and change types (change orders and change requests) are the objects that are searchable through this page. You can control the attributes used in search, filters, and how search will behave in the view.

To access the Product Management Search page, in the Product Information Management work area or Product Development work area, on the **Tasks** panel tab, click **Search Product Management**. The Product Management Search page is displayed.

The search page has two main areas:

- *Search Region*, where you specify the search query.
- *Search Results*, where the search results are displayed based on the query run in the Search region.

Search Region

You can enter all search queries in the **Search** text box. This text box combines user entered search data as a query. When you start typing in the **Search** text box, the search provides suggestions based on the data entered. Clicking on a suggestion performs the search.

Autocomplete and Suggestions

Autocomplete provides type-ahead suggestions similar to autosuggest. Autocomplete reduces the number of clicks. The suggestions are presented as you type within the **Search** text box. By default, a set of attributes for each object is configured for autocomplete and keyword search. For example, in item search, the item number and item description

attributes are configured for autocomplete and keyword search to support cases where you search for an item number or search for an item using terms within the item description.

Filter Chips

You can refine the search by selecting filters and values based on the data in the search results. The first five to seven filter chips are displayed beneath the **Search** text box. The other filter chips are available by clicking on the **Filters** action. These are displayed based on the display order in the view. Filter chips can be enabled only for date and text attributes.

> **Note:** You can't enable filter chips for long text attributes.

To apply a filter chip, click it to edit the filter chip. Click the chip the second time to display a set of values for filter. It shows a list of values that you can select. Search and select a value and click anywhere on the page. The filter chip is applied on the search results and the table refreshes to display the result based on the applied chip.

> **Note:** The counts show how often a specific value occurs. The values are provided through aggregation of the data in the database for the attribute.

The filter chip might allow you to select another value, or in some cases you can select one or more values. For example, if you want to search for items for manufacturers Aero Tech and Tech Space, you can select both and the search results are filtered.

The last chip beneath the **Search** text box is the **Filters** action. Clicking this displays the **Filters** drawer, where you can select values for the filter chip. You can apply the search criteria to multiple filters in the drawer and click **See Results** to run the search.

To remove the applied filters, click **Clear**.

> **Note:** Applying multiple filter chips with specific values selected will be ANDed together as part of the search.

Keyword Search

When the index is created, each attribute is assigned an analyzer, which is used to create searchable content for the attributes. Part of this process is tokenizing the characters in the attributes. Tokens are searchable terms that are part of the index record for the object. The tokenizer will create a set of tokens by reviewing the characters and applying rules to separate the characters into tokens. For example, if the description contains: 'CAP, CERAMIC, SMD, 0402, 0.22UF, Y5V, 10V, +80/-20%', the resulting tokens would be 'CAP', 'CERAMIC', 'SMD', '0402', '0.22UF', 'Y5V', '10V', '+80' and '-20'. Each token is searchable using keyword search.

By default, keyword search is enabled for primary attributes of the objects. For example, for items, keyword search is enabled for item number and item description.

Administrators can turn on the Keyword enable switch for the Item Description attribute for cases where they don't want a match on the Description field. If the Description attribute value is generated using extensible flexfields, the Administrator can turn off the keyword search and use filter chips to search for content within the Description.

All keyword searches use starts with in the searches.

Use Operators to Perform Keyword Search

You can use the following operators within the search criteria to perform a keyword search.

Operator	Description
+	AND operator.
| or space	OR operator. Space character is considered OR operator.
*	When used at the end of a term, signifies a prefix query.
"	Search for a group of terms as a phrase. For example, “220 Micro Farads”.
(,)	Wrap a clause for precedence (for example, wind + (capacitor| cap)).
~n	When used after a term (for example, wnid~3), sets fuzziness. When used after a phrase, sets slop.
-	Negates the term.

Search Content Within Item Descriptions Using Phrase Search

You can use double quotes surrounding a group of search terms to find a match closest to the term and to find one or more terms in a specific order. Use phrase search on item numbers to increase the matches when the item number includes special characters such as hyphen.

For example, if the item description is:

Item Number: CAP-0041 Description: CAP .22 Micro Farads 10mmdx17mml 105s mp LOW Axial y5v 0.05 Ohms 10 Year 100 Celsius -35 Celsius .0017 Amperes 8 % 5 Volt

You can search for "330 Micro Farads", or any other combinations of the terms in the order they appear. When you enter "330 Micro Farads" as the search criteria, the result returns all items that have this phrase. The following screenshot shows multiple items are found that has the phrase *330 Micro Farads* and *Capacitors_DQ_MM_1* is one of the items in the search results.

Search Using Query

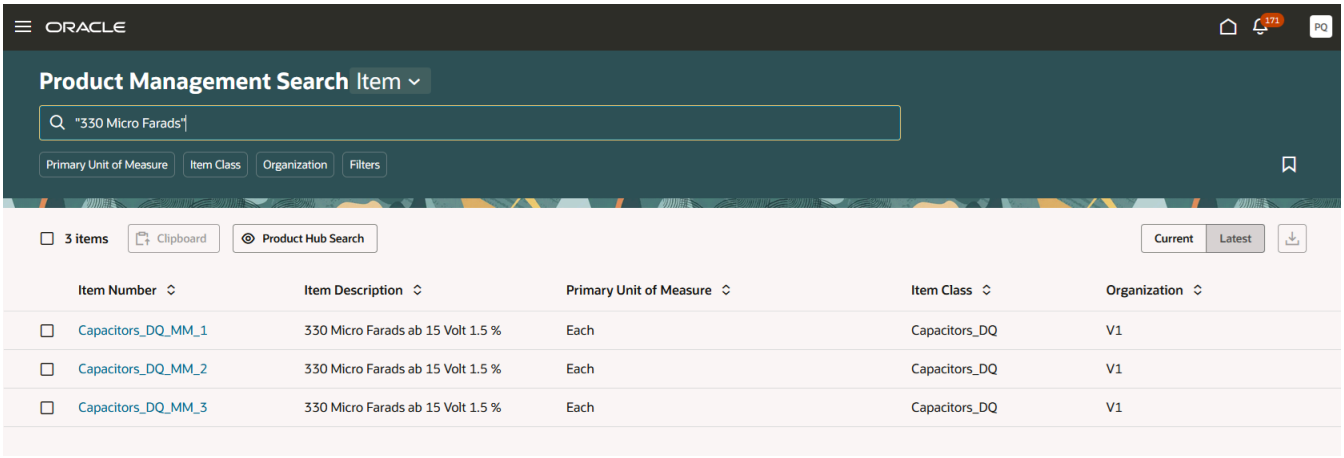
When you don’t know the part number, you can use a combination of operators, phrase search, and filter chips to form a query. For example, the Design Engineer needs a capacitor in the micro farads range and can use 15 volts. The Design Engineer knows that there are one or more item classes for capacitor and uses the Item Class filter chip to select one of the item classes. Next the Design Engineer enters the following query in the search box:

Cap + "Micro Farads" + "15 Volt"

where:

- Cap is the keyword to do a keyword search for all part numbers starting with Cap
- + is the AND operator
- "Micro Farads" is in phrase search format
- + is the AND operator
- "15 Volt" is in phrase search format

The result of the query returns three parts. Next, the Design Engineer can add additional attributes using the View Selector to refine the part to use.



You can use the operators to construct complex queries by combining them with terms in the **Search** box. The formulated query can also be used with filter chips. As example, you can select a filter value for an item class such as 'Capacitors' and combine it with terms such as 'Axial', the AND operator '+', and the term 'Micro' to search for all items within the Capacitor item class that use the Axial mounting and are in the Micro Farads capacitor value range.

Use multiple search terms with operators and filter chips together to form a query.

Expert users can use additional operators to form complex queries.

Note: To use the search using query feature, contact Oracle support.

Special Characters in Search Query

You can extend the search using the following special characters in the Search box:

- **List of Items**: You can search for multiple numbers for an object by entering them with spaces. For example, if you're searching for three items AS1, AS16903, or AS16901, enter the complete item number separated by spaces. Each of these items are displayed in the search results. You will also find additional items that start with these strings.
- **Item Numbers with Hyphen or Underscore**: To search item numbers that contain hyphens such as 06-CMM-SL, enter "06-CMM" with double quotes in the Search box. You can also find ITEM_GSE_123 by entering "ITEM_GSE". Additional items are displayed in the search results that start with these strings in the item number separated by hyphen and/or underscore.
- **Separators**: Special characters such as comma, colon, space, slash, back slash, hyphen, pipe, number sign, underscore, or dash are used in attribute values that have multiple terms. For example, a description such as 'DUCT,COVER,2.0"X 6FT,PANDUIT,WHITE' contains multiple separators. The ingest process uses the separators to break the value into searchable tokens.

Related Topics

- Search Results

Search Results

The search results are displayed in the search results region. A table within the search results will display the results as rows and the number of rows isn't limited. The table columns and their order depend on the selected view. The Product Management Search page is optimized to display more rows in the search results, and you can smoothly scroll down through the results. The count shows the number of rows in the search and is dynamically updated without slowing the search.

- *View Data Presence Indicators*
- *Additional Features*
- *Search Query Example*

View Data Presence Indicators

The presence indicator indicates that the objects in the row on the search page have extra content.

For example, the **Has Structures** presence indicator displays a structure icon in the column to indicate that the item in this row has a primary structure and you can view the (component) details. Other data presence indicators for components appear only if your administrator has configured them for the selected view. You can add the presence indicators to filters and as columns in the search results. Also, see the related links topic.

The supported presence indicators are:

- Has Level Attachments
- Has Pending Changes
- Has Item Structure
- Has AML
- Has Quality Issues
- Has PD Relationships
- Has Substitute Components
- Has Reference Designators

Note:

- Data presence indicators are accessible for structures and AMLs on both child and reference organization items, as well as for attachments, quality issues, and quality actions on reference organization items.
- To address performance problems related to data presence indicators for reference organization AMLs, create the profile option EGP_SKIP_DPI_PROPAGATION and set its value to Y. This will stop the application from generating data presence indicators for reference organization items. To update the data presence indicators on the existing reference organization items, run the Add Data Presence Indicator to Index scheduled process.
- To update the correct data presence indicator values, run the Upgrade Product Management Data scheduled process with the following parameters:
    - **Upgrade Process**: Execution
    - **Functional Area**: Item Child Entity Presence Indicator
    - **Feature**: All

      You must wait till the scheduled process completed successfully and then submit the index rebuild job.

Notes on the drawer view:

- On the **Attachments** tab, you must select only a single row to download the attachment.
- The **Pending Changes** tab display change orders and change requests that are pending; it doesn't include released changes.
- The **Product Development Relationships** tab will display the relationships you added through the Product Development work area. When you click the concept component or the requirement specification that's been added as a related object, the parent concept or requirement is opened.
- The **Quality** drawer only displays the open quality objects.

Controlling Drill Down to Other Pages

You can control the behavior of drill down when using the link for the object number in the search results or the **Has Item Structure** presence indicator through a profile option. The Drill Down in Place (ORA_EGP_PAGE_LAUNCH_CTRL) profile option controls if the Structure page will be launched in new browser tab or launched in same browser tab as the Product Management Search page. The default value is to launch the new page as a drill down in the same browser tab. Use the **Manage Advanced Item Profile Options** task to update the value of the profile.

Related Topics

- Display Data Presence Indicator in Search Results

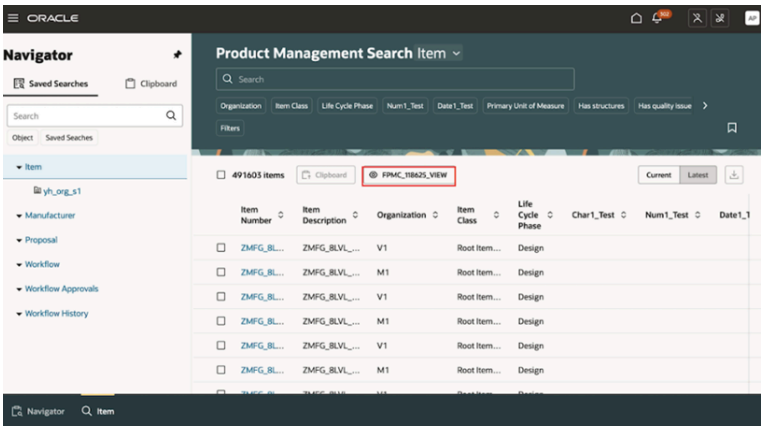
Using Views in Product Management Search

In Product Management Search, views are grouped into two types—system views and personal views. System views are available in the application by default and are predefined.

Only administrators can create and modify the system views. All other users can access the system views but can't edit them. Users can create their own personal views by copying a system view and modifying the columns to suit their requirements. Personal views are associated with only the user who created it. When the user logs in again, they will can access the personal views they've created. You can also identify important or irrelevant columns and choose the order in which you want to view these columns for a specific task.

In the Product Information Management work area or the Product Development work area, when you click **Search Products** on the **Tasks** panel tab, the Product Management Search page is displayed based on the default system view. If you've set a personal view as default, then the Product Management Search page will initially display the default view. You can control the display of columns in your personal view. The personal view will maintain the same view settings as the system view it was created from.

The following screenshot shows the view name that's currently being used.



Only the person who created the personal view can use the view. When necessary, the administrator can edit the personal view on the Configure View page. On the Configure View page, the administrator can create system views that the business users can then use to create their own personal views.

Create Personal Views

To create a personal view:

1. Click the current system view name. A view selector appears that displays all the enabled system views and the current view name is highlighted.
2. To create a personal view based on another system view, you must first click the required system view name to make it the current view.

   The Product Management Search page changes to display the column names based on the selected system view. Click the view name and then click the **Duplicate** icon for the highlighted the view name.

   The Columns drawer slides open on the right side and displays all the attributes (column names) that are configured in the current view.
3. You can show or hide the columns by selecting or clearing the checkboxes, and you can change the order of the columns using the icon. After you've completed the changes, click **Save As**.

   The Columns drawer displays, where you can specify the details for the personal view.
4. Enter a name for the new personal view. Also, you can select the **Mark as default** checkbox to set the personal view as the default view. Click **Save and Apply** to save the view as a personal view.

Edit Personal Views

To edit a personal view, go to the view selector and click the **Edit** icon next to the view name. The Columns drawer appears. You can show or hide columns by selecting or clearing the check boxes and change the order of the columns using the = icon. After you've completed the changes, click **Save**.

Additional Features

The following additional features are available on the Product Management Search page:

- **View selection**: Select another view to change the attributes in the search and the search configuration. All views are created on the View Management page.
- **Clipboard**: Select one or more rows and click **Clipboard** to add them to the clipboard. The items will be available in the application's clipboard and can be added to pages in the work areas. The clipboard is now persisted. This allows to use the fast search on the pages.
- **Hyperlink on the name**: Click this hyperlink to view the details.
- **Sort**: Click the small arrows in each column to sort the results in ascending or descending order.
- **Revision selector**: Control the revision that the results data displays. You can select one of the following:
  - **Current**: Current effective revision, where the revision is before the current date.
  - **Latest**: Latest revision, where effective date of the future revision is greater than the currently effective revision.
- **Export**: Select up to 10,000 rows in the search results and export them to an Excel sheet.
- **Columns**: Click this icon to open the Columns dialog box. In **Hide**, select the check box for the column that you to display in search results table. It moves to the **Show** section. If you don't want to show the column, deselect the check box and it moves to the **Hide** section. You can hover on = and drag and drop the column to set the order in which the columns must be displayed.
- **Adjust Column Widths**: You can adjust and save column widths for both system and personal views. All users can access system views while personal views are only accessible to the user who has created it and the administrator. Previously, if column width changes were made within a view, you had to redo the same changes when re-accessing the view. From this update onwards, the column widths are persisted as part of the saved view for the personal saved search. To change the column width:
  a. Hover on the line between the two column headers. The cursor changes to ‹|›.
  b. Click and drag the cursor either to the left or the right to adjust the column width.
  c. To save the changes made to the column widths, click the View name, then click the **Edit** icon next to the view name.
     The Columns drawer is displayed on the right side.
  d. Click **Save** to save the column width dimension changes you made on the Product Management Search page.
- **Saved Searches**: A search including the search text entered, the applied filter chips, and their values can be saved and later used to run the search. The following are the saved search types:
  - System Searches: Saved searches available to all users.
  - Personal Searches: Saved searches for personal usage by one user.
  - Personal shared Searches: Saved search URL that can be sent by a person to other users.
- **Filters**: Click **Filters** beneath the **Search** text box to open the Filters drawer, where you can specify the filter value.

- **Clear**: Click **Clear** beneath the **Search** text box to remove the applied filters.

Search Query Example

Here's an example that shows how to perform a search using the Search box with filters.

1. On the Product Management Search page, select **Item** using the arrow next to the page title.
2. In the **Search** text box, type **Capacitor**. As you type this word, suggestions are displayed and the suggested text for autocomplete also appears in grey color. From the displayed suggestions, select **XC1103**.

   The search results are automatically refreshed to display capacitors with the item number XC1103.
3. Click the **Primary Unit of Measure** filter chip beneath the **Search** text box and select the value **Each**. Click anywhere on the page.

   The selected filter chip is applied and the search results are refreshed to display XC1103 items with primary UOM as Each.

Search for Workflows, Approvals, and History

You can use the Product Management Search interface to configure and run a search for workflows, workflow approvals and workflow history.

To navigate to the search page, go to **Tasks** > **Product Management Experience** > **Search Products**. On the Product Management Search page, you can select one of the following:

- Workflow
- Workflow Approvals
- Workflow History

Search for Workflow

Workflow search can be used to configure and run a search for change orders, change requests, problem reports, and corrective actions. You can combine multiple keyword searches along with applied filters to complete the search. For example, you can search for:

- all changes created within a date range.
- all high priority changes in open status assigned to you.
- all changes based on Customer, Supplier, Manufacturer, and Source information.
- data presence indicators for tasks, attachments, and relationships.
- all changes of type New Product Introduction (NPI), and change extensible flexfields of product lines.

Search for Workflow Approvals

You can search for workflow approvals that need your attention by searching for both users and roles with participant types of Approver, Optional Approver, or Reviewer. This is supported for change orders, change requests, problem reports, and corrective actions in open, interim approval and approval workflow status types.

When you've a role as a participant and **Response Required From is One**, use this combination of filter chips to aid your search:
If the approval task hasn't been claimed by any member of the role:

Participants	Participant Role	Activity Type
Role Name	Role Name	Approval

If the approval task has been claimed by one member of the role:

Participants	Participant Role	Activity Type
User (person who has claimed it)	Role Name	Approval

Here are the example use cases for Workflow Approvals search by user role:

- Change and Quality Analyst:
  - Workflows pending approvals from a user or roles
  - High priority workflows pending approval
  - Overdue pending approvals
- Approver or Reviewer:
  - My pending approvals
  - Workflows that need my review
- Manager:
  - Workflows pending approvals from my group
  - High priority workflows pending approval from my group
  - Overdue pending approvals from my group

Search for Workflow History

You can search across change types to find all affected object redlines and updates made to the change header, workflow status, and other workflow entities.

For example:

- To find all workflow edits made by a specific user, Riley Smith, between June 23, 2024, and July 2, 2024, you can filter the search results based on workflow type, author, and date.
- To find all workflow history for a specific affected object, enter the affected object name in the search box.

Tips for Search

When you search for workflows, workflow approvals, or workflow history, you can:

- Select any configured view.
- Based on the configuration of the selected view, you can:
  - search by keywords.
  - apply one or more filters on the search results.
- Show or hide columns in the search results.

- Use the sort function to sort any column.
- Export the selected list of workflows, workflow approvals, or workflow history.
- You can apply filters or remove filters from filter drawer.

The Workflow Type (on the Product Management Search page) will be filtered to certain change types depending on the work area from where you launch the search; however, you can override the filter to display all change types.

Work Area	Change Types Filtered To
Product Development	Engineering change order, change orders without revision control, engineering change request, design change request
Product Information Management	Commercialization change order
Quality Management	Problem report, corrective and preventive action

Note:

- When you select the object, it will be opened in its respective work area, regardless of the work area from which you've launched the search.
- You can search for multiple changes by entering change numbers separated by space. For example: NPI123 ECO124 ECR156.

Access Key Product Management Information and Tasks Using Product Management Landing Page

Using the Product Management Landing page, you can view a summary of issues that need your attention by reviewing the Key Performance Indicators (KPIs) and the corresponding visualizations that provide details for the KPIs. For example, if you've pinned 5 items in the Clipboard that need your attention and you launch the system the next day, you can see the pinned items in the KPI and the details in the visualizations show 5 items. By default, the predefined KPIs are displayed. You can add additional KPIs. Also, you can monitor KPIs related to your work, and navigate to the relevant pages.

To view the Product Management Landing page:

1. In the Product Information Management work area or the Product Development work area, click **Search Product Management** on the **Tasks** panel tab.

   The Product Management Search page is displayed.
2. Click the **Product Management** tab at the bottom.

   The Product Management Landing page displays the following panels by default:
   - Pinned Items: Shows the count of items that are pinned on the Navigator Clipboard. This panel is displayed by default.
   - Table displays the visualizations related to the pinned items. In this table, you can:
     - Perform a search related to the pinned items.

    - Use filter chips to filter the items based on Item Class and/or Description.
    - Export the displayed search results to an Excel file.
    - View saved searches and create personalized search.
  - Actions panel: Provides navigation links to all the tasks that you use based on your role. Your top tasks can be pinned and will display on the landing page. All other tasks can be accessed using the **View All Actions** link. Clicking this link opens the **Actions** drawer where you can search for actions, pin actions, and click to navigate to the pages.

Edit Page Layout and Add Additional KPIs to Landing Page

You can edit the layout of the Product Management Landing page. You can also add additional KPIs and visualizations. This lets you personalize the landing page based on your requirement. OTBI report data can be mapped to visualizations provided in the graphical library.

To edit the page layout and add additional KPIs:

1. On the Product Management page, click **Edit Page Layout**.

   The Product Management page displays in edit mode.
2. Hover on a panel to display a four-arrow icon

.You can move and reposition a panel by clicking and dragging this icon.
3. To add additional KPIs and visualizations, use the Library drawer that's displayed by default. The Library lists all available KPIs and visualizations. Use the **KPI** and **Visualization** filter chips to filter the list. You can drag-and-drop the required KPI to the dashboard grid area. A new panel is added for the selected KPI. In case you close the Library drawer, click **Library** to open it.
4. To remove a panel, hover on the panel and click the **Remove** icon.

   You can't remove the Pinned Items KPI and the Actions panels. When you edit the page layout, the changes are saved automatically.
5. Click **Exit Edit Mode**.

   The Product Management Landing page displays the updated page layout and the panels.

Related Topics

- Use Product Management Search

Product Lifecycle Management Navigator

You can use the Product Lifecycle Management Navigator to access your saved searches across Product Lifecycle Management objects and add, pin, and copy items to and from your clipboard.

You can also navigate to a specific tab of an item from the clipboard. Access the Product Lifecycle Management Navigator from the classic UI by selecting **Product Management Experience** > **Search Products**. You can pin the Navigator so that it persists in the left-hand panel. To dismiss the Navigator you unpin and click in the right-hand panel; click the Navigator tab to access it again.

Access Saved Searches

In the Navigator's **Saved Searches** tab, you can:

- Easily find and select personal saved searches across objects
- Run saved searches in the panel on the right-hand side
- Use the search to search for saved searches by name
- Use the filters to limit searching by:
  - Object
  - Saved Searches (currently only personal Saved Searches are supported).

> **Note:** Only personal saved searches are available for selection in the Product Lifecycle Management Navigator Saved Searches tab.

Access Clipboard

With the Product Lifecycle Management Navigator **Clipboard** tab, you can:

- Add items you wish to use elsewhere in the classic UI. You can select the item, click the copy icon, and navigate to the classic UI and paste these selected items onto the structure or change affected objects tabs.
- Pin clipboard items so that they appear at the top (beginning) of the clipboard for quicker access.
- Click the ellipses (...) button to select which item tab to load in the right-hand panel.
- Use the filters to limit searching clipboard items by:
  - Pinned or not pinned items
  - Object

> **Note:**
> - Only items can be added to the clipboard.
> - Pinned items are displayed at the top (beginning) of the clipboard and have their checkboxes selected, followed by items most recently copied to the clipboard.

Related Topics
- Search Region

FAQs for Search

What's the difference between searching and browsing?

In query based searching, you enter strings that are used for the search. The query search relies on the metadata stored for the objects that are searched.

In the query based search, if you were searching a tree object, such as catalog, item class or structure, the query based search will only search the top object metadata unless you navigate to the object page where a query based search of the structure is provided.

In browse based searching, you are visually searching for the object. You have the ability to drill down through the structure of the object. For objects that are structured, the browse based search is much easier to use than the query base search since you just click to open each layer in the structure.

How many rows can be exported from the Manage Items page search results?

You can display a maximum limit of 500 rows of item search results on the Manage Items page, and you can export a default maximum limit of 500 rows by using the Export to Excel action.

To ensure that your export includes all of the items you want, perform your item search in a way that limits the search results to the export limit. A message in the exported spreadsheet tells you if the export limit was reached, and if some rows weren't exported.

If you want to export more than 500 rows, Oracle recommends defining a report based on the Source System Item subject area using Oracle Transactional Business Intelligence (OTBI).

You can improve the performance of the export by setting the limit on the number of item rows exported to the spreadsheet. You control the export limit by specifying the value of the profile option **Item Export Row Limit** (EGP_EXPORT_ITEM_ROWLIMIT) at site level. The default value is 500. Be aware that increasing the limit might adversely affect performance and timeouts, depending on your data. To modify the default, use the **Manage Advanced Item Profile Options** task in the Setup and Maintenance work area:

- Offering: Product Management
- Functional Area: Items
- Task: Manage Advanced Item Profile Options

> **Tip:** To improve performance, consider limiting the number of columns in the search results table before exporting the results to a spreadsheet.

Related Topics

- SCM Subject Areas in Oracle Transactional Business Intelligence
- Timeout error when using Export to Excel Functionality in Manage Items Search (Doc ID 2414771.1) on My Oracle Support

How do I search for an item using a related customer item number?

The item keyword search can use item relationship information when searching for a production item if the item relationship information is added to the item keyword index. You can add customer items to the keyword index using the **Manage Item Keyword Search Attributes** task in the Setup and Maintenance work area. For example, attributes for a manufacturer and manufacture part number can be added to the index.

When the production item is updated by adding a trading partner item type item relationship, you can use the Keyword search field in the Manage Item page to search for the trading partner item number and find the production item, where the item relationship was added.

You can use the trading partner name or the trading partner item number in the keyword search.

16 Item Mass Changes

How You Make Item Mass Changes

You can update information for more than one item simultaneously by searching for and selecting items, and then accessing the **Manage Item Mass Changes** submenu within the **Action** menu on the Manage Items search results table.

Through the Manage Item Mass Changes submenu you can:

- Assign items to organizations.
- Assign items to supplier site organizations.
- Assign, reassign, or unassign items to catalog categories.
- Change the item class of selected items.
- Edit item attributes.
- Edit items in a spreadsheet.

You must include the fields that will be changed in the search prior to selecting the items that will be changed. For example, to change item category assignments you must include catalogs and categories as columns in the search results table and as fields in the search.

Assign Items to Organizations

Items are engineered, manufactured and distributed by physical facilities called organizations. Organizations can also be sales centers such as stores. To enable an organization to perform any of these functions on an item, you must first assign the item to that organization.

If the items selected have associated packs or structures, you can also specify these options:

- **Assign packs**: Packs available for the master organization items will be available in the selected child organizations.
- **Assign item structures**: Select one or more structures then specify to either copy or common the structures.

Commit options let you apply these assignments directly to the database or export the data to a spreadsheet for further review or modification.

Assign or Reassign Items to Catalog Categories

You can select one or more catalogs' and one or more categories within each catalog to assign to the selected items,

Rules established at the catalog level determine whether you can assign single or multiple catalog categories to the item. If a catalog has multiple assignments enabled, then the same item can be assigned to more than one category associated to the catalog.

For reassigning catalog categories, the catalog category assignments for the selected items will be removed and assignments will be made to the newly selected catalog categories.

Unassign Catalog Categories

The catalog category assignments for the selected items will be removed.

After you save your changes, they're applied immediately to the database. No commit options are available. The application will launch a dialog asking if you want to make the change, since no commit options are available for this mass change action.

Assign Items to Supplier Site Organizations

Item supplier site organizations associate an item to a supplier site and an organization. It indicates that for a given organization, the item is being supplied from the specific supplier site. This mass flow creates all combinations of the organizations and supplier sites selected. For example, if you select three organizations (org1, org2, and org3) and three supplier sites (Sup1, Sup2, and Sup3), all combinations of these selections will be used: org1Sup1, org2Sup1, org3Sup1, org1Sup2, org2Sup2, org3Sup2, org1Sup3, org2Sup3, and org3Sup3.

If the items selected have associated packs (pack items defined in the pack hierarchy of an item), then you can associate those packs to the supplier site organizations.

First the user selects the suppliers, then the organizations. Next, they select if the items selected are pack items and create the item supplier organization associations for pack hierarchy.

Commit options let you apply these assignments directly to the database or export the data to a spreadsheet for further review or modification.

Change Item Class

To change the item class for several items, search for and select items. In the **Change Item Class** dialog, select the new item class to be applied to the selected items, and the import format to be used when you import the modified items back to the product hub. Click **Download** to generate a spreadsheet, which contains the existing item class attributes and values, but mapped to the new item class. Edit the attribute values in the spreadsheet, as needed. Then import the spreadsheet using an item batch.

Edit Item Attributes

You can edit the item attributes in the Edit Item Attribute dialog box or export them to a spreadsheet for editing. This method is useful when you need to set an item attribute to the same value across many items. For example, updating the **Orderable** attribute to **Yes** for 100 items. Using this flow, you can modify both item and item supplier site organization attributes.

To edit the item attributes:

1. On the Manage Items page, search and select the items for which you want to edit the attributes.

   > **Note:** Only the column attributes that are seen in the search results table are available in the Edit Item Attributes dialog box or in the spreadsheet. Use the options available on the **View** menu to add or remove column attributes in the search results table.

2. To edit the item attributes in the UI:
    a. Click **Actions** > **Manage Item Mass Changes** > **Edit Item Attributes**.

       The Edit Item Attributes dialog box is displayed.
    b. If you've selected few items, then you can update the values for the attributes in the **Items** region.
    c. If the number of items is very large and you want to mass update for all items, then update the values for the attributes in the **Edit Columns** region. For example, if you want to change the status across a lot of items, then select the status from the **Item Status** drop-down list. The selected status is applied across the items.
    d. Click **Apply** and then click **Next**.

       The Process Details dialog box is displayed.
    e. Provide process details such as batch options including scheduling information. Also, specify change order details in those cases where business rules require approval for any of the changes made.
    f. Click **Submit**.
3. To edit the item attributes in a spreadsheet:
    a. Click **Actions** > **Manage Item Mass Changes** > **Edit Item Attributes in Spreadsheet**. The selected items are exported into a spreadsheet and after a few minutes the message "The spreadsheet was generated and can now be downloaded." is displayed.
    b. Click **Download** and download the file to your system. For more information, see the next section *Edit Items in a Spreadsheet*.

Edit Items in a Spreadsheet

Editing items in a spreadsheet lets you work offline on the item updates and upload them back to the application. The **Edit Items in Spreadsheet** option generates a smart spreadsheet that you can download to your system. You can review and make further changes to the items and then upload the data directly from the spreadsheet into the item batch for importing to Product Hub. You can only mass edit 100 item attributes at a time.

The columns in the smart spreadsheet is the same as the Search Results table on the Manage Items or Browse Items pages. You can add specific columns to the Search Results table for adding them in the smart spreadsheet.

> **Note:** Item relationship attributes aren't exported to Smart Excel.

When the smart spreadsheet is generated, an Import Map is automatically created at the back end with the mappings for the attributes or columns from the Search Results table on Manage Items or Browse Items pages. This Import Map won't be visible on the Manage Import Maps page. The smart spreadsheet is created in the logged in user's language.

To edit the spreadsheet, you must have a role with the following privileges:

- Manage Item Batch (EGI_MANAGE_ITEM_BATCH)
- Generate Access Token (EGI_GENERATE_ACCESS_TOKEN_PRIV)
- Get Item Batch Rest (EGI_GET_ITEM_BATCH_REST)
- Manage Item Batch Rest (EGI_MANAGE_ITEM_BATCH_REST)
- Import Item (EGP_IMPORT_ITEM_PRIV)

> **Note:** If your mass changes aren't imported, make sure that the **Schedule** attribute for the Product Information Management Data Hub (PIMDH) spoke system is set to **On data load**.

Related Topics

- Commit Options for Item Mass Changes
- How You Import Item Data Using Import Maps

How You Purge Automatically Generated Import Maps

While mass editing items, a few import maps are generated automatically. These import maps are internal and not displayed on the Manage Import Maps page.

It isn't required to delete these import maps because they will be reused internally. You must delete them only if there are issues with a specific smart spreadsheet that was used for mass editing the items. You can delete these maps using the Upgrade Product Management Data scheduled process.

> **Note:** Use the Upgrade Product Management Data scheduled process with caution because it can delete all the automatically generated import maps that were created while mass editing items.

Perform these steps to delete the automatically generated import maps:

1. From the Navigator link, go to **Tools** and click the **Scheduled Process** link.
2. Click **Schedule New Process** in the Search Result table header.
3. In the Schedule New Process dialog, select the following:
    - **Type**: Job
    - **Name**: Upgrade Product Management Data
4. Click **OK**.
5. In the Process Details dialog, enter the following parameters:
    - **Upgrade Process**: Execution
    - **Functional Area**: Import Maps
    - **Feature**: Delete automatically generated import maps
    - **Parameter 1**: Enter the name of the import map that must be deleted. You can get the name of the import map from the smart spreadsheet. To delete all the automatically generated import maps of all users, specify **Parameter 1** as **ALL**.

      If **Parameter 1** is left blank, then none of the automatically generated import maps will be deleted. If you specify the name of an import map that wasn't generated automatically, then that import map won't be deleted. The scheduled process only deletes automatically generated import maps.
6. Click **Submit** to start the process.
7. Monitor the status of this scheduled process by entering the process ID in the Search region.

Commit Options for Item Mass Changes

Commit options let you specify whether to apply changes directly to the database or export the data to a spreadsheet for further review or modification.

Data that is applied to the database is always validated prior to saving it to the database. After you select the items and specify the changes, then you select the commit operations. If you make changes to a spreadsheet, then the data is uploaded to an item batch, validated and saved to the database through a scheduled process.

Commit options are available for the following item mass change activities:

- Assign items to organizations
- Assign items to supplier site organizations
- Assign items to catalog categories
- Reassign items to catalog categories

Apply Changes to Database

Changes will be applied to the database after running the validations to ensure the integrity of the changes.

Specify item batch options including, scheduling and change order details in those cases where business rules require approval for any of the changes made.

> **Note:** If you schedule the item batch to be processed at a later time, then it will be available as an internal item batch through **Manage Item Batches** user interface.

Manage in Spreadsheet

You can review and make further changes to the items through the downloaded spreadsheet and then apply the changes to the database by selecting **Upload** from within the spreadsheet.

When you click **Upload**, you must specify batch options including scheduling information. Also specify change order details in those cases where business rules require approval for any of the changes made.

> **Note:** In order to use this feature you must have Microsoft Excel 2007 or later Standard Edition license.

Related Topics

- What Change Orders Modify
- Item Batch Import and Scheduling Options
- How You Make Item Mass Changes

FAQs for Item Mass Changes

How can I update item attributes using a spreadsheet?

Select Edit Item Attributes in Spreadsheet from the Manage Item Mass Changes submenu within the Action menu in the Manage Items search results table.

Edit the attributes in the spreadsheet and then apply the changes to the database using the **Upload** button in the spreadsheet.

Note: The appropriate item attributes must be included in the search results table in order to export them to a spreadsheet for modification.

Related Topics

- How You Make Item Mass Changes
- Item Specifications and Attributes

Can I update the unique key attributes in multirow-extensible-flexfield groups?

No, you can't update the unique key attributes in multirow-extensible-flexfield groups. Therefore, when you provide a new value for an existing unique key attribute, the extensible flexfield group considers the updated value as a new row.

What's the difference between common item structures and copied item structures?

If you need to create an item structure that's very similar to an existing structure, then it's easier to copy the item structure and make the necessary modifications rather than create a new one.

If you need to create an item structure that's identical to an existing structure so that it doesn't require any component changes, then make the item structure common. This helps reduce maintenance and the risk of errors.

Related Topics

- How You Create Structures

How can I update item supplier site organization attributes using a spreadsheet?

Select **Edit Item Attributes in Spreadsheet** from the Manage Item Mass Changes submenu within the Action menu in the Manage Items search results table.

Edit the attributes for supplier site organization in the spreadsheet and then apply the changes to the database.

Note: The appropriate supplier site organization attributes must be included in the search results table in order to export them to spreadsheet for modification.

Related Topics

- How You Make Item Mass Changes

17 Guided Task Flows

Perform Guided Task Flows

Administrators create and configure the guide task flow. You can perform the guided task by selecting the flow and starting it. Run each task until all the required tasks are completed. The final task allows the you to submit the changes through the mass change processes and monitor the status of the process.

You can perform the following using the guided tasks flows:

- Mass Update Item Attributes
- Mass Replace Components

Related Topics

- Perform Guided Task Flow to Mass Replace Components
- Perform Guided Task Flow to Mass Update Item Attribute Changes
- View Guided Task Flow Status
- Overview of Guided Task Flows

Perform Guided Task Flow to Mass Update Item Attribute Changes

You can run the configured guided task flow to mass update item attribute changes.

To run a guided task flow:

1. In the Product Information Management work area, click the **Tasks** panel tab, and then click **Perform Guided Tasks**.

   The Perform Guided Tasks page is displayed.
2. Use the filters or specify a search criterion in the **Search** box to display a list of guided task flows.
3. Click the guided task that you want to run.

   The guided task flow displays a list of tasks.
4. Click **Start Guided Task** to start the first task - **Select Item Attributes**.

   The list of tasks in the guided task flow is displayed.
5. Click the first task.

   The task details are displayed.
6. Select the items for which you want to perform the mass update.

7. On the page that displays the guided tasks information, click the **Review and Submit** task.

   The Mass Update Summary is displayed. Review the information and click **Done**.

   - The guided task flow is automatically updated and simultaneously exports the items you selected to an Excel spreadsheet.
   - After you open the Excel spreadsheet file, you can see the items you selected in the first step of the guided task. In this file, you can edit the required item information.
   - After you've edited the information, these changes need to be uploaded back to the guided task flow. To do this, in the **Add-ins** tab, click **Validate**, then click **Upload Data**.
   - After the updated data has been uploaded back to the Guided Task, you can go back to the Guided Task and view the order status of the changes you made. To check the order status, select the batch name and click **Refresh**. When the Job Status changes to **Succeeded**, then you've successfully completed the Guided Task flow. If the batch fails, then you can redo the data validation through Excel.
   - To view the status of the tasks later, you can click the **View Guided Tasks** link in the **Tasks** panel tab.

Perform Guided Task Flow to Mass Replace Components

You can perform a mass replacement of components across multiple structures using a guided task flow. Your administrator can configure the guided task.

You can view all the items where a component is used and replace it with a different component across one or more selected structures. Here's how:

1. On the **Tasks** panel tab click **Perform Guided Tasks**.
2. On the Explore page, search for a component replacement journey and select it or select a component replacement journey appearing on the page.
3. Click **Start This Journey**.
4. Search and select the original component you want to replace and the replacement component. Click **Done**.

   During the selection, the components will be filtered based on the organization selected in the configuration.
5. Select for one or more structures from the where used list that shows where the original component is used. You can refine the search within the displayed list, if the list returns too many results. Click **Done**.

   Notes:
   - If the replacement component is configured to be routed through an engineering change order, the search results will only include engineering structures created in the Product Development work area.
   - If the replacement component is configured to be routed through a commercialization change order, the search results will include commercial structures created in the Product Information Management work area and engineering structures in the Prototype or Production lifecycle phases. The results will exclude Packaging Structures.
   - If the replacement component isn't configured to be routed through any change order at all, the search results will include both engineering structures and commercial structures.

6. Review the summary of the selections from your previous tasks and click **Done** to submit the mass replacement action.

   Notes:
   - You can create a new engineering or a commercialization change order. You also select an existing change that's in the Draft or Open status.
   - Depending on the configuration of the guided task, the changes will be applied directly to the selected structures of the commercial items or added as affected items to the change order through the scheduled process for engineering and commercial items.
   - When the scheduled process is complete, the change order is created in the open status.

     If the guided task isn't configured for the change type, then there's no need to select the change type or create the change order. The replacement will be made directly on the item.
   - When the components are replaced, the reference designators will also get replaced.
7. View the change order status.

   You can view the details such as batch name, change order name, job ID, and job status.

   > **Note:** To view the status of the tasks on a later date, you can click the **View Guided Tasks** link in Product Management Experience in the Tasks panel tab.

View Guided Task Flow Status

You can monitor the status of the submitted flows and continue any guided task flow that wasn't completed in the Perform Guided Tasks action.

Monitor Guided Task Flows

To view the guided task flow status:

1. In the Product Development or Product Information Management work area, click the **Tasks** panel tab, and then click **View Guided Tasks**.

   The View Guided Tasks page is displayed.
2. Use the filters or specify the search criteria in the **Search** box to display a list of guided task flows with the status **Open**, **In Process**, or **Completed**.

Continue Pending Guided Task Flow

To continue a pending guided task flow:

1. In the Product Development or Product Information Management work area, click the **Tasks** panel tab, and then click **View Guided Tasks**.

   The View Guided Tasks page displays the list of guided task flows that aren't completed (status as **Open**). If it isn't displayed, use the **Status** filter chip and search for guided tasks flows with the status as **Open**.
2. Click the guided task flow that you want to complete.
3. After the guided task flow opens, go to the task that must to be completed.
4. Review the task and make changes if required. Click **Done** to run the task.
5. After the guided task flow is completed, the status changes to **Completed**.

18 New Item Requests

Create New Item Requests

New item requests are created to define item information and its entities, including specifications, structures and packs, and relationships. In addition to being defined, the new item requests are also routed for approval.

Before you create a new item request, be sure to enable the item class for the new item request. Use the Manage Item Classes task to modify the item class.

Use one of the following to create the new item request.

- **Quick Submit**: To quickly create the new item request by making use of prefilled item data. Here, you can't add the new item to an existing new item request.
- **Submit**: To submit the item to an existing new item request or create a new one.
- The item import process.

Additionally, a new item request is automatically created when the item lifecycle phase changes to preproduction or production through a change order. This is only applicable for items created in the Product Development work area and when the number generation method is Sequence-Generated.

Here's how you use Quick Submit:

1. In Item Management, click **Create Item**.
2. In the Create Item dialog:
    - Select **Create New.**
    - Be sure to select an item class that's enabled for new item request.
    - Enter the item details and **OK**.
3. In the Create Item page, enter additional item details.
4. Click **Quick Submit**.

    The new item request is created in the Open status.
5. Enter any additional information. Click **Save**.

Here's how you use Submit:

1. In Item Management, click **Create Item**.
2. In the Create Item dialog:
    - Select **Create New.**
    - Be sure to select an item class that's enabled for new item request.
    - Enter the item details and **OK**.
3. In the Create Item page, enter additional item details.
4. Select Create New Item Request and click **Next**.
5. Enter the details of the new item request. Click **Save and Edit**.

    The new item request is created in the Draft status.
6. Enter any additional information. Click **Submit**.

Here is a description of fields appearing on the Create New Item Request page:

Additional Information

You can add Descriptive flexfields as additional attributes for the new item request.

Need-by-Date

The date by which the new item request must be approved. This is mandatory to track new item requests which fail to meet the deadline. If the new item request isn't approved by this date, the details are appended to the Items Pending Approval infolet displayed in the Product Information Management work area.

Add Attachments

You can add attachments when you create a new item request. You can also edit attachment details and remove attachments from an open new item request.

Attachments include the following file types:

- Files and folders from your desktop or a configured repository.
- Text files generated during the attachment process.
- URL links.

> **Note:** New item requests support multiple items across different item classes. Each item can be routed to different assignees for definition, because the definition steps are defined at the item class level.

After you submit new item request, a request comment notification is normally sent to predefined assignees, but if **Skip Request Comment** is checked, request comment notifications aren't sent.

Bypass New Item Request for Configured Items

Configured items are automatically created when the end items are configured based on the model items in a sales order. These configured items should not be added to the new item request even if the item class is enabled for new item request. Such configured items aren't relevant for the new item request process. Hence, configured items created based on model items that belong to an item class and mandates new item request are skipped. You can identify configured items based on the following attribute settings:

- **Autocreated Configuration** – Set to **Yes**.
- **Structure Item Type** – Set to **Standard**.
- **Base Model** – Has a value and isn't null.

Related Topics

- In a new item request, what's the difference between submit and quick submit?
- Overview of Item Batches

New Item Request Workflow

You can execute tasks on predefined statuses for new item requests, but you can’t create or delete statuses or workflows. You can also process item approvals for master and child organizations concurrently.

Predefined Workflow Statuses

Here are the predefined statuses for new item requests:

- Open
- Definition
- Approval
- Scheduled
- Completed

Open

As an assignee, you can add items and attachments.

As an administrator, you can configure whether a request comment notification sent to the user is required. If it's required, the new item request can't move to the next status until the assignee responds to the notification.

Here's how you configure the request comment notification:

1. In the Setup and Maintenance work area, use the following:
    - Offering: Product Management
    - Functional Area: New Item Requests
    - Task: Manage New Item Request Type Details
2. In the Open status, use the **Skip Request Comment** option.

Definition

As an administrator, you can configure the definition workflow at the item class level. Based on the definition steps, a notification is sent to assignees for defining the item. Once the item is defined, it can be promoted to approval status manually or automatically approved by the BPEL process.

As a definition task assignee, you can define item information such as specifications, structures, packs and so on. But you can't add additional items in this status or create a new workflow.

Approval

Approval notifications are sent to approvers based on whether the assignment method is rules-based, or user defined. Once the approval is granted, the new item request can't be modified.

Scheduled Status

After all the necessary approval is received, the new item request is automatically promoted to the Scheduled status.

Completed

After the new item request is scheduled, a job is triggered and status is automatically changed to Completed.

> **Note:** To view the last updated date for new item requests created before update 22D, see the **Completed On** column in the definition workflow section.

Process Child and Master Organization Item Approvals Concurrently

You can use a commercialization change order to enrich child organization items while a new item request is in progress for the master organization item. You can initiate the commercialization workflow processes without waiting for the new item request process to complete.

Here are some details on processing child and master organization items concurrently:

- When you add an unapproved child organization item to a change order, the item's **Approval Status** will be based on the completion status of the new item request for the master organization.
    - If the change is completed but the new item request isn't completed, the Approval Status of the child item is set to **Approved** when the new item request is completed.
    - If the change isn't completed before the new item request is completed, the approval status of the child item is set to **Change Order in Progress** until the change order is completed. Once the change is completed, the approval status will change to **Approved**.
- Impact on configured rules:
    - If the new item request for the master organization item is completed before the change order for the child organization item is approved, rules that are based on child organization approval status (Status = Approved) won't be triggered. It's recommended that you use change order entry and exit criteria to validate child item data. You must reconfigure entry and exit criteria to validate data on child organization items that are approved after the master organization items.
    - You can use configured rules to validate child organization item approval status (Status= 'Change Order in Progress'). Rule-related errors are recorded in the action log of the new item request.
- If you remove an unapproved child organization item from a pending change order, either by deleting or canceling the change order, then the child item must be added to a new change order to route it for approval. Once the child organization item has been added to a change order, it can't be approved through the new item request process.
- If an unapproved child organization item is on multiple change orders, the first child organization change order that becomes complete after the master organization new item request is complete will set the child organization item to Approved.
- You can't add unapproved items to a change order through import.
- If you haven't added an unapproved child organization item to a change order, then the new item request for the master organization item will approve both the master and child items.
- You can't add unapproved master organization items to a change order.

Related Topics

- Configure the Definition Workflow for a New Item Request
- Why did the workflow stop responding?
- Why is my approval rule not working in a new item request?

Understand New Item Request Notifications

During the new item request workflow notifications are sent out to assignees, approvers, and requester; consolidated notifications are sent out to assignees.

For a detailed list of new item request notifications, notification types, and recipients, refer to *View Product Management Notifications* available on the Oracle Help Center.

Note:

- If the approval notifications are delayed ensure that approvers have the following privilege: Generate Item Change Order Report (EGO_GENERATE_ITEM_CHANGE_ORDER_REPORT_PRIV)
- A line which is rejected by an approver appears as read-only in the notification.
- Here's a list of actions that aren't available for new item request notifications:
  - Skip Current Assignment
  - Suspend
  - Create Subtask
  - Request Information
  - Route Task
  - Add Comments

Claim Tasks from Notifications

For the **Claim** action to be enabled,

- Your administrator must set the value of **Response Required From** field as **One** and **Assignee Type** field as **Role**. (This is available in the Setup and Maintenance work area. Execute the Manage New Item Request Type Details task in the Product Management offering.)
- The **Auto Claim** option in BPM Worklist must be disabled. (To access this search for Manage Task Configurations for Supply Chain Management and select the New Item Requests functional area.)

When an approver or definition task assignee selects the **Claim** action on a notification, the notification is locked against changes by other approvers, unless the first approver unlocks it by using the **Release Claim** action.

New Item Request Notifications — New Format

Notifications are available in a new template for new item requests (NIR). You can review, approve and reject workflow requests for new item requests in the notifications. It's available both in online format and email notifications.

Let's look at the attributes that are displayed in the new item request approval notifications:

- In the Details section:
  - New Item Request Number: Link which opens the NIR details in a new page.
  - Approval Status
  - Activity Type: It's either optional approval or approval.
  - Expiration Date: Date when this approval request will expire.
  - Response Required From: Requires response from one assignee or from all the assignees.
- The Line items section includes the new item number, item description, item class, effective date, and item status.

Define Items

You can define item information such as specifications, structures, packs and so on. Note that this depends on the definition task configured by your administrator.

How You Define Items

Here's how you define items from the new item request.

1. From the **Manage New Item Requests** page, search for the new item request in which you want to define the item.
2. Open the new item request, click the Details tab and select the Definition workflow status.
3. To view the definitions tasks, expand the Workflow Details section.

   To filter the tasks, use the **Show** list. Here are the options in this list:

   - **Current Tasks**: Tasks assigned to all users in the selected definition step.
   - **My Current Tasks**: Tasks assigned to the logged-in user in the selected definition step.
   - **My Tasks**: Tasks assigned to the logged-in user in all the definition steps.
   - **All Tasks**: Tasks assigned to all users in all the definition steps.

   Here are the key fields appearing in Workflow Details.

   - **Step Sequence Number**: The number assigned to the definition step by your administrator. Note that a parallel workflow consists of multiple rows of the same step sequence number with different tasks.
   - **Assigned to**: The role or the user ID of the person to whom the task is assigned.

- **Response Required From**: Whether the response is required from one or all users in the role.
- **Owner**: For tasks in progress, displays the user name of the person who claimed the task.

  For tasks that are complete, displays the user name of the person who completed the task.

  > **Note:** Some of the fields and options appear only if your administrator has opted in for the feature Control Role Expansion: New Item Request Definition.

4. Click the **Go to task** icon against the task you want to define.
5. If your administrator has assigned the definition step to a role and set the value of **Response Required From** as **One**, you must claim such tasks before you define the item.

   - **Claim Task**: Claim a task assigned to you in the definition step. For example, claim the current task which belongs to step sequence number 10.
   - **Claim All Tasks**: Click the down arrow next to the **Claim Task** button and select **Claim All Tasks**.

     Claim all the tasks assigned to you in the definition step. For example, if you open a task in step sequence number 10, then you can claim all tasks assigned to you in step 10.
6. Define the item by entering attributes or item entities configured by your administrator.

   After you complete the definition task, you must set the task status as Completed and click the **Mark Complete** button. The application saves your changes and closes when you click **Mark Complete**.

You can also define the item using the definition notification. Here's how:

1. Open the definition notification.
2. Expand the item and click the **Go to Task** icon against the item you want to define.

   To view the recent updates made to the task, click the **Refresh** icon.

Release Claims

If you have claimed a definition task that requires a response only from one user, you can release the claim so that it can be claimed by another user with the same role.

Click **Release Claim**, to release the claim from the task you claimed in the definition step.

Click **Release All Claims**, to release all the claims from the tasks you claimed in the definition step. For example, release all the claims you claimed in step sequence number 10.

How Control Role Expansion Impacts Definition Workflow

Here's what you need to know about the feature Control Role Expansion: New Item Request Definition:

- If only one response is required from an assignee and a role is added as the assignee, the role isn't expanded to show its members. All members of the role receive definition notifications, and you can track the task owner and task status in the workflow details section on the new item request. The **Assigned To** field in the notification isn't expanded to show all role members.
- If the definition assignee is a role and **Response Required From** is set to **All**, the role is expanded to show all its members. It's recommended to limit the number of members in a role to less than 50.
- Notifications will be sent to all the assignees added directly or inherited from the role hierarchy, whether the response is required from all or one.

- The **Owner** column isn't automatically populated for new item requests created before update 22C. To populate this column, you can run the following Enterprise Scheduler Service job: Upgrade Product Management Data. Note that this is a one-time activity. The **Owner** column is automatically populated for new item requests created after you opt in to this feature or after update 22C.

Impact on Ongoing Definition Workflows

For pending new item requests that are already in Definition status, here's what you need to know:

- If a task was assigned to a role and **Response Required From** was set to **One**, the role is expanded.
- For all the incomplete definition tasks assigned to roles, you can use the **Go to Task** icon on the notification to continue the definition tasks (on a pending new item request) or you can terminate and restart the definition workflow.

Related Topics

- What happens when I add a new user to a role that's assigned to an ongoing definition task?
- Oracle Fusion Cloud SCM: Performing Your Quarterly Update (Doc ID 2337485.1)

Infolets for New Item Requests

The infolets for new item requests in the Product Information Management work area help you keep track of new item requests that are assigned to you.

- New Item Requests (Priority): Shows open new item requests by priority (High, Medium, and Low), based on values specified in the Priority field for the items. Only new item requests that are in Open status and past the Need-By date are shown.
- Items for Definition: Shows the number of items that are currently in the Definition status.
- Items Pending Approval: Shows the number of items currently in the approval status.

Note: The count in the Items for Approval infolet and Items for Definition infolet is restricted to the new item requests that are assigned to you. You can’t see the count of items assigned to anyone else.

What Happens to New Item Requests Without Approvers

If approvers aren't assigned to a user-defined workflow of a new item request, at runtime, the status of the new item request changes to Approval, but notifications aren't sent. As a result, the workflow is 'stuck' in the Approval status.

How You Manage Stuck New Item Requests

To resolve the 'stuck' new item request, you must cancel the new item lines or the entire new item request. You can cancel the new item request in any status except in the Completed state. Once you cancel an item line, it no longer appears in the new item request notifications. You can delete the new item request after:

- moving new item lines to another new item request.
- canceling all the new item lines.

Note: You can demote a new item request in the Definition, Scheduled, Scheduled (Failed) and Approval (Rejected) statuses. But you can't demote the new item request in Completed or Canceled status.

Related Topics

- How can I move lines (items) from a new item request?

FAQs for New Item Requests

Why is the newly created new item request unavailable in the new item requests infolet on the home page?

New item requests in the Draft status aren't appended on the home page; they're appended once you promote them to the Open status.

In a new item request, what's the difference between submit and quick submit?

In Quick Submit the following fields are filled automatically: new item request name, number and description. Where as in Submit, you enter the new item request name, number, and additional details across multiple windows.

You can only append a single item when using Quick Submit. But you can append more than one item when using Submit.

The table shows which fields are automatically filled based on the number generation method.

Rule or Sequence Generated Numbers	User-Defined Numbers
• The new item request number is automatically generated • The new item request name is same as item number • The new item request description is similar to item description	• The new item request number and name are same as item number • The new item request description is similar to item description

How can I promote a new item request?

To promote a new item request, first review your notifications.

On the notification, go to the Manage New Item Requests tab and select the row containing your new item request. From the Actions menu, select Promote. In the Promote dialog box, you can select from the available phases to promote the new item request. You must enter a comment when promoting a new item request to the next phase.

Can new item requests be automatically promoted and demoted?

Yes. You can set up automatic promotion and demotion rules at the new item request type level.

Related Topics

- Configure Automatic Promotion and Demotion

What are the workflow phases of a new item request?

The New Item Request will go through the following workflow phases:

- Open: The new item request is created and items are added.
- Definition: Participants define item attributes and item entities, such as structures, packs, and organizations.
- Approval: Participants approve or reject the items.
- Scheduled: After approval, the request is promoted to a Scheduled status.
- Completed: When the effective date of its associated item is reached, the new item request is promoted to a Completed status.

How can I associate items with a new item request?

Items are associated with new item request in one of the following ways:

- From a new item request: Search for and select items in the Items table.
- From an item: Add the item to an existing new item request or create a new request.
- From an item import: Add the imported items to an existing new item request or create a new request.

What's an action log?

The action log provides an audit trail of all actions performed on the new item request.

The first entry indicates when the new item request was created and by whom. Subsequent actions will be listed to show the progress of the new item request. For example, submitted and promoted to definition.

From the **Action Log**, you can initiate a discussion by posting and assigning a new comment, respond to requested comments or reply to specific comments, thereby creating a threaded discussion within the context of the new item request.

Here are some additional details:

- The **Comment** column in the action log table shows additional information about an action.
- The **Author** column shows **System** when an action is performed by the application.

  It shows the user name when the action is performed by a user.

  > **Note:** In OTBI, the **Author** column doesn't show System when an action is performed by the application.

The table shows some of the actions performed by the application, and the entries in the **Comment** and **Author** columns:

The table shows some of the actions performed by the user, and the entries in the **Comment** and **Author** columns:

How can I post a comment in new item request?

You post comments in the Comments section available on the contextual pane within the new item request. This section is available on all New Item Request pages.

You can also post comments from the **Action Log** by selecting the **Post Comment** link.

How can I request a comment in a new item request?

You request a comment in the Action Log by clicking the Request Comment button. A Request Comment dialog box will appear for you to assign and enter your request.

Can I approve only two out of three item lines in a new item request?

Yes. In the new item request approval notification, select the Include in Approval check box against items you want to approve.

Can I process a change order for a child organization item before completing the new item request for the same item in the master organization?

You can concurrently process a commercialization change order and a new item request on the same item in the child and master organization.

Related Topics

- New Item Request Workflow

How can I move lines (items) from a new item request?

On the Manage New Item Request page, expand the search results and select lines from one or more new item requests within the same organization and then select Move New Item Lines.

You can move the selected lines to a new New Item Request or add them to an existing New Item Request.

How can I cancel a new item request?

On the Manage New Item Requests page, select the new item request you want to cancel. Click **Actions** > **Cancel**. The new item request status is set to canceled and any changes defined for items are discarded.

Note that you can't cancel a new item request in the Completed status.

How can I delete a new item request?

On the Manage New Item Request page, select the new item request to be deleted and then select the Delete action.

Once a new item request has been added to the delete group, the request will be unavailable and you can't reverse the delete.

How can I demote a new item request?

While reviewing your notifications, go to the Manage New Item Requests tab and select the row containing your new item request.

From the **Actions** menu, select **Demote**. In the Demote dialog box, you can select from the available phases to demote the new item request. You also must enter a comment when demoting to another phase.

When can items be added to a new item request?

Items can only be added when the New Item Request is in a draft status and an open phase.

What happens when I add a new user to a role that's assigned to an ongoing definition task?

Let's say that a new item request is in the definition phase. The definition task is assigned to a role that has multiple users, and the task isn't claimed by any user.

You add a new employee as a new user in the role (which is assigned to the task). Here are answers to questions you may have.

Does the new user receive any notification immediately?

No.

Can the new user claim the definition task immediately?

No.

How does the new user claim the definition task?

You must demote the new item request and promote it again to the definition phase. All users receive notification about the definition task. The new user can claim the task from the notification.

What happens if a user quits the organization after claiming all tasks in multiple new item requests?

This results in a stuck workflow. But you can resolve this by demoting new item requests and promoting them again to the definition phase.

Note: You can't release or reassign the definition task to another user even if the user has the claim task role.

Why did the workflow stop responding?

In change orders and new item requests, the workflow can stop responding due to one of the following reasons:

- Approval rule has an empty approval group.
- Approval rule not being associated with an approval group.
- An invalid approver. The user or role selected as an approver doesn't exist in the application.
- One or more lines don't match any rules in the approval task.
- Extensible flexfields not being generated.

- Inactive rules.
- Rules unavailable for the header stage.
- A new item request definition step assigned to a role and the role not being assigned to any user.
- An error in SOA workflow. Use Enterprise Manager to view workflow errors.
- Use of an incorrect case to specify the value of a parameter such as priority code.

Related Topics

- Why is my approval rule not working in a new item request?
- Configure the Definition Workflow for a New Item Request

Why is my approval rule not working in a new item request?

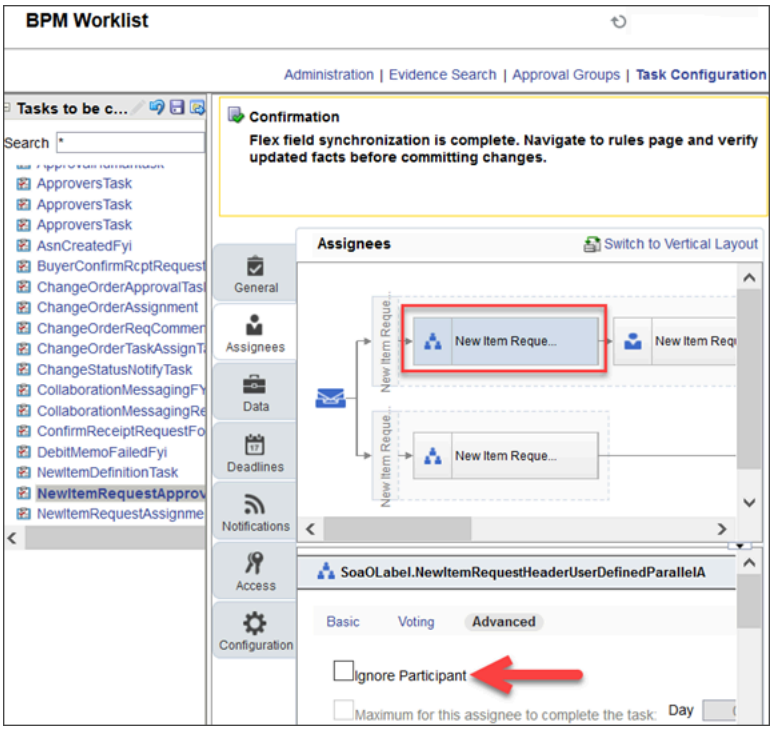
An approval rule may not work due to one of the following reasons:

- You haven't set the assignment method in the new item request type as **Rules Based**.

  Open the **Manage New Item Request Type Details** task and change the **Assignment Method** in the approval workflow.

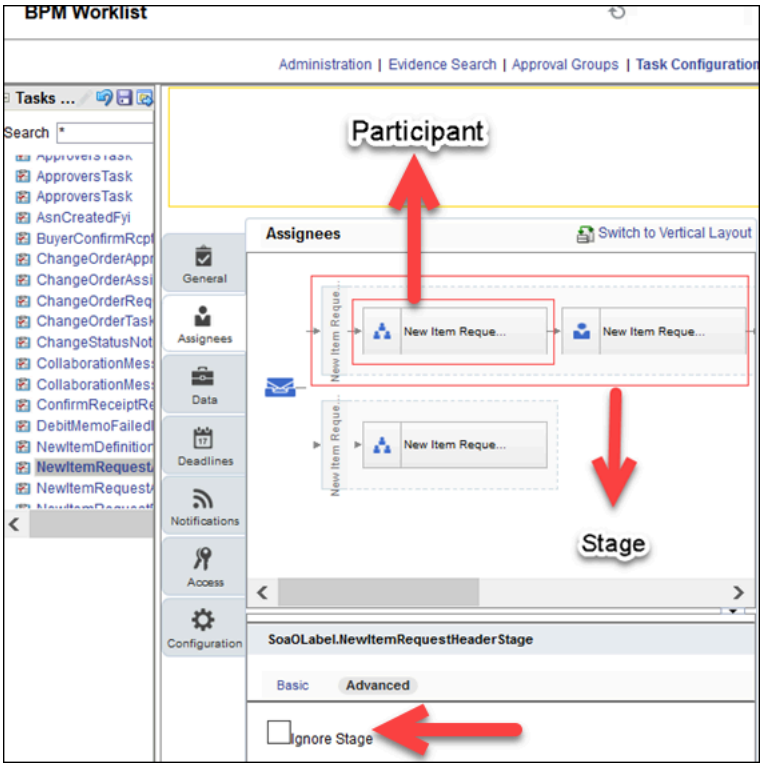
- You selected the **Ignore Participant** option for the rule. To include the participant:
  - Navigate to the BPM Worklist.
  - In the Assignees tab, select the participant. Click the Advanced tab.
  - Deselect **Ignore Participant**.

    Here's the screen that shows how you include the participant:



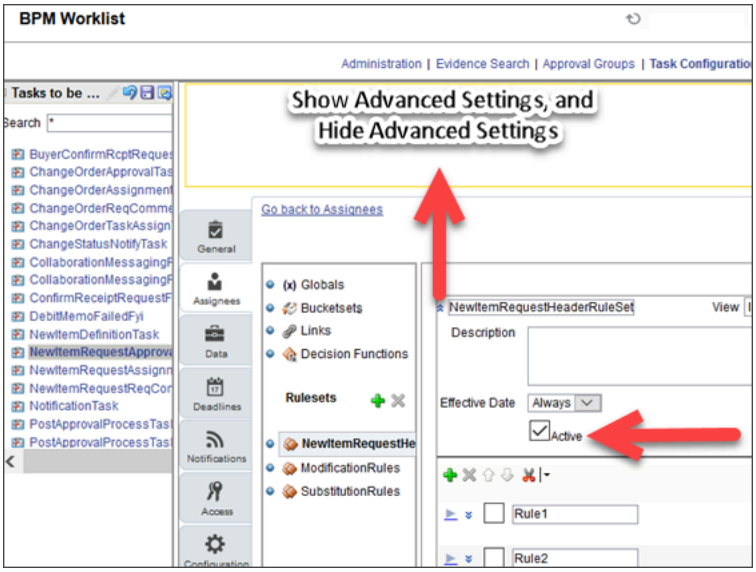
- You selected the **Ignore Stage** option. To include the stage:
    - Navigate to the BPM Worklist.
    - In the Assignees tab, select the participant and then select the stage. In the UI, stage is the region that encloses the participant.
    - Click the Advanced tab.
    - Deselect **Ignore Stage**.

      Here's the screen that shows how you include the stage:



- The `NewItemRequestHeaderRuleSet` isn't active. To activate the rule set:
    - Navigate to the BPM Worklist.
    - Select the participant. Click the diamond icon and then select **Go to rule**.
    - Click **Show Advanced Settings** (or the double down arrow icon) that appears next to the rule set.
    - Select **Active**.

      Here's the screen that shows how you activate the rule set:



Related Topics

- Why did the workflow stop responding?

Why don't I see all items in the new item request notification?

You must have privileges to view the item.

Related Topics

- Troubleshoot Access to New Item Requests

Why does the new item request approval notification appear blank?

If you're on update 21C or earlier, ensure that you have Manage New Item Request privilege.

Related Topics

- Troubleshoot Access to New Item Requests

19 Supplier Collaboration

Manage Item Supplier Associations

Managing item supplier associations involves creating associations between items and supplier addresses for an item organization, updating these associations, and deleting the associations.

You create item supplier associations while creating or editing an item for an organization.

> **Note:** Item supplier associations are only used for master data management. They're not used within supply chain or procurement transactions. For example, you can create an item supplier association in the Product Information Management work area for a supplier SUPPA123, after that supplier has been created in the Suppliers work area. But you can't use the item supplier association to provide the supplier and site information in the shipment details for a sales order from supplier SUPPA123 in the Order Management work area. You can employ item supplier associations for reporting and supplier management, using the relevant Product Management subject areas within Transactional Business Intelligence.

Assign Supplier Associations to Organizations

On the Manage Items page, search for and edit an item belonging to a specific organization. From the **Edit Item** page, select the **Associations** tab and then the **Supplier Organizations** subtab. On the Supplier Organization Associations table, select **Select and Add** from the **Actions** menu, or click the **Select and Add** icon. Use the resulting **Select and Add Supplier Organization Associations** dialog to search for, select, and add suppliers

Once the selected suppliers are added, save the associations, by saving the item.

Temporarily Suspend Supplier Associations

Supplier associations are active, by default, but you can temporarily suspend associations using the Supplier Organization Associations table.You can set a single association to being inactive by selecting the value **Inactive** in its **Status** column. You can revert it to active status at any point by selecting the value **Active**. You can change the status of multiple associations simultaneously by selecting multiple rows of the Supplier Organization Associations table, selecting their status from the **Edit Status** list of values and clicking the **Change** button.

Specify a Primary Supplier for an Item Organization

You can designate a primary supplier for the item. There can be only one primary supplier for one item organization association.

To designate a primary supplier, select the **Primary** check box for the supplier in the Supplier Organization Associations table. Then save your update.

Delete Item Supplier Associations

To remove a supplier association from an item, select the supplier from the Supplier Organization Associations table, then select **Delete** from the **Actions** menu, or click the **Delete** icon. In the Delete Item Supplier Association dialog box,

add the association to an existing delete group, or create a new delete group. Select the Manage Delete Groups task to process the delete group. The associations will be deleted completely when the delete group has been processed.

Related Topics

- How to Manage Supplier Access
- What's the difference between item supplier associations and the approved supplier list?
- Group Deletions of Items, Structures, New Item Requests, and Change Orders

How to Manage Supplier Access

To provide supplier access to an item, navigate to the Manage Items page, select an item, and open the Edit Item page.

Select the **Item People** tab, where you can add, delete, and modify the groups and persons that can act upon the item, and the actions available to each group or person.

Item grants to supplier users can be managed at the item level. This gives you granular control in providing supplier users with access to one or more items, on an ad-hoc basis.

Grants to supplier users can also be maintained at the item class level (as instance set level grants), if supplier users need access to all items within an item class.

> **Note:** Since the security actions defined for an item class are inherited by the items in the item class, those actions cannot be modified at the item level. Security actions defined for an item class are defined in the Setup and Maintenance work area, using the Manage Item Classes task, where you select item class people and actions on the Security tab for an item class.

Related Topics

- Data Security Privileges for Accessing Items
- Data Security Privileges for Viewing Items
- Data Security Privileges for Creating Items
- Data Security Privileges for Updating Items
- Data Security

FAQs for Supplier Collaboration

What's the difference between item supplier associations and the approved supplier list?

Item supplier associations indicate the supplier and address from which an item is supplied and the item organization to which it's supplied. You create these associations by editing an item in the Product Information Management work area.

The approved supplier list is where you define your approved suppliers, sites, and other information for procuring specified items. You create entries on this list with the Manage Approved Supplier List Entries task in the Purchase Orders and Purchase Agreements work areas. Suppliers themselves are created in the Suppliers work area.

Related Topics

- Manage Item Supplier Associations

20 Item Status

Overview of Item Status

Every item has an Item Status attribute. By setting the item status, you can change the default values for a subset of operational attributes referred to as status-controlled attributes of the item, according to how the status has been set up.

Set Up Item Statuses

You can use predefined item statuses, and also define your own statuses.

To create, edit or delete item statuses, use the **Manage Item Statuses** task:

- Offering: Product Management
- Functional Area: Items
- Task: Manage Item Statuses

The predefined item statuses are:

- Active
- Inactive

For each item status, the **Details** section of the Item Statuses page contains the operational attribute groups and status-controlled attributes governed by the selected item status. The same set of status-controlled attributes applies to all statuses. You define how the item status affects each attribute.

The defined status-controlled attributes are listed under the reference for the **Item Status** attribute, which is a member of the Item Main specifications. Examples of status-controlled attributes are Build In WIP, Customer Orders Enabled, and Invoice Enabled. All of the status-controlled attributes have the values Yes and No.

Whenever a defined status is applied to an item by a user, the value of each of the status-controlled attributes in this list is set to the value you choose here, subject to the usage you select. Note that the affected attribute value in the item might not be different after the item status is applied.

To set the values and usages for the status-controlled attributes, in the Details table, set the **Attribute Value** control to **Yes** or **No**, then set the **Usage**. The usage values are:

- Defaulted - Lets you override the value during the import and update of an item.
- Inherited - Sets the values of the item status-controlled attributes when the status value changes. You can't override the value.
- None -The item status attribute values won't be changed.

Any change made to an item status isn't applied automatically to existing items. The change will be applied when the item status value is next changed while editing the item.

The **Controlled at** field isn't editable and is populated from the value set on the Manage Attribute Groups page.

Apply Item Statuses

You can use an item status to change the default values for status-controlled attributes.

To set the item status of a particular item, select a value of the **Item Status** field on the Edit Item page for the item.

When you change the item status of an item, that status can change the default values of the status-controlled attributes of the item, depending on how the item status has been set up. In turn, the status-controlled attributes can change the value of certain operational attributes, which can affect the actions that you can perform on the item.

Related Topics

- Interdependent Item Attributes
- Item Main Specifications

FAQs for Item Status

How can I change an item's status?

You can change an item's status by selecting the appropriate item status on the Edit Item page. Based on the status setup, either the status attributes are inherited or defaulted.

You can also change the status through a rule. For example, you could create a rule that if the attribute's lifecycle phase is production, the item status can be changed to active.

How can I make changes to item organizational assignments?

Organization assignments allow items created in a master organization to be used in other organizations, enabling you to control the visibility of an item in organizations. For example, certain items may not be assembled, sold or purchased in a specific organization.

You control the visibility of an item by assigning it to a specific organization.

Similarly you can control specific attributes at organization levels. For example, an item can be sold in a specific organization (region) but not permitted to be sold in other regions. You do this by controlling this attribute at the organization level.

Can I make changes to item organization assignment and route it for approval through a change order?

Yes. You can enable an item in a child organization through a change order. By providing an effective date for the assignment, you can ensure that the item is available for transaction in the child organization from the specified date only.

Note that this is only supported in commercialization change orders. If approval routings are enabled for the change order, you can seek approvals on the item organization assignment before enabling the item in a child organization.

21 Change Orders

Overview of Change Orders

Change orders let you process changes to user-defined item attributes, structures, packs, associations, and item revisions.

Product managers can create change orders within predefined change types, author product changes, view product changes, submit changes for review and approval, track change statuses, and implement changes on a scheduled date.

Changes are submitted through a formal review and approval workflow to ensure successful and validated completion of change orders.

> **Note:** The Product Development work area doesn't support approval of change orders at the line level.

Changes to item structures can be implemented in other organizations by propagating change orders to multiple organizations using predefined propagation rules while still having the flexibility to adapt implementation schedules based on individual organizations.

Individual lines in change orders can be moved to existing or new change orders to avoid bottlenecks in processing and implementation.

> **Note:** In the Product Information Management work area, change orders can be accessed through horizontal tabs or side tabs. If the navigation provided in a help topic doesn't match with navigation in the user interface, the administrator might have enabled the Simplified Change Management Interface. If you want to use a different interface, contact the administrator.

Related Topics

- What Change Orders Modify
- Change Order Actions

Create Change Orders

In the Product Information Management work area, you can create change orders using one of the following methods:

- From the Manage Change Orders pages, by entering the details of the change order. The change order is created in a Draft status.
- From the Item page, by quickly submitting the item to a change order in an Open status.

Create the Change Order in the Draft Status

1. In the Tasks panel tab, click **Manage Change Orders**.

2. Click the **Create** icon on the Manage Change Orders page.

   Or

   Select **Create** from the **Actions** menu on the Manage Change Orders page.
3. On the Create Change Order dialog, enter the details of the changes order, and click **Save and Edit**.
4. Enter the additional details of the change order, and click **Save**.

Create the Change Order and Directly Submit it to the Open Status

Here's how you create an item and directly submit it to a change order in the Open status.

1. From the tasks panel tab, click **Create Item**.
2. Enter the basic details of the item and click **Save**.
3. Enter additional item details.
4. Click the arrow next to the **Save** icon and select **Save to Change Order**.
5. In the **Save to Change Order** dialog, select **Create Change Order** and click **Next**.
6. Enter the details of the change order and click **Submit**.

   The change order is submitted to the Open status.

Related Topics

- Why am I unable to create a change order?

Manage Change Orders and Change Requests

You can search for and perform actions on changes using the Manage Change Orders and Manage Change Requests pages.

You can filter changes based on type and use other criteria to narrow your search results to the most relevant results. You can also use the **Add Fields** button to add more fields to the search criteria. The fields you add can be configured to appear as columns in search results.

Note:

- To configure the fields appearing in search results, click **View** > **Show more columns**.
- When you search for the Change Request change type, the search results also include deviation requests.

Here are some actions you can perform from the Manage Change Orders and Manage Change Requests pages:

- Add new change orders or duplicate existing ones.
- Delete change orders by adding them to a delete group. You can delete change orders that are in the **Draft** status. You can delete change orders that are in the **Canceled** status too, but a canceled change order with even one scheduled or completed line can't be deleted.
- Manage the change order workflow by using change order actions: Promote, Demote, Hold, Release Hold, and Cancel.
- Generate change order details report.

Here are some details on the Manage Change Orders and Manage Change Requests pages:

- **Search Filter**

  You can use this filter to search by a change type. The default search filter is set to **All Change Types**.
- **Saved Search**

  The default saved search is titled Application Default. This is executed when you select a change type.
- **Manage Watchlist**

  Use the Watchlist to track important business objects. The watchlist is categorized by the functional areas. Each item on the Watchlist page is made up of descriptive text followed by a count. Click the watchlist item to navigate to the object of interest.

  You can create your own watchlist items based on saved searches. Click the **Manage Watchlist** icon on the Manage Change Orders or Manage Change Request page. In the Manage Watchlist dialog box, select the check box **Include Saved Searches** to add the saved searches to the watchlist.

  You can use the Watchlist page in the Set Preferences work area (**Navigator** > **Tools** > **Set Preferences**) to determine which categories and items to show or hide in the watchlist.

  You can create watchlists for corrective actions and problem reports.

Related Topics
- Using Common Features Guide

Modify Assignee

If your workflow is stuck due to absence of the assignee, you can modify both assignee role and default assignee.

You can modify these fields on the following objects: change orders, change requests, problem reports, and corrective actions if they're stuck.

Before you modify the assignee role or the assignee, here's what you need to know:

- It's recommended that you always populate the **Assignee Role** field on the General Information tab so that the **Assigned To** user can add approvers during the approval workflow.
- The **Assignee Role** field can be edited in the Draft and Open statuses. If the object is in interim or approval status, you must terminate the workflow.
- To modify the **Assignee Role** and **Assigned To** fields, you must have the Manage Assignee privilege. You must also have permission to manage change header attributes as defined in the Additional Workflow Controls table in change type setup.
- If the assignee role isn't defined, the new assignee must have the BPMWorkflowAdmin privilege to terminate the workflow and reassign.
- If the assignee role isn't defined and the new assignee wants to reassign or delegate a task from BPM Worklist, the new assignee must have the BPMWorkflowSCMAdmin privilege to view all the approval tasks in Administrative Tasks.

- You can't edit the **Assignee Role** or **Assigned To** fields for objects that were added prior to the support of Additional Controls in update 20B.
- Only the **Assigned To** user can see the Terminate and Restart actions in the Actions menu. Ensure that a user name is provided in the **Assigned To** field.

Note: If you have modified the assignee's user name during a change order or new item request workflow, an error message appears. To resolve the error, terminate and restart the workflow.

Related Topics

- Configure Default Assignee for Quality Issues and Actions

Use Similar Interface for Engineering and Commercialization Changes

In the Product Information Management work area, you can use the Simplified Change Management Interface to access change orders through side tabs instead of horizontal tabs.

This interface is similar to the change order interface in the Product Development work area. You can access some of the change order features available in Product Development. For more information on change orders in Product Development, see the chapter on Change Management in the Oracle Fusion Cloud SCM Using Product Development guide.

Note: This feature is available to you only if your implementor has opted in for the following feature: Use Simplified Change Management Interface.

Here are some of the features available on all change types in the Simplified Change Management Interface:

- Redline an affected object and view the redline summary.
- Promote or demote the change order through the workflow and initiate notifications for approval.
- Add affected objects belonging to the organization from which the change order is created.
- Add affected objects created in Product Development or Product Information Management. If the item is created in Product Development, you can only add items in the following lifecycle phases: prototype or preproduction, and production.
- Edit reference designators inline on the structure tab of the affected object.
- Modify the effective date in a scheduled change order. The modified date must be within the start and end date of the updated component in the item structure.
- Cancel change lines except when the change order is complete.
- Blue tab icons on change orders indicate the presence of content in them. Note that this is applicable only if you've opted in for the feature User Interface Improvements for Items and Changes.

- Perform a comprehensive audit on commercialization change orders. To use this feature your implementor must also opt in for the feature Track Affected Object Redlines and Other Updates on Changes.

  If you opt in to Use Simplified Change Management Interface after you have opted in to Track Affected Object Redlines and Other Updates on Changes for some time, you must run the Upgrade Product Management Data scheduled process to migrate change history in the Product Information Management work area.

Features Available on Commercialization Change Orders

Here are some of the features available only on commercialization change orders:

- Create a commercialization change order from master and child organizations.
- Redline and implement changes to substitute components. You can also view the redlines for substitute components.
- Edit component attribute groups in the item structure.
- Terminate and restart the workflow.
- Set up relationships with commercialization change orders, engineering change orders, and change orders without revision control.

  The Relationships tab on your commercialization change order displays relationships that are set up from the Product Development and Innovation Management work areas.
- Manage change order propagation.
- View and select a use-up date specified in a supply plan as the effective date for the affected object when you remove or replace a component. You can perform this action from the Affected Objects tab on the change. For more information, see the related links.
- Perform a comprehensive audit on commercialization change orders. To use this feature your implementor must also opt in for the feature Track Affected Object Redlines and Other Updates on Changes.

  > **Note:** If you opt in to **Use Simplified Change Management Interface** after you have opted in to **Track Affected Object Redlines and Other Updates on Changes** for some time, you must run the Upgrade Product Management Data scheduled process to migrate change history in the Product Information Management work area.

Considerations for Using Simplified Change Management Interface

In the Simplified Change Management Interface:

- You can't view revision specific changes in extensible flexfields.

Difference Between Affected Object and Change Line

Simplified Change Management Interface and the Product Development work area use "affected object" to indicate an object affected by the change order, whereas the Product Information Management work area uses "change line".

Related Topics

- Effective Date and Revision for Affected Objects
- Terminate and Restart a Workflow
- Relationships in Change Orders
- View and Edit Change Details

What Change Orders Modify

Create change orders within predefined change types to modify item information and route that information for review and approval.

Change orders modify the following:

- Item specifications: Modify operational and user-defined item attributes.
- Item structures: Add, update, and delete structures.

  > **Note:** Components can be disabled only through change orders

- Packs: Add, update, and delete packs and pack attributes.
- Associations: Add item supplier site organization associations, remove existing associations, and modify existing item supplier attributes.
- Revisions: Create new revisions for an item while modifying item information

Changes to item structures can be propagated to other organizations through rules associated with the change type.

Where Change Orders Are Created

Access the Create Change Order process in one of three ways:

- Select the **Manage Change Orders** link on the Tasks panel tab.
- Click the **Create** icon on the Manage Change Orders page.
- Select **Create** from the **Actions** menu on the Manage Change Orders page.

The change order changes items specific to the organization that you select. However, if propagation rules are associated with the selected change type, then you can push changes made to the item structures into other organizations in which the changed item is enabled.

Change type determines how change order numbers are generated, how changes will be propagated to other organizations, and what steps in the workflow are required to complete the change order.

Change order header details include priority, reason, propagation rule, trading partner reference attributes such as customers, suppliers, manufacturers and source, and user-configured attributes.

> **Note:** The trading partner reference attributes are applicable for only commercialization change orders in the simplified change management interface.

On the Overview tab, specify the following information:

- Tasks required to complete the change order
- Attachments providing additional information
- Propagation information

On the Lines tab, add and access individual items to modify attributes, structures, packs, and associations.

> **Note:** Only item details that can be modified through the change order will appear. For example, because catalog assignments aren't supported through change orders, those tabs won't appear on the item details page. Also links on the Specification tabs for attributes that can't be changed through the change order won't appear.

When you submit the change order for approval, you can track approval or rejections for each line in the change order.

Related Topics

- Manage Tasks in Change Orders and Change Requests
- Change Order Attachments
- Understand Change Types

Manage Tasks in Change Orders and Change Requests

You can create a checklist of tasks related to the change order (or change request) and assign work to individuals.

You can make it compulsory for certain tasks to be completed by specified users before the change order can progress to a status.

Here are some more details on tasks:

- Your ability to manage tasks depends on the permissions for the Add Tasks, Remove Tasks, and Update Tasks actions in Additional Workflow Controls for the change type.
- You can mark the status of a task and assign tasks even after the change order is complete. Use this to manage post-completion tasks such as documentation or qualification of contract manufacturers. Note that only the change assignee can manage tasks in Completed status.
- The task can't be set as required if the **Complete Before Status** is one of the following: blank, first Open status, Scheduled, or Completed.

  > **Note:** Status first Open indicates the first open status in case your administrator has configured additional open statuses.

Here are some examples of tasks:

- Prepare Functional Specification document.
- Review and update cost attributes of affected objects.
- Define regulatory attributes.
- Publish information to Marketing and Sales.

The Tasks table includes the following fields that let you specify task details:

- **Sequence**: Determines the order in which the tasks are performed. By default, this increments by 10.
- **Required**: Indicates that the task is compulsory for the change order to progress. If a task is compulsory, then a **Complete-Before Status** must be specified.
- **Assigned To**: Specifies the person to whom the task is assigned.
- **Assigned By**: Specifies the user who assigned the task.
- **Assigned On**: The date and time when the task was assigned.

Note: If the same task has been assigned by different users, the **Assigned By** and **Assigned On** fields show details of the latest assignment.

- **Start-by Status**: The status at which the tasks should be initiated. Includes current and future statuses, and a blank value. Use the blank value when you want the task to being irrespective of the change status.
- **Complete-Before Status**: The status before which the task should be completed. Includes future statuses and a blank value. Use the blank value to leave this field blank when **Start-by Status** is set to **Completed**.
- **Need-by-Date**: Indicates the date on which the tasks should be completed.
- **Task Status**: Can be updated only by the task assignee or the change analyst.

Copy Existing Tasks to New Change Orders

You can create a new change order based on an existing one, and copy over the tasks. Use the **Save As** action (in the change order). Tasks in the newly created change order are reset to the Open state.

Related Topics

- Why am I unable to update the task status in the change order?
- Understand Change Order Statuses

Change Order Attachments

A change order attachment is unstructured information related to a change order. Examples of change order attachments include CAD drawings, test results, specification sheets, or URLs.

Attachments can be any type of file including:

- Files and folders from your desktop or a configured repository.
- Text files generated during the attachment process.

You can also specify URL links as attachments.

Managing Change Order Attachments

You can add attachments when you create a change order. You can also edit attachment details and remove attachments from an open change order.

Related Topics

- What are valid objects for change order attachments?
- What Change Orders Modify

Propagate Changes for Each Organization

You can use propagation in commercialization change orders to implement item structure changes automatically across multiple organizations, instead of manually creating change orders for each organization. Here's an example:

Let's say that you have different models of a mobile phone manufactured across locations. You want the microphone structure to be similar across all models. Then you can create a propagation rule so that when you create a change order on the microphone in your central R&D lab, similar change orders with redlines are automatically created across all manufacturing locations.

How changes are propagated across organizations is configured by your administrator in the change type setup.

Prerequisites and Considerations

Before you initiate propagation, here are the prerequisites and considerations:

- Make sure that the structure components you want to propagate (from source organization) are also available in target organizations. Otherwise, an error message appears.
- Propagation is applicable only for commercialization change orders, and you can only propagate item structure changes.
- Both source and target organization components must be in definition organization.

  Note: To perform the procedures in this topic, it's recommended to use Simplified Change Management Interface.

How You Propagate Changes

If your administrator has configured the change type to autopropagate, you need not initiate propagation. When your change order reaches the Scheduled status, duplicate change orders in Open status are created.

If your administrator hasn't configured autopropagate, here's how you propagate changes:

1. Navigate to the Affected Objects tab on the change order and complete the item structure changes.
2. Review and approve the change order.
3. When the change order reaches Scheduled status, click Propagation Organizations tab.
4. Select the organization in which you want to initiate propagation and click **Propagate**.

You can also propagate changes from search results. Here's how:

1. On the Manage Search Results, search for commercialization change orders in the scheduled status.

2. Select change orders that are already configured for propagation.
3. Click *Actions* > **Propagate**.

View Propagation Status

When your change order reaches the Scheduled status, a batch job is created to propagate changes across target organizations. Here's how you view the propagation status:

1. Open the change order in your source organization.
2. Click Propagation Organizations tab on the change order and click the **Propagation Details** icon.

   Propagation Details icon: Click this icon to view additional details in a new window. To view any error messages, use the horizontal scroll bar in the new window.

   Propagation Status icon: Click this icon to view the schedule process ID and the log file.

Exclude Components from Propagation

Depending on your business needs, you can exclude items from propagation. Here are such scenarios:

- As part of localization of item structures, your organization decides to use a component which is different from the one in source organization.
- The component no longer exists in your target organization. So you decide to use a different one.

Here's how you exclude components

1. Open the change order in your source organization.
2. Click Propagation Organizations tab on the change order and click the **Propagation Details** icon.
3. In the Propagation Details window, select the item that you want to exclude and click **Exclude**.

Edit Items from Change Orders

You can add items and author item changes when you create or edit a change order.

You can create new or change existing item organization assignments. Click on the item links on the Lines tab to access the Edit Item page where you can manage item details.

> **Note:** The effective date for the item needs to be specified and saved before the **Edit Item** page can be accessed.

On the **Edit Item** page, you can edit the following item details:

- *Specifications:* On the **Specifications** tab, you can modify predefined and user-configured attributes.
- *Structures and Packs:* On the **Structures** tab, you can add new structures, copy structures, and modify structures by adding new components, removing existing components and modifying component attributes. You can also modify packs by adding new packs and modifying pack attributes.

  > **Note:** You can't modify referenced (common) structures through a change order.

- *Associations: Access the Edit Change Order page to modify change order settings and content:*

- You can assign an item to a child organization or master organization through a change order. You can process the item in both child and master organizations concurrently.
- You can't add duplicate components to a structure or a parent component to a child component. This applies to both preliminary structures and affected item structures on both, engineering and commercialization change orders.

  You can add duplicate components to a structure if you opt in to the feature Add Find Number and Suggested Operation Sequence for Structure Components. This feature allows you to differentiate between multiple instances of a component within a structure using find numbers.
- From a master organization, assign an item to a child organization, add the change to a change order, and route it for approval. You can then enable this item in the child organization, on a specified date.
- From a master organization, you can also create a change order, add a revised item, and make the item organization assignment in a change order context.
- By selecting the appropriate batch-level change order options, you can also make item organization assignments through batches and add them to a change order. But, if change order required rules are triggered for such assignments, they're carried through a change order even if batch options aren't specifically set.
- You can also use change services to add item organization assignments to a change order.

When managing change orders:

- You can enable an item in a child organization through a change order and have the item available for transaction on a specified date.
- If approval routings are enabled for a change order, you can seek approvals on the item organization assignment before enabling the item in a child organization.
- If **Skip Request Comment** is checked, request comment notifications aren't sent to the predefined assignees on submission of change order to Open status.
- You can access item detail through the change order details page by clicking on the item links on the **Lines** tab to access the item detail page.

Related Topics

- Change Order Actions
- What Change Orders Modify
- Edit a Change Order

Edit a Change Order

You can monitor the workflow and modify the change order using the Edit Change Order page.

You can access the Edit Change Order page in the following ways:

- When you create a new change order.
- When you select a change order from the search results on the Manage Change Order page and select **Edit** from the **Actions** menu.
- When you access a change order in view mode by clicking the change order link in the search results on the Manage Change Order page, then select **Edit** from the change order detail page.

Tasks You can Perform from the Edit Change Order page

This table lists the tasks you can perform depending on the status of the change order.

If Status is	Tasks you can perform
Draft, Open	Modify header details such as priority and reason and add or remove attachments.
Draft, Open	Modify the current status of change order tasks.
All statuses	Monitor the current status of change order tasks.
Draft, Open	Modify line details and access item pages for further change
All statuses	Monitor the current status of the change order in the workflow.
All statuses	Review the actions that have been performed on the change.

Additionally, you can perform the following:

- You can assign an item to a child organization or master organization through a change order. You can process an item in both child and master organizations concurrently.
- From a master organization, assign an item to a child organization, add the change to a change order, and route it for approval. This item can then be enabled in the child organization on a specified date.
- From a master organization you can also create a change order, add a revised item, and make the item organization assignment in a change order context.
- By selecting the appropriate batch-level change order options, you can also make item organization assignments through batches and add them to a change order. But, if change order required rules are triggered for such assignments, they're carried through a change order even if batch options aren't specifically set.
- You can also use change services to add item organization assignments to a change order.

Process Child and Master Organization Item Approvals Concurrently

You can use a commercialization change order to enrich child organization items while a new item request is in progress for the master organization item. You can initiate the commercialization workflow processes without waiting for the new item request process to complete.

Here are some details on processing child and master organization items concurrently:

- When you add an unapproved child organization item to a change order, the item's **Approval Status** will be based on the completion status of the new item request for the master organization.
    - If the change is completed but the new item request isn't completed, the Approval Status of the child item is set to **Approved** when the new item request is completed.
    - If the change isn't completed before the new item request is completed, the approval status of the child item is set to **Change Order in Progress** until the change order is completed. Once the change is completed, the approval status will change to **Approved**.
- Impact on configured rules:

    - If the new item request for the master organization item is completed before the change order for the child organization item is approved, rules that are based on child organization approval status (Status = Approved) won't be triggered. It's recommended that you use change order entry and exit criteria to validate child item data. You must reconfigure entry and exit criteria to validate data on child organization items that are approved after the master organization items.
    - You can use configured rules to validate child organization item approval status (Status= ‘Change Order in Progress’). Rule-related errors are recorded in the action log of the new item request.
- If you remove an unapproved child organization item from a pending change order, either by deleting or canceling the change order, then the child item must be added to a new change order to route it for approval. Once the child organization item has been added to a change order, it can't be approved through the new item request process.
- If an unapproved child organization item is on multiple change orders, the first child organization change order that becomes complete after the master organization new item request is complete will set the child organization item to Approved.
- You can’t add unapproved items to a change order through import.
- If you haven’t added an unapproved child organization item to a change order, then the new item request for the master organization item will approve both the master and child items.
- You can't add unapproved master organization items to a change order.

Related Topics

- What Change Orders Modify
- Edit Items from Change Orders
- Understand Change Order Statuses

Change Order Workflow

Each change order follows a process based on predefined and user-defined statuses associated with the change type. The sequence of statuses define the change order's workflow.

At each status in the change order's life cycle, specified change order tasks must be completed before a change order is promoted to the next status.

Each change order workflow definition is associated with a change type. The definition determines the sequence of statuses in the workflow.

- Change order status:

  Open, Interim Approval, Approval, Scheduled, and Completed. You can configure the change type to have additional statuses including user-defined statuses.
- Sequence of status:

  The sequence of final statuses must be Approval > Scheduled > Completed.
- You can cancel change lines before the change order is in the Completed status.

Related Topics

- Change Order Actions
- Understand Change Order Statuses

Change Order Actions

You can propagate changes, move lines between change orders, and manage the life cycle of a change order using the change order actions available on the Actions menu on the Manage Change Orders page.

Actions in the Product Information Management Work Area

Here are some of the actions available on a change order:

- **Promote** and **Demote**: Manually promote or demote a change order to the next status in the workflow for that change type.

  The workflow associated with the change type may allow a change order to be automatically promoted or demoted to the next status after the completion of the workflow in a specific status.
- **Hold**: Place a change order on hold. No further action can be taken on the change order.
- **Release Hold**: Release the change order from being on hold, so that further actions can now be taken.
- **Cancel**: Set the change order status to canceled. Any changes defined for items in the change order are discarded.
- **Propagate**: Propagate the selected change order to the selected child organizations.
- **Move Change Lines**: Move the selected change lines to a new change order within the same organization.
- **Reschedule Change Line**: Modify the effective date in a Scheduled change order. The modified date must be within the start and end date of updated or disabled component in the item structure.

  If you reschedule a change line which includes a new item component in item structure with start and end date specified manually, rescheduling affects the start date only; the end date is unaltered.

  If you modify the effective date in a commercializaton change order and you receive a message that the effective date for the affected line must be after the effective date of the successor item, here's what you can do:
  - Cancel the change line and move it to a new change order.
  - Resolve revision conflicts for the old revision.
  - Edit the effective date of the change line in the new change order.
  - Route the new change order for approval and completion.
- **Publish**: publish engineering change orders into an XML report. A process ID is generated for each report. To view the report, click **Tasks** > **View Scheduled Process** and enter the process ID.

  > **Note:** You can retrieve the publication files from Oracle WebCenter Content programmatically, or by using the **File Import and Export** option in the Tools menu of the Navigator.

- **Generate Report**: Produce a detailed report on the selected change order.

Related Topics

- Move Change Lines
- Cancel Change Lines
- Replace a Component
- Understand Change Order Statuses

How to Use the Action Log on a Change Order

The action log is available on a tab of the Edit Change Order page. The action log displays all actions (and associated comments) executed against or posted to the change order. The action log also contains messages generated by the application.

From the action log, you can initiate a discussion by posting and assigning a new comment, you can respond to requested comments, or you can reply to specific comments, thereby creating a threaded discussion within the context of the change order.

Related Topics

- Change Order Actions
- What Change Orders Modify

How Application Validates Change Assignee

When you promote or demote a change order (or change request) to the next status, an additional check validates whether the assignee is an active user. This check is performed for each status up to Approval status.

If the assignee isn't an active user, the promotion doesn't proceed. Demotion will proceed, and an entry is added in the action log.

During manual or automatic promotion to Open status, if the application detects that the person who initially requested the change is an inactive user, the change isn't promoted.

During demotion, if the assignee is found to be an inactive user and Skip Request Comment is disabled, the Request for Comment notification isn't sent. A corresponding entry is created in the action log. In this case, the user must choose an active user as the assignee and then promote the change manually.

Cancel Change Lines

If a change order is stuck due to an unforeseen reason, review the details in the History and Workflow tabs. Depending on the workflow, you can cancel the change order or change lines (or affected objects).

Here are some things you need to know before you cancel change orders and change lines:

Manually Cancel the Change Order

Use the Cancel Change Order action. Then the application cancels all change lines except the ones that are complete; the change order status is set to Canceled.

> **Note:** To cancel a change order in the interim approval or approval status, you need the reschedule change order privilege.

Manually Cancel the Change Line

Use the **Cancel** action.

If you cancel change lines in a Scheduled change order which is stuck because the effectuation post process job is stuck, a message appears that the change line is implemented and the line will be set as Completed, not Canceled. An entry is made in the change history and an FYI notification is sent.

Auto Cancellation of the Change Line

If the application detects an error when implementing or activating the change line, the change line gets canceled automatically. If this happens you notice:

- an entry in the History tab indicating which change line is automatically canceled.
- the change line status appears as Canceled.

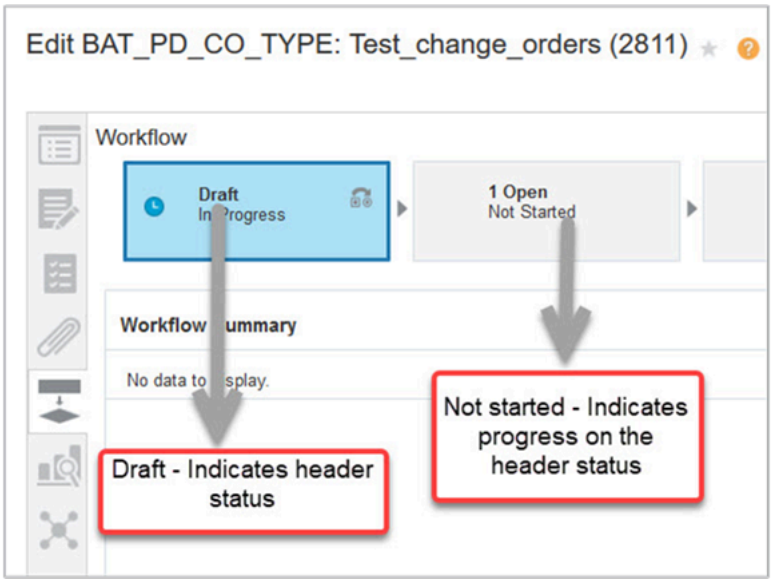
To proceed with the change line, you can move it to another change order.

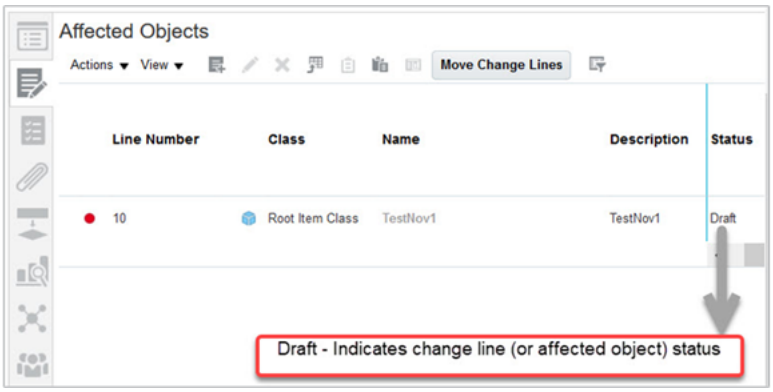
Factors that Determine Whether you Can Cancel Change Lines

The following factors determine whether you can cancel change lines or not.

- the header status in a change order
- the progress on the header status.
- If you aren't the analyst (assignee), you must be assigned with the BPMWorkflowScmAdmin privilege, regardless of the permissions defined in the additional workflow controls table.

  > **Note:** If you modify the assignee, you must assign the BPMWorkflowScmAdmin privilege to the new assignee.





When Can I Cancel Change Lines?

The table shows the criteria to cancel change lines:

Header Status	Progress on the Header Status	Change Line Status	Cancel Change Lines?
Draft	Draft	Draft	Yes
Cancel	Cancel	Cancel	Not applicable
Open	Open	Open	Yes
Open	Open	Hold	Yes
Open	Open	Canceled (one line canceled)	Not applicable
Interim Approval	Interim Approval	Submitted for Approval	Yes

Header Status	Progress on the Header Status	Change Line Status	Cancel Change Lines?
Interim Approval	Interim Approval	Approved	Yes
Interim Approval	Interim Approval	Rejected	Yes
Interim Approval	Interim Approval	Terminated workflow	Yes
Interim Approval	Interim Approval	Terminated Hold	Yes
Interim Approval	Interim Approval	Canceled (one line canceled)	Not applicable
Approval	Approval	Submitted for Approval	Yes
Approval	Approval	Approved	Yes
Approval	Approval	Rejected	Yes
Approval	Approval	Terminated workflow	Yes
Approval	Approval	Terminated Hold	Yes
Approval	Approval	Canceled (one line canceled)	Not applicable
Scheduled	Scheduled	Scheduled	Yes
Scheduled	Scheduled	Failed	Yes
Scheduled	Scheduled	Canceled (one line canceled)	Not applicable
Completed	Completed	Failed	No
Completed	Completed	Canceled	No
Completed	Completed	Completed	No
Interim Approval	Failed	Approved	Yes
Interim Approval	Failed	Submitted for Approval	Yes
Approval	Failed	Submitted for Approval	Yes
Approval	Failed	Approved	Yes

Header Status	Progress on the Header Status	Change Line Status	Cancel Change Lines?
Open	Canceled	Canceled (all lines canceled)	Not applicable
Interim Approval	Canceled	Canceled (all lines canceled)	Not applicable
Approval	Canceled	Canceled (all lines canceled)	Not applicable
Scheduled	Canceled	Canceled (all lines canceled)	Not applicable
Completed	Canceled	Canceled (all lines canceled)	Not applicable

Related Topics

- Why did the Scheduled change order get promoted automatically?

Move Change Lines

Here are a few scenarios in which you can move change lines or affected objects:

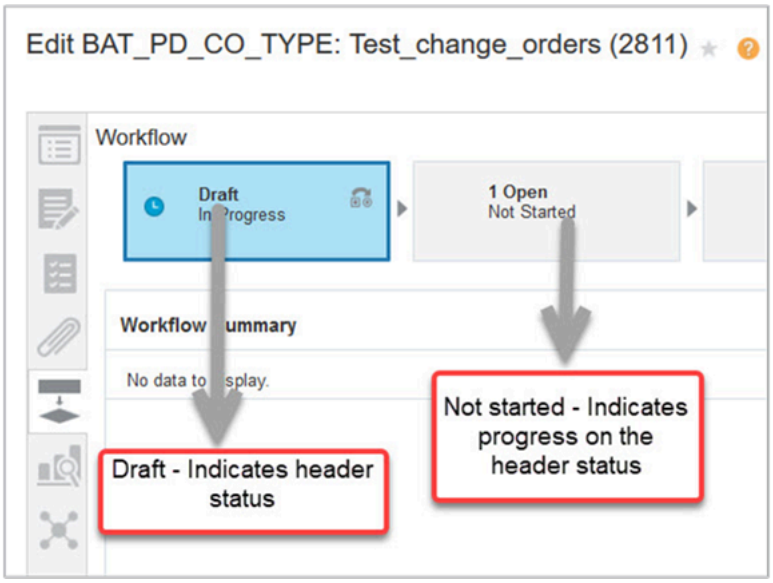
- The change order is stuck. Depending on the header status, you can move the change line to a new change order and proceed with the change.
- The change order is automatically canceled. Depending on the header status, you can still move the lines to a new change order.

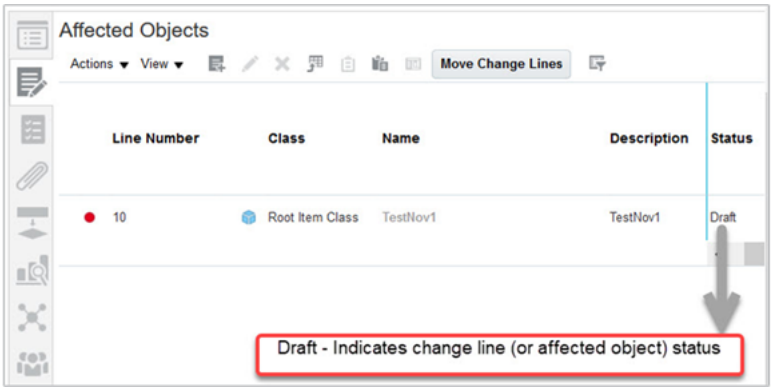
Here are the factors that determine whether you can move change lines:

- The header status in a change order.
- The progress on the header status.
- The configuration for the move change lines action in Additional Workflow Controls for the change type.

  If you're on update 21C or later, note that this action isn't controlled by the Reschedule Item Change Order privilege.

The images show where the header status and the progress status are displayed:





When Can I Move Change Lines?

The table shows the criteria for moving change lines:

Header Status	Progress on the Header Status	Change Line Status	Move Change Lines?
Draft	Draft	Draft	Yes
Cancel	Cancel	Cancel	Yes
Open	Open	Open	Yes
Open	Open	Hold	No
Open	Open	Canceled (one line canceled)	Yes
Interim Approval	Interim Approval	Submitted for Approval	Yes

Header Status	Progress on the Header Status	Change Line Status	Move Change Lines?
Interim Approval	Interim Approval	Approved	No
Interim Approval	Interim Approval	Rejected	No
Interim Approval	Interim Approval	Terminated workflow	Yes
Interim Approval	Interim Approval	Terminated Hold	No
Interim Approval	Interim Approval	Canceled (one line canceled)	Yes
Approval	Approval	Submitted for Approval	No
Approval	Approval	Approved	No
Approval	Approval	Rejected	No
Approval	Approval	Terminated workflow	No
Approval	Approval	Terminated Hold	No
Approval	Approval	Canceled (one line canceled)	Yes
Scheduled	Scheduled	Scheduled	No
Scheduled	Scheduled	Failed	Not applicable
Scheduled	Scheduled	Canceled (one line canceled)	Yes
Completed	Completed	Failed	No
Completed	Completed	Canceled	Yes
Completed	Completed	Completed	No
Interim Approval	Failed	Approved	No
Interim Approval	Failed	Submitted for Approval	No
Approval	Failed	Submitted for Approval	No
Approval	Failed	Approved	No

Header Status	Progress on the Header Status	Change Line Status	Move Change Lines?
Open	Canceled	Canceled (all lines canceled)	Yes
Interim Approval	Canceled	Canceled (all lines canceled)	Yes
Approval	Canceled	Canceled (all lines canceled)	Yes
Scheduled	Canceled	Canceled (all lines canceled)	Yes
Completed	Canceled	Canceled (all lines canceled)	Yes

Move Duplicate Change Lines

Here are some guidelines before you move duplicate change lines:

- If you need to move two or more duplicate change lines from one change order to another, you must select all lines and move them in a single action. You can't move such lines one at a time.
- If a change line is canceled in the target change order, then you can't move the same item again as a change line to the target change order. You must remove the canceled change line or move it to a different change order before you move the same item to the target change order.

Related Topics

- Actions You Can Control

Change Order Approval Process

A change order can be approved only through the successful completion of an approval routing.

When you create a change order, an approval routing is created automatically based on approval rules or manually by any user granted the Item Change Order Management Duty privilege.

An approval routing consists of one or more approval stages. Each approval stage specifies a workflow process and assignee. For example, you can create stages to request approval or request comments. You can also create stages having the Interim Approval status.

Skip Request Comment is available in open status. When checked, request comment notifications aren't sent to the seeded assignees.

If Skip Request Comment is enabled and autopromotion is defined for open status, on submission of the change order from draft, the change order will be pushed to the status set for autopromotion.

After changes are authored for each item, the change order is submitted for approval workflow.

When a change order is submitted, notifications are sent out to assignees. Consolidated notifications are sent to each of the appropriate assignees at each stage of the approval process. Each approver is requested to respond before the

expiration date specified in the approval task in AMX. Reminder notifications can be set up so that an approver who doesn't respond by the required date can receive notifications at a specified interval.

The approval status of a change order reports the progress of the approval. A list of approvers and the action taken by each approver is captured as a part of the history displayed in the notification for approval.

The approver can approve each line in the change order or reject the change.

> **Note:** The Product Development work area doesn't support approval of change orders at the line level.

You can set up a task so that when the change order is approved or rejected, an email notification is sent to the creator, requester, and assignee. If the approval routing workflow is stopped, then a task can be set up so an email notification is sent to all people in the approval routing who were previously notified regarding an assigned workflow process in an approval stage.

You can set up a change type so that a request is approved by a single member of a user group. From the Manage Change Order Types task of the Setup and Maintenance area, edit a change type and select an approval step on the Workflow tab. Then, for an approval activity in the step's status details, set **Response Required From** to One. When one member of a group approves the change, the notifications to other approvers in the group are withdrawn for that approval step, and notifications are sent to the approvers for the next step.

The assignment of approvers for change order lines is governed by rules. For change order headers, you can select an assignment method in the Interim Approval or Approval step's status details for the Header approval stage, either rules-based or user-defined. If you choose user-defined assignment, you then select an approver by using the **Assigned To** control.

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

> **Note:** For change orders in Draft or Open, their lines can be moved to a new change order or to another existing change order, if those lines are hindering the approval workflow.

If **Response Required From** has been set to One, then, when an approver selects the Claim action on a notification, the notification is locked against changes by other approvers, unless the first approver unlocks it by selecting the Unclaim action.

On interim approval and approval notifications for change orders, the Pack Type column of the Items table is hidden by default. To view the pack type associated with the items in a change order, select **Pack Type** from the View menu.

You can navigate to the items in the change order approval notification using the item link. The resulting read-only item page is rendered in a separate window. The first view on an item drill-down from a notification is the item view, to view the changes in the context of the entire item (as supported by the change order). Then you can toggle to an item view that displays changes.

Approvers can only see those aspects of the item for which they have access. They can also perform the following tasks on the change order:

- Request more information
  When you request more information from a user, the user must submit the information using **Actions** > **Submit Information** (available on the change) so that the change can be approved.

  > **Note:** If a message appears during the approval informing you that the action is invalid or the user doesn't have the privilege, review the change history. Identify if more information was requested from a user. The change can be approved once the user submits the information.

- Reassign
- Escalate
- Suspend

Related Topics

- Change Order Workflow
- Manage Tasks in Change Orders and Change Requests
- How can I move change order lines?
- Change Order Notifications
- Understand Change Types

Add or Remove Participants in Current Status

You can add or remove approvers in the interim approval and approval status. You can add or remove participants of type reviewers when the change is in draft, open, approval, and interim approval, scheduled, or completed statuses.

You can add roles as approvers or reviewers while approvals are in progress.

> **Note:**
> - Participants include reviewers, approvers, and optional approvers.
> - This is applicable for change orders, change requests, problem reports, and corrective actions.
> - Adding participants depends on the permissions assigned in the additional workflow controls table.

Here are some additional details:

- The newly added participants receive notifications. You're restricted from adding a role that has more than 40 members to the approval workflow if the **Response Required From** field is set to **All**. This happens when you promote the change. Also, automatic promotion is prevented. You'll see a new entry in the action log and a notification is sent to the analyst.
- Optional approvers can't be added when approval is in progress.
- Only the change analyst can remove approvers or reviewers in the current approval status.

- You can't add the same user as reviewer and approver.
- You can also remove a person or role from the participants list as long as there's at least one person or role remaining as an approver. Only the change analyst can remove participants.
- You can't remove approvers who have already approved or rejected the change.
- You receive an FYI notification if you're removed as an approver or reviewer in the current interim approval or approval status, and if you're removed from the approval group.
    - You can see the comments provided during the removal action in the notification.

> **Note:**
>
> - In BPM Worklist configuration, it's recommended that you make commenting mandatory when rejecting a change order so that rejection comments are captured.
> - Comments are visible in the rejection notification for change orders, change requests, problem reports, and corrective actions.

Related Topics

- Why am I unable to add or remove approvers during the change order approval?
- Actions You Can Control
- View Product Management Notifications

Understand Role Expansion in Change Orders

In the change order's Approvers table, roles are expanded to show all members of the role only in certain cases.

- If the approver is a role and **Response Required From** is set to **All**, the role is expanded to show all its members.
- If the change is promoted to approval and the role has more than 40 members, it won't be expanded. You must delete the role to submit the change for approval.
- If only one response is required on a user-defined approval and roles have been added as approvers, the roles aren't expanded to show their members.

In either case, all members of the role receive notifications on completion of the change workflow, and you can track who signed off. Note that the Assignee field in the notification is also not expanded to show all role members.

Change Order Notifications

Notifications are sent to assignees throughout the lifecycle of the change order.

For a detailed list of new item request notifications, notification types, and recipients, refer to *View Product Management Notifications* available on the Oracle Help Center.

Here's when the notifications are sent:

- When a change order is submitted, notifications are sent out to assignees, approvers, and the requester.

- When you start a step, notifications are sent to each of the assignees of the step.
- When the change order is approved or rejected, a notification is sent to the creator, and approver.

Notifications are of the following types:

- Task notifications are sent out to the assignees of each task.
- FYI notifications are sent to the creator, assignee, requester, and approver of change order lines and headers when it moves to Scheduled or Completed Status.

Important Considerations about Notifications:

- FYI notification is sent if you're removed as an approver or reviewer for the change that is in the current interim approval or approval workflow status.
- FYI notifications are sent to all the removed participants of the approval groups.
- FYI notification shows who has rejected the change order approval request and the rejection comments for the same.
- Comments are visible in the rejection notification for change orders, change requests, problem reports, and corrective actions.

  You can see the comments provided when you are removed as a workflow participant.

Note:

- If the approval notifications are delayed ensure that approvers have the following role: EGO_GENERATE_ITEM_CHANGE_ORDER_REPORT_PRIV_OBI
- The assignee in the notification refers to the users who are part of the approval groups. If your role is designated as the workflow status participant, the Assignee field of the FYI notifications displays your role, instead of your user name.
- Sometimes, unanticipated issues prevent the workflow from getting completed as expected, and terminating a workflow maybe inevitable. You can stop an approval routing workflow, even if it isn't completed using Terminate Workflow. Related notifications, if any, are removed from the assignees' work lists.
- In BPM worklist configuration, it’s recommended that you make commenting mandatory when rejecting a change order so that the rejection comments are captured.

Note:

- Workflow participants (approvers, optional approvers, and reviewers) don't receive FYI notifications for change workflow events that aren't relevant to them.

  Only participants added to the current and previous workflow statuses receive notifications when:

  - The change is rejected or completed.
  - Autopromotion fails.

- Participants added to future workflow statuses or skipped workflow statuses don't receive FYI notifications for these events.
- If the change moves through a status and is demoted, participants of the status through which the change moved will receive a relevant FYI notification.

Note:

- The number of affected objects displayed in an email notification depends on a threshold.

  If the number of objects exceeds this threshold, a link to the change order page is provided so that you can navigate to the object and view the full list.

  For change order approval task notifications, the threshold is 25.

  For FYI notifications, the threshold is 100.
- A predefined request comment notification is associated with the **Open** status. The change order can't move to the next status until this notification has a response. The notification is then sent automatically to the assignee and the requester.

  This automatic notification can be bypassed by removing the assignees. If the notification is bypassed and the BPEL process is set to automatically promote, then the change order automatically moves to the next status. Otherwise, you need to manually move the change order to the next status.
- Change order notifications aren't sent for the following actions:
  - Skip Current Assignment
  - Suspend
  - Create Subtask
  - Request Information
  - Route Task
  - Add Comments

Related Topics

- What Change Orders Modify
- Understand Change Order Statuses
- View Change Order Notifications

Approve Selected Change Lines

When you receive a notification for a commercialization change order, you can choose to approve selected change lines only.

Click the **Approve or Reject Lines** option from the **Actions** menu on the notification to open it in a new browser window. Here you can select the Include in Approval check box to approve all change lines in the change order, or select individual change lines to approve.

Change lines that aren't selected in the **Include in Approval** column are rejected. Select individual change lines only if you're approving them. If you click Reject, the change order and all its change lines are rejected.

Note: This feature isn't supported in email notifications.

Related Topics

- Watch video: Approve Individual Line Items

Considerations for Managing Flexfields in Items and Change Orders

Item extensible flexfields and item revision extensible flexfields are handled differently in Product Information Management and Product Development work areas.

Here's what you should keep in mind if you're managing flexfields in both work areas.

Flexfield Type	Product Information Management	Product Development
Item Extensible Flexfield	Available in items and change orders. On selecting a revision, only the current effective values appear.	Available in items and change orders. On selecting a revision, revision-specific values appear.
Item Revision Extensible Flexfield	Appears on the item page where it's configured. Appears in the change line in the classic Product Information Management work area, but not in the Simplified Change Management Interface.	Not supported. Doesn't appear in the item view or change order affected objects view.

Best Practices

Here are some best practices for managing flexfields:

- In Product Development, you can use item extensible flexfields to track different attribute values by revision when specific data isn't explicitly tracked through change control.
- In Product Information Management, you can choose not to include item attributes in change control, but still use item revision extended flexfields to track the difference in values between revisions.

Considerations for Managing Attachments in Items and Change Orders

Attachments are handled differently in Product Information Management and Product Development work areas.

Here's what you should keep in mind if you're creating and managing attachments in both Product Information Management and Product Development.

Product Information Management	Product Development
Supports item-level and item revision-level attachments.	Supports only item revision-level attachments.
Item and item revision-level attachments can be edited through the item, but not through a commercial change order.	After an item is released, item revision attachments can only be edited by redlining through a change order.
Item revision attachments don't flow to the next revision.	Item revision attachments flow automatically to the next revision, unless deleted.
Item images are stored and shared as item-level attachments.	Item images are stored and shared as item-level attachments.

Note: When you add an attachment to an item in Product Development, it will be visible on the item in Product Information Management only if the item is in a higher lifecycle status than Design. Note that the attachment appears in Product Information Management as an item revision-level attachment, not as an item-level attachment.

Best Practices

Here are some best practices for managing attachments:

- Use item-level attachments to associate unstructured content and additional details with an item. These attachments aren't revision-specific; they apply to all revisions of an item.

- Given that these item-level attachments aren't change controlled, always use the actions available on the Attachments panel from the Product Information Management work area to manage changes to these attachments.
- Always add attachments to a change order using the **+Add** button on its Attachments tab to ensure proper association and auditing. Avoid adding attachments directly from notifications.

FAQs for Change Orders

How can I create a new change order based on an existing change order?

You can use the **Save As** action to create a new change order. In the Create Change Order dialog box, you must select the change type for the new change order.

Here's what you need to know before you before using the **Save As** action:

- Depending on the work area, you can choose to copy over the existing descriptive and extensible flexfields, contextual attributes, attachments, tasks, and affected objects.
- In the Product Information Management work area, you can save the change order to any type of commercialization change order.
- In the Product Development work area, you can save the change order to an engineering change order or change order without revision control.
- To copy over the descriptive and extensible flexfields select the **Additional Information** option in the **Save As** dialog box.

Why am I unable to create a change order?

Review the descriptive flexfield settings for the Item Change Management module. Be sure that the value of context segment is set to ORA_EGO_CHANGE_TYPES_VS.

Here's how you review and edit the flexfield:

1. Execute the Manage Descriptive flexfield task in the Setup and Maintenance work area.
2. Search for the flexfield code EGO_ENGINEERING_CHANGES and edit the flexfield.
3. In Context Segments review the **Value Set** field. Be sure that the value is set to ORA_EGO_CHANGE_TYPES_VS.
4. Click **Save**.

   You must deploy flexfields after you save the task.

Related Topics

- Deploy Item Flexfields

What's the difference between an affected object and a change line?

Both the terms indicate an object affected by the change order.

Affected object is used in the Product Development work area and Simplified Change Management Interface.

Change line is used in the Product Information Management work area.

How can I view the list of change orders that are on hold or canceled?

You can use OTBI to generate a report listing change orders that are on hold or canceled.

Why am I unable to view extensible flexfields on change orders in the Product Information Management work area?

You must opt in to the following features to view extensible flexfields on change orders:

- Use Extensible Flexfields on Changes, Problem Reports and Corrective Actions and
- Use Simplified Change Management Interface

What are valid objects for change order attachments?

Change order attachments can be any type of local file, repository file or folder, URL link, or text.

These objects can be attached to both the header, and to individual lines, of a change order. The attached content is not searchable.

Related Topics

- Change Order Attachments
- What Change Orders Modify

How many objects can I add to a change order or new item request?

The default limit is 50 and the maximum is 100. Your administrator can change the default limit for:

- The number of change lines or affected objects in change orders, and
- The number of items in new item requests.

Here are some additional details:

- When you exceed the limit while adding items through the user interface, an error message appears.
- When you import a large number of items in a batch, you can choose to automatically split items and create new change orders or new item requests.

Related Topics

- Item Batch Change Order Options
- Item Batch New Item Request Options
- Configure the Limit for Objects in Change Orders and New Item Requests

Can I set a default priority for my change order or new item request?

Yes. You must set the default priority for a change type or a new item request type. The priority is inherited when you create a new change order (based on the type) or new item request.

Use the following tasks from the Product Management Offering in the Setup and Maintenance work area:

- Manage Change Order Types
- Manage New Item Request Type Details

To set the default priority, use the **Priority** field.

How can I find details about changes to an item in a change order?

You can navigate to the items in the change order approval notification using the link provided on the number of the item.

The resulting read-only item details page is rendered in a separate window. From the item details, a link on View Change Order Line enables you to view the scheduled changes to the item in redlined mode.

Click the change order link in on the Manage Change Orders page. On the Lines tab, click the **Item Changes** for an item to access the Item Changes page.

The first view on an item drill-down from a notification is the item view in the context of the change order. Then you can toggle to an item changes-only view in redlined mode.

> **Note:** The Item Changes page displays only changes made to the item through this change order. Approvers will only see those aspects of the item for which they have access.

Related Topics

- How can I find details about changes to an item component in a change order?
- Edit Items from Change Orders

How can I find details about changes to an item component in a change order?

Click the change order link in on the Manage Change Orders page.

On the Lines tab, click the Item Changes icon for an item to access the Item Changes page then click the **Component Changes** icon in the Structure Changes table to access change information for specific item components.

Related Topics

- Edit Items from Change Orders

How can I move change order lines?

On the Manage Change Orders page, expand the search results and select lines from one or more change orders within the same organization then select Move Change Lines.

In the Move Change Lines dialog box, you can select an existing change order to which to move the selected change lines, or you can move the change lines to a new change order by selecting Create Change Order. If you create a new change order for the change lines being moved, then you must enter header information for that change order.

Note that you can only move change lines in a commercialization change order.

Related Topics

- What Change Orders Modify

What's the difference between Withdraw and Remove?

Use Withdraw, to delete a component that was added before the item was assigned to the change order.

Use **Remove**, to delete a component that was added after the item was assigned to the change order.

How can I secure the change order created in the Product Information Management work area?

Access the change order from the Product Development work area. Use the Security side tab to restrict access.

You can choose users who are responsible in their review and approval of the change order. You can also choose roles by which you restrict the availability of the change order. Additionally, you must provide data security privileges for the change order.

Why am I unable to assign the item to a change order?

You can't assign an item to a change order in Product Development, if the item is created in Product Information Management.

Also, you can't assign an item to a commercialization change order in Product Information Management if the item:

- Is created in Product Development, and
- Is in the design lifecycle phase.

Why does the change order display information in side tabs instead of horizontal tabs?

Your administrator has enabled the Simplified Change Management Interface for the Product Hub work area.

Related Topics

- Use Similar Interface for Engineering and Commercialization Changes

Why am I unable to edit the change order?

If the change order is created in Product Information Management, you can't edit that in Product Development. Conversely, the change order created in Product Development can't be edited in Product Information Management.

Can I modify the find number when the item is on a change order?

You can modify the find number when the change is in draft or open status. Here's how:

Delete a component and add it again with a different find number.

Or

Use the **Replace** action to replace a component with the same component and provide a different find number.

Can I cancel a change line in an approved change order?

Yes. When you cancel the change line, any changes defined for items in the change order are discarded.

For example, you noticed a defective item in the approved change order and the item is in scheduled state. To resolve the defect, you cancel the change line and again process the item through another change order.

What's the difference between cancel and terminate actions in a change order?

Use cancel to stop further processing of the change order. You can still move the change lines to a new change order and retain redlines.

Use terminate to temporarily pause the workflow and resume it in the same change order.

Related Topics

- Cancel Change Lines
- Terminate and Restart a Workflow

Why did the change order approval prompt for a comment and password?

Your administrator configured the comment and password fields as compulsory for the purpose of audit. Enter your sign-in password.

Why did the change order fail on approval?

Open the History tab of the change order to review the sequence of actions on that change order. Depending on the action performed, the application displays a comment.

For example, if you try to promote two change orders simultaneously and the effective dates are less than 30 minutes apart, then a comment appears advising you to maintain a time difference of more than 30 minutes. You can also see the Workflow tab to review the change order status.

Related Topics

- Cancel Change Lines

How can I restart the change order workflow which is on hold when the approval is in progress?

From the **Actions** menu, click **Restart Workflow**.

Note: You can't restart the workflow using **Continue**.

Why am I unable to add or remove approvers during the change order approval?

You must be assigned with the add participants and remove participants actions in the additional workflow controls for the change type.

Additionally, the value of **Response Required From** (in the change type) must be set to **All**.

How can I remove a participant from the change workflow?

In the Change Status dialog box, select the participant and click **Delete**. You can also perform this action from the Participants section on the change Workflow tab.

Note:

- Your ability to remove a participant depends on the permissions assigned in additional workflow controls for the change type.

Can I edit multirow extensible flexfield attributes from the item page or without using a change order?

Yes. But your administrator must remove any restrictions set for editing the attribute only through the change order page.

Related Topics

- Configure Attributes in Item and Change Order Context

Why did the Scheduled change order get promoted automatically?

Since the Autocomplete on Cancel option is enabled by default from update 23A, all scheduled change orders move to the Complete status on cancellation of the last change line. This is applicable to new and in-progress change orders.

Let's say that the first three change lines are complete, and the last change line is stuck in the Scheduled state. You cancel the scheduled change line, and the change order moves to the Completed status.

Related Topics

- Create Problem Reports and Corrective Actions
- Understand Change Types

Why did the change order workflow restart automatically?

If the schedule processor job is stuck in the initial run and it doesn't require any user intervention, the application restarts the job. It restarts up to 5 times with increasing time gaps in between each job.

You don't need to manually search for unsuccessful change orders that weren't processed due to locked affected objects.

> **Note:** An item can be simultaneously updated from different sources. A record can be updated through the user interface, while another update could be triggered through a web service or scheduled process. This results in locking issues, and the jobs can't be complete successfully. In such scenarios, the application restarts the subsequent job after some wait time and attempts to complete the job.

Why am I unable to update the task status in the change order?

You can only update the status for the tasks that are assigned to you. But your change analyst can update the status for all tasks.

In a change type, can I configure additional controls for the Draft status?

No. But you can configure additional controls for Open, Approval, Interim Approval, Scheduled, and Completed status.

Related Topics

- Control Actions by Participants

How can I set the reason code field on a change as a required field?

You can opt in to the Simplified Change Management Interface feature and then use Page Composer to edit the Reason Code field component and set it as required.

Related Topics

- Watch Video: Use Page Composer to Modify Interface Pages

Where are the change header attributes and change descriptive flexfield attributes displayed?

In the Product Development work area and Simplified Change Management Interface, the change header and descriptive flexfield attributes are available on the General Information tab of the change order.

Examples of change header attributes: Number, Name, Description, and Reason Code.

Why am I unable to edit the extensible flexfields on the change order?

Your ability to edit flexfields depends on the following:

- You must have the Manage Change Order privilege.
- Permission for the Manage Change Header Attributes action (in the additional workflow controls table) must be set to All or Additional Information. For example, if you are the creator of the change, the **Creator** column for this action must be set to All or Additional Information.
- You must be assigned both view and edit privileges on the Edit Context page.
- In the Security tab of the change type, your role or user ID must be assigned the same view and edit privileges (that was assigned on the Edit Context page). For more information, see the related topics.

Related Topics

- Secure Extensible Flexfields on Change Types

How do I know whether my approval is required or optional for a change order?

In the approval notification, the **Activity Type** field indicates whether you're an approver or an optional approver.

How can I know whether the entire change order (or new item request) was rejected or if a few items were rejected?

The approval notification provides details of whether the entire change order (or new item request) was rejected, or if a few items in the change order (or new item request) were rejected.

How can I find out the change order used for propagating changes and the change order created by propagation?

Open the History tab of a change order to see the sequence of actions recorded for the change order. You can see which change order was used as a source for propagation and which change order was created by propagation.

Why should I claim the change order approval?

The **Claim** action enables you to review and approve the change order before another user in the role attempts the approval.

This is because your administrator assigned the change order approval to a role and set the value of **Response Required From** as **One**. So one response from a user in the role is sufficient for approval. Note that an approval notification is sent to all users in the role.

22 Data Imports

Overview of Manage Imports

You can import items and item-related information using interface tables through FBDI.

Use the file-based data import feature to import large volumes of data from third-party or other Oracle applications, or create new data in Oracle Fusion Cloud SCM. For example, product data stewards can import new items into Oracle Product Hub using the ItemImportTemplate.xlsm template. You can also import trading partner items, item associations, customer items, and customer item cross references.

The following objects are available to import:

- Items
    - Operational attributes
    - Extensible flexfield attributes
    - Attachments
- Item Associations
    - Organization assignments
    - Supplier Site Organization Associations
- Trading Partner Items
    - Customer Item
    - Manufacturer Part Numbers
    - Competitor Items
- Item Relationships
    - Trading Partner Item Relationships
    - Related Items
    - Cross References
    - GTIN

Related Topics

- Item Batches
- Item Batch Structure Options
- Item Batch Import and Scheduling Options

Import Style and SKU Items with Import Maps

For importing Style and SKU items, users are expected to provide the correct values in the import map data file for the style item and the variant attributes.

To import style items containing a single value set for the variant attributes, users map to the style Item field in the main node and set the value to Yes in the data file column mapping to this field.

To import SKU items, map to the variant attributes displayed for SKU items and provide the style item number by mapping to the Style Item Number attribute in the main node.

23 Batch Imports

Create Item Import Batches

Overview of Item Batches

A product data steward can import items and related entities such as structures, packs, category assignments and trading partner item references from multiple product source systems using an item batch.

The following options are available for item batches:

- Import options let you schedule the batch loads and specify policies for governance, new item requests, and product changes.
- Data quality options for item batches let you categorize items, standardize attribute data, and match item data to ensure clean, consistent data during batch import.

You can add and modify item data to batches using a spreadsheet, XML, CSV or any other delimited files or using industry standard open interface tables.

Related Topics

- Item Batches
- Item Batch Options
- Overview of Manage Imports

Item Batches

Create item batches to import sets of item data including product structure and pack hierarchies from multiple product source systems.

Item Batch Definition

When you create a new item batch definition, you specify a target organization then specify the product source system and data quality options. Based on the specified spoke system, the options that were defined during source system management are populated. You can override these options for the specific item batch. You can also modify the import batch option settings.

Data quality options determine matching and standardization rules for an item batch to cleanse product data during batch import.

Item batch options let you schedule batch loads, specify product structures and packaging hierarchies, and policies for new item requests and change orders.

Adding Items to an Item Batch

After the item batch definition has been saved, you can add items to the item batch using CSV or another delimited file format, XML, or by File-Based Data Import (FBDI).

You can import item data as follows:

- *Import Maps*: Create an item batch on the Manage Item Batch page, and select **Actions** > **Add Items to Batch** > **Upload from File**. In the **Upload from File** dialog box, specify the import map, the source data file (which is CSV or XML), and, if uploading attachments, the attachments .zip file, and select **Upload File**.
- *FBDI*: To import items, prepare the **Item Import** FBDI template.

The following objects are available for import:

- Items
- Structures and Packs
- Trading Partner Item Relationships
- Category Assignments
- GTIN Relationships
- Item cross-references
- Related Items
- Trading Partner Items

Related Topics

- Product Spoke Systems
- Import Data Using FBDI
- Oracle Fusion Cloud SCM: File-Based Data Import (FBDI) for SCM

Item Batch Options

Use item batch options to set the schedule of the import, define the default structure and pack options and manage the creation of new item requests and change orders for items being imported.

Item batch options are defined and associated with product source system definitions. When you specify a source system in an item batch definition, the import options associated with the source system are included as default settings in the new item batch definition.

You can modify these settings when you create a new item batch or edit an existing definition.

Depending on the type of item being imported, you can specify item batch options in one or more of the following areas.

- Import and scheduling
- Structures and packs
- Change orders
- New item request

- Data Quality

For external batches, data quality options are determined by whether the product source system is an internal or not an internal source system. For internal batches, data quality options are determined by the product source system.

Related Topics

- Item Batch Change Order Options
- Item Batch New Item Request Options
- Item Batch Import and Scheduling Options
- Item Batch Structure Options
- Product Spoke Systems

Available Options to Check Data Quality for Item Batches

You can specify data quality options when defining a source system or through an import batch definition by selecting **Check data quality on upload**.

Items being created in the Oracle Product Hub go through the data quality check automatically, while items that are updated using batches must have the data quality check initiated manually. The cleansing process classifies the item, standardizes the attributes and identifies any matches or duplicates that may exist in the product hub.

Check Data Quality Options

The options that are available when you select the **Check data quality on upload** option are determined by the data source.

- If the items are being created or updated from a third-party source system, then the following options are available:
    - **Enable data quality matching**
    - **Confirm single matches**
    - **Confirm unmatched as new item**
- If the items are being created or updated in Oracle Product Hub, then the following options are available:
    - **Enable data quality matching**
    - **Confirm unmatched as new item**

> **Note:** In the Product Information Management work area, Oracle Product Hub is represented as a spoke system with the name **Product Information Management Data Hub**.

Enable Data Quality Matching

You can improve item data import performance and reduce the time needed for initial data load and data migration by modifying the behavior of data quality matching.

The **Enable data quality matching** option enables you to control whether the process associated with identifying potential duplicates in the import is run or not. By deselecting this option, you can improve the import performance in cases where the data is already known to be good. This can be selectively done for each batch.

- Use this option to control whether data quality matching has to run to identify potential duplicates in an import. Depending on the known state of your data, it might not be necessary to identify potential duplicates.
- Deselect this option to ignore the process associated with matching for your imports.
- Deselect this option to improve import performance when you don't want data quality checks to be performed.
- This option is especially useful for an initial data load when the data is already de-duplicated outside Product Hub.

Confirm Single Matches

The behavior of the **Confirm single matches** data quality option is determined by the data source.

- If items are being created from a third-party source system and are imported manually, the following behavior results:
  - Single matches appear in the In Progress tab and the edit match actions value is Confirm.
  - Multiple or no matches appear in the In Progress tab and the edit match actions value is Unconfirm.
  - If **Confirm Single Matches** isn't selected, then all items will appear in the In Progress tab and the edit match actions value is Unconfirm.
- If items are being created from a third-party source system and are imported during data load, the following behavior results:
  - Single matches appear on the Imported tab.
  - Multiple or no matches appear in the In Progress tab and the edit match actions value is Unconfirm.
  - If **Confirm Single Matches** isn't selected, then all items will appear in the In Progress tab and the edit match actions value is Unconfirm.
- If items are being updated from a third-party source system and are imported manually, the following behavior results:
  - If a cross-reference exists, then no data quality check is performed, and the items appear in the In Progress tab and the edit match actions value is Confirm.
  - If **Confirm Single Matches** isn't selected, a cross-reference exists, and no data quality check is performed, then the items appear in the In Progress tab and the edit match actions value is Confirm.
- If items are being updated from a third-party source system and imported during data load, the following behavior results:
  - If a cross-reference exists, then no data quality check is performed, and the items appear on the Completed tab.
  - If **Confirm Single Matches** isn't selected, a cross-reference exists, and no data quality check is performed, then the items appear on the Completed tab.

Confirm Unmatched As New Item

The behavior of the **Confirm unmatched as new item** data quality option is determined by the data source.

- If items are being created from a third-party source system and imported manually, the following behavior results:

    - Items with no matches appear in the In Progress tab and the edit match actions value is Confirm.
    - Items with single or multiple matches appear in the In Progress tab and the edit match actions value is Unconfirm.
    - If **Confirm unmatched as new item** isn't selected then all items will appear in the In Progress tab and the edit match actions value is Unconfirm.
- If items are being created from a third-party source system and imported during data load, the following behavior results:
    - Items with no matches appear on the Completed tab
    - Items with single or multiple matches appear in the In Progress tab and the edit match actions value is Unconfirm.
    - If **Confirm unmatched as new item** isn't selected then all items will appear in the In Progress tab and the edit match actions value is Unconfirm.
- If items are being updated from a third-party source system and imported manually, the following behavior results:
    - If a cross-reference exists, then no data quality check is performed and the items appear in the In Progress tab and the edit match actions value is Confirm.
    - If **Confirm unmatched as new item** isn't selected then and a cross-reference exists, no data quality check is performed and the items appear in the In Progress tab and the edit match actions value is Confirm.
- If items are being updated from a third- party source system and imported during data load, the following behavior results:
    - If a cross-reference exists, then no data quality check is performed and the items appear on the Import tab.
    - If **Confirm unmatched as new item** isn't selected then, if a cross-reference exists, no data quality check is performed and the items appear on the Import tab.
- If items are being created or updated from the Product Data Hub and imported during data load, the following behavior results:
    - Items with no matches appear on the Import tab.
    - Items with single or multiple matches appear in the In Progress tab and the edit match actions value is Unconfirm.
    - If **Confirm unmatched as new item** isn't selected then all items will appear in the In Progress tab and the edit match actions value is Unconfirm.
- If items are being created or updated from the Product Data Hub and imported manually, the following behavior results:
    - Items with no matches, single matches, or multiple matches appear in the In Progress tab and the edit match actions value is Unconfirm.

Related Topics

- Item Batches
- Imported Items in Item Batches
- Confirmed Items in Item Batches
- Unconfirmed Items in Item Batches
- Data Quality

Item Batch Import and Scheduling Options

Item batch import and scheduling options let you set the schedule of the import and specify item cross-references imports.

Cross-References Only

If you select **Cross-References Only** in the Create Item Batch dialog, then no source system data is imported. A cross-reference of the source system item is created with a matched, new, or cross-referenced item in the Oracle Product Hub.

> **Note:** You can only select the **Cross-References Only** option when creating an item batch. If the source system specified in the item batch definition is *Product Information Management Data Hub*, then the **Cross-References Only** option isn't available for selection.

If you select **Cross-References Only**, then item batch options for new item requests and change orders aren't available. However, options can be set for structures and packs.

Schedule

Determine when the data specified in the item batch will be imported.

- **On Data Load**: Import process is run immediately at the time of data upload.
- **Manual** (default): Lets you import the data at a later time.
- **Specify Date and Time**: Lets you specify the date and time to import the confirmed items or structures in the item batch

Process Items

The Process Items option determines if the Items are to be imported individually or as a bundle. If the bundle option is chosen, then all items in the bundle will be not be imported even if one of the items fails import validations. This option is typically used when importing data from a GDSN data pool.

Related Topics

- Item Batch Options
- Available Options to Check Data Quality for Item Batches
- Item Batch Structure Options
- Item Revisions

Item Batch New Item Request Options

Use the item batch new item request options to create new item requests or add to existing new item requests when importing items or structures.

Here are the options that appear for new item requests in the Edit Item Batch Options dialog box:

- **One per Item:** create a single new item request for each item.
- **One per Item Class:** create a single new item request for all the items in the item class. You can choose to split the items across multiple new item requests if you have many items in the same item class. For more information, see the section Limit the Number of Items in a New Item Request.
- **One per Item Batch**: create a single new item request for each item batch.

  You can create a new 'new item request' or add to an existing one. You can choose to split the items across multiple new item requests if you have many items in the same item class. For more information, see the section Limit the Number of Items in a New Item Request.
- **One per Item Bundle**: create a single new item request for each item bundle.

  Affected items will be added to the bundle specified in the import map. You must specify a mapping ID for the bundle in the import map. The resulting new item request will include only those items that are identified with the same bundle, which normally indicates a pack. Consequently, all items belonging to a pack will be included in a single new item request.
- **Add all items**: select this to override any approval rules defined for creating items and add items to the item batch.

  For all new item request options, those items associated with rules that require approval for changes will be added to the new item request. If desired, you can specify to add all imported items to the new item request.
- **Create new**: create new item requests to include items from the import.
- **Add to existing**: add items to an existing new item request. You must enter the new item request number in the **Number** field.

If an item being imported as part of a new item request is later rejected, you can resubmit the item as part of an item batch, instead of having to create another new item request and move rejected item lines there one by one. After you resubmit the item in an import batch, its **Approval Status** field includes a link to the new item request that's created by that import.

> **Note:** If you select the **Cross-References Only** option when creating an item batch, then new item request options are unavailable.

Limit the Number of Items in a New Item Request

If you're importing a large number of items to a single new item request, you can split the items across multiple new item requests. This feature is applicable when you select:

- **One per Item Batch** and **Create New** or
- **One per Item Class** and **Create New**.

You must then select **Split automatically**.

For example, if you set the limit to 50, and there are 70 items in total, the application automatically creates a new request and moves 20 items onto it.

If you don't split the new item request and if you exceed the maximum limit, then an error message appears.

Related Topics

- Item Batch Options
- Item Batches
- New Item Request Workflow
- Configure the Limit for Objects in Change Orders and New Item Requests

Item Batch Change Order Options

Use the item batch change order options to create change orders or add to existing change orders when importing items or structures.

Here are the options that appear for change orders in the Edit Item Batch Options dialog box:

- **One per Item:** create a single change order for each item.

  If a Needs Approval rule is configured for the item, the change type will be based on the rule. Otherwise, the change type is as based on the item class configuration.
- **One per Item Class:** create a single change order for all the items in the item class. You can choose to split the items across multiple change orders if you have many items in the same item class. For more information, see the section Limit the Number of Change Lines in a Change Order.
- **One per Item Batch**: create a single change order for each item batch.

  You can create a new change order or add to an existing one. You can choose to split the items across multiple change orders if you have many items in the same item class. For more information, see the section Limit the Number of Change Lines in a Change Order.
- **One per Item Bundle**: create a single change order for each item bundle.

  Affected items will be added to the bundle specified in the import map. You must specify a mapping ID for the bundle in the import map. The resulting change order will include only those items that are identified with the same bundle, which normally indicates a pack. Consequently, all items belonging to a pack will be included in a single change order.
- **Add all items**: select this to override any approval rules defined for creating items and add items to the item batch.

  For example, you already have a rule for items in class Radios to go through change orders of type Region. If you select this option, the application won't execute the rule.
- **Create new**: create new change orders to include items from the import.
- **Add to existing**: add items to an existing change order. You must enter the change order number in the **Number** field.

Note:

- If you select the **Cross-References Only** option when creating an item batch, then change order options are unavailable.
- If a **Needs Approval** rule is configured, see *How You Route Item Changes Through Change Types Using Rules* to understand how these options are interpreted.

Limit the Number of Change Lines (or Affected Objects) in a Change Order

If you're importing a large number of items to a single change order, you can split the items across multiple change orders. This feature is applicable when you select:

- **One per Item Batch** and **Create New** or
- **One per Item Class** and **Create New**.

You must then select **Split automatically**.

For example, if you set the limit to 50, and there are 70 items in total, the application automatically creates a new change order and moves 20 items onto it.

The change orders created by this split are automatically related to each other and can be accessed from the Relationships tab on the change order (in the Product Development work area). Here, **Relationship Type** is shown as **Split by Import**.

If you select One per item class, the change orders created for each item class are related only to each other, and not to change orders of a different item class.

If you don't split the change order and if you exceed the maximum limit, then an error message appears.

Set the Change Order Line Effective Date

The **Effective Date** option lets you set the effective date for the change order:

- **Type default** - Uses the effective date from the Change Order Type setting.
- **Effective immediately** - Change order lines using this setting are effective immediately.
- **User-entered** - Use this option for special cases in the item batch that uses the import map. For details, see *Importing Item Data Using Import Maps*.

  Note: Don't use this option in **Batch Options** for **Manage Item Mass Changes** > **Edit Item Attributes in Spreadsheet** process.

Merge Redlines Through Import

You can incorporate redlines coming in through import into existing change orders where applicable. This helps in reducing the number of outstanding changes, stuck changes, and overall change order cycle time. This is supported for engineering change orders and change orders without revision control.

You can import redlines and merge these with existing redlines on engineering items that are assigned to a change order. You can do this as long as the change is in draft or open status. The following modifications can be merged:

- Item general information
- Item structure components

- Reference designators
- Substitute components
- AML

To merge redlines, here's what you can do in the Edit Item Batch dialog box:

- **Change Order** and **Effective Date**: Select One per Item Batch and Effective Immediately.
- **Number**: Specify the change order number in which you want to merge redlines of the existing affected item.
- **Select Add to Existing** and **Add all items**.

The table shows how the effective date specified in the existing affected items and the import file determines whether redlines are merged or not.

Effective Date in the Existing Affected Items	Effective Date in the Import File	Redlines Merged?
Effective on approval	No date. The item is considered as effective on approval.	Yes.
Effective on approval	Future effective date.	No.
Future effective	No date. The item is considered as effective on approval.	Yes. The effective date of existing affected item is applied for the newly imported changes.
Future effective	Future effective date.	If the effective dates match, then the redlines are merged. If not, redlines aren't merged.

Modify Released Engineering Items Through Import

You can modify released engineering items through import only by using a change order. This is because the application enforces change control on such items that are past the open status.

Note that this feature isn't applicable for commercial items and commercialization change orders.

Here's what you can modify:

- Item general information
- Structure components
- Reference designators
- Substitute components
- AML

To route the items through a change order, in the Edit Item Batch dialog box select the following for change order:

- **One per Item**, **One per Item Class**, or **One per Item Batch**.
- **Add to existing** or **Create new**.

Revision Updates During Import

The change order import process updates the new revision of affected items automatically on an engineering change order. The revision number isn't incremented automatically on the affected item of an engineering change order if:

- The affected item is a part of another change order that is in scheduled status.
- The revision doesn't follow a standard pattern, or it's not obvious what the next revision should be. For example, the initial revision number is .001, or Z.

Related Topics

- Item Batch Options
- Change Order Workflow
- Item Batches
- Configure the Limit for Objects in Change Orders and New Item Requests

Considerations for Item Batch Change Order Options

This table shows conditions that are applicable when importing items or structures to new or existing change orders.

Change Order Type (new or existing change orders)	You can add	You can't add
Commercialization change order	• Items created in Product Hub. • Items created in Product Development and in the following lifecycle phases: pre-production or prototype, and production.	• Items existing in a new item request. • Unapproved items. • Items in the design lifecycle phase.
Engineering change order and change order without revision control	• Items created in Product Development. • Items in the design lifecycle phase. • Unapproved items.	• Items existing in a new item request.

Item Batch Structure Options

Item batch structure options let you specify a defined item structure, how structure effectivity is controlled, and which structure components are updated.

You can update structures on preliminary items and change orders.

Structure Effectivity Control

The following controls determine when changes to product structure components become effective:

- **Date**: Effectivity on a specified date

- **Model Unit Number**: Effectivity based on unit number
- **Serial**: Effectivity based on the serial number assigned to each unit of an item

Update Options

You can select to update only those structure components that have changed, or you can update all. The update options are:

- Changed components only: Use the Item Structure batch option **Changed components only** to update the item structure with only the changed structure components.
- All components: Use the Item Structure batch option **All components** in the Edit Item Batch Options page to dynamically update all structure entities. The import considers the data provided in the import file as the source of truth and updates the structure of the item accordingly.

Note:

- To remove any structure data using All components batch option, exclude the details of the entity such as component, reference designator or substitute component from the import file.
- The All components batch option only supports the synchronization of structure entities like components, substitutes, and reference designators. It doesn't support the synchronization of AMLs.
- The Delete transaction type and the Replace function aren't supported for the All components batch option in structure import.
- If there are errors when using the **All components** batch option the complete transaction isn't rolled back. The changes without errors are imported and the changes that caused errors are captured in the error log.

Deleting Component Data Using Import

Use the Delete transaction type in item structure import maps and FBDI templates to delete structure components, substitutes, and reference designators you don't want in the item structure.

Here's how you can do this:

- Set the Update option to **Changed components only** in the Item Structure section of the Edit Item Batches page. This only deletes the selected components in the item structure through the import process.

  Note: You can also delete structure entities using FBDI import by selecting the transaction type as **Delete**.

- Map the transaction type of each entity you wish to delete and pass the transaction type as Delete in the import file. For example, if you want to delete a reference designator, you can select the Delete transaction type for the reference designator.
- If the import file includes a **Delete** component transaction type and an **End Date** value, the application will use the end date to complete the import.
- The following existing validations will be applicable for the **All components** batch option and the **Delete** component transaction type:

- You must route the structure changes through a change order if the parent item is a released engineering item or if it's already assigned to a change order.
- If you want to merge the structure changes on to the existing affected item, the effective dates must match or they must be set to effective on approval.

Related Topics

- Item Batch Options
- Update Product Structures
- How You Create Structures

Item Batch Pack Options

The item batch pack option lets you specify which pack components are updated.

Update Options: You can select to update only those pack components that have changed, or you can update all. The two options are Changed Components only and All Components.

Best Practices for Item Import Performance

You can get the best results from your item imports by observing a set of best practices.

The recommended set of best practices for item import performance is:

1. Determine the scope of data to be imported.
2. Review the data model design.
3. Create the item batches and load data.
4. Set the profile options.
5. Request a performance analysis.
6. Plan strategies for data migration.

Determine the Scope Of Data To Be Imported

There are two aspects to determining the scope of data to be imported. The first aspect is the number of items (master plus child organization) and the second aspect is the total number of records.

Each item (master or child organization) is composed of multiple child objects which may result in multiple records being imported for a single item.

The total number of records is critical in determining the appropriate profile option settings.

The total number of records is obtained by counting the following for each item (master and child organization):

- One additional record for each master controlled single row attribute group for each master item (additional records are created for translatable attribute groups)
- One additional record for each organization controlled single row attribute group for each organization item combination (additional records are created for translatable attribute groups)
- One additional record for each item category association

- One additional record for each item attachment association
- One additional record for each item relationship
- One additional record for each row of a master-controlled multi-row attribute group for each master item (additional records are created for translatable attribute groups)
- One additional record for each row of an organization-controlled multi-row attribute group for each master item (additional records are created for translatable attribute groups)

Review the Data Model Design

Often, a review of the data model design may offer opportunities to reduce the total number of records. The following should be considered.

Consider whether there's an opportunity to:

- Reduce the number of item organization associations
- Use reference organizations
- Reduce the number of attribute groups
- Reduce the number of rows in multi-row attribute groups
- Convert organization-controlled attribute groups to master-controlled

Create the Item Batches and Load Data

The optimal number of records to load in a single run of a item batch is 100,000 items (master or child organization) and their related child entity records. However, the total number of records should not exceed 4 million records per batch.

If a large number of items are to be imported, first import the master items and the related child objects, prior to importing child organization items and their related child objects. If possible, avoid importing items assigned to different child organizations in the same batch.

Items with attribute data can be imported together in a single batch.

Attachments should be imported in a separate batch once all the other child objects have been imported.

In general, we recommend that you load the data into an item batch using a CSV file with an import map. There are some cases where it's more efficient to load items using FBDI. This is true when the ratio of attribute group records to item records is high.

Note:

- It's recommended to import trading partner items separately and then import the trading partner item relationships.
- If you're using FBDI to import data, then don't delete any sheet or tab in the FBDI Item Import template. If any sheet isn't used for the import, then leave that sheet bank. Use a batch ID that's new or doesn't exist in the interface table for item import; don't repeat batch IDs.

Purging the interface tables frequently improves performance. The tables should definitely be purged so that no more than 4 million records are in the interface tables (across all batches).

If the purge results in a large number of records being purged (greater than 1 million), then run a small batch of 5-10 items first before importing a batch with a larger number of items.

Important: Do not run multiple item batches in parallel. This can be done by setting the **Process Sequentially** spoke system option to **Yes** . The item import process already contains logic to process the workload in parallel. You gain no advantage by submitting parallel batches and may cause record locking issues. However, **Process Sequentially** should be set to **No** only when the number of records in the batches is low (in the hundreds) and when there are no large batches being imported during the same time period.

Set the Profile Options

Examine the values of profile options that affect import, and set them according to your situation.

Profile Option Code and Name	Usage
EGP_CONVERSION_MODE Item Data Conversion Mode Enabled	To support data conversion and initial load, this profile option must be set to **Yes**. The default profile option value is **No**. It has the following effects: • You can't import item revisions with a past date if the item is assigned to any existing change orders in Scheduled or Completed status. • You can still import item revisions with a past date if the item is assigned to any existing change orders in Open status. Setting this profile option value to **Yes** will have the following effects. • The import process ignores all security checks. Data privilege and functional privilege aren't considered. • All items will be created as Approved Items regardless of whether the item class is enabled for new item requests or whether you select the option **Add All Items** for new item requests in the batch. • All updates will be directly posted to production by ignoring the creation of change orders if you select the option **Add All Items** for change orders in the batch. • All validation rules of the type Needs Approval will be ignored. • None of the creations or updates made to the items are audited. • Can result in stuck changes if you import item revisions with a past date and if the item is assigned to any existing change orders in Scheduled or Completed status.
EGP_ITEM_IMPORT_NUMBER_OF_THREADS Number of Threads for Importing Items	The default value is 12. The value should not be set to more than 100. Once your environment has been resized, file a service request to get guidance from Oracle Support on what value should be set.
EGP_ITEM_IMPORT_ITEMS_PER_THREAD Items Per Thread in the Import Program.	The default value is 20. To set the optimum value for this option, first compute the average ratio of the child object rows to item (master and child organization) rows in the batch being imported (based on the information in step 1). • If the ratio is between 0 and 20, keep the default value of 20. • If the ratio is between 20 and 500, change the value to 10. • If the ratio is 500 or greater, change the value to 5. For example, if for each master/child item, there are 100 child object rows (such as extensible flexfields, category assignments, and so on), then the ratio is 1:100. These values are guidelines. You can adjust the value with these guidelines in mind.

Request a Performance Analysis

If the number of records that you plan to import is greater than 1 million, or you determine the throughput to be low after following the recommendations here, file a service request for a performance analysis.

Ensure that you provide an accurate count of the total number of items (master and child organization) as well as the total number of records, broken down by the categories listed here. Also, indicate the number of days in which you would like to complete the data migration. This is very important to get the right size.

Plan Strategies for Data Migration

A common strategy for data migration is to perform the migration in stages or phases. This allows more time to migrate the data and resolve errors.

In the first stage, the items can be imported well ahead of the go-live deadline. As you get closer the to go-live date, obtain a list of legacy items which have been added or edited since the first set of data was migrated and load those changes just prior to go-live.

For initial load or large batches, it's recommended to:

- Explicitly insert master organization rows and child organization rows in the import.
- Not use rules to assign the items to the child organizations in case of initial data load as well as for batches that have large number of rows. This helps in avoiding performance issues as the import automatically processes the data in to parallel threads.

Related Topics

- Item Batch Options
- Importing Item Data Using Import Maps
- Item Profile Options

Best Practices for Item Structure Import Performance

You can get the best results from your item structure import by adhering to a set of best practices.

Here's the recommended set of best practices:

1. Determine the scope of data to be imported.
2. Review the data model design.
3. Set the profile options.
4. Create the item batches and load data.
5. Request a performance analysis.
6. Plan strategies for data migration.

Determine the Scope of Data to be Imported

Here are the primary aspects to determine the scope of data to be imported.

- The number of structures or BOMs (bill of materials) to be imported, and the number of components per structure header, including reference designators and substitutes.
- The number of common structures you intend to have and the number of organizations you intend to associate these structures to.

The total number of records is critical in determining the appropriate profile option settings. This number is obtained by counting the following for each item structure.

- One additional record for each structure header to be created on an item. This should include primary and alternate structures.
- One additional record for each common structure on the child organizations (reference and definition organizations.)
- One additional record for the total number of components to be added to the structure.
- One additional record for the average number of components per structure.

Review the Data Model Design

Often, a review of the data model design might offer opportunities to reduce the total number of records.

Consider whether there's an opportunity to:

- Reduce the number of common structure creation.
- Reduce the number of structures by not considering the alternate structures wherever possible.
- Reduce the number of records for reference designators and substitutes.

Also consider importing only the latest revision of the released item structures.

Set the Profile Options

Examine the values of profile options that affect the structure import and set them according to your situation.

Profile Option Code and Name	Usage
EGP_CONVERSION_MODE Item Data Conversion Mode Enabled	To support data conversion and initial load, this profile option must be set to **Yes**. The default profile option value is **No**. It has the following effects: • You can't import item revisions with a past date if the item is assigned to any existing change orders in Scheduled or Completed status. • You can still import item revisions with a past date if the item is assigned to any existing change orders in Open status. Setting this profile option value to **Yes** will have the following effects. • The import process ignores all security checks. Data privilege and functional privilege aren't considered. • All updates will be directly posted to production by ignoring the creation of change orders if you select the option **Add All Items** for change orders in the batch. • All validation rules of the type Needs Approval will be ignored. • The item creations and item updates aren't audited.
EGP_ITEM_IMPORT_NUMBER_OF_THREADS Number of Threads for Importing Items	The default value is 12. The value should not be set to more than 100. Once your environment has been resized, file a service request to get guidance from Oracle Support on what value should be set.
EGP_ITEM_IMPORT_ITEMS_PER_THREAD	The default value is 20. To set the optimum value for this option, first compute the average ratio of the child object rows to item (master and child organization) rows in the batch being imported.

Profile Option Code and Name	Usage
Items Per Thread in the Import Program	• If the ratio is between 0 and 20, keep the default value of 20. • If the ratio is between 20 and 500, change the value to 10. • If the ratio is 500 or greater, change the value to 5. For example, if for each master or child item, there are 100 child object rows, then the ratio is 1:100. These values are guidelines. You can adjust the value with these guidelines in mind.

Create the Item Batches and Load Data

First import item revisions that will be part of the structure, including substitutes.

If you want to create a common structure, you must associate the items to the child organization and then create the common structures.

The components, reference designators, and substitutes must be imported in the same batch. If you have the components already imported, you must have the component details in the input file while importing reference designators and substitutes.

> **Note:** Don't run multiple item batches in parallel. This can be done by setting the **Process Sequentially** spoke system option to **Yes**. The item import process already contains logic to process the workload in parallel. You don't gain any advantage by submitting parallel batches and this might cause record locking issues. However, **Process Sequentially** can be set to **Yes** only when the number of records in the batches is low (in the hundreds) and when there are no large batches being imported during the same time period.

Request a Performance Analysis

If you determine that the performance is still slow after following the recommendations listed here, file a service request for a performance analysis.

Ensure that you provide an exact count of the total number of structures (primary and alternate) as well as the total number of components and average number of components per structure. Also indicate the number of days in which you would like to complete the data migration. This is very important to get the correct size.

Plan Strategies for Data Migration

A common strategy for data migration is to perform the migration in stages or phases. This allows more time to migrate the data and resolve errors.

In the first stage, you must import the item structures of the older revisions well ahead of the go-live deadline. As you get closer the to go-live date, you must obtain a list of latest released structures that are current effective and load those structures just prior to go-live.

Manage Item Batch Details

Unconfirmed Items in Item Batches

You manage the results of the data quality and item matching checks performed on the items in the batch and take appropriate actions.

Data Quality Results

Data quality results for each item are:

- *Classification*: Classifies the item and also assigns it to catalog categories.
- *Standardization*: Standardizes the attribute values of the item.
- *Matching*: Checks for duplicates in Oracle Product Hub.

Matching Results

There are the three matching result types:

- **Multiple Match**: There is more than one match found for the source item in Oracle Product Hub.
- **Single Match**: There is only one match found for the source item in Oracle Product Hub.
- **No Match**: There are no matches found for the source item in Oracle Product Hub.

Matching Actions

You can review and specify a match action for each unconfirmed item:

- **Confirm**: Matches the source item with an existing item in Oracle Product Hub.
- **Exclude**: Excludes this item from this import and all subsequent imports.

  The next time the same item data is uploaded within a batch, the item data appears in the In Progress tab and the match actions value changes to Excluded.
- **Ignore**: Temporarily excludes this item from import.

  The next time the same item data is uploaded within a batch, the item data appears in the In Progress tab and the match actions value changes to Included.
- **New Item**: Confirms that a new item must be created during import for this source item in Oracle Product Hub.

Managing Unconfirmed Items

You can also perform the following tasks in the In Progress tab.

- You can modify the item information that appears in the In Progress tab and add more items by selecting **Manage in Spreadsheet** from the Action menu or by clicking the **Manage in Spreadsheet** icon to download an item information spreadsheet.

- If an unconfirmed item is associated with a structure or pack, you can click the icon in the **Structure or Packs** column to display structure and batch details.

  You can modify structures or packs by clicking **Manage in Spreadsheet** and selecting the appropriate template to download.

Update and then upload the spreadsheet to incorporate your changes.

Click **Check Data quality** to perform additional data quality checks after making changes to unconfirmed items.

Related Topics

- Available Options to Check Data Quality for Item Batches
- Item Batch Import and Scheduling Options
- Item Batches
- Data Quality

Confirmed Items in Item Batches

On the In Progress tab, you manage items that have been matched and confirmed using matching rules, along with new items in the batch.

Match Types

Match types:

- **Single Match**: There is only one match found for the source item.
- **Multiple Match**: There is more than one match found for the source item.
- **No Match**: There are no matches found for the source item.

Matching Actions

You can review and specify a new match action for each confirmed item:

- **Unconfirm**: Mark the item as Unconfirm for further update.

  > **Note:** You can also unconfirm a cross-reference. When you find a new match for the unconfirmed item, the status for that matched item becomes a single match. Upon import, the existing cross-reference is end-dated and the new cross-reference is created with a start effective date equal to the import date.

- **Confirm**: Match with an existing source item in Product Hub.
- **Exclude**: Excludes this item from this import and all subsequent imports.

  The next time the same item data is uploaded within a batch, it appears in the Excluded tab for that batch.
- **Ignore**: Temporarily excludes this item from import.

  The next time the same item data is uploaded within a batch, it appears in the In Progress tab, and the match actions value is Excluded for that batch.

Confirmed Item Detail

The following detailed information is displayed for a highlighted confirmed item:

- Structures
- Packs
- Category Assignments
- Relationships

Importing Confirmed Items

Select **Import** to import all items into Product Hub.

Related Topics

- Available Options to Check Data Quality for Item Batches
- Unconfirmed Items in Item Batches
- Category Assignments in Item Batches

Relationships in Item Batches

On the Relationships tab, review the relationships being imported for each of the items on the In Progress tab (if applicable).

Depending on the data, confirmed item relationships can be organized in up to four areas:

- Related items
- Trading partner items
- Global Trade Identification Number cross-references
- Cross-references

Related Items

You can review confirmed relationships based on predefined and user-defined relationship types, such as superseded items, substitutes, and complimentary items. Additional item attributes further qualify the relationship and effectivity dates indicate when these relationships are phased in and out.

Trading Partner Items

You can review the relationship of the confirmed item with the trading partner items.

GTIN Cross-References

GTIN cross-references relate confirmed items using the industry standard, enabling tracking and identification of trading partner items.

Cross-References

Cross references identifies items that have been consolidated from multiple source systems into a single master item.

Related Topics

- Manage Item Relationships
- Confirmed Items in Item Batches

Category Assignments in Item Batches

On the Category Assignments tab, you can review the catalog category assignments for each of the items on the In Progress tab.

The category assignments for items displayed on this tab are derived in one of two ways:

- Data quality classifies an item and it can also assign it to alternate catalog categories.
- Category assignments are imported for an item by selecting **Item Category Assignment** when you add items to the batch.

Related Topics

- Confirmed Items in Item Batches
- Item Batch Options
- Relationships in Item Batches

Imported Items in Item Batches

The Completed tab displays all items that are imported into the Oracle Product Hub.

Imported Item Details

Besides the detail displayed on each line of the imported item table, you can access more details on item components as follows:

- **New Item Request**: Click on the new item request name to go to the New Item Request summary page.
- **Change Order**: Click on the change order name to go to the Change Order summary page.

Item Import Status

Each imported item can have one of the following import statuses:

- **Success**: The item and all its related entities were imported successfully.
- **Partial**: The Item was imported successfully, but some of its entities had errors during import.
- **Error**: The item itself had errors during import. These items will display on the Error tab.

Highlight an item with an import status of **Partial** or **Error** to display details.

Updating Imported Items with Errors

You can modify the items that appear on the Error tab by selecting **Export** from the Action menu or clicking the **Manage in Spreadsheet** icon. Correct the data and click Upload in the spreadsheet to apply your changes.

Related Topics

- Item Batch Change Order Options
- Item Batch New Item Request Options
- Available Options to Check Data Quality for Item Batches

Excluded Items in Item Batches

You can manage the items that aren't imported into the Oracle Product Hub as the result of the data quality and item matching checks performed on the items in the batch.

- The excluded status is retained for an item in future batch imports and the item will be automatically placed in the In Progress tab. The match actions value changes to Excluded.
- Items that are marked as **Ignored** aren't imported into Product Hub for that batch only.
- You can change the statuses of **Excluded** and **Ignored** to **Unconfirm** or **Confirm**. You can edit the statuses or match actions in the In Progress tab.

Related Topics

- Item Batches
- Relationships in Item Batches

Cross-References in Item Batches

On the Relationships tab, you can review source system item cross references.

The cross-references for items displayed on this tab are identified in one of following ways:

- Item batch import and scheduling options let you specify item cross-references imports

  If you select **Cross-References Only**, then no source system data is imported. A cross-reference of the source system item is created with a matched, new, or cross-referenced item in the Oracle Product Hub.

Note: You can also unconfirm a cross-reference. Once you do this, the item moves to the In Progress tab and match action is Unconfirm. When you find a new match for the unconfirmed item, the status for that matched item becomes a single match. Upon import, the existing cross-reference is end-dated and the new cross-reference is created with a start effective date equal to the import date.

Related Topics

- Available Options to Check Data Quality for Item Batches
- Relationships in Item Batches

Reject Item Batches

You can reject an item batch in one of the following ways:

- Highlight an item batch on the search results table on the Manage Item Batches page and select **Reject** from the Action menu in the search results table.
- Access the Edit Item Batch page and then select from the Action menu.

Note: You cannot reject an item batches with a status of **Completed**.

Related Topics

- Item Batches

Reassign Item Batches

You can reassign an item batch to a different user in one of the following ways:

- Highlight an item batch on the search results table on the Manage Item Batches page and select **Reassign** from the Action menu in the search results table.
- Access the Edit Item Batch page and then select **Reassign** from the Action menu.

Note: You cannot reassign an item batch with a status of **Completed**.

Note: You can only add items to item batches that are assigned to you.

Related Topics

- Item Batches
- Reject Item Batches

Item Batch Completion

Item batches can be completed by navigating to either of the following pages and selecting Complete from the Actions menu:

- **Manage Item Batch page**: Search for and highlight the item batch you want to complete.
- **Edit Item Batch page**: Search for and access the item batch for editing.

Note: You cannot reassign or reject an item batch with a status of .

Related Topics

- Item Batches
- Item Batch Options
- Item Batch Import and Scheduling Options

Purge Imported Item Interface Tables

You can purge the data from interface tables pertaining to import process. This permanently removes all records in the batch from the import interface tables.

You must purge batches after the batch has been imported successfully, and you have ensured that the data in the interface tables is no longer required.

A high volume of records in the interface table contributes to poor performing queries, data backup, data recovery, new index creation, and so on, thus affecting the import performance. Hence, there is a limit for the number of records in the interface tables. A warning message is displayed when the number of records in any of the interface table reaches five million and will indicate that you must purge the records. If you continue to ignore this message, then after a threshold limit of six million records in any interface table, the import process displays an error message. The Purge Interface Tables scheduled process log file will have a table that provides a list of interface tables, estimated number of records in each interface table, and the warning and error limits for each table.

You can purge the interface table data using one of these methods:

- Manage Item Batch page (if you have an Oracle Product Management Cloud Service subscription)
- Purge Interface Tables scheduled process (if you don't have an Oracle Product Management Cloud Service subscription)
- purgeBatchData operation in the Batch Maintenance SOAP service

Purge Interface Tables from Manage Item Batch Page

To purge the interface tables from the Manage Item Batch page:

1. In the Product Information Management work area, go to the **Manage Item Batches** task.
2. Search and select the item batch that you to purge.
3. In the **Search Results**, highlight the item batches that you want to purge.
4. From the **Actions** menu, click any of the following options:
    - **All Rows** - Purge all rows in the item batch including rows with the status error and completed.
    - **Error Rows** - Purge rows in the interface table that were terminated due to errors.
    - **Completed Rows** - Purge rows in the interface table that were completed.

    The data is purged in the interface tables based on your selection.

Purge Interface Tables Using Purge Interface Tables Scheduled Process

You can purge the records from interface tables that are uploaded using FBDI and non-FBDI modes:

- FBDI Mode – Records with valid load request IDs are purged.
- Non-FBDI Mode – Records are purged only when purge predicate is defined.

To purge the interface tables using the Purge Interface Tables scheduled process:

1. In the Scheduled Processes work area, click **Schedule New Process**.
2. Search and open the **Purge Interface Tables** schedule process.
3. Specify the following parameters:
    - **Purge Process Intent** – Select one of the following modes:
        - **File-based data import** - Purge the records that were loaded using file-based data import. You can purge based on the specified load request ID or a range of load request IDs.
        - **Maintenance** – Purge the interface table entries and the extracted files in the file location that are older than 30 days or a user-defined age.
        - **Other** - Purge the records that were loaded using non-FBDI methods. You can purge based on the specified request ID or a range of request IDs.
    - **Import Process** – Select the import process for which you want to purge the interface table records.
    - If you have selected **File-based data import** as **Purge Process Intent** mode, specify one of the following:
        - **Enable load request ID ranges** – Select this option and specify the range of the load request IDs in the **Start Load Request ID** and **End Load Request ID** fields.
        - **Load Request ID** – Specify the load request ID based on which the purge must be performed.
    - **Extract Data** – If you have selected **File-based data import** as the **Purge Process Intent** mode, then select this option to indicate whether the entries to be purged must be extracted and uploaded to a file location or not.
    - **Allow context purge of data** – Select this option if **Purge Predicate** must be considered while purging the FBDI entries.
    - **Number of Days** – If you have selected **Maintenance** as the **Purge Process Intent** mode, then specify the number of days to a number greater than 30. The interface table entries and the extracted files in the file location exceeding this value for a given import process are purged.
    - If you have selected **Other** as the **Purge Process Intent** mode, specify one of the following:
        - **Enable request ID** - Select this option and specify the **Start Request ID** and **End Request ID**.
        - **Request ID** – Specify the request ID.
4. (Optional) Click **Advanced** and schedule the process to run at a later date and time. You can schedule the Purge Interface Tables job when the **Purge Process Intent** mode is **Maintenance**.
5. Submit the scheduled process.

The scheduled process deletes the interface table records for the selected import process.

Auto Schedule Purge Job

The Purge Interface Table scheduled process purges the interface and error table data (default setting is within 30 days of the initial load). Before purging the records, the interface and error data is extracted and uploaded to a file location for the individual product import process that's used.

The extracted file format is: ImportBulkData_<ImportJobName>_<LoadRequestId>.zip

The Purge Interface Table scheduled process will also purge these extracted files automatically (default setting is within 30 days of the initial file load).

You can access the extracted files using:

- File Import and Export UI
- ERP Integration Service Operations

Purge Interface Tables Using purgeBatchData Operation

You can purge the interface tables using the purgeBatchData operation in the Item Batch Maintenance SOAP Web service. For more information, see the Item Batch Maintenance SOAP Web service in the SOAP Web Services for SCM guide, available at *docs.oracle.com*.

FAQs for Batch Imports

Can I add items to a batch if it is not assigned to me?

No, you can only add items to item batches that are assigned to you.

Related Topics

- Item Batches

How do I perform an impact analysis?

To perform an analysis, simulate the conditions by applying all the rules, including those in Draft status. In the Product Information Management work area, select the Manage Item Rule Sets task.

Related Topics

- Analyze Rule Impact

Import Items Using Import Maps

Importing Item Data Using Import Maps

Retailers can upload data using spreadsheets and suppliers can send product and catalog data as comma-separated values (CSV) or Extensible Markup Language (XML) files.

Suppliers can use standard industry formats, such as BMECat or eClass, or others. Users must onboard or upload the data provided by suppliers into Oracle Product Hub.

The following is an overview of the functions that you can perform when importing items using import maps.

- Bring in data in XML format directly through an import batch without having to reformat it.

- Upload item data in XML format directly to an import batch. The data is processed and placed in interface tables for import into Oracle Product Hub.
- When uploading the XML file, map the elements of the XML file to the Product Hub data columns to facilitate moving the data into interface tables.
- Preview the data from the XML file after mapping the XML elements to the Product Hub data columns.
- Save the mapped data columns to be reused later for another data upload.
- Optionally, link saved maps to suppliers so only relevant maps are used by suppliers.
- The data map can be inherited from parent's item class.
- Import maps can be used to upload data to an item batch of any source system.
- If data errors are encountered during the XML file upload, then no data gets uploaded. The data errors are identified along with the type of errors and presented to user in a report.
- XML file upload also preprocess all the data records so that users can navigate to the batch details and look at the data in the interface tables.

- Bring in data in the Nested XML file format directly through an import batch without having to reformat it.
  - Upload item data in Nested XML format directly to an import batch. The data is processed and placed in interface tables for import into Oracle Product Hub.
  - Nested XML files support mapping of recursive and repeating XML nodes and attributes. When uploading the Nested XML file to import packaging and structure data:
    - Map the parent node containing item information to the Item node in the Master Data region of the Import Map.
    - Map the recursive parent node with packaging and structure child item information to the **Pack** or **Structure** node in the Master Data region.
    - For example, for GDSN, Data Stewards map the `catalogueItem` XML node to the Item node in the Master Data region and the `catalogueItemChildItemLink` XML node to the Pack node in the Master Data region
  - The repeating nodes of a Nested XML data file display in the Source Data region of an import map. When a repeating node is mapped, the other corresponding repeating nodes can't be mapped.
  - Recursive nested XML refers to nested XML in which the structure or packaging hierarchy is built top-down, rather than the entire hierarchy at the same level. For example, this hierarchy:

```
Parent Item
 Child Item 1
 Child Item 1A
```

    is represented by this nested XML:

```
<Item>Parent Item
 <Item>Child Item 1
 <Item>Child Item 1A</Item>
 </Item>
```

```
</Item>
```

- An XML attribute refers to an attribute on an XML element. For example, `languageCode` is an XML attribute in `<descriptionShort languageCode="en">Short Description</descriptionShort>`.

  ```
  <descriptionShort languageCode="en">Short Description</descriptionShort>
  ```

- You can map XML attributes this way:
  - An XML attribute is displayed under its XML element in the Source Data region of the import map. Map the XML attribute in the Source Data region to the item attribute in the Master Data region of an import map.
  - Map an XML node in the Source Data region to an item attribute in the Master Data region, based on the value of the XML attribute. To do so, you can use the `decode()` function to create an expression. For example, consider an XML node that contains descriptions in various languages, such as `<descriptionShort languageCode="en">Short Description</descriptionShort>`. Based on the language specified in the XML attribute, you can map the XML node using the following `decode()` function: `Item.Main.DESCRIPTION.US=decode([languageCode],'en',[descriptionShort],'')`, where `languageCode` is the XML attribute and `descriptionShort` is the XML node.

- Bring in product data in the CSV file format directly through an import batch without having to reformat it.
  - Upload item data in CSV format directly to an import batch. The data is processed and placed in interface tables before being imported into Oracle Product Hub.
  - When uploading the CSV file, map the metadata (columns) of the CSV file to the Product Hub data columns to facilitate pushing the data into interface tables.
  - Preview the data from the CSV file after mapping the CSV columns to the Product Hub data columns.
  - Save the mapped data columns to be reused later for another data upload.
  - Optionally, link saved maps to suppliers so only relevant maps are used by suppliers.
  - Import maps can be used to upload data to an item batch of any source system.
  - If data errors are encountered during the CSV file upload, then no data gets uploaded. The data errors are identified along with the type of errors and presented to user along with sample data rows. Using this, rectify the data errors and upload the CSV again.
  - CSV file upload also preprocess all the data records so that users can navigate to the batch details and look at the data in the interface tables.

  > **Note:** When entering item data in the data file, we strongly recommend that you group all data of an item together.

- Manage item batches.
  - Create an import map while uploading source file data to item batch from Manage Item Batches page.
  - Additionally, create an import map from the Manage Import Maps page
  - Edit and delete import maps from the Manage Import Maps page.

- Map source data for items, packs, and structures.
    - Upload a CSV, XML, or Nested XML file using the controls in the Source File region.
    - Map the CSV columns or XML elements to entities in the Master Data table.
        - Map data sources by dragging them from the Source Data table and dropping them on the corresponding entities in the Master Data table.
        - Map data sources by selecting **Map Source Columns** from the Actions menu of the Source Data table and then selecting the corresponding entities in the Master Data table in the Select Master Column dialog.
    - Expand the Pack and Structure nodes in the Master Data table to expose the attributes of packs and structures. By mapping to these attributes you can import pack and structure hierarchies.
    - Map source data to item attributes in the Master Data table so that items are imported along with packs or structures.
    - Import maps support the mapping and import of all attributes available for items, item relationships, attachments, descriptive flexfields, and trading partner items.
    - Source data columns that contain values in multiple languages can be mapped to attributes that support multiple languages. The language of a source column is identified by the value of the language code column in that row.

- Transform source data using complex expressions before importing the data through an import batch.
    - Write basic transformation expressions using functions that operate on the source data, such as the string functions `split()` and `concat()`.
        - The `split()` function:
            - Takes the source data value to be split
            - Takes the delimiter that indicates the points in the value at which to split the value into parts
            - Takes the part number to return
            - Returns the part of the split input value corresponding to the specified part number

          Example:

          If the value of Attribute1 is

          ```
          AS-100#Acme Solution 100#Description
          ```

          then:

          ```
          split([Attribute1],#,2)
          ```

          returns

          ```
          Acme Solution 100
          ```

        - The `concat()` function takes multiple source data values as input and concatenates them into a single value.
    - The transformation functions are independent of the file type used for uploading the data.
    - To use a transformation expression, the general procedure is:
        i. Select a row in the Source Data table. Select **Actions** > **Create Expressions**. Select the Master Data Column into which the evaluated value of the expression is uploaded.
        ii. Select the function to use. Build the expression by inserting Source Data columns and other parameters to the selected function.
        iii. Optionally, validate the expression.
- Associate multiple suppliers with the import map.
    - Select the **External** check box to enable all suppliers to access the import map as a template in Oracle Product Hub Portal.
    - If you enable external suppliers, you can then specify which ones can access the import map. Click the **Manage Suppliers** button and use the **Manage Suppliers** dialog to add only the wanted suppliers.
- Import items to multiple organizations.
    - Map a source data column that identifies the organization for an item to the Master Data attribute Item.Main.Organization.
    - During import, source items are assigned to the organization identified in the source data.

- Set change order line effective dates.
    - For the source data attribute that provides the effective date for change order lines, map its source data column to the Master Data attribute `Item.Main.Change Order Line Effective Date.`
    - In the Change Orders region of the **Edit Item Batch Options** dialog box for the item batch that uses the import map, set the value of **Effective Date** to **User-entered**.
    - During data upload, the value provided for the effective date attribute in the source data file is inserted in the VERSION_START_DATE column in the interface table.On importing item changes, the mapped date value is set as the Effective Date for the change order line.
- Import item category assignments:
    - Map data source columns for the item categories to the **Catalog.Item Categories** set of the master data attributes.
    - Set the start and end dates of the item category assignments using the Start Date and End Date attributes available under the Item Categories node of the import map.

      You can delete the end dates of the existing item category assignments through import by entering #NULL in the smart spreadsheet column that's mapped to the End Date attribute under Item Categories node of the import map.
    - Re-assign existing item category assignments to new ones using the Old Category Code and Old Category attributes available under the Item Categories node of the import map. Make sure the Transaction Type is passed as UPDATE in the data file.

      > **Note:** You can't save an import map if the **External** check box in the import map is selected and any of the Old Category Code or Old Category attributes are mapped.
- Import structures with components, reference designators, and substitutes.
    - Map data source columns for the structure to the **Structure.Item Structure** set of master data attributes.
    - Map data source columns for the structure component to the **Structure.Component** set of master data attributes.
    - Optionally, import common structures.

      > **Note:** Only the first level of common structure can be created through import.

        - Map the data source column containing the item number of the source item from which the common structure is to be created to the master data attribute Structure.Item Structure.**Common Structure Item**.
        - Map the data source column containing the organization of the source item from which the common structure is to be created to the master data attribute Item.Main.**Common Organization**.

          Note that the attribute Common Organization was previously named Pack Common Organization.
    - Optionally, import reference designators and substitute components with start dates.

        - To import a reference designator for the structure, map a source column to the master data attribute Structure.Reference Designator.**Reference Designator**.
        - To import substitutes for the structure, map a source column to the master data attribute Structure.Substitute.**Substitute Item** or Structure.Substitute.**Substitute Source System Reference**.
        - If you import start dates for a structure component (by mapping to the master data attribute Structure.Component.**Start Date**), and are also importing reference designators and substitute

components, you must enter the date value in every row of the data file that contains details for the reference designator or substitute.

- You don't directly specify the effectivity start dates for reference designators and substitutes. The import process applies the effectivity start date for a component to its reference designators and substitutes.
- If you're importing multiple reference designators or substitutes for a component, then you must enter the component's effectivity start date in every row of the source data file that specifies a reference designator or substitute.

  In this rough example of source data, the date 1-Oct-2020 must be entered for every row that specifies a reference designator or substitute.

Component	Component Start Date	Reference Designator	Substitute
Comp123	1-Oct-2020	RefDes001	
Comp123	1-Oct-2020	RefDes002	
Comp123	1-Oct-2020		Sub001
Comp123	1-Oct-2020		Sub002

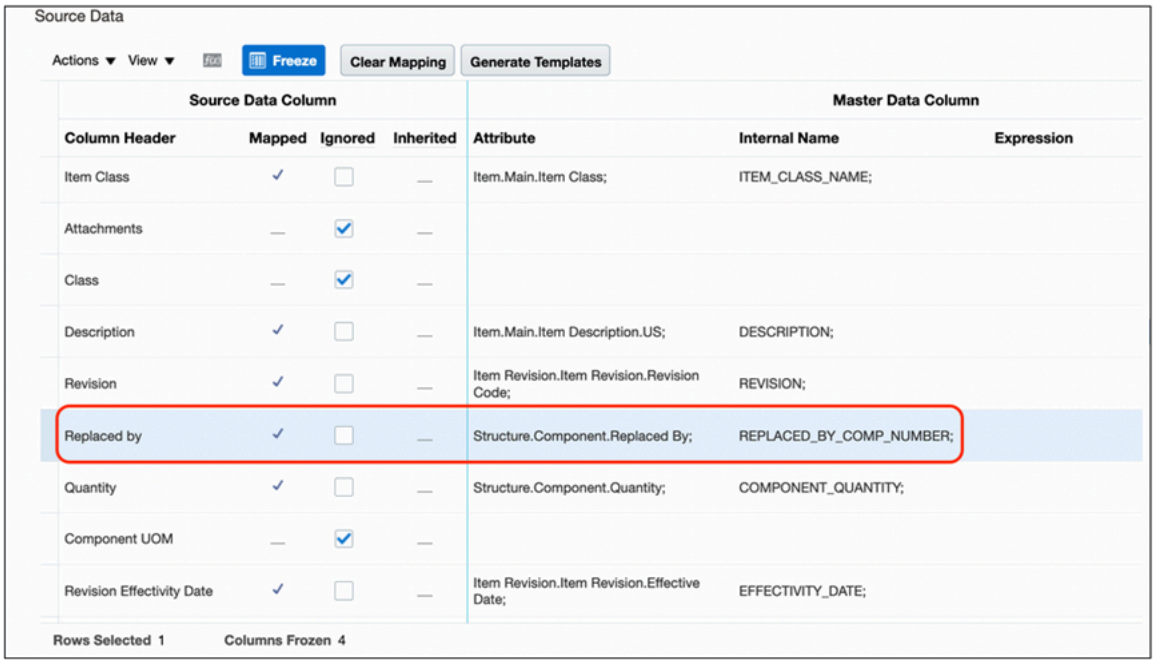
- If you're importing the same component with different effectivity dates, then the import process applies the effectivity start date for the component to the corresponding reference designator or substitute specified in that dated component's row of the source data file.

  In this rough example of source data, the reference designator RefDes001 will be imported with a start date of 1-Oct-2020, and the substitute Sub002 will be imported with a start date of 1-Nov-2020.

Component	Component Start Date	Component End Date	Reference Designator	Substitute
Comp123	1-Oct-2020	31-Oct-2020	RefDes001	
Comp123	1-Nov-2020	30-Nov-2020	RefDes002	
Comp123	1-Oct-2020	31-Oct-2020		Sub001
Comp123	1-Nov-2020	30-Nov-2020		Sub002

- Replace components on the following:
  - Item structures of commercial items
  - Preliminary item structures of engineering items
  - Affected item structures on a change order

The image shows how you map the data source column containing the component number of the replacement component to the master data attribute.



The image shows item import template for the replace action.

Sequence	Name	Parent	Structure	Org	Item Class	Description	Revision	Replaced by
	Laptop Assembly V01			V1	Root Item Class	Laptop Version 01	A	
30	Keyboard V01	Laptop Assembly V01	Primary	V1	Root Item Class	Keyboard Version 01	A	Keyboard V02
60	Mouse V01	Laptop Assembly V01	Primary	V1	Root Item Class	Mouse Version 01	A	
90	Display Screen V01	Laptop Assembly V01	Primary	V1	Root Item Class	Display Screen Version 01	A	
120	CPU V01	Motherboard V01	Primary	V1	Root Item Class	CPU Version 01	A	
150	Motherboard V01	Laptop Assembly V01	Primary	V1	Root Item Class	Motherboard V01	A	
30	RAM V01	Motherboard V01	Primary	V1	Root Item Class	RAM V01	A	RAM V02

- Share import maps between applications instances.
  - Use the Setup and Maintenance work area to export setup data associated with import maps, and import that data to another instance of Oracle Fusion Cloud Applications. After importing this data into a target instance, you will be able to view and edit the mappings there. You can export and import by specifying either:
    - The entire Product Management offering
    - The Items functional area
    - The Manage Import Maps task (which exports only the import maps)
    - The Manage Import Maps task as part of an implementation project.
  - Import map task data is exported and imported as CSV files or configuration packages.

- You can compare the setup data for import maps, as you can with other setup data, by using the **Compare Setup Data** action.
- Only the mappings in an import map are exported, not the CSV or XML data files associated with the import map, or any Smart Spreadsheets attached to the import map.
- After you have imported the import maps into the target instance, run the **Regenerate Import Map Templates** scheduled process to regenerate the Smart Spreadsheets for the imported import maps.

Related Topics

- How You Import Item Data Using Import Maps
- Overview of Item Batches
- Item Batches
- Export Setup Data Using Offering or Functional Area
- Export Setup Data Using Implementation Project

How You Import Item Data Using Import Maps

You can use import maps to help upload item data from a variety of external sources into Oracle Product Hub.

To use external data sources whose layout doesn't exactly correspond to the master data for Product Hub, you can map source data from comma-separated value (CSV) files and Extensible Markup Language (XML) files to the master data.

When you specify a CSV, XML, or Nested XML source data file while creating or editing import maps in the Managing Import Maps page, the file data isn't directly uploaded to Product Hub, but is first uploaded to an item batch. You can upload source data using import maps from the Manage Item Batches page.

You can create an import map or edit an existing import map using the following procedure.

> **Note:** You can also import the setup data for an import map from another instance of Oracle Fusion Applications. For details, see the topics cited here about importing setup data using an offering or functional area.

Create or Edit an Import Map

Create or edit an import map as follows.

1. Depending on your access privileges, you can create or edit import maps in these ways:
   - In the Product Information Management work area, select the **Manage Import Maps** task from the panel drawer.
   - In the Setup and Maintenance work area, use the **Manage Import Maps** task:
     - Offering: Product Management
     - Functional Area: Items
     - Task: Manage Import Maps
2. To create an import map, click the **Create** icon on the toolbar or select **Actions** > **Create** from the menu.

   To edit an existing map, search for and select the map, then click the **Edit** icon on the toolbar or select **Actions** > **Edit** from the menu.
3. On the Create Import Map or Edit Import Map page, specify the following import map information.

UI Element	Description
Import Map	Enter a name for the import map. This field is required.
Description	Enter a description of the import map.
Item Class	Select an item class to associate with the import map. This item class is associated to items that don't have an item class specified in the data file uploaded to an item batch for import. The item class is also used to display this import map in Oracle Product Hub Portal if you select the **External** check box.
Source Map	Optionally, select an existing import map to inherit its import map details. If a source map is selected, the Data Map section of the current map is populated with inherited item mapping information. You can also map additional source data, but you can't edit or delete the inherited item mapping details.
External	Select to specify that the mapping can be used for third-party, external suppliers.
Suppliers	This option appears if you select **External**. Click the **Manage Suppliers** icon to open the **Manage Suppliers** dialog box, and select the supplier for which the import map is defined, and who can view the import map. You can specify multiple suppliers, by adding more in the Manage Suppliers dialog box. If no supplier is specified, the import map is visible to all suppliers.
Active	Select to enable the import map for use.

Specify Source File Information

Specify information in the Source File section as specified in the following table.

UI Element	Description
File Type	Specify the source file type to be used to upload data. Options are: Text, XML, Nested XML.
Delimiter	Specify the type of delimiter used in the source data file. Options are: Comma, Tab, Colon, Semicolon, Pipe, Space, Other.
Date Format	Select a format for the date.

UI Element	Description
Time Stamp Format	Select a format for the time stamp.
Encoding Type	Select an option to specify the file encoding format. Options are: US-ASCII, ISO-8859-1, UTF-8, UTF-16BE, UTF-16LE, UTF-16.
Upload From	Select **Desktop**, **URL**, or **Network** from which to upload source data. Specify the source data file location: • Desktop: Click **Browse** and select the source data file. • URL: Enter the URL for the source data. • Network: Specify whether the file is a recent file or a specific file. Enter the path of the source data file.
Templates	Displays the Microsoft Excel templates generated for the import map.

Map Source Data and Master Data Attributes

The Source Data table displays the data columns from the source file. The Master Data table displays the item attributes available in Oracle Product Hub. You can map attributes from different item classes in a single import map. You can map one source map attribute to multiple master data attributes, but not the other way around. You can create expressions on source data attributes to combine multiple source data attributes and map the expression to a master data attribute.

1. In the Master Data table, select an option in the **Item Class** field to specify the item class from which to view and map the master data attributes. The default item class is **Root Item Class**.
2. In the Master Data table, locate a master data attribute to which you want to map a source data attribute.

   Expand the hierarchical attribute tree to locate an attribute. You can also search for an attribute by entering all or part of the attribute's name in the search field above the master data list. Click the **Next** and **Previous** controls to locate multiple occurrences of the attribute.
3. To map a source data attribute to a master data attribute, drag and drop an unmapped row from the Source Data Column of the Source Data table onto an attribute in the Master Data table.

   Alternatively, select a data column in the Source Data table, select **Actions** > **Map Source Columns**, search for and select a master data attribute in the Select Master Column dialog box, and click **OK**.

4. If you're using transformation expressions to operate on source data:
    a. Select a source data column and click **Create Expressions** on the toolbar, or **Actions** > **Create Expressions** from the menu. The Create Expression page displays.
    b. Click **Select** to specify the master data column with which to map the expression. The Select Master Column dialog box displays.
    c. Search for and select the master data column and click **OK**.
    d. Select a function in the **Functions** tab and click **Insert**. The expression template text appears in the pane at the bottom of the Create Expression page.
    e. In the expression template, position the cursor where you want to add an attribute, select the source attribute from the **Source Columns** tab, and click **Insert**. The column is added to the expression.
    f. Insert the required columns to the expression format to create the required expression. Delete the placeholder text from the expression template.
    g. Click **OK** to create the expression and map it to the master data attribute. The Create Expression page closes, and the expression you created appears in the **Expression** column in the Source Data table of the Create Import Map page.

    > **Note:** Alternatively, to save an expression and create another expression on the same source data column, click **Apply and Create Another** on the Create Expression page.

5. In the Preview Data section, click the **Refresh** icon or select **Actions** > **Refresh** from the menu. The table is populated with mapped data. You can preview the result of the mapping and make changes if required.
6. Click **Generate Templates** if you want to create a Microsoft Excel template, also referred to as Smart Spreadsheet, for the import map.
7. Click **Save**.

Generate Smart Spreadsheets

Product data stewards can generate Smart Spreadsheets for import maps. These spreadsheets help users in reducing data entry errors while creating the data files that are to be used for importing data into Product Hub. These spreadsheets contain the attributes that are mapped in the import map, with their respective list of valid values and metadata information, such as data type, maximum length, and precision. The data entered in the spreadsheet is validated against the attribute metadata. Data files can then be generated from the populated spreadsheets, which can then be used to import data into Product Hub.The Smart Spreadsheets that are generated take only the attribute metadata that's available at that point in time when they're generated. So if any attribute metadata is edited after the Smart Excel is generated, then you need to regenerate the Smart Spreadsheet.

Here's how you create Smart Spreadsheets:

1. Click the **Generate Templates** button in the Source Data region of the Import Map.
2. In the Generate Templates dialog box, select the languages for which the spreadsheets are to be generated.
3. Click **Generate**. Language-specific Smart Spreadsheets are generated and attached to the import map. Use the link at the **Templates** field of the Source File region of the map to download the templates.

Keep these points in mind:

- We strongly recommend that you don't create Smart Spreadsheet templates with more than 256 columns. If more than 256 columns exist in a template, then you will be asked to save the spreadsheet as a macro-enabled workbook (`.xlsm` file) when you open it.
- A Smart Spreadsheet takes longer to open if there are several columns containing a large list of values.

You can regenerate Smart Spreadsheets in one of these ways:

- Clicking the **Generate** button on the Edit Import Map page and saving the Import Map
- Running the **Regenerate Import Map Templates** scheduled process.

  When scheduling this process, select these options:

  - **Item Class**: If blank, the templates are generated according to the selections in the **Import Maps** and **Languages** fields. If you select an item class, then templates are generated for the import maps for that item class and also for its child item classes. The default is no selection of item class.
  - **Import Maps**: The default is **With templates**.
    - Select **With templates** to regenerate templates only for import maps that have templates.
    - Select **All** to regenerate templates for all import maps.
  - **Languages**: Select the languages for which the spreadsheets are to be regenerated, or for all installed languages. If you don't make any selection, then templates are only generated for languages that exist for the import maps affected by the **Import Maps** field. The default is no selection of languages.

  The selections you make for these process options are considered as a set of criteria for whether to generate templates (meaning Item Class AND Import Maps AND Languages).

If you're using Smart Spreadsheets on a Mac:

- The data file automatically generated from the Smart Spreadsheet is saved to the folder containing the spreadsheet.
- If more than 256 attributes are mapped in the import map, you need to save the Smart Spreadsheet as a macro-enabled workbook (`.xlsm` file) before using it.

Add Data, Generate Data File, or Upload Data Using Smart Spreadsheet

The smart spreadsheet contains two sheets-Instructions sheet and Data sheet. The Instructions sheet provides the information to validate data, generate a data file, and upload the data to the item batch for import. The Data sheet is where you will enter the data. It also provides the name of the item batch, spoke system, and the import map that was used to generate the spreadsheet. These attributes won't display in the smart spreadsheets generated for import maps marked as external.

If the spreadsheet was generated from the Manage Items or Browse Items pages, then:

- Item batch name is autogenerated.
- Spoke system name is the product information management data hub spoke system.

If the spreadsheet was downloaded from the Edit Import Map page, then the item batch name and spoke system name is blank.

Note:

- If you change the import map name, the specified import map won't be used for generating the data file or uploading the data to an item batch. This attribute is for information purpose only
- Item attributes with only 10000 values are displayed as drop-down lists in the smart spreadsheet
- The smart spreadsheets doesn't work with 32-bit Microsoft Office on Mac and 64-bit Microsoft Office is required
- Smart spreadsheet is certified on Microsoft Excel 365. The spreadsheet is supported only for those Excel versions that are currently supported by Microsoft Corporation.

Adding and Validating Data in the Smart Spreadsheet

To enter the data in the smart spreadsheet, refer to the bubble text on each column header for the description of the data and data type that the column requires. After adding the data, click **Validate** on the **Add-ins** tab to validate the data. If there are any errors, the respective cells are highlighted. Click the bubble text in the column header to understand and correct the error. If a value isn't entered for a mandatory attribute, warning is displayed. Resolve all the errors and warnings and then click **Validate** to confirm that there are no errors.

If the smart spreadsheet is generated from the Manage Items or Browse Items pages, then:

- Enter the date attribute in the MM/DD/YYYY format.
- Enter the timestamp attribute in the YYYY-MM-DDTHH:mm:ss.SSS-Z format. SSS indicates milliseconds and Z indicates the UTC time zone. For example, 2001-07-04T12:08:56.235-0700.
- The revision effective date is displayed in the UTC time zone.

After validating the data, you can either generate a data file or upload the data to the item batch for import.

Generating a Data File

To generate a data file, click **Generate Data File** on the **Add-ins** tab. Use this data file to import the data into Product Hub.

Set Change Order and New Item Request Options in Smart Spreadsheet

You can set the change order and new item request options in the smart spreadsheet before uploading the item data from the smart spreadsheet to the item batch. The display of these options depends on the **Item Batch Options in Smart Spreadsheets Enabled profile** option. If this profile option is enabled, then after specifying the access token during upload, the Item Batch Options dialog box is displayed, where you can specify the change order and new item request settings. In case the access token was already provided and is still valid, then the Item Batch Options dialog box dialog is displayed directly.

These change order and new item request batch options are the same as the Edit Batch Options dialog that is displayed while editing an item batch from the Manage Item Batches page.

The initial values of these options are populated from the Spoke System settings of the item batch being created or updated.

The Item Batch Options dialog box won’t display if the value of the **Item Data Conversion Mode Enabled** profile option is set to Yes.

If both **Item Batch Options in Smart Spreadsheets Enabled** and **Item Data Conversion Mode Enabled** profile options are set to **Yes**, then the **Item Data Conversion Mode Enabled** profile option has higher precedence and the Item Batch Options dialog box won't display in the smart spreadsheets.

The **Item Batch Options in Smart Spreadsheets Enabled** profile option is set to **No** by default.

Uploading Data to the Item Batch for Import

The data is uploaded to the item batch based on the batch name and spoke system name in the smart spreadsheet. You can change these names based on your requirement. If the item batch name doesn't exist, it will create the batch and then upload the data into the batch.

> **Note:** You can only upload up to 10000 rows from the smart spreadsheet to an item batch. If there are more than 10000 rows, you must generate the data file from the smart spreadsheet and upload it to an item batch from the Manage Item Batches page.

To upload data to the item batch for import:

1. On the **Add-ins** tab, click **Upload Data**.
2. In the Upload Data dialog box, click **Generate Access Token**. If you're not logged in to Product Hub, you will need to log in after clicking **Generate Access Token**.
3. In the Generate Access Token page, click **Generate and Copy Access Token**. The access token is copied to the clipboard.
4. Paste the access token in the Upload Data dialog box and click **Upload Data**.

   The upload progress is displayed. After the upload process is complete, the number of rows that are uploaded and the batch number is displayed.

   > **Note:** If you're using Mac, click **Paste Access Token** in the Upload Data dialog box to paste the access token.

Important Points

- If you upload the data without validating it and if there are any errors and warnings, then the respective cells are highlighted. Resolve all the errors and warnings and then upload the data again.
- If you make any changes to the data and click **Upload Data**, the upload starts, and you don't have to provide the access token again. But, if you close the spreadsheet and open it, then you must generate the access token for uploading the data.
- If a batch with the name specified in the Item Batch Name attribute doesn't exist, then a new batch with that name is created and the data is uploaded to that batch.
- If the smart spreadsheet was generated using the Mass Update action, then the created batch is of the Mass Update type. If the smart spreadsheet was generated from the Edit Import Map page, then the created batch is of Import type.
- Smart spreadsheets of external import maps don't allow data upload directly from the smart spreadsheets to an item batch.
- When using a smart spreadsheet on Mac to upload data to an item batch, if the smart spreadsheet contains multi-byte characters, you'll be asked to grant additional permissions for generating and accessing the data file on your system before the data is uploaded. You must grant this permission for the data to get uploaded to the item batch.
- Descriptive flexfield attributes are shown as free text in the template. Valid values aren't shown for descriptive flexfield attributes.

- Dependent value sets don't show dependent values in the template. All values from the value set are shown in the drop-down of the template.
- When uploading the data:
  - Ensure the date and date time formats match with the import map setup to minimize errors during upload.
  - The numeric decimal separator and grouping separator are honored based on the user locale. The application user preferences aren't considered.

Use Transaction Type

You can control imports by using the attribute **Transaction Type** in import maps.

- For all spoke systems, you can create, update, sync, or delete an item entity when you import item data using import maps, by specifying the value for the Transaction Type attribute as CREATE, UPDATE, SYNC, or DELETE. Only those item entities that can be deleted through FBDI can be deleted through import maps as well.
- If data is uploaded directly to an item batch using import maps in Oracle Product Hub, then the valid values for the Transaction Type attribute are: CREATE, UPDATE, SYNC, and DELETE. Note that the DELETE Transaction Type is only supported for item entities that can be deleted through FBDI.
- If data is uploaded using product uploads in Product Hub Portal, then the valid values for the Transaction Type attribute are SYNC and DELETE. If the value for the Transaction Type attribute is specified as CREATE or UPDATE, then it's converted to SYNC during the data file upload process.
- If the Transaction Type attribute isn't mapped, or is mapped but has no value provided in the data file, then the SYNC transaction type will be inserted by import maps in the interface tables.
- Use the Delete transaction type in item structure import maps and FBDI templates, to delete the structure entities such as components, substitutes, and reference designators in an item structure. For details see the topic Item Batch Structure Options.
- For translatable extensible flexfields, the Transaction Type attribute is displayed for mapping in import maps once per installed language.
- You can manage attachments to items, item revisions, or trading partner items, by selecting the value for the Transaction Type attribute, as CREATE, UPDATE, SYNC, or DELETE. For details, see the topic on import of attachments.
- If you upload data using the Supplier Products REST resource in Oracle Product Hub Portal Cloud, then the Transaction Type attribute:
  - Is available only for extensible flexfields, relationships, and categories.
  - Can only have the values SYNC and DELETE. A value of CREATE or UPDATE causes an error.
  - For single-row extensible flexfield data, can only have the value SYNC. A value of CREATE, UPDATE, or DELETE causes an error.

Related Topics

- Functions for Import Map Expressions
- Upload Products with Smart Spreadsheets
- Export Setup Data Using Offering or Functional Area
- Import Setup Data Using Offering or Functional Area

Functions for Import Map Expressions

You can create expressions using one or more source data columns and map them to master data attributes. For example, the Long Description attribute in Master Data may include information from the Item and Description columns of the Source Data.

The functions used to create expressions can be of type String, Math, Generic, and Calendar.

String Functions

The string functions available for creating expressions are listed in the following table.

Name	Description	Expression	Example
`toDate`	Converts a string value to a date value with the date format matching the date format in the context.	`toDate(expression)`	If Attribute1 = 10-31-1997, format = MM-dd-yyyy Depending on locale: `toDate([Attribute1]) = 10-31-1997 or 1997-10-31`
`toDateTime`	Converts a string value to a time stamp value with the time stamp format matching the import map time stamp format.	`toDateTime(expression)`	If Attribute1 = 2000.01.31 12:01:01, format = yyyy.MM.dd hh:mm:ss Depending on locale: `toDateTime([Attribute1]) = 2000.01.31 PST or 12:01:01 PM`
`concat`	Concatenates the specified character strings.	`concat(expression1, expression2, .....expression30)`	If Attribute1 = Item, Attribute2 = Description `concat([Attribute1], [Attribute2]) = ItemDescription`
`length`	Returns the length, in number of characters, of a specified string. The length excludes blank characters.	`length(expression)`	If Attribute1 = Item `length([Attribute1]) = 4`
`split`	Splits character string at the specified delimiter and returns the specified part of the string. Delimiter can be any regular expression or special character.	`split(expression, delimiter, partNumber)`	If Attribute1 = `Item#Description` `split([Attribute1],#,2) = Description`
`substring`	Creates a new string of specified length, starting from the specified character number in the original string.	`substring(expression, startPosition, length)`	If Attribute1 = `ItemDescription` `substring([Attribute1],0, 4) = Item`

Name	Description	Expression	Example
`insert`	Inserts a specified character string into the specified location in another character string.	`insert(expression1, integer1, expression2)`	If Attribute1 = `ItemDescription`, Attribute2 = Long `insert([Attribute1], 5,[Attribute2]) = ItemLongDescription`

`newLine`	Inserts a newline character at the end of the specified string.	`newLine()`	If Attribute1 = Item, Attribute2 = Description
			
			`concat([Attribute1], newLine(),[Attribute2]) =`
			
			`Item`
			
			`Description`

`uppercase`	Converts a character string to uppercase.	`uppercase(expression)`	If Attribute1 = `item` `uppercase([Attribute1]) = ITEM`
`lowercase`	Converts a character string to lowercase.	`lowercase(expression)`	If Attribute1 = `ITEM` `lowercase([Attribute1]) = item`

Math Functions

The math functions available for creating expressions are listed in the following table.

Name	Description	Expression	Example
`random`	Returns a pseudo-random number between 0 and 1.	`random()`	If Attribute1 = 25 `random()*([Attribute1]) = random number`
`round`	Rounds a numeric expression to n digits of precision.	`round(expression, integer)`	If Attribute1 = 10.45 `round([Attribute1],0) = 10`

Generic Functions

The generic functions available for creating expressions are listed in the following table.

Name	Description	Expression	Example
`nvl`	Returns the value of expression2 if the value of expression1 is	`nvl(expression1, expression2)`	If Attribute1 = blank, Attribute2 = Item, Attribute3 = Description

Name	Description	Expression	Example
	blank, else returns the value of expression1.		`nvl([Attribute1], concat([Attribute2], [Attribute3])) = ItemDescription`
`decode`	Returns the value of expression3 if the value of expression1 equals value of expression2, else returns the value of expression4.	`decode(expression1, expression2,expression3, expressiosn4)`	If Attribute1 = Item, Attribute2 = Item, Attribute3 = Match, Attribute4 = No Match `decode([Attribute1], [Attribute2],[Attribute3], [Attribute4]) = Match`
`toString`	Converts an object to its string representation.	`toString(expression)`	If Attribute1 = 4 `toString([Attribute1]) = 4`
`getCustomObjectValue`	Returns the value of custom object attribute corresponding to the specified custom object attribute and expression.	`getCustomObjectValue(custom customObjectReturnAttribute customObjectQueryAttributeA expression1, ...customObjectQueryAttribu expressionN)`	If `CustomObject = Manufacturer Details`, `CustomObjectAttribute1 = Media Inc.`, `CustomObjectAttribute2 = MI`, `CSV Column1 = MI` `getCustomObjectValue("CustomObject" "CustomObjectAttribute1", "CustomObjectAttribute2", [CSV Column1]) = Media Inc.`

getCategory	Returns the category corresponding to the specified From category in the given catalog mapping.	`getCategory(catalogMappingN fromCategoryCode)`	`If Attribute1 = Spoke Mapping, Attribute2 = Ceramic_Faucets`
			
			`getCategory([Attribute1], [Attribute2]) = Faucets`
			
			where, `Faucets` is the To category set corresponding to the From category `Ceramic_Faucets` in the catalog mapping `Spoke Mapping`.

getItemClass	Returns the item class corresponding to the specified From Category in the given catalog mapping.	`getItemClass(catalogMapping fromCategoryCode)`	`If Attribute1 = Supplier Mapping, Attribute2 = Peripheral_Devices`, and `getItemClass([Attribute1], [Attribute2]) = Electronics` where, `Electronics` is the item class set corresponding to the From category `Peripheral_ Devices` in the catalog mapping `Supplier Mapping`.

Calendar Functions

The calendar functions available for creating expressions are listed in the following table.

Name	Description	Expression	Example
`currentDate`	Returns the current date.	`currentDate()`	01/17/2017
`currentTime`	Returns the current date and time.	`currentTime()`	01/17/2017 10:30:45 AM
`dayName`	Returns the name of the day for a specified date.	`dayName(expression)`	If Attribute1 = 01/17/2000 `dayName([Attribute1]) = Monday`
`dayOfMonth`	Returns the number of the day of the month for a specified date.	`dayOfMonth (expression)`	If Attribute1 = 01/17/2017 `dayOfMonth([Attribute1]) = 17`
`dayOfWeek`	Returns the number of the day of the week for a specified date.	`dayOfWeek (expression)`	If Attribute1 = 01/17/2017 `dayOfWeek([Attribute1]) = 2`
`dayOfYear`	Returns the number of the day in the year for a specified date.	`dayOfYear (expression)`	If Attribute1 = 01/17/2017 `dayOfYear([Attribute1]) = 17`
`month`	Returns the number of the month for a specified date.	`month(expression)`	If Attribute1 = 01/17/2017 `month([Attribute1]) = 1`
`year`	Returns the year for a specified date.	`year(expression)`	If Attribute 1 = 01/17/2017 `Year([Attribute 1]) = 2017`

Import Item Attachments

Manage Item Attachments by Import

In addition to importing items, you can also import and upload the attachments related to the items to Product Hub. Attachments may include digital assets such as images, PDF files, and videos. You can also update and delete existing attachments by using import.

You can import item attachments by these methods:

- File-based data import (FBDI)
- Import maps

In addition to importing attachments, you can also add attachments to items using REST APIs as described here.

For the files that are to be imported as attachments, you can provide them to the import process by either:

- Compressing the files into a compressed file (recommended for ongoing incremental attachment imports)
- Uploading the files to Oracle WebCenter Content (recommended for initial migration or large volume attachments import for best performance. Note that any user with direct access to Oracle WebCenter Content and the FAFusionImportExport security group will be able to view all files in WebCenter Content.)

For the compressed file method, each compressed file must not be more than 500MB. If your compressed file size is larger than 500MB, then you should split it into multiple files. Each item batch must not have more than 5 to 10 compressed files and less than 5000 attachments should be imported per item batch. Including compressed files within compressed files is not recommended.

Identify Documents in Oracle WebCenter Content

If you have uploaded your attachment files to Oracle WebCenter Content, you need to identify the attachment documents to be imported.

To identify your attachments, use the GET_SEARCH_RESULTS search service of the Core Content Server for Oracle WebCenter Content to obtain the values of these attributes of an uploaded file:

File Attribute to obtain	Use attribute value for
dDocName This value also appears in the **Content ID** field of the user interface of WebCenter Content.	The value of **Document ID** in FBDI template spreadsheets and in import maps.
dID	The value of **Document Version Number** in FBDI template spreadsheets and in import maps.

Manage Attachments with File-Based Data Import

You can import, update, and delete attachments to items, item revisions, and trading partner items using file-based data import (FBDI).

1. Identify the source of your attachment files, in Oracle WebCenter Content, or in a compressed file.
2. Refer to the Oracle Fusion Cloud SCM: File-Based Data Import for SCM guide for more information about using FBDI to load data into interface tables and product tables. Use the spreadsheet template file for item import to specify your item data and item attachment data.

3. In the downloaded template file `ItemImportTemplate.xlsm`, specify your item attachment data in the EGP_ITEM_ATTACHMENTS_INTF sheet. The template file includes formatting details and example values.

Column Name	Column Description
Transaction Type	Indicates the action (CREATE, UPDATE, SYNC or DELETE) to be performed. If you're not sure whether an attachment for an item exists, use SYNC, which updates existing attachments or creates attachments if necessary.
Batch ID	The ID of the item batch that's to be used for importing attachments.
Batch Number	The number of the item batch that's to be used for importing attachments.
Item Number	The item number of the item to which the attachment is to be attached.
Organization Code	The organization of the item.
Revision	The item revision to which the attachment is to be attached.
Source System Code	The external source system from which data is being imported.
Source System Reference	The Spoke System Reference data or the Item Name from the external source system.
Trading Partner Item Number	The item number of the trading partner item being attached.
Trading Partner Number	The number of the trading partner providing the attachment.
Entity Type	The entity for which the attachment is to be imported: Item, Item Revision, Customer Item, Competitor Item, Supplier Item or Manufacturer Part Number.
Batch Doc Name	The name of the compressed file containing the attachments to be imported.
Attachment Category	The category of the item attachment being imported. Examples: Image, Miscellaneous. If the attachment category of an existing attachment is changed to another attachment category with the Primary attribute set to Yes through import, and a primary attachment already exists for that attachment category on the item, then the attachment being imported will be set as the primary attachment after successful import. The Primary attribute of the existing attachment will be unchecked after successful import.
File Type Name	The type of attachment being imported. Values are: File, Repository File/Folder, URL, or Text.

Column Name	Column Description
File URL Text	The file name or URL of the file to be attached to an item.
Document ID	The ID in Oracle WebCenter Content of the document to be imported.
Document Version Number	The revision number in Oracle WebCenter Content of the document to be imported.
Title	The title of item attachment being imported.
Shared	Indicates whether the attachment is a shared attachment.
Primary Category Flag	Optional. Marks the attachment category as primary for the attachment. For example, if there are multiple item images attached to an item, the primary image appears first when you view that item.
New Attachment Category	The new category of the item attachment being updated by import.
New File URL Text	The name of the updated file or URL to be attached to an item.
New Title	The new title of the updated item attachment being imported.

4. If you're importing item attachment files that were uploaded to Oracle WebCenter Content:
    - Select `Repository File/Folder` in the **File Type Name** column.
    - Either do this:
        - **Batch Doc Name**: Leave the column empty.
        - **Document ID** and **Document Version Number**: Specify the values.

      Or this:
        - **Batch Doc Name** column: Specify the name of the compressed file.
        - **Document ID** and **Document Version Number**: Omit the values.
5. Generate a `.csv` file from the template.
6. Upload the `.csv` file, and the compressed file containing attachments (if you're using one), to the account `scm/item/import`.

   The size of the compressed file should be kept under 2 GB.

7. In the Scheduled Processes work area:
   Schedule the process **Load Interface File for Import** to load the attachment data to the interface tables.
   Schedule the process **Item Import** to import the attachments from the interface tables to the product tables.
8. During import:
   - If you provided the attachment files by uploading them to Oracle WebCenter Content, then the files with the specified Document ID and Document Version Number from WebCenter Content are added to the item, item revision, or trading partner item as attachments.
   - If you provided the attachment files using a compressed file, then the files from the compressed file are extracted and added to item, item revision, or trading partner items as attachments.

Manage Attachments with Import Maps

You can import, update, and delete attachments to items, item revisions, and trading partner items using an import map.

1. Identify the source of your attachment files, in Oracle WebCenter Content, or in a compressed file.
2. Create an import map and map the columns of the source data file to the attachment attributes listed in this table, in the **Attachment** node in the Master Data region of the import map.
   You can't save an import map as external if any one of these attachment attributes are mapped: New Category, New File Name, or New Title.

Attachment Attribute	Attribute Description
Attachment Entity	The entity for which the attachment is to be imported: item, item revision, customer item, competitor item, supplier item or manufacturer part number.
Category	The category of the item attachment being imported. If the attachment category of an existing attachment is changed to another attachment category with the Primary attribute set to Yes through import, and a primary attachment already exists for that attachment category on the item, then the attachment being imported will be set as the primary attachment after successful import. The Primary attribute of the existing attachment will be unchecked after successful import.
Description	The description of the item attachment being imported.
Document ID	The ID in Oracle WebCenter Content of the document to be imported.
Document Version Number	The revision number in Oracle WebCenter Content of the document to be imported.
File Name	The file name or URL of the file to be attached to an item.
File Type	The type of attachment being imported. Values are: File, Repository File/Folder, URL, or Text.

Attachment Attribute	Attribute Description
New Category	The new category of the item attachment being updated by import.
New File Name	The name of the updated file or URL to be attached to an item.
New Title	The new title of the updated item attachment being imported.
Primary	Optional. Marks the attachment as the primary attachment. For example, if there are multiple item images attached to an item, the primary image appears first when you view that item.
Sequence	Optional. Marks the sequence of the attachment. For example, if there are multiple item images attached to an item, the image appears on the item in the indicated sequence when you view that item.
Shared	Indicates if the attachment is shared with another entity.
Title	Title of the item attachment being imported.
Transaction Type	Indicates the action (CREATE, UPDATE, SYNC or DELETE) to be performed during import. To delete an existing attachment by import, select DELETE. To update an existing attachment by import, select UPDATE. If you're not sure whether an attachment for an item exists, use SYNC, which updates existing attachments or creates attachments if necessary.

3. Create an item batch.
    - If your attachment data is in a compressed file, select the **Upload from File** action and upload the item data file and the compressed file containing item attachments to be imported.
    - If your attachment data is in Oracle WebCenter Content, map the source data columns to the master **Document ID** and **Document Version Number** attributes in the **Attachment** node of the **Attributes** table in the Master Data region. Then select **Upload from File** from the **Actions** menu and upload the item data file to be imported.
4. Submit the batch to import the item attachments.

Manage Existing Attachments

After importing new attachments, you can update or delete existing attachments using either file-based data import (FBDI) or import maps.

To update or delete existing attachments, the high-level tasks are:

1. Decide whether to import by FBDI or by import map. This may have been decided by your previous imports.

2. Identify each existing attachment to be updated or deleted.
3. Set the import **Transaction Type** for the attachment to UPDATE, DELETE, or SYNC. SYNC updates an attachment if it exists, or creates a new attachment if it doesn't exist.
4. If updating the attachment, provide the new attachment's category, file name, and title.

The task details are provided in this table:

Task	FBDI	Import map
Identify the existing attachment	Verify the correct values for the columns: • Attachment Category • File URL Text • Title See the identification logic in the next table.	Verify the correct values for the columns: • Category • File Name • Title See the identification logic in the next table.
Update the existing attachment	Set Transaction Type to UPDATE or SYNC Provide values for the columns: • New Attachment Category • New File URL Text • New Title	Set Transaction Type to UPDATEor SYNC Provide values for the attributes: • New Category • New File Name • New Title
Delete the existing attachment	Set Transaction Type to DELETE	Set Transaction Type to DELETE

Note:

- To update an existing attachment of the File or Repository File/Folder attachment type by uploading a new file, you should use only the compressed file import method.
- To create or update a particular attachment of Repository File/Folder attachment type, you should specify the attachment title and description in only one row of the data file and not all rows.

The identification logic for updating or deleting existing attachments depends on the type of the attachment, as described in this table:

Attachment Type	Identification Logic
File Repository File/Folder URL	The existing attachment will be identified during import using a combination of these attributes: • The attachment category • The file name, URL, or text If no attachments are found with that combination, then the import process fails. If multiple attachments are found with that combination, then the attachment title is also used for identification. If multiple attachments are still found with that expanded combination, then the import process fails.

Attachment Type	Identification Logic
Text	The existing attachment will be identified during import using a combination of these attributes: • The attachment category • The attachment title If no attachments are found with that combination, then the import process fails. If multiple attachments are found with that combination, then the import process fails.

Import Shared Attachments

You can share the same attachment among multiple items

The high-level process for importing shared attachments is:

1. Designate an attachment on an existing item as shared.
2. Import attachments to other items by referencing the sharing data from the source item.

The detailed process for importing shared attachments is:

1. For the item that's the source of the attachment to be shared, create a shared attachment through either of these ways:
    - On the Attachments tab of the item, select **Actions** > **Add Attachment**. In the Details pane for the attachment, select **Shared**.
    - Perform an attachments import using the compressed file method that's described elsewhere in this topic. Be sure to select **Shared** when importing the first attachment.
2. For the other items that are sharing the attachment, create an attachment in each item, using the data listed in the following table, either through an import map or by FBDI item import.
    - For import maps, map the attributes.
    - For FBDI item import, pass the attribute values in the data template file (on the EGP_ITEM_ATTACHMENTS_INTF sheet of the `ItemImportTemplate.xlsm` file).

Attribute	Value
Shared	Yes
File Type Name	Repository File/Folder
File URL Text	The name of the attachment file in the source item
Document ID	In WebCenter Content, the ID (dDocName) of the attachment file in the source item
Document Version Number	In WebCenter Content, the version number (dID) of the attachment file in the source item

Import Specific Entities

When importing specific entities, you need to provide specific information for certain entries.

You need to provide some specific information when importing:

- Item images
- Item revision attachments
- Trading partner item attachments
- Attachment descriptive flexfields

Attachment Entity	FBDI Template File	Import Map
Item images	Enter `Image` in the **Attachment Category** column.	Enter **Image** in the Category column.
Item revision	Enter the specific item revision in the Revision column, and select `ITEM_REVISION` in the **Entity Type** column.	Map the source Revision column to the master data **Item Revision** > **Revision** column. Map the source Attachment Entity column to the master **Attachment** > **Attachment Entity** column. Specify ITEM_REVISION in the source file column that maps to the **Attachment** > **Attachment Entity** attribute.
Trading partner item	Enter the trading partner item data in the Trading Partner Item Number and Trading Partner Number columns and specify CUSTOMER_ITEM, COMPETITOR_ITEM, SUPPLIER_ITEM or MANUFACTURER_PART_NUMBER in the **Entity Type** column.	Map the source TPI columns to the master **Trading Partner Item** > **TPI** attributes. Map the source Attachment Entity column to the master **Attachment** > **Attachment Entity** column. Specify `CUSTOMER_ITEM`, `COMPETITOR_ITEM`, `SUPPLIER_ITEM`, or `MANUFACTURER_PART_NUMBER` in the source column that maps to the master **Attachment** > **Attachment Entity** attribute.
Descriptive flexfields	Enter the Descriptive Flexfields values in the attachment **Descriptive Flexfields** columns.	Map the source Descriptive Flexfields columns to the master Descriptive Flexfields attributes in **Attachment** > **Additional Attributes**.

Add Attachments Using REST API

You can use REST APIs to add files in Oracle WebCenter Content as item and item revision attachments, and as product attachments.

1. Upload your attachment files to Oracle WebCenter Content.
2. Identify the source of your attachment data, in Oracle WebCenter Content, using the GET_SEARCH_RESULTS search service of the Core Content Server for Oracle WebCenter Content to obtain the values of dDocName and dID for an uploaded file.

3. Once the files are uploaded to Oracle WebCenter Content, you can use the dDocName and dID to:
    - Use the POST action on the Item Attachments child-resource of the Items Version 2 REST API to add the files as item level attachments.
    - Use the POST action on the Item Revision Attachments child-resource under the Item Revisions child-resource of the Items Version 2 REST API to add the files as item revision level attachments.
    - Use the PROCESS action of the Product Uploads REST resource to add the files as product attachments.

      The Product Uploads REST API uses import maps to upload the data from the source data file to the staging interface tables. When calling the Product Uploads REST API, you need to specify:

        - The import map to use for uploading the data to staging interface tables.
        - The Oracle WebCenter Content location of the source data file (CSV or XML) containing the item data. You can upload the source data file to the `/scm/item/import/` account.
        - Either:
            - The Oracle WebCenter Content location of the compressed file containing attachment files. You can upload the compressed file to the `/scm/item/import/` account. Using a compressed file is recommended.
            - An import map in which you have mapped the Document ID and Document Version Number attributes.
    - During the POST or PROCESS action, the file with the specified dDocName and dID from Oracle WebCenter Content is added to the item as a non-shared attachment.
    - The user who uses these REST APIs should be the same user who uploads the files to Oracle WebCenter Content.
4. Refer to the REST API for Oracle Fusion Cloud SCM guide for more information about using these REST APIs.

Related Topics

- Oracle Fusion Cloud SCM: File-Based Data Import (FBDI) for SCM
- REST API for Oracle Fusion Cloud SCM
- GET_SEARCH_RESULTS search service of the Core Content Server, in the Oracle Fusion Middleware Services Reference for Oracle WebCenter Content guide
- Video: Import Item Attachments Using Manage Item Batches

Import Descriptive Flexfields

How You Import Descriptive Flexfields

You can import descriptive flexfields from your source file using import maps. You add your source file that has the descriptive field details to the import map and then create a mapping with the master data.

You define mappings for flexfields in the Source Data table on the Create Import Map or the Edit Import Map page. You can access this page from the Manage Import Maps task in the Product Information Management work area.

You can import descriptive flexfield data related to these entities:

- Item

- Item Revision
- Item Relationship
- Trading Partner Item
- Attachment
- Structure

Each of these entities have an attribute group named Additional Attributes that holds the descriptive flexfield data. You can map these descriptive flexfields with the source file to create an import map, and then import the data.

Here's some additional information for Item Relationship, Trading Partner Item, and Structure master attributes:

- For the Item Relationship entity, you can define descriptive fields in the Additional Attributes attribute group. Within Additional Attributes, you have the Entity attribute where you specify that the descriptive flexfields belong to which relationship type, such as Related Item, GTIN and Cross-Reference.
- For the Trading Partner Item entity, you can define the descriptive flexfields for TPI and TPI Relationship in the Additional Attributes attribute group. Within Additional Attributes, you have the Entity attribute where you specify that the descriptive flexfields belong to which TPI or TPI Relationship type, such as MPN, Supplier Item, Customer Item, and Competitor Item.

  You import TPI Relationships by mapping item attributes in the Item entity, and by mapping TPI attributes in the Trading Partner Item entity. In addition to these, if you also map the descriptive flexfields in Additional Attributes, then the descriptive flexfield is imported as TPI Relationship descriptive flexfield (not as TPI descriptive flexfield).

  Also, you import TPIs by mapping only the TPI attributes in the Trading Partner Item entity. In addition to these, if you map the descriptive flexfields in Additional Attributes, then the descriptive flexfield is imported as TPI descriptive flexfield (not as TPI Relationship descriptive flexfield).
- For the Structure entity, you can define the descriptive flexfields for Structure Header, Component, Substitute, and Reference Designator in the Additional Attributes attribute group. Within Additional Attributes, you have the Entity attribute where you specify that the descriptive flexfields belong to which Structure entity: Item Structure, Component, Substitute or Reference Designator.

FAQs for Item Import

What are the required attributes for adding items to a batch?

If the source system that you're importing from isn't Product Information Management Data Hub, then your spreadsheet for the import must include values for these attributes:

- Source System Reference
- Source System Reference Description
- Source System Code
- Transaction Type
- Organization Code
- Batch ID

  You must copy the value for the batch ID from the batch's row on the Manage Item Batches page.

Can I map attributes of multiple item classes in a single import map?

Yes. While mapping the attributes on the Create Import Map or Edit Import Map page, you can select an item class from the Item Class field in the Master Data region and then map the item class-specific attributes.

You can then select another item class in the Item Class field and map its attributes.

Can I change the item class of an item during import using an import map?

Yes. You can specify the new name of the item class in the source data file column.

While creating or editing an import map, map the source column to the New Item Class Name attribute in the Main attribute group under the Item node in the Master Data region.

Can I delete a batch if it is not assigned to me?

No, you can only delete item batches that are assigned to you.

In addition, you cannot delete an item batch with a status of Active.

Related Topics

- Item Batches

Can I import multibyte characters using import maps?

Yes. You can import multibyte characters using import maps by setting the Encoding Type attribute to UTF-16 on the Create Import Map page and by uploading a data file that is encoded to UTF-16.

Can I import double quotation marks using CSV files and import maps?

Yes. You can import double quotation marks using CSV files and import maps by escaping the double quotation marks. To escape the double quotation marks, enclose them within another double quotation mark.

Here are a few examples to import double quotes. If you enter the following values in a CSV file:

1. """Laptop with 15 inch display."""
2. "Laptop with ""15 inch"" display."
3. "Laptop with 15 inch"" display."
4. """Laptop with ""15 inch"" display."""
5. """Laptop with 15 inch"" display."""

Import map imports the following values:

1. "Laptop with 15 inch display."
2. Laptop with "15 inch" display.
3. Laptop with 15 inch" display.
4. "Laptop with "15 inch" display."
5. "Laptop with 15 inch" display."

How can I set existing attribute values of items to null during import?

Replace the existing attribute values with a predefined value that matches the data type (character, date, date-time, number, and so on) of the values you want to set to null. See the following table for predefined values.

Attribute Type	FBDI	Import Maps (CSV and XML)	ADFDi (Excel)	Item Version 2 SOAP Web Service
Character	`#NULL`	`#NULL`	`#NULL`	`xsi:nil="True"`
Date	`#NULL`	`#NULL`	Not Supported	`xsi:nil="True"`
Date-time	`#NULL`	`#NULL`	Not Supported	`xsi:nil="True"`
Number	`9.99E+125`	`#NULL`	`9.99E+125`	`xsi:nil="True"`
Number, with precision X	For precision of X, enter 9, X times. Example for precision of 6: `999999`	`#NULL`	For precision of X, enter 9, X times. Example for precision of 6: `999999`	`xsi:nil="True"`

Note: To nullify all fields of an existing row of a multi-row attribute, you must set the Transaction Type column to DELETE in the FBDI or smart spreadsheet.

How can I import line breaks when importing items using import maps?

When you enter data for the attributes in the import map, make sure you use the Enter key to add a new line and use double quotes for the entire text so that during import, the data is imported properly.

For example, use:

```
"dddd
ccccc"
```

> **Note:** The double quotes are added automatically if the CSV data is prepared in Excel. Only if the data file is prepared manually, you must explicitly add the double quotes.

Why can't I change the edit item batch options for new item request or change order?

Editing of the new item request and change order options on the Item Batch page is restricted when the profile option EGP_CONVERSION_MODE has a profile option value of **Yes**.

The **Yes** option is used for performance reasons when initially importing items in large quantities. The Item Import scheduled process will then skip the security check for new item request and change order policies.

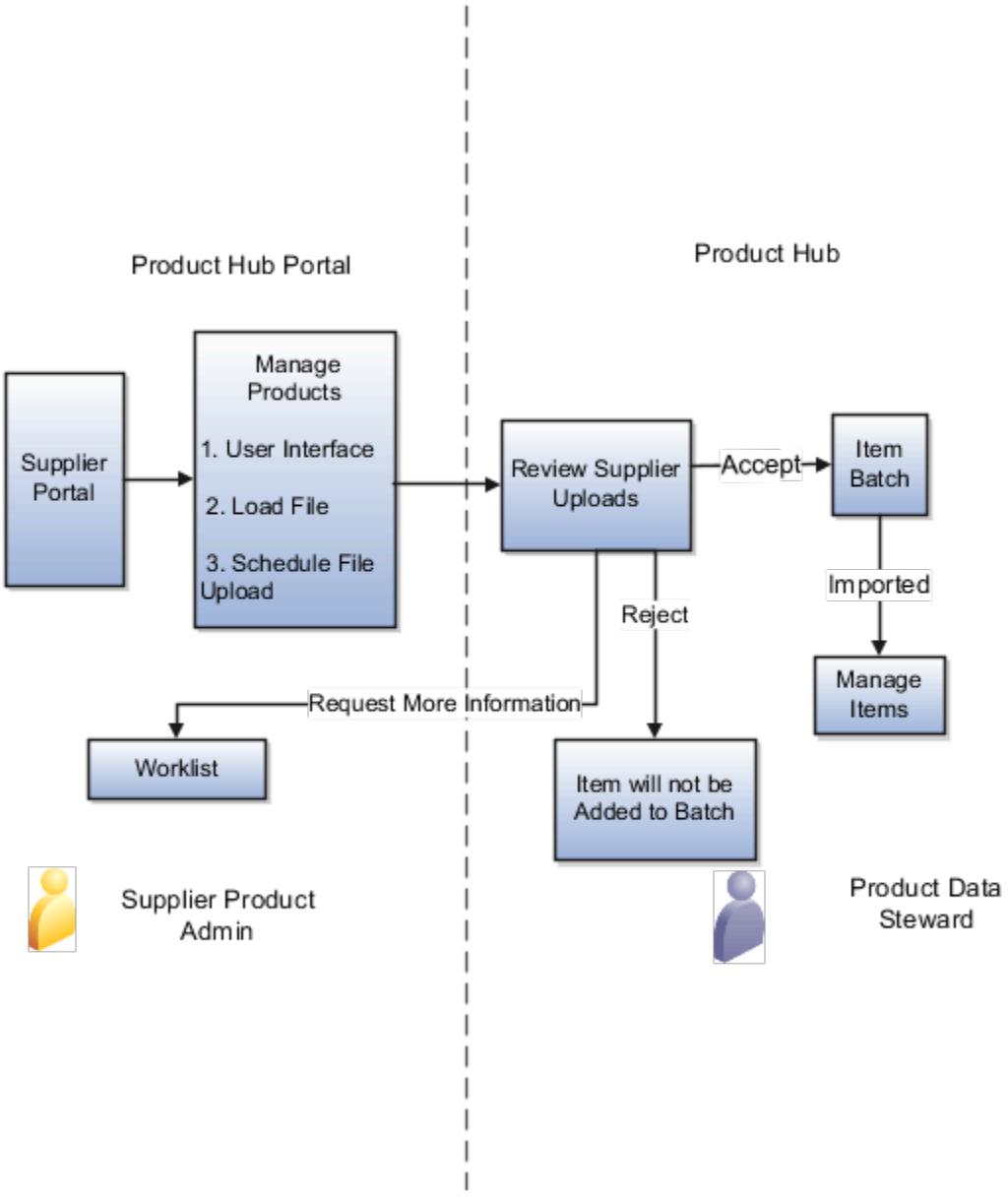
Use these steps to change this setting.

1. From the Setup and Maintenance work area, select the Product Management offering.
2. Select the Items functional area.
3. Select the Manage Item Profile Options task.
4. Select the **EGP_CONVERSION_MODE** profile option.

24 Supplier Products

Overview of Managing Supplier Products

Supplier product administrators can create products in Product Hub Portal that are sent to the Product Hub for review.



Users can create supplier products in the Product Hub Portal UI, using the smart spreadsheet or through a scheduled upload. The product data steward reviews the products and either requests more information, rejects, or approves the products. Products that need more information or are rejected are sent back to the supplier. The supplier can view the

product status on the Manage Products page. Products that are accepted are added to an item batch. Products that are rejected can be resubmitted by the supplier. When the item batch completes, the products are available in Product Hub with a status of Imported.

Overview of Creating Supplier Products

Suppliers can create products in these ways in Oracle Product Hub Portal:

- Through the Create Product task in the Product Hub Portal.
- By uploading a file.
- Through a scheduled product upload.

Create Supplier Products

As a supplier, you can manage your own products from Product Hub Portal.

You can create, edit, and bulk upload the products, as well as monitor the status of the products. When you upload the products, your products are stored in a staging area.

While creating and editing the products, you can provide data for the various product attributes, as well as upload product specific attachments.

To create a product:

1. In the Supplier Portal work area, select the **Manage Products** task from the task list.
2. Select **Actions** > **>** > **Create**.
3. Select the category for the product that you want to create.
4. You must provide values for these required fields:
    - Category
    - Product
    - Description
    - Primary Unit of Measure

    For multi-row extensible flexfield rows, you must provide a value for the unique row identifier attributes.

    Other fields may be required. You can save a product without providing values for all of them, including required extensible flexfields.

    > **Note:** If you're creating products using product uploads, then you must provide values for all required extensible flexfields.

5. Optionally, attach attachments to the product.
6. Optionally, associate the supplier organizations to the product.
7. Click **Save**. The **Status** field displays the value **DRAFT**.
8. After entering the values for all the required attributes, click **Submit** to submit the product.

Consider these points when you create a product:

- A saved product remains in a Draft status until you submit it. After you submit the product, the Product Data Steward can review the submitted product before importing it into Product Hub.
- Once the Product Data Steward import the products into Product Hub, an item is automatically created in Product Hub and a Spoke Item Relationship is created for the item. The spoke system is set to Supplier's Spoke System and the spoke item number is set as the product, as uploaded by the supplier in Product Hub Portal.
- A Product Data Steward can also import the product as a Supplier Item Relationship or MPN Relationship by asking the suppliers to upload their products in Product Hub Portal using an import map. The import map must have the mappings for these Trading Partner Item Relationships.
- As a supplier, you can also specify the MPN Relationship on the Create Product page while creating a product in Product Hub Portal.

Add Supplier Organization Associations

Suppliers can associate their organization addresses to products and specify the corresponding extensible flexfield values. They can search for their addresses using Global Location Numbers if they're set up for the addresses. Product Data Stewards can then optionally review the supplier provided data before importing it in Oracle Product Hub as supplier organization associations.

To add the supplier organization associations:

1. On the Create Product or Edit Product pages, click the **Supplier Organization Associations** tab. The Supplier Organization Associations page is displayed.
2. Search and select the required address.
3. Specify the purchase price, customer price, and the margin.
4. Submit the changes.

> **Note:** The **Supplier Organization Associations** tab is displayed only if the Product Data Steward has added the supplier-level extensive flexfield attribute groups to the **Product Hub Portal** sub-tab of the item class associated to the category of the product being created or edited.

Suppliers can delete an address only if the product is in the **Draft** status. Once the product is submitted, the delete action is disabled and suppliers can't delete the address. To delete supplier organization associations of non-draft status products, you can use Supplier Products REST.

Supplier Product Uploads

Suppliers can upload product data, using a file, through Oracle Product Hub Portal.

Upload Flow

The following table describes the basic product upload flow when your supplier uses Product Hub Portal. This flow assumes that you're responsible for managing import of data to production tables, and that you have set up a spoke system for your product data supplier.

Who (User)	Where (Location)	What (Objects)	How (Action)
You	Edit Import Map page	Import map	Select the **External** option and choose the suppliers who will upload data. Select a source data file and map columns of source data to master data attributes.
You	Edit Import Map page	Import map source data file	Use the Generate Templates action to generate templates that suppliers can download in product hub portal.
Your supplier	Product Uploads page in Product Hub Portal	Import map source data file	Click **Download Templates** and download the source data template file, which is named for the corresponding import map.
Your supplier	Downloaded Template	Smart spreadsheet	Enter the product data and generate the data file to be uploaded to product hub portal.
Your supplier	Product Uploads page	Generated data file	Click **Upload File**, then specify the category and data file. A default name for the upload is provided. Click **Upload** to start the upload of the source data file to the interface tables.
You	Review Supplier Uploads page	Product information	Review and accept or reject products uploaded by suppliers and create item batches.
You	Manage Item Batches page	Item batch containing the data upload	Review the new item batch and import options for the spoke system definition for your supplier.
You	Manage Item Batches page	Item batch containing the data upload	The item batch page includes details about the outcome of the import process.
You Your supplier	Product Information Management work area Supplier Portal work area	Worklist notifications email messages	Events in the flow generate informational messages or emails, prompting you and your supplier to take action as needed.
Your supplier	Schedules page	Schedules	Examine the status of the schedule. Stop the schedule if desired. Edit future runs of the schedule if it hasn't completed them.

Note:

- Suppliers can't import structure component substitutes or reference designators from Oracle Product Hub Portal.
- When subsequent supplier product upload is performed, the newly uploaded product data is merged with the existing product data.
- When you upload a product with an incorrect category, you can't re-upload a new file with the correct category until you delete the existing product. To delete the existing product, use the Supplier Product REST resource and then you can upload the new data file with the correct product category.

Delete Attribute Values from Production

Supplier product administrators can delete attribute values of a product in Product Hub Portal and submit the changes for import into Oracle Product Hub. On successful import, the attribute values on the production item are deleted.

- Be aware of the following scenario, and its effect on the attributes **GTIN**, **GTIN UOM**, **Manufacturer Part Number**, and **Manufacturer Name**:

    a. You have previously imported a supplier product into production with GTIN or MPN relationships.
    b. The supplier deletes the attribute value in Product Hub Portal.
    c. You re-import the supplier product.
    d. GTIN or MPN relationships aren't deleted from production items after import if values are deleted from Oracle Product Hub.

Related Topics

- Item Batches
- Importing Item Data Using Import Maps

Upload Products with Smart Spreadsheets

Suppliers can download the Smart Spreadsheets that are exposed to them by the Product Data Stewards. They can use these spreadsheets to fill out their product data and generate the data files which can then be uploaded to Product Hub Portal.

The Smart Spreadsheets contain the metadata information of the item attributes that are mapped in the Import Map to which the spreadsheet belongs to. The suppliers can use this information to accurately fill in their product data. The metadata information could be valid values that can be entered for the item attributes, the maximum number of characters that can be entered for an item attribute, the data type of the item attribute, and so on.

Uploading Data Using Smart Spreadsheets

In the Product Hub Portal, supplier product administrators can download the smart spreadsheets exposed by the Product Data Stewards, enter data, and create and upload data files. The spreadsheet contains two sheets-Instructions sheet and Data sheet. The Instructions sheet provides the steps to enter and validate data, and then generate a data file. The Data sheet is where you will enter the data.

You can use smart spreadsheets to upload data to the Product Hub Portal as follows:

1. Download the smart spreadsheet template as follows:
    a. In the Supplier Portal work area, click the **Manage Products** task.
    b. On the Manage Products page, select the **Product Uploads** infolet.
    c. Click **Download Templates** to download and save a smart spreadsheet template.
2. Enter data into the smart spreadsheet.
3. Validate data in the smart spreadsheet: On the **Add-Ins** tab, click **Validate** to check the data entered in the smart spreadsheet against the attribute metadata. The rows that fail the validation are highlighted in the Status column. The Status column isn't included in the generated data file.
    - Errors indicate an invalid value or a missing value for the Item Number and Spoke Item Number required attributes.
    - Errors also display if a value exceeds the character limit or doesn't follow the allowed format.
    - Warnings indicate a missing value for the required attributes that are optional if you're updating data.
    - If a row contains both an error and warning, it's highlighted with the higher severity status, that's an error.
    - Resolve all errors and warnings, and click **Validate** to confirm.
4. Generate a delimited data file from the smart spreadsheet: On the **Add-Ins** tab, click **Generate Data File**. The data file is generated from the validated spreadsheet.
5. Upload the data file to Product Hub Portal as follows:
    a. On the Manage Products page, select the **Product Uploads** infolet.
    b. Click **Upload File**. The Upload File dialog box displays.
    c. From the **Category** drop-down list, select the product category for which you want to create the products.
    d. Select a template in the **Template** field to upload the product data. Select the same template that was downloaded to fill in the product data.
    e. Upload the data file in the **File** field. Optionally, you can also upload a ZIP file containing product attachments, using the **Attachments** field.
    f. Enter a name in the **Upload Name** field.
    g. Click **Upload** to upload the data file.

The newly created or updated products are submitted to the Product Data Stewards for review. On successful import, products are created or updated in the Product Hub.

Source Data Files

The source data file contains the product data to be uploaded to the Product Hub staging tables. Before a supplier can enter data in the file, you must associate the file with an import map and map its columns to attributes in the item master data table the import map. Source data files can be in the text or XML formats. A supplier downloads the source data file template, which has the same name as the import map, from the Product Uploads page.

The following example shows product data in text format.

```
Item_number,Org,Item Class,Primary UOM,LifeCycle Phase,Status
IMB_SP_121610000_Item_1,V1,Root Item Class,Each,Design,Active,

IMB_SP_121610000_Item_2,V1,Root Item Class,Each,Design,Active

 IMB_SP_121610000_Item_3,V1,Root Item Class,Each,Design,Active
```

The following example shows product data in XML format.

```
<?xml version="1.0"?>
<ItemData>
 <Item>
 <ItemNumber>IMB_SP_121610000_Item_1</ItemNumber>
 <Org>V1</Org>
 <UOM>Each</UOM>
 <Phase>Design</Phase>
 <Status>Active</Status>
 </Item>
 <Item>
 <ItemNumber>IMB_SP_121610000_Item_2</ItemNumber>
 <Org>V1</Org>
 <UOM>Each</UOM>
 <Phase>Design</Phase>
 <Status>Active</Status>
 </Item>
 <Item>
 <ItemNumber>IMB_SP_121610000_Item_3</ItemNumber>
 <Org>V1</Org>
 <UOM>Each</UOM>
 <Phase>Design</Phase>
 <Status>Active</Status>
 </Item>
</ItemData>
```

Review Supplier Uploads

Product data stewards can review the products submitted by all suppliers that they have access to in Product Hub.

Managing Products by Product Data Stewards

After reviewing products submitted by suppliers, product data stewards can then choose to selectively import the products into Product Hub by adding them to item batches. Once the items are added to item batches, they're copied from the supplier staging area to the item batch, from where they're imported into Product Hub. If blending rules are set up by the product data stewards then the product data of multiple suppliers is blended before it's imported into Product Hub. The data stewards can also choose to request more information from the suppliers for the submitted products, or reject the products.

Reviewing Supplier Uploads

Product data stewards can view the product uploads and products submitted by all suppliers in Product Hub from the Review Supplier Uploads page. They can then take necessary actions, such as importing the products in Product Hub, requesting more information for the submitted products and rejecting the products.

From the Review Supplier Uploads page, product data stewards can review the product uploads and products submitted by all suppliers in Product Hub.

Importing Supplier Products into Product Hub

Product data stewards can selectively import the submitted products into Product Hub by adding them to item batches.

When the products are added to item batches, they're copied from the supplier staging area to the item batch. This action keeps a copy of the product data in the supplier staging area. The products added to the item batches can then be imported into Product Hub. Changes made to the products in Product Hub aren't visible to suppliers in Product Hub Portal.

Rejecting Supplier Products

Product data stewards can reject the products that they don't want to import into Product Hub. The suppliers can then edit the rejected products in Product Hub Portal, make any needed changes, and resubmit the product for upload.

How You Can Schedule File Uploads in Product Hub Portal

Your supplier can place product data in the Oracle WebCenter Content and schedule automated uploads of that data at defined intervals. The automated upload requires a manifest file, which identifies one or more source data files and corresponding optional attachment files to be uploaded.

To schedule an automatic upload, your supplier must:

1. In Oracle WebCenter Content, place one or more source data files in Contribution Folders.
2. Provide a manifest file, in CSV format. The manifest guides the upload process to the source data files for a specified schedule. A separate product upload will run for each source data file. The manifest must contain the following columns:
    - Template: The name of the item map template associated with each data source file included in the manifest.
    - File Path: The relative path in Oracle WebCenter Content to each data source file to be uploaded.
    - Attachments File Path: The relative path in Oracle WebCenter Content to each optional references file to be uploaded.
3. In Oracle WebCenter Content, place the manifest file in Contribution Folders.
4. On the Schedules page of the Product Hub Portal, create a schedule.
5. Enter a name for the schedule, and the path to the manifest file in Oracle WebCenter Content, such as `/Contribution Folders/SPManifest.csv`.
6. Specify the frequency and start date for the scheduled uploads. The frequency should accord with your supplier's upload plans.

    > **Note:** To ensure that data isn't uploaded redundantly, the manifest file is marked as processed after each run, and the schedule won't run again unless an unprocessed file is detected.

7. Since a schedule can include multiple uploads, they're each assigned a number. Specify the starting number and numbering increment. You can optionally specify a text prefix for each upload name.

Worklists and Notifications in Product Hub Portal

As you and your supplier proceed with the product upload and import process, you're both informed of its progress and status, by workflow notifications. These messages indicate what action you should take next.

- Worklist notifications are sent to both your supplier and to you.
- Notifications appear in the worklist.
- Workflow notifications contain the following information:
    - Details about the upload job, such as the assignee, originator, task number, and supplier name.
    - Recommended actions related to the status of the workflow event. The actions differ for different events.
    - Details about the product data in the upload, such as the item class, import map name, and data template file name.
    - Links to the files used by the upload, such as the data template file. The links point to Oracle WebCenter Content.

      .
    - The name and number of any item batches created by a successful upload.

1. If a file upload fails, then you and your supplier receive a notification. The recommended action is to correct the errors and upload the file again. In Product Hub Portal, your supplier can click the **Download Errors** button in the Product Upload dialog to download the errors file.
2. If a file upload succeeds, and the schedule of the item batch is set to On Data Load, then you and your supplier receive a notification. The recommended action informs you that the scheduled import is in progress. The item batch resulting from the upload is identified.
3. If a file upload succeeds, and the schedule of the item batch is set to Manual, then you and your supplier receive a notification. The recommended action is to initiate an import of an item batch. The item batch resulting from the upload is identified. A link is provided to the Manage Item Batches page.
4. You receive a notification when a supplier submits a product by creating or updating it from the Create or Edit pages in Product Hub Portal. You also receive a notification when a supplier resubmits a product that had been rejected but was edited to fix the issue.

   Your supplier receives a notification when you request more information for a submitted product, while reviewing it from Review Supplier Upload page.

   Your supplier receives a notification when you raise a subscription request for supplier products from the Manage Data Pool Subscriptions page.

25 Data Quality

Check Data Quality

Data Quality

The quality of product data is enhanced with data quality, which provides classification, standardization, and matching to refine item data and to prevent duplicate items. Item data can be inconsistent, especially when imported from external sources.

Data quality involves the following:

- Data quality checking
- Data quality attributes
- Classification
- Standardization
- Matching

Data Quality Checking

When you check data quality, data quality applies classification, standardization, and matching to the items that you are creating, editing, or importing, and then presents you with the results for acceptance.

You can check the quality of your product data:

- When you are creating a single item interactively
- When you are creating multiple items interactively
- When you are editing an item interactively
- By running a periodically scheduled process that checks the items in an item class
- When you are importing a batch of items

Data Quality Attributes

Data quality depends primarily on the values of designated attributes. You define the detailed rules for the relationships between these data quality attributes, which are used for either standardization or matching. Then, you designate these attributes at the item class level.

Categorization

Categorization includes suggested assignments of items to one or more catalogs and to categories within those catalogs. For example, if the Power attribute equals 10 watts and the Capacity attribute equals 300 ohms and the Capacitance attribute equals 10 microfarads, then the item belongs to the Capacitor category. Categorization rules are defined using the Manage Item Rule Sets task.

Standardization

You can define rules that make the values of specified item attributes consistent with desired norms. For example, you might convert all Fahrenheit temperature values to Celsius, or all English measurements to metric. You can also use standardization to merge divergent forms of attribute values into a single consistent form, such as by changing the unit of measure values **in.** and **IN** to **Inches**. Standardization rules are defined using the Manage Item Rule Sets task.

Matching

You can define rules for detecting when an item that is being created or imported matches an item that already exists in the Oracle Product Hub repository. For example, suppose that if power supply items differ only in the finish style of the casing, then they are considered to match existing items. To get this result, you would not use the hypothetical Casing Style attribute as a match-rule attribute.

Related Topics

- Check Data Quality for Items
- How can I use attribute groups to control data quality?
- Available Options to Check Data Quality for Item Batches
- When does data quality checking occur?
- Overview of Product Rules

Check Data Quality for Items

The following scenarios illustrate the ways in which you can check data quality when working with items.

- Creating a single item
- Creating multiple items
- Editing an item
- Importing an item batch

Creating a Single Item

To check data quality when creating a single item interactively:

1. On the Create Item page, select **Actions** > **Check Data Quality**.
2. Examine the Check and Apply Data Quality Results window, which displays the classification, standardization, and matching values .
3. If the data quality results are satisfactory, click **Apply** to apply the new values to the Create Item page.
4. The data quality checks are also performed when you click **Save**, **Save and Close**, or **Submit**. Note that you can submit an item only when its item class is enabled for new item requests.

Creating Multiple Items

To check data quality when you're creating multiple items interactively:

1. On the Create Multiple Items page, select **Actions** > **Check Data Quality**.
2. Examine the Check and Apply Data Quality Results window, which displays, for each item in the set, the classification, standardization, and matching values.

3. Use the iterator control to examine different items in the set. Click **Remove item** for an item to be removed from the set.
4. If the data quality results are satisfactory, click **OK** to apply the new values to the Create Multiple Items page.
5. The data quality checks are also performed when you click **Save and Close** or **Submit**.

> **Note:** You can submit items only when their item class is enabled for new item requests. If the data quality results contain a mixture of enabled and nonenabled items, then the **Submit** action is replaced by the following actions:
>
> - Add all of the items to a new item request, regardless of whether the item class is enabled.
> - Add only the enabled items to a new item request.

Editing an Item

To check data quality when you're editing an item interactively:

1. On the Edit Item page, select **Actions** > **Check Data Quality**.
2. Examine the Check and Apply Data Quality Results window, which displays the classification, standardization, and matching values.
3. If the data quality results are satisfactory, click **Apply** to apply the new values to the Edit Item page.
4. The data quality checks aren't performed when you click **Save**, **Save and Close**, or **Submit**.

> **Note:** Data quality isn't automatically checked when you update an item. To ensure data quality for existing items, you can run the periodically scheduled **Semantic Key Update** process.

Importing an Item Batch

You can specify data quality options when defining a source system or through an import batch definition by selecting **Check Data Quality** in the Data Quality section of the source system or batch definition. Items being created in Oracle Product Hub go through the data quality check automatically, while items that are updated using batches must have the data quality check initiated manually.

Related Topics

- Data Quality
- Item Batches
- Available Options to Check Data Quality for Item Batches
- Unconfirmed Items in Item Batches

Matching

How Items are Matched

Items that are created during import or through the application go through global trade item number (GTIN) and trading partner item (TPI) matching in addition to attribute matching as part of data quality checks.

Matching Flows

Here's a summary of when and how items are matched:

- In the Product Information Management work area, potential duplicates are shown:
    - When the item is created through the Create Item task.
    - When the item is updated through the Manage Items task and the Edit Item page.
    - For each item being created or updated, the data quality matching check runs, and:
        - Identifies any potential duplicates
        - Presents potential item duplicates to the user in the Data Quality dialog box, where the Matching region shows all the similar duplicate items that have the same values
        - Prevents possible item duplicates, based on the value of the profile option **Allow New Item Creation When a Item Match is Found** (EGI_ALLOW_ITEM_CREATE_DQ_MATCH_FOUND)
    - The duplicates are identified based on:
        - Matching attributes
        - Trading partner items associated with the item that are being updated
- During the flow of items being imported, potential duplicates are shown:
    - In the Data Quality subtab of the In-Progress tab of the Item Batches page.

      This display allows the product data steward to select one of the items and allows the steward to update entity values based on import data.
    - During import, the steward selects one of the matching items to allow the import to update the attribute values of the matched item instead of changing the item provided in the import.

> **Tip:** The essential purpose of presenting users with potential duplicates is to make them consciously decide whether or not to create a duplicate item.

Matching During Updates

Matching is only performed when one of these entities is updated, either by user action, import, or rules.

- Matching attributes that are associated with the item.
- Trading partner item (TPI) data associated with the item: Manufacturer Part Number, Supplier Part Number, Competitor Part Number, or Customer Part Number.
- Global trade item number (GTIN): By default, the same combination of GTIN and UOM can't be added to multiple items in Product Hub. If the UOM is different, then the same GTIN can't be associated with multiple items.
- Spoke system items: By default, the same spoke item can't be added to multiple items in Product Hub. This only applies to batches that are not from the Product Information Management Data Hub spoke.

Enable Matching During Updates

You enable must enable matching during updates to determine whether potential duplicates are shown to the user and what actions can be performed by the user.

To enable matching during updates:

1. Opt in to the feature Check for Item Match Upon Item Update.
2. In the Setup and Maintenance work area, use the **Manage Data Quality for Products Profile Options** task:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Data Quality for Products Profile Options
3. Edit the profile option **Allow New Item Creation When a Item Match is Found** (EGI_ALLOW_ITEM_CREATE_DQ_MATCH_FOUND).
4. At the desired Profile Level, set the **Profile Value** to **Yes** to allow duplicate items to exist, either by creating a new item or updating an existing item.
5. Save the profile option value.

How GTIN and TPI Matching Is Processed

Items that are created during import or through the Create Item task go through global trade item number (GTIN) and trading partner item (TPI) matching in addition to attribute matching as part of data quality checks.

The data quality check first attempts to match items based on the spoke system item number, if the spoke system is not Product Information Management Data Hub. If no existing cross-references are found, data quality check then performs matching in the following sequence:

1. GTIN
2. Supplier Part Number
3. Manufacturer Part Number
4. Customer Part Number
5. Competitor Part Number

Once a match is found, the matching program stops and will not continue to the next match type. Data quality then checks for matches defined at the item class. The spoke system cross reference is created and is used in update cases.

For GTIN matching, an internal item is identified as a match if the GTIN of the incoming item exists as a GTIN cross reference on an internal item and the pack type of the incoming item is the same as that of the internal item. When creating items with a GTIN cross reference, the reference is used to match against existing items with GTIN cross references. Then you can accept the match and choose to update the existing item with the new data or ignore the match and create it as a new item.

For TPI matching, supplier, manufacturer, customer, or competitor items are considered a match only when the trading partner and trading partner item associated to the internal item are the same as the incoming item. When creating items with TPI associations, they are used to match against existing items with the TPI associations. Then you can accept the match and update the existing item with the new data or ignore the match and create it as a new item.

Related Topics

- How can I use attribute groups to control data quality?
- Available Options to Check Data Quality for Item Batches

FAQs for Data Quality

When does data quality checking occur?

Data quality is checked automatically when you save newly created items, but you must explicitly check data quality when you save existing items that you have just updated. You can run a scheduled process to periodically check data quality.

When you are creating a new item, or multiple items, you can select **Actions** > **Check Data Quality**. The data quality checks are also performed automatically when you select **Save**, **Save and Close**, or **Submit**.

When you are editing an existing item, you must select **Actions** > **Check Data Quality** . Data quality is not checked automatically.

When you are importing a batch of items, you can check data quality either automatically or manually. To enable automatic checking during data upload, select **Check data quality** in the Data Quality Options section of the Create Item Batch page. If automatic checking is not enabled, you can select a batch on the Manage Item Batches page then select **Actions** > **Check Data Quality**.

Related Topics

- Data Quality
- Available Options to Check Data Quality for Item Batches
- Check Data Quality for Items
- Unconfirmed Items in Item Batches

How can I use attribute groups to control data quality?

While defining an item class, select the attributes that participate in data quality in the order that you want them to be applied. All selected attributes are used for classification and standardization.

You can also select attributes to be used for matching duplicate items. If an attribute isn't marked for matching, it's used for classification only and isn't used to identify duplicates.

To use attribute groups to control data quality:

1. In the Setup and Maintenance work area, use the **Manage Item Classes** task:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Item Classes
2. On the Manage Item Classes page, select the item class and click **Edit**.
3. On the Edit Item Class page, navigate to the Pages and Attribute Groups tab.
4. Select the Matching subtab.
5. Select **Actions** > **Select and Add**.
6. In the Select and Add: Data Quality Attributes window, search for one or more desired attribute groups.

7. Select an attribute from the attribute group to be used when checking data quality. Repeat for other attributes that you want to use for checking data quality.

> **Note:** Items across item classes are used for matching if they have the same set of matching attribute values, without regard for the position of the item class in the item class taxonomy. The matching attributes are inherited down the item class hierarchy. The matching attributes present in an item class drive the identification of potential duplicates. Therefore, if any new matching attributes are added to a child item class, then any items belonging to such child item classes won't be shown as potential duplicates.

Related Topics

- Data Quality
- Item Attributes
- Check Data Quality for Items
- Available Options to Check Data Quality for Item Batches

Can I bypass the data quality check while creating an item?

No. If data quality checking has been implemented, then the checks are performed automatically when you select Save, Save and Close, or Submit from the Actions menu. The Submit action applies only to new item requests.

Related Topics

- Data Quality
- Check Data Quality for Items
- What happens if the data quality results for a new item aren't satisfactory?

What happens if I remove some items from the data quality results for multiple items?

Any items that you remove from the data quality results for multiple items are not created.

Related Topics

- Data Quality
- Check Data Quality for Items
- What happens if the data quality results for a new item aren't satisfactory?

What happens if the data quality results for a new item aren't satisfactory?

If you consider the data quality results for the item you are creating to be incorrect, then your immediate choice is to cancel the creation.

However, you should also contact the administrator responsible for the setup and discuss the issue so that the model can be altered as required.

Related Topics

- Data Quality
- Check Data Quality for Items
- What happens if I remove some items from the data quality results for multiple items?

What happens if I don't accept the results after running a data quality check?

You must either accept all of the results of classification and standardization, or choose not to create the affected items. However, if new items are affected by the checks for matching, then you can ignore the duplicates and continue with creating the items.

Related Topics

- Data Quality
- Check Data Quality for Items
- What happens if the data quality results for a new item aren't satisfactory?

Why can't I see the Data Quality dialog box during item matching?

During a data quality check, if there are no matching items found, Product Hub saves the item automatically. You don't have to take any action for saving the item.

26 Item Identification

Numbers, Descriptions, and Rules

You can create rules that generate the identification numbers for several types of objects when they are created: items, change orders, and new item requests. You can also create rules that generate descriptions for items.

Generating numbers and descriptions with rules requires the following actions:

- Creating rule sets
- Creating rules
- Completing associations

Creating Rule Sets

You must associate the rule sets containing number generation rules with the item classes, change order types, or new item request types for those objects.

- You must select the **Assignment** type for the rule set, because you are assigning a new value to an object's number (or description).
- In the rule set, the association type must correspond to the object, according to the following table.

Object to Be Numbered	Association Type for the Rule Set
Item	**Item class**
Change order	**Change type**
New item request	**New item request**

> **Note:** Although you can also associate a rule set with an attribute group, you cannot generate numbers for an attribute group.

You activate a rule set by adding it to an item master rule set.

Creating Rules

The rules that generate numbers or descriptions must produce appropriate values.

- The return type of the rule must correspond to the object being numbered, according to the following table.

Object to Be Numbered	Return Type for the Rule
Item (number)	**Item number**
Item (description)	**Item description**
Change order	**Change order number**
New item request	**New item request number**

- The definition of the rule must generate a number (or description) as the return value.

Completing Associations

You must associate the object with the rule set of the rule that generates the number or description.

- The rule set must already exist and contain a valid rule.
- The number generation method (or description generation method) of the object must be set to **Rule Generated**. The location for setting the generation method varies by object.
- After the number generation method is set to **Rule Generated**, the associated rule set name must be set to the rule set that contains the generation rule that you created.

> **Note:** In an item class, you can use one rule set for item number generation, and a different rule set for item description generation.

Related Topics

- Generate Numbers and Descriptions with Rules
- Number Generation Methods
- Rules and Rule Sets

Number Generation Methods

You can define methods to automatically generate numbers for items, new item requests, and change orders.

Number generation methods can be specified when defining the following:

- Item classes - The generated item number is applied to items when they're created from the specified item class. You specify the method in the **Item Number Generation Method** field on the **Item Management** tab of the Edit Item Class page.
- New item requests - The generated new item request number is applied to all new item requests when they're created. You specify the method in the **Number Generation Method** field on the **Number Generation** tab of the Manage New Item Request Type Details page.
- Change orders - The generated change order number is applied to change orders when they're created from the specified change type. You specify the method in the **Number Generation Method** field on the **Number Generation** tab of the Edit Change Order Type page.

Existing numbers aren't changed if you change a number generation method.

The number generation methods are:

- Inherited from Parent
- Rule-Generated
- Sequence-Generated
- User-Defined

Inherited from Parent

Select this method to generate numbers for items, using the same number generation method that's defined in the parent item class of an item class. Like other aspects of item classes, the number generation method can be inherited. This method is only available for item classes.

Rule-Generated

Select this method to use a rule set to generate numbers for items, new item requests, or change orders. The rule set that you select must be already associated with the item class, new item request type, or change type.

Sequence-Generated

Select this method to use an alphanumeric sequence to generate numbers for items, new item requests, or change orders. Enter a starting number and an increment value to determine the sequencing. You can optionally define a textual prefix or suffix for the generated number.

For item classes that define configured items, you can also define a distinct sequence number that's used by Oracle Fusion Configurator. Select **Sequence** from the **Configured Item Number Generation Method** field. Specify a starting number and an increment value. For the optional prefix or suffix, you can select **Model Item Number**, which uses the value specified for the **Base Model** attribute, or **User Defined**, which requires manually entered text. You can select an optional **Delimiter** character to separate the elements of the generated number.

User-Defined

Select this method to allow the manual entry of a number for items, new item requests, or change orders when you create them.

Related Topics

- Rules and Rule Sets

Generate Numbers and Descriptions with Rules

The following scenarios illustrate how to use rules to generate numbers for newly created items, change orders, or new item requests, and descriptions for newly created items.

- Creating rules to generate numbers for new items
- Creating rules to generate descriptions for new items
- Creating rules to generate numbers for change orders
- Creating rules to generate numbers for new item requests

Creating Rules to Generate Numbers for New Items

This scenario illustrates how to use rules to generate numbers for newly created items.

1. Select the **Setup Rules** task.
2. On the Manage Rule Sets page, create and save a rule set with the field values shown in the following table.

Field (in Rule Set)	Value
Display Name	*Example:* **MyItemNumGenRuleSet1**
Type	**Assignments**
Association Type	**Item Class**
Association Name	*Example:* **MyItemClass1**
Business Entities	One or more of Item data level, Item revision data level, or Item supplier data level

3. On the Edit Rule Set page, create and save a rule with the field values shown in the following table.

Field (in Rule)	Value
Name	*Example:* **MyItemNumGenRule1**
Return Type	**Item Number**
Primary If Expression	**true**
Secondary If Expression	**true**

Field (in Rule)	Value
Return Value	Example: `[Item].[Physical Attributes].[Unit Length]`

4. Select the **Manage Item Classes** task.
5. On the Manage Item Classes page, edit the item class that you selected as the association name for your rule set.
6. On the Item Management tab of the Edit Item Class page, select the field values shown in the following table, and save the item class.

Field (in Item Class)	Value
Name	*Example:* **MyItemClass1**
Item Number Generation Method (in the Number Generation section)	**Rule Generated**
Associated Rule Set	*Example:* **MyItemNumGenRuleSet1** **Note:** Only rule sets with the corresponding association type (in this scenario, Item Class) are available. Also, your rule set won't appear in the **Associated Rule Set** list of values unless a valid rule has been created in the rule set.

7. When you create a new item from this item class, the item number field initially contains a message that the number will be rule generated. When you save (or submit) the item, your rule generates a number for it.

Note: Once an item has been saved, its item number, whether generated or manually entered, can't be changed unless the **Update Item Number** (EGP_UPDATEABLE_ITEM) profile option has been set to **Yes** at the site level. If that profile option has been set to **Yes**, then when any attributes used in your number generation rules are updated, the item numbers are regenerated accordingly.

Creating Rules to Generate Descriptions for New Items

This scenario illustrates how to use rules to generate descriptions for newly created items The scenario is the same as the one for generating numbers for new items, with the differences shown as follows.

- In the Details section of the Edit Rule Set page, the differences for your rule are shown in the following table.

Field (in Rule)	Value
Name	*Example:* **MyItemDescGenRule1**
Return Type	**Item Description**
Return Value	Example: [Item].[Main].[Item_Type] + [Item].[Main].[Long_Description]

- On the Item Management tab, the differences for your item class are shown in the following table.

Field (in Item Class)	Value
Item Description Generation Method (in the Description Generation section)	**Rule Generated**
Associated Rule Set	*Example:* **MyItemDescGenRule1**

- When you create a new item from this item class, the item **Description** field initially contains a message that the description will be rule generated. When you save (or submit) the item, your rule generates a read-only description for it.
- Whenever any attributes used in your description generation rules are updated, the item descriptions are regenerated accordingly when the item is displayed.

Note: The same rule set can contain rules for both item number generation and item description generation.

Creating Rules to Generate Numbers for Change Orders

This scenario illustrates how to use rules to generate change order numbers for newly created change orders. The scenario is the same as the one for generating numbers for new items, with the differences shown as follows.

- On the Edit Rule Set page, the differences for your rule set are shown in the following table.

Field (in Rule Set)	Value
Display Name	*Example:* **MyCONumGenRuleSet1**
Association Type	**Change type**
Association Name	*Example:* **MyCOType1**

- In the Details section of the Edit Rule Set page, the differences for your rule are shown in the following table.

Field (in Rule)	Value
Name	*Example:* **MyCONumGenRule1**
Return Type	**Change order number**
Return Value	Example: `Flexfield[CM_Global_Segment1]`

- On the Number Generation tab of the Edit Change Order Type page, the differences for your change type are shown in the following table.

Field (in Change Type)	Value
Number Generation Method (in the Number Generation section)	**Rule Generated**
Associated Rule Set	*Example:* **MyCONumGenRuleSet1**

- When you create a new change order, your rule generates a change order number for it after you submit it.

Creating Rules to Generate Numbers for New Item Requests

This scenario illustrates how to use rules to generate new item request numbers for newly created new item requests. The scenario is the same as the one for generating numbers for new items, with the differences shown as follows:

- On the Edit Rule Set page, the differences for your rule set are shown in the following table.

Field (in Rule Set)	Value
Display Name	*Example:* **MyNIRNumGenRuleSet1**
Association Type	**New Item Request**
Association Name	*Example:* **MyNIRType1**

- In the Details section of the Edit Rule Set page, the differences for your rule are shown in the following table.

Field (in Rule)	Value
Name	*Example:* **MyNIRNumGenRule1**
Return Type	
Return Value	Example: `Flexfield[CM_Global_Segment1]`

- On the Number Generation tab of the Manage New Item Request Type Details page, the differences for your new item request type are shown in the following table.

> **Note:** There are multiple item classes and change types, but only a single type for new item requests. Consequently, all new item requests use the same rule set.

Field (in New Item Request Type)	Value
Number Generation Method (in the Number Generation section)	**Rule Generated**
Associated Rule Set	*Example:* **MyNIRNumGenRuleSet1**

- When you create a new item request, your rule generates a new item request number for it.

Related Topics

- Numbers, Descriptions, and Rules
- Number Generation Methods
- Rules and Rule Sets

What are the Various Methods for Submitting Items to the Update Process

Determine the method to use for submitting items to the product update.

Select one of the following options:

- Items Without Error
- Items with Error
- Manually Update Items
- Upload Items to Spreadsheet

Items Without Error

When you select this action, all the items that don't have errors will be added to the batch. When the Batch is run, rules are forcefully applied and items are updated.

Items with Error

When the impact analysis is performed, certain items may result in errors. In this case, you can add the items to an item batch and then later search and process the item batch so that the items that are updated are consistent with the rules.

Manually Update Items

If you want to correct the errors before you add the items to batch, run the batch then navigate to the respective item pages, separately, and update the necessary data so that these items don't result in an error during the update process.

Upload Items to Spreadsheet

You can update the items in a spreadsheet before adding them to the batch. You can specify any necessary preprocessing updates so that these items don't result in an error during the update process. In this case, you can add the items to an item batch, then later search and process the item batch so that the items are updated consistently with the rules.

FAQs for Item Identification

What happens if item numbers are allowed to change?

Ordinarily, item numbers cannot be changed after they are entered (or are generated by product rules) and the item is saved. This behavior is produced by the **Update Item Number** profile option (EGP_UPDATEABLE_ITEM), which has a default setting of **No**.

If you set this profile option to **Yes**, then number generation rules will regenerate item numbers when any attributes participating in those rules change.

Related Topics

- Numbers, Descriptions, and Rules
- Generate Numbers and Descriptions with Rules

27 Item Publication

Publish Item Objects

Publication enables you to schedule and publish item objects automatically to each spoke system.

Here are the high-level steps to publish item objects from Oracle Product Hub to a spoke system:

1. Define publication options for a spoke system.
2. Define the schedule and parameters for the scheduled process.
3. Access the payload generated by the publication scheduled process.

Now, let's discuss these steps in detail.

Define Publication Options for a Spoke System

You can set the options that govern the publication of item objects using the Manage Spoke Systems task.

1. From the Setup and Maintenance work area, use this navigation to open the **Manage Spoke Systems** task:
    - Offering: Product Management
    - Functional Area: Product Spoke Systems or Item Batches
    - Task: Manage Spoke Systems

    You can also select the Manage Spoke Systems task in the Product Information Management work area.
2. Search for and select a spoke system, then select **Edit** from the Actions menu to open the **Edit Spoke Systems** page.
3. Click the Publication Options tab.
4. Select the Publication Criteria region for the object that you want to publish, one of:
    - Item
    - Item class
    - Catalog
    - Trading partner item
5. Within the publication criteria for the Item object, you can select which child entities of the item you want to publish, such as attachments, trading partner items, structures, and so on.
6. Save the page for the spoke system to save the publication options that you set.

When you publish the spoke system:

- One or more XML files are created, for the objects that you selected for publication.
- The publication content includes the complete category-classification path for an item-category assignment. The category-classification path is also published in the publication payload as a part of the item-category assignment.

Publish Deleted Item Data

You can publish deleted content for items, item category assignments, and item suppliers to support integration with external systems. You can use the publication functionality to publish either updated or deleted item data.

To configure the publication system to publish the deleted item data, select the **Include deleted items** option on the **Publication Options** tab for the spoke system. The Publication Transaction Type attribute in the publication payload will indicate if the item data is updated or deleted. Integration logic can use this attribute to support deleting the item content in external systems.

Deleted data that is published involves the following:

- Parent item record including all child objects associations to the item record are deleted. For example, if the item has an item category assignment to Catalog=Purchasing and to Category=Misc. and if the item is deleted, the item category assignment will be deleted, but the catalog and category won't be deleted. In this case, the transaction type displays Deleted and the child objects that are in scope (extensible flexfields, item category assignments, and item supplier associations).
- Child object or association is deleted, the parent object isn't deleted. For example, the item category assignment for Catalog=Electronics, to Category=Computer is deleted from the item, then this assignment content is deleted but the item isn't deleted. In this case, the item record will have transaction type as Updated and the child object will have transaction type as Deleted.

The content supported for the deleted data is:

- Items
- Item extensible flexfields: Extensible flexfields that are used to extend an item object and the translated extensible flexfields data.
- Item category assignments: Child object of the item which contains the catalog and categories assigned to the item.
- Associations: Supplier Organizations, the supplier associated with the item.

Define the Schedule and Parameters for the Scheduled Process

Publish the item objects using the Product Hub Publication Job scheduled process.

1. From the Scheduled Processes work area, click **Schedule New Process**.
2. Open the **Product Hub Publication Job** schedule process.
3. Define the **Publish Items** parameter as **Yes** to publish your items. You need to configure all the parameters in the Process Details dialog box. Here are the most relevant parameters:

Schedule Process Parameters	Description
Spoke System	Name of the external spoke system where you want to publish items, item classes, or catalog information.

Schedule Process Parameters	Description
Publish from Date	Publishes records of objects from a start date. Specify the start date.
Publish to Date	Publishes records of objects to an end date. Specify an end date. Use this parameter with the Publish from Date parameter.
Process Sequentially	Specifies the publication jobs to run sequentially when there is more than one job. Otherwise, the jobs run in parallel with each other.

4. (Optional) Click the **Advanced** button and schedule the process to run at a later date and time.
5. Submit the scheduled process.

The scheduled process publishes the objects of each spoke system.

Publication processes can be a recurring or a one-time event. Let's say you're setting up an integration to a legacy application, where you're publishing new items that are created in Oracle Product Hub. You would want to set up the scheduled publication job to run each night.

The scheduling frequency is based on the integration requirements and the availability of the applications that integrate with Product Hub to receive and process the data. For example, you may have a situation where Oracle Product Hub is feeding new item information to an ERP application. The application is available only for a brief period to accept the feed. So, you must plan the schedule process accordingly.

You should review the log files for additional details:

- The log file for the **Product Hub Preprocessing Publication Job** scheduled process contains the parameters that were used to run the job, plus record counts of what's published.
- The log file for the **Product Hub Publication Job** scheduled process contains the identifier dDocName (which corresponds to the **Content ID** in Oracle WebCenter Content) and the name of the compressed file containing the publication files.

You can view the errors identified during publication from the log files of the scheduled process.

- If an item record in the publication fails, the publication process doesn't publish the failed record but it does publish the remaining item records.
- The publication process updates the log file with additional information about the publication failure including the item number, rule name, and any error message that you have configured for the rule definition. Using this information, you can trace any publication errors and fix them.
- The publication log file also:
    - Contains additional information to clarify publication exceptions.
    - Displays rule exception messages that you have created during the rule definition.
    - Displays exception messages based on the exception type during publications.
    - Includes publication subjob exceptions.

Define Profile Options to Publish Items

If you're publishing over 1000 items or records, you can consider changing the values of the publication profile options to optimize the publication process.

CAUTION: These profile options control all publication processes. Use care when and if you modify these settings.

You can control of the size of the publication payload to match the requirements of applications and processes. To control the payload size, use the **Manage Advanced Item Profile Options** task in the Setup and Maintenance work area to modify the values of one or more of these profile options:

1. In the Setup and Maintenance work area, use the **Manage Advanced Item Profile Options** task:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Advanced Item Profile Options
2. Update one or more of the profile options in this table:

Profile Option Code	Profile Option Name	Purpose
EGI_PUBLICATION_ITEMS_PER_PAYLOAD	Number of Items per Payload for Publication	Number of items in each XML file. This profile option determines the number of items to be used per payload in the publication process. The predefined value is 500. If a value more than 500 is specified, then 500 is used.
EGI_PUBLICATION_NUMBER_OF_PAYLOADS	Number of Parallel Payloads for Publication	Number of publication subprocesses that are launched in the extraction process. This profile option determines the number of parallel payloads to be used in the publication process. The predefined value is 10.
EGI_PUBLICATION_SIZE_OF_ZIP_FILE	Size of the Publication Payload File in Megabytes	This profile option controls the overall size of the publication .zip file, in megabytes. The recommended value is 500 MB or lower. The .zip file can contain more than one XML file for an item object. This profile option

Profile Option Code	Profile Option Name	Purpose
		lets you chunk large publication jobs into multiple XML files.

Related Topics

- How can I chunk the data of the publication process?
- How can I modify the values of the item publication profile options?

Access Payload Generated by the Publication Scheduled Process

You can access the XML payload of the publication scheduled process from Oracle WebCenter Content.

The log file for the **Product Hub Publication Job** scheduled process contains an entry that identifies the output file for the publication. The identifier dDocName in the log file corresponds to the **Content ID** field of the user interface of Oracle WebCenter Content.

You can use File Import and Export tool to retrieve the published file. You can also locate your publication file using the GET_SEARCH_RESULTS search service of the Core Content Server for Oracle WebCenter Content, using these criteria:

- The value of dDocName from the log file
- The FAFusionImportExport Security Group

Here's an example of a search criteria expression for GET_SEARCH_RESULTS that uses information from the scheduled process log file:

```
IdcService=GET_SEARCH_RESULTS
dDocName = UCMFA00019982
```

Related Topics

- GET_SEARCH_RESULTS search service of the Core Content Server, in the Oracle Fusion Middleware Services Reference for Oracle WebCenter Content guide
- Overview of Files for Import and Export

Purge Publication History Records for Spoke System

You can purge the publication history records for a spoke system using the Product Hub Publication Job scheduled process. This improves performance by systematically purging publication records on a scheduled basis.

To purge the publication history records using scheduled process:

1. In the Scheduled Processes work area, click **Schedule New Process**.
2. Search and open the Product Hub Publication Job schedule process.
3. Specify the following parameters:

- **Spoke System** - Select the spoke system for which you want to delete the publication history records.
- **Purge History** – Select one of the following options:
  - **All Rows** - Purge all rows in the publication history including rows from publication jobs with the status error and completed.
  - **Error Rows** - Purge rows corresponding to publication jobs that were terminated due to errors.
  - **Completed Rows** - Purge rows corresponding to publication jobs that completed successfully.

4. (Optional) Click **Advanced** and schedule the process to run at a later date and time.
5. Submit the scheduled process.

The scheduled process deletes the publication history records for the selected spoke system.

Note: You can't run the Publication Purge History operation if you have selected **Yes** for any of the other parameters in the Product Hub Publication Job scheduled process.

What's Published in the Publication Payload

This table lists the payload that's published for a spoke system. The Publication Criteria column specifies what you define in the spoke system and the Options column specifies the published content.

Publication Criteria	Options
Objects	• Items • Item classes • Item catalogs • Trading partner items
Item entities	• Attributes The attributes are selected by default, and they include: o Item main attributes o Operational attributes • Attachments of type URL • Supplier site organizations association • Item category assignments • Pack hierarchies • Item relationships: o Global trade item number (GTIN) o Related items o Cross-references • Structures:

Publication Criteria	Options
	◦ All ◦ Primary • All pack items All items with a pack type, regardless of membership in a hierarchy, are published whenever a change to the pack occurs. • Item selection rules Add rules that select certain items. • Item validation rules Select an existing validation rule set.
Item class entities	• Item class attachment categories • Item class attribute groups • Item class descriptive flexfields • Data quality attributes • Product hub portal attributes groups • Item class pages • Item class lifecycle phases • Item class page attribute group • Item class translation content • Item overview attribute groups • Supplier attribute groups • Transactional attributes • Transactional attributes translation content
Item catalog entities	• Catalog translation content • Catalog attachments • Catalog descriptive flexfields • Categories • Category translation content • Category attachments • Category descriptive flexfields • Category item assignments
Trading partner item entities	• Trading partner items for customers • Trading partner items for suppliers • Trading partner items for manufacturers • Trading partner items for competitors • Item relationships for related items • Trading partner item attachment

Publication Criteria	Options
	• Trading partner items descriptive flexfields • Linked trading partner item relationship for Manufacturer Part Number and Supplier Part Number relationship

Extended Item Data

You can use the Request ID and Object Version Number attributes to improve integration capabilities. The values are provided in the object headers of the published XML.

- The value of **Object Version Number** is used by integrated solutions to indicate whether the object is newly created or is updated. A value of `1` indicates that the object was newly created. Each time the object is updated, the value is incremented by 1.
  The XML attribute name is: `ObjectVersionNumber`
- The value of **Request ID** is generated when content is imported through the item batch infrastructure, and is published as part of the publication payload. You can use the ID to filter the published items.
  The XML attribute name is: `RequestId`
- Here's an example of a payload, edited to focus on `ObjectVersionNumber` and `RequestId`:

```
<:ns1:Item ...>
 <:ns1:ItemNumber>TJG_Pack1_020<:/ns1:ItemNumber>
...
 <:ns1:Pack>
 <:ns14:ItemNumber>TJG_Pack1_020<:/ns14:ItemNumber>
...
 <:ns14:ObjectVersionNumber>2<:/ns14:ObjectVersionNumber>
 <:ns14:RequestId>51412<:/ns14:RequestId>
...
 <:ns14:PackComponent>
 <:ns14:ComponentItemNumber>TJG_Base1_020<:/ns14:ComponentItemNumber>
...
 <:/ns14:PackComponent>
 <:/ns1:Pack>
<:/ns1:Item>
```

Here are the entities on which RequestId and ObjectVersionNumber are added in the publication payload:

- Catalog
- Category
- Item
- ItemCategory
- ItemCrossReference
- ItemRevision
- ItemSupplierAssociation
- ItemSupplierEffCategory
- Pack
- RelatedItem
- Structure

- SupplierItemXref
- SysItemXref
- TradingPartnerItem

Common Structure

The `CommonStructure` record represents common structure among items.

The publication structure record contains a record named `CommonStructure`. This record shows details of each item that the master structure was copied from or created from, enabling integration logic to add a copy of the master structure to each item.

The `CommonStructure` record enables integration to update the referencing common items from the changes in the referenced master common item, for scenarios where the target system for the integration requires a copy of the master item structure at each of the items that reference the master item structure.

Here's an example of a publication payload, edited to focus on `CommonStructure` records, which are highlighted here by doubled asterisks (`**`):

```
 <Items ... >
<ns1:Item ... >
 <ns1:OrganizationCode>V1</ns1:OrganizationCode>
 <ns1:ItemNumber>STR_Header_Primary</ns1:ItemNumber>
 <ns1:ItemDescription>STR_Header_Primary-Desc</ns1:ItemDescription>
 ...
 <ns1:Structure ... >
 <ns14:BillSequenceId>300100544404018</ns14:BillSequenceId>
 <ns14:OrganizationCode>V1</ns14:OrganizationCode>
 <ns14:ItemNumber>STR_Header_Primary</ns14:ItemNumber>
 <ns14:StructureName>Primary</ns14:StructureName>
 <ns14:Description>Primary Structure for Common Publication</ns14:Description>
 <ns14:CommonItemNumber>STR_Header_Primary</ns14:CommonItemNumber>
 <ns14:CommonOrganizationCode>V1</ns14:CommonOrganizationCode>
 <ns14:SourceItemNumber>STR_Header_Primary</ns14:SourceItemNumber>
 <ns14:SourceOrganizationCode>V1</ns14:SourceOrganizationCode>
 ...
 <ns14:Component ... >
 ...
 <ns14:ComponentDFF>
 ...
 </ns14:ComponentDFF>
 </ns14:Component>
 <ns14:StructureDFF>
 ...
 </ns14:StructureDFF>
** <ns14:CommonStructure>
 <ns14:BillSequenceId>300100544406846</ns14:BillSequenceId>
 <ns14:Description>Primary Structure for Common Publication</ns14:Description>
 <ns14:ItemId>300100544403990</ns14:ItemId>
 <ns14:OrganizationId>204</ns14:OrganizationId>
 <ns14:ItemNumber>STR_Header_Common_1</ns14:ItemNumber>
 <ns14:OrganizationCode>V1</ns14:OrganizationCode>
 <ns14:ItemDescription>STR_Header_Common_1_Desc</ns14:ItemDescription>
 ...
 </ns14:CommonStructure>
** <ns14:CommonStructure>
 <ns14:BillSequenceId>300100544406933</ns14:BillSequenceId>
 <ns14:Description>Primary Structure for Common Publication</ns14:Description>
 <ns14:ItemId>300100544403992</ns14:ItemId>
 <ns14:OrganizationId>204</ns14:OrganizationId>
 <ns14:ItemNumber>STR_Header_Common_2</ns14:ItemNumber>
```

```
<ns14:OrganizationCode>V1</ns14:OrganizationCode>
<ns14:ItemDescription>STR_Header_Common_2-Desc</ns14:ItemDescription>
...
</ns14:CommonStructure>
</ns1:Structure>
</ns1:Item>
</Items>
```

Related Topics

- Common Structures
- Define Publication Options for a Spoke System

Manage Publication Maps

You can specify a mapping between the Oracle Product Hub attributes and a target spoke system (to which the data will be published) using publication maps. Use the **Manage Publication Maps** task in the Product Information Management work area to search, create, edit, delete, or duplicate publication maps.

You can publish your data in a more streamlined and efficient manner because you can prune the data that's sent to your spoke systems. Therefore, the ingesting systems can now receive a subset of the deltas based on the previous publication.

Create Publication Map and Specify Mapping Attributes

To create a new publication map:

1. In the Product Information Management work area, click the **Tasks** panel tab and then click **Manage Publication Maps**.
   The Publication Maps page is displayed.
2. Click the **Add** icon.
   The New publication map drawer appears on the right side.
3. Provide the following information:
   - **Name**: Name of the publication map
   - **Description**: Description of the publication map
   - **Output File Type**: Type of file being uploaded.
   - **Delimiter**: If you've selected **Text** as the **Output File Type**, select **Comma** or **Pipe**.
   - **Active**: Indicate if the publication map is in active or inactive state.
   - Upload CSV data file that contains the spoke system attributes in the first row. The file size should not exceed 25 MB.
4. Click **Create** to create the publication map and open it in edit mode. Clicking **Cancel** will close the drawer and publication map won't be created.
   If you've uploaded a CSV file, the contents of the CSV are extracted and the Map details page is displayed, where you can specify the mapping between the spoke system attribute and the attribute mapping.
   If you haven't uploaded a CSV file, the mapping table will be empty when you try to edit the publication map. In this case, you can manually add spoke columns and their corresponding mapping rows to the table.

5. In the mapping table, add the following mapping details for each attribute that you want to map.

   For existing rows that were extracted from the input CSV file, **Sequence** number and **Spoke Attribute** are available, and **Master Attribute** must be mapped.

   To add new rows to the mapping table, use the first inline edit row present in the table. In this row, you must specify the **Sequence** number, **Spoke Attribute**, and **Master Attribute**.
   - **Sequence**: Enter a unique sequence number for each row in the mapping table.
   - **Spoke Attribute**: Name of the target spoke attribute that you want to map.
   - **Master Attribute**: Click the drop-down list and select the master attribute that you want to map to the target spoke system attribute. Entity and Attribute Group columns are automatically populated when a master attribute is selected.

     > **Note:** You can map one master data attribute to multiple spoke system columns.

   In **Actions**, click the **Apply** icon to add the mapped attribute as a row.
6. To edit the attribute mapping, click the **Edit** icon for the respective row.
7. To clear the attribute mapping, select the required rows and click **Clear Mappings**.
8. To delete one or more attribute mapping, select the required rows and click **Delete**.
9. To export the attribute mappings to an Excel file, select all or the required rows and click the **Export** icon.
10. Click **Save** or **Save and Close** to save the changes.

Edit Publication Map

To edit a publication map:

1. On the Publication Maps page, search for the publication map.
2. From the search results, click the required publication map to open it in edit mode.
3. Specify the attribute mapping between the spoke system attributes and the master data attributes. You can also modify the **Description**, **Output File Type**, **Delimiter**, and the status. For details, see *Create Publication Map and Specify Mapping Attributes*.
4. Click **Save** or **Save and Close** to save the changes.

Duplicate Publication Map

To duplicate a publication map:

1. On the Publication Maps page, search for the publication map that you want to use to create another publication map.
2. From the search results, for the publication map that you want to duplicate, click **Duplicate**.

   The <Publication Name> (Copy) drawer appears on the right side.
3. Change the details such as **Name**, **Description**, **Output File Type**, **Delimiter**, and click **Create**.

   > **Note:** When you duplicate an existing map, you can't upload a CSV file.

   The Map details page is displayed.
4. Update the attribute mapping between the spoke system attributes and the master data attributes. For details, see *Create Publication Map and Specify Mapping Attributes*.
5. Click **Save** or **Save and Close** to save the changes.

Delete Publication Map

On the Publication Maps page, search for the publication map that you want to delete and click the **Delete** icon. A message appears asking for confirmation. Click **Delete** to confirm the deletion.

Business Rules and Guided Journeys for Publication Maps

The New publication map drawer and Map details page support extensibility through business rules and page properties.

The predefined business rules are:

- Default
- Delimiter Required and Default Value Localization Rule

You can also define any extension business rules for the New publication map drawer and the Map details pages.

You can control the visibility of the description and active badge on the page header and configure the Guided Journeys for the Map details page using the Page Properties section.

For details on how to configure business rules and guided journeys, see:

- *Extend SCM Redwood Application Pages Using Visual Builder Studio*
- *Create Guided Journeys for Redwood Pages*

FAQs for Item Publication

What happens if I don't select any objects on the spoke system to publish?

If you don't select any objects on the spoke system, you will not be able to define the publication options and no data will be published to the spoke system.

Will all items in Product Hub be published?

Only items that have been updated since the last publication or criteria date and that meet the publication criteria for the spoke system will be published. This includes newly created items meeting the publication criteria.

Which items will be published?

The items published are based on what has changed since the last publication date and filtered by the selection rules in the configuration information on the publication options tab of the Manage Spoke Systems task.

Selection rules can be based on organizations, organization hierarchy, catalog or item class.

Can I select items from specific child organizations to publish?

No, you cannot publish by specific child organizations. You can only publish at the master organization level. All child organizations within the master organization will publish.

Which item entities are supported for publication?

The supported item entities are:

- Attributes
- Attachments
- Supplier Site Associations
- Item Category Assignments
- Packs
- Item Relationships
- Structures

How can I chunk the data of the publication process?

Use the profile options provided for the publication process:

Profile option	Purpose
EGI_PUBLICATION_ITEMS_PER_PAYLOAD	Use this to define the number of items per payload in the publication scheduled process. The predefined value is 500. If a value more than 500 is specified, then 500 is used.
EGI_PUBLICATION_NUMBER_OF_PAYLOADS	Use this to define the number of publication sub processes. This profile option determines the number of parallel payloads to be used in the publication process. The predefined value is 10.
EGI_PUBLICATION_SIZE_OF_ZIP_FILE	Use this to control the overall size of the publication .zip file, in megabytes. The recommended value is 500 MB or lower.

When deciding the values for these profile options, keep the following in mind:

- The capacity of the application you're publishing to.
- The equipment specifications for where the publication is running and in the applications you're publishing to.
- How often the publication job is run.

How can I modify the values of the item publication profile options?

Profile option values for items are defined using the Manage Advanced Item Profile Options task in the Setup and Maintenance work area.

28 Item Deletion

Obsolete Products and Services Using Delete Groups

Product managers can obsolete products and services by defining and maintaining delete groups that identify products and services that are at the end of their life cycle and should be purged.

Constraints maintain data integrity so that pending transactions aren't affected while purging. Along with predefined constraints, custom constraints can be defined and checked before purging is done.

> **CAUTION:** You can supersede existing items using item relationships. In those cases, the superseded items must continue to exist in the application. If the superseded item is deleted from the application, then all the cross references, item relationships and so on will be lost.

The following objects can be added to a Delete Group:

- Items
- Item organizations
- Item supplier site organizations
- Change orders
- New item requests
- Item structures and components

Delete groups can be created and maintained through the **Mange Delete Groups** link in Items on the Task menu.

You can add objects directly to a delete group through this task.

You can also add different objects to delete groups from their respective Manage pages. Search for an object such as item, item organization, new item request, or change order. Highlight the object and select **Delete** from the Action menu. You are prompted to add the object to an existing delete group or create a new one.

Related Topics

- Group Deletions of Items, Structures, New Item Requests, and Change Orders
- Item Supersession

Group Deletions of Items, Structures, New Item Requests, and Change Orders

Deleting items, structures, new item requests, and change orders is controlled through the Delete Groups task. Delete Groups can be created and maintained through the Mange Delete Groups link under Items on the Task menu of the Product Information Management work area.

> **CAUTION:** Once an item is deleted, it's removed from the application, all the cross-references and item relationships such as item organizations, item supplier site organizations, structures, and components are lost.

On the Manage Delete Groups page, you can search for and access existing delete groups. From this page you can also delete those delete groups that were successfully submitted and completed.

On the Edit Delete Group page, you can add and remove objects for deletion, check constraints, and submit the delete group for processing.

> **Note:** When you delete an object such as items, new item requests, and change orders from the appropriate manage page, you're prompted to add the object to an existing delete group or create a new one.

Checking Constraints

Constraints maintain data integrity so that pending transactions that involve objects in delete groups aren't affected during purges.

After saving a delete group, choose **Check Constraints** on the Edit Delete Group page to ensure that it's safe to submit the objects for submission.

To check constraints:

1. On the Edit Delete Group page for the delete group, click **Check Constraints**.
2. You're returned to the Manage Delete Groups page while the constraints check runs. Query the delete groups for updates on the status.
3. When the Status is **Completed** and the **Last Activity** is **Constraints Check**, then the **Last Activity Status** indicates whether there were errors.
4. If **Last Activity Status** for a delete group is **Errors**, click the group's name to open it.
5. On the Edit Delete Group page for the delete group, the objects with errors have a **Status** of **Errors**.
6. In the Details column for an object with errors, click the icon to open the **Error Details** dialog box, which displays a list of messages about the errors that prevent the object from being deleted.

Along with predefined constraints, custom constraints can be defined to be checked before purging is done. Constraints are defined using the Service Oriented Architecture (SOA) Business Process Execution Language (BPEL).

The products that are checked for constraints are:

- Product Hub
- Procurement
- Inventory
- Shipping
- Receiving
- Manufacturing
- Sales Forecast
- Sales Catalog
- Opportunity Management
- Order Capture
- Lead Management
- Market Response

When an item is in a delete group, the constraint check determines whether there are any open transactions involving the item. The constraint check is performed by querying a web service provided by each product. You can't delete an

item that has open transactions. In some cases, you can't delete an item that has a completed or canceled transaction involving the item. Hence, it depends on the product and the type of constraint checks performed.

Items in Delete Groups

On the Items tab of the Edit Delete Group page, you can specify the following objects for deletion by choosing **Select and Add** from the Action menu, then selecting from the Entity drop-down list on the Select and Add page.

- Items
- Item organizations
- Item supplier site organizations

> **Tip:** When you add an item to the delete group, you can change the organization, supplier and supplier site assignments for the object by highlighting the item row and selecting the appropriate assignments. This feature can be used with the **Duplicate** action from the Action menu when you're adding several similar objects with different organization, supplier and supplier site assignments. The Duplicate feature enables you to copy the previous record and then you can change the different values, thus saving multiple clicks.

Item Structures in Delete Groups

On the Item Structures tab of the Edit Delete Group page, you can specify the following objects for deletion by choosing **Select and Add** from the Action menu, then selecting from the Entity drop-down list on the Select and Add page:

- Structures
- Components

> **Tip:** When you add structures and components to the delete group, you can change organization, structure and component assignments by highlighting the structure or component row and changing the appropriate assignments. This feature can be used with the **Duplicate** action from the Action menu when you're adding several similar objects with different organization, structure and component assignments.

Change Orders and Delete Groups

On the Change Orders tab of the Edit Delete Group page, you can specify change orders for deletion by choosing **Select and Add** from the Actions menu.

> **Tip:** When you add change orders to the delete group, you can change the organization assignment by highlighting the change order row and changing the organization assignments. This feature can be used with the **Duplicate** action from the Action menu when you're adding several similar change orders with different organizations.

> **Note:** You can delete change orders that are in the **Draft** status by adding them to a delete group. You can delete change orders that are in the **Canceled** status too, but a canceled change order with even one scheduled or completed line can't be deleted.

New Item Requests and Delete Groups

On the New Item Request tab of the Edit Delete Group page, you can specify new item requests for deletion by choosing **Select and Add** from the Action menu.

Submitting a Delete Group

Click **Submit** on the Edit Delete Group page to submit the objects for purging from the application.

Related Topics

- Oracle Cloud Developing SOA Applications with Oracle SOA Suite guide

Item Supersession

Items can be superseded by defining item relationships between two internal items using predefined relationship types, such as superseded items, substitutes, or complimentary items.

You can also define item relationships between two internal items using user-defined relationships.

When you define the relationship, you can specify attributes to further qualify the relationship as well as a date range when the relationship is effective.

Related Topics

- Obsolete Products and Services Using Delete Groups
- Group Deletions of Items, Structures, New Item Requests, and Change Orders
- Types of Item Relationship
- Manage Item Relationships

Delete Items In Bulk

If you need to delete a large number of items, you can use a web service to add the items in bulk to a delete group. This technique might be more convenient than adding the items using only the Manage Delete Groups task.

To delete items in bulk:

1. Create a delete group that doesn't contain any items:
    a. In the Product Information Management work area, click the **Manage Delete Groups** task.
    b. Click **Actions** > **Create**.
    c. Enter a name and optional description for the delete group. For example, `Item_Delete01`.
    d. Click **Save and Close**.
2. Run a web service to populate the delete group with items in bulk.
    Run the **Item Version 2** web service using the **deleteItem** operation to add items to delete group. For more information, see the Oracle Fusion Cloud SCM: SOAP Web Services for SCM guide. Call `deleteItem` in a loop for every item to be deleted.
    The parameters `orgId`, `itemId`, and `deleteGroupName` are required.
    The `orgId` can be obtained using the `findItem` operation by passing in the `itemNumber` and `orgCode`.
    The `itemId` can be obtained using a query based on `itemNumber`, where `inventory_item_id` is `itemId` and `Organization_id` is `orgId`.

```
select Item_number,inventory_item_id,Organization_id
from egp_system_items_b where item_number = 'SF1A'
```

Here is an example request payload in SOAP XML:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/scm/productModel/items/itemServiceV2/t
ypes/">
 <soapenv:Header/>
 <soapenv:Body>
 <typ:deleteItem>
 <typ:orgId>204</typ:orgId>
 <typ:itemId>300100578417258</typ:itemId>
 <typ:deleteGroupName>Item_Delete01</typ:deleteGroupName>
 </typ:deleteItem>
 </soapenv:Body>
</soapenv:Envelope>
```

Here is an example response payload in SOAP XML:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsa="http://
www.w3.org/2005/08/addressing">
 <env:Header>
 <wsa:Action>http://xmlns.oracle.com/apps/scm/productModel/items/itemServiceV2//ItemService/
deleteItemResponse</wsa:Action>
 <wsa:MessageID>urn:uuid:dff50971-26c7-4dc7-a99e-1c48e2e888f2</wsa:MessageID>
 </env:Header>
 <env:Body>
 <ns0:deleteItemResponse xmlns:ns0="http://xmlns.oracle.com/apps/scm/productModel/items/itemServiceV2/
types/">
 <result xmlns="http://xmlns.oracle.com/apps/scm/productModel/items/itemServiceV2/types/">Success</
result>
 </ns0:deleteItemResponse>
 </env:Body>
</env:Envelope>
```

3. Submit the populated delete group for processing:
    a. On the Manage Delete Groups page, query for the delete group that you created, and click its name to open it. The delete group now contains the list of items to be deleted.
    b. On the Edit Delete Group page, click **Check Constraints**. Examine the constraint check status for whether there are errors or pending transactions for an item.
    c. When errors or pending transactions are resolved, click **Submit** on the Edit Delete Group page to process the deletion of the items.

Related Topics

- Group Deletions of Items, Structures, New Item Requests, and Change Orders

Identify Deleted Entities Using Deletion Business Events

Items in Product Information Management contains core entities and child entities.

The core entities include master organization item, item revision, item organization assignment, item supplier association, and non-translatable or translatable single row extensible flexfields at all levels. The child entities include

item category assignments, all types of relationships, trading partner items, non-translatable or translatable multi-row extensible flexfields at all levels. When a core entity is deleted, the child entities are also deleted. However, you can delete the child entities independently.

Note: Structure and related entities aren't applicable.

The core entity is always deleted through delete group along with constraint checks. The child entities can be deleted through import or individually. Constraint checks that are a part of the delete group aren't performed for child entities.

Business events are raised every time an item or its related entity is deleted. The types of delete events are:

- Bulk Delete Event: When a core entity is deleted through delete group or child entity is deleted through import, then the Bulk Delete Event is generated.
- Entity Delete Event: When a child entity is deleted individually, then the Entity Deleted Event is raised.

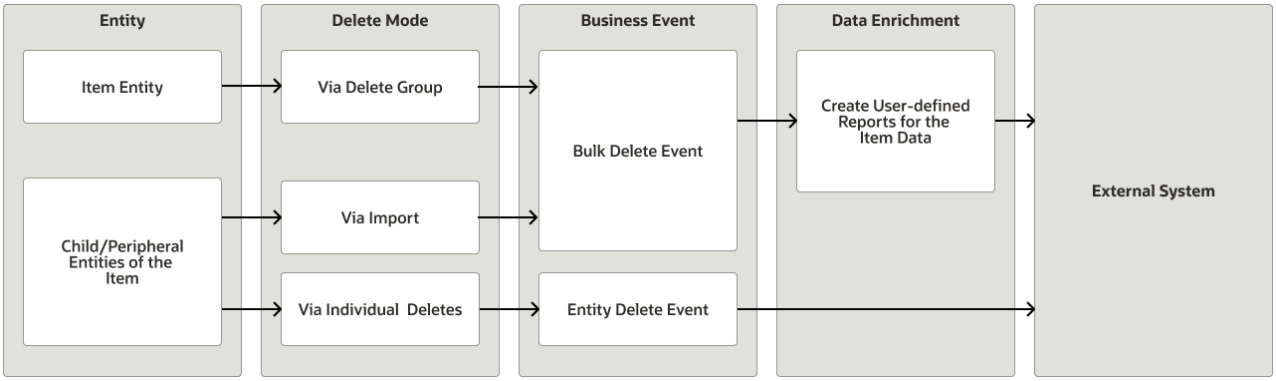
You can use the Deleted Item Entities REST resource to fetch the details of the deleted items from the Bulk Delete Events. The details include the primary identifier of the object and other secondary identifiers of the deleted entity. If the parent object is deleted, the child objects is also deleted, and thus the primary and alternate identifiers of the child objects must be stored.

Integration with external systems can be done by listening to the delete business event with the payload or by using a combination of business events and fetching the details using the Deleted Item Entities REST resource.

When you delete an item or its related entity in Product Information Management work area, the business events are seen in Oracle Integration Cloud. You can subscribe to these events through Oracle Integration Cloud and orchestrate real-time integrations with other systems.

You can create user-defined Business Intelligence reports based on the deleted entity tables to get the complete item details and send them to downstream products for integrations on a scheduled basis. The reports can be used to maintain external systems in sync, near real time when an item or its related entities are deleted. For information about the delete entity tables, see the *EGP_DELETE_ENTITIES* section in the *Oracle Fusion Cloud SCM: Tables and Views for SCM* guide.

Here's the image that illustrates the delete business events framework.



Here's the supported entities for the delete business events:

- Item Deletion
- Item Revision Deletion
- Item Organization Assignment Deletion
- Item Supplier Association Deletion

- Item Category Assignment Deletion
- Item Relationship Deletion
- Item Trading Partner Relationship Deletion
- Item Multi-row Attribute Deletion at Item, Item Revision, Item Supplier Levels

Note: Business events aren't supported for deletion of item attachments.

Here's the list of entities and the corresponding delete events.

Entity	Event
Item	Item Bulk Delete Event [postItemBulkDelete]
Item Revision	Item Bulk Delete Event [postItemBulkDelete]
Item Organization	Item Bulk Delete Event [postItemBulkDelete]
Item Supplier Association	Item Bulk Delete Event [postItemBulkDelete]
Item Category Assignment	Item Category Assignment Delete Event [postItemCategoryAssignmentDelete]
Related Item Relationship	Related Item Relationship Delete Event [postRelatedItemXRefDelete]
Trading Partner Item Relationship	Trading Partner Item Relationship Delete Event[postTradingPartnerItemXRefDelete]
GTIN Item Cross Reference Relationship	GTIN Item Cross Reference Relationship Delete Event [postGtinItemXRefDelete]
Item Cross Reference Relationship	Item Cross Reference Relationship Delete Event[postItemXRefDelete]
Source System Item Relationship	Source System Item Relationship Delete Event[postSourceSystemItemXRefDelete]
Item Level Multi-row Attribute	Item Level Multi Row EFF Delete Event [postItemMultiRowEFFDelete]
Item Revision Level Multi-row Attribute	Item Revision Level Multi Row EFF Delete Event [postItemRevisionMultiRowEFFDelete]
Item Supplier Level Multi-row Attribute	Item Supplier Level Multi Row EFF Delete Event [postItemSupplierMultiRowEFFDelete]
Single Row Attribute at all Levels	Item Bulk Delete Event [postItemBulkDelete]
Entities Deleted Via Import	Item Bulk Delete Event [postItemBulkDelete]

Related Topics

- Oracle ERP Cloud Adapter Capabilities
- Overview of Analytics Publisher

29 Healthcare Integration

Enrich Your Product Information From an External Healthcare Catalog

After a basic item is created in Oracle Product Hub, you can enrich your supply chain item master with the following from an external healthcare catalog provider using a predefined integration:

- Trading partner information
- Standardized codes
- GUDID information
- Product classifications
- Product operational information
- Item sizes
- Sterilization methods
- Storage conditions

Using this feature, you can:

- Publish the item master items to the External Healthcare Catalog seamlessly.
- Eliminate duplicate items with automated cleansing and deduplication capabilities from the External Healthcare catalog.
- Enrich item attributes and classify items quickly and accurately.
- Quickly find and identify items with well-structured descriptions.
- Speed up the ability to transact with the item for your supply chain and clinical processes.
- Reduce errors due to manual maintenance thereby accelerating the item add and introduction processes.

Prerequisites

Before enriching the item master, make sure you've done the following:

- A license agreement with an external healthcare catalog provider.
- Deploy existing healthcare library. The standard integration with external healthcare catalog provider works with the predefined healthcare library. For more details about healthcare library, see *Use Predefined Extensible Flexfield Attributes for Maintaining Healthcare Product Data*.
- Create an integration user for the External Healthcare Catalog provider with the following security privileges to process the enrichment:
  - Create Trading Partner (EGP_CREATE_TRADING_PARTNER)
  - Manage Item Manufacturer (EGP_MANAGE_ITEM_MANUFACTURER)
  - Modify Trading Partners (EGP_MODIFY_TRADING_PARTNER)
  - Import Item (EGP_IMPORT_ITEM)

- Manage Item (EGP_MANAGE_ITEM)
- Manage Item Attachment (EGP_MANAGE_ITEM_ATTACHMENT)
- Manage Item Batch (EGI_MANAGE_ITEM_BATCH)
- Manage Product Upload (EGS_MANAGE_PRODUCT_UPLOAD)

Related Topics

- Item Enrichment - Initial Setup
- Enrich Your Item Master

Item Enrichment - Initial Setup

Here's the initial setup you must do before you enrich the items master:

1. Associate the **Healthcare External Enrichment** attribute group to the relevant item classes and item pages. For details, see *Associate Healthcare Attributes With Items* .
2. Deploy the **Register with External Healthcare Catalog** attribute for the appropriate item classes.
3. Create a validation rule set:
    a. In the **Product Information Management** work area, go to the **Tasks** panel tab, click **Manage Rule Sets**.
    b. Create a validation rule set to filter items with the **Register with External Healthcare Catalog** attribute value set as **Yes**. For details, see *Define Rule Sets and Item Rules*.

    > **Note:** When defining the rules, specify the **Attribute Group** as **External Healthcare Enrichment** and the **Attribute** as **Register with External Healthcare Catalog** with **Value** as **Yes** and **Suspend**.

    c. Click **Save**.
4. Associate the validation rule set to the predefined spoke system called **External Healthcare Catalog**:
    a. In the **Product Information Management** work area, go to the **Tasks** panel tab, click **Manage Spoke Systems**.
    b. Search for the **External Healthcare Catalog** spoke system.
    c. Under **Item**:
        - In **Selection Criteria**, add the item selection rules to specify the selection criteria. The item selection rule includes the business entity, operator, and entity name. Select the following values:
            - **Business Entity**: Organization
            - **Operator**: Equals
            - **Entity name**: Name of your master organization
        - From the **Validation Rule Set** drop-down list, select validation rule set you created in step 3.
    d. Click **Save**.
5. Schedule the **Product Hub Publication Job** scheduled process with the External Healthcare Catalog spoke system to publish the list of items that need enrichment to Oracle WebCenter Content for every four hours. For details, see *Define the Schedule and Parameters for the Scheduled Process*. You must specify the following parameters:
    - **Spoke System**: External Healthcare Catalog
    - **Publish Items**: Yes
    - Select **No** for the other parameters.

Related Topics

- Enrich Your Item Master

Enrich Your Item Master

To enrich your item master:

1. Go to the **Product Information Management** work area.
2. From the **Tasks** panel tab and click **Manage Items**.
3. Search for the item.
4. From the search results, click the item for which you want to enrich the healthcare attributes.

   The Edit Item page is displayed.
5. Click the **Specifications** tab and go to relevant item page for healthcare attributes. The predefined attributes are displayed without any values.
6. Set the **Register with External Healthcare Catalog** option to **Yes** and click **Save**. The external healthcare provider matches the information based on the supplier part number and supplier name and shares the updated record with Product Hub.
7. After the Product Hub Publication Job scheduled process job is successfully completed, the external healthcare catalog provider generates an enrichment file and uses the predefined import map called **Item Enrichment with External Healthcare Catalog** to automatically load the data back to Product Hub. The frequency of the enrichment updates can be discussed with the external healthcare catalog provider.
8. After the item enrichment is processed, open the same item again and you can see that the healthcare attributes have values. These values are added from the external healthcare provider during enrichment.
9. Go to the **Relationships** tab and then click **Trading Partner Items**.

   You can see that the manufacturer part number and name has been updated from the external healthcare provider. Also, the GTIN information must be available.

   This completes the item master enrichment process.

Related Topics

- Item Enrichment - Initial Setup

Sync Item Information With Oracle Health

You can sync your item master, item location, and item cost information with Oracle Health EHR.

You can publish items from their item master thereby eliminating duplicate items that might be created in the Oracle Health EHR item master. You can access critical attributes directly in Oracle ERP Cloud and it isn't required to maintain this information in Oracle Health EHR. This reduce errors that might occur due to manual maintenance thereby speeding up release the item for clinical purposes.

Before you sync items with Oracle Health EHR, do the following:

1. Deploy the existing healthcare library. The standard integration works with the predefined healthcare library. For additional details about healthcare library, see *Use Predefined Extensible Flexfield Attributes for Maintaining Healthcare Product Data*.
2. Deploy and setup the Oracle Fusion Cloud SCM — Oracle Health EHR | Sync Items accelerator in Oracle Integration. For details, see the Sync Items from Oracle Fusion Cloud SCM to Oracle Health EHR guide available at *docs.oracle.com*.
3. Opt in to the Synchronize Item Information With Oracle Health feature.
4. Create filters for items using the **Oracle Health** spoke system to publish the item.
    a. In the Product Information Management work area, go to the **Tasks** panel tab, and click **Manage Spoke Systems**.
    b. Search for the name **Oracle Health**.
    c. In the search results, click the **Oracle Health** link in the **Name** column or select the row and click the **Edit** icon.

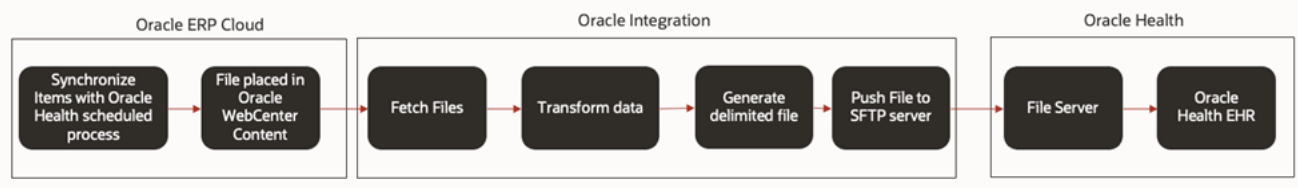
       The Edit Spoke System: Oracle Health page is displayed.
    d. Click **Publication Options**.
    e. Define filters using the **Selection Criteria** or **Item Validation Rules**, or both.
    f. Click **Save and Close**.
5. In the Setup and Maintenance work area, go to the **Manage Subinventories and Locators** task.
    a. Select the **Organization** and click **OK**.
    b. For the subinventories that are applicable for Oracle Health, click each subinventory, click the **Edit** icon, and select the **Oracle Health location** checkbox.
    c. Click **Save and Close**.
6. Schedule the Synchronize Items with Oracle Health schedule process with the Oracle Health spoke system. Specify the following parameters:
    - **Spoke System**: Oracle Health
    - **Synchronize Item Master**: Yes
    - **Synchronize Item Locations**: Yes
    - **Synchronize Item Costs**: Yes
    - **Full Publish**: No
7. Click **Submit** to submit the process.

Oracle Health Item Integration Process

When the Synchronize Items with Oracle Health scheduled process is initiated, the Oracle Fusion Cloud SCM — Oracle Health EHR | Sync Items accelerator performs the following:

1. Downloads the ZIP files from Oracle WebCenter Content.
2. Transforms data and creates files for Oracle Health EHR.
3. Loads the file in the file server for Oracle Health EHR to process.
4. Communicates with Product Data Steward and administrator for resolution if data transfer fails.

The following image shows the integration process with Oracle Health EHR.



Sync Item Information With Epic

You can sync your item master, item inventory location, and item cost information with Epic.

You can publish items from your item master thereby eliminating duplicate items that might be created in the Epic item master. You can access critical attributes directly in Oracle ERP Cloud and it isn't required to maintain this information in Epic. This minimizes errors that might occur due to manual maintenance, thus accelerating the release of the item for clinical purposes.

Before you sync items with Epic, do the following:

1. Deploy the existing healthcare library. The standard integration works with the predefined healthcare library. For additional details about healthcare library, see *Use Predefined Extensible Flexfield Attributes for Maintaining Healthcare Product Data*.
2. Deploy and setup the Oracle Fusion Cloud SCM — Epic | Sync Items recipe in Oracle Integration. For details, see the Sync Items from Oracle Fusion Cloud SCM to Epic guide available at *docs.oracle.com*.
3. Opt in to the Synchronize Item Information With Oracle Health feature.
4. Create a spoke system called **Epic**.
5. In Setup and Maintenance work area, go to the **Manage Trading Community Source Systems** task.
    a. Click **Create**.
    b. Add a new source system for Epic.
6. Create filters for items using the **Epic** spoke system to publish the item.
    a. In the Product Information Management work area, go to the **Tasks** panel tab, and click **Manage Spoke Systems**.
    b. Search for the name **Epic**.
    c. In the search results, click the **Epic** link in the **Name** column or select the row and click the **Edit** icon.

    The Edit Spoke System: Epic page is displayed.
    d. Click **Publication Options**.
    e. Define filters using the **Selection Criteria** or **Item Validation Rules**, or both.
    f. Click **Save and Close**.
7. In the Setup and Maintenance work area, go to the **Manage Subinventories and Locators** task.
    a. Select the **Organization** and click **OK**.
    b. For the subinventories that are applicable for Epic, click each subinventory, click the **Edit** icon, and select the **Oracle Health location** checkbox.
    c. Click **Save and Close**.
8. Schedule the Synchronize Items with Oracle Health schedule process with the Epic spoke system. Specify the following parameters:
    - **Spoke System**: Epic
    - **Synchronize Item Master**: Yes
    - **Synchronize Item Locations**: Yes

- **Synchronize Item Costs**: Yes
- **Full Publish**: No

9. Click **Submit** to submit the process.

Epic Integration Process

When the Synchronize Items with Oracle Health scheduled process is initiated, the Oracle Fusion Cloud SCM — Epic | Sync Items recipe performs the following:

1. Downloads the ZIP files from Oracle WebCenter Content.
2. Transforms data and creates files for Epic in HL7 format.
3. Loads the file in the file server for Epic to process.
4. Communicates with Product Data Steward and administrator for resolution if data transfer fails.

The following image shows the integration process with Epic.