Oracle Fusion Cloud SCM

Implementing Manufacturing and Supply Chain Materials Management

26D

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Get Help

In addition to the resources available in Oracle Help Center, you can explore training, connect with the Oracle community, and share your feedback.

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.

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

Overview of Implementing Manufacturing and Supply Chain Materials Management

To start an implementation of Manufacturing and Supply Chain Materials Management, you must opt into the offerings applicable to your business requirements. Refer to the Oracle Fusion Cloud Applications: Using Functional Setup Manager guide to manage the opt-in and setup of your offerings.

Manufacturing and Supply Chain Materials Management Cloud Offering

Use this offering to configure the processes that support manufacturing, maintenance, inventory, shipping, receiving, supply chain managerial accounting, supply chain financial orchestration, supply chain orchestration, supply chain collaboration, and service logistics. The offering also includes steps to set up some common objects, such as organizations and schedules. For more information about performing those common setups, refer to Oracle Fusion Cloud SCM: Implementing Common Features for SCM.

For the full list of functional areas and features in this offering, use the Associated Features report that you review when you plan the implementation of your offering.

Functional Area	Description
Inventory Management	Enables your warehouse to process inventory transactions, manage inventory balances, and perform cycle and physical inventory accounting.
Receiving	Enables your warehouse to process receipts, including the receipt inspection, put away, and return of material.
Shipping	Enables your warehouse to release pick waves, process and confirm outbound shipments, and capture shipping costs.
Receipt Accounting	Configure the receipt accounting structures, options, and rules for purchase receipt accounting and analysis.
Cost Accounting	Configure the cost accounting structures, options, and rules for supply chain transaction cost accounting as well as product cost and profitability analysis.
Landed Cost Management	Configure the landed costing structures, options, and rules for capture of actual and estimated landed cost.
Intrastat Reporting	A system for collecting, recording, and reporting trade statistics related to the movement of material across international borders within the European Union.
Manufacturing	Enables creation, management, and execution of manufacturing production orders.

Functional Area	Description
Supply Chain Collaboration	Enables enterprises to collaborate with trading partners on their supply forecasts, receive contract manufacturing production updates, and implement vendor-managed inventory processes.
Supply Chain Orchestration	Enables tracking and change management of supply creation, and provides a 360 degree view of supply creation and fulfillment.
Maintenance Management	Configure maintenance management to enable creation, management of maintainable assets, define maintenance requirements, and perform planning and execution of maintenance work orders.
Supply Chain Financial Flows	Configure and manage the financial flows between internal parties of the supply chain business process.
Service Logistics	Manage the sourcing, ordering, and field service billing of parts for service logistics.

Related Topics

- Plan Your Implementation

Overview of Guides for the Manufacturing and Supply Chain Materials Management Offering

On the Oracle Help Center, you can find several guides that can help you with your Manufacturing and Supply Chain Materials Management implementation.

You can find these guides with the Oracle Fusion Cloud Supply Chain & Manufacturing documentation that's available on the Oracle Help Center (https://www.oracle.com/pls/topic/lookup?ctx=cloud&id=supply-chain-management).

If you're focused primarily on manufacturing or maintenance business processes, and you're preparing for a conference room pilot (or similar exercise) of the Manufacturing and Supply Chain Materials Management offering, be sure to look at these guides:

- Oracle Fusion Cloud SCM: Getting Started with Your Manufacturing and Supply Chain Materials Management Implementation
- Oracle Fusion Cloud SCM: Getting Started with Your Maintenance Implementation

But when you're working on a full implementation of the Manufacturing and Supply Chain Materials Management offering, these guides are what you need:

- Oracle Fusion Cloud SCM: Implementing Common Features for SCM
- Oracle Fusion Cloud SCM: Implementing Manufacturing and Supply Chain Materials Management

2 Back-to-Back Fulfillment

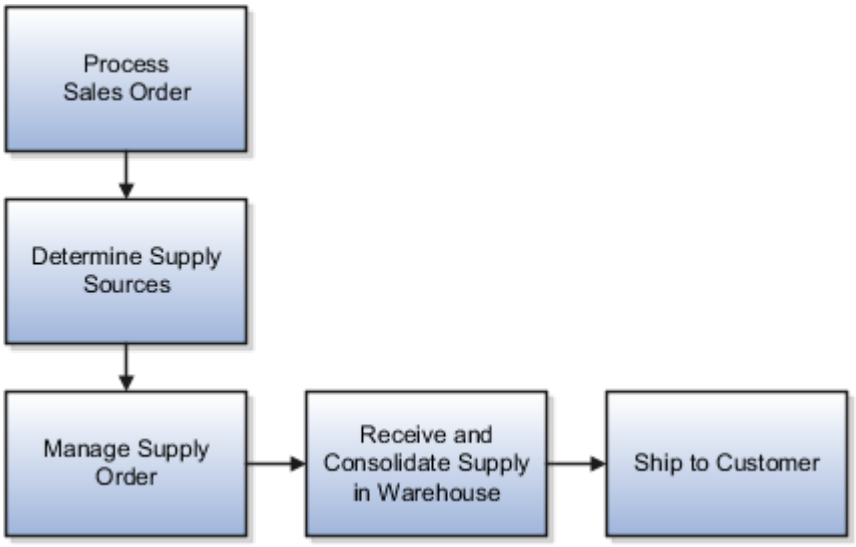
Introduction

Overview of Back-to-Back Fulfillment

The back-to-back fulfillment process is one in which specific sales order demand triggers supply creation, and a link is established between the sales order and the supply.

Note: Back-to-back flow is currently supported only for discrete manufacturing.

The following figure provides a high-level flow diagram showing the back-to-back supply creation and fulfillment process flow.



Back-to-back fulfillment is where supply is procured and then received at a warehouse only after an order is placed. The supply is reserved against a sales order until shipping. This process provides support to create and link supply after a sales order is entered and scheduled, allowing you to reduce your inventory while maintaining the ability to respond to customer demands.

You create supply for a back-to-back order using one or more of the following back-to-back flows:

- **Buy:** Procurement from an external supplier.
- **Make:** Production in an internal manufacturing facility (includes in-house manufacturing and contract manufacturing).
- **Transfer:** Transfer from another warehouse.
- **On hand:** Reservation of on-hand supply in the fulfillment organization.

Note: For information about back-to-back flows for contract manufacturing, see the Implementing Contract Manufacturing chapter in this guide.

After the supply is received into the fulfillment warehouse, the back-to-back order is ready for shipment to the customer.

Related Topics

- Back-to-Back Supply Creation Flows

How Back-to-Back Fulfillment Works

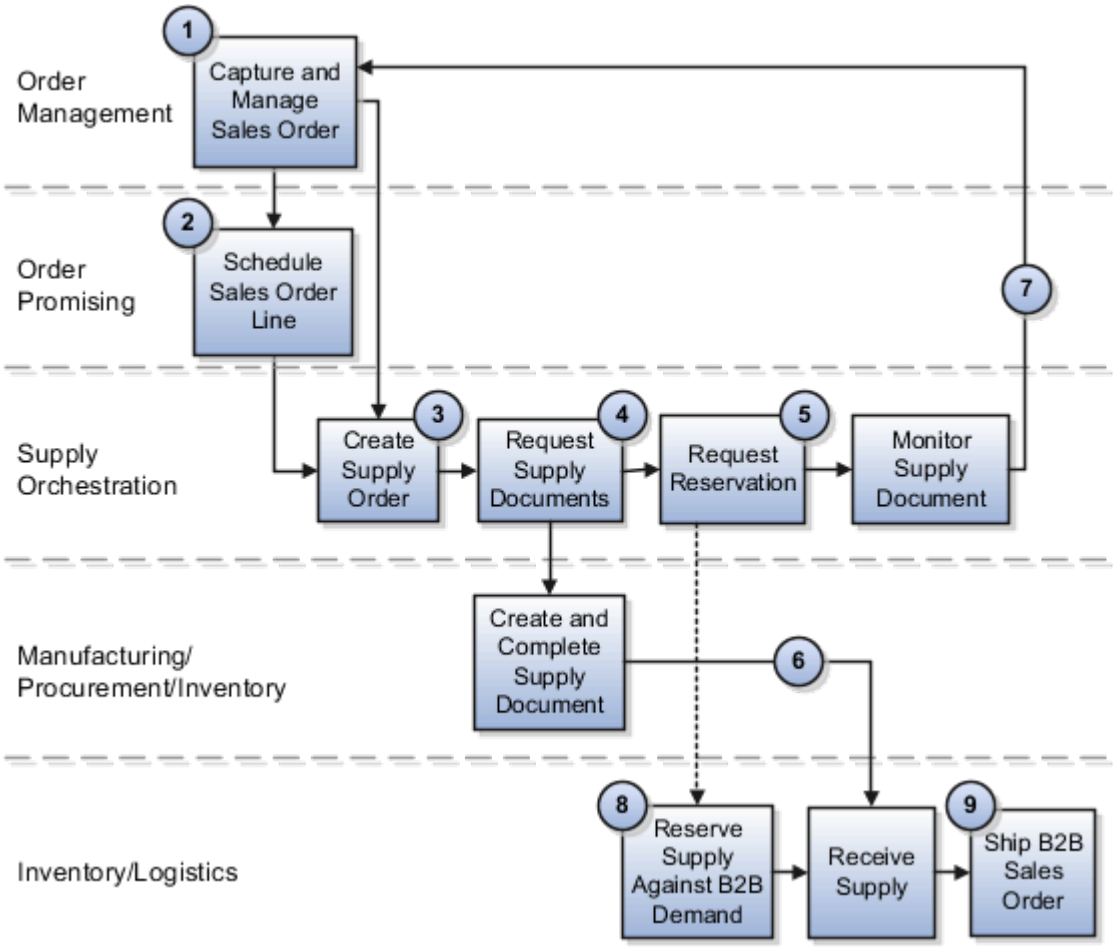
The back-to-back process flow is one in which specific sales order demand triggers supply creation and a link is established between the sales order and the supply.

An organization procures goods from an internal or external supplier or source to a specific warehouse from where you can combine those goods with others to create a single shipment to the customer. Back-to-back supply processes are similar to regular supply processes that deliver supply to a warehouse except for one difference; the back-to-back supply is always reserved to an order management fulfillment line.

At a high level, you can think of back-to-back fulfillment as a three-step process:

1. Creation of a customer sales order (source of demand).
2. Creation and fulfillment of supply document (source of supply) to the fulfillment warehouse.
3. Shipment of sales order from the fulfillment warehouse to the customer.

However, the back-to-back flow is truly a highly integrated process flow involving several Oracle Fusion Cloud applications. The following figure shows the back-to-back process flow in detail. An explanation for each number



follows the figure.

Explanation of Callouts

1. The back-to-back flow begins with order capture. Typically, an order entry specialist enters a customer sales order for an item that's designated for back-to-back fulfillment. After the sales order is entered and scheduled, Oracle Global Order Promising is invoked.
2. Global Order Promising performs two key functions:
    a. First, Global Order Promising promises orders for back-back items by choosing the best possible sources across the supply chain, while considering sourcing rules, available-to-promise (ATP) rules, and other constraints.

        Note: ATP calculations are currently supported only for discrete manufacturing.

    b. Second, Global Order Promising releases supply recommendations (or the supply picture) to Oracle Supply Chain Orchestration. These supply recommendations are based on how Global Order Promising pegs supply against the back-to-back demand.

        After the sales order fulfillment line is scheduled, Oracle Fusion Cloud Order Management releases the fulfillment line information (or the demand picture) to Supply Chain Orchestration.
3. Supply Chain Orchestration processes the demand picture from Order Management and the supply picture from Global Order Promising to create a supply order in Supply Chain Orchestration.

4. Supply Chain Orchestration also triggers the creation of supply documents in the supply execution application. Depending on how sourcing rules are defined and how Global Order Promising sends its supply recommendations, the supply document can be a purchase order in Oracle Fusion Cloud Procurement, a work order in the Oracle Fusion Cloud Manufacturing solution, or a transfer order in Oracle Fusion Cloud Inventory Management.

   > **Note:** Back-to-back purchase order creation requires the initiation of a purchase requisition, which is then converted (automatically or manually) to a purchase order.

5. Supply Chain Orchestration tracks the creation of the supply document and immediately initiates a reservation request to tie the sales order demand with the supply document.
6. The reservation of supply to demand is made in Inventory Management and ensures that the incoming supply isn't allocated incorrectly or diverted to any other demand source.

   > **Note:** Global Order Promising respects the pegging between the supply document and the sales order during subsequent reschedules for the order.

7. Supply Chain Orchestration tracks the status of the supply document and sends updates to order management.
8. After the supply is received into stock (purchase order receipt and put away, transfer order receipt and put away, or work order completion), the reservation switches from the supply document to on hand that has been created by the supply document receipt.
9. The sales order is now ready to be shipped to the customer. Order Management requests shipment to the customer and then interfaces with receivables for billing. Supply Chain Orchestration tracks the process until the goods are shipped to the customer.

Related Topics

- Overview of Back-to-Back Fulfillment
- Oracle Applications That Support Back-to-Back Fulfillment

Back-to-Back Supply Creation Flows

You can set up Oracle Fusion Cloud applications that support back-to-back fulfillment to trigger supply creations flows (buy, make, transfer, and on hand) after a sales order is entered and scheduled.

Each variant of the back-to-back flow differs in the supply document that's created and the supply execution application in which the document is created. Depending on the source of the item, supply is provided from manufacturing, procurement, or inventory. Then, after the supply is received into the fulfillment warehouse, the back-to-back order is ready for shipment to your customer.

The following table describes the supply creation flows and associated supply document supported for each flow when using back-to-back fulfillment.

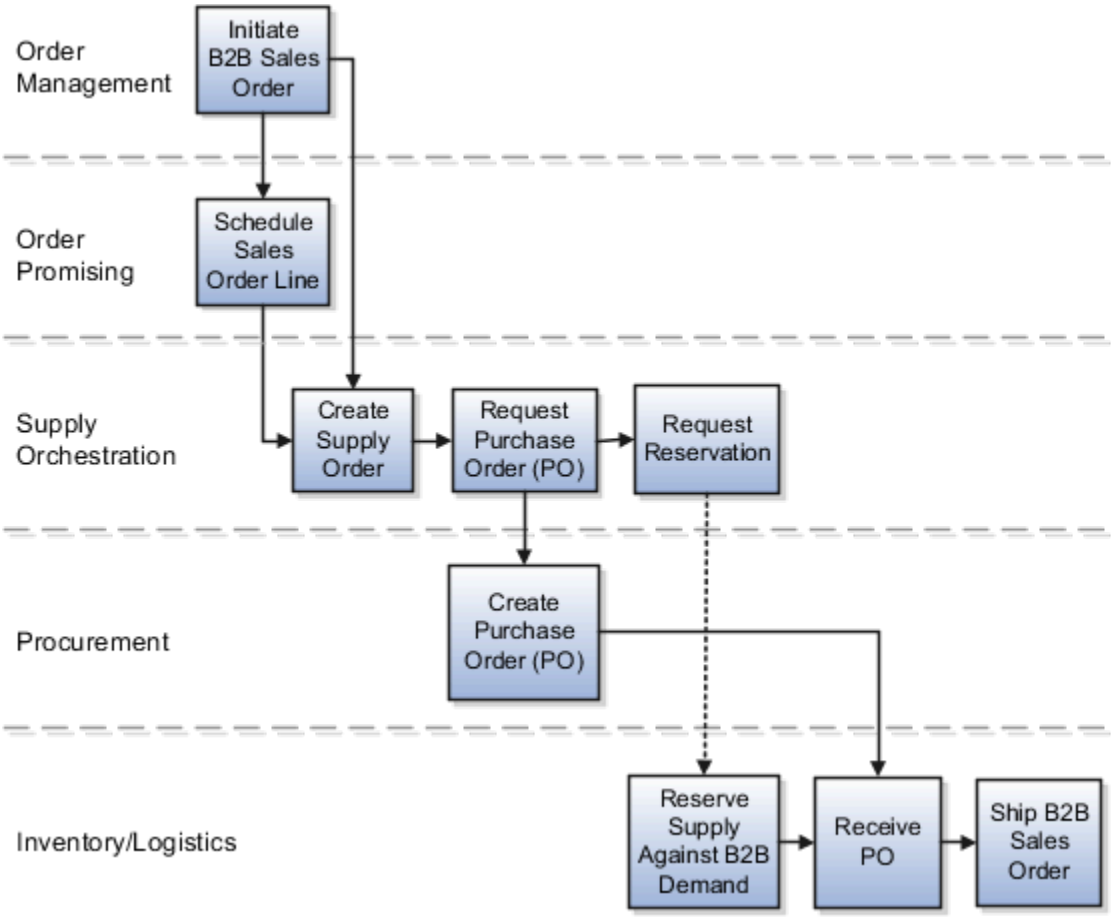
Supply Creation Flow	Supply Document	Description
Buy	Purchase Order	Procurement from an external supplier.
Make	Work Order	Production or assembly at an internal manufacturing location.
Transfer	Transfer Order	Transfer from another warehouse.

Supply Creation Flow	Supply Document	Description
On-hand Available	Request Reservation Only	Reservation of on-hand supply (in cases where on hand available in the fulfillment warehouse).

Back-to-Back Supply Creation Buy Flow

The supply document for a back-to-back buy flow is a purchase order. Based on supply recommendations from Oracle Global Order Promising, a purchase order is created and reserved against the sales order. When the purchase order is received by the supplier, on hand is created to ship out the back-to-back sales order.

The following figure shows the back-to-back supply creation buy flow.

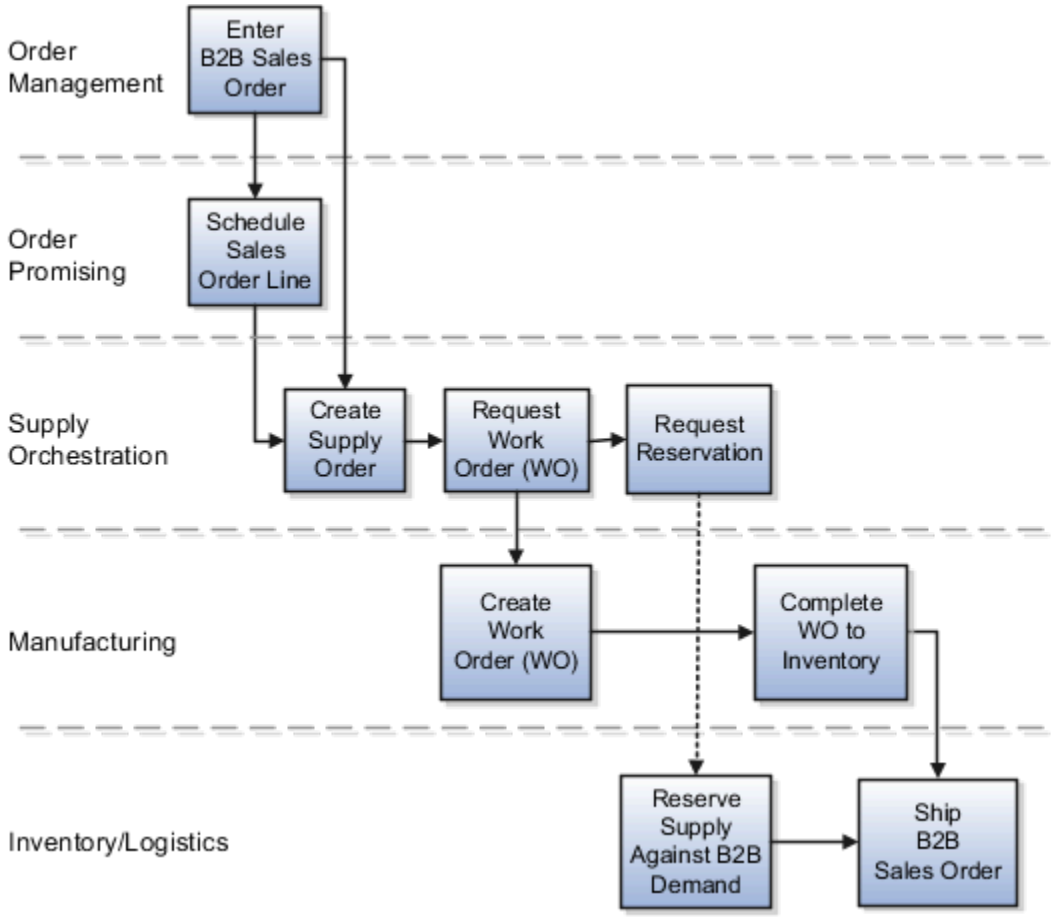


Back-to-Back Supply Creation Make Flow

The supply document for a back-to-back make flow is a work order. As soon as the work order is created in Oracle Fusion Cloud Manufacturing, it's tied to the back-to-back sales order in the form of a reservation in inventory. The work order goes through the regular production process and the work order completion transaction issues finished goods to inventory.

Note: Back-to-back flow is currently supported for only discrete manufacturing.

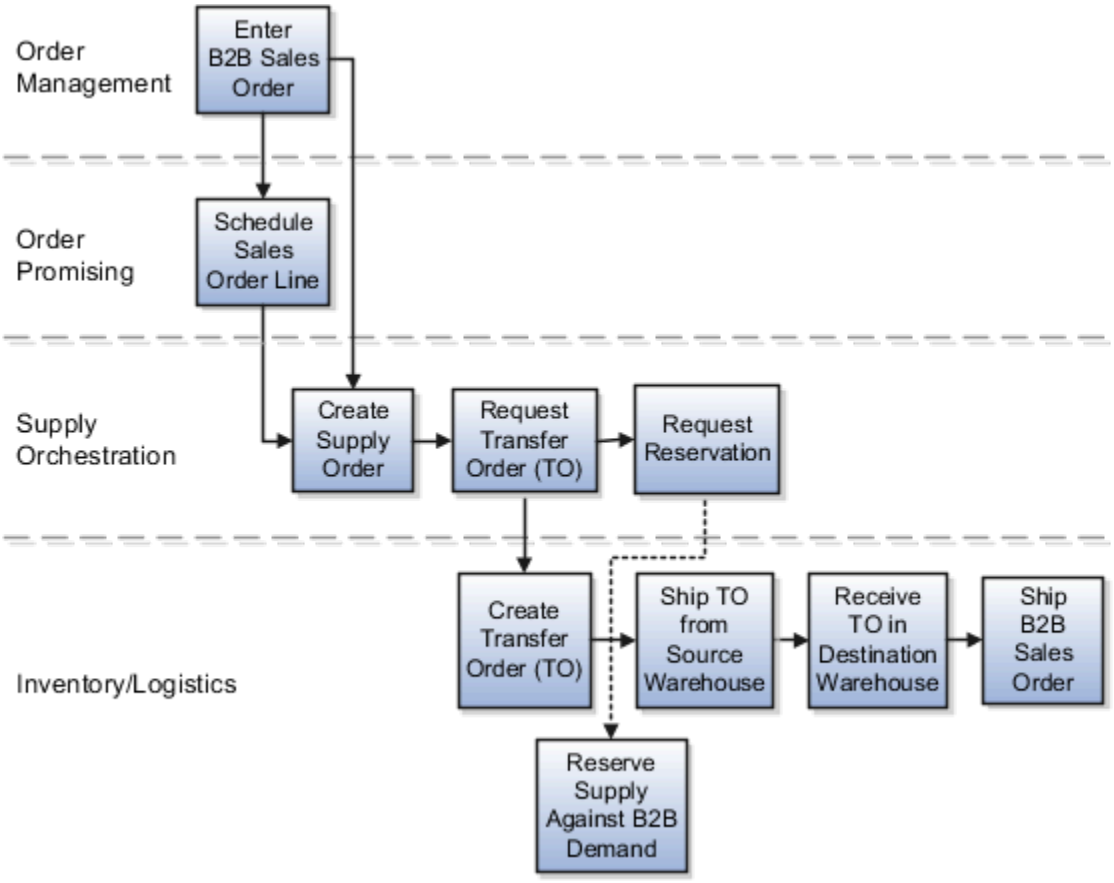
The following figure shows the back-to-back supply creation make flow.



Back-to-Back Supply Creation Transfer Flow

The supply document for a back-to-back transfer flow is a transfer order. The transfer order is created in inventory and reserved against the back-to-back sales order. When the transfer order is ready to be fulfilled, an interorganization shipment moves goods from the source organization to the destination organization. An interorganization receipt in the destination organization (which is also the fulfillment warehouse on the back-to-back sales order) creates on hand to fulfill the sales order.

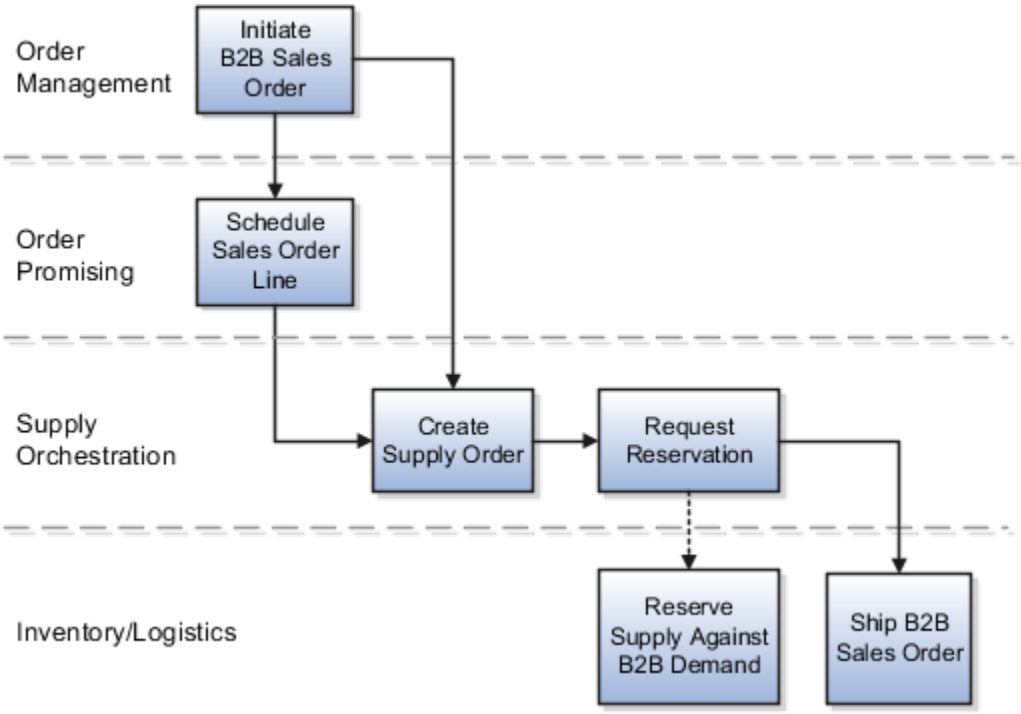
The following figure shows the back-to-back supply creation transfer flow.



Back-to-Back Supply Creation On-Hand Flow

The back-to-back on-hand available (ATP) flow is the simplest in terms of the number of steps that constitute the flow. This flow occurs where on hand supply is available in the fulfillment warehouse for the ordered back-to-back item at the time of order promising. Because on-hand goods already exist in the form of on hand, Oracle Supply Chain Orchestration directly sends a request to reserve the on hand quantity against the back-to-back sales order. You can ship the sales order immediately after the reservation is created.

The following figure shows the back-to-back supply creation on-hand flow.



Related Topics

- Oracle Applications That Support Back-to-Back Fulfillment

Set Up Back-to-Back Transfer Flow

The topic explains what you need to do for setting up back-to-back transfer flow.

In the Oracle Product Information Management, ensure that the Item is Back-to-Back enabled.

In Oracle Global Order Promising:

1. Set up a global sourcing rule with Type as Transfer from. Set the organization as the organization requesting the transfer (example, Warehouse 1).
2. Set up a local sourcing rule for the organization (in this example, Warehouse 1) Type as Transfer from, from the organization that has the stock from which the transfer will take place (example, Warehouse 2).
3. Set up an ATP rule with the Promising Mode as Supply chain availability search.
4. Ensure that the Supply chain availability search attributes are enabled according to your requirements. For example, you might want the application to search components and resources to include on-hand or in-transit Supply Types or fulfillment lines Demand Types.
5. Set the ATP Rule Assignment as required.
6. Set the sourcing assignments for the sourcing rules that you defined in steps 1 and 2.
7. Ensure that the assignment level used for the global sourcing rule doesn't include any Organization.
8. Refresh and restart the Order Promising Server for ATP Rules and Sourcing.

With this setup:

- The global rule is used to source the item from Warehouse 1 if there is stock available to reserve.

- If there's no stock on hand, Global Order Promising uses the local rule to transfer the item from Warehouse 2 to Warehouse 1.

For more information, see these guides:

- Oracle Fusion Cloud SCM: Using Product Master Data Management
- Oracle Fusion Cloud SCM: Using Order Promising

Oracle Applications That Support Back-to-Back Fulfillment

There are several Oracle Fusion Cloud applications that support back-to-back fulfillment, however, some additional setup is required.

The following table lists those applications, a brief description of their importance in back-to-back fulfillment, and when you must perform additional setup for the applications. The supply flow columns indicate which applications support which flows, and the comments describe at a high-level the product-specific back-to-back setup that's required for the flows to work. For setup instructions, see Setting Up Back-to-Back Fulfillment: Roadmap.

Oracle Application	Make Supply Flow	Buy Supply Flow	Transfer Supply Flow	On-Hand Supply Flow	Comments	For More Information
Oracle Product Information Management	Yes	Yes	Yes	Yes	You must identify items for back-to-back orders. This is a mandatory first step in implementing back-to-back fulfillment. Depending on your supply demand needs, setup of additional applications might also be necessary.	Enable Items for Back-to-Back Fulfillment:
Oracle Global Order Promising	Yes	Yes	Yes	Yes	You must create available-to-promise (ATP) rules so that Global Order Promising can send scheduling information (when product can ship and where from) to Oracle Order Management. In addition, you must also set up sourcing rules so that Global Order Promising can send Supply Chain Orchestration buy, make, transfer	How You Configure Global Order Promising to Support Back-to-Back Fulfillment

Oracle Application	Make Supply Flow	Buy Supply Flow	Transfer Supply Flow	On-Hand Supply Flow	Comments	For More Information
					and on hand recommendations for where to obtain supply to fulfill the sales order.	
Oracle Supply Chain Orchestration	Yes	Yes	Yes	Yes	Supply Chain Orchestration provides predefined back-to-back processes for all supply creation flows (buy, make, transfer, and on hand).	Set Up Supply Chain Orchestration for Back-to-Back Fulfillment
Oracle Fusion Cloud Manufacturing	Yes	No	No	No	For each item that will be fulfilled through back-to-back make flow, you must set up a work definition to describe the manufacturing process to build that item. This definition also allows automatic creation of the work order.	How You Configure Manufacturing to Support Back-to-Back Fulfillment
Oracle Fusion Cloud Procurement	No	Yes	No	No	By default, Procurement isn't configured for back-to-back fulfillment. However, you can set up Procurement to support back-to-back fulfillment to: • Execute buy order recommendati through purchases orders • Automate purchase order creation for back-to-back order items and submit for approval Also, if you want to automate purchase	Enable Procurement to Support Back-to-Back Fulfillment How You Automate Purchase Order Creation for Back-to-Back Items Oracle Fusion Cloud Procurement: Implementing Procurement guide

Oracle Application	Make Supply Flow	Buy Supply Flow	Transfer Supply Flow	On-Hand Supply Flow	Comments	For More Information
					order creation, you must create blanket purchase agreements for your back-to-back order items.	
Oracle Fusion Cloud Order Management	Yes	Yes	Yes	Yes	There's no setup required beyond the normal order-to-cash (OTC) setups. Order Management has predefined processes for back-to-back fulfillment that are automatically assigned.	Oracle Fusion Cloud SCM: Implementing Order Management guide
Oracle Fusion Cloud Inventory Management	Yes	Yes	Yes	Yes	There's no setup required for Inventory Management specific to back-to-back. However, this application plays an important role in back-to-back fulfillment. Inventory Management creates transfer orders for internal transfers and reserves supply against demand for all supply creation flows.	Oracle Inventory Management documentation

Related Topics

- Set Up Back-to-Back Fulfillment

Implement Back-to-Back Fulfillment

Considerations for Implementing Back-to-Back Fulfillment

Use back-to-back fulfillment when you prefer not to keep stock on hand.

The following table provides points to consider before implementing back-to-back fulfillment.

Consideration	Description
Cost-effective fulfillment for high-cost, non-stocked, slow-moving items	Back-to-back fulfillment is best suited for items that your organizations choose not to stock. A request for supply is created only after a sales order is scheduled for items you have designated for back-to-back fulfillment. This fulfillment process flow also offers your organizations the flexibility to extend their product offerings even if they don't directly stock goods.
Prevents loss or misallocation of supply	The essence of the back-to-back process flow is the firm link that exists between the demand document (sales order) and the supply document (purchase order, transfer order, or work order). This link between sales order and supply document is crucial in preventing misallocation or diversion of supply for other demands.
Provides organizations with more centralized control over the fulfillment process	Fulfillment decisions are controlled centrally for back-to-back flows. This allows your organizations to designate items to be back-to-back enabled and apply sourcing rules to determine supply creation options.
Provides 360 degree visibility of the supply creation and fulfillment process	Back-to-back fulfillment allows for visibility to demand, supply, and exceptions in the fulfillment flow. This high-level visibility provides your order fulfillment and supply chain operations managers with up-to-date information and enhances their responsiveness to exceptions. Reducing incidence of fulfillment delays is a key factor in back-to-back fulfillment.

Set Up Back-to-Back Fulfillment

Learn how to set up an Oracle application so it supports your back-to-back fulfillment.

You can set up back-to-back so it works with your predefined standard or drop ship fulfillment flows.

Here's a summary to help you get started.

Set Up	Details
Enable your item for back-to-back fulfillment. This is a required step.	*Enable Your Item for Back-to-Back Fulfillment*
If you want to build the item, then you must set up a sourcing rule in Oracle Global Order Promising so your factory can use a make recommendation.	*Set Up Promising to Support Your Back-to-Back Flow*
If you want to make a standard item or an assemble-to-order (ATO) item, then you must create a work definition for it Oracle Manufacturing. The work definition provides the operation, resource, and component details that Manufacturing needs to create the work order. You must enable the Used in Planning option on the work definition.	*How You Configure Manufacturing to Support Back-to-Back Fulfillment* *How You Set Up Manufacturing*

Set Up	Details
If you want to use a purchase order instead of a transfer order to fulfill the back-to-back sales order, then you must do some set up in Oracle Supply Chain Orchestration. Global Order Promising sends a transfer recommendation to Supply Chain Orchestration, then Supply Chain Orchestration creates a transfer order. As an option, you can set up a rule that specifies to use a purchase order instead of a transfer order. For example, you might have a financial incentive to use a purchase order.	*Set Up Supply Chain Orchestration for Back-to-Back Fulfillment*
If you want to use a buy recommendation, or if you want to use a purchase order with an internal material transfer, then you must enable the Customer Sales Order Fulfillment feature in the Procurement offering.	*Enable Procurement to Support Back-to-Back Fulfillment*
If you want your flow to automatically create a purchase order, then you must set up Oracle Procurement so it can create a blanket purchase agreement for each item in your back-to-back flow.	*How You Automate Purchase Order Creation for Back-to-Back Items*
If you want to outsource your manufacturing process, then you must set up contract manufacturing.	*How You Configure Manufacturing to Support Back-to-Back Fulfillment* *Overview of Contract Manufacturing*

How Order Management Orchestration Works in Back-to-Back Fulfillment

You don't need to do any special set up for Oracle Order Management. Order Management comes predefined with the DOO_OrderFulfillmentGenericProcess orchestration process to fulfill a back-to-back item.

Order Management orchestrates three different types (branches) for the standard, back-to-back, and drop ship shipment flows. The back-to-back branch in Order Management is selected after the sales order line is scheduled for shipment from a warehouse. If the scheduled warehouse has the indicator Enable Back-to-Back Fulfillment set to Yes for the ordered item (enabled in Product Model), Order Management automatically routes the order line to the back-to-back process branch. For more information on setting this attribute, see Enabling Items for Back-to-Back Fulfillment: Procedure.

In the back-to-back process branch, Order Management sends the item to Supply Chain Orchestration. Then, Order Management sends the item, quantity, and ship-from warehouse information to Supply Chain Orchestration so that Supply Chain Orchestration can make sure there's ample supply available in that warehouse by the scheduled ship date. Order Management, in turn, receives supply status updates from Supply Chain Orchestration (appears in the Supply Details tab).

For more information about Order Management orchestration and the shipment fulfillment flows, see Supply Chain Management Cloud, Implementing Order Management guide.

Related Topics

- Enable Your Item for Back-to-Back Fulfillment
- How You Configure Global Order Promising to Support Back-to-Back Fulfillment
- Set Up Supply Chain Orchestration for Back-to-Back Fulfillment
- Enable Procurement to Support Back-to-Back Fulfillment
- How You Configure Manufacturing to Support Back-to-Back Fulfillment

Enable Your Item for Back-to-Back Fulfillment

Enable your item so you can use it in a back-to-back flow.

1. Go to the Product Information Management work area, then click **Tasks > Manage Items**.
2. Search for your item, then open it for editing.
3. On the Edit Item page, click **Specifications > Sales and Order Management**, then set the attribute.

Attribute	Value
Back-to-Back Enabled	Yes

   Notes

   - Your flow will schedule the sales order then create a supply request for it. It establishes a firm relationship between the demand document, which is the sales order, and the supply document, which is the purchase order, transfer order, or work order.
   - Oracle applications look at this setting to determine how to process the item. For example, Order Management and Supply Chain Orchestration look at it to determine whether to assign an orchestration process that Oracle has set up specifically to do back-to-back fulfillment. Global Order Promising uses it to determine when to send a supply request to Supply Chain Orchestration.
4. You might need to do some set ups in an Oracle application, depending on your business requirements. For more information, see Setting Up Back-to-Back Fulfillment: Roadmap.

Related Topics

- Set Up Back-to-Back Fulfillment

How You Configure Global Order Promising to Support Back-to-Back Fulfillment

This topic provides supporting documentation for a step in the Setting Up Back-to-Back Fulfillment roadmap. If you have a requirement to build products to meet your supply demand for back-to-back orders, you must configure Oracle Global Order Promising.

The Global Order Promising Rules tasks that you configure in the Order Promising work area in the Manufacturing and Supply Chain Materials Management offering are:

- Manage ATP Rules
- Manage Sourcing Rules
- Manage Assignment Sets

Configuring Global Order Promising to support back-to-back fulfillment is similar to configuration for standard order promising. However, there are additional needs specific to back-to-back order promising. The following table provides the configuration settings you must apply.

Task Name	Settings	Comments
Manage ATP Rules	Select **Supply chain availability search** for the Promising Mode	NA
Manage ATP Rules	Enable **Search Components and Resources**	This is mandatory for back-to-back make recommendations.
Manage ATP Rules	Select the **Supply Types** you want supported	NA
Manage ATP Rules	Set the Infinite **Availability Time Fence Definition** to a large value	If the flow is required to support long-lead items, set this attribute. Otherwise, make this value consistent with the planning time fence for the enterprise. **Note:** If Global Order Promising doesn't find sufficient supply until the Infinite Time Fence, it assumes there's an infinite supply for the manufactured item. Therefore, Global Order Promising doesn't generate any recommendations.
Manage Sourcing Rules	Choose **Local** for the Organization Assignment Type	Depending on the general setup, ranking of sources, and the ability to provide supply in the required lead time, Global Order Promising recommends make, transfer, or on hand supply recommendations.

Task Name	Settings	Comments
Manage Sourcing Rules	(Optional) Enter the **Start Date** and **End Date** for Sourcing Rule Effective Dates	NA
Manage Sourcing Rules	Define **supply sources** in the Sources table	NA
Manage Assignment Sets	Provide the following attributes: • Assignment Level • Item • Define the sourcing rule within the assignment set (in the Sourcing Rule or Bill of Distribution column)	Global Order Promising supports assignment at multiple hierarchical levels.

Tip: For a manufactured item, you must associate the item with a "Make At" sourcing rule specified for the organization for which the item will be manufactured.

Global Order Promising looks through sourcing to determine what type of supply recommendation to generate at the fulfillment organization. The following table shows the supply generation recommendations for various scenarios.

Scenario	Supply Recommendation
Available-to-promise (ATP) supply available at fulfillment organization	Generate ATP (on-hand) recommendation
Supply available at upstream organization defined in the local sourcing rule	Generate transfer recommendation
Supply available through components and resources at fulfillment organization	Generate make recommendation
Supply available at supplier defined in local sourcing rule at fulfillment organization	Generate buy recommendation

For more information about working with these tasks, see How Order Promising Rules Work Together in the Oracle Fusion Cloud SCM: Using Global Order Promising guide.

Related Topics

- Back-to-Back Supply Creation Flows

How You Configure Manufacturing to Support Back-to-Back Fulfillment

This topic provides supporting documentation for a step in the Setting Up Back-to-Back Fulfillment roadmap. Depending on your business needs, you might need to configure Oracle Fusion Cloud Manufacturing for back-to-back fulfillment.

Oracle Manufacturing doesn't require setup that's specific to back-to-back manufacturing of standard or configured items. However, for Oracle Global Order Promising to recommend a back-to-back make supply source, work definitions must be defined in Manufacturing and collected by Oracle Planning. Therefore, for any item that's designated as a candidate for a back-to-back make flow, you must create work definitions and setup operations that constitute the work definition. The work definition also provides automatic creation of the work order. You configure these settings using the Work Definition task list in the Manufacturing application.

Make sure to select the Used in Planning check box in the Work Definitions Names task when creating new work definitions names for back-to-back items. This enables Oracle Planning Central to plan back-to-back item components and resources.

> **Note:** Back-to-back flow is currently supported for only discrete manufacturing. You only need to create new work definition names if no applicable names have been defined. For information about creating new work definitions, see the Implementing Manufacturing chapter in this guide.

Related Topics

- Set Up Back-to-Back Fulfillment
- Overview of Configure-to-Order

Set Up Supply Chain Orchestration for Back-to-Back Fulfillment

The orchestration processes that Supply Chain Orchestration uses for back-to-back fulfillment come predefined. In most situations, you can use them without modification.

Supply Chain Orchestration automatically assigns an orchestration process to the order for each item where you set the Back-to-Back Enabled option to Yes in the Product Information Management work area. Order Promising recommends to use make, buy, transfer, or on-hand to create supply when it schedules fulfillment.

If your user manually creates a supply request, then Supply Chain Orchestration combines demand details from Order Management with the supply recommendation from Order Promising when it creates the supply request document.

Use Purchase Order Instead of Transfer Order

Orchestration uses a transfer order to process an internal transfer from one warehouse to another warehouse, by default. However, you might need to use a purchase order to process an internal transfer. For example, to address a financial reason.

As an option, set up a rule that creates the supply document so it changes the behavior of the supply demand. The rule determines whether to use a transfer order or a purchase order to fulfill a transfer request that starts in a back-to-back sales order.

Related Topics

- Set Up Back-to-Back Fulfillment
- Guidelines for Setting Up Rules That Create Supply Orders

Enable Procurement to Support Back-to-Back Fulfillment

This topic provides supporting documentation for a step in the Setting Up Back-to-Back Fulfillment roadmap. You must enable the customer sales order fulfillment feature in the Oracle Fusion Cloud Procurement offering for the back-to-back fulfillment flow to work within Procurement.

> **Note:** Make sure you have created your suppliers and supplier sites in the Procurement application. For more information about suppliers and supplier sites, see Oracle Fusion Cloud Procurement: Using Procurement guide.

By default, Procurement isn't configured for back-to-back fulfillment. Use the following procedure to enable this feature.

1. In the Setup and Maintenance work area, select the Procurement offering.
2. In the Setup and Maintenance work area, select the Procurement offering, and then click the **Actions** drop-down list and select **Change Configuration**.
3. On the Configure: Procurement page, click the **Features** icon.
4. On the Features page, select the **Customer Sales Order Fulfillment** check box.
5. Click **Done**.

For more information about configuring the Procurement offering, see the Oracle Fusion Cloud Procurement: Implementing Procurement guide.

Optionally, you can automate purchase order creation for your back-to-back orders. For more information, see the Oracle Fusion Cloud Procurement: Implementing Procurement guide.

Related Topics

- Set Up Back-to-Back Fulfillment
- How You Automate Purchase Order Creation for Back-to-Back Items

How You Automate Purchase Order Creation for Back-to-Back Items

Automating creation of purchase orders for back-to-back items can save you time and effort, especially when there's a high volume of transactions.

This topic provides supporting documentation for an optional step in the Setting Up Back-to-Back Fulfillment roadmap. You enable automation controls for purchase order creation in the set up for the governing blanket purchase agreements.

There are three prerequisite requirements before you can automate purchase order creation for your back-to-back order items.

- You must have enabled back-to-back fulfillment for Oracle Fusion Cloud Procurement. For details, see Enabling Procurement to Support Back-to-Back Fulfillment: Procedure.
- Suppliers and supplier sites must have been created. Each supplier site must be set up with a Procurement business unit that's a service provider for the requisitioning business unit that's ordering the item. The supplier's site assignment page must list the requisitioning business units for the site. For more information on creating suppliers and supplier sites and creating Procurement business units, see the Oracle Fusion Cloud Procurement: Implementing Procurement guide. For more information on managing suppliers and supplier sites, see the Implementing Drop Ship section in the Oracle Fusion Cloud SCM: Implementing Order Management guide.

After the prerequisite requirements are met, you can create blanket purchase agreements to automate purchase order creation for back-to-back order items. When creating the blanket purchase agreements, make sure to set the following automation control options:

- **Automatically generate orders.** This option enables automated conversion of purchase requisitions to purchase orders.
- **Automatically submit for approval.** This option enables automated submission of purchase orders for approval.

For more information on creating blanket purchase agreements, see the Oracle Fusion Cloud Procurement: Using Procurement guide.

Related Topics

- Enable Procurement to Support Back-to-Back Fulfillment
- Set Up Back-to-Back Fulfillment

Back-to-Back Fulfillment Cross-Product Features

Cross-Product Features Compatible with Back-to-Back Fulfillment

Back-to-back fulfillment provides a variety of cross-product features within the Oracle Fusion Cloud application offerings. These features are available by default.

You can set up back-to-back processing to coexist with business processes for drop-ship and standard fulfillment flows. The fulfillment method you use for an ordered item is chosen at runtime, based on the available data. These predefined end-to-end flows are highly integrated across the Oracle Fusion Cloud applications.

Feature	Description	Oracle Fusion Cloud Applications Supported
Promising Back-to-Back Orders	Allows you to promise orders based on sourcing rules and lead time to make, buy, or transfer the item. Also, you can initiate back-to-back fulfillment based on item-organization combination.	Order Management, Global Order Promising

Feature	Description	Oracle Fusion Cloud Applications Supported
Automate Supply Orders	Automatic creation of a work order, transfer order, or purchase order that's then reserved to the sales order line. This feature provides visibility to the sales order and customer information on the reserved supply. Additionally, the supply chain manager has visibility to the sales order to which the supply order is reserved.	Order Management, Supply Chain Orchestration, Procurement, Manufacturing, Inventory Management
Automatically Reserve Inventory	Ability to automatically reserve inventory to the sales order when it's put into inventory, ensuring it can't be used to fulfill another customer order.	Supply Chain Orchestration, Inventory Management, Logistics
Manage Change in Real-Time	Makes adjustments based on supply and demand changes, and gives your supply chain manager the ability to re-source the supply if necessary.	Order Management, Supply Chain Orchestration, Procurement, Manufacturing, Inventory Management
Provide Fulfillment Visibility	Gives the order manager visibility to work order, transfer order, or purchase order status and automatically notifies the order manager when there are issues (such as when the supply doesn't meet customer request).	Order Management, Supply Chain Orchestration, Procurement, Manufacturing. Inventory Management, Receiving

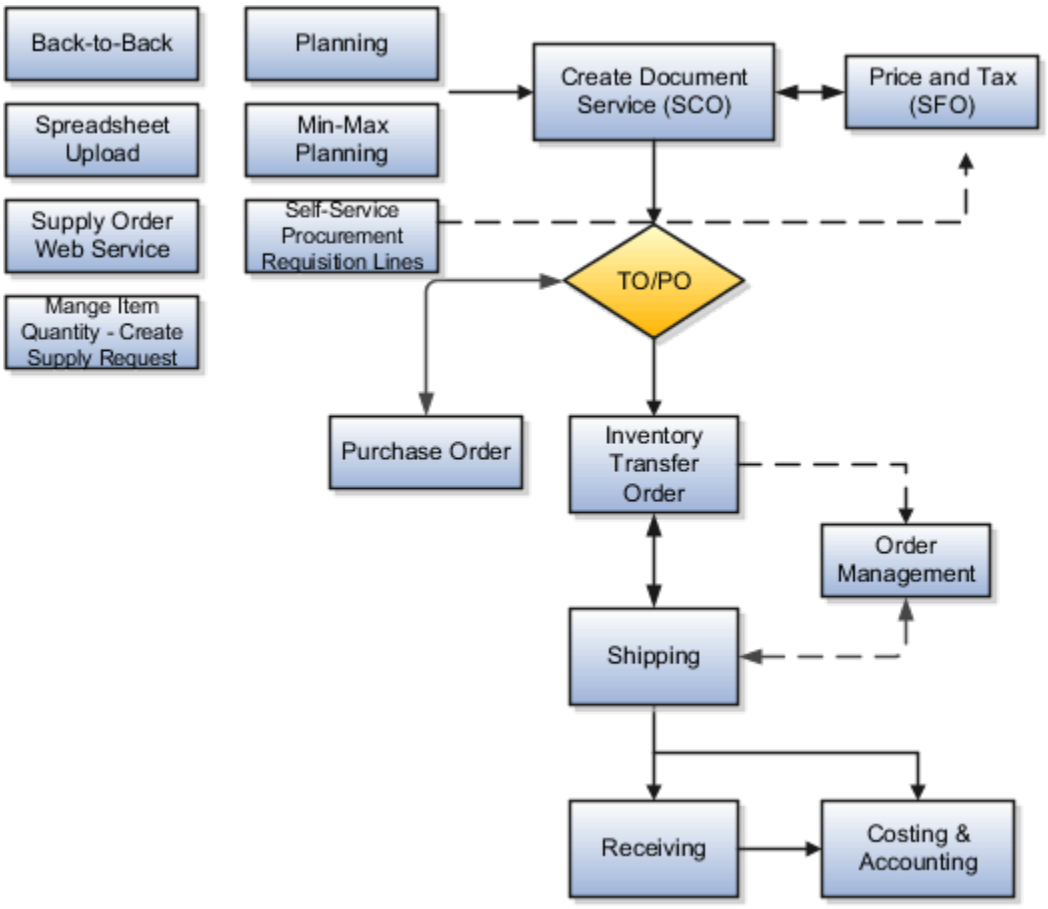
3 Internal Material Transfers

Overview of Internal Material Transfers

An internal material transfer is an automated or manual transfer request of materials within or between organizations.

Transfer orders transfer inventory for interorganization, intraorganization, and intercompany flows. Transfer orders represent demand and supply in a single document. You can transfer material to an inventory destination or an expense destination. The transfer order serves as the orchestration document representing demand and supply for an internal material transfer. Transfer orders are routed directly through Oracle Shipping, or through Oracle Fusion Cloud Order Management.

This diagram provides an overview of internal material transfers.



Here's an overview explaining how internal material transfers work:

- Transfer source

  Transfer requests can come from multiple sources such as back-to-back, planning, inventory min-max planning, self-service requisition lines, the Create Supply Request page, Supply Order web service, and spreadsheet uploads.
- Determine transfer order or purchase order

Oracle Supply Chain Orchestration provides visibility to supply and demand, in addition to providing rules to determine if a transfer order or purchase order is created.

- Transfer price and tax calculation

  Oracle Supply Chain Financial Orchestration calculates the transfer price and integrates with tax for tax calculation.

  For requisition lines, Self-Service Procurement calls Supply Chain Financial Orchestration directly when creating transfer orders to get the price to use for approvals and budgetary control purposes.

- Create new transfer order document and fulfill transfer orders

  Create your transfer order documents in Oracle Inventory Management.

- Perform pick, ship, receive, put away, and return processes

  You can process transfer orders using the standard pick, pack, ship, deliver, and return processes through Oracle Shipping, Receiving, and Inventory Management.

- Perform automatic costing and accounting

  Oracle Cost management orchestrates the costing and accounting of internal material transfers automatically.

Note: Optionally, you can fulfill transfer orders using Oracle Order Management. Oracle Order Management users have visibility to internal and external orders.

Related Topics

- Internal Material Transfer Setup Tasks
- Internal Material Transfer Process Flow
- REST API for Oracle Fusion Cloud SCM

Internal Material Transfer Setup Tasks

An internal material transfer is an automated or manual transfer request of materials within or between organizations.

You can perform your internal material transfer setup in the Setup and Maintenance work area.

This table describes all of the setup tasks and whether each task is required or optional for the implementation of internal material transfers.

Set Up Task	Offering	Functional Area	Required or Optional	Description
Manage Supply Chain Financial Orchestration Transfer Pricing Rules	Manufacturing Supply Chain Materials Management Offering	Supply Chain Financial Flows	Required	Manage financial orchestration transfer pricing rules and set options to determine how the transfer price is calculated.

Set Up Task	Offering	Functional Area	Required or Optional	Description
Manage Supply Chain Financial Orchestration Flows	Manufacturing Supply Chain Materials Management Offering	Supply Chain Financial Flows	Required	Create and maintain the financial trade agreement to orchestrate the financial transactions between trade routes.
Manage Item Cost Profiles	Manufacturing Supply Chain Materials Management Offering	Cost Accounting	Required	Assign cost profiles to items at the cost organization and cost book level.
Manage Cost Elements	Manufacturing Supply Chain Materials Management Offering	Cost Accounting	Required	Create and edit cost elements that are used for inventory transaction accounting.
Manage Default Cost Profiles	Manufacturing Supply Chain Materials Management Offering	Supply Chain Financial Flows	Required	Create and edit cost profiles that can be automatically assigned to items at the cost organization, cost book, or item category level.
Manage Supply Order Defaulting and Enrichment Rules	Manufacturing Supply Chain Materials Management Offering	Supply Chain Orchestration	Required	Create, review, update, and delete rules that default and enrich supply order attributes. This is required only if you plan to fulfill transfer orders using Oracle Fusion Cloud Order Management.
Manage Supply Execution Document Creation Rules	Manufacturing Supply Chain Materials Management Offering	Supply Chain Orchestration	Required	Create, review, update, and edit rules that determine if an internal material transfer should be executed using a transfer order or a purchase order.
Manage Intersubinventory Parameters	Manufacturing Supply Chain Materials Management Offering	Inventory Management	Required	Configure intersubinventory parameters to perform internal material transfers between two subinventories within a single organization. This is required only if you're performing intraorganization transfers.
Manage Interorganization Parameters	Manufacturing Supply Chain Materials Management Offering	Inventory Management	Required	Enable the Transfer Order Required option to execute a transfer order between

Set Up Task	Offering	Functional Area	Required or Optional	Description
				the source and destination organization.
Manage Transit Times	Manufacturing Supply Chain Materials Management Offering	Carriers and Transit Times	Required	For intersubinventory transfers, define transit times between subinventory locations. For interorganization transfers, define transit times between organization locations.
Manage Shipping Parameters	Manufacturing Supply Chain Materials Management Offering	Shipping	Required	Configure the **Enforce shipping method** parameter to determine whether the **Default Ship Method** field on the transit time is required for a transfer order. • If deselected, you have the choice of whether to select the **Default Ship Method** option on the transit time. Both options result in a successful transfer order. • If selected, and you select the **Default Ship Method** option on the transit time, the transfer is created successfully. • If selected, and you don't select the **Default Ship Method** option on the transit time, the transfer isn't created.
Manage Receiving Profile Options	Manufacturing Supply Chain Materials Management Offering	Receiving	Optional	Set receiving profile options to use the receipt confirmation feature.
Manage Receiving Parameters	Manufacturing Supply Chain Materials Management Offering	Receiving	Optional	For interorganization transfers, set up the receiving parameters for the destination organization.
Manage Consumption Rules	Manufacturing Supply Chain Materials Management Offering	Inventory Management	Optional	Create, review, and update consumption rules for interorganization transfers between inventory organizations.

Set Up Task	Offering	Functional Area	Required or Optional	Description
Manage Shipping Lookups	Manufacturing and Supply Chain Materials Management Offering	Shipping	Optional	Set up freight cost types before setting up the shipping cost types used to identify the additional transfer order charges that can be associated with a transfer order line.
Manage Shipping Cost Types	Manufacturing and Supply Chain Materials Management Offering	Shipping	Optional	Set up shipping cost types to identify the type of charge that applied to a transfer order line.
Manage ATP Rules From the Global Order Promising work area, select Manage ATP Rules.	NA	NA	Optional	Set up ATP rules to define order promising behavior. Specify: • Promising mode to determine how supply availability is considered • Supply and demand source types to be considered during promising • Usage of advanced promising features, such as capable to promise and profitable to promise
Self Service Procurement Feature	Procurement Offering	Self Service Procurement	Optional	Enable the internal material transfer feature to create internal material transfer requisition lines.

Related Topics

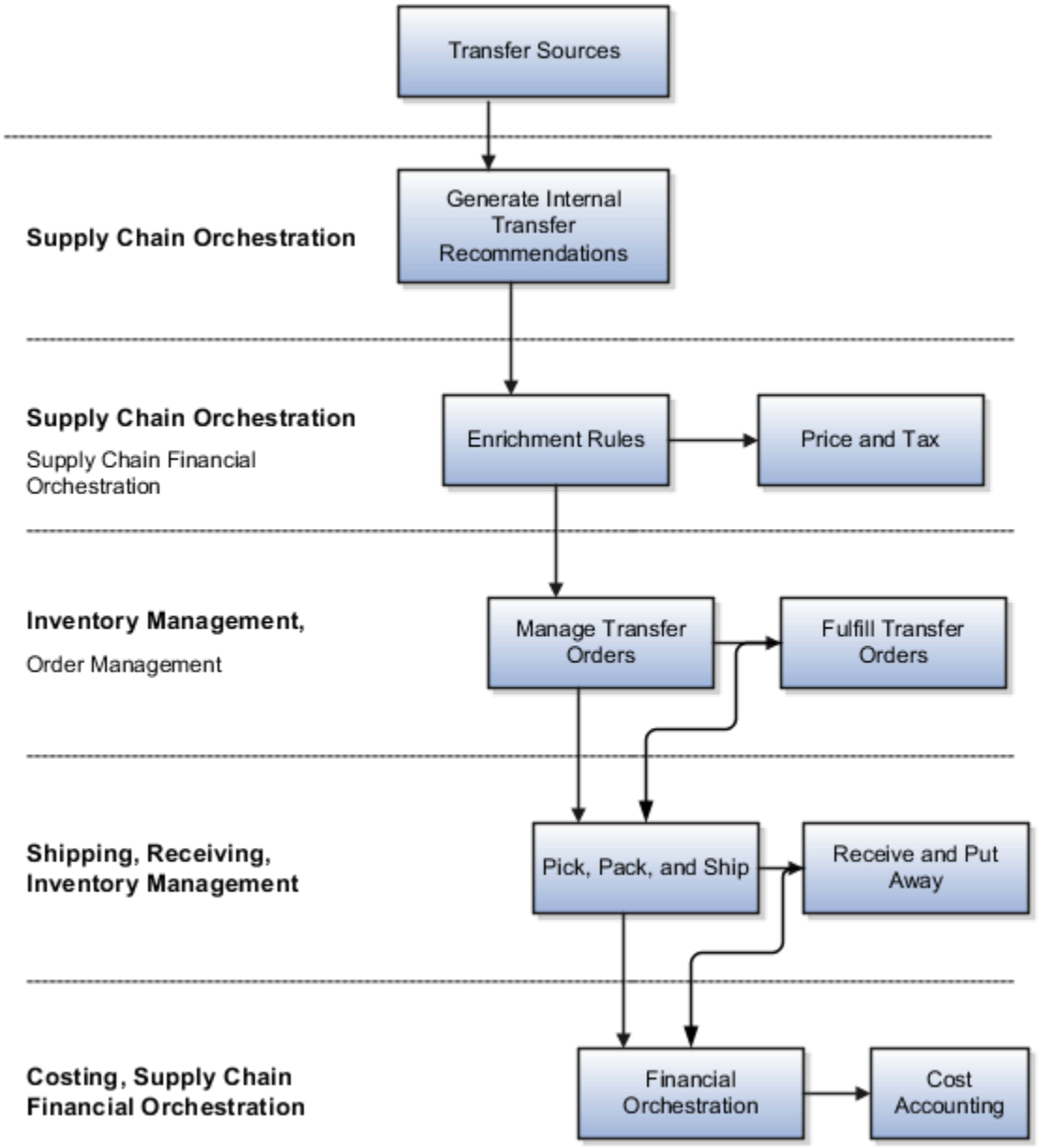
- Financial Orchestration Flow
- Cost Profiles, Default Cost Profiles, and Item Cost Profiles
- Considerations for Internal Material Transfer Document and Enrichment Rules
- Consumption Rules
- Intersubinventory Parameters

Internal Material Transfer Process Flow

The life cycle of an internal material transfer spans several tasks and products from initiation of the transfer source through the costing and accounting of the transfer. The internal material request and fulfillment process ranges from

simple processes to extremely complex processes, spanning multiple legal entities, across geographies, and involving multiple shipment points.

This figure shows the life cycle of internal material transfer and the products responsible for each task.



Transfer Sources

You initiate internal material transfers from transfer sources.

This table shows the transfer sources from which you can create internal material transfers.

Transfer Source	Description
Min-max planning	Automatically create internal material transfers from min-max planning.

Transfer Source	Description
Back-to-back	Automatically create internal material transfers from back-to-back transfers.
Planning	Automatically create, reschedule, and cancel internal material transfers from planning.
Supply Order web service	Manually create, update, and cancel internal material transfers through a supply request web service.
Template upload	Manually create, update, and cancel internal material transfers through a supply request file-based data import spreadsheet template.
Requisitions lines	Manually create internal material transfers from requisition lines in Self Service Procurement.
Create Supply Request page	Manually create internal material transfers on the Create Supply Request page which you can access from the Manage Item Quantities page. This allows entry of ad-hoc internal material transfers directly from Inventory.

Note: You cannot create an intraorganization inventory destination transfer from requisition lines.

Generate Internal Material Transfer Recommendations (Supply Chain Orchestration)

The process starts with creating a transfer source. Multiple automatic and manual transfer sources are supported including min-max planning, back-to-back, spreadsheet upload, Supply Order web service, planning, self-service procurement requisition lines, and the Create Supply Request page from the Manage Item Quantity page.

Sourcing tools enable you to manually create internal material transfer requisition lines in Self Service Procurement and create supply requests from the Manage Item Quantity page. These sourcing tools provide a default source organization and allow access to source organization rankings and available to promise quantities. Oracle Supply Chain Orchestration works with Oracle Global Order Promising and Oracle Inventory Management to identify the source organization rankings based on pre-established rules.

Enrichment Rules (Supply Chain Orchestration)

During the supply creation process, Supply Chain Orchestration evaluates the Supply Execution Documentation Creation Rules to determine if an internal material transfer should be executed using a transfer order or a purchase order.

Manage and Fulfill Transfer Orders (Inventory Management)

A transfer order is created automatically from the various transfer sources. The transfer order represents demand and supply in a single document. Both interorganization and intraorganization transfers are supported by Oracle Inventory Management.

Pick, Pack, Ship, Receive, and Put Away (Shipping, Receiving, and Inventory Management)

You can perform processes such as pick, ship, receive, put away, and return against a transfer order document. Warehouse managers have full visibility to shipments and receipts associated with a transfer order. You can update attributes on a transfer order such as source organization, requested delivery date, and requested quantity.

You can also use self-service receiving for the receiving of requisition sourced transfer orders.

Financial Orchestration (Supply Chain Financial Orchestration)

Oracle Supply Chain Financial Orchestration (SFO) allows the supply chain controller to model financial flows between business units involving different pricing and accounting requirements. The Supply Chain Financial Orchestration framework provides an estimate of the transfer price for creation of transfer orders to transfer goods between internal organizations. Once the transfer price is calculated, Supply Chain Financial Orchestration calls the tax application to determine the tax applicable on the transfer price.

For internal material transfer requisition lines, Self Service Procurement calls Supply Chain Financial Orchestration directly when creating transfer orders to get the estimated price to use for approvals and budgetary control purposes.

Cost Accounting (Cost Management)

Oracle Cost Management has an infrastructure in place to trigger costing and accounting of internal transfers automatically. Internal material transfer transactions such as Transfer Order Shipment and Transfer Order Receipt are interfaced to Cost Management. Trade events are interfaced from Supply Chain Financial Orchestration to Cost Management. Cost Management also provides the ability to analyze the gross margin earned for internal sales transactions separately.

> **Note:** Once the product is shipped and delivered, Cost Management obtains the transfer price at that point in time and uses it for costing, budgetary control, and encumbrance accounting purposes.

> **Note:** You can optionally fulfill internal material transfers through Oracle Order Management. Order Management enables the orchestration of transfer orders across fulfillment systems. Order Managers can centrally monitor the fulfillment of transfer orders and sales orders, and prioritize shipments across these orders.

Related Topics

- Considerations for Internal Material Transfer Document and Enrichment Rules
- How the Internal Material Transfer Price Is Calculated
- Internal Material Transfer Setup Tasks

Considerations for Internal Material Transfer Document and Enrichment Rules

Oracle Supply Chain Orchestration provides two setup user interfaces to enable the supply chain orchestration process:

- Manage Execution Document Creation Rules
- Manage Supply Order Enrichment Rules

Manage Execution Document Creation Rules

Use the supply execution document creation rules to determine if an internal material transfer should be executed using a transfer order or a purchase order for an organization.

During the supply creation process, if based on the supply execution document creation rules, it is determined that the supply document should be a purchase order, these updates are made:

- Supply type on the internal material transfer request is updated to Buy.
- Supplier and supplier site associated to the source organization is used to create supply documents.

> **Note:** You cannot set up documentation rules to create purchase orders for internal material transfers sourced from requisition lines. You make the decision on whether or not to create an internal material transfer or purchase order requisition line at the point of entry of the requisition line in Oracle Fusion Cloud Self Service Procurement.

Manage Supply Order Enrichment Rules

Use the supply order defaulting and enrichment rules to route shipments of items on an internal material transfer request through Oracle Fusion Cloud Order Management. This allows the order manager to view transfer orders, as well as regular customer sales orders, on the Order Workbench, and prioritize shipments from the Order Workbench when needed.

You can set up a business rule for your organization that runs at the time of supply creation and sets the value of the order management shipment option. During transfer order creation, the process evaluates the order management shipment option to determine if the transfer order line should be directly interfaced to Oracle Shipping, or if it should pass through Oracle Order Management (and from Order Management to Shipping).

> **Note:** Internal material transfer requests that originate from back-to-back sales order demands cannot be routed through Oracle Order Management. Also, return transfer orders and intraorganization transfer orders cannot be routed through Oracle Order Management. In addition, expense destination transfers that originate from a requisition cannot be routed through Oracle Order Management.

Related Topics

- Set Up Rules That Create Supply

How the Internal Material Transfer Price Is Calculated

You can estimate the transfer price when creating a transfer order to transfer goods between internal organizations.

Settings That Affect The Transfer Price

The transfer price is based on the answers to these questions:

- Is the transfer order crossing business?
- What are the transfer pricing options?
- Do the shipping and receiving inventory organizations for the internal material transfer belong to a single business unit?

How The Transfer Price Is Calculated

The application calculates the transfer price according to these rules:

- If the transfer order is crossing business units, the transfer price is calculated based on the transfer pricing method specified in the configurable transfer pricing rules for the financial route between the shipping organization and the receiving organization.
- If transfer pricing options are enabled, you can derive the transfer price based on the shipping organizations transaction cost, Oracle Pricing, or a third-party pricing service.
- If, for the internal material transfer, the shipping and receiving inventory organizations belong to a single business unit, then Oracle Supply Chain Financial Orchestration uses the cost of the item in the source organization as the transfer price.
- If, the transfer source is a requisition line, Oracle Fusion Cloud Self Service Procurement calls Supply Chain Financial Orchestration directly when creating transfer orders to get the price.

Once the transfer price is calculated, Supply Chain Financial Orchestration calls the tax application to determine the tax applicable on the transfer price.

Setup of Interorganization Parameters for Transfer Orders

Use the Manage Interorganization Parameters task to configure rules for interorganization transfer orders and define the relationships between source and destination inventory organizations. Transfer orders represent demand and supply in a single document. You can transfer material to an inventory destination or an expense destination.

Here are some important interorganization parameters for transfer orders:

- Inventory destination transfer type
- Inventory destination receipt routing

- Transfer order required
- Expense destination receipt required
- Expense destination receipt routing
- Cancel backorders

In the Setup and Maintenance work area, use the Manage Interorganization Parameters task to set up your interorganization parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Interorganization Parameters

Inventory Destination Transfer Type

Specify either direct or in-transit. This option determines how material should be transferred between two inventory organizations.

Inventory Destination Receipt Routing

Specify the receipt routing for in-transit inventory destination transfer types. Receipt routing options include Standard, Direct, and Inspection.

Transfer Order Required

Indicate whether a transfer order is required for each transfer.

Expense Destination Receipt Required

Indicate whether or not a receipt is required in the destination inventory organization for expense destination transfers going to that destination location. If you select this option, a receipt is required on interorganization expense destination transfer orders between the from and to organizations. If you do not select this option, then the transfer order is considered received and delivered at the time of shipment. This field is available for Expense destination types only.

Expense Destination Receipt Required

Specify the receipt routing for expense destination transactions. Receipt routing options include Standard, Direct, and Inspection.

Cancel Backorders

Specify whether or not you want to automatically cancel the remaining quantity on a backordered transfer order line. This option enables you to cancel the remaining quantity on a transfer order line that would normally be backordered when orders cannot be filled due to shortages.

The three possible values for the **Cancel Backorders** option are shown in this table.

Cancel Backorders Option	Description
Cancel remaining quantities	Automatically cancel the remaining quantities on transfer order backorders.

Cancel Backorders Option	Description
Do not cancel remaining quantities	Do not automatically cancel the remaining quantities on transfer order backorders.
Default to source inventory organization level	Use the default set at the inventory source organization level to determine whether or not to automatically cancel the remaining quantities on transfer order backorders.

Setup of Intersubinventory Parameters for Transfer Orders

Use the Manage Intersubinventory Parameters task to configure parameters for transferring material between two subinventories within an organization. You can perform transfer orders for an inventory or expense destination transfer. Set this attribute on the Manage Intersubinventory Parameters page.

Here are some important intersubinventory parameters for transfer orders:

- Organization
- Destination type
- Destination subinventory
- Source subinventory
- Receipt required at expense destination
- Inventory destination transfer type
- Receipt routing

In the Setup and Maintenance work area, use the Manage Intersubinventory Parameters task to set up your intersubinventory parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Intersubinventory Parameters

Organization

Enter the destination organization.

Destination Type

Specify inventory or expense destination. The value in this field identifies how transfer order shipments and receipts are handled for the two different destination types.

Inventory destination transfer orders require movement to a destination inventory warehouse location. Expense destination transfer orders allow you to transfer material from an inventory warehouse location directly to your location for immediate usage.

Destination Subinventory

You must enter a destination subinventory when the destination type is Inventory. This field is available for inventory destination types only.

Source Subinventory

Enter a source subinventory for inventory destination types. You can optionally enter a value for expense destination types. The combination of organization and source subinventory must be unique. You also have the option to choose All for the source subinventory.

If you enter a source subinventory for an expense destination type, then the parameters on this row apply to all intraorganization expense destination transfer orders sourced from the entered subinventory. If a subinventory isn't entered, than the parameters on this row become the default parameters for the organization, and the parameters are applied to any intraorganization expense destination transfer order that's sourced from a subinventory that doesn't have a specific intersubinventory parameter row defined.

Receipt Required at Expense Destination

Indicate whether or not a receipt is required in the destination inventory organization for expense destination transfer orders going to that destination location. If selected, then a receipt is required on transfer orders originating from the subinventory on that parameter row. If this option isn't selected, then the transfer order is considered received and delivered at the time of shipment. This field is available for Expense destination types only.

> **Note:** If the source subinventory for a intraorganization expense destination transfer order isn't found at shipping time and a default parameter row hasn't been setup, then the **Receipt required at expense destination** option defaults automatically to not selected and the transfer order is considered received and delivered at the time of shipment.

Inventory Destination Transfer Type

Specify either direct or in-transit. Determines how material should be transferred between two inventory organizations. Available for inventory destination types only.

Receipt Routing

Specify the receipt routing for in-transit inventory destination transfer types. This option is also available for intraorganization expense destination transfer orders if the receipt is required at the expense destination. Receipt routing options include **Standard**, **Direct**, and **Inspection**.

Subinventory Parameters for Transfer Orders

Transfer orders represent demand and supply in a single document. When goods are not completely available at the time the transfer order is being fulfilled, processing can automatically cancel the remaining quantity on a transfer order line that would normally be backordered.

Use the Manage Subinventories and Locators task to set the **Cancel Backorders** option at the destination subinventory level. This option specifies whether the cancel decision is made at this level for transfer orders that are being delivered to a specific destination subinventory.

The three possible values for the **Cancel Backorders** option include:

Cancel Backorders Option	Description
Cancel remaining quantities	Automatically cancel the remaining quantities on transfer order backorders.
Do not cancel remaining quantities	Do not automatically cancel the remaining quantities on transfer order backorders.
Use next level in hierarchy	Depending on the transfer order type, the inventory organization or interorganization parameter is used to determine whether or not to automatically cancel the remaining quantities on transfer order backorders. • Intraorganization transfer order uses inventory organization • Interorganization transfer order uses interorganization parameter

In the Setup and Maintenance work area, use the following to set the **Cancel Backorders** option at the destination subinventory level:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Subinventories and Locators

Shipping Method Setup for Transfer Orders

The Enforce Shipping Method parameter (set up on the Mange Shipping Parameters page) determines whether the default shipping method is required for a transfer order. You define the default shipping method when defining the transit time.

The **Default Shipping Method** field shows as either checked or unchecked for a transit time on the Manage Transit Times page.

This table shows how transfer orders process based on the setting of these two parameters:

Enforce Shipping Method	Default Shipping Method	Transfer Order Created
Not selected	Selected	Yes
Selected	Not selected	No
Not selected	Not selected	Yes

Enforce Shipping Method	Default Shipping Method	Transfer Order Created
		Note: You receive the message: Transit times weren't found between the origin and destination locations.
Selected	Selected	Yes

To set the **Enforce Shipping Method** parameter:

From the Setup and Maintenance work area, go to the **Manage Shipping Parameters** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Shipping
- Task: Manage Shipping Parameters

To set the **Default Shipping Method** when defining a transit time:

From the Setup and Maintenance work area, go the **Manage Transit Times** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Carriers and Transit Times
- Task: Manage Transit Times

Create an Intersubinventory Transfer Order

This example shows how to create a transfer order for an intersubinventory transfer. The required steps through Oracle Inventory Management, Supply Chain Orchestration, Shipping, and Receiving are shown.

Note: You can't perform return transactions for an intraorganization transfer order.

Complete the following setups prior to creating a transfer order for an intersubinventory transfer:

- Set up locations on the Manage Locations page. Define the location for the source and destination subinventories.
- Set up destination subinventory parameters on the Manage Subinventories page.
- Set up source subinventory parameters on the Manage Subinventories page.
- Set up intersubinventory parameters on the Manage Intersubinventory Parameters page.
- Define transit times between source and destination subinventory locations on the Manage Transit Times page.
- Determine the **Enforce Shipping Method** parameter on the Manage Shipping Parameters page.

The process flow for this example proceeds through these applications:

- Inventory Management
- Supply Chain Orchestration

- Shipping
- Receiving
- Inventory Management

Inventory Management

1. From the Inventory Management work area, select **Manage Item Quantities** from the task panel.
2. On the Manage Item Quantities page, search for and select the item that you want to transfer.
3. Select **Request Transfer Order** from the **Actions** menu.
4. On the Supply Request page, enter values for the **Requested Quantity** and **Requested Delivery Date** fields.
5. Select the **Supply Details** icon.
6. In the Supply Details pop up window, provide supply information such as destination type, destination subinventory, source organization, and source subinventory.
7. Click **OK** in the Supply Details pop up window. This takes you back to the Create Supply Request page.
8. On the Create Supply Request page, click **Submit**. A supply request reference number is generated.
9. Click **OK**.

Supply Chain Orchestration

1. From the Supply Orchestration work area, select the **Manage Supply Lines** task.
2. On the Mange Supply Lines page, search with your supply request number.
3. Click the supply order number link to open the supply order and access the Supply Order Details page.
4. Select your supply line and click the Transfer tab in the Line Details section of the page.
5. View the transfer order number created for the supply order in the **Document Number** column.
6. Click **Done**.

Shipping

1. From the Inventory Management work area, select **Shipments** in the **Show Tasks** field of the task panel. Then, select **Manage Shipment Lines**.
2. On the Manage Shipment Lines page, enter the transfer order number that you viewed on the Supply Order Details page in the **Order** field.
3. Click the **Search** button. This takes you to the Edit Shipment Lines page.
4. Select **Pick Release** from the **Actions** menu. You receive a confirmation that a pick release was created for the selected lines.
5. Click **Ok** to return to the Edit Shipment Lines page.
6. Click **Cancel** to return to the Manage Shipment Lines page.
7. On the Manage Shipment Lines page, you can see that the **Shipment** field is now populated for the shipment line.
8. Select the shipment to open the Edit Shipment page.
9. In the Lines section of the page, enter a value in the **Shipped Quantity** field.
10. Click the **Ship Confirm** button. You receive a message stating that the shipment was confirmed.
11. Click Save to return to the **Mange Shipment Lines** page.
12. On the Manage Shipment Lines page, you can see that the shipment line now shows a status of **Shipped** in the **Line Status** field.

Receiving

1. From the Inventory Management work area, select **Receipts** in the **Show Tasks** field of the task panel. Then, select **Receive Expected Shipments**.

2. On the Receive Expected Shipments page, enter your transfer order number in the **Transfer Order** field and click **Search**.
3. Select your transfer order line and click the **Receive** button to access the Receive Lines page.
4. Enter the values for the **Quantity** and **Subinventory** fields.
5. Click the **Create Receipt** button.
6. On the Create Receipt page, click the **Submit** button. A confirmation message displays with your receipt number.
7. Click **OK**.
8. Click **Done**.
9. From the Inventory Management work area, select the **Put Away Receipts** task.
10. On the Put Away Receipts page, enter your receipt number in the **Receipt** field and click **Search**.
11. Select your receipt line and click the **Put Away** button to access the Put Away Lines page.
12. On the Put Away Lines page, enter a subinventory and click **Submit** to create your put away transaction. A message confirms the creation of the put away transaction.
13. Click **OK** to return to the Put Away Receipts page.
14. Click **Done**.

Inventory Management

1. From the Inventory Management work area, select **Inventory** in the **Show Tasks** field of the task panel. Then, select **Review Completed Transactions**.
2. You can search for and view your completed transaction.

Related Topics

- Setup of Intersubinventory Parameters for Transfer Orders
- Subinventory Parameters for Transfer Orders
- Shipping Method Setup for Transfer Orders
- How can I set up transit times for intersubinventory transfer orders?

Create Supply Request Through Manage Item Quantities Task

To create a supply request from the Manage Item Quantities page, you must first perform these set up steps for the item in the Product Information Management work area:

Note: You must also set up your interorganization parameter and transit time setups.

1. From the Product Information Management work area, select the **Manage Items** task from the task panel.
2. Search for and select an item.
3. On the Edit Items page, select the Specifications tab.
4. Under the Item Organizations section, select the Sales and Order Management tab.
5. Select the **Transfer Orders Enabled** check box.
6. Select the **Internally Transferable** check box.
7. Click **Save and Close**.

Then, to create your supply request, perform these steps from the Inventory Management work area:

1. From the Inventory Management work area, select **Manage Item Quantities** from the task panel.

2. On the Manage Item Quantities page, search for and select the item that you want to transfer.
3. Select **Request Transfer Order** from the **Actions** menu.
4. On the Supply Request page, enter values for the **Requested Quantity** and **Requested Delivery Date** fields.
5. Select the **Supply Details** icon.
6. In the Supply Details pop up window, provide supply information such as destination type, destination subinventory, source organization, and source subinventory.
7. Click **OK** in the Supply Details pop up window. This takes you back to the Create Supply Request page.
8. On the Create Supply Request page, click **Submit**. A supply request reference number is generated.
9. Click **OK**.

Related Topics

- Internal Material Transfer Setup Tasks
- Setup of Interorganization Parameters for Transfer Orders
- How can I set up transit times for intersubinventory transfer orders?

Set Up Internal Requisition Transfer Orders from Self-Service Procurement for Planned and Non-Planned Items

You can create internal requisitions transfer orders from Self-Service Procurement for both planned and non-planned items. There's a minor difference in setups to create internal requisitions for planned and non-planned items.

Let's review the common, planned item, and non-planned item setups. Let's also look at the process flow for creating internal requisitions.

Common Setup Steps

Here are the common setup steps:

1. Enable the **Internal Material Transfer** feature for Self Service Procurement if not already enabled:
    a. From the Setup and Maintenance work area, select the **Procurement** offering.
    b. Select **Change Feature Opt In** in the Functional Area menu.
    c. Select **Self-Service Procurement**.
    d. Click the **Edit** icon in the **Features** column.
    e. Select the **Enable** check box for Internal Material Transfers. The child feature **Fulfill Expense Requisitions for Agreement Based Catalog Items from Internal Source** also selects automatically.
    f. Click Done.
2. Enable supply availability details on the Configure Requisitioning Business Function page. Select the **Enable supply availability for internal transfers** check box.
3. Create interorganization parameters between source and destination organizations on the Manage Interorganization Parameters page.
4. Assign inventory organizations to respective locations on the Manage Locations page.
5. Create shipping method and assign to organizations on the Edit Carriers page.
6. Create transit times between source and destination locations on the Manage Transit Times page.

7. Create on-hand in source organizations. Provide cost details while creating transactions.
8. Transfer inventory transactions to costing. Run the **Transfer Inventory Transactions to Costing** process.
9. Create the cost accounting distributions. Run the **Create Cost Accounting Distributions** process.
10. Review item costs. Cost should be defined for item to be transferred.

Planned Item Specific Setup

Here's the planned item specific setup steps:

1. Create an item with these attributes and values:

Attribute	Value
Transfer Order Enabled	Yes
Internally Transferable	Yes
Planning Method	MRP Planning
Calculate ATP	Yes

2. Assign item to all required inventory organizations.
3. Run collections.
4. Create ATP rules and assign to inventory organization.
5. Create sourcing rule to transfer from other inventory organizations and assign to assignment set.
6. Run the **Refresh and Start the Order Promising Server** process.

Non-Planned Item Specific Setup

Here's the non-planned item specific setup steps:

1. Create an item with these attributes and values:

Attribute	Value
Transfer Order Enabled	Yes
Internally Transferable	Yes
Planning Method	Not Planned
Calculate ATP	No

2. Create interorganization parameter along with distance values.

Process Flow

Let's look at the overall process flow for creating internal requisitions transfer orders from Self-Service Procurement. After your initial setup is complete, perform these steps:

1. Create a requisition and select the source type as **Inventory (Purchase Requisitions work area** > **Enter Requisition Line page)**.
2. Click **Supply Source** and select the source organization. Note that this list comes from the sourcing rule for planned items. For non-planned items, the source organization priority ranking is based on the **Distance** parameter set up in the interorganization parameters for the **From Organization** and **To Organization** pair (Enter Requisition Line page).
3. Add the requisition to your cart and submit the requisition for approval. This automatically generates a transfer order. Write down the transfer order number for future reference (Enter Requisition Line page and Shopping Cart).
4. Create the pick wave to release the transfer order (Create Pick Wave page).
5. Ship confirm the transfer order (Edit Shipment page).
6. Receive transfer order in destination organization (Receive Expected Shipments and Receive Lines pages).
7. Put away transfer order in the destination organization.
8. Check transfer order and requisition details (Shipments and Receipts page).

Related Topics

- Internal Material Transfer Setup Tasks

Create an Internal Material Transfer Requisition (Casual User)

This example follows a scenario where a casual user is requesting an item that's stocked in inventory at a warehouse within their same organization. The user wants to enter a requisition to have the item delivered to their cubical.

Since the item is going to be delivered from an internal inventory warehouse within the requester's own organization and expensed to that user, an intraorganization expense destination transfer order is generated to deliver the item directly to the requester's cubicle.

This example has these process steps:

1. Quick entry of internal material transfer requisition line
2. Review approved requisition
3. Ship transfer order
4. Review delivered requisition and transfer order

This example assumes that all setup steps are complete.

Quick Entry of Internal Material Transfer Requisition Line

The first step in this example is to create the internal material transfer requisition line. Let's start from the Shopping page in the Purchase Requisitions work area. Sign in with privileges to create a requisition in order to perform this step.

1. From the Purchase Requisitions work area, use the **Search** field to search for the item you want to order.
2. Click the **Shopping Cart** icon next to the item to add it to your shopping cart with a quantity of **1**.
3. Click the **Submit** button. This submits the requisition for approval.

Review Approved Requisition

Once the requester submits the order from the shopping cart, it goes through approval processing. When it's approved, the application automatically creates a transfer order. The associated transfer order number posts to the requisition allowing the requester to drill into the order to view its progress.

1. From the Purchase Requisitions work area, select a link for a recent requisition. This brings up the requisition details.
2. Review the requisition details:

Field	Description
Deliver-To Location Type	If the item is set up as transfer order enabled, then it always defaults to **Internal**.
Deliver-To Location	Defaults from the requisition owner's preferences.
Destination Type	Defaults from the requisition owner's preferences.
Source Organization	For expense destination transfers, always defaults to the same as the destination organization.
Distribution	The billing distributions in the **Billing** section of the page default from the requisition owner's preferences.
Order	The **Order** field in the **Requisition Line** section of the page shows the transfer order number created for the requisition line.

3. Click on the transfer order number in the **Order** field to review transfer order details. This opens the View Transfer Order page.

Ship Transfer Order

Next, the transfer order is picked and shipped in Shipping. For this example, let's assume that we've set up parameters so that the pick wave is created using the autopick and autoship features. Use the Warehouse Manager sign on for this step.

> **Note:** In an actual production environment, you have the choice to pick and ship as individual steps, pick and then automatically ship, automatically pick and manually ship, or to automatically pick and ship as is being done in this example.

1. From the Inventory Management work area, select **Shipments** from the **Show Tasks** section of the Task panel.
2. Select the **Create Pick Wave** task.
3. Click the **Show More** link.
4. On the Demand Selection tab, enter values for the **Order Type** and **Order** fields.
5. Clear out the values for the **From Scheduled Ship Date**, **To Scheduled Ship Date**, **From Requested Date**, and **To Requested Date** fields.
6. Click the Options tab. Make sure that the **Autoconfirm picks** check box is selected and that an autoship ship confirm rule is entered in the **Ship Confirm Rule** field.

7. Click the **Release Now** button to initiate the pick wave process.

Review Delivered Requisition and Transfer Order

In this step, let's view the delivered requisition and the shipment details associated with the transfer order. Since this example shows a process flow that requires the least amount of interaction from the requester, the intersubinventory parameters have been setup so that a receipt is not required for expense destination transfer orders. The shipping details show that the order has been shipped, and automatically received and delivered. In this case, the shipping department physically sends this directly to the requester's cubicle completing the process.

Sign back in as the requester to perform this step.

1. From the Purchase Requisitions work area, select your requisition ID to bring up the requisition details.
2. On the Manage Requisitions page, click the order number in the **Order** column to drill down to the View Transfer Order page.
3. Review the transfer order:

Field	Description
Status (header)	The status at the header level is **Closed**.
Line Status	The line level status in the Lines section of the page is **Closed**.
Fulfillment Status	The fulfillment status is **Shipped and received**.
Quantity fields	The quantity fields on the detail line in the Lines section of the page show that the ordered item has been shipped, received, and delivered.
Billing Details	The Billing Details section shows that the quantity associated with the distribution has been delivered. If there were multiple distributions and only a partial quantity had been shipped, then this area would show the quantities delivered for a given distribution quantity.

4. Click the **View Shipments and Receipts** button to view the details of the shipment.
5. Click **Done**.

Create an Internal Material Transfer Requisition (Sophisticated User)

This example shows a scenario where an experienced user is requesting an item that's stocked in inventory at a warehouse within their same organization. For example, the user is in an engineering department that orders parts out of internal inventory on regular basis.

This user can override many of the fields on a requisition line and has authority to source the material from warehouses outside the current organization when necessary to secure parts needed for prototypes.

This example has these process steps:

1. Enter requisition line
2. View and edit transfer order
3. Ship transfer order
4. Receive items
5. Review delivered requisition and transfer order

This example assumes that all setup steps are complete.

Enter Requisition Line

The first step in this example is to create the internal material transfer requisition line. Let's enter the requisition details on the Enter Requisition Line page that is accessed from the Purchase Requisitions work area..

Since our user has the ability to source products from multiple warehouses, we can use the Select Supply Request page to review the availability of inventory at different warehouses prior to selecting one as the source of the internal material transfer.

1. From the Purchase Requisitions work area, select **More Tasks** > **Enter Requisition Line**.
2. Enter an item, or search for and select an item.
3. Note these field values:
    - Quantity: Defaults to **1**
    - Price
    - Source organization
    - Source subinventory
    - Deliver-to location
    - Destination type
    - Billing distributions
4. Change the **Source Organization**:
    - Click the **Source Organization** link. The Select Supply Request page opens showing a list of valid source organizations ranked in order. The available quantity for the item at each organization displays.
    - Select a source line.
    - Click **OK** to accept the change of the source organization. This returns you to the Enter Requisition Line page.
5. Review the new details on the Enter Requisition Line page. Note these fields:

Field	Description
Source Organization	The value for the source organization is now your newly selected organization.
Price	Price has changed to the cost of the item in the new source organization.

6. Click the **Add to Cart** button.
7. Click on the **Shopping Cart** icon to view what is now in your shopping cart. This opens the Shopping Cart popup window.

8. Click the **Submit** button in the Shopping Cart popup window.
9. The application assigns a requisition, and the requisition status is **Awaiting Approval**.

View and Edit Transfer Order

Once you've created the requisition and it's been approved, the application automatically creates the associated transfer order. You can view the details of the approved requisition and associated transfer order. You can also edit the transfer order if you want to make changes to the quantities or requested delivery date.

Note: In order to change the transfer order, you must have the Manage Transfer Order privilege.

1. From the Purchase Requisitions work area, select a link for your recent requisition ID. This brings up the requisition details.
2. Review the requisition details:

Field or Action	Description
Order (field)	The **Order** field on the requisition detail line is a link that takes you to the transfer order. You can view the transfer order details and status by clicking this link at any time.
Edit Order (action)	Select **Edit Order** from the **Actions** menu to drill down into the transfer order in an edit mode.
Cancel (action)	Use the **Cancel** action from the **Actions** menu to cancel the transfer order line. **Note:** If part of the order has been shipped, then this action can be used to cancel the remaining quantity on the transfer order.

3. Select **Edit Order** from the **Actions** menu to access the Edit Transfer Order page where you can edit the transfer order.

   If there are multiple lines on the requisition, all lines show when drilling down to the transfer order.

Field	Description
Status (header)	Header status can be open, closed, or canceled.
Line Status	Line status can be open, closed, or canceled.
Fulfillment Status	The fulfillment status shows that the transfer order is **Awaiting Fulfillment**.
Quantity fields	The quantity fields show real-time statuses for the requested quantity, shipped quantity, received quantity, and delivered quantity. You can change the values in the quantity fields.

Field	Description
	Note: You can only decrease the quantity, it can't be increased.
Requested Delivery Date	You can change the values in the **Requested Delivery Date** field.

If you make any changes, click the Submit button to accept the changes. Otherwise, click Cancel to exit the page and return to the requisition.

Ship Transfer Order

Next, the transfer order is picked and shipped in Shipping. For this example, a pick wave is created using the autopick and autoship features.

> **Note:** In an actual production environment, you have the choice to pick and ship as individual steps, pick and then automatically ship, automatically pick and manually ship, or to automatically pick and ship as is being done in this example.

When the order is shipped, the transfer order is updated as being shipped and the application generates a transfer order inventory transaction to record the fact that the item has been issued out of the source inventory.

If a receipt is not required, then this transaction is used by Costing to record both the issue and the expensed delivery at the destination organization. If a receipt is required, then an inbound shipment is created in Receiving allowing the item to be received and delivered by user-entered responses at the user location with either the Self-Service Receiving pages or the Warehouse Receiving pages.

In our example, the interorganization parameters between organizations have the Receipt Required option selected. So, the next step in this example is to use the Self-Service Receiving pages to receive and deliver the item.

Use the Warehouse Manager sign-on for this step.

1. From the Inventory Management work area, select **Shipments** from the **Show Tasks** section of the Task panel.
2. Select the **Create Pick Wave** task.
3. Click the **Show More** link.
4. On the Demand Selection tab, enter **Transfer Order** in the **Order Type** field.
5. Enter a value for the **Order** field.
6. Clear out the values for the **From Scheduled Ship Date**, **To Scheduled Ship Date**, **From Requested Date**, and **To Requested Date** fields.
7. Click the Options tab. Make sure that the **Autoconfirm picks** check box is selected and that an autoship ship confirm rule is entered in the **Ship Confirm Rule** field.
8. Click the **Release Now** button to initiate the pick wave process.
9. A Confirmation window displays a message with the number of generated pick slips and pick waves.
10. Click **OK**.

Receive Items

Once shipped, the requested item is delivered to the requester who uses Self-Service Receiving to acknowledge the receipt.

Since the **Receipt Required** option was set on the interorganization parameters for the organization pair, the next step in the process flow is to receive the item once it's delivered to the requester. You can enter the receipt in either the Self-Service Receiving pages or the Warehouse Receiving pages. In this example, let's use the Self-Service Receiving pages.

> **Note:** In order to use the Self-Service Receiving pages to receive a requisition-sourced item, the **Receipt Routing** option in the interorganization parameters between the two organizations must be set to **Direct**. If the **Receipt Routing** option is set to **Standard** or **Inspection**, then you must use the Warehouse Receiving pages to receive the item.

Use the Requester sign-on to receive the transfer order from the Self-Service Receiving pages.

1. From the My Receipts work area, use the Search area to bring up your transfer order:

Field	Description
Transfer Order	Enter the transfer order number from earlier in this example
Items Due	Select **Any time**

2. Click **Search**. This loads the transfer order shipment details into the search results.
3. Select the transfer order shipment line in the search results.
4. Click the **Receive** button to open the Create Receipts page.
5. Create the receipt using the Create Receipt page:
    - Enter a **Receipt Quantity** of **1**.
    - Click the **Submit** button.
    - Click **OK** in the Confirmation window.

Review Delivered Requisition and Transfer Order

You can review the completed requisition and transfer order to look at the shipment and receipt history. The transfer order shows that it was shipped, received, and delivered.

Sign in as the Requester to perform this step.

1. From the Purchase Requisitions work area, select your **Requisition ID** to bring up requisition details.
2. Click the order number in the **Order** column to drill down to the View Transfer Order page. Review the transfer order noting these fields:

Field	Description
Status (header)	The status at the header level is Closed.
Line Status	The line level status in the Lines section of the page is **Closed**.
Fulfillment Status	The fulfillment status is **Shipped and received**.

Field	Description
Quantity fields	The quantity fields on the detail line in the Lines section of the page show that the ordered item has been shipped, received, and delivered.
Billing Details	The Billing Details section shows that the quantity associated with the distribution has been delivered. If there were multiple distributions and only a partial quantity had been shipped, then this area would show the quantities delivered for a given distribution quantity.

3. Click the **View Shipments and Receipts** button. Note the Shipping and Receipts section showing the details of the shipment and the receipt. You can drill down further to view additional details on the shipment and receipt by clicking the links in the **Shipment** and **Receipt** columns.
4. Click **Done**.

Kit Items for Transfer Orders

A kit item is an item with fixed components that displays the item structure and doesn't have options and classes. The kit item itself is a list of standard, nonconfigurable, nonselectable items that are consistently combined and shipped. The top level is the kit item, and it contains a primary item structure type.

With kit items, you can request pick-to-order kits on a transfer order instead of requesting each component individually. After defining the kit parent item and associating the component structure in Oracle Product Hub, you use the kit parent item name when requesting the transfer order. Upon creation, Oracle Fusion Cloud Inventory Management automatically explodes the kit components onto the transfer order so that picking, shipping, and receiving still occur at the component level.

When the transfer order for the kit item is created, it can be viewed in Oracle Inventory Management on the Manage Transfer Order page. From there, you can review and edit the kit item transfer order. The kit components are shippable items displayed in shipping as individual shipment lines. The shipment lines are automatically grouped into a shipment set at transfer order creation to ensure all items in the kit ship together. Kit items can be entered on both inventory and expense destination transfer orders.

It's common for companies to group several items that frequently ship together into a single kit item for order efficiency purposes. That way the order can be placed for a single item that represents multiple items being shipped.

Important Notes

- You can create a transfer order for a kit item using the Oracle Supply Chain Orchestration supply request, REST resource, or file-based data import (FBDI). This doesn't apply to kit items on transfer orders routed through Oracle Order Management.
- When defining the kit item from the Product Information Management work area, you must set the **Internally Transferable** and **Transfer Orders Enabled** attributes to **Yes**.
- A kit item can be pick-to-order or prebuilt. For example, kit components can be kept in separate locations, picked individually, and then packed together to fulfill an order.
- You can't cancel a kit component if it's backordered.
- Supply lines in Oracle Supply Chain Orchestration aren't updated when transfer order lines are updated.

- Multiple distributions are supported by Oracle Supply Chain Orchestration from Self Service Procurement and interfaced to Inventory Management. Multiple distributions aren't supported for expense and inventory destination transfers using the Supply Chain Orchestration REST resource. This is because the REST resource doesn't capture distribution percent and distribution quantity as part of the REST payload.

Related Topics

- Considerations for Using Kit Items for Transfer Orders
- Impact of Shipping Parameters for Kit Items on Transfer Orders
- Set Up Kit Items for Transfer Orders

Considerations for Using Kit Items for Transfer Orders

Before using kit items on transfer orders, consider these items:

- Consider the primary item structure for the kit item defined in the Product Information work area. This impacts the type and quantity of component items shipped. All kit components and their calculated requested quantities must be defined. This item structure is used to explode the kit item into transfer order lines and shippable components at the time of transfer order creation.
- Consider the **Shipment Set Behavior** shipping parameter which impacts how the component shipment lines react when anything less than the requested quantity is shipped for the component item on the transfer order.
- The ability to use kit items on transfer orders is achieved by defining a kit item in the Product Information Management work area with the required Inventory, Sales and Order Management, and Manufacturing item attribute settings. You must also set the **Shipment Set Behavior** shipping parameter to a value that fits your business need.

Related Topics

- Kit Items for Transfer Orders
- Impact of Shipping Parameters for Kit Items on Transfer Orders
- Set Up Kit Items for Transfer Orders

Set Up Kit Items for Transfer Orders

Define kit items in the Product Information Management work area.

Complete these steps to create kit items for transfer orders:

From the Product Information Management work area, select **Create Item** from the task menu

1. From the Product Information Management work area, select **Create Item** from the task menu.

2. On the Specification tab of the Create Item page, define the kit item with these Inventory, Sales and Order Management, and Manufacturing item attribute settings.

Item Attribute Setting	Location	Value
Stocked	Inventory > Material Control section	No
Transaction Enabled	Inventory > Material Control section	No
Internally Transferable	Sales and Order Management > Order Management section	Yes
Shippable	Sales and Order Management > Fulfillment section	No
Transfer Orders Enabled	Sales and Order Management > Order Management section	Yes
Pick Components	Manufacturing > Item Structure section	Yes

3. On the Structures tab of the Create Item page, create the kit item structure. An item structure is required for kit items. You must use the **Primary** item structure name when creating a new item structure for a kit item.

   On the Structures tab of the Create Item page, create the kit item structure. An item structure is required for kit items. You must use the **Primary** item structure name when creating a new item structure for a kit item

4. Use the Associations tab of the Create Item page to associate the kit item to the inventory organizations.

Related Topics

- Kit Items for Transfer Orders
- Considerations for Using Kit Items for Transfer Orders
- Impact of Shipping Parameters for Kit Items on Transfer Orders

Impact of Shipping Parameters for Kit Items on Transfer Orders

The values of the **Shipment Set** and **Enforce Shipment Set** shipping parameters impact kit items on transfer orders.

Use the **Manage Shipping Parameters** task from the Setup and Maintenance work area to update these shipping parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Shipping
- Task: Manage Shipping Parameters

Shipment Set Behavior

To ensure that the kit component items are shipped together (in a kit), the shipment lines are automatically stamped with a shipment set number at the time of the transfer order creation. The business intention of the kit item is that full

quantities of all kit components within the kit item, ship at the same time. But there are business conditions that require the shipment set to be broken.

The **Shipment Set Behavior** shipping parameter controls the ability to break a shipment set. You can only ship less than the requested quantities for the kit components if the **Shipment Set Behavior** parameter is **Information** or **Warning**.

Consider the settings of the **Shipment Set Behavior** parameter to determine the level of control you want when picking and shipping kit components:

- **Error**: If any quantity changes are made to the shipment line, an error message displays at ship confirmation and the transaction stops. This is true for kit components as well as standard items.
- **Warning**: If any quantity changes are made to the shipment line, a warning message displays at ship confirmation, and you have a choice to continue or stop the transaction. This is true for kit components as well as standard items.
- **Information**: If any quantity changes are made to the shipment line, the change is accepted and the transaction processes without issue. This is true for kit components as well as standard items.

Enforce Shipment Sets

Also consider enabling the **Enforce shipment sets** shipping parameter. With this parameter enabled, all lines in a shipment set are picked together. This isn't a required setup, but it has proven beneficial to companies that want to keep the shipment set intact from picking through shipping.

Select the **Enforce shipment sets** check box in the Pick Release section of the Manage Shipping Parameters page.

Related Topics

- Kit Items for Transfer Orders
- Considerations for Using Kit Items for Transfer Orders
- Set Up Kit Items for Transfer Orders

FAQs for Implementing Internal Material Transfers

What's the difference between a physical and accounting only internal material transfer return?

If the physical return of material is required, the transfer order is interfaced to Oracle Shipping.

If the physical return isn't required (accounting-only internal material transfer return), the transfer order isn't interfaced to Oracle Shipping.

A transfer order type of Return is created for both scenarios (with or without physical returns).

How can I fulfill transfer orders for items on an internal material transfer through Oracle Fusion Order Management?

Configure a business rule in the Manage Supply Order Enrichment Rules user interface.

Set up a business rule that runs at the time of supply creation and sets the value of the order management shipment option. During transfer order creation, the process evaluates the order management shipment option to determine if the transfer order line should be directly interfaced to Oracle Shipping, or if it should pass through Oracle Fusion Cloud Order Management (and from Oracle Order Management to Shipping).

How can I set up the expense destination receipt required option for transfer orders?

Set this option on the Manage Interorganization Parameters page for interorganization transfer orders, and on the Manage Intersubinventory Parameters page for intraorganization transfer orders. Access these pages from the Setup and Maintenance work area, in the Manufacturing and Supply Chain Materials Management offering.

What's the difference between inventory and expense destination transfer orders?

Expense destination transfer orders transfer material from an inventory warehouse location directly to the buyer's location for immediate usage. With expense destination transfers, there's no put away transaction in inventory since the item is expensed, and the destination inventory isn't incremented. Returns aren't allowed, and serial and lot numbers aren't tracked in receiving.

Inventory destination transfer orders require movement to a destination inventory warehouse location. With inventory destination transfers, you have a shipment in the source organization that decrements the source location's inventory, and a put away transaction in the destination organization that increments the destination location's inventory.

Can I use the source organization's business unit for sales orders created from transfer orders?

Yes, when using Supply Order Defaulting and Enrichment Rules to route transfer orders through Oracle Fusion Cloud Order Management, you have the option to align the sales order requisitioning business unit with the source organization's business unit.

Normally, when you create a sales order from a transfer order, you use the destination inventory organization's business unit on the sales order. Creating the sales order in the source organization's business unit lets the organization actually

shipping the requested goods accurately track the internal order through its lifecycle. This also enables you to accurately manage and account for orders through their lifecycle.

In the case of multiple lines and source organizations, the first line of the transfer order determines the business unit on the sales order.

How can I set up transit times for intersubinventory transfer orders?

Define transit times between source and destination subinventory locations on the Manage Transit Times page.

To set up a transit time:

1. In the Setup and Maintenance work area, go to the **Manage Transit Times** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Carriers and Transit Times
    - Task: Manage Transit Times
2. Click the **Add** icon to create a new record.
3. Select **Internal Location** for the **Origin Type** field.
4. Select values for the **Origin**, **Destination Type**, and **Destination** fields.
5. Click the **Assign Shipping Method** button. Enter shipping method and transit time details.
6. Click **Save and Close**.

Why can't I select a source organization for my internal requisition transfer order?

The Transfer Order Enabled and Internally Transferable item attributes must be both set to Yes for the item. Update the item attributes using the Manage Items task from the Product Information Management work area. On the Edit Items page, select the Specifications tab.

Why can't I select a destination organization when creating an interorganization transfer?

To create an interorganization transfer between internal organizations, you must first complete this setup:

1. Set up the interorganization parameters between the source and destination organization using the **Manage Interorganization Parameters** task.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Interorganization Parameters

2. Set up the receiving parameters for the destination organization using the **Manage Receiving Parameters** task.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receiving
    - Task: Manage Receiving Parameters

Why can't I create a supply request from Self-Service Procurement?

If you're not using the internal requisition process for inventory-sourced items to create a supply request, you must deselect the Internal Material Transfer opt in feature for Procurement.

To deselect this feature, complete these steps:

1. From the Setup and Maintenance work area, select the **Procurement** offering.
2. Select **Change Feature Opt In** in the Functional Area menu.
3. Select **Self-Service Procurement**.
4. Click the **Edit** icon in the Features column.
5. Deselect the **Enable** check box for Internal Material Transfers. The child feature **Fulfill Expense Requisitions for Agreement Based Catalog Items from Internal Source** also deselects automatically.
6. Click **Done**.

4 Contract Manufacturing

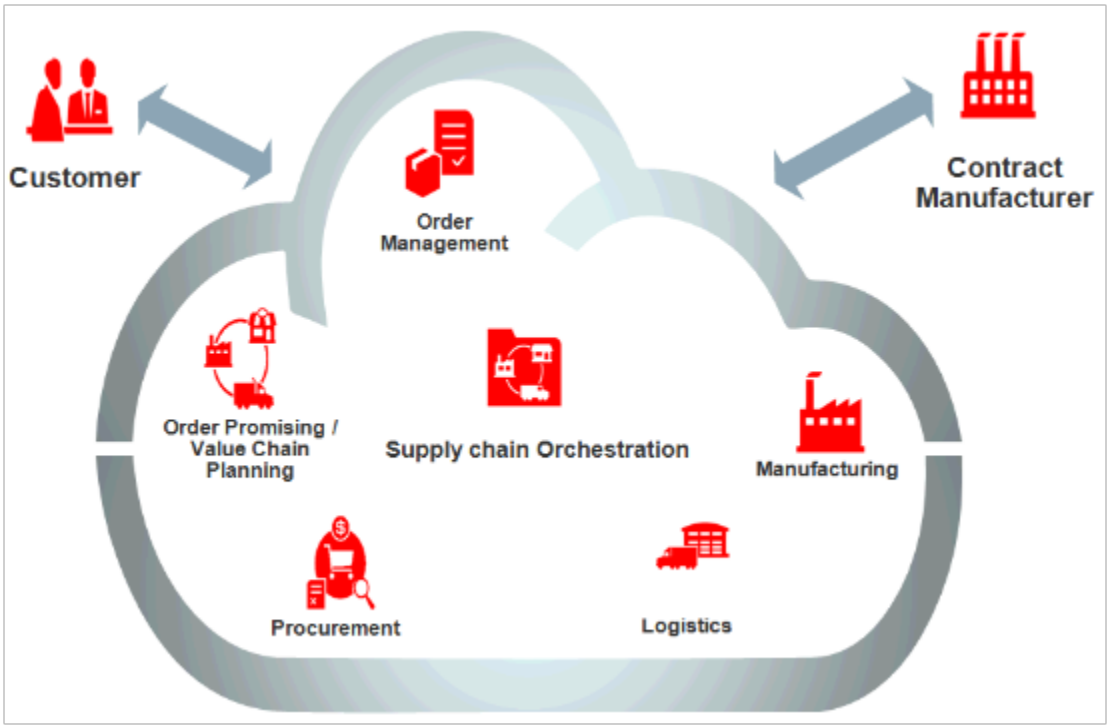
Overview of Contract Manufacturing

Contract manufacturing is a business process in which an organization, known as the original equipment manufacturer (OEM), outsources manufacturing to another organization, known as the Contract Manufacturer, to manufacture a specific part or a full product. The contract manufacturer manufactures the product to exact specifications of the original equipment manufacturer's label. The original equipment manufacturer may supply some or all components to the contract manufacturer. Contract manufacturing enables the original equipment manufacturer to completely outsource their manufacturing process to the contract manufacturer.

Note: The contract manufacturing flow is currently supported for only discrete manufacturing.

The following figure illustrates the solution overview of contract manufacturing:

In the following image, the business flow for contract manufacturing is explained. Manufacturing, Logistics, Procurement, Order Management, Supply Chain Planning, and Supply Chain Orchestration all form different parts of a single enterprise which deal with the various aspects of fulfilling a business flow for production of a work order which is used to complete a sales order for a customer. The contract manufacturer is an entity outside the enterprise who manufactures only a part of the production and returns it to the enterprise.



The solution supports outsourcing of manufacturing jobs in a **build to plan** or **build to order** manufacturing strategies. The OEMs can track and monitor the manufacturing process in the contract manufacturer's facility in real time, and also

track the inventories at the contract manufacturer's facility that are owned by them, whether they're components or finished goods.

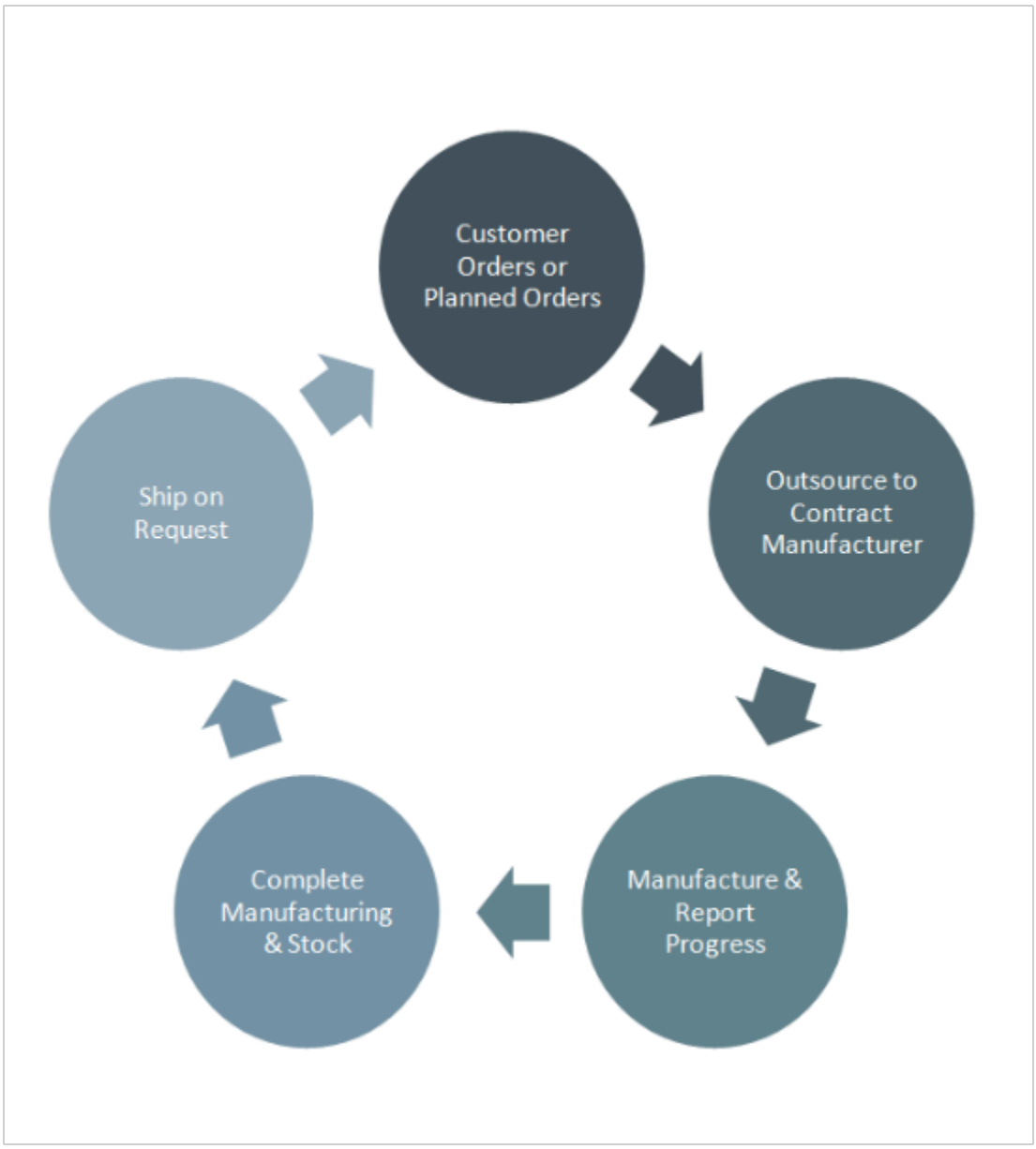
Contract Manufacturing Lifecycle and Features

Contract manufacturing is set into motion either when a customer places an order for manufacturing a product with the original equipment manufacturer (OEM) for back-to-back flow, or from Planning for plan-to-produce flow. The OEM in turn outsources the customer order to the contract manufacturer.

The following figure illustrates the life cycle of contract manufacturing from start to completion:

The following image describes how a contract manufacturing flow works. The customer places a sales order or there is a planned order in place. The manufacturing is outsourced partially to a contract manufacturer. The contract manufacturer manufactures and reports progress to the original equipment manufacturer. The original equipment manufacturer completes the rest of the manufacturing

and reports stock to the inventory. The final product is then shipped on the customer's request.



Contract manufacturing consists of the following five features:

- Planning and Promising Contract Manufacturing Orders: Enables automatic scheduling and promising a customer order for a back-to-back contract manufactured item and generates planned orders to a forecast for a plan-to-produce contract manufactured item. Generates replenishment orders for the OEM supplied components which are already positioned at the contract manufacturers' facility, and planned orders for the OEM supplied components which are supplied to the contract manufacturer per order.
- Automatic Supply Creation and Fulfillment: Creates supplies automatically for the OEM supplied components based on the contract manufacturing finished good item demand. It also creates supply for the finished

good item and fulfills a customer demand or a planned order demand for a contract manufactured item automatically.

- Track Production Progress: Enables OEMs to track the manufacturing progress in real time and provide visibility to the inventory that they own.
- Automatic Change Management: Manages automatically any change requests coming from the demand side, and exceptions from the supply side.
- Plan and Account Costs: Enables users to compare the costs between outsourced and in-house manufacturing. Cost Accounting enables users to monitor costs at a summary or detail level for each work order using the Review Work Order Costs user interface. This user interface enables users to review costs for in-house manufactured and contract manufactured items.

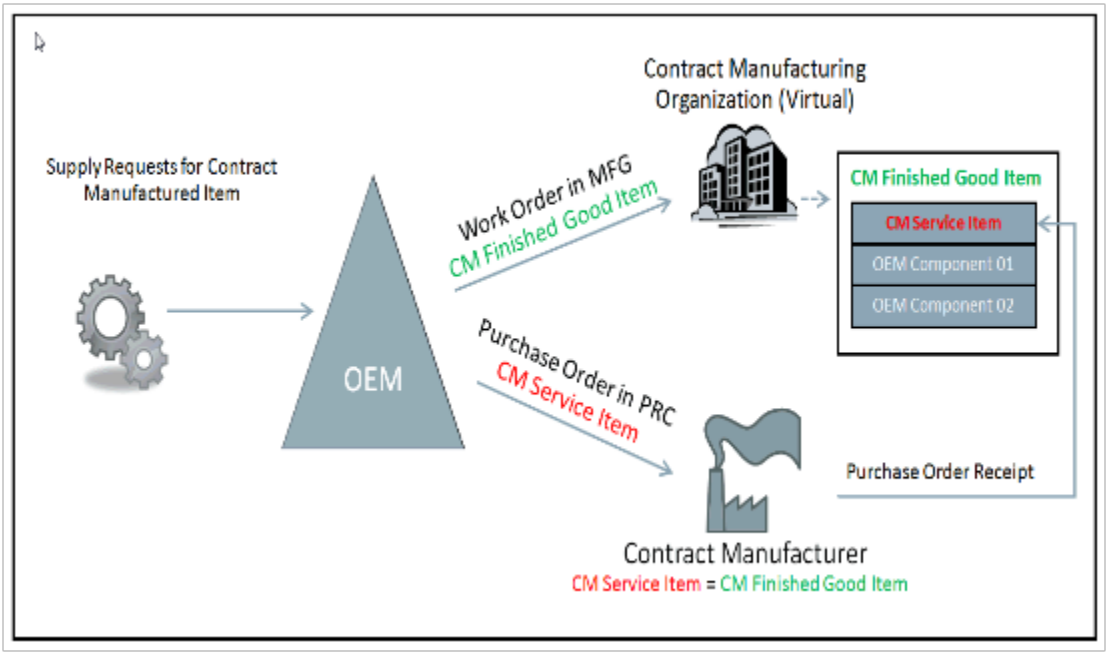
How Modeling of Entities Work Together in Contract Manufacturing

For contract manufacturing to work in Oracle Fusion Cloud Manufacturing, some of the entities within contract manufacturing are modeled as explained in the following section:

- Contract manufacturer: Modeled as a regular supplier and supplier site within the Original Equipment Manufacturer's enterprise. Also modeled as an inventory organization within the original equipment manufacturer's enterprise.
- Contract manufacturing finished good item: Item type is set to **Make**. The contract manufacturing check box is set to **Yes**.
- Contract manufacturing service item: Item type is set to **Buy**. The contract manufacturing check box is set to **Yes**.
- Contract manufacturing finished good item Bill of Material (BOM): Components supplied by the original equipment manufacturer are included in the BOM. The **Supply Type** of the components supplied by the **contract manufacturer** is marked as **Supplier**.The **Supply Type** for the components that are supplied by the **original equipment manufacturer** is marked as **Push**. The contract manufacturing service item is also included as a component in the BOM.

The following figure illustrates how the entities work together in contract manufacturing:

The following figure explains how various entities work together to complete the contract manufacturing flow. It is explained in detail in the topic.



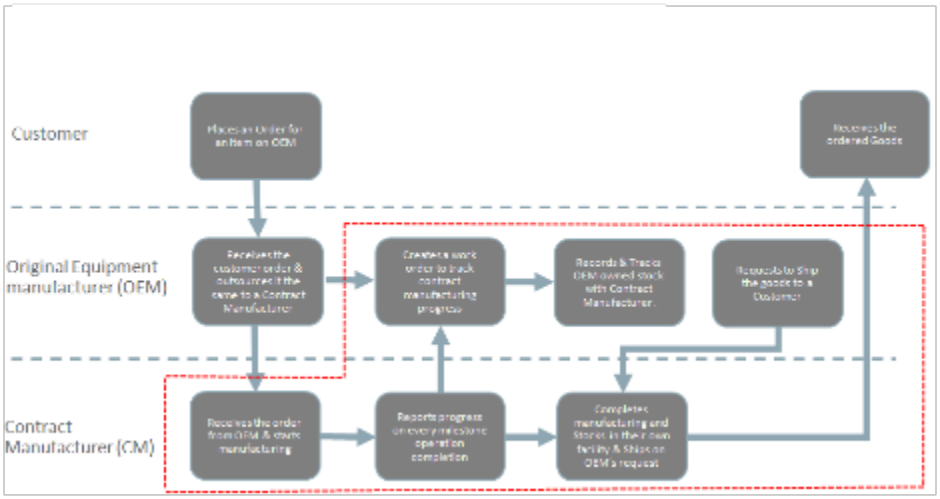
Explanation of how these entities work together in contract manufacturing:

1. The original equipment manufacturer (OEM) receives supply creation requests for a contract manufactured item.
2. After the supply creation request is received, the OEM creates a work order on the contract manufacturing finished good item in the contract manufacturing organization to monitor the manufacturing process in the contract manufacturer's facility. The contract manufacturing organization is a virtual organization that was created in the OEM enterprise representing the contract manufacturer to whom the manufacturing is outsourced.
3. The OEM sends a purchase order on the contract manufacturing service time to the contract manufacturer as part of outsourcing the manufacturing.
4. On receiving the Purchase Order (PO) on the contract manufacturing service item, the contract manufacturer understands that the PO is to manufacture the contract manufacturing finished good item. The contract manufacturer understands this because that person would have mapped the contract manufacturing service item to the contract manufacturing finished good item within their enterprise, based on the agreement with the OEM. This is achieved either by item cross referencing or any other means within their enterprise which is outside the purview of contract manufacturing.
5. After the contract manufacturer completes manufacturing, the contract manufacturing finished good item is stocked in their premises and the contract manufacturer notifies the OEM that production is complete.
6. The OEM initiates a receipt transaction on the PO placed on the contract manufacturer and receives the contract manufacturing service item into the contract manufacturing virtual organization, and completes the tracking work order that was created in the contract manufacturing organization. Because the contract manufacturing service item is one of the components in the Bill of Material (BOM) for the contract manufacturing finished good item, and the contract manufacturing service item is set for **backflush** or **assembly pull**, the contract manufacturing service item is auto-consumed into the work order. In addition, the inventory for the contract manufacturing finished good item is created in the contract manufacturing organization and the contract manufacturing service item inventory is decremented from the contract manufacturing organization.

Overview of the Contract Manufacturing Business Flow

After reviewing how each of the entities is modeled and how these entities work together in this solution, you can understand the overall business flow for contract manufacturing. The following figure shows a typical contract manufacturing business flow fulfilling a customer order. The parties involved in this business flow are the customer, the original equipment manufacturer (OEM), and the contract manufacturer.

The following image shows a contract manufacturing business flow fulfilling a customer order. The topic explains it in further details.



Explanation of the business flow sequence:

1. A customer places an order for an item with the OEM.
2. The OEM receives the customer order and identifies that the ordered item is a contract manufacturing-enabled item.
3. The OEM sends a purchase order to the contract manufacturer and outsources the manufacturing process for that item to the contract manufacturer as well.
4. The OEM also creates a work order within their enterprise to track the manufacturing process at the contract manufacturing facility.
5. The contract manufacturer reports production progress to the OEM on every milestone operation completion in the manufacturing process. The contract manufacturer also reports any component consumption that's being supplied by the OEM.
6. The OEM receives the production report from the contract manufacturer, and in turn updates the work order that was created internally within the OEM enterprise. The OEM also records any OEM-supplied component consumption.
7. After the manufacturing is complete at the contract manufacturer's facility, the contract manufacturer stocks the finished goods in their facility and sends a production completion report to the OEM. The finished good stock at the contract manufacturer's facility is owned by the OEM. The OEM can track the components supplied by them and the finished good stock that's lying in the contract manufacturer's facility by reviewing the inventory levels in the contract manufacturing organization that the OEM has created within their enterprise.
8. The contract manufacturer ships the finished goods to the customer on the request of the OEM. After the finished goods are shipped and then received by the customer, the OEM updates the inventories in the contract manufacturing organization that the OEM has created within their enterprise.

Planning and Promising Contract Manufacturing Orders

The Planning and Promising Contract Manufacturing Orders feature in contract manufacturing, helps in planning the requirement of all the components that are supplied by the original equipment manufacturer (OEM) to the contract manufacturer.

Contract manufacturing solution supports two flavors for the OEM supplied components. The OEM can do one of the following:

- Supply the components in bulk at the contract manufacturer's facility.
- Supply components with every order that the OEM places on the contract manufacturer.

In a typical business scenario, the OEM would prefer to supply low-cost components in bulk at the contract manufacturer's facility and ship the high-cost components on a per order basis.

This feature also helps in planning and promising the contract manufactured items and adds to the business value of an organization.

Automatic Supply Creation and Fulfillment

The Automatic Supply Creation and Fulfillment feature in contract manufacturing helps in automating the contract manufacturing process from the supply creation process for the components that are supplied by the original equipment manufacturer (OEM), the contract manufacturing finished good item by the contract manufacturer, until the fulfillment of the customer order or a planned order demand.

The salient points are as follows:

- This feature helps not only to autocreate the supplies for the components that are supplied by the OEM to the contract manufacturer, but also processes the shipment of the OEM supplied components to the contract manufacturer.
- The supply creation requests that come into Oracle Supply Chain Orchestration from Oracle Inventory Min-Max Planning and the Planning Central for the pre-positioned components and the components that are supplied per order are processed in Supply Chain Orchestration. These supply requests result in a supply order, which is fulfilled by transferring from one of the OEM warehouses to the contract manufacturer. Supply Chain Orchestration orchestrates the supply creation process through an Internal Material Transfer flow, and ensures that the components are shipped to the contract manufacturer.
- This feature also automates the supply creation and the fulfillment process of a contract manufactured finished good item using a predefined business process.
- As part of this predefined business process flow, a work order is created in the contract manufacturing organization in the OEM enterprise to track the production progress at the contract manufacturer. This work order is reserved against the customer order because the supply is being used to fulfill a customer order. If the supply is being created to fulfill a planned order, the supply isn't tied to any demand, and the predefined business process doesn't have the reservation step.
- After the reservation is created, a Purchase Order (PO) is created for the contract manufacturing service item and sent to the contract manufacturer. This purchase order has the tracking work order details and the finished good product details stamped on it. This establishes a link between the contract manufacturing work order and

the purchase order. This helps the contract manufacturer in identifying the contract manufacturing finished good item and work order details, which in turn helps them while reporting the production progress to the OEM. The purchase order also carries the work definition document as an attachment by which the work instructions and the milestone operations on which the contract manufacturer must report the progress are communicated to the contract manufacturer.

- On every milestone operation completion, the contract manufacturer sends the production progress to the OEM. This feature enables Oracle Manufacturing to receive the production progress from the contract manufacturer.

A contract manufacturer can send the production progress in three ways:

- Operation and material transaction public web services exposed by the OEM: If the contract manufacturer calls the operation and material transaction public web services that are exposed by the OEM manufacturing application, this automatically updates the tracking work order and update the OEM-owned inventories in the contract manufacturing organization.
- Preformatted spreadsheet given by the OEM: If the contract manufacturer sends the progress in a preformatted spreadsheet, the spreadsheet can be manually uploaded into the OEM manufacturing application by a production supervisor, which automatically updates the tracking work order component or finished good inventory levels.
- E-mail or phone: If for some reason the contract manufacturers can't adapt to the web service technology or spreadsheet, they can always send the production progress by e-mail or by phone, whereby the production supervisor in the OEM enterprise can manually update the tracking work order and material transactions.

With this, the OEM can monitor the production progress at real time by reviewing the work order or operation status. The OEM owned inventories can always be tracked in the contract manufacturing organization.

After the manufacturing is complete, the contract manufacturer sends the production complete report to the OEM. The manufacturing application in the OEM enterprise receives the progress, completes the work order, and notifies Supply Chain Orchestration when the supply of the contract manufacturing finished good is created. Supply Chain Orchestration in turn notifies Order Management that the goods are now available for shipping.

How Production Progress is Tracked

The Track Production Progress feature in contract manufacturing enables a 360-degree view of the supply creation process from capturing the customer order till the fulfillment of the order.

This feature works in the following manner:

- In the original equipment manufacturer (OEM)'s enterprise, Supply Chain Orchestration (SCO) workbench enables the supply chain operations manager to monitor the progress of supply creation process at any given point in time, and also to drill down into the manufacturing application to review the work order and operation statuses in real time. Similarly, a production supervisor can sign in to the manufacturing application at any time and review the work order and operation statuses.
- If there are any exceptions reported by the contract manufacturer, they're recorded in the Supply Chain Orchestration workbench, and the exceptions are notified to the order manager. This enables the order manager to take appropriate corrective actions to mitigate the exceptions.
- The order manager has supply details such as supply order details, supply availability status and any supply exceptions that are being reported by SCO displayed on the order fulfillment page. The order manager is also

able to drill down into the Supply Chain Orchestration workbench to review the supply creation process in detail.

- The warehouse manager can track the OEM-owned inventories be it the OEM-supplied components or the finished goods at any time in the contract manufacturing organization.

The salient features of the Track Production Progress feature are:

- Provides 360-degree view of the production progress.
- Enables you to view any supply exceptions.
- enables you to take corrective actions to mitigate exceptions.
- Provides visibility to OEM owned components and finished goods.
- Enables real time visibility to the contract manufacturing production process.

Automatic Change Management

The Automatic Change Management feature in contract manufacturing helps in keeping the demand and supply in balance.

The key points of this feature are:

- Automatic change management enables you to handle any changes that originate from the demand side, either from a customer or a planned order. It enables you to take action on quantity, date changes, or demand cancellations, and relay that information to the contract manufacturer appropriately. In this process, the feature ensures that the contract manufacturing work order and purchase order are synchronized. If for any reason the requested demand changes can't be met, the order manager is notified of the exceptions.
- Automatic change management also enables a response to any exceptions that originate from the contract manufacturer. The feature enables you to react to any increase or decrease in quantity, date exception, or supply cancellation by relaying these exceptions to the order manager. The order manager can initiate corrective action if necessary. Change management always keeps the contract manufacturing work order and purchase order synchronized.
- The business value of this feature is that, it enables the original equipment manufacturer (OEM) to efficiently handle all customer needs and react appropriately to all the supply exceptions in order to meet the customer demand. Supply chain resilience is increased with this feature to meet with any supply or demand changes.

Plan and Account Costs

The Plan and Account Cost feature helps cost accountants in all phases of the manufacturing cycle. It helps to estimate and set costs for components, resources and overheads. The components issues and product completion transactions are used to calculate the actual costs incurred for each work order.

The work order costs include the cost of the contract manufacturing service item. The service item cost is also included in the contract manufacturing work order, just as any other component. If the item is costed using actual cost method, then the Purchase Order (PO) price is used. However, for average and standard cost method, the current costs are used. The costs are calculated, and then the necessary distributions and accounting entries are created for all the transactions reported against this contract manufacturing work order.

Set Up a Supplier for Contract Manufacturing

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

- A contract manufacturer must be defined as a **Supplier**. To do this, in the Setup and Maintenance work area, use the following:
  - Offering: Manufacturing and Supply Chain Materials Management
  - Functional Area: Manufacturing Master Data
  - Task: Manage Suppliers
- Each contract manufacturer's manufacturing site must be defined as a supplier site. You must assign a procurement business unit to each site. This is the organization authorized to provide procurement services for the site.

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

Set Up Inventory Organizations for Contract Manufacturing

In Contract Manufacturing, every Contract Manufacturer's manufacturing site is modeled as an inventory organization in the Original Equipment Manufacturer's Oracle Fusion Cloud Applications.

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

The following table displays the values of the inventory organization's attributes:

Attribute Name	Attribute Value
Usage	Inventory Management
Location Address	The Location Code or Address created in the earlier step for the Contract Manufacturer
Internal or External	External
Organization or Manufacturing Plant	Yes
External Application Type or Organization which represents a Contract Manufacturer	Yes

Attribute Name	Attribute Value
Supplier	Select the Contract Manufacturer (defined as a Supplier)
Supplier Site	Select the Contract Manufacturer's Site or Location (defined as a Supplier Site)

You must also specify the following:

- Supply subinventory
- Supply locator (if the supply subinventory is locator controlled)
- Completion subinventory
- Completion locator (if the completion subinventory is locator controlled)

Note: The parameter in the organization definition **Auto Associate Serial Numbers to Work Order** must be set to **Yes** for serial-tracked production, and if the original equipment manufacturer (OEM) supplies serials.

Setting Up Item Inventory Organization in Contract Manufacturing

In contract manufacturing, you must set up item inventory organization to define the items and components. Negative inventory isn't valid in the Contract Manufacturer Finished Goods Server.

The following table describes the attribute values that must be set up for Contract Manufacturer Finished Goods Server and Contract Manufacturer inventory organization:

Attribute Name	Attribute Value
Receipt Date Exception Action	None
Over Receipt Action	None

Note: You must ensure that overreceipt tolerance on the Purchase Order and overproduction tolerances are the same in Purchase Order and Work Order.

For more details about setting up item inventory organizations and setup steps common to all SCM offerings, refer to the Implementing Common Features for SCM guide.

How Items Are Set Up

The items used in contract manufacturing are created in the Product Information Management work area. The following key setup tasks are performed within the Product Information Management work area:

- **Create Items** setup is used to create items such as the contract manufacturing finished goods item and the contract manufacturing service item. It is also used to set the attributes as required for the contract manufacturing flow.
- **Create Item Structure** setup is used to create the bill of material for the contract manufacturing finished good item.

The following table displays items and the attributes for Finished Goods item, original equipment manufacturer (OEM) supplied components, contract manufacturer supplied components, and contract manufacturing service item (represented as Contract Manufacturer Finished Goods Server):

Attribute Name	Attribute Value	Attribute Value	Attribute Value	Attribute Value
Not Applicable	**Finished Goods Server**	**Contract Manufacturer Finished Goods Server**	**OEM Components**	**Contract Manufacturer Sourced Components**
Item Type	Make	Buy	Transfer	Transfer
Inventoried	Yes	Yes	Yes	Yes
Stockable	Yes	Yes	Yes	Yes
Transactable	Yes	Yes	Yes	Yes
Back-to-Back	Yes	No	No	No
Contract Manufacturing	Yes	Yes	No	No
Inventory Planning Method	Not Planned	Not Planned	Min-Max Planning (for pre-positioned components)	Not Planned
Planning Method	Not Planned (for Back-to-Back) and MPS Planning (for Plan to Produce)	Not Planned	MRP Planning (for components supplied per order)	Not Planned
Supply Type	Push	Assembly Pull	Push	Supplier

If you've defined the contract manufacturing finished goods item as a dual units of measure item, which means the Tracking Unit of Measure is set to primary and secondary, you should also define the contract manufacturing service item as a dual units of measure item.

The contract manufacturing service items set up with defaulting control as **Fixed** and **Default** are supported, whereas **No Default** isn't supported. You're not allowed to create a contract manufacturing service item with defaulting control **No Default** in Product Information Management. It's also recommended that if both the contract manufacturing finished goods item and contract manufacturing service item are dual units of measure items, then you should set up their secondary UOM, positive and negative deviation factors, and item intraclass and interclass conversions identically. The application doesn't enforce these validations.

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

Set Up a Work Definition in Contract Manufacturing

In contract manufacturing, multiple supply scenarios are possible, resulting in a Bill of Materials (BOM) for each of the supply scenarios.

The following are a few supply scenarios:

- Make in-house.
- Purchase from a supplier.
- Alternative Contract Manufacturer Suppliers: CM1or CM3.
- Work definition is set up for each contract manufacturer's manufacturing plant.
- The following section lists the recommendations for setting up a work definition:
    - Contract Manufacturer Finished Goods Server is defined as one of the components for the last operation and is an example of a contract manufacturing service item. Define only one Contract Manufacturer Finished Goods Server as a component, with a BOM quantity of 1 EA.
    - Set up the supply subinventory and locator (if subinventory is locator controlled).
    - Dummy work centers are required only for lead-time calculation. It is expected that the Contract Manufacturer supplier doesn't report any resource consumption.
    - Work definition need not be limited to only those operations that the OEM is interested in tracking. Work definition can include all the operations, and the operations (milestone operations) on which the OEM needs a progress update from the Contract Manufacturer. Those operations are marked as count point operations.
    - All the milestone operations are count point operations, and auto-transact operations may exist in a contract manufacturing work definition.

Set Up a Blanket Purchase Agreement in Contract Manufacturing

In contract manufacturing, the buyer sets up a blanket purchase agreement with the contract manufacturer supplier. To set up a blanket purchase agreement, you must use the Create Agreements task in the Purchasing work area.

The following table lists the values a buyer must specify in the blanket purchase agreement:

Attribute Name	Attribute Value
Group Requisition Headers	No
Group Requisition Lines	No

The buyer must manually attach the work definition **.pdf** or **XML** document to the blanket purchase agreement. It is expected that the buyer adds this attachment to the purchase agreement, and communicates to the supplier.

You can search and edit items in the work definition and create attachments using the following steps:

1. To enable the **To Supplier** attachment category for the Items entity **ITEM_ENTITY** In the Setup and Maintenance work area, use the following:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Attachment Categories for Product Management
2. To add a new attachment category for **To Supplier** to the Root Item **Class** or the **Item Class** in context for the work definition item, in the **Setup and Maintenance** work area, use the following:
    - Offering: Product Management
    - Functional Area: Items
    - Task: Manage Item Classes
3. In the Product Information Management work area, click the **Manage Items** task to search for and select the work definition item.
4. On the **Edit Item** page, click the **Attachments** tab to add a new attachment. Select the **Attachment Category** created earlier, and select the **Work Definition** document, as it was printed from work definition.

Set Up Receiving Parameters in Contract Manufacturing

In contract manufacturing, you can use receipt routing to track and move items through a series of operations that make up a receipt route. You must set up the receipt routing controls in such a way that the Contract Manufacturing Finished Goods Server (which is an example of a contract manufacturing service item) has a direct delivery routing.

Set Up ATP Rules in Contract Manufacturing

In contract manufacturing, setting up ATP Rules to support the Back-to-Back contract manufacturing flow is similar to how ATP Rules are set up for standard order promising.

However, there are certain points to be noted specifically for Back-to-Back contract manufacturing order promising, and are as follows:

- The **Promising Mode** is set as **Supply chain availability search**.
- The **Search Components and Resources** is enabled if **Make** recommendations are required. This is mandatory for Back-to-Back contract manufacturing **Make** recommendations.
- For**Supply Types**, all required supply types are selected that must be considered during order promising.
- For **Demand Types**, all required supply types are selected that must be considered during order promising.
- The **Infinite Time Fence** is set to a large value.

Set Up Sourcing Rules in Contract Manufacturing

In contract manufacturing, you can define sourcing rules that specify how to replenish items in an organization, such as purchased items in plants. Sourcing rules can also specify how to replenish all organizations.

Setting up sourcing rules to support the Back-to-Back contract manufacturing flow is similar to how sourcing rules are set up and assigned for standard order promising. However, there are certain points to be noted specifically for Back-to-Back contract manufacturing order promising and are as follows:

- The sourcing rule is defined as a **Local** one.
- The effective **Start Date** and **End Date** for the rule is provided. The end date is optional.
- Define a sourcing rule of type **Make**, and select the **Contract Manufacturing Organization** in the **Organization** field.

The following table describes how you must set up sourcing rules:

Sourcing Rule for Finished Goods or Component	Sourcing Rule
Demand for Finished Goods Server in OEM Organization	Transfer from Contract Manufacturer Organization
Demand for Finished Goods Server in Contract Manufacturer Organization	Make in Contract Manufacturer Organization
Demand for Component (OEM Supplied) in Contract Manufacturer Organization	Transfer from OEM Organization

Guidelines for the Setup and Implementation of Contract Manufacturing

This topic explains certain decision points and some best practices that are crucial for the setup and implementation of contract manufacturing.

Decision Points

The following decisions must be made before you set up your organization as a contract manufacturing organization.

- The original equipment manufacturer organizations must identify the items for which the manufacturing process is completely outsourced to a contract manufacturer.
- The original equipment manufacturer organizations must identify which items are outsourced to fulfill a customer order, and which items are outsourced to fulfill a planned order generated against a forecast. This

decision has to be made taking into account the readiness of the extended supply chain to support the contract manufacturing flows.

The items outsourced to fulfill a customer order is a contract manufactured item, and the item outsourced to fulfill a planned order is a back-to-back item.

Best Practices

The following points are some of the best practices that you can keep in mind while setting up your organization as a contract manufacturing organization:

- Each contract manufacturing site should be modeled as one inventory organization within the original equipment manufacturer's enterprise.
- For easy identification, name the contract manufacturing organization with the contract manufacturer's name.
- Define one subinventory for tracking the finished good inventory, and another subinventory for tracking the components supplied by the original equipment manufacturer.
- For easy identification of the contract manufacturing service item, name the service item by suffixing the contract manufacturer's name or initial to the contract manufacturing finished good item.

5 Outside Processing

Overview of Outside Processing

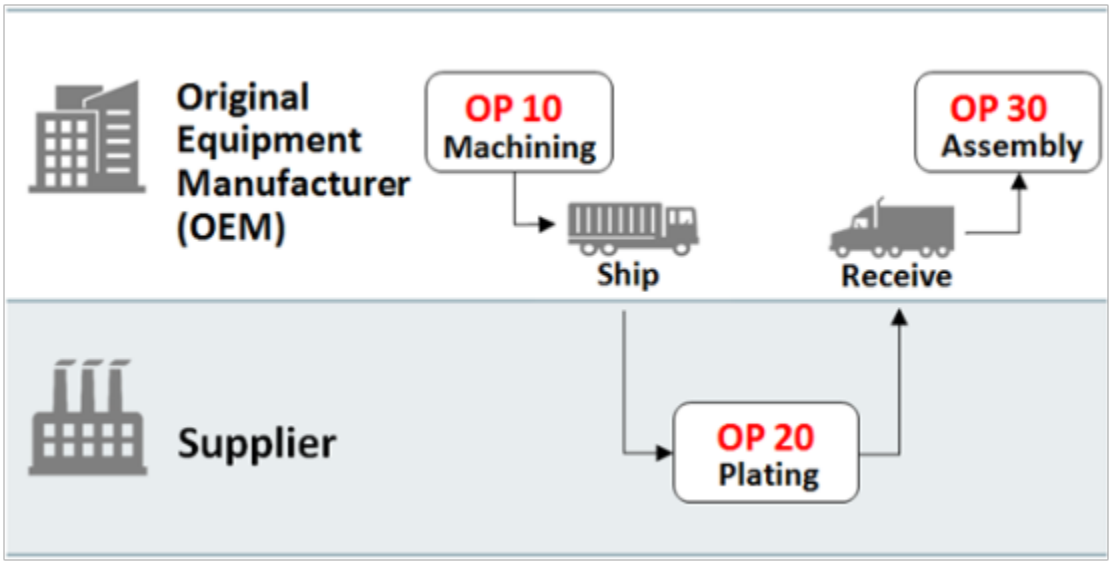
Outside processing is a business process where one or more operations of a work order are outsourced to a supplier who provides specialized manufacturing services.

These services may vary depending on the nature of the industry.

Outside processing is often adopted as a strategic alternative to in-house manufacturing for the following reasons:

- To lower manufacturing costs due to production costs
- To leverage state of the art manufacturing technology
- To increase capacity to overcome production bottlenecks
- To focus on core competencies

Here's a figure which explains a business flow where three operations are required to complete a work order. Operation 10 which is machining, followed by operation 20 which is plating, and operation 30 which is assembly. Operation 20 is a supplier operation performed by outside processing.



- An Original Equipment Manufacturer (OEM) performs the first operation in-house and ships the machined parts to a supplier for plating.
- The supplier performs the plating operation and sends the plated parts to the Original Equipment Manufacturer (OEM).
- The OEM receives the plated parts and pays the supplier for performing the value added services.

In the entire process, the OEM retains the ownership of the goods that are sent to and received back from the supplier.

Note: The outside processing flow is supported for both discrete and process manufacturing.

Overview of Outside Processing Features in Oracle Supply Chain Management Cloud

To support outside processing, Oracle Fusion Cloud Supply Chain Management offers many capabilities and enables you to do the following:

- Differentiate between manufacturing operations that are processed in-house and those that are outsourced to suppliers.
- Create and manage standard operations of the type **Supplier**.
- Create and manage work definitions with supplier operations.
- Create and manage work orders with supplier operations.
- Schedule supplier operations based on the processing lead times maintained at the operation level.
- Trigger automatic creation of purchasing documents.
- Trigger generation of shipment lines for shipping and printing shipping documents such as packing slip, bill of lading that are required in outside processing.
- Record completed quantities at supplier operations after goods are received and delivered to Oracle Manufacturing.
- Manage and execute supplier operations with or without serialization-enabled manufacturing.
- Review supplier operation details, manage supply exceptions, and perform receipt-related returns and corrections.
- Manage demand side changes by automatically propagating work order changes referred to as demand side changes to the associated purchase orders.
- Manage supply side changes by logging supplier operation exceptions to notify changes to purchase orders.

Oracle Fusion Cloud Supply Chain Management helps improve operational efficiency in managing outside processing in many ways. Some of them are as follows:

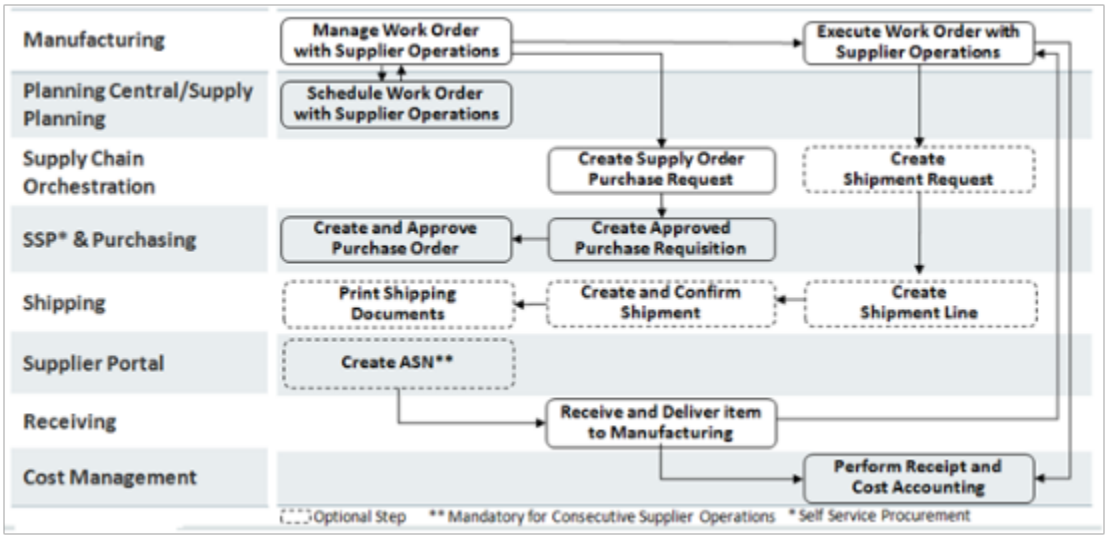
- Provides enhanced visibility into supply chain execution by displaying purchasing, shipping, and receiving details for a supplier operation.
- Reduces the manual intervention required to manage supplier operations through automatic creation and approval of purchasing documents, shipment lines and progression of quantities at a supplier operation upon receipt.
- Enables increased responsiveness in managing demand and supply side changes by providing the ability to automatically propagate demand side changes and log exceptions to notify supply side exceptions.
- Provides better insight into outside processing costs through the display of receipt and cost accounting distributions at supplier operations.

How Outside Processing is Managed and Executed

This topic details the sequence of steps of the process flow for outside processing. There may be variations to the process flow depending on the business offering.

The following image illustrates the process flow of outside processing across product offerings in Oracle Fusion Supply Chain & Manufacturing:

This image explains the various steps involved across products to complete an outside processing flow.



The following steps explain the process flow in a sequential manner:

1. Create and release a work order with supplier operations in Oracle Manufacturing Service. Work orders are scheduled using the unconstrained logic in Oracle Planning Central Service and Oracle Supply Planning Service.
2. When the work order is released, a request is sent to Oracle Orchestration Service to create a purchase requisition. Oracle Orchestration Service in turn creates a supply order and triggers the creation of a purchase requisition in Oracle Self-Service Procurement.
3. An Outside Processing Purchase Order is created in Oracle Fusion Cloud Purchasing Service using the details maintained in the Outside Processing Blanket Agreement.
4. Execute the work order by reporting quantities as completed at the operation prior to the supplier operation. A request is then sent to Oracle Fusion Cloud Orchestration Service to create a Shipment Line. Oracle Orchestration Service in turn creates a Supply Order Line and triggers the creation of a Shipment Line in Oracle Shipping.
5. A Shipment is manually created for the Shipment Line in Shipping which is then confirmed and closed. Based on the options set for the Ship Confirm Rule, the processes to Print Packing Slip and Bill of Lading are initiated automatically.
6. The next step is to create an Advance Shipment Notice (ASN) in the Supplier Portal for the outside processing service item. Goods are received in Oracle Receiving using the ASN and delivered to Oracle Manufacturing Service. For a supplier operation that's not serialization enabled, this results in automatic completion of quantities at the supplier operation.
7. Supplier operations are then managed and tracked in Oracle Manufacturing Service.
8. The receipt, delivery and operation transactions result in receipt and cost accounting in Oracle Cost Management.

Note: Steps to create shipment line and print shipping documents are optional as indicated in the diagram. ASN creation is required only in the case of consecutive outside processing scenarios.

Related Topics

- Overview of Outside Processing

How You Create and Manage Work Orders with Supplier Operations

To support outside processing, Oracle Manufacturing provides the ability to distinguish between work order operations that are processed in-house and those that are outsourced to suppliers through the Operation Type attribute.

The **Operation Type** attribute of an operation is set to **Supplier** to indicate that the attribute is processed by a supplier. You can create and manage all types of work orders with one or more supplier operations, define consecutive supplier operations, and maintain additional details for a supplier operation.

You can also import work orders with supplier operations using the predefined .xlsm template.

Work orders with supplier operations are scheduled using the unconstrained logic in Oracle Planning Central and Oracle Supply Planning taking into account the fixed and variable lead times maintained for the supplier operation.

The fixed and variable lead times specified for the supplier operation are also considered by Planning Central and Supply Planning while creating a planned order for an item that includes one or more supplier operations within its work definition. Additionally, the manufacturing lead time calculation program takes into account fixed and variable lead times maintained for the supplier operation.

> **Note:** For more information about creating work orders with supplier operations, refer to the Manage Production chapter of the Oracle Fusion Cloud Supply Chain Management Using Manufacturing guide.

How Purchasing Documents are Created and Managed for Outside Processing

This topic explains how purchasing documents for outside processing are created and managed.

Settings That Affect Purchase Requisition Creation

Purchase requisitions for outside processing are created based on the setting of the Purchase Requisition Trigger plant parameter.

How Purchase Requisition Is Created

If the Purchase Requisition Trigger plant parameter is set to Work Order Release, purchase requisitions are created for all supplier operations on a work order when the work order is released.

If the parameter is set to Prior Operation Completion, purchase requisitions are created for a supplier operation on a work order when quantities are completed at the prior count point operation. If the supplier operation is the first count point operation, then the purchase requisition for the supplier operation is created when the work order is released.

In each of these scenarios, Oracle Manufacturing sends a request to Oracle Supply Chain Orchestration to create a purchase requisition.

Supply Chain Orchestration creates a supply order based on the request received from Manufacturing. It orchestrates the automatic creation of outside processing purchase requisitions in Self-Service Procurement. Whenever there is failure during requisition creation, SCO notifies Manufacturing and a new production exception is automatically created indicating what needs to be done to resolve the purchase requisition creation issues.

As a Production Supervisor or a Maintenance Manager, you can review the details of the exception and collaborate with a Supply Chain Application Administrator who has access to the Supply Orchestration work area to further review the details in the Supply Chain Orchestration pages. Based on the reasons of failure, users can fix the issues, and resubmit to reprocess the failed supply request or supply order line marked in exception. Alternatively, the supply request or the supply order line can be canceled requiring re-initiation of the requisition creation from the Review Supplier Operation Details page.

An outside processing purchase order is created in Oracle Purchasing from the purchase requisition based on the outside processing blanket agreement that's set up for the outside processing service item.

Supply Chain Orchestration maintains the details of the outside processing purchase requisitions and purchase orders, and provides drill-down capabilities to review additional details of the outside processing purchase orders.

Purchasing maintains manufacturing details (such as Work Order, Operation, and Product) for outside processing purchase orders. It displays the details at purchase order line and schedule levels, and uses the Manufacturing destination type for outside processing.

Oracle Purchasing also supports consecutive supplier operation scenarios. In consecutive outside processing, the Ship to Party, Ship-to Location, and Deliver to Location in the purchase order cut for the first supplier operation correspond to the Supplier and Supplier Site that services the next operation in sequence.

How Shipping Documents are Created for Outside Processing

This topic explains how shipping documents for outside processing are created and managed.

Settings That Affect Shipment Line Creation

Shipment lines for outside processing are created based on the setting of the Generate Shipment attribute of the work order supplier operation.

How Shipping Documents Are Created And Managed

Oracle Fusion Cloud Manufacturing Service sends a request to Oracle Fusion Cloud Orchestration Service to create a shipment line when the goods are reported as complete at the operation prior to the supplier operation to ship the goods to the supplier.

Oracle Orchestration Service creates a Supply Order Line based on the request sent by Oracle Manufacturing and orchestrates the automatic creation of a shipment line of **Outside Processing** order type in Oracle Fusion Cloud Shipping. For such shipment lines, Oracle Shipping maintains and displays manufacturing details such as work order, operation, and end assembly.

The shipment line is then associated with an existing shipment or a new shipment. The shipment is then confirmed and closed. Based on the options set for the Ship Confirm Rule, the processes to Print Packing Slip and Bill of Lading are initiated automatically.

Alternatively, these documents can be printed on demand for shipping the goods to the supplier for outside processing.

Oracle Orchestration Service maintains and tracks the details of the shipments, such as Shipment Number and Shipment Line that are related to outside processing.

How Goods Are Received and Delivered for Outside Processing

To support outside processing, Oracle Fusion Cloud Receiving receives and delivers goods processed by the supplier using the Work Order destination type.

> **Note:** You must receive an outside processing service item only in its primary unit of measure.

After creating the delivery, Oracle Receiving calls Oracle Fusion Cloud Manufacturing to automatically report operation completions for nonserialized operations. The quantities are then further managed in Oracle Fusion Manufacturing.

For serialization enabled operations, quantities automatically progress from In Process status to Ready. The serials are reported as Completed either in the **Manage Supplier Operations** page or by reporting the operation transactions in a predefined .xlsm template.

Receipts in outside processing can also be recorded using Advance Shipment Notices (ASNs) that are created in Supplier Portal or in Oracle Receiving.

> **Note:** ASNs are mandatory only if the next count point operation is also a Supplier Operation in a consecutive outside processing scenario.

How You Monitor, Manage, and Execute Supplier Operations in Manufacturing

Oracle Fusion Cloud Manufacturing Service enables the monitoring of supplier operation quantities by dispatch status (In Process, Ready, Complete, Scrap, Reject) in the Manage Supplier Operation page.

The In Process dispatch status represents quantities in supplier operations that are completed in the previous count operation but haven't been received from the supplier after processing. When received, the quantities or serials are further managed in the Manage Supplier Operation page. You can complete, scrap, reject quantities using the Quick Complete and Complete with Details actions.

The Manage Supplier Operation page also provides visibility into supplier operation exceptions.

Additionally, for any supplier operation record, the Manage Supplier Operations page enables you to navigate to the work order details page and the Review Supplier Operation Details page.

You can print work order traveler and product labels directly from the Manage Supplier Operations page.

You can navigate to the Material Transactions page to report Original Equipment Manufacturer-supplied component usage.

Note: The Manage Supplier Operations page displays only Supplier Operation records.

For any given supplier operation, the Review Supplier Operation Details page enables you to monitor and review supplier operation details by:

- Displaying the purchasing (such as requisitions and purchase orders), shipping and receiving details related to a supplier operation.
- Providing links to review additional details of purchase orders, shipments and receipts.

The Review Supplier Operation Details page provides several actions for production supervisors to manage supply exceptions. These actions are conditionally enabled and allow production supervisors to do the following:

- Initiate the creation of a purchase requisition in case of supply failures to fulfill the requirement for the deficit quantity.
- Handle issues related to the quality and quantity of the goods delivered to Manufacturing with the ability to correct receipts, over receipts, and return quantities to supplier or receiving.

Note: For more information about Supplier Operations in Manufacturing, refer to the Manage Production chapter of the Oracle Fusion Cloud SCM: Using Manufacturing guide.

How Outside Processing Costs are Planned, Accounted, and Reviewed

As part of cost planning, Oracle Fusion Cloud Cost Management enables you to define outside processing service item cost and include it in the rolled up cost of standard costed items.

Oracle Cost Accounting and Oracle Fusion Cloud Receipt Accounting support processing of outside processing transactions. Accounting distributions are created in Oracle Receipt Accounting for the receipt of outside processing service item. Accounting distributions are created in Cost Accounting after the outside processing service item is delivered to Oracle Manufacturing. The Manufacturing destination type is used to identify receipt of outside processing items.

In outside processing, there are no changes for managing receipt accounting accruals. Purchase cost is included to work in process if the cost method of the outside processing item is Average or Actual. If the outside processing item is standard costed, then the standard cost is used.

Oracle Cost Management also provides the ability for cost accountants to identify supplier operations while reviewing work order costs.

Note: For more information about planning, accounting and reviewing outside processing costs, refer to the Oracle Fusion Cloud SCM: Using Supply Chain Managerial Accounting guide.

How Demand and Supply Side Changes Are Managed for Outside Processing

Demand side changes in outside processing refer to changes to a work order with supplier operations.

It can also be a result of reporting transactions at a count point operation prior to the supplier operation which impacts the associated purchasing and shipping documents. This can be any of the following:

- Work order quantity change
- Work order status change
- Work order date change
- Scrap at prior operation
- Reversal at prior operation

In such cases, Supply Chain Orchestration propagates the work order changes to the associated purchase orders. Open shipments, if any, are canceled only on closure or cancellation of the work order.

> **Note:** Failure to propagate work order-related changes results in logging of supplier operation exceptions in Manufacturing.

Supply side changes in outside processing refer to the changes to an outside processing purchase order in Purchasing. This can be any of the following:

- PO status change
- PO quantity change
- PO requested date change
- PO schedule split

Order Orchestration reports such change events and notifies Manufacturing. This results in the logging of supply operation exceptions. Users can review the exception details and directly navigate to the Review Supplier Operation Details page to take appropriate actions.

You can perform corrections and returns on receipts related to outside processing to handle issues related to the quality and the quantity of the goods that are delivered to, or returned from manufacturing. These can be any of the following:

- **Overreceipt:** In cases where the quantity received at a supplier operation is more than the quantity requested, or completed at the immediate prior operation, or shipped to the supplier for processing, a production supervisor can use the Correct Overreceipt action in the Review Supplier Operations Details page to correct the overreceipt quantity. You need to select the desired receipt in the Receiving Details region in the Review

Supplier Operations Details page for the supplier operation and click on the Correct Overreceipt button and enter the quantity to correct.

> **Note:** The overreceipt quantity at a supplier operation is automatically reduced by an equivalent amount if you do either of the following:
>
> - Report completion at the count operation that immediately precedes a supplier operation.
> - Confirm the shipment (if applicable) at the supplier operation.

- **Return to supplier:** In cases where quantities need to be returned to the supplier for reasons such as bad quality, a production supervisor can use the 'Return to Supplier' action in the Review Supplier Operations Details page to return the quantities to receiving. You need to select the desired receipt in the Receiving Details region in the Review Supplier Operations Details page for the supplier operation and click on the Return to Supplier button and enter the quantity to return.
- **Return to receiving:** In cases where quantities need to be returned to the receiving for reasons such as bad quality, a production supervisor can use the Return to Receiving action in the Review Supplier Operations Details page to return the quantities to the supplier. You need to select the desired receipt in the Receiving Details region in the Review Supplier Operations Details page for the supplier operation and click on the Return to Receiving button and enter the quantity to return.
- **Receipt and return corrections:** In cases where quantities that were received or returned need to be corrected for reasons such as wrong data entry, a production supervisor can use the Correct action in the Review Supplier Operations Details page to return the quantities to the supplier. You need to select the desired receipt or return transaction in the Receiving Details region in the Review Supplier Operations Details page for the supplier operation and click on the Correct button and enter the quantity to correct.

> **Tip:** You must use the Review Supplier Operations page to correct or return quantities after they're delivered to manufacturing. The quantities must be in **Ready** dispatch status to perform a correction or a return transaction.

> **Note:** File-based data import process or web service can't be used to correct or return quantities after they're delivered to manufacturing.

For more information about demand and supply side changes for outside processing, refer to the Manage Production chapter of the Oracle Fusion Cloud SCM: Using Manufacturing guide.

Overview of Outside Processing Setup

The key setups required for using the outside processing feature are as follows:

- Purchase Requisition Trigger plant parameter must be set up using the **Manage Plant Parameters** task in the Setup and Maintenance work area.
- To derive the Purchase Order Charge Account, rules for the work order mapping set must be defined using the **Define Transaction Account Rules** and **Manage Mapping Sets** tasks in the Setup and Maintenance work area.
- Outside Processing Service Items must be created using the **Create Item** task in the Product Information Management work area.

- Suppliers must be created using the **Create Supplier** task in the Suppliers work area.
- Standard operations can be optionally created using the **Manage Standard Operations** task in the Work Definition work area.
- Work definitions must be created using the **Manage Work Definitions** task in the Work Definition work area.

How You Set Up Plant Parameters for Outside Processing

You must review and set up the Purchase Requisition Trigger plant parameter to determine when purchase requisitions are created for supplier operations of a work order for outside processing.

- If set to **Work Order Release**, purchase requisitions are created for all supplier operations of a work order when the work order is released.
- If set to **Prior Operation Completion**, purchase requisitions are created for a supplier operation of a work order when quantities are completed at the prior count point operation.

  If the supplier operation happens to be the first count point operation, then the purchase requisition for the supplier operation is created when the work order is released.

Note: For more information about setting up plant parameters for outside processing, refer to the Manufacturing chapter of the Oracle SCM Cloud Implementing Manufacturing and Supply Chain Materials Management guide.

How You Set Up Mapping Sets for Outside Processing

You must define rules for the work order mapping set. This enables you to get the purchase order charge account required for automatic creation of outside processing purchase orders.

You can define rules by using the **Define Transaction Account Rules** and **Manage Mapping Sets** tasks in the Setup and Maintenance work area.

The work order mapping set is based on the following attributes:

- Inventory Organization
- Work Order Subtype
- Purchasing Category Code
- Item Number

How Items Are Set Up for Outside Processing

In addition to the finished goods and components, you must define an outside processing service item in Product Information Management to represent the value added service, such as plating.

The service item is used to account for the supplier contribution in the build process. The outside processing item is referenced in the purchasing and shipping documents, and is used to receive goods against an outside processing purchase order.

The outside processing service item also represents the outgoing partially completed assembly shipped to the manufacturing partner. For example, machined partially finished assemblies that are sent to the manufacturing partner for plating.

The service item also represents the incoming partially finished assembly received from the manufacturing partner. For example, plated partially finished assemblies received from the manufacturing partner. Receiving the outside processing item implicitly means receipt of the incoming partially finished assembly.

If you've defined the finished goods item as a dual units of measure item, which means the Tracking Unit of Measure is set to primary and secondary, you should also define the outside processing service item as a dual units of measure item.

The outside processing service item set up with defaulting control as **Fixed** and **Default** are supported, whereas **No Default** isn't supported. You're not allowed to create an outside processing service item with defaulting control No Default in Product Information Management. The application enforces that the primary UOM of the finished goods item is the same as the primary UOM of the outside processing service item. It's recommended that if the finished goods item and outside processing service item are both dual units of measure, you set up their secondary UOM, positive, and negative deviation factors, and item intraclass and interclass conversions identically. The application doesn't enforce these validations.

> **Note:** For more information about setting up items for outside processing, refer to the Oracle Fusion Cloud Supply Chain Management Using Product Master Data Management guide.

How Suppliers Are Set Up for Outside Processing

In Oracle Fusion Cloud Manufacturing, it's required to define suppliers for the outside processing of an operation.

In the context of outside processing, a supplier refers to an external party that provides specialized manufacturing services, such as plating to manufacture a product.

> **Note:** For more information about setting up suppliers for outside processing, refer to Manage Supplier Information chapter of the Oracle Fusion Cloud Procurement Using Procurement guide.

How You Set Up a Blanket Purchase Agreement for Outside Processing

In Oracle Fusion Cloud Purchasing, you must define an outside processing blanket agreement for the outside processing service item, to enable automatic creation and approval of purchase orders in outside processing.

In the absence of a blanket agreement, the purchase orders must be manually created from the requisition.

Note: For more information about blanket purchase agreements, refer to the Manage Supplier Agreements chapter of the Oracle Fusion Cloud Procurement Using Procurement guide.

How You Set Up Standard Supplier Operations

In Oracle Fusion Cloud Manufacturing, you can optionally define and identify standard operations that are processed in-house, or by an external supplier. You can also maintain additional details for a standard supplier operation and reuse standard supplier operation across work definitions and work orders.

Note: For more information about setting up standard supplier operations, refer to the Design Production Process chapter of the Oracle Fusion Cloud Supply Chain Management Manufacturing guide.

Work Definitions with Supplier Operations

In Oracle Fusion Cloud Manufacturing, you must define work definitions with supplier operations to create standard work orders with supplier operations.

Oracle Manufacturing enables you to:

- Define and manage work definitions with one or more supplier operations
- Maintain additional details for a supplier operation
- Define back to back or consecutive supplier operations
- Manage work definitions with supplier operations using ADF Desktop Integration (ADFdi)

Note: For more information about setting up work definitions with supplier operations, refer to the Design Production Process chapter of the Oracle Fusion Cloud Supply Chain Management Using Manufacturing guide.

Considerations for Implementing Outside Processing

The following points must be considered for implementing outside processing:

- To model and track consumption of the Original Equipment Manufacturer (OEM) supplied components, associate components to a supplier operation with the supply type, such as Push (Operation), Pull (Assembly Pull).
- To inspect goods after they're received from supplier and delivered to Oracle Fusion Cloud Manufacturing, create an in-house operation immediately after the supplier operation to record inspection results.

FAQs for Outside Processing

Contract Manufacturing versus Outside Processing

Do I need to define an organization for outside processing to represent a supplier like contract manufacturing?

No. It's not required unlike in contract manufacturing where the Contract Manufacturer's manufacturing site is required to be modeled as an inventory organization in the OEM system to track contract manufacturing activities.

Can I define supplier operations in a Contract Manufacturing Organization?

No. Contract Manufacturing and Outside Processing are mutually exclusive.

Outside Processing Setup

Can the unit of measure (UOM) of the outside processing item be different than that of the end item?

No. The unit of measure (UOM) of the outside processing service item must be the same as that of the end item. The unit cost, list price of the outside processing service item must be calculated per unit of the end item (expressed in the primary unit of measure of the end item) and entered in the application.

Can I associate materials to a supplier operation? If yes, can they be planned and purchased based on demand in the OEM organization?

Yes. You can associate material or components to a supplier operation to model cases where the manufacturer sends components to the supplier in outside processing. You can record and track components that are consumed at the supplier operation. However, unlike partially finished assemblies, creating shipping documents to ship materials or components to the supplier isn't supported. Shipment of material or components need to be handled outside the application. Materials and components associated to a supplier operation can be planned like material and components associated to an in-house operation.

Can I associate resources to a supplier operation?

No. You can't associate resources to a supplier operation. However, you can manually report resource usages at the supplier operation for resources that are associated to the supplier operation's work center.

Can a supplier operation be the only operation on a work definition or a work order?

Yes. A supplier operation can be the only operation on a work definition or a work order. Also, it can be the first, intermediate, or the last operation on a work definition or a work order.

Is it mandatory to associate a supplier and supplier site to a supplier operation?

No. It's not mandatory to associate a supplier and supplier site to a supplier operation. However, if the immediate prior count point operation is also of the type "Supplier", then you must associate a supplier and supplier site to a supplier operation.

Outside Processing Execution

Can I create an Outside Processing Purchase Requisition?

No. An outside processing purchase requisition is an externally managed requisition and you can't create it manually in the Self-Service Procurement pages.

Can I view outside processing purchase requisitions in Self Service Procurement pages?

No. Externally managed requisitions, including outside processing requisitions, aren't visible in the Self-Service Procurement pages. You can view these requisitions in the View Requisition Line task in the Purchasing work area.

Can I change a previously created requisition for outside processing?

No. You can cancel the requisition, but you can't update it. Updates are made directly in the purchase order using the change order operation.

Which calendar is used for scheduling supplier operations?

Supplier operations are scheduled using the plant calendar by considering 24 hour availability within the working days of the calendar. Any shift exceptions defined are ignored while scheduling supplier operations.

Can I group multiple requisition lines in outside processing and create a single purchase order?

Yes. You can configure the Outside Processing Blanket Agreement controls to group requisition lines based on the requested date, ship-to party, and location.

How is the requested delivery date on outside processing purchase documents calculated?

The requested delivery date for supplier operations is calculated while creating and updating the associated purchasing document using the following logic:

- If the supplier operation is the either the first or an intermediate operation of the work order, then the requested delivery date is determined by subtracting the post processing purchase lead time (in days) of the outside processing item from the next operation's start date.
- If the supplier operation is the either the first or an intermediate operation of the work order, then the requested delivery date is determined by subtracting the post processing purchase lead time (in days) of the outside processing item from the next operation's start date.

During the above scenarios, if the calculated requested delivery date is less than the current date, then the requested delivery date is passed as the current date.

In consecutive outside processing, does the first PO contain the second supplier's address as the ship to party?

Yes. The Ship to Party, Ship to Location, and Deliver to Location on the PO cut for the first supplier operation correspond to the supplier that services the next operation in sequence

If the last operation on a work order is processed by a supplier, can the supplier drop ship the goods to a customer?

No. Customer drop ship scenarios aren't supported in outside processing.

Can I modify the seeded shipping documents such as the bill of lading and packing slip?

Yes. You can modify the seeded shipping documents and add or modify the attributes that are exposed in the data model.

Can outside processing be executed in a configure to order environment?

Yes. Supplier operations can be defined either as a mandatory operation or option-dependent operation in an ATO model work definition. If defined as a mandatory operation, then the supplier operation will always be included in the resulting configured item work definition and work order. If it's defined as an option dependent operation, then the supplier operation will be included in the resulting configured item work definition and work order provided that the option associated to the operation is selected by the user. This behavior is the same as an in-house operation.

Is outside processing supported for orderless execution?

No. Outside processing isn't supported for orderless execution. Work definitions with supplier operations aren't displayed while performing an orderless transaction.

How is lot / serial genealogy maintained when goods are shipped to and received back from suppliers?

Shipping and receiving in outside processing are performed using the Outside Processing Service Item, which is a non-transactable item and which can't be a lot and serial controlled. No inventory transactions are generated while shipping the goods or receiving the goods from the supplier and hence no genealogy is maintained.

Is picking supported for shipping of OSP item to supplier?

Picking of the semi-finished assembly (represented by the OSP item) that needs to be shipped to the supplier isn't supported in the OSP flow.

Is there is a standard report in Manufacturing with information of OSP work orders and the Associated PO?

There are no standard reports available in Manufacturing for information on OSP work orders and the operations with ready quantity on dispatch list. But, an OTBI subject area, "Manufacturing - Work Order Performance Real Time" is available to build with fields such as, Supplier, PO Number, PO Status, Received Quantity, Completed Quantity, Received Quantity, and many other fields as required.

How to review and troubleshoot outside processing exceptions in Supply Chain Orchestration?

Supply Chain Orchestration receives and processes supply requests from Manufacturing and orchestrates the creation of outside processing purchase requisitions and purchase orders. There could be situations where the purchase requisition or PO creation could fail due to missing setups or invalid data. For more information about reviewing and troubleshooting such issues, refer to the Problems with Outside Processing section of Troubleshoot Your Supply Chain Orchestration Flows chapter in the Using Supply Chain Orchestration guide.

Can I report overcompletions at a supplier operation?

No. You can't report overcompletions at a supplier operation even in a case where the supplier operation happens to be the first count point operation.

Can I perform inspections and report quality results at a supplier operation after the goods are delivered to the shop floor?

No. Inspection results can be reported only at in-house operations. The suggested work around is to create an in-house operation immediately after the supplier operation to record inspection results.

Outside Processing Costing

How is costing performed for operations that are outsourced to suppliers?

- **Cost Planning:** The outside processing service is modeled as an item and is attached to a supplier operation. You can define a standard cost for this item and when the work definition of the finished product is rolled up, the outside processing cost is included as an input item cost in the supplier operation. This step is required only if the outside processing item is a standard costed item. If the outside processing item is using an actual or a perpetual average cost, then the Cost Management automatically calculates the cost based on the purchase cost.
- **Receipt Accounting in Outside Processing:** As part of the outside processing enhancements, a new destination type called "Manufacturing" has been introduced. Receipt Accounting recognizes the "Work Order" destination type and processes all purchase receipt transactions for this destination type. There's no change to the logic of creating the accrual entries for the Outside Processing Service item receipt that's, the receiving inspection account is debited with the PO price and the purchase accruals account is credit for the same value.
- **Cost Accounting in Outside Processing:** The transaction type "Purchase Order Receipt into Manufacturing" will be processed by cost accounting based on the following logic:

  If the item is standard costed, then the standard cost times quantity received is added to work in process, while the difference between the purchase price and purchase order price is accounted as a purchase price variance.

  For an actual or average costed item, the purchase price times quantity received is added to work in process.

Is outside processing supported for all cost methods?

Yes. It's supported for Standard, Actual, and Perpetual Average cost methods

How can I capture shipping costs in outside processing?

Shipping costs can be modeled as overheads and applied to the Outside Processing Service item receipt transaction to be accounted as part of the work order costs.

6 Project-Driven Supply Chain

Overview of Project-Driven Supply Chain Management

Project-Driven Supply Chain is an end-to-end, integrated solution across the Oracle Supply Chain and Project Management Cloud applications. This solution is designed to support various business processes of manufacturing and asset-intensive companies.

You can use the Project-Driven Supply Chain solution to manage your supply chain processes in the context of projects without creating separate organizations for each project. You can also capture supply chain costs as project expenditures.

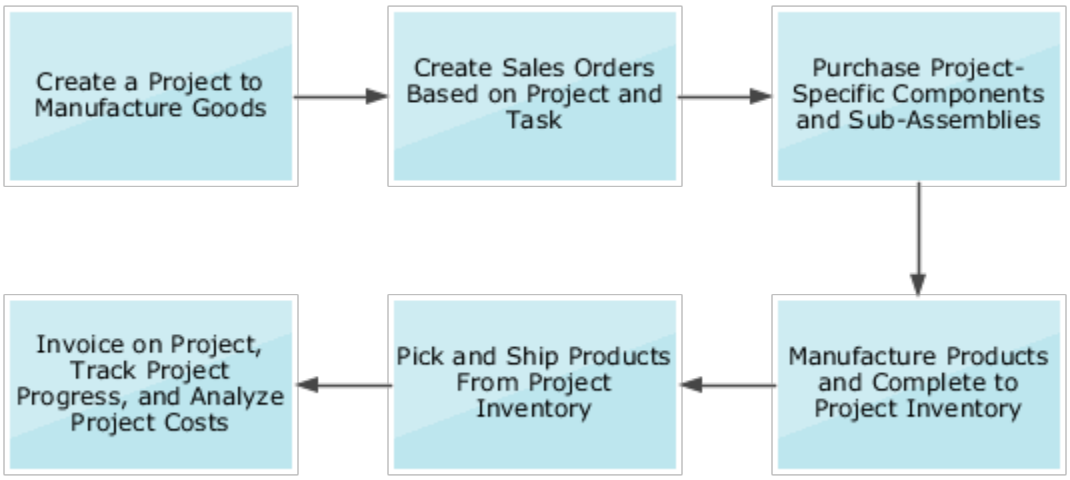
The integrated supply chain and project management cloud solution enables you to:

- Plan project-specific supply
- Segregate and manage project-specific inventory
- Receive project-specific supply
- Pick project-specific inventory
- Ship project-specific inventory
- Transfer project-specific inventory
- Purchase project-specific inventory
- Accept project-specific customer returns
- Execute project-specific manufacturing
- Perform project-specific maintenance
- Execute project-striped supply chain without Oracle Project Financials

Project-Driven Supply Chain for Manufacturing Companies

Manufacturing companies use project-driven processes to provide turn-key solutions, or bundle sale of products with an on-going service, or execute contract manufacturing services on multiple contracts from one plant. In turn-key and service-based supply chain, one or more services such as product design and development, installation, and ongoing service are bundled with the sale of a product.

Here is an illustration that explains the project-driven supply chain process for manufacturing companies.

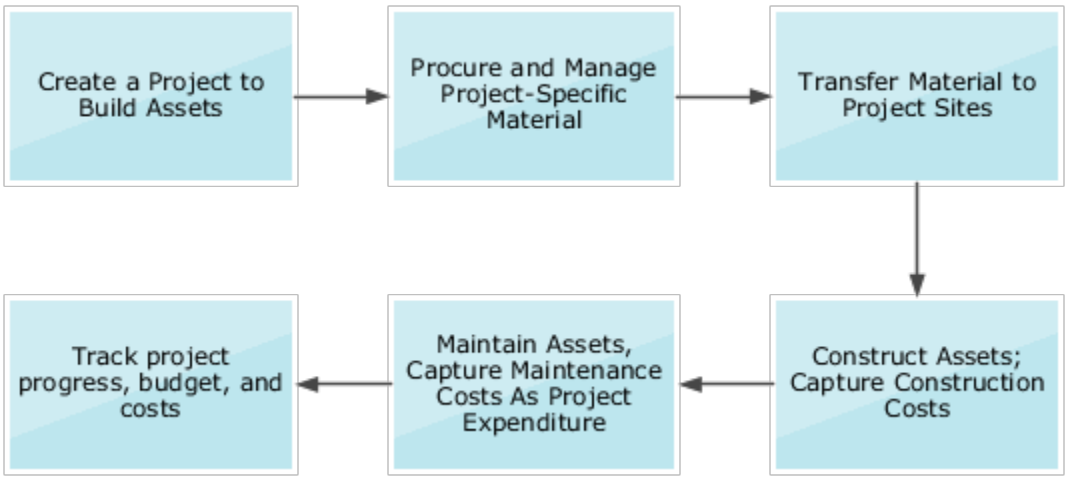


Project-Driven Supply Chain for Asset-Intensive Companies

Asset-intensive companies build assets for internal use. These assets are typically capitalized when put in service.

Projects to build assets usually start with a corporate plan that outlines what assets will be built, their location and schedule, and a budget. The corporate plan is converted into an engineering and construction plan that contains a bill of materials. Based on these plans, project tasks and their budgets are defined. Materials and services are procured and the asset is constructed. Upon construction, the asset is capitalized for financial management and also interfaced with the installed base for maintenance.

Here is an illustration that explains the project-driven supply chain process for asset-intensive companies, such as utilities and communications.



How the Project-Driven Supply Chain Solution Works

The Project-Driven Supply Chain solution integrates several products of Oracle Fusion Cloud Supply Chain and Project Management.

Project-Driven Supply Chain begins with the creation of a project in Oracle Project Portfolio Management. The integration of Oracle Project Management and Oracle Supply Chain enables supply chain products to support project attributes. Information such as project numbers and project cost attributes are available in the supply chain products to execute activities in the context of a project.

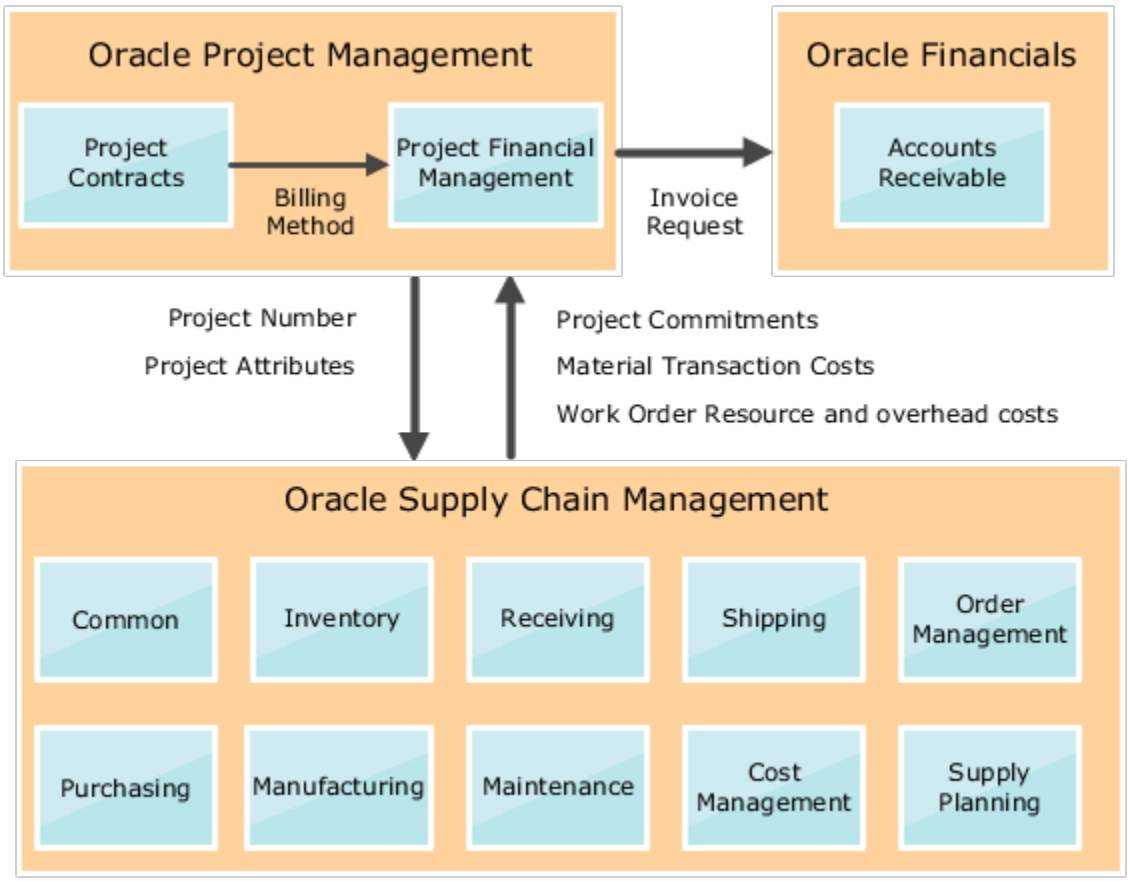
Project Number and Task Number are added as inventory attributes. They are used to segregate and value the inventory, and support project-specific transactions that are based on rules in the Inventory, Shipping, and Receiving applications.

Project attributes are also added to supply chain execution documents such as purchase requisition, purchase order, sales order, manufacturing work order, and maintenance order. The processes driven by these execution documents are also enhanced with project-specific business rules. Life cycle of these project-specific execution documents follows the business rules that are defined for the project. Any transactions associated with these documents that create a commitment or actual cost to the project are captured with project attributes to ensure that these costs are posted as expenditures to the project.

Project Financial Management maintains the financial work breakdown structure, budgets, commitments, and actual costs. Finally, the invoicing is done based on your settings in Project Contracts.

The Supply Planning application plans supplies by project group, project, or project and task. You can also review the project and task values for demands and supplies.

Here is an illustration that explains how the project-driven supply chain solution works.



For information about product-specific flows, see the Project-Driven Supply Chain Process Flows section.

How You Set Up Project-Driven Supply Chain

To set up Project-Driven Supply Chain, perform these tasks in the sequence listed below:.

Task	Required	Details
Opt in to the Project-Driven Supply Chain feature	Required	In the Offerings work area, enable the Project-Driven Supply Chain feature at the offering level for the Manufacturing and Supply Chain Materials Management offering.
Enable inventory tracking by project	Required	You can enable Oracle Projects integration on individual inventory organizations. Materials management transactions and manufacturing transactions will gather the project details. Here's how you enable individual organizations to track by project:

Task	Required	Details
		1. In the **Setup and Maintenance** work area, go to the **Manage Inventory Organizations** task: o Offering: Manufacturing and Supply Chain Materials Management o Functional Area: Facilities (click Show All Tasks) o Task: Manage Inventory Organizations 2. Search for your inventory organization, and then click **Manage Organization Parameters**. 3. Select the **Enable inventory tracking by project** option, a new option with this update, and then click **Save and Close**. 4. Repeat steps 2 and 3 for additional inventory organizations, as required.
Set up the default expenditure types	Required	Review and maintain the set of expenditure types which will be the default to use in specific supply chain transactions supporting integration with projects. Here's how you set up your default expenditure types: 1. In the **Setup and Maintenance** work area, go to the **Manage Default Expenditure Types** task: o Offering: Manufacturing and Supply Chain Materials Management o Functional Area: Facilities (click Show All Tasks) o Task: Manage Default Expenditure Types 2. On the Manage Default Expenditure Types page, select a default value for each of the fields. 3. Click **Save and Close**.
Manage project organization classification	Required	You must classify each inventory organization that's enabled for project-driven supply chain as a project expenditure organization. Ensure that the organizations classified as project expenditure organizations belong to the hierarchy that you specified in the **Configure Project Accounting Business Function** task for the business unit. Here's how you complete this setup task: 1. To classify inventory organizations, in the **Setup and Maintenance** work area, use the **Manage Project Organization Classifications** task.

Task	Required	Details
		2. To add an organization to the hierarchy: a. In the **Setup and Maintenance** work area, click **Search** and search for the **Manage Organization Trees** task. b. In the **Manage Organization Trees** page, select the organization hierarchy and add the new inventory organization. Ensure that the starting organization is at a minimum the inventory organization or any other organization in the hierarchy above that. c. Click **Actions > Flatten** and flatten the HR organization. d. Click **Actions > Set Status > Active**. 3. Run the **Maintain Project Organization** process.
Set up project attribute defaults	Optional	Set up the defaults for contract number, funding source, or any user-defined attributes. These attributes can be defaulted at five levels, with the most specific definitions being chosen first, and more abstract defaults selected if necessary.
Set up item level attributes	Optional	Specify the expenditure type that needs to default onto material transactions and for creating outside processing requisitions. You can also specify if the item is hard pegged at Project and Task Level and if you can use material from common supplies if sufficient inventory does exist in the project and task-specific inventory on-hand.
Set up resource level default expenditure type	Optional	Specify the default expenditure type for the resource transactions when they're interfaced to costing.
Manage orchestration process definitions Manage order lookups	Required	Prevent Order Management from sending order lines that include project details to Receivables. For more information, see the Set Up Projects in Order Management topic in the Implementing Order Management guide.
Manage order management extensions Manage processing constraints	Optional	Write your own Groovy script to process sales orders that include project details. Disable the processing constraint that prevents the Order Entry Specialist from updating a fulfillment line that includes project details. For more information, see the Import Your Project Details topic in the Implementing Order Management guide.

Task	Required	Details
Import your project details	Optional	Import sales orders that include project details. Use REST API, a web service, or File-Based Data Import. For more information, see the Set Up Projects in Order Management topic in the Implementing Order Management guide.
Manage valuation structures	Conditional	To track inventory values by project and task, you must set up the valuation structure with project number and task number costing attributes.
Manage cost profiles	Conditional	To track inventory values by project and task, you must set up the cost profile with a valuation structure containing the project number and task number costing attributes. **Note:** You can't modify existing cost profiles with the new valuation structure. You can update an item cost profile with a new cost profile, which has a valuation structure containing project and task, only if the item cost profile isn't already used in transactions.
Manage valuation units	Conditional	If you use a manual valuation unit setup, you must set the valuation unit with a valuation structure containing the project number and task number costing attributes.
Manage project type cost exclusions	Conditional	Set up the project type for exclusion from cost collection. The cost collection setup would determine the following behavior: • Project expenditure isn't interfaced to Oracle Project Portfolio Management from Oracle Cost Management. • Commitment isn't recorded in Oracle Project Portfolio Management when using the project whose project type is excluded from cost collection. • If there should be any cost of goods sold recognition for sale order issue to projects or not. If the project type associated to the project isn't excluded from cost collection, then a debit is recorded using a new accounting line type called Project Clearing, to facilitate charging the shipment cost as expenditure to the project. If the project type is excluded from cost collection, then cost of goods sold accounting will happen within Cost Management.

Task	Required	Details
		1. In the **Setup and Maintenance** work area, go to the **Manage Project Type Cost Exclusions** task: o Offering: Manufacturing and Supply Chain Materials Management o Functional Area: Facilities (click Show All Tasks) o Task: Manage Project Type Cost Exclusions 2. Select the project types you want to exclude from cost collection and move them to the **Cost Excluded** list. 3. Click **Save and Close**.

Related Topics

- Configure Offerings

Project-Driven Supply Chain Process Flows

How You Execute Project-Specific Manufacturing

The Project-Driven Supply Chain solution provides the ability to execute project-specific manufacturing by creating a work order or through orderless execution, issue components from common or project-specific inventory, and put away the end product into project-specific inventory.

You can create a work order with the project number and task number in Manufacturing. You can also create a work order after the project-specific supply is planned in Supply Planning, and the make planned order is released to Manufacturing.

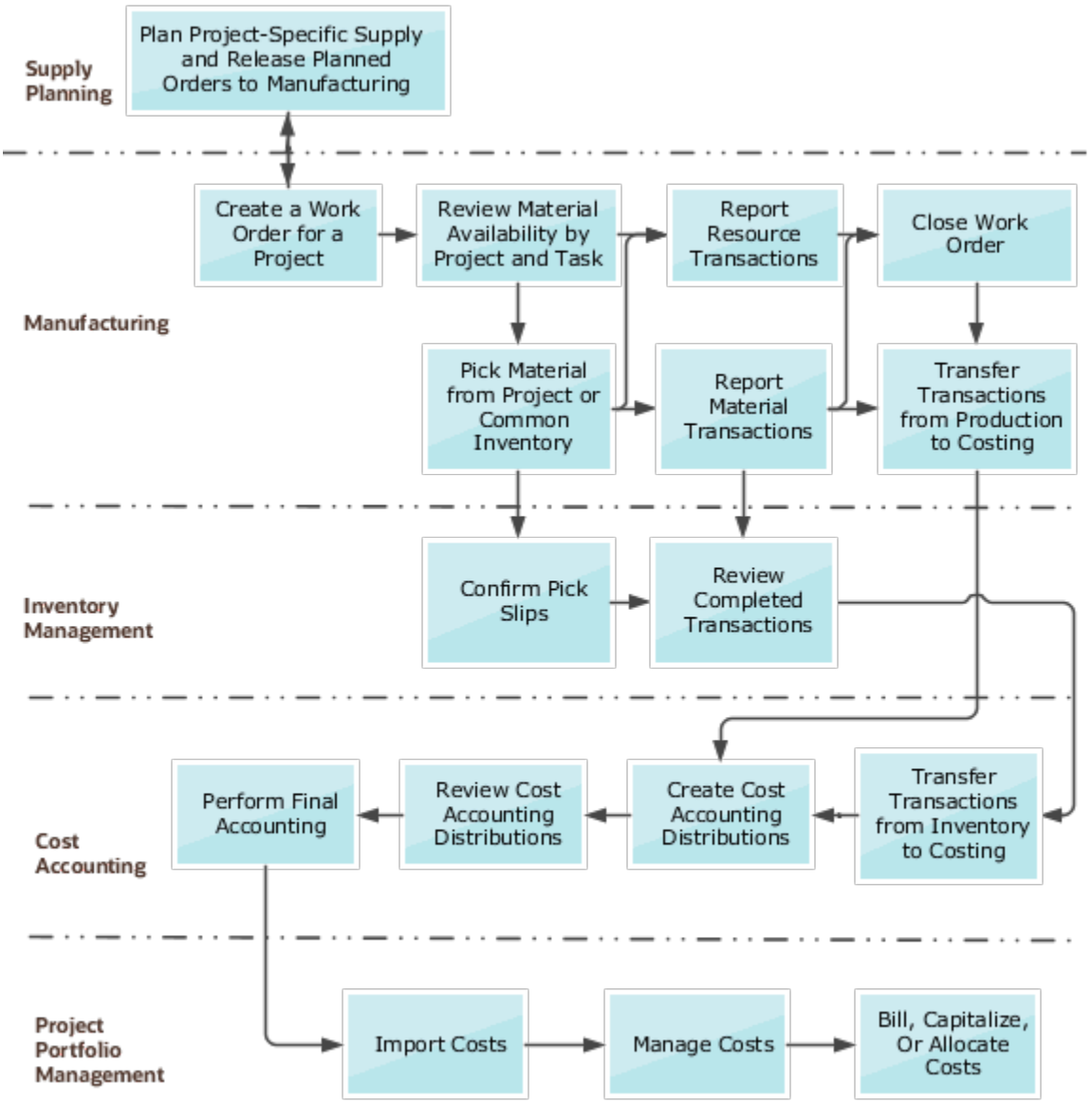
You can purchase outside processing services, procure material directly for project-specific work orders, and import material and resource costs to the project.

Here's the high-level process flow to execute project-specific manufacturing:

1. Create a work order with the project number and task number in Manufacturing or by using the make planned order released to Manufacturing from Supply Planning.
   A work order is saved with the default project costing attributes. You can review and modify the attributes as required.
2. Calculate material availability by project or task and release the work order.
   The work order is released only after Project Portfolio Management validates the project costing attributes.
3. Pick material for work order based on project and task.
4. Execute movement requests and review the completed transactions with reference to the project and task in Inventory Management.
5. Interface the material transaction with the project and task references to inventory.
6. Review dispatch list with project and task as additional search attributes.
7. Report resource transactions.

8. Report material transactions and review the completed transactions in Inventory Management.
9. Close the work order.
10. Run the **Transfer Transactions from Production to Costing** task and transfer the resource transactions to Costing.
11. Run the **Transfer Transactions from Inventory to Costing** task and transfer the materials transactions to Costing.
12. Create cost accounting distributions and review the project details for accounting distributions. The costs are final accounted and are imported into Project Portfolio Management where they're further managed.
13. Generate project invoices to bill the customer based on the percentage of completion or milestones achieved on the project.
14. If it's a capitalizable cost, you can proceed to execute the capitalization flow. You may also choose to allocate costs to other projects, project tasks, or accounts as appropriate.

Here's an illustration that explains the process flow for creating and executing work orders with project and task details:



How You Plan Project-Specific Supply

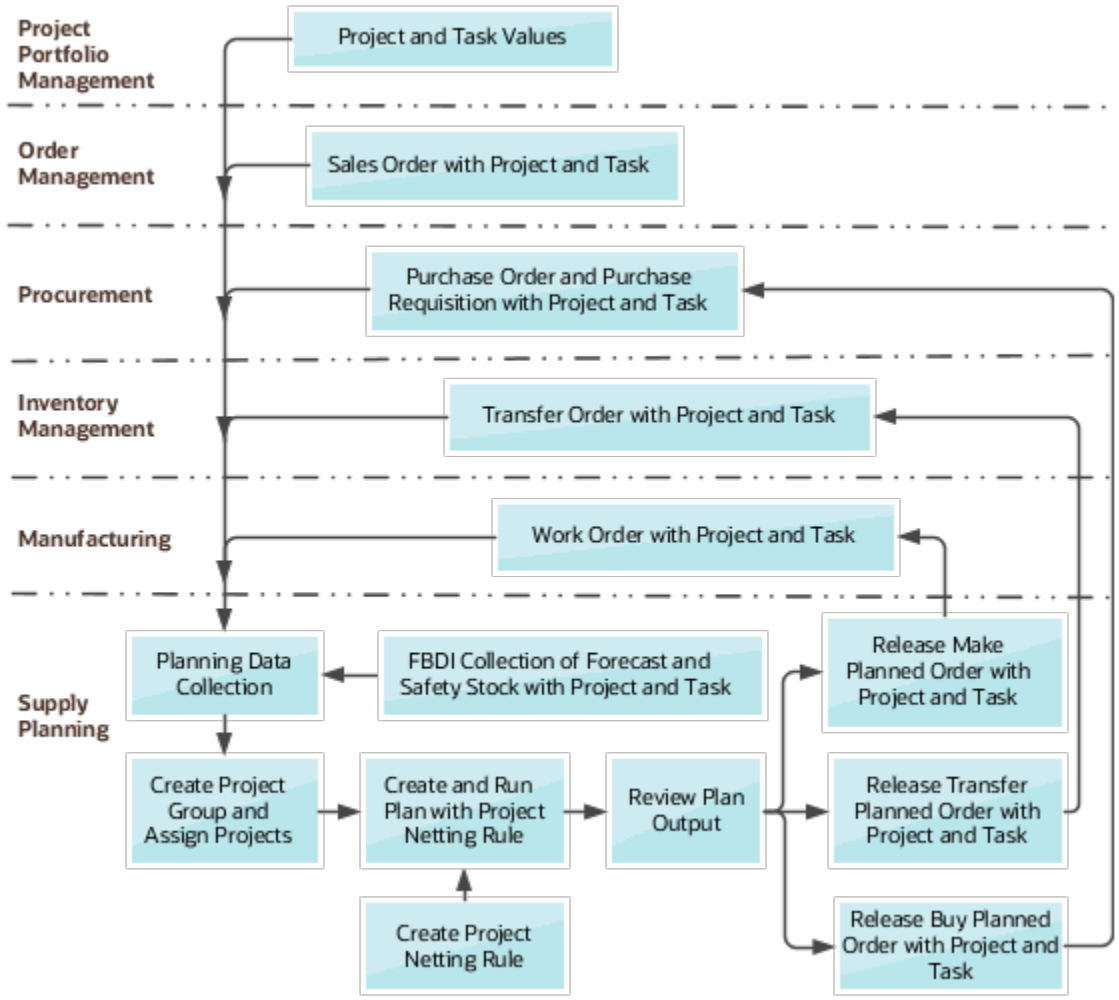
Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Supply Chain and Project Management applications. This solution supports business processes to plan project-specific supply to satisfy project demands.

Project-specific supply planning enables you to plan supplies based on projects in your organization. It improves your order fulfillment accuracy by ensuring components availability to build and fulfill orders. It also ensures completion of projects on time without excessive inventory.

Here's the high-level process flow to plan project-specific supply.

1. Start your project-specific supply planning with the collection of these entities:
    - Project and task attribute values and their relationships from Project Portfolio Management.
    - Supplies and demands with project and task values from Inventory, Order Management, Purchasing, and Manufacturing.
    - Forecast and safety stock that are specific to project and task.
2. The next step is to create project groups and assign projects to the groups. Creating project groups enables the planning process to net supplies within a project group across multiple projects and their tasks.
3. You then create attribute-based netting rules with the project group, project, and task attributes. The planning process uses the netting rules to net and share supplies at the project group, project, and task levels.
4. After collecting the planning data and creating netting rules and project groups, create a plan and associate the netting rule to the plan.
5. After you configure plan options of your project-specific supply plan, run the plan from the Supply Planning or Demand and Supply Planning work area.
6. You review the plan output with project and task values for supplies and demands and release planned orders with project and task to Manufacturing, Purchasing, and Inventory.

This illustration explains the high-level process flow to plan project-specific supply.



How You Purchase Project-Specific Inventory

Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Supply Chain and Project Management applications. This solution supports the business process to purchase project-specific material to satisfy project demand.

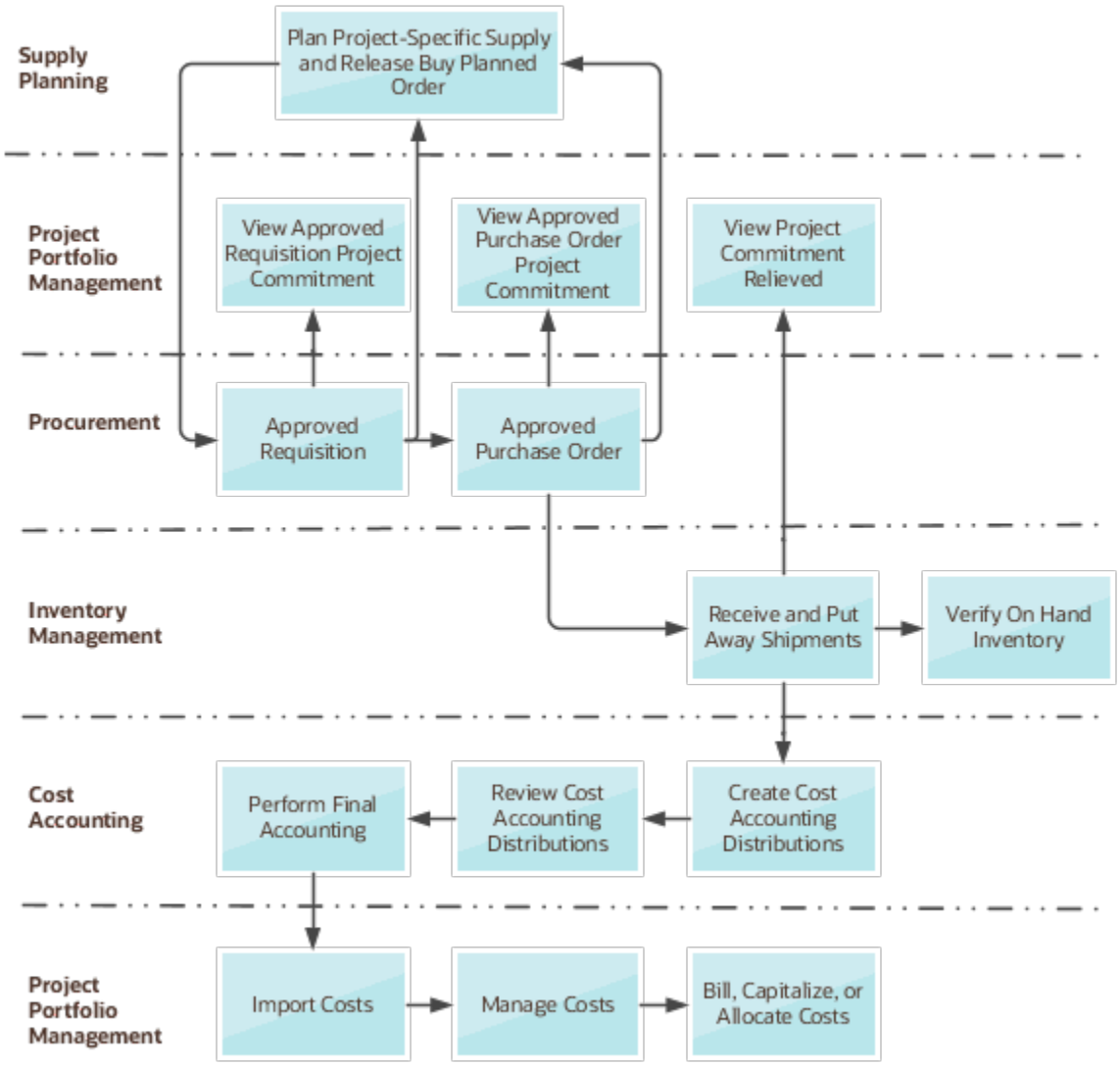
Project-specific purchase orders ensure that the cost of the purchase is charged to the project and the material is received into project inventory. With this feature, you can automate the purchase of project-specific materials for multiple projects and carry forward project attributes through the entire procure-to-pay cycle.

Here's the high-level process flow to purchase project-specific inventory:

1. The process starts with the creation and approval of a requisition in Self-Service Procurement or with the release of a buy planned order from Supply Planning.
2. After the requisition is approved, a project commitment is created.
3. Next, the purchase order is created from the requisition and the project commitment is moved to the purchase order.
4. This is followed by the receipt and put away of the end product into project-specific inventory that can be verified by checking on hand inventory for that project.

5. After receipt and put away, the project commitment is relieved.
6. Cost accounting distributions are created in costing and the project details are reviewed for the accounting distributions.
7. The costs are final accounted and imported into Project Portfolio Management where they're further managed.
8. And finally, the project invoices are generated to bill the customer based on the percentage of completion or milestones achieved on the project.

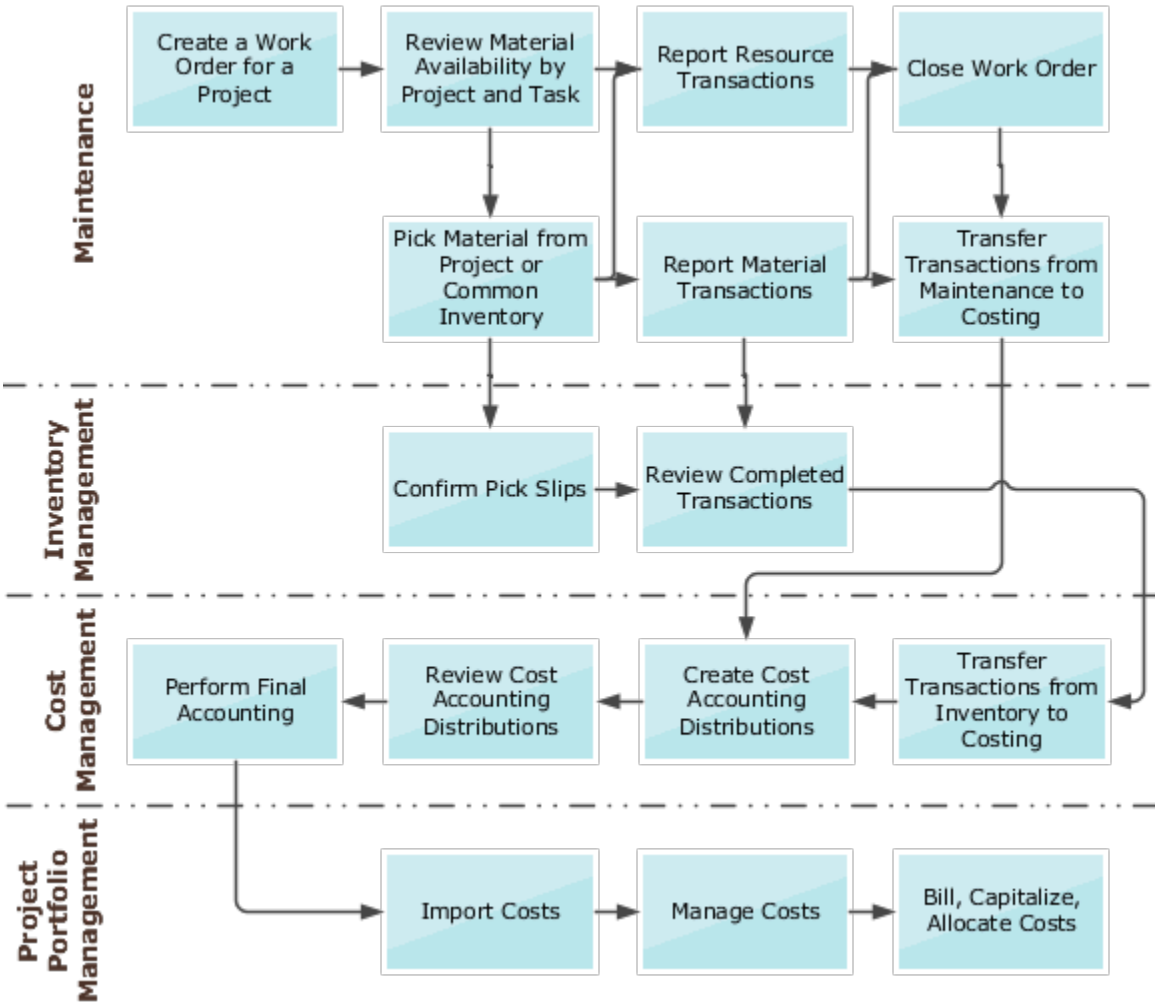
This illustration explains the high-level process flow to purchase project-specific inventory.



How You Perform Project-Specific Maintenance

Perform project-specific maintenance by creating a work order, issue components from common or project-specific inventory, and put away the end product into project-specific inventory. You can purchase outside processing services, procure material directly for project-specific work orders, and import material and resource costs to the project.

This diagram explains the process flow for creating and executing a work order with project and task details, across maintenance, inventory management, costing, and project portfolio management.



Here's the high-level process flow to perform project-specific maintenance:

1. Create a work order with the project and task in Oracle Maintenance.

   A work order is saved with the default project costing attributes. You can review and modify the attributes as required.
2. Calculate Material Availability by Project/Task and release the work order.

   The work order is released only after Project Portfolio Management validates the project costing attributes.

3. Pick material for work order based on project and task.
4. Execute movement requests and review the completed transactions with reference to the project and task in Inventory Management.
5. Interface the material transaction with the project and task references to inventory.
6. Review maintenance dispatch list with project and task as additional search attributes.
7. Report maintenance resource transactions.
8. Report maintenance material transactions and review the completed transactions in Inventory Management.
9. Run the **Transfer Transactions from Maintenance to Costing** task and transfer the resource transactions to Costing.
10. Run the **Transfer Transactions from Inventory to Costing** task and transfer the materials transactions to Costing.
11. Create cost accounting distributions and review the project details for accounting distributions. The costs are final accounted and are imported into Project Portfolio Management where they're further managed.
12. Generate project invoices to bill the customer based on the percentage of completion or milestones achieved on the project.

How You Segregate and Manage Project-Specific Inventory

Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Supply Chain and Project Management applications. It provides the ability to execute project-specific inventory management by inventory transactions, counting, and reclassification of project-specific inventory.

Here's the high-level process flow to segregate and manage project-specific inventory:

1. Perform inventory transactions like miscellaneous transactions, subinventory transfers, and interorganization transfers. Perform counting like cycle counting and physical inventory. Also, reclassify project inventory by using Create Project Transfer in Inventory Management.
2. View the completed transactions on the Review Completed Transactions page. You can also view the changes in project inventory using the Manage Item Quantities page. The inventory transactions include the project costing details in inventory management and those details are transferred to costing through the Transfer Transactions from Inventory to Costing process.
3. Costing creates the cost accounting distributions and you can review the project details for accounting distributions.
4. The costs are accounted and imported into Project Portfolio Management where you can manage them further.
5. Generate project invoices to bill the customer based on the percentage of completion or the milestones achieved on the project.

How You Receive Project-Specific Inventory

Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Procurement, Supply Chain, and Project Management applications. It provides the ability to receive project-specific manufacturing when a project-striped purchase order is created.

Here's the high-level process flow to receive project-specific inventory:

1. The process starts with the creation of a project-specific purchase order in Procurement.
2. Receiving then receives, inspects, and puts away the material in Inventory Management.
3. Run the Transfer Inventory Transactions to Costing process to interface the deliver transactions to Cost Accounting.

4. Run the Create Cost Accounting Distributions.
5. Run Create Accounting.
6. Review the cost accounting entries for the purchase order.
7. Import the costs into Project Accounting.
8. Review the project costs on the Manage Project Costs page.

How You Pick Project-Specific Inventory

Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Order Management, Manufacturing, Supply Chain, and Project Management applications. It provides the ability to pick project-specific inventory for a project specific sales order, transfer order, work order, or requisition movement request.

You can create pick waves and pick project-specific material for projects. Based on rules, you can also pick material from a common pool of inventory when project-specific inventory isn't available.

Here's the high-level process flow to pick project-specific inventory:

1. The process starts with the creation of a project-specific sales order in Order Management, a project-specific work order in Manufacturing, or a project-specific transfer order or movement request in Inventory management.
2. This is followed by the pick release of the sales order, transfer order, or movement request in Inventory Management. The pick release for the work orders initiates in Manufacturing.
3. Next, confirm the pick slips and review the material transactions in Inventory Management.
4. Run the Transfer Transactions from Inventory to Costing process to transfer the inventory transactions to costing.
5. Run the Transfer Transactions from Production to Costing process in Cost Accounting.
6. Run the Create Cost Accounting Distributions process.
7. Run the Create Accounting process and review the cost accounting distributions for the pick transactions in Cost Accounting.
8. Import the costs into Project Accounting.
9. Review the project costs on the Manage Project Costs page.

How You Transfer Project-Specific Inventory

Transfer project-specific inventory is part of the Project-Driven Supply Chain solution which is an end-to-end, integrated solution across Oracle Fusion Cloud Supply Chain and Project Management applications. It supports business processes to transfer project-specific material to another inventory organization, or within an inventory organization. It lets you automate the transfer of project-specific materials for multiple projects and carry forward project attributes throughout the entire transfer.

Here's the high-level process flow to transfer project-specific inventory:

1. The process starts with the creation of a transfer order with project details based on one of these cases:
    - A requisition from Self-Service Procurement
    - A supply request from Supply Chain Orchestration
    - A transfer planned order from Supply Planning
2. Then, transfer order lines create shipment lines, which are pick released and pick confirmed.
3. Depending on the item definition, the shipment of material comes from either project inventory or common inventory.

4. Once the shipment is confirmed, the application transfers the shipment transactions with associated project details to Costing.
5. Costing creates the cost accounting distributions and you can review the project details for accounting distributions.
6. You can import costed and accounted transactions from supply chain into Project Portfolio Management.
7. If the cost incurred against the project is a billable cost, you can bill the customer based on the percentage of completion or milestones achieved on the project. If it's a capitalizable cost, you can execute the capitalization flow. If needed, you can allocate costs to other projects, project tasks, or accounts as appropriate.

How You Accept Project-Specific Customer Returns

Project-Driven Supply Chain is an end-to-end, integrated solution across Oracle Fusion Cloud Procurement, Supply Chain, and Project Management applications. It provides the ability to accept project-specific customer returns for a project-based return order.

Here's the high-level process flow to accept project-specific customer returns:

1. The process starts with the creation of a project-specific return material authorization (RMA) or unreferenced RMA order in Oracle Fusion Cloud Order Management.
2. Receiving then receives, inspects, puts away the material in Inventory Management.
3. Run the **Transfer Inventory Transactions to Costing** program to interface the deliver transactions to Cost Accounting.
4. Run the **Create Cost Accounting Distributions** program and review the cost accounting entries.
5. Run **Create Accounting**.
6. Import the costs into Project Accounting.

   The transaction for a RMA receipt is interfaced from Cost Management to Project Portfolio Management (PPM) for a referenced project-based intercompany order. The project-based unreferenced RMA and referenced non-intercompany RMA aren't interfaced to PPM.

7 Dual Units of Measure

What's a Dual Unit of Measure?

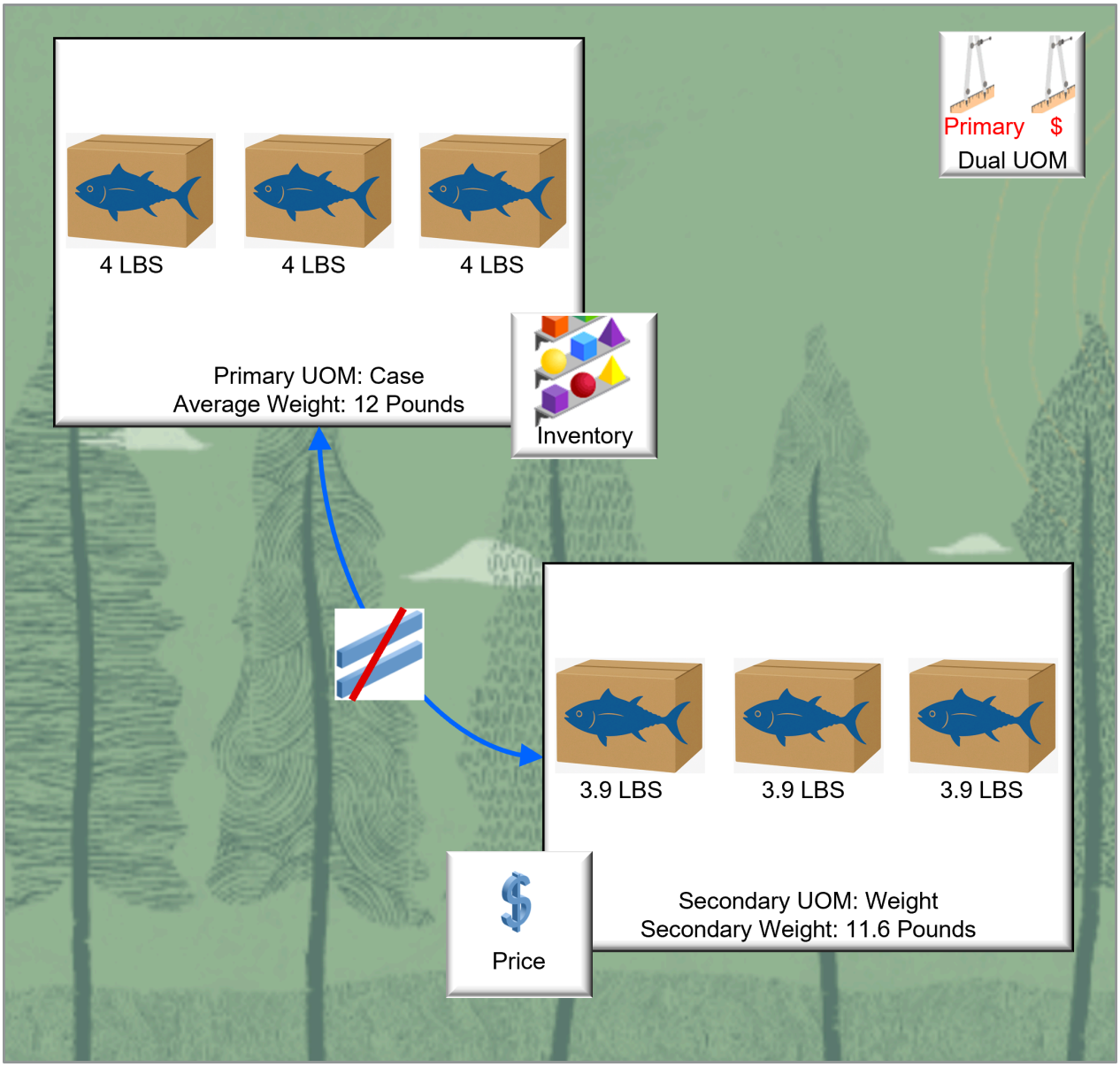
Use dual units of measure to order, price, manufacture, receive, pick, pack, and ship an item in the primary measure but price it in the secondary measure.

A *dual unit of measure* is an inventory management technique that manages an item's quantity in different measures at the same time, such as cases and pounds. You can use it to keep transactions and inventory accurate in each measure.

You might need to order, transfer, outsource, or buy an item in a unit of measure that's different from the unit of measure that you use to price and invoice it:

- You price fish by the pound but you sell the entire fish to your customer.
- You price steel by the ton but ship and receive it by the sheet.
- You price paper by the pound but ship and receive it by the roll.
- You price apples by the pound but ship and receive them by the bag.

Example



Note

- Weight for each fish is approximate because it naturally varies in size. 10 different fish will each sell for a different amount because each one has a unique weight. You might need to use the primary Case measure to stock your fish in inventory, but use the secondary Pounds measure to price it.
- A case of fish weighs an average of 12 pounds, and that's how you stock it.
- The actual weight just before you ship is 11.6 pounds, and that's the price you charge your customer.

Meet Your Requirements

You can use dual units of measure to meet these requirements:

- Track your item in the primary measure and in the secondary measure throughout your business flow. Use it through Oracle Order Management, Oracle Inventory Management, Oracle Procurement, and Oracle Manufacturing.

- Capture the item's actual weight that you sell, transfer, or purchase so you can accurately price, invoice, and cost it.
- Provide a price estimate when you sell or purchase so you can maximize value according to the exact weight that you ship or receive.

You can create an order line in the item's primary measure or in another measure that's in the primary measure's class, then convert that measure to automatically calculate quantity in the secondary measure:

- Track the item in a measure that's different from the measure that you use to stock the item. For example, use the primary Case to stock and track the quantity that your customer orders, and use the secondary Pounds to track the secondary quantity that you price and actually ship. You can use Case and Pounds simultaneously to track the item.
- Update the order line and automatically invoice it according to the quantity or the secondary quantity that you ship.
- Use and view two measures throughout your end-to-end supply chain. For example, start with the primary on the order line, then price and invoice in the secondary. Reserve, allocate, plan, produce, and ship in the primary.
- If you're doing an internal transfer, then you can create and fulfill the transfer order in the item's primary but calculate the transfer price in the secondary.
- Select the lot to use to fulfill the item during shipping.
- Revise a sales order. Add a new order line that uses dual measures to an existing order, or change the quantity on an order line that uses dual measures.
- Cancel an order line that uses dual measures.
- Cancel a sales order that uses dual measures. Order Management will automatically set the quantity and secondary quantity on all order lines to zero.

Realize these benefits:

- Improve the accuracy of the price that your charge your customer. Charge according to the quantity that you actually ship, in the secondary measure.
- Bill accurately so you can increase profitability.
- Improve your report's accuracy. Use secondary attributes in your report, such as the secondary quantity and the secondary measure.
- Increase revenue and improve customer satisfaction.

Support Your Business Flows

Order to Cash

You can use:

- Standard order.
- Back-to-back order. Use this feature to help you create the purchase order, transfer order, or work order when you use dual measures to fulfill demand in your back-to-back flow.
- Drop shipment. Create a sales order in the item's primary measure, then use the item's secondary quantity during fulfillment in your drop ship flow. If you want to use drop ship, then we recommend that you opt in to the Purchase Items That are Priced in Their Secondary UOM feature in the Procurement offering.

- Transfer order. Create a transfer order in the primary and automatically calculate the expected quantity in the secondary according to your conversion. Specify transfer pricing in the secondary according to the actual secondary quantity that you receive.
- Return order.

If a change of ownership happens between one business unit to another business unit, then Oracle Supply Chain Financial Orchestration orchestrates financial details and processes the transaction.

Procure to Pay

You can use:

- Purchasing. Create a purchase order in the primary and automatically calculate the expected quantity in the secondary according to a UOM conversion. Price the order line in the secondary and invoice it according to the actual secondary quantity that you receive.
- Self Service Procurement.
- Direct Procurement.
- Invoicing in Accounts Payable.
- Advance Shipment Notice.
- Pay on Receipt.
- Debit Memo.

Plan to Produce

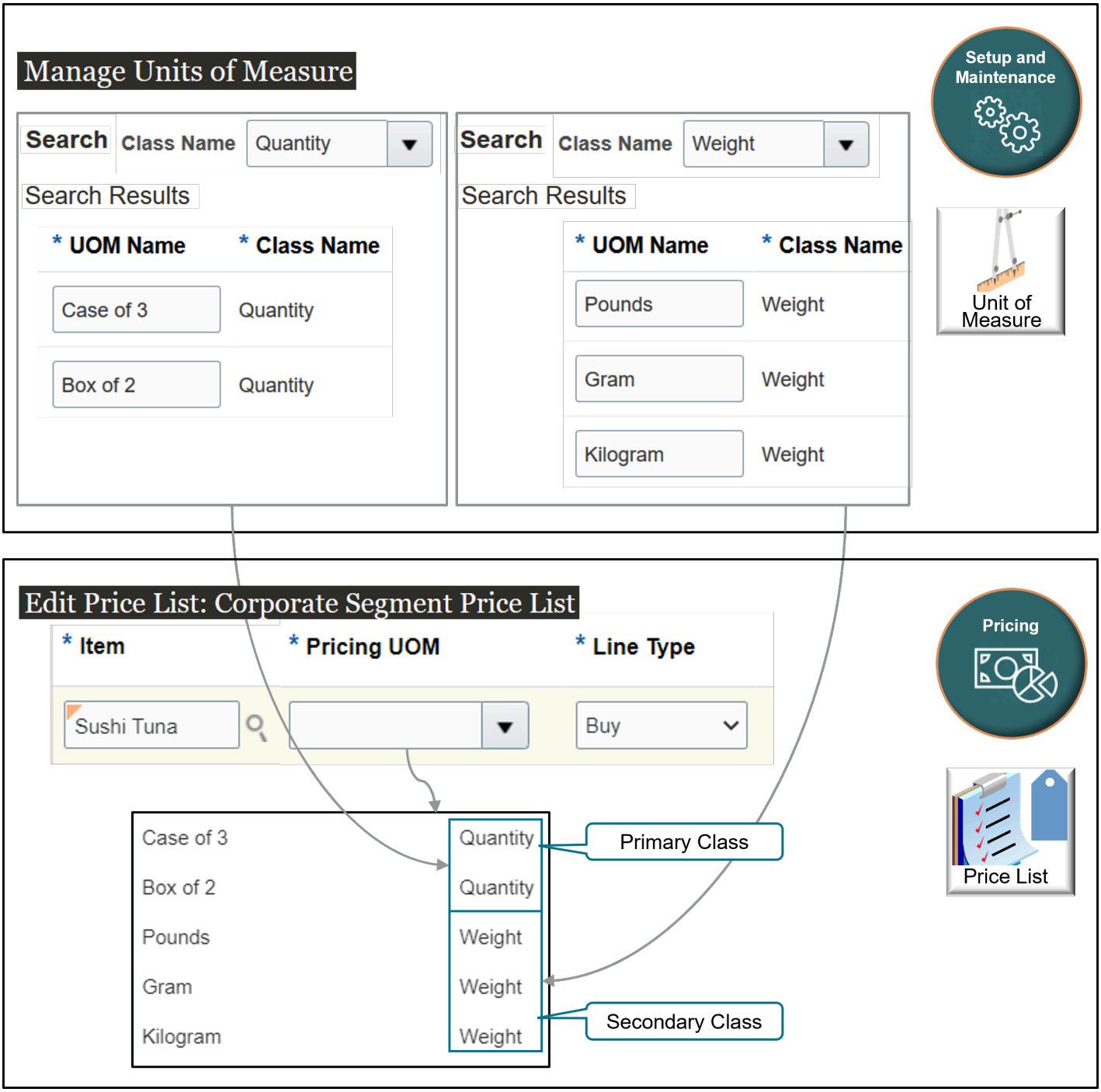
You can use:

- Discrete Manufacturing.
- Process Manufacturing, including work definitions and work orders.
- Contract Manufacturing. Include dual measures in the production reports that you get from your contract manufacturer. Include a description of the materials used and what was finished. Include details in the primary measure and the secondary measure.
- Outside Processing.

For more about flows, see *Quick Start to Set Up Order-to-Cash*.

Price Dual Measures

Use the Pricing Administration work area to specify pricing for the item:



Note

- To identify and manage the units of measure that are in each class, go to the Setup and Maintenance work area, open the Manage Units of Measure task, then search according to class, such as Quantity.
  You can specify pricing for a dual measure in a price list, discount list, or shipping charge list.
- Use the Pricing UOM attribute to tell Pricing which measure to use to price the item. Use this attribute when you add the item to a list, such as the Corporate Segment Price List.

- Set up pricing in any measure that's in the primary's or the secondary's class.

Example

Let's see how the attribute values change as your item moves through fulfillment:

1. Start on the order line in Order Management.
2. Move to the shipment line in Oracle Shipping.
3. Now on the order line back in Order Management after Order Management receives the shipment confirmation from Shipping.
4. Finally on the invoice line in Oracle Receivables.

Assume you sell an item named Sushi Tuna. You sell the whole fish, and you sell it for the same price regardless of how big the fish is, so you use the primary Each measure to price it. Here's what pricing looks like when you sell a quantity of 2 fish and each one weighs 4 pounds:

Line	Ordered Quantity	Ordered UOM	Shipped Quantity	Secondary Quantity	Secondary UOM	Secondary Shipped Quantity	Secondary Fulfilled Quantity	Unit Price	Extended Amount
1. Order Line	2	Each	0	8	Pounds	-	-	$4	$8
2. Shipping Line	2	Each	2	8	Pounds	-	-	-	-
3. Submitted Order Line	2	Each	2	8	Pounds	8	-	-	-
4. Invoice Line	2	Each	-	8	Pounds	8	8	$4	$8

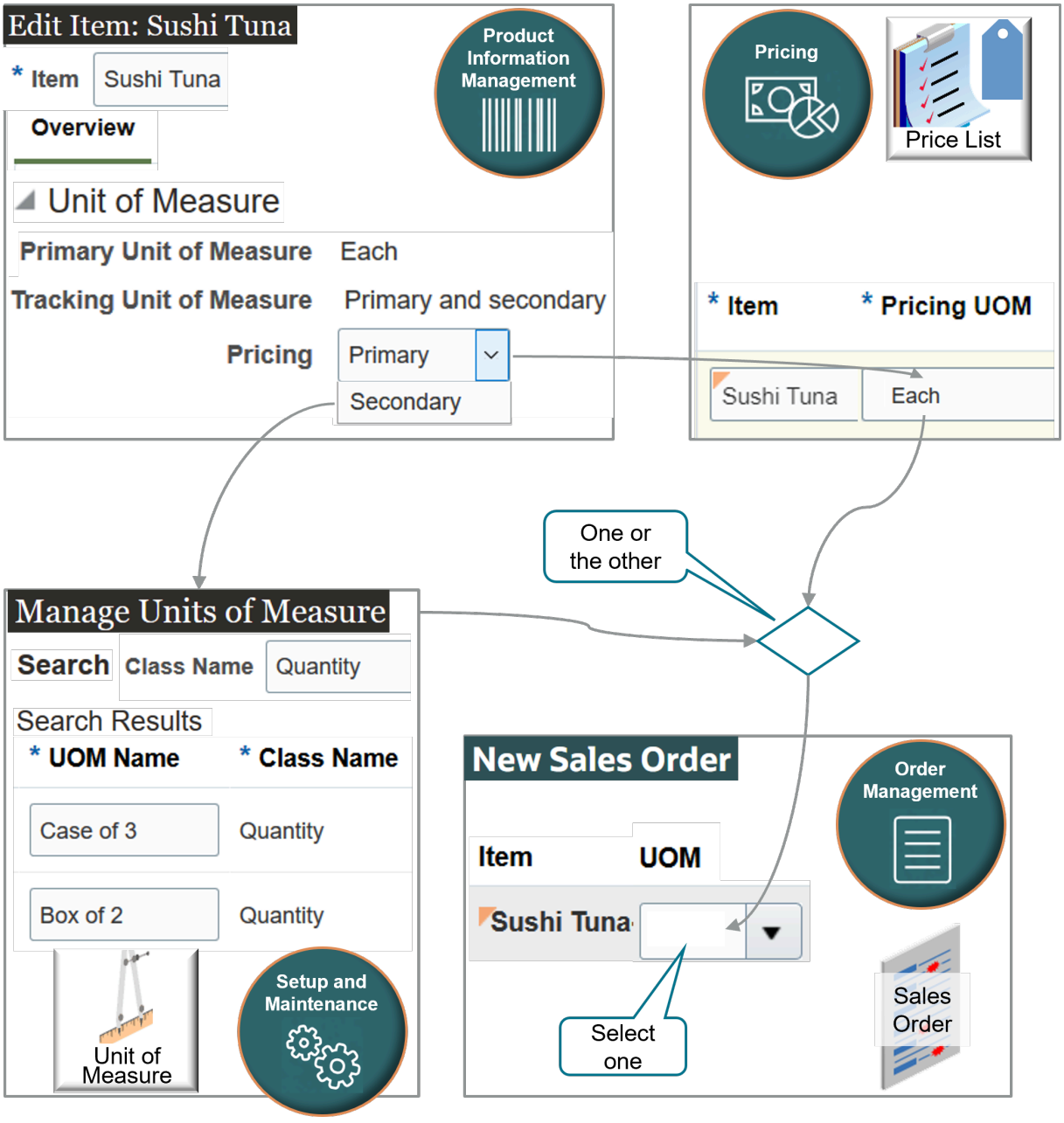
Each fish can vary in weight, so using Each results in pricing that's all over the map. Your customers prefer to buy the whole fish, so you decide to continue selling each whole fish instead of cutting it up, but you use the secondary Pounds measure to price it. Here's what pricing looks like when you sell a quantity of 2 fish, each one weighs 4 pounds, and you charge $1.50 a pound:

Line	Ordered Quantity	Ordered UOM	Shipped Quantity	Secondary Quantity	Secondary UOM	Secondary Shipped Quantity	Secondary Fulfilled Quantity	Unit Price	Extended Amount
1. Order Line	2	Each	0	8	Pounds	-	-	$1.5	$6
2. Shipping Line	2	Each	2	8	Pounds	-	-	-	-
3. Submitted Order Line	2	Each	2	8	Pounds	7	-	-	-
4. Invoice Line	2	Each	-	8	Pounds	7	7	$1.5	$10.5

Line	Ordered Quantity	Ordered UOM	Shipped Quantity	Secondary Quantity	Secondary UOM	Secondary Shipped Quantity	Secondary Fulfilled Quantity	Unit Price	Extended Amount

Set the Item's Pricing Attribute

The value that you set for the item's Pricing attribute in Product Management determines the value that you can set for the order line's UOM attribute:



Primary

If you set the item's Pricing attribute to Primary in Product Management, then you can set the order line's UOM attribute only to the measure that you specify in Pricing Administration. For example, if you set the Pricing UOM attribute to Each in Pricing Administration, then you must set the order line's UOM attribute to Each.

Pricing will use the primary measure to price the item.

Secondary

If you set the item's Pricing attribute to Secondary in Product Management:

- You can set the order line's UOM attribute to any measure that's in the same class as the measure that you specify in the Primary Unit of Measure attribute in Product Management.
- Pricing will use the secondary measure to price the item.
- If the Pricing attribute for the item validation organization contains Secondary, then you must price the item in the secondary measure.
- You can't change the line's Secondary UOM attribute to another value.
- Order Management will price the item according to the secondary measure regardless of whether you set up pricing in Pricing Administration. Pricing won't prevent you from using the primary, but if you use dual measures, then you must set up pricing according to the secondary measure. If you don't, you will encounter a runtime error.

Consider an example:

- You set the Item Validation Organization parameter to Fresh Fish 4 U. See *Manage Order Management Parameters*.
- In Product Management, you create the Sushi Tuna item in the Fresh Fish 4 U organization, and you set Sushi Tuna's primary measure to Each.
- The Each measure is in the Quantity class, so you can price the item in any measure that's in the Quantity class, such as Bag, Book, Box of 10, Case of 12, Dozen, Each, Gross, Ream, Sheet, and so on.

Related Topics

- What's a Dual Unit of Measure?
- How You Set Up Items in Product Information Management
- Manage Price Lists

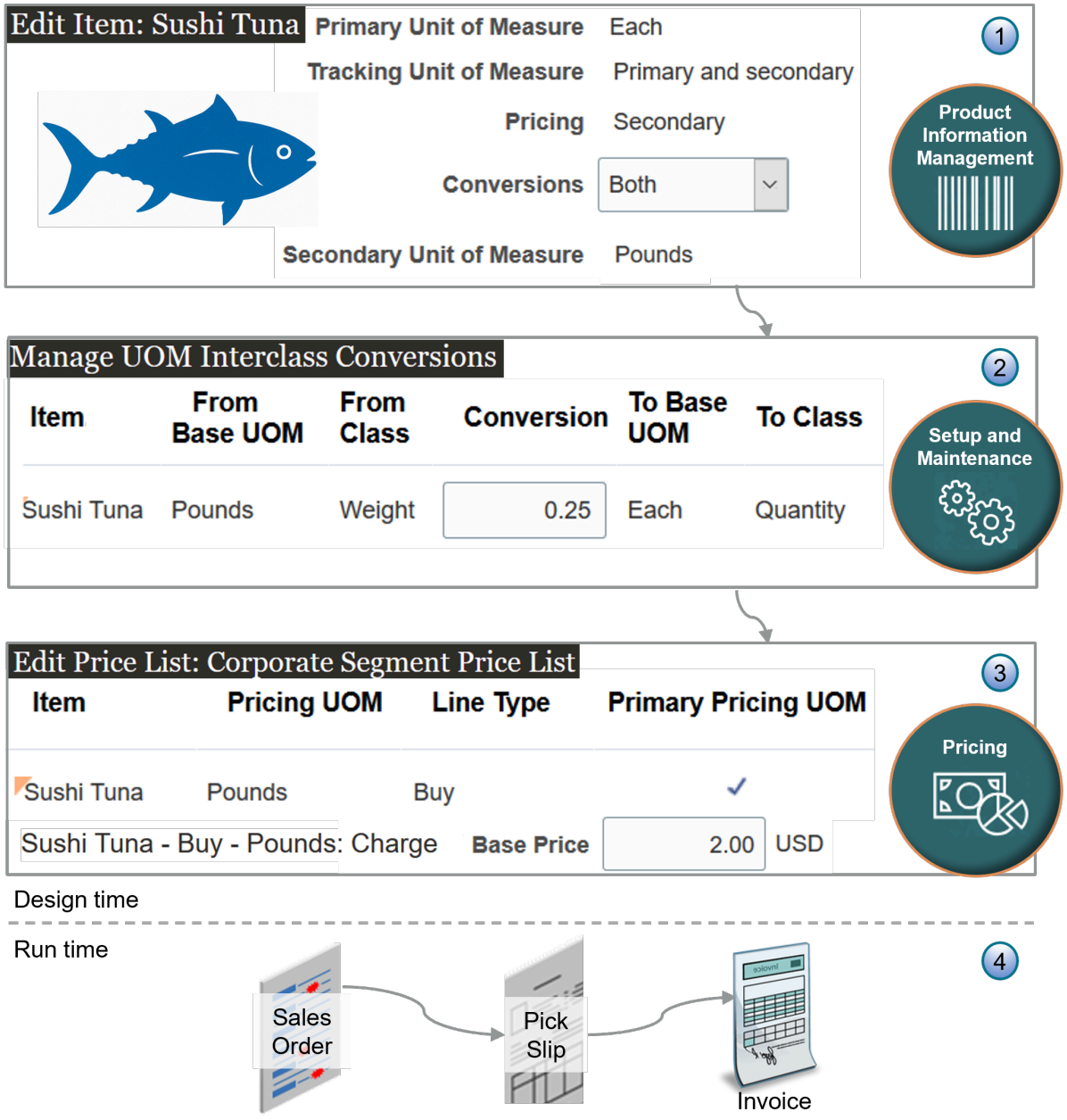
Set Up Dual Measures

Set up dual units of measure so you can order, price, manufacture, receive, pick, pack, and ship an item in the primary measure but price it in the secondary measure.

Assume you're in the Fresh Fish 4 U organization, and you're a fishmonger who sells an item named Sushi Tuna. You capture tuna in the open ocean and bring them to port every day, where you sell the whole fish to your favorite restaurateur, Fancy Fish.

You price it by pound, not by each fish, so you need to price it in the secondary measure. Sushi Tuna is a good candidate for dual measures because a tuna naturally varies in size, you typically sell each tuna as one fish each, but you price it by weight. You sell each tuna fish for a different amount because each one has a unique weight. You need to track the item in the primary measure and secondary measure throughout your order fulfillment lifecycle.

Here's your work map:



Summary of the Setup

1. Create the item.
2. Manage the conversion.
3. Set up pricing.
4. Test your work.

You need a different set of privileges for each work area that you use in this procedure. See *Get the Privileges That You Need to Implement Order Management*.

Create the Item

1. Go to **Home > Product Management > Product Management > Tasks > Create Item**.
   You must create a new item. You can't add dual measures to an item that already exists.
2. In the Create Item dialog, set the values:

Attribute	Value
Organization	Fresh Fish 4 U
Create New	Enabled
Number of Items	1
Item Class	Root Item Class

3. Make sure the Selected List window contains only Finished Goods, then click **OK**.
4. On the Create Item page, set the values:

Attribute	Value
Item	Sushi Tuna
Description	The world's tastiest tuna. Remember, you can tune a piano, but you can't tune a fish.
Primary Unit of Measure	Each Specify the unit of measure that you use to stock and sell and the item.
Tracking Unit of Measure	Primary and Secondary Specify how to track your on-hand balance. If you set it to Primary and Secondary, then you're telling Order Management that this item is a dual measure item.
Pricing	For this example, choose Secondary. See *Price Dual Measures*.
Conversions	Both

Attribute	Value
Secondary Unit of Measure	Pounds Specifies the measure that you use to price the item.
Defaulting Control	Choose a value: - **Default**. Use when your item's secondary measure might change at run time. - **Fixed**. Use when your item's secondary measure won't change at run time.

You can't change some of the values that you set in the Unit of Measure area after you save, so make sure you set them correctly.

5. Click **Specifications > Manufacturing**, then set the value:

Attribute	Value
Structure Item Type	Standard You must use Standard.

6. Click **Sales and Order Management**, then set the values:

Attribute	Value
Sales Product Type	Goods You must use Goods or leave it empty.
Shippable	Yes Can be Yes or No.
Invoiced	Yes
Invoice Enabled	Yes

7. Click **Save > Save and Close**.

See *How You Set Up Items in Product Information Management*.

Defaulting Control

If you set the Defaulting Control attribute to Default or No Default, then you can specify a deviation factor.

Variation sometimes happen during fulfillment, particularly with an item that varies in weight, such as fish because its ingredients evaporate over time, and that results in less weight. You might need to change the quantity on the pick slip to reflect the actual quantity picked. If you set Defaulting Control to Default, then you can use the deviation factor attributes to specify the percent that you can set for the Secondary Picked Quantity attribute on the pick slip.

Assume you set up a conversion between the primary Each and the secondary Pounds as 1 Each equals 10 Pounds, and you then set these values:

Attribute	Value
Positive Deviation Factor	10 If you set the quantity on the order line to 1 Each, then Inventory Management will limit the secondary measure to a maximum of 11 pounds. Here's the math for that: • 10 pounds multiplied by 10% equals a positive deviation of +1. • 10 pounds on the order line plus 1 equals 11.
Negative Deviation Factor	10 If you set the quantity on the order line to 1 Each, then Inventory Management will limit the secondary measure to a maximum of 9 pounds. Here's the math: • 10 pounds multiplied by 10% equals a negative deviation of -1. • 10 pounds on the order line minus 1 equals 9. If you set Positive Deviation Factor to 10 and Negative Deviation Factor to 10, then the user can set the value to 9, 10, or 11.

Note:

- You must use a decimal value for each attribute.
- You can't use dual measures when you set the Defaulting Control attribute to No Default.
- If a change happens between the time you pick the item and ship it, then you can override the picked quantity and secondary picked quantity, but the secondary shipped quantity must not exceed the secondary picked quantity. See *Manage Leftovers for Dual Measures*.

Manage the Conversion

You must set up a conversion between the item's primary measure and its secondary measure. You can use the standard conversion for many items or you can set up a conversion only for the item. In this example you set up a conversion for the item:

- 1 Pound equals 0.25 Each. If you order 1 Each of Sushi Tuna, then the value in the secondary Pounds measure is 4.

Try it:

1. Go to **Home > My Enterprise > Setup and Maintenance > Tasks > Search > Manage Units of Measure for Interclass Conversion**.
   In this example you convert between a measure that's in the Weight class and another that's in the Quantity class, so you create an interclass conversion. If your measures are in the same class, then use the Manage Units of Measure for Intraclass Conversion task.
2. On the Manage UOM Interclass Conversions page, click **Change Organization**, set the value, then click **OK**:

Attribute	Value
Organization	Fresh Fish 4 U

3. Click **Actions > Add**, set the values, then click **Save and Close**:

Attribute	Value
Item	Sushi Tuna
From Base UOM	Pounds
From Class	Weight
Conversion	0.25 You sell the Bullet Tuna species. Assume each of these tuna averages about 4 pounds each.
To Base UOM	Each
To Class	Quantity

4. Set up a standard conversion.
   Assume you package fish in a case, one case contains 3 tuna, so you also need to set up a rule that converts case to each:
   - Go to **Tasks > Search > Manage Units of Measure**.
   - On the Manage Units of Measure page, click **Actions > Add**, set the values, then click **Save**:

Attribute	Value
UOM Code	CS3

Attribute	Value
UOM Name	Case of 3
Description	Case of 3
Class Name	Quantity
Base UOM Name	Each

- Click **Manage UOM Standard Conversions**.
- On the Manage UOM Standard Conversions page, click **Actions > Add**, set the values, then click **Save and Close**:

Attribute	Value
UOM Name	Case of 3
Conversion	3
Base UOM Name	Each
Class Name	Quantity

Set Up Pricing

Assume you use the Corporate Segment Price List, and the sale price for tuna on the commercial market is about $2 a pound

You specify the Pounds measure as the primary. This way, pricing will price it by the pound, not by each. You specify 2.00 USD as the base price, so you charge $2 for each pound of tuna:

1. Go to **Home > Order Management > Pricing Administration > Price Lists**.
2. Search for and open the Corporate Segment Price List.
3. Click **Actions > Add Row**, set the values, then click **Save**:

Attribute	Value
Item	Sushi Tuna
Pricing UOM	Pounds

Attribute	Value
Line Type	Buy
Primary Pricing UOM	Selected. Enabling this option tells Pricing to use the value that you set in the Pricing UOM attribute to price the item. Don't confuse the Primary Pricing UOM attribute with the Primary Unit of Measure attribute that you set for the item in Product Management. The Primary Pricing UOM attribute is specifically for pricing, not for the item.

4. Click **Create Charge**, set the values, then click **Save and Close**:

Attribute	Value
Pricing Charge Definition	Sale Price
Calculation Method	Price
Base Price	2
Allow Manual Adjustment	Selected. Market conditions probably vary every day, so let your users adjust the price manually.

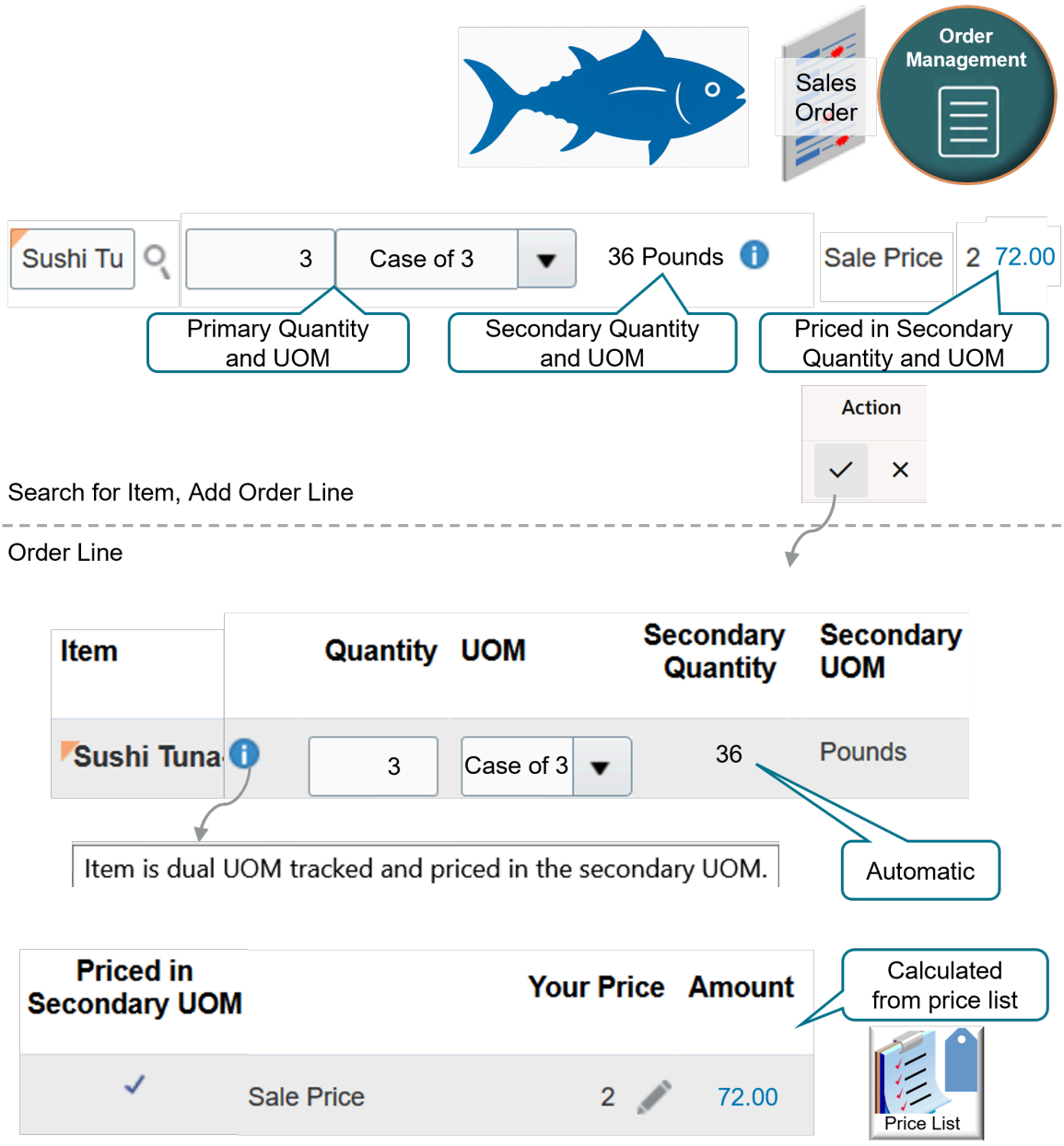
See *Manage Price Lists*.

Test Your Work

1. Go to the Order Management work area and create a sales order:

Attribute	Value
Customer	Fancy Fish
Business Unit	Fresh Fish 4 U

2. Search for and add the Sushi Tuna item on the order line:



Note

- You use the order line to search for the item. It displays the quantity and price for the primary measure and the secondary measure.
- You can't change the secondary quantity or secondary measure on the order line, but you can change the primary quantity and Order Management will automatically calculate the secondary quantity and the amount.
- The order line sets the unit of measure to the primary, by default. It also displays primary and secondary attributes which makes it easy to see the conversion.

3. Assume you change the Quantity to 3 and the UOM attribute to Case of 3:

Attribute	Value
Quantity	3 This is the primary quantity.
UOM	Case of 3 The primary measure of the item is Each. You can change it to any measure that's in the primary measure's class, such as Case of 3.
Secondary Quantity	36 The order line uses your conversion rules to automatically calculate the secondary quantity: o 1 case contains 3 tuna. o 1 tuna equals 4 pounds. o 3 tuna multiplied by 4 pounds means each case weighs 12 pounds. o 12 pounds for each case multiplied by the primary quantity of 3 equals a secondary quantity of 36.
Secondary UOM	Pounds
Sale Price	2
Line Price	72.00 Its the secondary quantity of 36 pounds multiplied by the unit price of 2 equals 72.00.
Information Icon	Let's you know that you're using dual measures for this item.

4. Click **Add**, then notice that the sales order adds the values that you set on the order line. Here are a few more details you should take note of:

Attribute	Value
Item	Contains your dual measure item.
Priced in Secondary UOM	Contains a value: o **Selected**. Pricing priced the order line according to the value in the Secondary UOM attribute on the order line. In this example, that would be Pounds.

Attribute	Value
	○ **Not Selected**. Pricing priced the order line according to the value in the UOM attribute on the order line. In this example, that would be Each. Order Management gets this value from the Pricing attribute that you set in Product Management.

5. Submit:
    - The orchestration process schedules and reserves the item just like it does any other sales order. It schedules the order according to the order line's Quantity attribute and UOM attribute.
    - The secondary measure and the secondary quantity doesn't affect scheduling.

Assume the order number is 525940. Here's part of the order line:

Line	Item	Quantity	UOM	Status	Secondar Quantity	Secondar UOM	Price	Extended Amount	Assessab Value	Shipped Quantity	Secondar Shipped Quantity	Secondary Fulfilled Quantity
1	Sushi Tuna	3	Case of 3	Awaiting Shipping	36	Pounds	$2	$72	$72	empty	empty	empty

Manage Leftovers for Dual Measures

Leftovers are great after supper but require special handling in inventory. If your item uses dual units of measure, and if a transaction drives the item's on-hand quantity in the primary measure to zero, then Oracle Inventory Management automatically creates a transaction for the leftover quantity, but the secondary on-hand quantity isn't zero.

Note

If Secondary On-hand Quantity Is. . .	Leftover Transaction Will Have A . . .
Less than zero	Receipt
Greater than zero	Issue

You can set the Defaulting Control attribute to manage these differences:

Value	Description
Fixed	The primary quantity and your UOM conversion will determine the secondary quantity.
Default or No Default	The deviation that you specify will determine the secondary quantity.

Assume you allow a 10% deviation in either direction. The conversion from primary to secondary is 1 to 1, such as KG and Liters. Assume you receive 100 KG and 100 Liters. Assume you issue:

- 50 KG and 51 Liters to a shipment because the material expanded during fulfillment. That leaves you with 50 KG and 49 Liters on hand.
- 50 KG and 51 Liters. This leaves your on-hand quantity as 0 KG and -2 Liters. But this isn't physically possible. If you have 0 KG, you must also have 0 Liters.

Inventory Management will automatically create a receipt for the leftover quantity for 0 KG and 2 Liters to bring your on-hand quantity to 0 KG and 0 Liters. If you have 0 KG and a positive 2 Liters, Inventory Management will create an issue for the leftover quantity.

You typically see these leftovers when you allow a deviation. However, if you set Defaulting Control to Fixed, then the secondary on-hand quantity can sometimes get out of sync with the primary quantity and the UOM conversion because rounding errors accumulate. If a transaction leaves on-hand quantity at zero in the primary quantity, but not zero in the secondary quantity, then you'll have a transaction for the leftover quantity.

The reverse isn't true. If a transaction leaves on-hand quantity as zero in the secondary quantity but not zero in the primary quantity, then Inventory Management doesn't automatically create an issue for the primary measure. You can create a miscellaneous issue to make the primary measure 0.

For more about the Defaulting Control attribute, see *Set Up Dual Measures*.

Related Topics

- What's a Dual Unit of Measure?
- How Units of Measure, Unit of Measure Classes, and Base Units of Measure Relate to Each Other

8 Inventory Management

Overview of Implementing Inventory Management

Inventory Management functionality lets you manage warehouse activities such as replenishing inventory, counting stock (both cycle count and physical inventory), moving material within the warehouse, and issuing goods to manufacturing. Consigned inventory capabilities are supported as well.

Set up Oracle Inventory Management so that your users can take advantage of the Inventory Management work area to streamline warehouse operations.

This table describes the setup tasks in the Define Inventory Management task list.

Setup Task	Required or Conditional	Description
Manage Subinventories and Locators	Conditional	Configure parameters related to the transfer of material between two subinventories.
Manage Interorganization Parameters	Conditional	Configure interorganization parameters to define accounting information and relationships that exist between a shipping organization and a destination organization.
Manage Account Aliases	Conditional	Configure account aliases to provide an easily recognizable name or label for general ledger account numbers.
Manage Transaction Source Types	Conditional	Configure inventory transaction sources to use while performing transactions to classify transactions according to their origin, such as purchase order, sales order, account number, or physical inventory.
Manage Transaction Reasons	Conditional	Configure inventory transaction reasons to classify or explain the reason for an inventory transaction. An inventory transaction reason can be specified when performing miscellaneous transactions.
Manage Item Transaction Defaults	Conditional	Configure item transaction defaults to define default subinventories and locators for items for shipping, receiving, and movement request transactions.
Manage Material Statuses	Conditional	Configure user-defined material statuses to control the transactions that can be performed on the material. Material status can be assigned either at the subinventory, locator, lot, or serial number level.

Setup Task	Required or Conditional	Description
Manage Pick Slip Grouping Rules	Conditional	Configure the grouping of picks into pick slips.
Manage Picking Rules	Conditional	Configure picking rules to enable the selection of material based on defined criteria.
Manage Picking Rule Assignments	Conditional	Configure the assignment of a picking rule to any combination of criteria and prioritize the rule assignment within the organization.
Manage Consumption Rules	Conditional	Manage rules to determine ownership change of consigned inventory.
Manage Intersubinventory Parameters	Conditional	Configure parameters for transferring material between two subinventories within an organization.
Manage Lot Grades	Conditional	Configure lot grades to describe the particular makeup and quality characteristics of items in a lot.
Manage Lot Expiration Actions	Conditional	Configure lot expiration actions to indicate the action required on a lot when it expires.
Manage Lot and Serial Attributes Mapping	Conditional	Assign lot and serial number attribute descriptive flexfield context to an item or item category.
Manage ABC Classes	Conditional	Configure ABC classes to identify the value groupings to which items will be assigned.
Manage ABC Classification Sets	Conditional	Configure the valuation and scope of the ABC analysis performed against an inventory based on quantity, value, or history of the item.
Manage ABC Assignment Groups	Conditional	Configure ABC assignment groups and associate ABC classes to the respective ABC assignment groups.
Manage Inventory Profile Options	Conditional	Define profile option settings and values to control inventory behavior such as Material Status Support or Inventory Transaction Date Validation.
Manage Inventory Lookups	Conditional	Review and maintain lookup values for Inventory, such as Movement Request, Pick Slip Print Options, and Lot Origination Type.
Manage Inventory Value Sets	Conditional	Create and edit inventory value sets.

Setup Task	Required or Conditional	Description
Manage Inventory Descriptive Flexfields	Conditional	Define validation and display properties of descriptive flexfields for inventory. Descriptive flexfields are used to add user-defined attributes to entities.
Manage Inventory Account Alias Key Flexfield	Conditional	Define the inventory account alias key flexfield segments and validation for use as inventory account alias classification keys. The inventory account alias key flexfield must be defined for inventory to operate.
Manage Inventory Locator Key Flexfield	Conditional	Define the inventory locator key flexfield segments and validation for use as inventory locator classification keys. The inventory locator key flexfield must be defined for inventory to operate correctly.
Import Oracle Fusion Data Extensions for Transaction Business Intelligence (scheduled process)	Conditional	Import extensible data, including data in descriptive flexfield segments, and key flexfield segments into Transactional Business Intelligence. **Note:** The Import Oracle Fusion Data Extensions for Transaction Business Intelligence scheduled process is an Oracle Fusion Application Toolkit (ATK)-level task.

Here are the steps to access the tasks for your Inventory Management setup:

1. In the Setup and Maintenance work area, go to the Inventory Management functional area:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
2. On the Setup: Manufacturing and Supply Chain Materials Management page, select **All Tasks** from the **Show** drop-down list.

Common Tasks That You Perform for Inventory Management

Inventory Management requires that you perform the following common tasks:

- Manage Profile Options
- Manage Lookups
- Manage Value Sets
- Manage Descriptive Flexfields

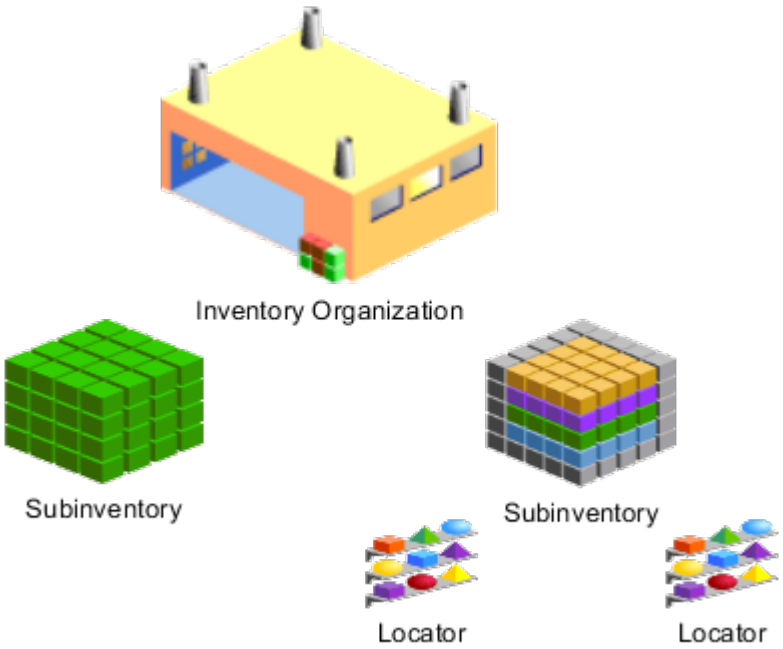
These tasks are common to most Oracle applications. For details about how to perform them, see the Oracle Fusion Cloud SCM: Implementing Common Features for Oracle SCM guide.

Subinventories and Locators

How Inventory Organizations, Subinventories, and Locators Fit Together

You can structure the relationship of inventory organizations, subinventories, and locators to match the physical structure of your warehouse.

One inventory organization contains two subinventories. One subinventory contains no locators, and the other



subinventory contains two locators.

Inventory Organizations

An inventory organization can contain one or more subinventories.

Subinventories

Define at least one subinventory for each inventory organization that you want to transact items into, from, or within.

Locators

A subinventory can contain one or more locators.

Subinventories

Define at least one subinventory for each inventory organization of item and inventory management usage.

You can create these kinds of subinventories:

- Storage subinventories
- Receiving subinventories

Storage Subinventories

A storage subinventory is used to store material in the warehouse. Material in a storage subinventory is reflected in on-hand quantity.

Receiving Subinventories

A receiving subinventory is used to temporarily store material before placing in a storage subinventory. Material in a receiving subinventory isn't reflected in on-hand quantity. An inventory organization need not contain a receiving subinventory.

Related Topics

- How Inventory Organizations, Subinventories, and Locators Fit Together
- Subinventory Parameters for Transfer Orders

Considerations for Creating Subinventories and Locators

You should take into account the following when planning to create subinventories and locators:

- Subinventory-locator hierarchy
- Considerations for creating subinventories
- Considerations for creating item subinventories
- Considerations for creating locators

Creating the Subinventory-Locator Hierarchy

You should consider the following when planning the hierarchy of subinventories and their corresponding locators:

- The importance, for your organization, of creating a subinventory and locator hierarchy that represents the physical layout of your warehouse.
- Your organization's plan for the movement of item and labor, and utilization of labor and equipment, for put away and picking.

  You should refer to these plans when sequencing the picking order of subinventories and locators.

Considerations for Creating Subinventories

You should consider the following when planning to create subinventories:

- How many storage and receiving subinventories are required in your warehouse.
- Whether you must distinguish between receiving and storage subinventories.

  Use storage subinventories for tracking on hand quantities.
- Whether you want to associate items to subinventories and their locators by creating item subinventories.

Considerations for Creating Item Subinventories

You should consider the following inventory planning methods:

Inventory Planning Method	When to Use
Min-Max Planning	Use when the enterprise is responsible for managing the min-max replenishment process.
Supplier Managed	Use when the supplier is responsible for managing the replenishment process. Oracle Fusion Cloud Supply Chain Collaboration uses this field for vendor-managed inventory.
Not Planned	Use when not planning inventory.

Considerations for Creating Locators

You should consider the following when planning to create locators:

- Whether you want to allow users to dynamically create locators.
- Whether you want to add items to locators.
- Whether it's necessary to implement locator control.

  If you decide to implement locator control, consider whether you must implement locator control for the organization, for individual subinventories, or at the item level.
- The level of granularity required for locators, such as: "row or rack" or "row or rack or bin".

Related Topics

- How Inventory Organizations, Subinventories, and Locators Fit Together
- What's an item subinventory?

Bulk Export and Import of Subinventories and Locators

You can mass export and import subinventories, locators for a subinventory, and add items to a subinventory from the Setup and Maintenance work area.

Complete these steps:

- Add **Actions** icon to Manage Subinventories and Locators task
- Export CSV file
- Review, download, and edit CSV file
- Import CSV file
- Review the **Import to CSV** process
- Confirm item subinventory records

Add Actions Icon to Manage Subinventories and Locators Task

First, add the **Actions** icon to the **Manage Subinventories and Locators** task.

1. In the Setup and Maintenance work area, go to the Inventory Management Functional area:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
2. If the **Actions** icon doesn't already display as a column, you must enable it. From the **View** menu, select **Columns** > **Actions**. The **Actions** icon now displays as a column on the page.

Export CSV File

Next, export the CSV file.

1. For the **Manage Subinventories and Locators** task, click the **Actions** icon.
2. Select **Export to CSV File**.
3. Select **Create New**. This opens the Export Setup Data to CSV File page.
4. On the Export Setup Data to CSV File page, click the **Submit** button.
5. Click **OK** in the Confirmation window to return to the Setup and Maintenance work area.

Review, Download, and Edit CSV File

Now you can review, download, and edit the CSV file.

1. To review the Export to CSV file, click the **Actions** icon for the **Manage Subinventories and Locators** task.
2. Select **Export to CSV File**.

    Select **Ready for download <date>**. A warning may be reported, but you can still complete the item to subinventory assignment process. This takes you to the Export Setup Data to CSV File Results page.
3. To download the CSV file:
    a. Click the **Actions** menu.
    b. Select **Download**.
    c. Select **CSV File Package**.
4. Save the Zip file to a local directory.
5. Extract the **INV_ITEM_SUBINVENTORY.csv** file from the Zip file to add item subinventory records.
6. Edit the **INV_ITEM_SUBINVENTORY.csv** file by adding the new records.
7. Add the edited **INV_ITEM_SUBINVENTORY.csv** file back to the Zip file.

Import CSV File

Import the CSV file.

1. Navigate back to the Inventory Management functional area of the Setup and Maintenance work area.
2. For the **Manage Subinventories and Locators** task, click the **Actions** icon.
3. Select **Import from CSV File**.
4. Select **Create New**.
5. Click the **Choose File** button.
6. Browse for your Zip file and click the **Submit** button.
7. Click **OK** in the Confirmation window to return to the Setup and Maintenance work area.

Review the Import to CSV Process

Review the Import to CSV process.

1. To review the **Import from CSV** process, click the **Actions** icon for the **Manage Subinventories and Locators** task.
2. Select **Import to CSV file**.
3. Select **Ready for data validation <date>**. This takes you to the Import Setup Data from CSV File Results page.
4. After viewing that you have a value of **Completed Successfully** in the **Status** field, click the **Done** button.

Confirm Item Subinventory Records

Finally, confirm the item subinventory records.

1. To confirm that item subinventory records are now successfully created, click the **Manage Subinventories and Locators** task.
2. On the Manage Subinventories and Locators page, select the **Manage Item Subinventories** button.
3. On the Manage Item Subinventories page, view your newly created records.

FAQs for Subinventories and Locators

What's a locator?

A locator is a physical area within a subinventory where you store material, such as a row, aisle, bin, or shelf. You can transact items into and out of a locator.

Why can't I assign locator control options to some subinventories?

You can assign locator control to the subinventory only if an inventory organization's locator control parameter is set to assign locator control at the subinventory level.

What happens if I select different locator control options for a subinventory?

Here are your locator control options for a subinventory:

- Select **Dynamic Entry** to require entry of a locator for each item; the user can choose a valid predefined locator, or define a locator dynamically at the time of transaction.
- Select **Item Level** to define locator information for specific items.

- Select **Prespecified** to require entry of one of the predefined locators for each item.

Why can't I change the locator control of an existing organization at the subinventory level?

You can only change the Locator Control value if all pending transactions are cleared and on-hand quantity doesn't exist in the subinventory.

If you want to implement locator control for a few subinventories and no locator control for other subinventories in the same organization, then you must select the **Locator Control Determined at Subinventory Level** parameter for the organization. In the Setup and Maintenance work area, use the **Manage Inventory Organizations** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Facilities
- Task: Manage Inventory Organizations

Then, in the subinventory setup, you can enable or disable the locator control on the Edit Subinventories page. In the Setup and Maintenance work area, use the **Manage Subinventories and Locators** task to edit the locator control for your subinventory:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Facilities
- Task: Manage Subinventories and Locators

Related Topics

- What happens if I select different locator control options for a subinventory?
- Inventory Organization Parameters

Why can't I select a particular subinventory as the item transaction default subinventory for a particular item?

If the item is associated with one or more subinventories (as one or more item subinventories), you can only select the subinventories with which the item is associated.

What's an item subinventory?

An item subinventory is an association of an item with a subinventory that's created when you add an item to a subinventory.

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

Interorganization Parameters

Enable Interorganization Transfers

Interorganization transfers enable you to transfer particular items between organizations.

Scenario

You are charged with performing the prerequisites that are necessary for your users to perform interorganization transfers of a particular item.

To enable interorganization transfers, you perform these steps:

1. Ensure that you have created the inventory organization from which the item will be transferred, in addition to the inventory organization to which the item will be transferred.
2. In the item's attributes, ensure that the item is assigned to the inventory organization from which the item will be transferred, in addition to the inventory organization to which the item will be transferred.
3. Manage interorganization parameters to define the relationships that exist between the inventory organizations.
4. Ensure that the item has the same unit of measure in each inventory organization.

Related Topics

- Setup of Interorganization Parameters for Transfer Orders

FAQs for Interorganization Parameters

What are interorganization parameters?

Interorganization parameters define the relationships that exist between source and destination inventory organizations. Define these relationships to enable users to create interorganization transfers.

One interorganization parameter enables a one-way interorganization transfer from a source inventory organization to a destination inventory organization. To enable two-way interorganization transfers between two inventory organizations, create two interorganization transfers, with each inventory organization functioning as a source inventory organization and a destination inventory organization.

What happens if I select different receipt routing options for the In Transit transfer type?

Select Direct to deliver this item directly to its location at receipt. Select Inspection to receive this item first, inspect it, then deliver. Select Standard to receive this item first, then deliver without inspection.

What happens if I select the Automatically Cancel Transfer Order Backorders check box?

The remaining quantities on backordered transfer order lines are automatically canceled.

Account Aliases

Overview of Account Aliases

An account alias is an easily recognized name or label that represent an account number. You can view, report, and reserve against an account alias. During a transaction, you can use the account alias instead of an account number to refer to the account.

Use the **Manage Account Aliases** task in the Setup and Maintenance work area to define your account aliases. You can also inactive an account alias on this page.

Example of Creating an Account Alias

There are multiple situations for which you might want to create an account alias. This scenario illustrates an example of one such situation.

Creating an Account Alias for a Temporary Project

Your company has a temporary project for which costs need to be tracked to a particular account. You create an easily-recognizable account alias for the account and have your employees cost the project's transactions to this account alias. You set the account alias to expire when the project ends, so that users cannot cost transactions to this particular project after the project ends.

Set Up an Account Alias

To set up an account alias:

1. In the Setup and Maintenance work area, go to the **Manage Account Aliases** task:
    - Offering: Manufacturing and Supply Chain Materials Maintenance
    - Functional Area: Inventory Management
    - Task: Manage Account Aliases
2. Select an organization.
3. Enter a unique account alias name and description.
4. Enter the general ledger account to which you charge all transactions that use this account alias.

    You can change this account only if the account alias hasn't been referenced.

5. Enter the start date on which the account alias is enabled. The date must be greater than or equal to the current date.
6. Click **Save**.

FAQs for Account Aliases

What's an account alias?

An account alias is an alternate name for an account number, and is used to more easily identify an account when performing a transaction.

You can select an account alias as a demand source when performing a reservation; you can also select an account alias as a transaction source when performing a miscellaneous transaction.

How can I inactivate an account alias?

On the Manage Account Aliases page, search for and select an account alias. Enter the date you want the account alias to become inactive in the End Date field. As of this date, you can no longer use the account alias.

The date must be greater than or equal to both the start date and the current date.

Transaction Sources and Types

Transaction Types

A transaction type is used to classify transactions. Examples of transaction types are Purchase Order Receipt, Sales Order Issue, and Inventory Subinventory Transfer. You can define transaction types on the Manage Inventory Transaction Sources and Types page.

Transaction types are combinations of:

- Transaction sources
- Transaction actions

Transaction Sources

A transaction source is the type of entity against which a transaction is charged. Along with a transaction action, a transaction source uniquely identifies a transaction type. Examples of transaction sources are Purchase Order, Sales Order, and Inventory.

Transaction Actions

A transaction action is a system-defined type of material movement or cost update. Examples of transaction actions are Receipt into Stores, Issue from Stores, and Subinventory Transfer.

Example of Defining a Transaction Source and Transaction Type

This scenario illustrates how you can define a transaction source and transaction type for a particular business need:

Scenario

Your organization frequently donates items that you manufacture to charity. You might want to define a transaction source called "Charity" and a transaction type called "Issue to Charity", using the "Issue from Stores" transaction action. When you donate an item to charity, you create a miscellaneous transaction using the Issue to Charity transaction type.

FAQs for Transaction Sources and Types

What happens if I enable status control for a transaction type?

The transaction type for which you enable status control becomes an allowed transaction type for new material statuses that you create.

When material status control is enabled for a transaction type and you're creating or editing a material status, you can choose to leave transactions of that transaction type as allowed, or disallow transactions of that transaction type. If you don't enable status control for a particular transaction type, transactions of that transaction type are always allowed.

What's a transaction source?

A transaction source is the type of entity against which a transaction is charged. Examples of transaction sources include purchase orders, sales orders, and inventory.

Can I export user-defined transaction types with seeded transaction sources?

No, seeded transaction sources aren't exported. So, all transaction types under a seeded source, also aren't exported.

You can export user-defined transaction types with user-defined transactions sources.

Here's how to export user-defined transaction types and sources:

1. In the Setup and Maintenance work area, go to the **Inventory Management** functional area:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
2. For the **Manage Inventory Transaction Sources and Types** task, select the **Actions** button.
3. From the **Actions** drop down, select **Export to CSV File**.
4. Select **Create New**. This opens the Export Setup Data to CSV File page.
5. On the Export Setup Data to CSV File page, click the **Submit** button.
6. Click **OK** in the Confirmation window to return to the Setup and Maintenance work area.

Note: If the **Actions** icon doesn't already display as a column, you must enable it. From the **View** menu, select **Columns** > **Actions**. The **Actions** icon now displays as a column on the page.

Related Topics

- Export and Import CSV File Packages

Default Stocking Unit of Measure

Default Stocking Unit of Measure for Inventory Management

Use the default stocking UOM to specify the units of measure to stock material within your warehouse.

You can use the default stocking UOM to process inventory transactions and replenish inventory. You can also use the default stocking UOM across all other inventory activities such as receiving, picking, cycle counting, and physical counting.

Take a look at some important considerations for using the default stocking UOM:

- Benefits
- Considerations
- Setup
- Details

Benefits

Here are the main benefits of using the default stocking UOM:

- Ability to store the same item in multiple packing configurations

  In the Healthcare industry, it is common to transact and store the same item in multiple packing configurations. For example, a hospital may store bandages in one subinventory in cases of 100. The hospital might also store the same item in another subinventory in cases of 5. When performing inventory transactions, it's critical that your organization process inventory transactions and stores material in the correct stocking UOM.
- Reduction in user error when performing inventory replenishment activities

  For example, when replenishing PAR locations, using the default stocking UOM ensures that the application creates the replenishment request document in the correct ordering UOM. This avoids costly mistakes that can occur when material is replenished in an incorrect stocking UOM.
- Flexibility

  You also have the flexibility to set up the stocking UOM for an item at the inventory organization level, subinventory level, or both levels.

Using the default stocking UOM improves inventory processing times, accuracy, and visibility by ensuring that inventory transactions are processed and stored in the correct stocking UOM.

Considerations

Consider how you plan to implement units of measure usages within your organization. You can define item units of measure usages at the inventory organization level, subinventory level, or both levels. If you plan to stock an item in the

same UOM across all subinventories, you can define the UOM at the inventory organization level. However, if you plan to stock an item in different UOMs based on subinventory, you should define UOM usages at the subinventory level.

Setup

To use default stocking units of measure for your inventory transactions, you must first enable the Enable Units of Measure Usages feature. Once enabled, you can access the Manage Units of Measure Usages task from the Setup and Maintenance work area.

In the Setup and Maintenance work area, use the Manage Units of Measure Usages task.

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Units of Measure Usages

You must enter both an inventory organization and item when defining unit of measure usages.

Once you define a unit of measure usage, it's available on the inventory Management transaction pages. For example, if you define a stocking UOM of **Box of 5** for the item UOM-1000 on the Manage Units of Measure page, that stocking UOM (**Box of 5**) automatically defaults when you create an inventory transaction such as a miscellaneous receipt. Once you enter the subinventory on the transaction line, the stocking UOM automatically defaults.

Details

Here are some details for the default stocking unit of measure for inventory transactions:

- The Manage Item Quantities page displays the item quantities in the primary and secondary UOMs instead of the default stocking UOM.
- When performing transactions, the stocking UOM automatically defaults. However, you can choose to override the default stocking UOM.
- When UOM conversion calculations result in fractional quantities for replenishment orders, the application rounds quantities to the next highest integer.
- Drop shipments, Outside Processing (OSP), and return material authorization (RMA) flows don't use default stocking UOM. These processes use the primary UOM.

How You Use the Default Stocking UOM for Inventory Management

The default stocking unit of measure enables your organization to store the same item in multiple stocking unit of measures (UOM).

You can define stocking unit of measures at the organization level, subinventory level, or both levels. This setup configuration enables you to automatically default the stocking UOM when performing inventory transactions.

With the default stocking UOM, you can ensure that your organization uses the correct stocking UOM when replenishing, storing, counting, reconciling, and issuing material. Additionally, your organization can comply with specific industry requirements, such as those within the healthcare industry.

Here's how you can use the default stocking UOM:

- Processing inventory transactions

- Replenishing inventory
- Across all inventory activities

Processing Inventory Transactions

You can use the default stocking unit of measure across all inventory management activities to default the stocking UOM when processing inventory transactions. For example, when creating a miscellaneous receipt transaction, the UOM name automatically defaults once you select the subinventory on the transaction line. In addition, the application transacts and stores the miscellaneous receipt in the correct stocking UOM.

Replenishing Inventory

You can create inventory replenishment requests in the source organization's stocking UOM. The **Ordering UOM** field appears in the Sourcing region of the Manage Item Subinventories page. It's a read-only field and automatically defaults once you select the source organization and subinventory. This field represents the UOM associated with the source of the replenishment.

For example, if the source organization stores material in the stocking UOM named **Case of 100**, the ordering UOM associated with the replenishment request document is also put in the stocking UOM named **Case of 100**. If you configured the sourcing setup to generate an interorganization transfer order, then the associated transfer order is also generated in the UOM **Case of 100**. Using the stocking UOM reduces error and ensures that your organization creates replenishment requests in the correct UOM.

Across All Inventory Activities

Use the default stocking UOM when performing receiving activities such as receiving, inspecting, putting away, and returning material. For example, the stocking UOM automatically defaults when performing a put away transaction for supply documents such as a purchase orders, interorganization shipments, or transfer orders. The receiving process is streamlined by ensuring material is received and put away in the correct stocking UOM. Additionally, in the event that you need to return material, you can use the default stocking UOM when returning material. The stocking UOM displays in the receiving transaction history providing you with the ability to view the individual receiving transactions and the associated stocking UOM.

Use the default stocking UOM when processing and confirming shipments. Perform pick, pack, and ship process flows with the default stocking UOM. For example, the shipment line displays the requested quantity and shipped quantity in the default stoking UOM. When performing packing activities, you can view the quantity, requested quantity and shipped quantity shown in in their respective stocking UOM for each line. Quick Ship flows can also default the appropriate stocking UOM.

> **Note:** Drop shipments, Outside Processing (OSP), and return material authorization (RMA) flows don't use default stocking UOM. They use the primary UOM.

Set Up Default Stocking UOM for Inventory Management

To set up a default stocking UOM for inventory, complete these steps:

1. Enable the Units of Measure Usages feature.

   Once enabled, you can access the Manage Units of Measure Usages task in the Inventory Management functional area.

2. Access the Manage Units of Measure Usages task.

   In the Setup and Maintenance work area, use the Manage Units of Measure Usages task.

   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Inventory Management
   - Task: Manage Units of Measure Usages

You can define units of measure usages in the context of an inventory organization and item. You must enter both an inventory organization and item when defining unit of measure usages.

Once you define a unit of measure usage, it's available on the inventory Management transaction pages. For example, if you define a stocking UOM of **Box of 5** for the item UOM-1000 on the Manage Units of Measure page, that stocking UOM (**Box of 5**) automatically defaults when you create an inventory transaction such as a miscellaneous receipt. Once you enter the subinventory on the transaction line, the stocking UOM automatically defaults.

FAQs for Default Stocking Unit of Measure

Can I configure unit of measure usages for an item at different levels?

Yes, you can configure units of measure usages for an item at the inventory organization level, subinventory level, or at both levels.

If you plan to stock an item in the same UOM across all subinventories, you can define the UOM at the inventory organization level. However, you if plan to stock an item in different UOMs based on subinventory, you should define UOM usages at the subinventory level.

Can I override the default stocking UOM?

Yes, you can override the default stocking UOM when performing inventory, receiving, and shipping transactions.

ABC Analysis

Overview of ABC Analysis

ABC analysis is an inventory categorization technique, which determines the relative value of a group of inventory items based on a user-specified valuation criterion.

Using ABC analysis you can identify items that will have a significant impact on overall inventory cost, while also identifying different categories of stock that will require different management and controls. ABC refers to the ranking you assign your items in order of their estimated importance suggesting that inventories of an organization aren't of equal value, such as items classified as:

- A items are very important for an organization and are very tightly controlled and accurate records are maintained

- B items are important, but less important than A items and more important than C items and are less tightly controlled and good records are maintained
- C items are marginally important with the simplest controls possible and minimal records are maintained

Typically, you use ABC analysis as the basis for defining the frequency in which items are cycle counted. The frequency with which you count your items depends upon criticality of the item, cost of the item, lead time of the item, past stock movements of the item as well as other criteria.

Set Up ABC Information

This example demonstrates how to set up ABC classes, create ABC classification sets, and perform ABC assignments to perform ABC analysis. You set up ABC information in the Setup and Maintenance work area.

This table summarizes the key decisions for ABC analysis:

Decisions to Consider	In This Example
How to determine relative ranking of each item?	Create an ABC class
How to arrange the items in the decreasing order based on the defined criteria?	Create an ABC classification set
How to associate ABC classes with ABC classification sets?	Create ABC assignment groups
How to associate items to ABC classes within an ABC assignment group?	Perform ABC assignments
Can we update ABC assignments?	Yes
Can we purge an ABC assignment group?	Yes

Summary of the Tasks

In the Setup and Maintenance work area, you set up ABC information to perform ABC analysis:

1. Create an ABC class
2. Create an ABC classification set
3. Create ABC assignment groups
4. Perform ABC assignments
5. Update ABC assignments
6. Purge ABC assignment group

Creating an ABC class

You use ABC classes to identify the value groupings to which your items belong. You define these classes using your own terminology. For example, you might define classes A, B, and C, and later assign your items of highest rank to the

A class, those of lower rank to the B class, and those of lowest rank to the C class. You can add to the list of classes you have already defined.

To create a new ABC class:

1. In the Setup and Maintenance work area, go to the Manage ABC Classes task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classes
2. On the Manage ABC Classes page, click **Actions** > **Add Row**.
3. Enter the name in the **ABC Class** column.
4. Enter a date on which the class becomes active in the **Start Date** column.
5. Enter a date on which the class becomes inactive in the End Date column.
6. Click **Save and Close**.

Creating an ABC Classification Set

You define an ABC classification set for your organization or for a specific subinventory within your organization. You select the classification set criterion, the scope of your analysis, and any additional information that may be conditionally necessary, based on your classification set criterion.

To create a new ABC classification set:

1. In the Setup and Maintenance work area, go to the Manage ABC Classification Sets task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classification Sets
2. On the Select Organization dialog box, select an organization and click **OK**.
3. On the Manage ABC Classification Sets page, click **Actions** > **Create**.
4. On the Create ABC Classification Sets dialog box, enter a name for the ABC classification set.
5. Select one of the these values for **Content Scope**:

Value	Context
Organization	To evaluate items in the entire organization against the criteria set in the ABC classification set.
Subinventory	To evaluate items for their rankings against other items in the subinventory and not the entire organization. Select the subinventory to which you want to restrict the valuation. Additionally, select the value for Valuation Scope. If you want to restrict items only to the subinventory, select the valuation scope as Subinventory, but if you want the ranking done organization wide, select the valuation scope as Organization.

6. Select a value for **Criteria** and accordingly set the start date and end dates.
7. Click **Submit**.

Creating ABC Assignment Groups

You define an ABC assignment group to associate ABC classes with an ABC classification set. You assign items to ABC classes within a particular group. This lets you assign items to different ABC classes in different groups.

You use the data on the ABC Classification Set Items page as a guide when assigning items to ABC classes. On the ABC Classification Set Items page, you analyze the item data and decide which value (sequence, inventory, item percentage, or value percentage) to specify as the cutoff point of an ABC class.

To create an ABC assignment group:

1. In the Setup and Maintenance work area, go to the Manage ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups
2. On the Manage ABC Assignment Groups page, click **Actions** > **Create**.
3. On the Create ABC Assignment Group dialog box, enter a name for the ABC assignment group.
4. Select an ABC classification set. In the ABC Classes table, enter the sequence number in which classes are ordered and enter the name of the class to use with this ABC group.

    > **Note:** The lower the sequence number the higher the importance of the class.

5. Click **Save and Close**.

Performing ABC assignments

You can assign and update ABC classes to an ABC assignment group where an ABC classification set was also entered. From the ABC Classification Set page you determine the cutoff points (sequence, inventory, item percentage, or value percentage) for assigning ABC classes. You can then use the classifications for other purposes such as determining how often you cycle count a given item.

To perform ABC assignments:

1. In the Setup and Maintenance work area, go to the Manage ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups
2. On the Manage ABC Assignment Groups page, search for the ABC assignment group and click **Actions** > **Perform ABC Assignments**.
3. On the ABC Assignments page, enter the cutoff points for each ABC class. Each ABC class must have at least one item assigned to it, and all items in the ABC classification set must be assigned to an ABC class. Complete any of the fields, as shown in this table.

Field	Context
Sequence	The sequence number from the ABC Classification Set page for the last item to be included in each ABC class.

Field	Context
Inventory Value	The cumulative value from the ABC Classification Set page for the last item to include in each ABC class.
Item Percentage	The percentage of number of items from the ABC Classification Set page to include in each class.
Value Percentage	The percentage of total value from the ABC Classification Set page to include in each class.

Note: For the Inventory Value, Item Percentage, and Value Percentage fields, if the value entered doesn't exactly match any item, the first item with a value greater than the value entered is allocated.

4. Click **Save and Close**.

Updating ABC Assignments

You can change the class into which an item falls as a result of the automatic ABC assignment process if it isn't appropriate. You can update an ABC group to include those items that weren't a part of the initial ABC classification set. By updating the ABC group, you can expand the scope of your existing ABC classification sets without having to rerun any processes.

To update ABC assignments:

1. In the Setup and Maintenance work area, go to the Manage ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups
2. On the Manage ABC Assignment Groups page, search for the ABC assignment group and search for the ABC assignment group and click **Actions** > **Update ABC Assignments**.
3. On the Update ABC Assignments page, enter an inventory item and a valid ABC class.
4. Click **Save and Close**.

Purging an ABC Assignment Group

You can purge an ABC group to delete all item assignments to ABC classes for the assignment group, as well as the ABC group itself. By purging an ABC classification set, you delete all item values and ranking for the ABC classification set, as well as the ABC classification set itself.

Note: You can purge an ABC classification set only when no ABC groups are using it.

1. In the Setup and Maintenance work area, go to the Manage ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups

2. On the Manage ABC Assignment Groups page, search for the ABC assignment group.
3. Select a row in the search results and click **Actions** > **Purge ABC Assignment Group**.

Related Topics

- ABC Classes
- ABC Classification Sets
- ABC Assignments

Predefined ABC Information

When you create a new inventory organization using Quick Setup, the INV_ORG_DEP_SEED_DATA_PUB.create service is run, which creates predefined ABC classes, an ABC Classification Set, and an ABC Assignment Group. This predefined ABC information uses criteria common to most companies.

Predefined ABC Classes

The INV_ORG_DEP_SEED_DATA_PUB.create service creates predefined ABC classes for the organization in the selected language.

These classes can be used for the ABC classification set of the newly created inventory organization.

This table lists the ABC classes created by the INV_ORG_DEP_SEED_DATA_PUB.create service:

Name	Description
Class A	High
Class B	Medium
Class C	Low

Note: You can edit the classes to update the names and descriptions.

Predefined ABC Classification Set

The INV_ORG_DEP_SEED_DATA_PUB.create service creates a predefined ABC classification set. The ABC classification set is an ordered list of the items in the organization used to make the ABC assignments in the newly created inventory organization. The predefined ABC classification set is not automatically submitted because you will not have loaded your inventory items into the application. Once you load your inventory items, you must manually resubmit the ABC classifications set and then use the ABC assignment group to perform the ABC assignments.

This table lists the criteria used to create the predefined ABC classification set:

Field	Value
Name	On-hand Value
Description	On-hand value of items in the organization
Content Scope	Organization
Criteria	Current on-hand value

Predefined ABC Assignment Group

The INV_ORG_DEP_SEED_DATA_PUB.create service creates a predefined ABC assignment group, which is used to link the ABC classification set with the ABC classes.

This table lists the ABC assignment group and the linked ABC classification set and ABC classes:

Assignment Group Name	ABC Classification Set	ABC Class
Assignment Group	On-hand Value	Class A
Assignment Group	On-hand Value	Class B
Assignment Group	On-hand Value	Class C

ABC Classes

ABC Classes

You use ABC classes to identify the value groupings to which items belong.

You can define these classes using your own terminology. For example, you can define classes High, Medium, Low, and later assign items of highest rank to High, those of lower rank to Medium, and those of the lowest rank to Low.

Typically, ABC refers to the ranking you assign your items in the order of their estimated importance suggesting that the inventories of an organization aren't of equal value, such as:

- A items are very important for an organization and are very tightly controlled and accurate records are maintained.
- B items are important, but less important than A items and more important than C items and are less tightly controlled and good records are maintained.
- C items are marginally important with the simplest controls possible and minimal records are maintained.

You can use ABC classes to group items for a cycle count where you count A items more frequently than B items. When you use ABC classes in this way, you perform an ABC analysis and assign items to classes based on the results of that analysis.

Delete ABC Classes

To delete an ABC class:

1. In the Setup and Maintenance work area, go to the Manage ABC Classes task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classes
2. On the Manage ABC Classes page, search for a class.
3. Select the ABC class and click **Actions** > **Delete**.
4. Click **Save and Close**.

Note: You cannot delete an ABC Class that is in use in cycle count or in ABC Assignment Group Classes.

FAQs for ABC Classes

What happens when I purge ABC information?

You purge an ABC group to delete all item assignments to ABC classes for the assignment group, as well as the ABC group itself. Purging an ABC classification set deletes all item values and ranking for the ABC classification set you specify, as well as the ABC classification set itself.

Note: You cannot purge ABC information that is being used; for example, an ABC classification set is not purged if it is associated to an ABC assignment group.

ABC Classification Sets

ABC Classification Sets

You use an ABC classification set to classify some or all of an organization's items based on the scope and criteria specified in order to divide them into ABC classes for use in ABC analysis and cycle counting.

You can define and compile an ABC analysis for your entire organization or for a specific subinventory within your organization. You select the criterion, the scope of your analysis, and any additional information that may be conditionally necessary, based on your criterion. The combination of all these parameters constitutes an ABC

classification set, identified by the ABC classification set name. You use this name to identify any activity pertaining to this ABC analysis.

ABC Classification Set Criteria

For each ABC classification set, you select one criterion to value and rank each item included in the ABC classification set. The criterion that you select defines the ranks of items in the ABC classification set.

The following table lists the ABC classification set criteria to value and rank each item included in the ABC classification set.

ABC Classification Set Criteria	Usage
Current on-hand quantity	Use the current on-hand quantity of inventory. Assign the sequence number in the descending order of quantity.
Current on-hand value	Use the current on-hand quantity of inventory times the item cost. Assign the sequence number in the descending order of value.
Current item cost	Use the current item cost to rank items based on their individual item cost.
Historical number of transactions	Use the historical number of transactions (transaction history) for the specified time period. Assign the sequence number in the descending order of the number of transactions.
Historical usage quantity	Use the historical usage quantity (transaction history) for the specified time period. Assign the sequence number in the descending order of quantity.
Historical usage value	Use the historical usage value (transaction history). This is the sum of the transaction quantities times the unit cost of the transactions for the specified time period. Assign the sequence number in the descending order of value.
Previous cycle count adjustment quantity	Use the previous cycle count adjustment quantity. This is the sum of the value of all cycle count adjustments since the last ABC classification set submission date. Assign the sequence number in the descending order of quantity.
Previous cycle count adjustment value	Use the previous cycle count adjustment transaction value. This is the sum of the value of all cycle count adjustments since the last ABC classification set submission date. Assign the sequence number in the descending order of value.

For example, if you use Current on-hand quantity as your compile criterion, an item with an on-hand quantity of 10 units is of higher rank than another item with a quantity of 5 units. If you use the Current on-hand value criterion, and the first item has a cost of $10 per unit and the second item has a cost of $25 per unit, the second item has a higher value than the first item because $100 ($10*10 units) is compared to $125 ($25*5 units).

ABC Classification Set Content Scope

When creating an ABC classification set, you can determine the ranking of items in an ABC classification set by using this content scope:

- Organization: where all items in the organization are included in the ABC classification set, which includes the items with zero cost or zero quantity.
- Subinventory: where you can restrict your ABC classification set to items within a particular subinventory. Additionally, you can value your items across all subinventories in the organization or just the one for which you have restricted the ABC classification set.

ABC Classification Set Items

ABC classification set items are items in the ABC classification set. These items are listed in descending order based on the criteria associated with the classification set. The item with the highest value is listed first and the subsequent ones in the descending order.

You use the ABC classification set items as a guide when assigning items to ABC classes. On the ABC Classification Set Items page, you can analyze the sequence numbers of items and decide which sequence number to specify as the cutoff point of an ABC class. You can specify the cutoff point for the ABC class on the Perform ABC assignments page.

Examples of ABC Classification Item Ranking

The ranking of the same items changes depending on whether you select an individual subinventory or the entire organization for the content scope, as well as whether the valuation scope is subinventory or organization.

The following scenarios show how the ranking of the same items changes depending on the content and valuation scope. In all examples, item WIDGET1 has an on-hand quantity of 5 units in subinventory STORES1. The same item also exists in other subinventories in your organization, for a total on-hand quantity of 30 units in the entire organization. Item WIDGET2, has an on-hand quantity of 10 units in STORES1 and a total on-hand quantity of 20 units in the entire organization. Item WIDGET3, has an on-hand quantity of 20 units in STORES2 and a total on-hand quantity of 40 units in the entire organization.

The ABC classification set criteria is Current on-hand quantity.

Content Scope is Organization

If you select the content scope for the ABC classification set as organization, WIDGET1, WIDGET2, and WIDGET3 are included in the ABC analysis. In the ABC analysis, 40 units for WIDGET3, 30 units for WIDGET1, 20 units for WIDGET2 are used, and WIDGET3 is ranked higher than WIDGET1 and WIDGET2.

Content Scope is Subinventory

If you select the content scope for the ABC classification set as subinventory STORES1, only WIDGET1 and WIDGET2 are included in the ABC analysis because they both exist in STORES1. However, the value to use is determined by what you select in the valuation scope. If you select to restrict valuation to the subinventory, 5 units for WIDGET1 and 10 units

for WIDGET2 are used, and WIDGET2 is ranked higher than WIDGET1. However, if you select to value the same items across the organization, 30 units for WIDGET1 and 20 units for WIDGET2 are used, and WIDGET1 is ranked higher than WIDGET2.

Resubmit an ABC Classification Set

To resubmit an ABC classification set:

1. In the Setup and Maintenance work area, go to the Manage ABC Classification Sets task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classification Sets
2. On the Manage ABC Classification Sets page, search for the ABC Classification Set.
3. Select a row in the search results and click **Actions** > **Resubmit ABC Classification Set**.

View an ABC Classification Set Item

To view the ABC classification set items:

1. In the Setup and Maintenance work area, go to the ABC Classification Sets task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classification Sets
2. On the Manage ABC Classification Sets page, search for the ABC Classification Set.
3. Select a row in the search results and click **Actions** > **View ABC Classification Set Items**.

   The information in the ABC Classification Set Items page is different depending on the selected criteria. After determining each item's value, all the items in your ABC classification set are ranked in the descending order on the ABC Classification Set page. You can use this information as a guide in assigning your items to ABC classes.

Purge an ABC Classification Set

To purge an ABC classification set:

1. In the Setup and Maintenance work area, go to the Manage ABC Classification Sets task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Classification Sets
2. On the Manage ABC Classification Sets page, search for the ABC Classification Set.
3. Select a row in the search results and click **Actions** > **Purge ABC Classification Set**.

Note: You cannot purge an ABC classification set if it is used in an ABC Assignment Group.

Related Topics

- Purge ABC Classification Set

FAQs for ABC Classification Sets

What happens when I resubmit an ABC classification set?

When you resubmit an ABC classification set, the items for the classification set are re-sequenced according to current values of the classification set criteria.

How can I rank items only in a subinventory but base the valuation ranking on the organization?

To rank the items at the subinventory level but base the valuation ranking on the organization, select the content scope as subinventory and then select the valuation scope as Organization.

What's the difference between the Historical Usage Quantity and Historical Usage Value criteria options for ABC classification sets?

Historical Usage Quantity ranks items in the ABC classification set by the quantities that the items have been used historically, for the period that you specify.

Historical Usage Value ranks items in the ABC classification set by their historical values, which is the sum of the transaction quantities times the unit cost of the transactions for the time period that you specify.

ABC Assignment Groups

ABC Assignment Groups

ABC assignment groups link a particular ABC classification set with a valid set of ABC classes. You selectively reduce or increase the number of ABC classes you want to use in your item assignments for a particular ABC classification set.

For example, you have five classes, A, B, C, D, and E, defined for your organization where you perform your ABC analysis by subinventory. The first subinventory is rather small. You need only three classes in which to divide your items. You define an ABC group, associating the ABC classification set for the first subinventory with the classes A, B, and C. The second subinventory for which you associate an ABC classification set is much larger. There are five distinct value groupings of items. You define a second ABC group, associating the ABC classification set for the second subinventory with all five classes defined for your organization, A, B, C, D, and E.

These groups are used when you automatically assign your items to ABC classes. It ensures that you divide your items into the exact number of groupings you specified in the ABC group. You can assign the same item to different ABC classes in two different ABC assignment groups. You must also assign a sequence number to each class associated with the ABC group. The class with the lowest sequence number is assumed to have the highest rank and will have higher rank items assigned to that class than the next higher sequence number. Using the A, B, and C classes in the example, you might assign the A class a sequence number of 1, the B class a sequence number of 2, and the C class a sequence

number of 3. (Sequence numbers 10, 20, and 30 would give the same result.) When you later assign your items to ABC classes, the first grouping of items in the descending value list are assigned to class A, the next to B, and the last to C.

You may update an assignment group to add new classes. However, you cannot delete a class. If you need to delete a class, you must create a new assignment group with only the desired classes.

You can use ABC assignment groups with cycle counting, for example to specify that A items are counted more frequently than B items.

Note: An ABC assignment group must have at least one ABC class associated to it.

Edit ABC Assignment Groups

To edit an ABC assignment group:

1. In the Setup and Maintenance work area, go to the ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups
2. On the Manage ABC Assignment Groups page, search for the ABC assignment group and click **Actions** > **Edit**.
3. On the Edit ABC Assignment Group page, select the ABC classes you want to add to your item assignments for the ABC classification set.
4. Click **Save and Close**.

Delete ABC Assignment Groups

To delete an ABC assignment group:

1. In the Setup and Maintenance work area, go to the Manage ABC Assignment Groups task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage ABC Assignment Groups
2. On the Manage ABC Assignment Groups page, search for the ABC assignment group and click **Actions** > **Delete**.

Note: You can't delete an ABC assignment group if it's used in a cycle count.

ABC Assignments

When you define ABC assignments, you must specify the cutoff point for each ABC class. Each ABC class must have at least one item assigned to it and all items in the ABC classification set must be assigned to an ABC class.

You need to provide at least one of the four values against the ABC classes. The last ABC class is automatically associated with the remaining items based on the entries for other ABC classes.

Guidelines for Performing ABC Assignments

Use the Perform ABC Assignments page to draw dividing lines on your ABC classification set items, dividing them into classes based on the ABC classification set criteria for the purpose of counting and reporting. You have options on how to differentiate the different item classes.

You can assign and update ABC classes to an ABC assignment group where an ABC classification set was also entered. You can use the ABC Classification Set Items report to assign items to ABC classes and to decide which value (sequence, inventory, item percentage, or value percentage) to specify as the cutoff point of an ABC class. You can then use the classifications for other purposes such as determining how often you cycle count a given item.

On the Perform ABC Assignments page, the fields not specified by you are dynamically calculated. The values for the last ABC class are automatically calculated when you specify a value for the second to last ABC class.

Here are the important options for the ABC Assignment Criteria table on the Perform ABC Assignments page:

Field	Description
Sequence	The sequence assigned to the item on the classification set. Entering the item's sequence here means that every sequence before the value entered here is Class A. The cumulative **Inventory Value** and **Item Percentage** default for all Class A items up to this sequence. If a customer enters another sequence for Class B. All items after Class B default to Class C. The last class in the ABC assignment group defaults to the last sequence in the ABC classification set.
Inventory Value	The inventory value of the item on the ABC classification set. Entering the item's inventory value here means every item with an inventory value before what's entered here is Class A. The corresponding classification set **Sequence** and cumulative **Item Percentage** default for all Class A Items up to this inventory value. If a customer enters another inventory value for Class B, all items after Class B default to Class C. The last class in the ABC assignment group defaults to the last sequence in the ABC classification set.
Item Percentage	The percentage of total items on the ABC classification set. For example, entering 10 here means the first 10% of the items on the ABC classification set are Class A. The corresponding classification set **Sequence** and cumulative **Inventory Value** default for all Class A items up to this item percentage. If a customer enters another item percentage for Class B, all items after Class B default to Class C. The last class in the ABC assignment group defaults to the last sequence in the ABC classification set.
Value Percentage	The percentage of the total value of the items on the ABC classification set. For example, entering 10 here means 10% of the items starting with the highest value are assigned to Class A. The corresponding classification set Sequence, cumulative **Sequence**, cumulative **Item Percentage**, and **Inventory Value** default for all the class A items up to the items designated in the 10%. Example: When the ABC classification set is run with criteria involving the value (on-hand value, item cost, usage value, and so forth), then along with the quantity and cumulative quantity, we will also have ABC classification set value and cumulative value. So, say the total cumulative value for all items is 100,000 USD. Now the user can specify that 10% of the top items by value fall in class A. So, the

Field	Description
	UI determines the number of sequences that fall within the cumulative value of 10,000 USD (10% of 100,000). And this sequence and other values default.

Rounding

Based on the percentages entered on the ABC Assignments page, the calculation can result in a decimal number. That decimal number is then rounded up to perform the calculations.

For example, say the number of items in the ABC classification set is 115 and you want the top 10% of items to belong to class A. With this, the number of items are calculated for the top 10%, which comes out to 11.5 items (sequence). Now to make sure we have an integer number of items (sequences) included in the class, the sequence is rounded up to 12. Once the sequence changes to 12, the percentage is recalculated. In this case it recalculates to: (12/115)*100=10.43.

So, you can specify the ABC Assignment criteria in any way (using **Item Percentage** or **Inventory Value**), but all of this drives the actual items to be included in that class for which the sequence is calculated. And if that sequence is a fraction, it's rounded up. And once it rounds up, the other values are recalculated.

Guidelines for Updating ABC Assignments

If you're not satisfied with the class into which an item falls as a result of the automatic ABC assignment process, you can change it.

For example, assume you compiled your ABC analysis based on historical usage value. You have a relatively new item in your inventory that was ranked lower in your ABC Classification Set Items report since it has very little transaction history on record. Therefore, after the assignment process, this item was assigned to a class of low rank. However, you know that in the future, this item will have a high usage value and should really be classified as a high rank item. You use the Update ABC Assignments page to reclassify this item to now be a high rank item.

You can also update an ABC group to include those items that weren't a part of the initial ABC classification set. You can expand the scope of your existing ABC classification sets without having to rerun any processes. For example, if you start stocking a new item in your inventory, you can make it a part of your existing ABC groupings through the update process. Otherwise, you would have to start all over by recompiling your ABC analysis and reassigning your items to ABC classes. With the whole process starting from the very beginning, you also run the risk of losing any changes you might have made to your item assignments.

FAQs for ABC Assignment Groups

When do I update ABC item assignments??

You update the ABC item assignments when you need to:

- Update the class into which an item falls.
- Include those items that were not included in the ABC classification set items.
- Add items that are new to the company.

Note: This is an optional step and only needs to occur on an as-needed basis.

What happens when I purge an ABC assignment group?

Purging an ABC assignment group deletes all ABC class assignments to the ABC assignment group, as well as the ABC assignment group itself.

Inventory Transaction Reasons

Inventory Transaction Reasons

An inventory transaction reason is a standard means of classifying or explaining the reason for a transaction, and can be used when performing any type of material transaction.

For example, you could define the inventory transaction reasons of Theft, Misplaced Items, and Damaged Items for classifying adjustment transactions when performing a cycle count or physical inventory count.

FAQs for Inventory Transaction Reasons

What happens if I select a reason type and reason context for an inventory transaction reason?

The transaction reason will only be available when you perform an inventory transaction in the reason type and reason context that you select.

For example, if you create an inventory transaction reason with a reason type of Receiving and a reason context of Change Subinventory/Locator, the user will only be able to select that transaction reason when the user is in Receiving and moving material to a different subinventory and locator combination.

Why did I get the partial picking error INV_PICK_NO_QTY_EXCEPTION?

You can get the INV_PICK_NO_QTY_EXCEPTION error when the pick transaction is submitted for confirmation with a quantity different then the requested quantity (partial picking), and a picking exception wasn't provided.

When the **Capture Picking Exceptions** option is setup for the inventory organization level, you must also define a picking exception reason for the **Manage Inventory Transaction Reasons** task. As an example, you can select **Pick** for the reason type and **Short pick** for the reason context.

First, confirm the **Capture Picking Exceptions** option is enabled:

1. In the Setup and Maintenance work area, go to the **Manage Inventory Organization** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Inventory Organization
2. Search for your organization.
3. Click **Manage Organization Parameters**.
4. Click the Item Sourcing Details tab.

5. Confirm that the **Capture picking exceptions** check box is selected.

Then, set up up picking exception reasons:

1. In the Setup and Maintenance work area, go to the **Manage Inventory Transaction Reasons** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Inventory Transaction Reasons
2. Create a picking exception reason and enter these values:
    - Reason Type: Pick
    - Reason Context: Short pick

Item Transaction Defaults

Item Transaction Defaults

An item transaction default specifies the default subinventory or locator for an item when the specified inventory, shipping, or receiving transaction is performed on that item. This improves inventory processing time and your warehouse personnel don't have to identify and enter that information manually.

You can create item transaction defaults for these transaction types:

- Account alias issue
- Account alias receipt
- Account issue
- Account receipt
- Direct interorganization transfer
- Miscellaneous issue
- Miscellaneous receipt
- Movement request
- Receiving
- Shipping
- Subinventory transfer

Note that for movement requests, if a user doesn't specify a locator when transacting an item into a locator-controlled subinventory that you specify as the item transaction default, the application determines the put-away locator.

Related Topics

- Set Up Item Transaction Defaults

Set Up Item Transaction Defaults

Set up item transaction defaults so that you can automatically default the subinventory and locator for an item when performing transactions. This default is based on the transaction type and item.

Here's how to set up an item transaction default:

1. In the Setup and Maintenance work area, go to the **Manage Item Transaction Defaults** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Item Transaction Defaults
2. Select an organization, if one isn't already selected.
3. Click **OK**.
4. Select **Add** from the **Actions** menu.
5. Enter the default subinventory and locator for each item transaction type.

    > **Note:** When executing an inventory transaction, this setup configuration is used to determine the default subinventory and locator.

6. Click **Save**.

Material Statuses

Material Status Control

Material status control restricts the movement and usage of portions of on-hand inventory.

Using material status control enables you to control whether you can pick or ship a sales order, or issue material for a sales order or account. You can also specify whether material needs to be quarantined until you inspect it. In addition, you can determine whether products with a particular status can be reserved, included in available to promise calculations, or netted in production planning.

This topic discusses:

- Material status control levels
- Material status transactions
- Cumulative effective status

Material Status Control Levels

You assign material statuses at the subinventory, locator, lot, and serial number levels.

When you assign a material status to a subinventory or locator, items are not assigned the material status of the subinventory or locator. Instead, items take on the behavior indicated by the material status that is assigned to the subinventory or locator.

To assign a material status to a lot or serial number, you must first enable the item attributes Lot Status Enabled and Serial Status Enabled on the item in the item master organization.

You can optionally assign a default lot or serial number status to an item in the item master organization. When you do so, the item retains the lot or serial number status through all inventory transactions, including interorganization transfers.

Material Status Transactions

When you create a material status, you select the allowed and disallowed transaction types for that material status. Note that you must enable status control for transaction types to make them available to allow and disallow. Transactions types for which you do not enable status control are always allowed.

Cumulative Effective Status

A cumulative effective status is the combination of all disallowed transactions. If a transaction is disallowed at the serial number, lot, locator, or subinventory level, the transaction fails. For example, if you have a locator whose status disallows miscellaneous issues, and that locator is in a subinventory whose status disallows sales order issues, you cannot perform transactions of either transaction type for material in that locator.

Related Topics

- What happens if I enable status control for a transaction type?

Considerations for Creating Material Statuses

Material statuses provide more flexible control of transacting material. For example, you can create a Damaged material status to disable damaged material from being shipped to a customer.

Before creating material statuses, you should:

- Determine if material statuses are necessary
- Determine allowed and disallowed transaction types
- Determine material statuses to define

Determining if Material Statuses are Necessary

Consider the needs of your organization, and whether it is necessary to create material statuses.

For example, if your organization operates on a small scale or you want to manage the statuses or items manually, it might not be necessary to create material statuses. By default, all the material is in Active status, which allows transactions with no restrictions.

Determining Allowed and Disallowed Transaction Types

Consider the needs of your organization, and the transaction types that should be allowed.

For example, damage to your warehouse's racks is making locations in the racks, and the material in those locations, inaccessible. You can create a material status to disallow transactions on the inaccessible material. Once the damaged racks have been repaired, you can create a material status to allow transactions on the material that is once again accessible.

Determining Material Statuses to Define

Consider the needs of your organization, and the material statuses that are necessary to define for your organization.

Following are examples of questions that you can ask when determining material statuses for your organization:

- What are the kinds of items that are handled in the warehouse?
- Does the consumption of material needs to be restricted when it needs to inspected for quality assurance?
- Should users be allowed to ship material, such as food or pharmaceuticals, to customers if the refrigerator storing the material is broken?

Lot Grades

Lot Grades

Use the Manage Lot Grades task in the Setup and Maintenance work area to define grades that you can associate with a lot for quality control purposes.

Grades are usually based on criteria such as color, size, or quality of the lot. For example, you can define lot grades such as excellent, average, or poor. Then, when you receive material that's in excellent condition, you can associate the lot grade of **Excellent** with the material. A grade is a characteristic of an item lot, and not a lot location.

FAQs for Lot Grades

What's a lot grade?

A lot grade is a rating that you assign to an item lot for quality control purposes. For example, the grade of a lot of paint could be excellent, average, or poor.

Lot Expiration Actions

Lot Expiration Actions

Use the Manage Lot Expiration Actions task in the Setup and Maintenance work area to define action codes to determine the action that you perform on a lot when it expires.

You can assign a lot action to an item if you set the item under shelf life control on the item master. You can determine a default expiration action on the item master, assign expiration actions on the lot master, or assign expiration actions when you transact an item.

FAQs for Lot Expiration Actions

What's a lot expiration action?

A lot expiration action determines that action that you perform on a lot when it expires.

Lot and Serial Attributes Mapping

Lot and Serial Attributes Mapping

Use the Manage Lot and Serial Attributes Mapping task in the Setup and Maintenance work area to assign lot and serial number attribute descriptive flexfield content to an item or item category.

The purpose of the Manage Lot and Serial Attributes Mapping page is to assign the context value of additional lot or serial attributes that you have defined in a descriptive flexfield to an item, a range of items, or an item category. You can either find existing mappings or define new mappings on this page. You can select either **Lot Attributes** or **Serial Attributes** for the **Flexfield Name** option. Then, select either a specific item, a range, or item category for the **Context Column** option. Finally, click the **Search** button. Existing assignments populate in the search results area.

Lot and Serial Descriptive Flexfields

Lot and serial descriptive flexfields provide you with the ability to create user-defined extension fields on the lot and serial pages. You can use descriptive flexfields to track additional information about a lot or serial number that's important and unique to your business.

Lot and serial descriptive flexfields can be context sensitive, where the information the application stores in the descriptive flexfield depends on other values entered in other parts of the UI. You can configure lot and serial descriptive flexfields so that you capture only those lot and serial attributes that you want or need.

The lot or serial context of an item specifies which lot or serial attributes need to be maintained for each item. For example, lot-controlled food products could include attributes such as best by date, grade, and age. While, lot-controlled textile products may include attributes such as length, thickness, and style. By specifying a context for the lot and serial attributes, you collect only those attributes that are appropriate for each item.

Lot and serial attributes populate when creating new lot and serial numbers. The receiver can default and override the descriptive flexfield attributes if required. When you receive against an existing lot, you may view, but not update the attributes of the existing lot. You can assign contexts to item categories allowing all lot-controlled items in a particular category to have the same context.

This topic provides information about these aspects of lot and serial descriptive flexfields:

- Global lot attributes
- Lot and serial attributes
- Attribute types

Global Lot Attributes

To ensure the consistency of lot attribute values across organizations, you can enable lot attributes as global attributes. The values of global attributes must be the same across organizations. You can update a global attribute. However, if you update a lot that exists in other organizations, then the attribute values are updated in the other organizations too.

Lot and Serial Attributes

Lot and serial numbers each have two different sets of attributes that you can use when defining a lot or serial descriptive flexfield.

- Lot Numbers: standard descriptive flexfield attributes based on table INV_LOT_NUMBERS
- Lot Attributes: additional descriptive flexfield attributes based on table INV_LOT_ATTRIBUTES
- Serial Numbers: standard descriptive flexfield attributes based on table INV_SERIAL_NUMBERS
- Serial Attributes: additional descriptive flexfield attributes based on table INV_SERIAL_ATTRIBUTES

You can view the lot and serial descriptive flexfields on the Record Lots and Serials page.

You define descriptive flexfields using INV_LOT_ATTRIBUTES and INV_SERIAL_ATTRIBUTES just like standard descriptive flexfield attributes. The difference is that you can also use the context for the INV_LOT_ATTRIBUTES and INV_SERIAL_ATTRIBUTES to default descriptive flexfield context values for an item or item category. You can't do this with INV_LOT_NUMBERS and INV_SERIAL_NUMBERS.

Attribute Types

There are three types of stored attributes. To help simply building the descriptive flexfields, attributes are stored in the date, number, and character fields.

This table shows the available date attributes:

Date Attribute	Description
Best by date	Date when the item quality becomes less or diminishes.
Change date	Date when an attribute of the lot or sub lot was last changed. Used by WMS only.
Maturity date	Date the lot matures and is ready for use.
Origination date	Date the lot is created. This is usually the date of manufacture. For example, the default origination date for a WIP completion is the date the job completes.
Retest date	Date the material needs to be retested to re-verify the quality. For example, you define an item descriptive flexfield to track how often to retest an item. This item attribute is used to default the retest date.

You can define up to ten distinct date attributes for any given lot or serial that contains information captured for the item. This information is stored in the D_ATTRIBUTE1 through D_ATTRIBUTE10 columns on the INV_LOT_NUMBERS and INV_SERIAL_NUMBERS tables.

Here are the available character attributes:

- Color
- Territory_code (country of origin)
- Date code
- Grade
- Place of origin
- Supplier
- Supplier lot number

You can define up to twenty distinct character attributes for any given lot or serial number that contains information captured for the item. This information is stored in the C_ATTRIBUTE1 through C_ATTRIBUTE20 columns on the INV_LOT_NUMBERS and INV_SERIAL_NUMBERS tables.

Here are the existing numeric lot attributes:

- Age (in days)
- Length
- Recycled content
- Thickness
- Volume
- Width

There are advantages to using numeric attributes in lot and serial descriptive flexfields. For example, if an allocation rule requires a calculation based on age, you can use the value in the age descriptive flexfield from this calculated field instead of computing the age at the time of performing the allocation or similar task. Storing these values ahead of time, for use in calculations, improves the performance during execution.

It's recommend that the unit of measure attributes (length UOM, thickness UOM, volume UOM, and width UOM) for each of the dimension attributes (length, thickness, volume, and width) be implemented together.

Here are the existing numeric serial attributes:

- Cycles since new
- Cycles since repair
- Cycles since overhaul
- Number of repairs
- Time since new
- Time since repair
- Time since overhaul

You may define up to up to ten distinct numeric attributes for any given lot or serial number that contains information captured for the item. This information is stored in the N_ATTRIBUTE1 through N_ATTRIBUTE10 columns on the INV_LOT_NUMBERS and INV_SERIAL_NUMBERS tables.

You can specify default values for attributes when configuring the contexts. The attributes of the material received, (if for an existing lot), are inherited from the existing lot.

You can populate lot and serial attributes for these transactions. You can also update lot and serial attributes in the Manage Lots and serial Numbers UI.

- Purchase order receipt
- Miscellaneous receipt
- WIP completion
- Work-orderless completion

Configure Lot and Serial Descriptive Flexfields

With lot and serial descriptive flexfields, you can create user-defined extension fields on the lot and serial pages to track additional information about a lot or serial number that's important and unique to your business.

To configure lot and serial attribute descriptive flexfields, complete these tasks.

1. Define each attribute value set.
2. Set up lot and serial descriptive flexfield contexts.
3. Set up lot and serial descriptive flexfield segments in each context.
4. Deploy the descriptive flexfield.
5. Assign context mapping by item category or item.

Define Each Attribute Value Set

Value sets are the framework for a particular segment of a descriptive flexfield. They determine the module validation type, value data type, and the format of the descriptive flexfield.

> **Note:** Before you define the value set for an attribute, you should determine its context requirements, including the types of values required for each context segment.

1. In the Setup and Maintenance work area, go to the **Value Sets** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Value Sets
2. On the Manage Value sets page, click the **Add** icon to create a value set using the values in this table.

Field	Value
Value Set Code	Initials_SERIAL_ATTRIBUTE1
Description	Initials_DFF_TEST
Module	Lots and Serials
Validation Type	Format Only

Field	Value
Validation Data Type	Character
Value Subtype	Text
Maximum length	10

3. Click **Save and Close**.

Set Up Lot and Serial Descriptive Flexfield Contexts

Setting up lot and serial descriptive flexfield contexts involves defining a context for each type of item that will track different groups of attributes. You should define different contexts to do the following:

- Track different attributes for different types of items
- Provide different default values for different types of items

To set up lot and serial descriptive flexfield contexts:

1. In the Setup and Maintenance work area, go to the **Manage Inventory Descriptive Flexfield** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Descriptive Flexfield
2. On the Manage Inventory Descriptive Flexfield page, in the **Module** field, search on **Lots and Serials** to display the context codes that currently exist for lot attributes.
3. Select **Serial Attributes** and click the **Edit** icon.
4. On the Edit Descriptive Flexfield page, select the **Manage Context** button.
5. On the Manage Context page, click the **Add** icon.
6. Define the context using the values in this table.

Field	Value
Display Name	Initials_QUALITY The context code and API populate based on the context.
Description	Quality DFF

7. Click **Save**.

Set Up Lot and Serial Descriptive Flexfield Segments

When you configure each attribute for each context, specify:

- Database column in which to store the attribute. WMS supports data types of varchar, number, and date.
- Whether the attribute is required or optional.
- Default value for the attribute.
- Value set for the attribute. The value set determines:
  - Length of the attribute
  - Type of validation of the data. Attribute validations types include no validation, independent validation, and table validation. Independent validation means that the attribute is validated against a manually defined list of values.

To set up lot and serial descriptive flexfield segments:

1. From the Edit Descriptive Flexfields page, click the **Add** icon on the Context Sensitive Segments toolbar.
2. On the Create Segment page, define these values for the segment:

Field	Value
Name	High
Data Type	Character
Value Set	Choose the Value Set created earlier: Initials_SERIAL_ATTRIBUTE1
Prompt	Accept default from name.
Display Type	Text Box
Display Size	10
Table Column	C_Attribute2

3. Click **Save and Create Another**.
4. Create two more context sensitive segments for **Medium** and **Low** quality.

   The result should be three context sensitive segments - High, Medium, and Low for Initials_QUALITY.
5. Click **Save and Close**.

   A new context is created called Initials_QUALITY.
6. Click **Save and Close** from the Mange Contexts page.
7. Click **Save and Close** from the Edit Descriptive Flexfield page.

Deploy the Descriptive Flexfield

After you define your descriptive flexfield, including all of its components, such as segments and values, you must deploy the flexfield in order to use it. Once, deployed, the **Deployment Status** field shows as selected for the flexfield on the Manage Inventory Descriptive Flexfields page.

To deploy a descriptive flexfield:

1. In the Setup and Maintenance work area, go to the **Manage Inventory Descriptive Flexfield** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Descriptive Flexfield
2. Search for a select a flexfield in the search results table.
3. Select the **Deploy Flexfield** button.

    When you click the **Deploy Flexfield** button, the changes are compiled and a process runs showing the deployment. Once the process complete, the **Deployment Status** check box displays as selected for the flexfield.

Assign Context Mapping by Item Category or Item.

After you deploy the flexfield, you must navigate to the Manage Lot and Serial Attribute Mapping set up page to assign the attribute context to its associated item or item category.

The purpose of the Manage Lot and Serial Attribute Mapping page is to assign the context value of additional lot or serial attributes that you have defined in a descriptive flexfield to an item, a range of items, or an item category. You can either find existing mappings or define new mappings on this page. You can select either **Lot Attributes** or **Serial Attributes** for the **Flexfield Name** option. Then, select either a specific item, a range, or item category for the **Context Column** option. Finally, click the **Search** button. Existing assignments populate in the search results area. To define new mappings, you can specify the same criteria and click the **Save** button.

Attributes contained in INV_LOT_NUBERS and INV_SERIAL_NUMBERS aren't supported for mapping default context. Only attributes contained in INV_LOT_ATTRIBUTES and INV_SERIAL_ATTRIBUTES are available for mapping as context in the Manage Lot and serial Attribute Mapping page.

Only categories within one category set can be used in an organization to assign attributes at the category level. When you assign a context to an item or item category, this occurs:

- The application prompts you to enter the correct group of attributes for each type of item.
- You can assign default contexts by item category or item number.
- You can assign by categories that exist in any category set. However, by assigning an item to a context that's different from its owning category, the item takes the attributes assigned at the item level.

Note: If you assign an attribute to an item category, then the item inherits the attribute.

1. In the Setup and Maintenance work area, go to the **Manage Lot and Serial Attribute Mapping** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Lot and Serial Attribute Mapping

2. Assign the context value of additional lot or serial attributes that you have defined in a descriptive flexfield to an item, a range of items, or an item category.

Pick Slip Grouping Rules

Pick Slip Grouping Rules

By creating pick slip grouping rules, you organize how picking lines for released sales orders, transfer orders, return transfer orders, and work orders are grouped onto pick slips.

For example, if you select order number as a grouping criterion, then all items on the sales order or all components for a work order are grouped onto a single pick slip.

These aspects of a pick slip grouping rule can reduce time spent on planning and organizing:

- Group pick slips based on criteria
- Specify effective date for the grouping rule

In the Setup and Maintenance work area, use the Manage Pick Slip Grouping Rules task to set up your pick slip grouping rules:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Pick Slip Grouping Rules

Criteria Based Grouping of Picking Lines

Enables you to specify more than one grouping criteria for picking. For example, if you select Shipment and Ship-to Location as grouping criteria, then all the picking lines grouped together on a pick slip are for the same shipment and ship-to location.

Effective Date

Enables you to specify the date from which you want the pick slip grouping rule to come into effect.

Picking Rules

Picking Rules

Picking rules enable you to define the criteria that determines how material is consumed. For example, LIFO, FIFO, Lot Ascending, Locator Ascending. After you create a picking rule, you can enable the rule for usage in various organizations.

In the Setup and Maintenance work area, use the Manage Picking Rules task to set up your picking rules:

- Offering: Manufacturing and Supply Chain Materials Management

- Functional Area: Inventory Management
- Task: Manage Picking Rules

A group of picking rules with different criteria can address the various needs of consuming material in an organization. This criteria determines how material should be consumed:

- Material restriction
- Allow partial picking
- Material sort

Material Restriction

The material restriction criteria you must specify include:

- **Shelf Life Days**: Indicates the minimum number of days prior to expiry that the material can be consumed.

  For example, if an item expires on June 30 and has a 60-day shelf life rule, it can only be picked if the required date is on or before May 1, which is 60 days prior to expiration. The required date for a sales order pick is the scheduled ship date.
- **Enforce Single Lot**: The enforcement of a single lot for the specific picking rule.

  If not, multiple lots may be picked.

Allow Partial Picking

Enables you to specify if the demand line can be partially picked if the total quantity for the order lines isn't available. For example, the requested quantity is 100 and the quantity available using the picking rule is 60. In this case, allow partial picking determines if the available quantity of 60 is picked or nothing is picked at all.

Material Sort

The sort attributes that you can assign priorities to are Lot, Locator, Subinventory, and Revision. You can have only one priority based on a sort attribute and type such as Locator Ascending, Locator Descending, Revision Ascending, or Revision Descending. For example, if you assign the sort attribute and type Lot Ascending to priority 1, then you can't assign the same sort attribute to another priority in the same picking rule regardless of the sort type being Ascending or Descending.

Considerations for Material Sort Criteria

Use material sort criteria to specify a priority to the sorting criteria. You can do this by assigning priority levels, with priority 1 being of highest priority and priority 3 being of lowest priority.

The sort criteria can be based on four different attributes; Lot, Locator, Subinventory, and Revision. Before assigning material sort criteria priorities, consider this question:

- What sort criteria is relevant to the picking rule you're creating?

Relevance to the picking rule

Consider the relevance of the sort criteria to the picking rule you're creating. For example, if the picking rule you're creating is primarily aimed at lots, then select sort criteria that will assist you in sorting by lots; lot number ascending or lot number descending.

Picking Rule Assignments

Picking Rule Assignments

Picking rule assignments enable you to assign an organization and sequence to a picking rule. It provides mechanisms to:

- Indicate if a picking rule can be used in an organization.
- Prioritize the various rules available to be used in an organization.
- Define set of criteria when a rule should be activated.

You can then assign certain criteria to the picking rule assignment based on which the material will be picked. Note that the same picking rule can have multiple rule assignments in an organization.

In the Setup and Maintenance work area, use the Manage Picking Rule Assignments task to set up your picking rule assignments:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Picking Rule Assignments

The example in this table demonstrates how picking rule assignments work for an item that's lot controlled and expiration enabled.

Picking Rule name	Rule details
Rule 1	LOT FIFO
Rule 2	LOT LIFO

The facility usually follows the FIFO rule and ships the oldest material first. However, for their loyal customers, for example, Loyal, they would like to follow the LIFO rule and ship the newest material first. The loyal customers are given priority over their other customers. In order to achieve this, the facility needs to have two picking rule assignments in order of priority.

This table demonstrates picking rule assignments in order of priority.

Picking Rule name	Picking Rule Assignment criteria
Rule 2	Item is specified and customer is specified as "Loyal" as part of the criteria.
Rule 1	Item is specified but customer isn't specified as part of the criteria.

According to the way the picking rules are assigned in the earlier picking rule assignments table, the application will first look at the high priority assignment and apply the picking rule assignment in the manner shown in the following table. The table describes scenarios and results for both "Loyal" and not "Loyal" customers.

Scenario	Result
Demand line for specified item and from customer specified as "Loyal."	Rule 2 is applied and newest material is supplied following LIFO.
Demand line is for specified item and customer isn't "Loyal."	Rule 1 is applied and oldest material is supplied following FIFO.

Picking rule assignments provide you the flexibility to:

- Assign sequence to the rule assignment
- Define criteria for the assigned picking rule

Assigning Sequence

Enables you to prioritize the rule assignment with respect to the other rule assignments.

Define Criteria

Enables you to specify the details when a rule on a particular picking rule assignment is activated. For example, if you create a picking rule that picks lots based on FIFO and select a specific customer in the criteria, then according to the picking rule assignment, the item is picked for that customer based on FIFO.

Considerations for Picking Rule Assignment Criteria

You can select any combination of criteria after assigning a picking rule. Selecting the criteria enables you to specify when the rule assignment is used.

For example, if a picking rule, which allocates lots based on FIFO, is assigned to a particular customer, then the material picked for that customer is allocated based on FIFO.

Before selecting criteria for picking rule usage consider:

- Which combination of picking rule and criteria will help achieve optimum material selection for your organization?
- What is your organization's preference for picking based on the available criteria?

Specifying criteria for picking rule assignment

You must consider the combination of picking rule and criteria that will meet your requirements on material consumption in your organization. For example, you have a picking rule that ships material based on Lot FIFO. You can assign that rule to a particular customer so that material for that customer is shipped based on FIFO.

Specifying criteria based on preference

Before selecting the criteria, you must consider your organization's preference for picking based on the available criteria.

- Customer
  Consider your organization's picking order preference on what material to ship to which customer. For example, if certain kind of material should be picked based on customer requirements, then the rule assignments with customer as criteria are effective.
- Carrier
  Consider your organization's preference on what material to ship based on carrier. For example, if the demand line is to be shipped via a specific carrier, then the carrier-based rule assignment will be effective.
- UOM class
  Consider your organization's preference on what material to ship based on UOM class. For example, if the demand line to be shipped specifies a UOM that belongs to a particular UOM class, then the UOM class-based rule assignment will be effective
- UOM
  Consider your organization's preference on what material to ship to based on UOM. For example, you have the following rules. Rule 1 sorts the subinventories in such a way that the item is stored by UOM 'Case' in the top subinventories. Rule 2 sorts the subinventories in such a way that the item is stored by UOM 'Each' in the top subinventories. You can sequence the rule assignments such that the correct demand lines with appropriate UOMs are picked using the appropriate rules.
- Source subinventory
  Consider your organization's preference on what material to ship to from which source subinventory.
- Destination subinventory
  Consider your organization's preference on what material to ship to which destination subinventory.
- Item
  Consider your organization's preference for particular items. For example, if the material needs to be consumed in a certain way because of the characteristics of the item, then the appropriate picking rule should be assigned to the item criteria. Take the case of milk products that should be consumed within the expiration date. In that case, a picking rule that has shelf life material restriction and assigned to item criteria "milk products" can work best in optimizing material selection.
- Item type
  Consider your organization's preference to ship material that belong to particular item types. You can select the best possible combination of a picking rule and item type that will help make selection efficient.
- ABC Assignment Group and Class
  Consider your organization's preference on material to ship based on a particular ABC assignment group and class.
- Transaction source type
  Consider your organization's preference on material to ship based on a particular transaction source type.
- Transaction type

Consider your organization's preference on material to ship based on a particular transaction type.

- Transaction action

  Consider your organization's preference on material to ship based on a particular transaction action.

FAQs for Picking Rule Assignments

What happens if I select different date type options?

You can enter different values into the Start Date and End Date fields.

For example, if you select **Week**, you can enter 1 to represent the first week of the year, and 52 to represent the last week of the year. If you select **Day of the Month**, you can enter 1 to represent the first day of the month, and 31 to represent the last day of the month.

Overpicks

Enable Overpicking for Sales Orders, Transfer Orders, and Work Orders

To enable overpicking, complete these steps:

1. In the Setup and Maintenance work area, use the **Manage Inventory Organizations** task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Facilities
   - Task: Manage Inventory Organizations
2. In the **Organization** field, select the inventory organization and click **Search**. The organization displays in the Search Results area.
3. Click **Manage Organization Parameters**.
4. Click the Item Sourcing Details tab.
5. In the Picking Defaults section, select the **Allow overpicking for special handling** check box

Related Topics

- Overpick for Sales Orders, Transfer Orders, and Work Orders

Inventory Consumption Rules

Consumption Rules

Consumption rules enable you to specify when the consumption of consigned inventory (ownership change) occurs. You define consumption rules on the Manage Consumption Rules page based on attributes such as transaction type, item, from organization, to organization and more.

For example, you can specify subinventory transfer, interorganization transfer, or internal material transfer transactions to trigger ownership changes.

If you create a rule with a higher level of granularity and another rule with a lower level of granularity, the rule that is created at the highest level of granularity (which is wider in coverage) applies during transactions.

> **Note:** Interorganization transfers trigger consumption (ownership change) by default. If you want the material to remain consigned, you must set up a consumption rule to specify that consumption does not occur with interorganization transfers.

Example

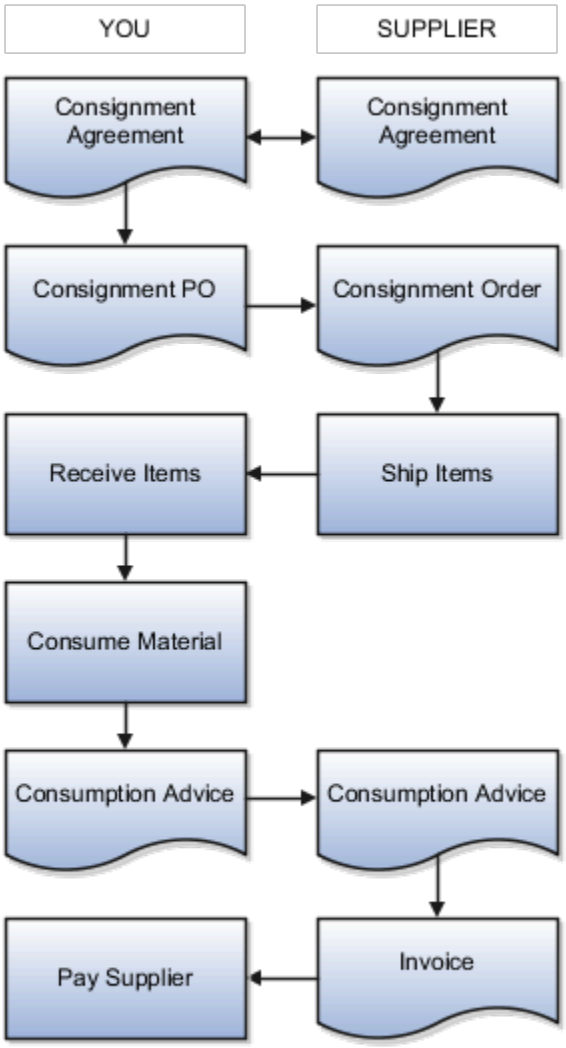
This example depicts a consumption rule defined to trigger an ownership change for a transaction type of subinventory transfer. The following table shows the consumption rule setup which carries attributes such as transaction type, inventory organization, owning party, from subinventory, to subinventory, and item.

Transaction Type	Inventory Organization	Owning Party	From Subinventory	To Subinventory	Item
Subinventory transfer	M1-Supplier	Allied Supplier	FGI	Stores	CM6000

Consigned Inventory

Consigned inventory refers to items that are in the possession of one party, but remain the property of another party by mutual agreement.

The process of consigned inventory follows steps between the buyer and seller. You start with a consignment agreement and end with paying the supplier. The following figure shows the steps of the consigned inventory process flow.



Consignment Agreement

The consigned inventory process starts with a buyer entering into a consignment agreement with a supplier. The consignment agreement carries the terms related to the consignment arrangement between the trading partners, items to be purchased on consignment, and the price associated with the items.

Consignment Order

The buyer periodically generates consignment orders requesting the supplier to ship goods.

The consignment order uses the terms and conditions of the consignment agreement and specifies the delivery details, quantities, locations, and dates for the consigned goods to be delivered.

Ship and Receive Items

Once the supplier ships goods, and the inventory has been received, the inventory is held as consigned stock. The inventory is in the possession of the buyer. However, the ownership of the inventory remains with the supplier.

Note: For regular (nonconsigned) inventory, once goods are received, the ownership changes to the buying party.

Consumption Advice

When the inventory is consumed, a consumption advice is generated based upon a frequency agreed upon between the buyer and supplier. The consumption advice communicates to the supplier the consumption transactions that occurred within a given period of time.

Invoice and Pay Supplier

The consumption advice serves as the document to initiate financial settlement for the consumed inventory. You also have the option to pay-on-use to pay your supplier immediately upon usage of the consigned inventory.

Related Topics

- Consigned Inventory Lifecycle

Consigned Inventory Consumption

Ownership changes from the supplier to the buyer when the buying organization consumes the consigned inventory. This process is referred to as consumption.

These factors are important regarding the consumption of consigned inventory:

- Ownership change
- Explicit or implicit transaction
- Lot and serial
- Consumption transaction pricing

Ownership change

You can define consumption rules to specify whether the transfer of consigned inventory between two inventory locations triggers an ownership change (consumption). When you execute a transfer between organizations, your previously defined consumption rules determine whether or not the transfer results in an ownership change.

There are two types of consigned inventory transactions:

- **Transfer to Owned**: Transfers consigned inventory to owned inventory. This transaction transfers the ownership of the inventory from the supplier to the internal organization.
- **Transfer to Consigned**: Transfers ownership of the inventory from the internal organization to the supplier.

Explicit or Implicit Transaction

You can choose to perform consumption transactions both explicitly and implicitly.

With explicit consumption, you specify the external owning party whose goods will be transferred to the internal organization.

With implicit consumption, consumption is a result of an inventory transaction such as a sales order issue. Most transactions occur through implicit consumption. You can configure the transaction types that trigger consumption through the setup of consumption rules.

For implicit consumption, the application generates two separate inventory transactions. The first transaction represents the consumption (change in ownership). This table shows a Transfer to Owned transaction. This transaction records the change in ownership between the original owning party (Allied Supplier) and the new owning party (Organization M1).

Transaction Type	Item	Quantity	Owning Party	Owning Party
Transfer to Owned	100C	10	Allied Supplier	Organization M1

The second transaction represents the movement of inventory. This table shows the transaction to record the movement of inventory. The consumption rules indicate that ownership changes when Item 100C transfers from source subinventory FGI to destination subinventory Stores.

Transaction Type	Item	Quantity	Source Subinventory	Destination Subinventory
Subinventory Transfer	100C	10	FGI	Stores

The two, separate transactions allow the segregation of transactions involving the change in ownership and the movement of material.

Lot and Serial

You can select lot and serial controlled items for a specific owning party when executing consigned inventory transactions.

Consumption Transaction Pricing

When the consumption transaction takes place, the application uses the terms of the associated consignment agreement to calculate the price that's in effect at the time of consumption. The calculated price is based on the date of consumption since this represents the point when ownership transfers from the supplier to the internal organization. Oracle Inventory Management interfaces with Oracle Purchasing to determine the current price from the consignment agreement.

Related Topics

- Consumption Rules

Consumption Advice

A consumption advice is a periodic summary report of consumption transactions that reports the usage of consigned inventory to the supplier based upon a consumption advice frequency.

The consumption advice stores the details needed to communicate information to the supplier such as item quantity and value of the inventory consumed in the warehouse. The consumption advice also serves as the document to initiate financial settlement for the consumed material.

Related Topics

- Considerations for the Create Consumption Advice Process
- How Consumption Advice Generation Frequency Is Calculated

Intersubinventory Parameters

Intersubinventory Parameters

When material is transferred between two subinventories within an organization, intersubinventory parameters are used to determine the transfer type and receipt routing.

In the Setup and Maintenance work area, use the Manage Intersubinventory Parameters task to configure your intersubinventory parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Intersubinventory Parameters

Related Topics

- Setup of Intersubinventory Parameters for Transfer Orders

Inventory Descriptive Flexfields

Descriptive Flexfields for Transfer Orders

You can define descriptive flexfields for transfer orders at the header, line, and distribution levels. This enables you to configure the Manage Transfer Order task to extend system functions to meet your specific needs.

For example, these user-defined attributes can enable integrations to support various reporting, labeling, compliance, and analytics requirements. You must set up descriptive flexfields for transfer orders in the **Manage Inventory Descriptive Flexfields** task before you can use descriptive flexfields for transfer orders.

- Set up the **Manage Inventory Descriptive Flexfields** task
- Use descriptive flexfields to transfer orders

Set Up the Manage Inventory Descriptive Flexfields Task

In the Setup and Maintenance work area, use the Manage Inventory Descriptive Flexfields task to set up your Inventory descriptive flexfields:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Inventory Descriptive Flexfields

On the Manage Inventory Descriptive Flexfields page, enter **Transfer Orders** in the **Module** field in the search area. Then, you can edit the header, line, or distribution levels, and add the descriptive flexfields needed for your configuration.

Use Descriptive Flexfields to Transfer Orders

With descriptive flexfields for transfer orders, you can enter user-defined attributes at the these transfer order levels:

- Transfer order header
- Transfer order line
- Transfer order distribution

Access descriptive flexfields from the **Additional Information** area in the Transfer Order header section of the Edit Transfer Order page. You can also access descriptive flexfields by clicking the **Additional Information** columns at the transfer order line and distribution levels of the transfer order.

Related Topics

- Overview of Descriptive Flexfields
- Considerations for Managing Descriptive Flexfields

Default Context Value by Transaction Type or Transaction Action in Descriptive Flexfields

Use descriptive flexfields in transaction history to provide additional details for inventory transactions like miscellaneous issues or receipts and interorganization transfers.

Descriptive flexfields are extensible sets of placeholder fields associated with business objects that you can place on application pages to capture additional information specific to your business. For transaction history, you can default the context values based on the specific transaction type or transaction action you perform. Defaulting the context values ensure that the correct context-sensitive segments display the appropriate context value without having to choose the value manually. You save time because you only have to enter descriptive flexfield values for a specific context, which reduces the time you spend selecting the right context for transactions.

To enable this feature, you must:

- Obtain the values
- Create context for the values
- Add SQL commands

Obtain the Values

1. From the Setup and Maintenance work area, go to the **Manage Inventory Transaction Sources and Types** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Transaction Sources and Types
2. On the Manage Inventory Transaction Source and Types page, search for a transaction type in which you want to default the context by entering these values.

Field	Value
Transaction Source	Inventory
Defined By	System

3. Select the transaction type from the search results and click the **Edit** icon.
4. Copy the transaction type name from the Edit Transaction Type dialog.
5. When the context is to be defaulted based on transaction action, copy the transaction action name from the Edit Transaction Type dialog box.

Create Context for the Values

1. From the Setup and Maintenance work area, go to the **Manage Inventory Descriptive Flexfields** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Descriptive Flexfields
2. On the Manage Inventory Descriptive Flexfields page, search for a flexfield code, choose a row from the search results, and click **Actions** > **Edit**.
3. On the Edit Description Flexfield: Flexfield Code page, click **Manage Contexts**.
4. On the Manage Contexts page, click **Actions** > **Create**.
5. Paste the values obtained for the transaction type or transaction action from the previous task (**Manage Inventory Transactions Sources and Types** task) in the **Display Name** and **Context Code** fields.
6. Click **Save**.
7. In the Context Sensitive Segments section, click **Actions** > **Create**.
8. Supply values for the required fields and click **Save and Close**.
9. Click **Save and Close** to exit the Edit Description Flexfield: Flexfield Code page.

Add SQL Commands

1. From the Setup and Maintenance work area, go to the **Manage Inventory Descriptive Flexfields** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Descriptive Flexfields

2. On the Manage Inventory Descriptive Flexfields page, search for a flexfield code, choose a row from the search results, and click **Actions** > **Edit**.
3. Scroll to the Context Sensitive Segments section.
4. Select the context (such as Miscellaneous Receipt) from the **Context** drop-down list.
5. Select the line sequence and click the **Edit** icon.
6. On the Edit Segment page, select **SQL** from the drop-down list in the **Default Type** field.
7. Enter the SQL in the **Default Value** field.
    - To default the context based on transaction type, enter this SQL command:

      ```
      select TRANSACTION_TYPE_NAME from inv_transaction_types_vl where
      transaction_type_id=:{PARAMETER.TransactionTypeId} and transaction_type_name in
      (select descriptive_flex_context_code from fnd_descr_flex_contexts where
      descriptive_flexfield_name='INV_MATERIAL_TXNS' and enabled_flag='Y')
      ```

    - To default the context based on transaction action, enter this SQL command:

      ```
      select MEANING from fnd_lookups where lookup_code =:{PARAMETER.TransactionActionId} and
      lookup_type='INV_TRANSACTION_ACTION' and meaning in(select descriptive_flex_context_code from
      fnd_descr_flex_contexts where descriptive_flexfield_name='INV_MATERIAL_TXNS')
      ```

8. Click **Save and Close**.
9. Click **Deploy Flexfield** and wait for the deployment to complete to 100%.

Item Keyword Search for Inventory

Item Keyword Search for Inventory

Item keyword search enables you to view and search for items using cross-referenced identifiers across all inventory pages.

Use the **Manage Item Keyword Search Attributes** task in the Set Up and Maintenance work area to set up the item relationship attributes. This task is included in the **Item** functional area inside the Manufacturing and Supply Chain Materials Management offering. It's mandatory for your Supply Chain Application Administrator to enable the **Item Keyword** attribute.

With item keyword search, you can search for items and objects on all inventory pages with three standard fields:

- Item
- Item Description
- Item Keyword

The **Item Description** and **Item Keyword** fields are hidden by default. Select these fields from the **Add Fields** button in the search area on inventory pages.

Note: Item relationships must be defined during item definition.

Integrate with 3PL and Warehouse Management Systems

Third-Party Logistics and Warehouse Management Systems

A third-party logistics (3PL) provider typically specializes in integrated operation, warehousing, and transportation services that can be scaled and configured to customer need based on market conditions. A warehouse management system (WMS) is a software application designed to support warehouse or distribution center management and staff.

This application facilitates management of available resources to move and store materials into, within, and out of a warehouse, while supporting staff in material movement and storage

Oracle Fusion Cloud Applications provide a central integration framework that coordinates communication with a 3PL system or WMS to support purchase order receipts, returns to suppliers, internal material transfers, inventory transactions, and sales order shipments. Using Simple Object Access Protocol (SOAP)-based web services or REST resources, Oracle Fusion Cloud Inventory Management communicates receiving advice and shipment requests to a 3PL provider or external WMS for processing. After completion of processing in the 3PL system or WMS, Inventory Management accepts receipt confirmations, shipment confirmations, and inventory transactions from the 3PL system or WMS.

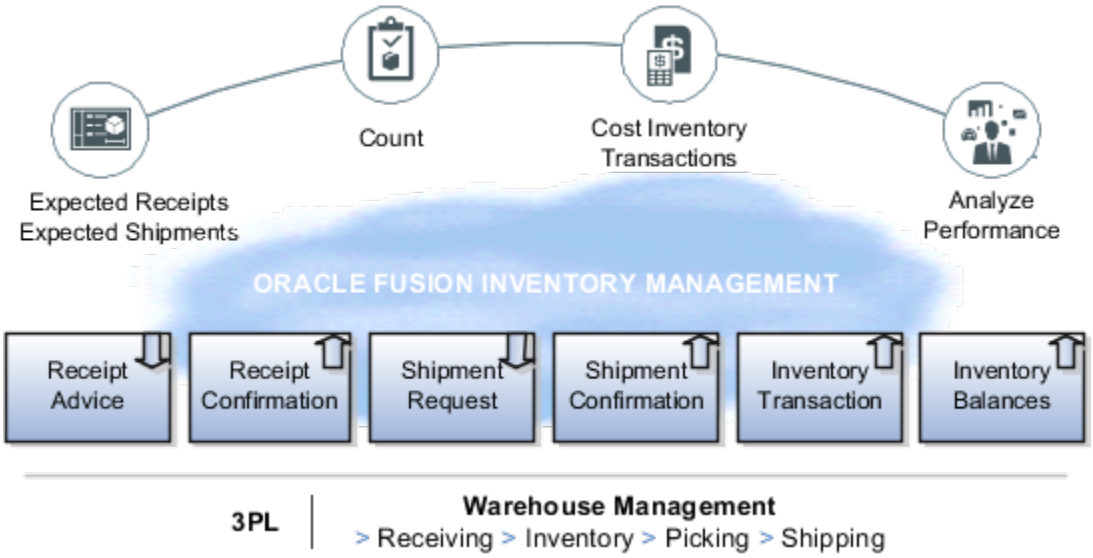
For more information, see these guides:

- REST API for Oracle Fusion Cloud SCM
- Oracle Fusion Cloud SCM: SOAP Web Services for SCM

Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Oracle Fusion Cloud Inventory Management supports a central integration framework for working with third-party logistics (3PL) providers and warehouse management systems (WMS). The inventory management suite of products includes Oracle Receiving, Oracle Inventory Management, and Oracle Shipping.

The following figure illustrates how Inventory Management integrates with 3PL and WMS systems. The subsections following the figure provide more detail for this integration.



Receiving Integration

Receiving integration addresses the following points:

- Sends a receipt advice to the WMS for the various documents, such as purchase order (POs), advanced shipment notices (ASNs), and return material authorizations (RMAs).
- Receives and processes receipt confirmations to acknowledge the receipt of material, updates the source documents and on-hand details for quantities and other related information, such as lots, serials, and external packing units, and the return of rejected material. This includes reference to the WMS transactions for reconciliation.

Shipping Integration

Shipping integration addresses the following points:

- Sends the shipment requests to the WMS for the various documents, such as sales orders and transfer orders.
- Receives and processes shipment confirmations to acknowledge the shipment of material and updates the source documents. This includes reference to the WMS transactions for reconciliation.
- Updates the on-hand details for quantities and other related information, such as lots and serials and splitting of the unfulfilled portions.

Inventory Management Integration

Inventory Management integration addresses the following points:

- Receives and processes various inventory transactions that can happen within a WMS that might affect the material location and on-hand details. Such inventory transactions include adjustments, miscellaneous receipts and issues, and transfers. This includes reference to the WMS transactions for reconciliation.
- Receives and processes inventory balance updates for solving inventory reconciliation challenges.

Related Topics

- Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow
- Inventory Balances Integration with External Systems

Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow

Oracle Fusion Cloud Inventory Management integration with third-party logistics (3PL) and warehouse management systems (WMS) provides you the ability to outsource part or all of your supply chain management functions.

Using this integration, you can:

- Improve customer service by minimizing total delivery time and costs using a 3PL provider.
- Improve visibility to expected shipment and receipt detail to better plan import and customs clearance by way of web service or REST payloads.
- Accept returns from your customers with authorization from the manufacturer by way of receipt advices.
- Maintain tighter controls between Inventory Management and the execution system for greater transparency for 3PL or WMS activities.
- Monitor inventory accuracy.

This figure shows a high-level overview of this integration process flow. Details of this flow are provided after the figure.

The web service Send Receipt Advice, available by way of Oracle Receiving, or the REST resource Receipt Advice Lines (GET method), enable Inventory Management to communicate expected shipment lines sent to and received by a 3PL system or WMS. Then, the 3PL system or WMS, by way of the Receive Receipt Confirmation web service in Receiving, or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), communicate confirmation and receipt details of the expected shipment lines.

The web service Material Shipment Line, available by way of the GenerateShipmentRequest operation in Oracle Shipping, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, enable inventory management users to send shipment requests to a 3PL system or WMS. The 3PL system or WMS can accept and confirm the shipment requests by way of the CreateandConfirm operation on the Material Shipment web service in Shipping or the REST resource Shipment Transaction Requests (POST method, with CreateAndConfirmShipment action code).

Also, within Shipping, you can use the tasks in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering so that you can send a shipment request directly from the Inventory Management work area. Additionally, when shipment confirmation errors occur from the 3PL system or WMS, you can select a task in the Inventory Management work area to view the error in a spreadsheet, correct the error, and reprocess the shipment. This action brings the confirmation details into the shipping tables.

The web service Inventory Transaction Manager or the REST resource Inventory Staged Transactions (POST method) enable you to receive material transaction updates made by the 3PL system or WMS to keep on-hand balances synchronized with Inventory Management.

For more information, see the REST API for Oracle Fusion Cloud SCM guide.

Supported Roles for Inventory Management Integration with 3PL and WMS Systems

The features for Inventory Management integration with 3PL and WMS systems are predefined, and you can access them through the following existing job roles:

- Warehouse manager
- Receiving and inspection manager
- Shipping manager

The users roles associated with this feature are:

- Warehouse operator
- Receiving agent
- Shipping agent

Change Management for Sales Orders in 3PL and WMS Systems

You can now make changes to sales order lines in Order Management. This means you can check order status, communicate order changes and shipping holds, and cancel orders in the 3PL or WMS system when the shipping organization is changed. Therefore,

- Any changes you make to the sales order are communicated to the WMS seamlessly without any additional interaction.
- The changes to the order are rejected if the order has progressed in the WMS and the current state does not allow any changes.
- The type of changes to the order can include quantity, scheduled ship dates, shipping method, customer, and other key attributes.
- Shipping holds that can be placed on sales orders are communicated to the WMS.

Related Topics

- Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Implementation Decision Points and Setup Best Practices for 3PL and Warehouse Management Systems Integration

Consider the following when implementing integration to third-party logistics (3PL) provider or external warehouse management system (WMS).

Oracle provides services to integrate Oracle Fusion Cloud Inventory Management, Oracle Receiving, and Oracle Shipping to a third-party logistics (3PL) provider or external warehouse management system (WMS). These product areas work together cohesively to support transfer orders, inventory transactions, reconciliation of inventory balances, and so forth.

Decision Points

Before implementing your external systems integration, consider the following points.

- If you plan to receive material using a 3PL provider or WMS, then use the predefined scheduled processes to generate a receipt advice.
- If you plan to ship material using a 3PL provider or WMS, then use the predefined scheduled processes to generate shipment requests.

Setup Best Practices

The following setup best practices are recommended before integrating with external systems.

- Use a 3PL provider or WMS at the inventory organization level. By representing the 3PL provider or WMS as an inventory organization, virtual tracking and visibility of inventory at the 3PL or WMS location is available to users in real time.
- For simplicity, set up a receiving subinventory and one subinventory for each material status used in the implementation of Oracle Inventory Management. For example, you might set up subinventories for receiving, quality assurance, rejected, and available inventory.
- Use security rules to control access to transactions performed in the 3PL or WMS organization.

Additional Considerations

Keep in mind the following additional considerations when planning your 3PL or WMS implementation.

- Don't track locator and packing unit information because this data isn't tracked in Inventory Management.
- Process inventory transactions only when the item status has changed or the item is received into or issued out of Inventory Management. For example, when a third party performs material transactions within locations or packing units at their facility, these transactions aren't tracked in Inventory Management.
- Track inventory transactions for lot and serialized items in Inventory Management. This tracking is a requirement when lot and serialized items are issued out of inventory to support install base and product genealogy.

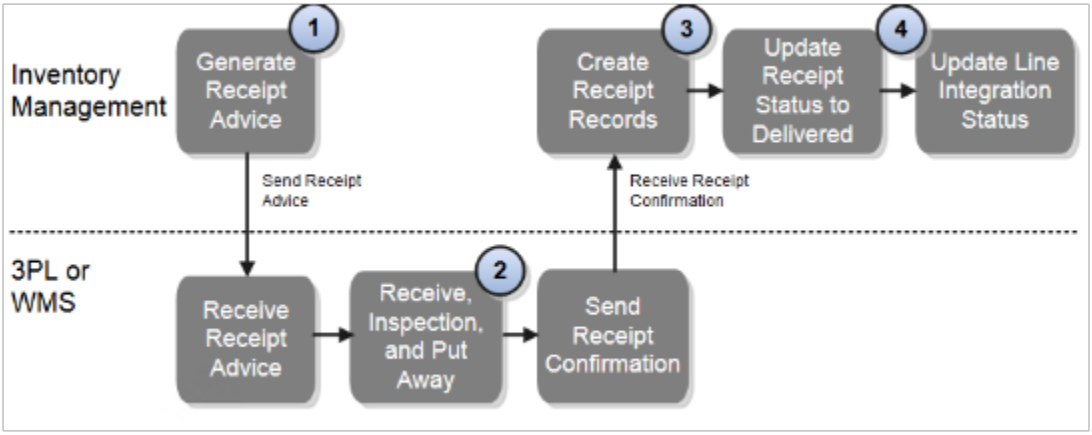
Receipt Advice and Receipt Confirmation Processes for External Systems Integration

This topic describes the receipt advice and receipt confirmation integration flow between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

Inventory Management communicates receipt advices to the 3PL system or WMS for processing. After completion of the processing in the 3PL system or WMS, Inventory Management accepts the receipt confirmations from the 3PL system or WMS.

For receiving, the web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) enables Inventory Management to communicate expected shipment lines to be received by a 3PL system or WMS. Then the Receive Receipt Confirmation web service or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method) enable the 3PL system or WMS to communicate confirmation and receipt details of the expected shipment lines that were communicated.

This figure shows the receipt advice and receipt confirmation integration flow.



Explanation of callouts:

1. The scheduled process Generate Receipt Advice publishes an event to notify the 3PL system or WMS that receipt advices are ready to be interfaced. The web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) provide the ability for the 3PL system or WMS to receive the actual receipt advices with the expected shipment lines for purchase orders (POs), transfer orders, and return material authorizations (RMAs).
2. After the 3PL system or WMS receives the receipt advices, the 3PL system or WMS performs receiving-related processes including receiving, inspection, and put away.
3. The web service Receive Receipt Confirmation, or the REST resource Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), is initiated, and receipt confirmation is sent to Inventory Management. The web service or REST resource provides the ability for the 3PL system or WMS to send the material and receiving details for the expected shipment lines received. The web service or REST resource also interprets and transforms the message, and creates the necessary records in Inventory Management. These records carry all the reference information from the external system to easily identify them for performing any future returns or corrections.
4. Inventory Management validates and processes the receiving transactions by processing the receipt confirmation messages and by updating the release status and integration status.

You can use the scheduled process Manage Receiving Transactions to automatically validate and process the transactions received. If an error occurs while processing the transactions, you can review and correct pending and error transactions using the **Review Receipts Interface** task in the Inventory Management work area, and resubmit the transactions for processing. When the transactions have successfully processed, the associated document is updated accordingly. For example, the status on an associated purchase order document is updated to **Closed for Receiving**.

You can use the scheduled process Generate Changed Receipt Advice to manage changes. For example, if there was a change to a purchase order line that was already interfaced but not confirmed, the service sends a changed receipt advice to communicate the associated change to the 3PL system or WMS.

You can use the Receive Expected Shipments page in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering to perform receiving of expected shipment lines to record various details, such as integration status. Integration status values include Ready to Interface, Interfaced, and Confirmed.

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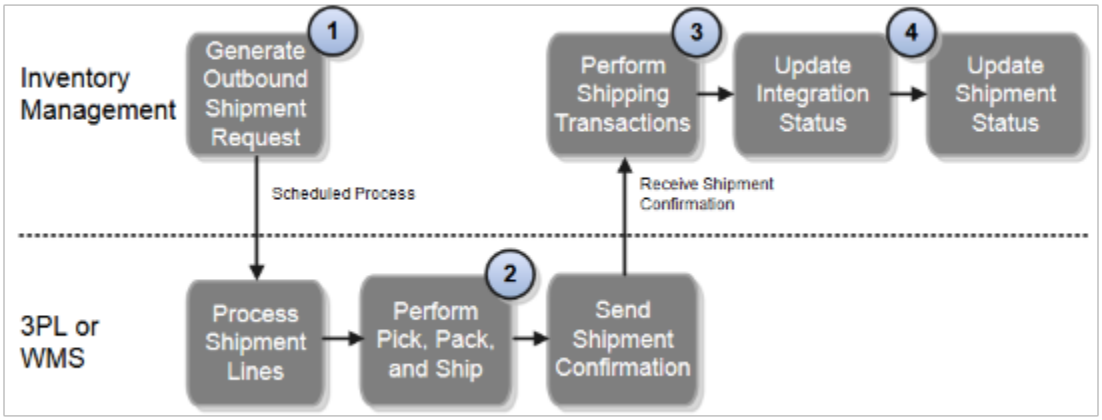
Shipment Request and Shipment Confirmation Processes for External Systems Integration

This topic describes the shipment request and shipment confirmation flows between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

This figure shows the shipment request and shipment confirmation flow.



Explanation of callouts:

1. The outbound shipment request integration process between Oracle Inventory Management and a 3PL system or WMS starts with a shipment request. The scheduled process Generate Shipment Request enables inventory management users to manually send shipment lines to the 3PL system or WMS using the task Create Outbound Shipment request in the Shipping UI, or they can automate the process using a scheduled process. The shipment request web service Material Shipment Line, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, uses the existing pick wave release rules to provide the criteria for selecting the shipment lines.

   Alternatively, the 3PL system or WMS can initiate the shipment request service voluntarily at specified intervals to retrieve shipment requests from Inventory Management.
2. After the 3PL system or WMS receives the shipment request, the pick, pack, and ship processes are performed.
3. The web service Material Shipment or the REST resource Shipment Transaction Requests (POST method, with the CreateAndConfirmShipment action code), when initiated with the required input, receives and processes the shipment confirmation messages. This service or resource interprets and transforms the message, and creates the necessary records in the shipping open interface tables. This transformation provides the mechanism for the 3PL system or WMS to send the material and shipping details for the shipment lines fulfilled.

The scheduled process Perform Shipping Transactions processes the pending transaction records received into the open interface tables. The process validates the data on the transaction records received from the 3PL system or WMS before processing them. Any errors from the validation step are recorded, and the transaction records remain in the open interface tables. The interface records with errors are available for users to view, edit, or resolve the errors, or reprocess.

In the event an error occurs while processing the shipment confirmation messages, users can access the **Manage Shipping Transaction Corrections in Spreadsheet** task to manage pending transactions by way of a spreadsheet interface using Application Development Framework Desktop Integration (ADFdi) technology. This interface supports management of interface transactions and corresponding errors related to shipment confirmations received from 3PL system and WMS. You can access this task in the Inventory Management work area of the Manufacturing and Supply Chain Materials Management offering.

> **Note:** The Manage Shipping Transaction Corrections spreadsheet displays only one error at a time for each sheet even if the shipment processing has more than one error.

After the shipment lines are successfully confirmed, the integration status and shipment status are updated accordingly.

Inventory Transaction Processes for External System Integration

All internal material transactions that occur within a third-party logistics (3PL) or warehouse management system (WMS) must be integrated appropriately to keep the inventory picture accurate in Oracle Fusion Cloud Inventory Management.

You can use the web service Transaction Manager or the REST resource Inventory Staged Transactions (POST method) to maintain inventory accuracy in Inventory Management with the 3PL system or WMS for the following:

- Miscellaneous account alias issues and receipts
- Subinventory transfers
- Interorganization transfers
- Cycle count adjustments
- Physical inventory adjustments
- Material status updates

The web service or REST resource inserts data into the applicable transaction interface tables and calls the transaction manager to process the rows that are ready for processing. If the transaction manager completes successfully, you can view the completed transaction on the Review Completed Transactions page. If the transaction processing fails, you can view the error details as well as transaction data on the Manage Pending Transaction page. From this page, you can correct the data and resubmit to the manager for reprocessing. You can access these pages in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Related Topics

- Inventory Transaction Interface

Inventory Balances Integration with External Systems

Using Oracle Fusion Cloud Inventory Management's inventory balances integration capabilities, you can outsource warehousing and manufacturing processes to efficiently lower costs, service local markets, reduce cycle times, and so on.

A central integration framework across Oracle Purchasing, Oracle Fusion Cloud Order Management, and Oracle Inventory Management tracks interactions between the various external systems. You can receive inventory balance details from external systems, such as third-party logistics providers, warehouse management systems, or contract manufacturers and use this information to reconcile inventory balances. Inventory on-hand details can include subinventory, locator, lot, serial number, and external packing unit.

The inventory balances integration feature enables you to:

- Use the Inventory Balance Transactions REST resource to post inventory balance messages from an external system
- Import inventory balance messages in bulk using a SaaS spreadsheet
- Enable users to resolve any processing exceptions
- Purge inventory balance messages periodically

Note: This feature is automatically available and is included with the shipped job roles (warehouse manager and inventory manager).

Use the following processes and task to interface with external systems to improve tracking and visibility across your supply chain, including partners:

- Manage Inventory Balances Processes
- Manage Inventory Balance Messages in Spreadsheet (ADFdi)
- Manage Inventory Transaction Process
- Purge Inventory Balance Messages Process

Manage Inventory Balances Process

This scheduled process processes the imported inventory balance messages in the interface tables.

Manage Inventory Balance Messages in Spreadsheet (ADFdi)

Use this task, in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering, to review and resolve any exceptions while processing the inventory balance messages.

Manage Inventory Transaction Process

This scheduled process processes the necessary adjustment transactions to reconcile the inventory balances.

Purge Inventory Balance Messages Process

Use this scheduled process to purge the historical balance inventory messages collected over time in the interface tables. Using the processing status parameter, you can purge error, successful, or all messages between a date range.

Related Topics

- Manage Inventory Balances Process
- Manage Inventory Transactions
- Purge Inventory Balance Messages

FAQs for Integrating with 3PL and Warehouse Management Systems

Can I synchronize master data with third-party logistics or warehouse management systems?

Yes. Oracle Product Hub, Oracle Purchasing, and the Oracle Fusion Cloud Sales integration solutions work together to provide integration capabilities to support automated integration for items, suppliers, and customers.

How can I send partially reserved demand to an external 3PL or warehouse management system?

To send partially reserved demand to an external third party (3PL) or warehouse management system (WMS), you must first set up the Reservation Behavior for Integration to External Systems shipping parameter.

1. In the Setup and Maintenance work area, go to the **Manage Shipping Parameters** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Shipping Parameters
2. Select **Partial** for the **Reservation Behavior for Integration to External Systems** shipping parameter.

    When you select this parameter, Oracle Shipping sends partially reserved shipping lines (from available on-hand goods) as shipment requests to your third-party logistics provider or warehouse management system.

Inventory Business Event Configuration

Inventory Business Event Configuration

Create an inventory business event configuration to associate business events with event types and organizations. You can manage business event configurations at the inventory organization or site level.

You can use business events to integrate with your external third-party logistics (3PL) or warehouse management system (WMS) using REST or Simple Object Access Protocol (SOAP) services. Use the **Manage Inventory Business**

Event Configurations task to select which business event to raise when integrating with your external 3PL or WMS for these functions:

- Outbound receipt advices
- Outbound shipment requests
- ASN and ASBN creation
- ASN and ASBN cancellation
- Transfer order creation
- Transfer order update
- Transfer order cancellation
- Pick confirm

Note: You can only select a REST event type for pick confirm and transfer orders.

On the Manage Inventory Business Event Configurations page, you can create, edit, search, and delete the business event configurations.

Note: If you don't configure a business event, SOAP is used for the 3PL or WMS integration.

For more information about inventory business events, see the Using the Oracle ERP Cloud Adapter with Oracle Integration guide.

Related Topics

- How can I choose REST or SOAP services to integrate with a 3PL system or WMS integration?
- Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow
- Overview of Inventory Management Integration with 3PL and Warehouse Management Systems
- Supported SCM and Procurement Business Events

FAQs for Inventory Business Event Configurations

What happens if I don't configure a business event?

If you don't configure a business event, SOAP is used for the 3PL or WMS integration.

How can I choose REST or SOAP services to integrate with a 3PL system or WMS integration?

Configure business events to specify whether to use REST or SOAP services to integrate with your external 3PL or WMS.

1. To configure inventory business events, use the **Manage Inventory Business Event Configurations** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Business Event Configurations

2. On the Mange Inventory Business Event Configurations page, click the **Add** icon to add a new business event configuration.
3. Select an operation such as **Outbound Receipt Advice** or **Outbound Shipment Request** for the event type.
4. Select an event name to adopt either SOAP or REST services.

   For example, for the event type of **Outbound Receipt Advice**, choosing an event name of **Outbound receipt advice** adopts REST, while choosing **Receipt advice event notification** adopts SOAP.
5. Select an organization.

   > **Note:** If you don't specify an organization, the business event applies to all organizations.

6. Click **Save and Close**.

What's an inventory business event?

Business events let you integrate Oracle Fusion Cloud Inventory Management transactions with third-party logistics (3PL) or warehouse management systems (WMS).

Use the **Manage Inventory Business Event Configuration** task to choose if you want to use REST or SOAP services to integrate with your external 3PL or WMS.

Min-Max Planning

Classifications in Min-Max Planning

When setting up min-max planning for Oracle Inventory Management, create classifications to categorize items. You associate categories with similar item attributes with a classification. Categorizing items with similar attributes enables you to specify the policies for computing the min-max quantities efficiently.

For example, based on item cost, you can define classifications as high cost, medium cost, or low cost. You can then associate all of the categories that contain high cost items to a classification called high cost.

You define all of the classifications under the Default classification group, which acts as a placeholder for all of the classifications. After creating classifications, you associate them with policy profiles at the organization and subinventory levels using the Manage Min-Max Planning Policy Profile Assignments task

> **Note:** You cannot create a classification group. You can only define classifications under the Default classification group.

Classification Criteria

After you create a classification, specify the category that you want to add to the classification. You associate the classification to a classification criterion called Category. You then define the criterion value for the Category by using one of the following conditions:

- **Starts with**: Group multiple categories with a single classification
- **Equals**: Specify the exact category
- **Contains**: Specify a criteria value the category may contain

- **Among**: Specify a range of categories

Create a classification and associate it with a classification criterion.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Min-Max Planning Classification Groups
2. On the Manage Min-Max Planning Classifications Groups page, in the Specify Classification section, click the **+** button to add a new row and specify a classification name and description.
3. In the Specify Classification Criteria section, click the **+** button, and do the following:
    a. In the **Condition** column, select a condition.
    b. In the **Criteria Values** column, click the **Edit** icon to specify the criteria.

Related Topics

- Policy Profiles in Min-Max Planning
- Policy Profile Assignments in Min-Max Planning
- How Classifications Work with Policy Profiles and Policy Profile Assignments in Min-Max Planning
- Set Up Min-Max Planning

Policy Profiles in Min-Max Planning

A policy profile in Oracle Inventory Management represents a set of rules that define how min-max planning will calculate quantities.

Create policy profiles to define the policy parameters for min-max planning. Policy parameters refer to a set of attributes for the minimum, maximum, and Economic Order Quantity (EOQ) quantities. These attributes define how the calculation program for the inventory policies calculates the min-max quantities to maintain the inventory levels.

Policy profiles work in conjunction with the classifications that you define for min-max planning. After creating a policy profile, you assign the policy profile to a classification using the Manage Min-Max Planning Policy Profile Assignments task. A policy profile can be assigned to a classification at the organization and subinventory levels. You can define one policy profile and assign it to multiple classifications.

Minimum Quantity

Minimum quantity is the inventory level quantity below which min-max planning suggests a replenishment order to bring the inventory level back to the maximum quantity. When creating policy profiles, you must define the Default Safety Stock Days of Cover attribute on the Create Min-Max Planning Policy Profile page. Min-max planning uses the Default Safety Stock Days of Cover attribute to calculate the minimum quantity.

Maximum Quantity and EOQ

Maximum quantity is the inventory level up to which min-max planning recommends a replenishment order. When you specify the maximum quantity value, the inventory level does not exceed that value. When creating policy profiles, you

must define the Maximum Quantity Calculation Method attribute on the Create Min-Max Planning Policy Profile page. Min-max planning uses the Maximum Quantity Calculation Method attribute to calculate the maximum quantity.

Additionally, you can define the EOQ attributes to calculate the EOQ and minimize the combined costs of acquiring and carrying the inventory.

Create policy profiles.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Min-Max Planning Policy Profiles
2. On the Manage Min-Max Planning Policy Profiles page, click the **+** icon.
3. On the Create Min-Max Planning Policy Profile page, do the following:
    - Enter a policy name and description.
    - Specify the required attributes in the Minimum Quantities, Maximum Quantities, and EOQ Calculation Inputs sections.
4. Click **Save**.

Related Topics

- Classifications in Min-Max Planning
- Policy Profile Assignments in Min-Max Planning
- How Classifications Work with Policy Profiles and Policy Profile Assignments in Min-Max Planning
- Set Up Min-Max Planning

Policy Profile Assignments in Min-Max Planning

Policy profiles contain the input policy parameters to calculate the min-max quantities. Assigning policy profiles is the final step in setting up min-max planning for Oracle Inventory Management. After creating policy profiles, you assign policy profiles to classifications at the organization and subinventories levels.

Define policy profile assignments.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Min-Max Planning Policy Profile Assignments
2. On the Edit Policy Profile Assignments: Default page, click the **+** icon to add a row.
3. In the **Classification** column, select a classification for the row you added.
4. In the **Organizations** column, click the **Edit** icon to add organizations.

    You can add multiple organizations.
5. In the **Subinventories** column, click the **Edit** icon to add subinventories.

    You can add multiple subinventories.

6. In the **Policy Profile** column, select a policy profile for the row you added.
7. Click **Save**.

Managing Policy Profiles

When associating a policy profile with a classification at the organization and subinventory levels, you can view and edit the parameters of the policy profile. It is recommended that you review the parameters of a policy profile before assigning it. You can also edit the policy parameters before making the assignments.

To view or edit the parameters of a policy profile:

1. In the Manage Min-Max Planning Policy Profile Assignments task, select an assignment row.
2. Click the **Manage Policy Profile** button.

Calculating Min-Max Planning Policy Parameters

After setting up the classifications, policy profiles, and policy profile assignments for min-max planning, you can calculate the min-max policy parameters. You can run the Calculate Min-Max Planning Policy Parameters scheduled process from the Manage Min-Max Planning Policy Profile Assignments task for one or more classifications.

To calculate the policy parameters:

1. In the Manage Min-Max Planning Policy Profile Assignments task, select the **Calculate Policy Parameters** check box corresponding to a classification row.
2. Click the **Calculate Min-Max Planning Policy Parameters** button.

Related Topics

- Classifications in Min-Max Planning
- Policy Profiles in Min-Max Planning
- How Classifications Work with Policy Profiles and Policy Profile Assignments in Min-Max Planning
- Set Up Min-Max Planning

How Classifications Work with Policy Profiles and Policy Profile Assignments in Min-Max Planning

Min-max planning in Oracle Inventory Management enables you to maintain the inventory levels by specifying the minimum and maximum quantities for an item. When the inventory level falls below the minimum quantity that's defined for an item, min-max planning recommends a replenishment order to bring the inventory level back to the maximum quantity. You define reusable replenishment profiles that help the calculation program for the inventory policies to calculate the min-max quantities.

Here's how to calculate the min-max quantities for an item using min-max planning:

- Create classifications to associate items or item categories that have similar attributes.
- Create policy profiles to define the policy parameters.
- Assign policy profiles to classifications.
- Run the Calculate Min-Max Planning Policy Parameters scheduled process.

Note: If you're using process manufacturing, min-max plans the primary items and any associated co-products. This can result in possibly exceeding the maximum quantity for an item. You can get around this by planning only one product at a time.

Classifications

Create classifications under the Default classification group to associate categories with similar item attributes to a classification. You then associate the classification to a category by specifying the classification criterion.

In the Setup and Maintenance work area, use the Manage Min-Max Planning Classification Groups task to create a classification:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Min-Max Planning Classification Groups

Policy Profiles

Policy profiles enable you to specify the policy parameters to calculate the min-max quantities. Each policy profile acts as a placeholder, which contains a set of policy parameters.

In the Setup and Maintenance work area, use the Manage Min-Max Planning Policy Profiles task to create policy profiles:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Min-Max Planning Policy Profiles

Policy Profile Assignments

Policy profiles assignments enable you to assign policy profiles to classifications at the organization and subinventories levels.

In the Setup and Maintenance work area, use the Manage Min-Max Planning Policy Profile Assignments task to set up policy profile assignments:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Min-Max Planning Policy Profile Assignments

Calculate Min-Max Planning Policy Parameters Scheduled Process

Run the Calculate Min-Max Planning Policy Parameters scheduled process to compute the min-max quantities at the item organization or item subinventory level.

The min-max quantities are calculated at the item organization level when you:

- Associate one or more categories with a classification.
- Assign a policy profile to the classification at the organization level.
- Set the Inventory Planning Method to Min-max planning in the **Specifications** tab of an organization using the Manage Items task. The Manage Items task is in the Product Information Management work area.

The min-max quantities are calculated at the item subinventory level when you:

- Associate one or more categories with a classification.
- Assign a policy profile to the classification at the subinventory level.
- Select the **Min-Max planning** check box at the item subinventory level using the Manage Subinventories and Locators task. The Manage Subinventories and Locators task is in the Setup and Maintenance work area.

Related Topics

- Classifications in Min-Max Planning
- Policy Profiles in Min-Max Planning
- Policy Profile Assignments in Min-Max Planning
- Set Up Min-Max Planning

Set Up Min-Max Planning

To set up min-max planning for an item, complete steps at the organization, item-subinventory, and inventory profile option levels. You also need to setup item catalogs and default categories for the Inventory and Purchasing functional areas.

Organization

1. On the Specifications tab of the Create Item page in the Product Information Management work area, set the **Inventory Planning Method** to **Min-Max planning**.
2. Specify the min-max quantities of the item.

Item-Subinventory

1. In the Setup and Maintenance work area, go to the Manage Subinventories and Locators task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Subinventories and Locators
2. In the Select Organization dialog box, select an organization and then click **OK**.
3. On the Manage Subinventories page, click **Manage Item Subinventories**.
4. On the Manage Item Subinventories page, edit or add an item to subinventory.
5. Select **Min-Max planning** and then specify the min-max quantities of the item.

Inventory Profile Option

1. In the Setup and Maintenance work area, go to the Manage Inventory Profile Option task.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Profile Options
2. Enter **INV_MINMAX_REORDER_APPROVED** in the **Profile Option Code** field and click **Search**.
3. In the INV_MINMAX_REORDER_APPROVED: Profile Values table, select a value for the **Profile Value** field.

    The profile value determines the requisition status for min-max generated requisitions. Options include:

- Preapproved: requisition is created in Approved status
- Incomplete: requisition is created in Incomplete status
- Approval required: requisition is created in Pending approval status and submitted to the Oracle Fusion Cloud Procurement approval workflow

Catalogs and Categories

Make sure that you set up catalogs and default categories for Inventory and Purchasing functional areas before loading items. The application assigns these functional area catalogs automatically once an item is created.

1. In the Setup and Maintenance work area, go to the **Manage Functional Area Catalogs** task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Catalogs
   - Task: Manage Functional Area Catalogs
2. Create a catalog for the Inventory functional area. Select the functional area first to ensure that the catalog is configured to follow the rules of the specific functional area. When you create the catalog, you must create a category and assign it to the default category. The default category is used in the automated process that assigns any new items used in inventory to the default category.

   > **Note:** All items that have the INVENTORY_ITEM_FLAG set to **Yes** are automatically added to the default category when the item is created.

3. Repeat the steps for the Purchasing functional area.

FAQs for Min-Max Planning

Can min-max planning ever exceed your maximum quantity?

Yes. If you're using process manufacturing, min-max plans the primary items along with any associated co-products. This can result in possibly exceeding the maximum quantity for an item.

For example, let's say your company places two process manufacturing work orders which can produce multiple products. Work Order 1 contains product A with a requested quantity of 1000 and a maximum quantity of 5000. Work Order 1 also contains co-products B and C with requested quantities of 500 each. Work Order 2 contains product B with a requested quantity of 2000 and a maximum quantity of 2000. Work Order 2 also contains co-products C and D with requested quantities of 750 each.

In this scenario, the total requested quantity for product B is 2500 (500+2000=2500) and the maximum quantity is 2000. This can happen when running replenishment planning for products A and B in a single replenishment run. You can get around this by planning only one product at a time.

PAR Replenishment

Overview of PAR Replenishment

Periodic Automatic Replenishment (PAR) includes the use of PAR locations and PAR levels.

A PAR location is a stock area from which you can take consumable items. Organizations, such as hospitals and clinics, use PAR locations to manage supplies needed to support medical procedures and patient care. The PAR level is the optimum level of stock needed for items in that PAR location. In addition to determining the best level of stock for items in an inventory area, the PAR level also defines the level at which to replenish stock.

Typically, there are two types of PAR locations:

- Quantity Tracked: For controlled or more valuable types of materials. Use quantity tracked to dispense and issue the items in a controlled manner.
- Non-Quantity Tracked: For important but lower value materials (or bulk supplies). Use non-quantity tracked for supplies that you count and replenish to predetermined levels at various intervals. Examples include gauze, syringes, test kits, gloves, and so forth.

We can break down PAR location management into five categories:

- Define: Set-up and maintain PAR locations within a facility and define rules about how to count and replenish the materials in the location.
- Count or Issue: Count PAR locations that aren't quantity tracked (i.e expensed) or capture the issue and dispensing of materials that are quantity tracked.
- Replenish: Replenish materials in PAR locations from suppliers or the stockroom or warehouse.
- Optimize: Optimize the replenishment of materials in PAR locations.
- Account and Record: Account and record replenishment transactions. Configure subledger accounting including setting up mapping sets and account.

PAR Locations

A PAR location is a stock area from which items are consumed.

We model PAR locations as subinventories. Your PAR location can be an area, closet, shelf, or cart. You may have only a few, or you may have hundreds of locations to define and manage. You may also have multiple facilities (organizations) with hundreds of PAR locations.

You must give your PAR location a name and associate it with an inventory organization.

Set up a PAR location using the Manage Subinventories and Locators task in the Setup and Maintenance work area.

Update these fields when defining a PAR location:

- Location
- PAR location
- Replenishment count method

- Default replenishment count type
- Quantity tracked
- Replenishment source
- PAR settings

Location

Use the **Location** to specify the ship-to-detail associated with the PAR location. The location details specify where to deliver the requested material to their final destination.

PAR Location

Select this check box to configure the subinventory as a PAR location. Enabling this setting lets you select the **Replenishment Count Method** and **Default Replenishment Count Type**. You can enable this option whether or not the subinventory is quantity tracked or non-quantity tracked.

Replenishment Count Method

The following table lists possible values for the replenishment count method.

Count Method	Description
Two Bin	A visual indicator indicating that materials are running low. The location is scanned to indicate that material needs replenishing. The application reorders the standard quantity or PAR quantity. The replenishment request is for all items in the location (bin) in PAR quantity and PAR UOM. For Two bin, the **Default Replenishment Count Type** field defaults with a value of Order PAR.
Request	Indicates that you want to enter the requested quantity. The application creates the replenishment for the given quantity for the PAR location item.
Count	Indicates that you will enter a count to specify what the current quantity is in the PAR location. When you select **Count** as the replenishment count method, you must enter a value in the **Default Replenishment Count Type** field.

Default Replenishment Count Type

The default replenishment count type indicates the count type for the PAR location.

The following table lists possible values for the default replenishment count type.

Count Type	Description
Order PAR	Generates a replenishment request for the PAR level quantity associated with the item subinventory or item locator. For example, if the PAR level quantity is 10. The reorder quantity will always be for a quantity of 10. You can't enter a replenishment count quantity when the replenishment count type is **Order PAR**.

Count Type	Description
On-Hand Quantity	Enter the on-hand quantity. The system compares the entered on-hand quantity with the PAR level quantity and creates a replenishment request for the difference. When the entered on-hand quantity is less than the PAR level quantity, the reorder quantity is the difference between the two. For example, if the on-hand quantity entered is 15 and the PAR level quantity is 20, the reorder quantity will be 5. If the entered on-hand quantity exceeds the PAR level quantity, the reorder quantity is 0.
Order Quantity	Generates a replenishment request for the order quantity entered for the replenishment count. For example, if an order quantity of 50 is entered and the PAR level quantity is 20, the reorder quantity will be 50. When the replenishment count type is **Order Quantity**, the PAR level isn't considered. The **PAR Maximum Quantity** is only used when the replenishment count type is **Order Quantity**. The **PAR Maximum Quantity** is a safeguard preventing users from mistakenly entering an incorrect reorder quantity. If the entered reorder quantity exceeds the **PAR Maximum Quantity**, an error message displays.
Not Planned	Use to disable PAR for specific items while retaining your previously specified PAR settings. Exclude specific items from your PAR process by setting the **Replenishment Count Type** to **Not Planned** at the item subinventory or item locator level. When set to **Not Planned**, any PAR requests you submit for the item won't be considered for replenishment.

Quantity Tracked

When creating a PAR Location you must determine whether or not the PAR location is quantity tracked or non-quantity tracked. Typically, you classify subinventories as non-quantity tracked for PAR replenishment. However, you can also configure PAR locations as quantity tracked.

When a PAR location is quantity tracked, this indicates that each transaction updates the on-hand quantity. In this case, the **Quantity Tracked** check box is selected by default. In order to deselect the **Quantity Tracked** check box, you must first change the material status associated with the subinventory. Then, you can update the **Quantity Tracked** check box on the Manage Subinventories page.

> **Note:** The **Quantity Tracked** check box is only enabled when the associated material status has a value of **Active: Not Available for Netting**, **ATP**, and **Reservations**.

Replenishment Source

Define the replenishment source using the Sourcing section. You can define your sourcing details at various levels starting with the item subinventory, subinventory, inventory item, and inventory organization levels.

The sourcing documents include:

- Purchase requisition (purchase order)
- Interorganization Internal Material Transfer
- Intraorganization Internal Material Transfer
- Movement Request

PAR Settings

Finish defining your PAR locations by completing the PAR Settings section.

PAR settings include:

- Replenishment count type
- PAR level
- PAR maximum quantity
- PAR level UOM
- Count tolerance percentage
- Count required
  (You define the count required at the item locator level only.)

Related Topics
- PAR Location Settings

PAR Location Settings

You have the option to configure PAR parameters at the item subinventory or item locator level. The level at which you chose to specify your PAR settings depends on how you store and count your items.

These settings include:

- PAR level
- Par level UOM
- Replenishment count type
- PAR maximum quantity
- Count required
- Count tolerance percentage

PAR Level

The level at which the quantity is restocked. If the count falls below this quantity, and a PAR maximum quantity has not been specified, the PAR level calculates the reorder quantity.

PAR Level UOM

The PAR level unit of measure associated with the item.

Replenishment Count Type

The replenishment count type values include Order PAR, On-Hand quantity, Order Quantity, and Not Planned. If you do not specify a value for the **Replenishment Count Type**, the application uses the default replenishment count type specified for the subinventory.

PAR Maximum Quantity

This value is used to recalculate the reorder quantity if the count falls below the PAR level. If you do not specify a PAR maximum quantity, the application uses the PAR level.

Count Required

A check mark in this field indicates that the item in the PAR location must be counted. You define this setting at the item locator level only.

Count Tolerance Percentage

The percentage that the count can exceed the PAR maximum quantity.

How You Set Up PAR Location Management

Periodic Automated Replenishment (PAR) enables facilities that do not store perpetual inventory (such as hospitals) to perform locator-level replenishment.

With PAR location management, organizations can perform locator-level stock counting for both quantity and not quantity tracked subinventories. If the stock level falls below the target on-hand quantity for the locator, inventory generates the appropriate replenishment document based on the item sourcing for the subinventory.

Considerations

Consider the following when setting up PAR location management:

- You have the option to configure PAR parameters at the item subinventory or item locator level. The level at which you chose to specify PAR parameters depends on how you store and count your items. This determines the level to setup the PAR replenishment related attributes.
- Determine if the PAR location will be quantity tracked or non-quantity tracked. Typically, PAR locations are non-quantity tracked. However, there can be cases where the PAR location is quantity tracked.

Set Up

To set up PAR location management:

1. Define the ship-to location associated with the PAR location.

   In the Setup and Maintenance work area, use the Manage Locations task:

   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Inventory Management
   - Task: Manage Locations

   The location you define represents the Deliver-to Location on the final put away or deliver transaction.

   Define these details for the PAR location:

   - Location Name
   - Location Code
   - Main Location Address
   - Ship-to-Location (for replenishment)
2. Set up PAR locations.

a. In the Setup and Maintenance work area, use the Manage Subinventories and Locators task:

   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Inventory Management
   - Task: Manage Subinventories and Locators

   PAR locations are modeled as subinventories.

   Fields that you need to enter when defining a PAR location include:

   - Subinventory Name
   - Subinventory Description
   - Subinventory Type
   - Location
   - PAR Location check box
   - Replenishment Count Method
   - Default Replenishment Count Type
   - Sourcing
   - PAR Settings

b. Select the **PAR location** check box to configure the subinventory as a PAR location.

   You can enable the **PAR Location** check box regardless of whether the subinventory is quantity tracked or not quantity tracked. You must select this check box in order to enable PAR level counting.

c. Once you have selected the **PAR location** check box, you can choose the **Replenishment Count Method** and **Default Replenishment Count Type**.

   Replenishment Count Methods include **Two Bin**, **Request**, and **Count**.

d. When you select **Count** as the Replenishment Count Method, you must enter a value in the **Default Replenishment Count Type** field.

   Values include **Order PAR**, **On-Hand Quantity**, **Order Quantity**, and **Not Planned**.

e. Define the replenishment source using the Sourcing region of page. You can define your sourcing details at various levels starting with the item subinventory, subinventory, inventory item, and inventory organization levels.

   The sourcing documents include:

   - Purchase requisition (purchase order)
   - Interorganization internal material transfer
   - Intraorganization internal material transfer
   - Movement request

f. Finish defining your PAR locations by completing the PAR settings region of the page.

   Settings include:

   - Replenishment Count Type
   - PAR level
   - PAR Maximum Quantity
   - PAR level UOM
   - Count Tolerance Percentage

- Count Required check box

3. The final step in the PAR replenishment process is to account and record the transaction.

   You can account and record PAR transactions using subledger accounting. You can configure accounting rules to transform subledger transactions into detailed subledger journal entries automatically.

   To implement subledger accounting for a PAR location you must first create a mapping set. Mapping sets provide an efficient way to define a segment or account combination value for one or more transaction or reference attribute values.

Related Topics

- Configure Offerings

PAR Location Counts

You can replenish a PAR location by counting and recording its quantity.

The frequency of counting of a PAR location depends on the criticality and turnover of items in the PAR locations. You can count PAR locations multiple times per day (like at the end of every shift), or on a daily, weekly, or as-needed basis.

You can use different ways to count and react to the consumption of items in a PAR location. The count method that you define on the PAR location determines the counting method. This table shows the available count methods:

Count Method	Description
Two Bin	Simple visual indicator that the materials are running low. Scan just the location to indicate that material needs replenishing. You can reorder the standard quantity or PAR quantity. When using one bin, a new bin replaces it (no counting). Use the **Order PAR** replenishment count type to always replenish the whole bin.
Request	You request an order for the item and enter the quantity to order. Use the **Order Quantity** replenishment count type. The application creates the replenishment for the given quantity for the PAR location item.
Count	You enter a count to specify the current quantity in the PAR location. If the count is below the PAR quantity, the application creates a replenishment order for the PAR quantity to bring the location back to the proper stocking level. You can use any replenishment count type with this option. When you select **Count** as the replenishment count method, you must enter a value in the **Default Replenishment Count Type** field.

Counting is a two-part activity:

1. You count the items in the PAR location and enter the quantity. Note that this could be a simple two bin action to swap bins in the location.

2. You indicate that the count is complete and send the quantities back to the application. The application generates the required replenishment requests based on your defined PAR location count and replenishment options.

The table shows the supported replenishment count methods and count types:

Replenishment Count Method	Replenishment Count Type	Quantity Mandatory in Replenishment Request	Replenishment Request
Two Bin (Replenish the complete PAR location or a specific PAR location item.)	Not applicable	No	Count quantity isn't sent in the replenishment request. You can only send details of organization and PAR location. Generates replenishment for all items in the PAR location with the reorder quantity set to **PAR Quantity**.
Request (Create a specific quantity for a PAR location item.)	Not applicable	Yes	You must provide the count quantity in the replenishment request. Replenishment is created for the given quantity for the PAR location item.
Count (Count and specify the current quantity. The replenishment request is created based on PAR location item setup.)	Supports three different replenishment count types: • Order PAR: create replenishment request for the PAR level. For example, if the PAR level is 5 and a replenishment order is requested, it will be for order quantity of 5. • Order Quantity: create replenishment request for the quantity entered by the user. For example, if the PAR quantity is 20 and the you enter and order a quantity of 30, the order will be for a quantity of 30. • On-Hand Quantity: compare the given quantity with the PAR quantity (along with other conditions like reasonableness) and create a replenishment for the difference. For example, if the PAR count quantity is 15 and the PAR level is 20, the replenishment order will be for a quantity of 5.	Yes	You must provide the count quantity in the replenishment request. Replenishment is done depending on the replenishment count type at the PAR location item level.

PAR Location Replenishment

The replenishment process considers the PAR location definition and uses the count options, requested quantity, current on-hand level, and any in-process requests to create an appropriate replenishment request. The replenishment request takes the form of a purchase requisition or warehouse request. The supplier or warehouse fills the request and delivers the material to the PAR location.

After submitting counts for a PAR location, a replenishment process performs these steps:

- Evaluates each item in the count to determine the amount to replenish and the type of replenishment.
- Considers the PAR location replenishment count type to determine the order quantity.
- Uses the PAR location unit of measure if there is no provided count unit of measure.
- Evaluates existing demand and supply for the item in that particular PAR location to determine how much to order. This is similar to min-max replenishment.
- Checks for the reasonableness of the request to avoid miss-keys of an order quantity that could create requests for unintended large orders.

Sourcing details define the replenishment source. You can define the sourcing details at various levels of granularity starting with the item subinventory.

The levels include:

- Item subinventory level
- Subinventory level
- Inventory item level
- Inventory organization level

This table shows the supported replenishment source types.

Sourcing Document	Sourcing Type	Sourcing Organization	Sourcing Subinventory
Purchase Requisition and Purchase Order	Supplier	Not applicable	Not applicable
Interorganization Internal Material Transfer	Organization	Enter the source inventory organization from where to replenish the material.	Optionally, enter the source subinventory from where to replenish the material.
Intraorganization Internal Material Transfer	Organization	Enter the same inventory organization that you logged in with.	Enter the source subinventory from where to replenish the material.
Movement Request	Subinventory	Organization automatically defaults.	Enter the source subinventory from where to replenish the material.

PAR Accounting and Recording

The final part of the PAR replenishment process is to account and record the transaction.

Cost Management subledger accounting provides rules that you can configure to automatically transform subledger transactions into detailed subledger journal entries. You can define flexible rules for accounting policies and generate accounting for legal and corporate reporting. Reconciling accounting to transaction data enables drill down from general ledger to the underlying subledgers and standard reports.

The first step in implementing subledger accounting for a PAR location is to create a mapping set. Mapping sets provide an efficient way to define a segment or account combination value for one or more transaction or reference attribute values. Using such input and output mappings is simpler than using complex conditions on account rules. Based on the value of the source input, you can derive a single segment or a full account. Examples of source input value types include transaction attributes and reference attributes.

The next step is to create an account rule on the Edit Account Rule page. You can use mapping sets to associate a specific output value for an account or segment. You can use mapping sets in the account rules to build the account. Use the account rules to determine the accounts for subledger journal entry lines. In addition, you can specify the conditions under which these rules apply. Using these capabilities, you can develop complex rules for defining accounts under different circumstances to meet your specific requirements. You can define account rules for an account, segment, or value set.

Example of PAR Replenishment Accounting and Recording

Let's look at an example to see how with an input source of **PAR Location**, we can derive the output type account combination.

Let's create a mapping set:

1. Navigate to the Manage Mapping Sets task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receipt Accounting
    - Task: Manage Mapping Sets
2. On the Edit Mapping Sets page, once you establish the input source, select the chart of accounts. In our example, let's say you select the chart of accounts of **102_Operations Accounting**.
3. Map the input source of **PAR Location** to the output source of **102_Operations Accounting**.
4. Select **Yes** for input source **PAR Location** and select a specific account code combination for the output type.

Let's create the account rule:

1. Navigate to the Manage Account Rules task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receipt Accounting
    - Task: Manage Account Rules
2. In the Rules region of the Edit Account Rule page, enter **Mapping Set** for the value type. This indicates to derive the account combination by referencing the mapping set. The account combination from the chart of accounts is specified using the mapping set.

3. In the account rules, you can specify conditions for each rule detail line. Priorities determine the order in which to examine the account rule conditions. When a condition is met, the rule associated with that priority is used. Depending on which of the defined conditions is met, a different account rule detail is employed to create the account. The Create Accounting process evaluates conditions based on the priority of the rule detail. When the condition is met, the rule detail is applied.

Two Bin Replenishment

Hospital environments use two bin inventory control systems to determine when to replenish items. It's effective to use this type of inventory control method primarily for small or low-value items.

For example, when a hospital depletes items in the first bin (working stock), the replenishment clerk creates an order to refill or replace these items. The second bin should have enough items to last until the placed order arrive. The first bin has a minimum of working stock and the second bin keeps reserve stock or the remaining material.

Once the hospital worker depletes the first bin in front, he places the empty bin on the top shelf. The empty bin serves as a visual indicator to the replenishment clerk to order additional material to replenish the empty bin. Since the count method is **Two Bin**, you don't need to enter an actual count. The two bin method automatically replenishes the item to the PAR level.

Once the replenishment clerk processes the replenishment request and receives the new material, the replenishment clerk places the new bin behind the existing bin. This ensures that the hospital uses the material in a first-in first-out approach.

Example of a PAR Replenishment Purchase Requisition

To generate a purchase requisition in Procurement, you must complete the necessary setups at the subinventory and item subinventory levels. Additionally, you can create a location and associate it with the PAR subinventory.

After running the replenishment process you can review the supply order details and requisition lines. Then, you can generate a purchase order, receive the order, and put away the receipt line.

Scenario

This example of a PAR replenishment purchase requisition covers these steps:

- Define location
- Create subinventory
- Associate item to a subinventory
- Run Replenish Inventory Request REST service
- Process Supply Chain Orchestration Interface process
- Review supply details
- View requisition lines
- Generate purchase orders
- Receive expected shipments
- Put away lines

This table describes each step in the example for a PAR replenishment purchase requisition.

Step	Description
Define location	First, define the location to serve as your final deliver-to location when performing the deliver or put away transaction. Use an address naming convention that allows receiving personnel to route the material to the appropriate replenishment location. Use the Manage Locations page to set up the location. Next, configure the subinventory to serves as the PAR location you intend to replenish. You must enable the **PAR Location** check box for the subinventory. Also, specify the **Replenishment Count Method** and **Default Replenishment Count Type**. You can also associate a location to the subinventory. Optionally, you can create a subinventory group. A subinventory group is a grouping of subinventories that you can use to process PAR replenishment requests. For example, you can define a subinventory group consisting of five individual subinventories. You can then create a replenishment request for all five subinventories instead of creating individual replenishment requests for each subinventory.
Create subinventory	In this example, let's set up the subinventory as non-quantity tracked subinventory. In order to configure a subinventory as non-quantity tracked, set the **Material Status** field to **Active: Not Available for Netting, ATP, and Reservations**. Once the material status is set, you can deselect the **Quantity Tracked** check box. In order to configure the subinventory as a PAR location, you must select the **PAR location** check box. By configuring the subinventory as a PAR location, you can now select the Replenishment Count Method and Default Replenishment Count Type. Last, assign a location to the subinventory. This location represents the final deliver-to location when you put away the material receipt into inventory.
Associate item to a subinventory	Once you create the subinventory, you must associate your item to the subinventory. The sourcing region on the Add Item to Subinventory page enables you to specify the sourcing type. In this example, let's select **Supplier** as the source type. The source type of **Supplier** indicates that the replenishment request will create a corresponding purchase requisition and purchase order to replenish the material to the PAR Level for the item subinventory. In the PAR Settings region, the Replenishment Count Type is automatically defaulted from the subinventory. In this example, the PAR Level has been set to 5 units for the item subinventory association. This means that the replenishment request will be created for 5 units. The PAR Level UOM is automatically defaulted from the item.
Run Replenish Inventory Request REST service	The Replenish Inventory Request REST service manages replenishment requests. When the REST request processes successfully, the return message text indicates the following: **M1 Supply Request Batch Number: PAR8001. The process has successfully completed**. When submitting the Replenish Inventory Request REST service, you have the option to specify **Yes** or **No** for the **Submit for Processing** parameter. Selecting **Yes** indicates that the service submits the replenishment request immediately for processing. Selecting **No** indicates that the service doesn't submit the replenishment request immediately for processing. For those replenishment requests that aren't submitted immediately, you can use the Create Inventory Replenishment Request scheduled process to create inventory replenishment requests. The Create Inventory Replenishment Request process supports these submission parameters: • Organization • Item • Subinventory

Step	Description
	• Subinventory group When the replenishment request is for a requisition, the Replenish Inventory Request REST service creates a supply request batch number. The supply request batch number always has a prefix with **PAR** for PAR generated replenishment requests. You can use the supply request batch number when submitting the Process Supply Chain Orchestration Interface process.
Process Supply Chain Orchestration Interface process	The Process Supply Chain Orchestration Interface scheduled process creates supply orders based on the Supply Chain Orchestration interface records. To process these records, you must submit the scheduled process. Once you enter the scheduled process parameters, you can submit the request. Let's use these values for our process parameters: • Supply Request System: Oracle Fusion Cloud Inventory Management • Organization: Enter the inventory organization that generated the PAR replenishment request • From Supply Request Batch Number: The batch number will always start with **PAR**. For example, PAR8001 • To Supply Request Batch Number: Enter the ending batch number for a range or supply request batch numbers • From Supply Request Date: Starting supply request date • To Supply Request Date: Ending supply request date
Review supply details	When the Process Supply Chain Orchestration Interface completes successfully, you can review the supply order details by navigating to the Manage Supply Lines task. Search by the supply request reference number to review the supply lines. The supply request reference number has a prefix of PAR such as in the example PAR8001. When reviewing the supply order details, you can review the supply lines associated with the supply order. When you click on a supply line, you can review the line details. Navigate to the Execution Documents tab to view the purchase requisition number created for the replenishment request.
View requisition lines	You can use the requisition document number displayed in the supply order details to search for the requisition in Procurement. You can navigate to the View Requisition Lines task in Procurement to view the requisition details.
Generate purchase orders	Procurement provides the ability to automatically generate a purchase order from a purchase requisition. The purchase order provides the supplier information indicating which supplier will replenish the material. The ship-to location is identified based on the location associated with the subinventory.
Receive expected shipments	Once the purchase order is in an Open status, it's available for receiving. Navigate to the Receive Expected Shipments page to perform the receipt transaction. You can search by criteria such as purchase order number, supplier, and item. The **Receipt Routing** field on the purchase order schedule determines how the material is received. The default value is derived from this criteria: • Item definition for the ship-to organization • Supplier site • Receiving option for the ship-to organization Receiving supports the following receipt routing methods:

Step	Description
	• Direct Delivery: Shipments are received into a receiving location and put away in the same transaction. Put away happens automatically upon receipt creation. • Standard Receipt: Shipments are received into a receiving location and then put away in a separate transaction. Standard receipts can be inspected or transferred before put away. • Inspection Required: Shipments are received into a receiving location and then inspected and put away in separate transactions. You can accept or reject material during the inspection, and put away to separate locations, based on the inspection result.
Put away lines	Depending on the configured receiving process, a put away transaction may be required to deliver the material to the final inventory destination. In this case, you must perform a two-step receipt and complete the put away or delivery transaction to the PAR subinventory. Once you submit the transaction, a confirmation message displays indicating that the receiving created the put away transaction.

Example of a PAR Replenishment Interorganization Internal Material Transfer

An interorganization internal material transfer represents a transfer of material from a source inventory organization to a destination inventory organization. You perform this type of transfer to replenish material from one inventory organization to another.

For example, the source inventory organization may represent a main storage facility used to replenish the various PAR locations. When the PAR location needs material, you replenish the material from the main storage facility.

You must complete the necessary setups at the subinventory and item subinventory levels. Additionally, you can create a location and associate it with the PAR subinventory. You must also set up the interorganization parameters. After running the replenishment process, you can review the supply order details and transfer order. Then, you can review the shipment lines, ship confirm, receive the transfer order, and put away the receipt line.

Scenario

This example of a PAR replenishment interorganization internal material transfer covers these steps:

- Define location
- Create subinventory
- Associate item to a subinventory
- Set up interorganization parameters
- Run Replenish Inventory Request REST service
- Process Supply Chain Orchestration Interface process
- Review supply order details
- Mange transfer orders
- Manage shipment lines
- Ship confirm

- Receive expected shipments
- Put away lines

This table describes each step in the example for a PAR replenishment interorganization internal material transfer.

Step	Description
Define location	First, define the location to serve as your final deliver-to location when performing the deliver or put away transaction. Use an address naming convention that allows receiving personnel to route the material to the appropriate replenishment location. Use the Manage Locations page to set up the location. Next, configure the subinventory to serves as the PAR location you intend to replenish. You must enable the **PAR Location** check box for the subinventory. Also, specify the **Replenishment Count Method** and **Default Replenishment Count Type**. You can also associate a location to the subinventory. Optionally, you can create a subinventory group. A subinventory group is a grouping of subinventories that you can use to process PAR replenishment requests. For example, you can define a subinventory group consisting of five individual subinventories. You can then create a replenishment request for all five subinventories instead of creating individual replenishment requests for each subinventory.
Create subinventory	In this example, let's set up the subinventory as non-quantity tracked subinventory. In order to configure a subinventory as non-quantity tracked, set the **Material Status** field to **Active: Not Available for Netting, ATP, and Reservations**. Once the material status is set, you can deselect the **Quantity Tracked** check box. In order to configure the subinventory as a PAR location, you must select the **PAR location** check box. By configuring the subinventory as a PAR location, you can now select the Replenishment Count Method and Default Replenishment Count Type. Last, assign a location to the subinventory. This location represents the final deliver-to location when you put away the material receipt into inventory.
Associate item to a subinventory	In this example, the source type is **Organization**, indicating that you're replenishing the item subinventory from another inventory organization. The **Organization** field is mandatory when the source type is organization. For our example, specify the source organization as Boston Manufacturing. Additionally, you can also specify a sourcing subinventory if required.
Set up interorganization parameters	You must establish interorganization parameters prior to performing an interorganization internal material transfer. Interorganization parameters define the relationship between the source inventory organization and the destination inventory organization. The parameters specify the transfer type and receipt routing.
Run Replenish Inventory Request REST service	The Replenish Inventory Request REST service manages replenishment requests. When the REST request processes successfully, the return message text indicates the following: **M1 Supply Request Batch Number: PAR12001. The process has successfully completed**. When submitting the Replenish Inventory Request REST service, you have the option to specify **Yes** or **No** for the **Submit for Processing** parameter. Selecting **Yes** indicates that the service submits the replenishment request immediately for processing. Selecting **No** indicates that the service doesn't submit the replenishment request immediately for processing. For those replenishment requests that aren't submitted immediately, you can use the Create Inventory Replenishment Request scheduled process to create inventory replenishment requests. The Create Inventory Replenishment Request process supports these submission parameters: • Organization

Step	Description
	• Item • Subinventory • Subinventory group When the replenishment request is for a requisition, the Replenish Inventory Request REST service creates a supply request batch number. The supply request batch number always has a prefix with **PAR** for PAR generated replenishment requests. You can use the supply request batch number when submitting the Process Supply Chain Orchestration Interface process.
Process Supply Chain Orchestration Interface process	The Process Supply Chain Orchestration Interface scheduled process creates supply orders based on the Supply Chain Orchestration interface records. To process these records, you can enter the scheduled process parameters and submit the request. Let's use these values for our process parameters: • Supply Request System: Oracle Fusion Cloud Inventory Management • Organization: Enter the inventory organization that generated the PAR replenishment request • From Supply Request Batch Number: The batch number will always start with **PAR**. For example, PAR12001 • To Supply Request Batch Number: Enter the ending batch number for a range or supply request batch numbers • From Supply Request Date: Starting supply request date • To Supply Request Date: Ending supply request date
Review supply order details	When the Process Supply Chain Orchestration Interface completes successfully, you can review the supply order details by navigating to the Manage Supply Lines task. Search by the supply request reference number to review the supply lines. The supply request reference number has a prefix of PAR such as in the example PAR12001. When reviewing the supply order details, you can review the supply lines associated with the supply order. When you click on a supply line, you can review the line details. Navigate to the Execution Documents tab to view the purchase requisition number created for the replenishment request.
Mange transfer orders	You can view the transfer order by navigating to Manage Transfer Orders task.
Manage shipment lines	You can use the transfer order number displayed in the supply order details to search for the shipment in inventory management. You can navigate to the Manage Shipment Lines task to view the shipment line details. In order to view the shipment lines, you must login as a user with data access to the source inventory organization.
Ship confirm	Proceed with the ship confirm process.
Receive expected shipments	The next step in the process is to receive the material at the destination inventory organization.
Put away lines	Depending on the configured receiving process, a put away transaction may be required to deliver the material to the final inventory destination. In this case, you must perform a two-step receipt and complete the put away or delivery transaction to the PAR subinventory. Once you submit the transaction, a confirmation message displays indicating that the receiving created the put away transaction.

Example of a PAR Replenishment Intraorganization Internal Material Transfer

An intraorganization internal material transfer represents a transfer of material from a source subinventory to a destination subinventory within the same inventory organization.

For example, the source inventory organization may represent a main storage subinventory used to replenish the various PAR locations. When the PAR location needs material, the material is replenished from the main storage subinventory within the same inventory organization.

You must complete the necessary setups at the subinventory and item subinventory levels. Additionally, you can create a location and associate it with the PAR subinventory. You must also set up the intersubinventory (intraorganization) parameters. After running the replenishment process, you can review the supply order details and transfer order. Then, you can review the shipment lines, ship confirm, receive the transfer order, and put away the receipt line.

Scenario

This example of a PAR replenishment intraorganization internal material transfer covers these steps:

- Define location
- Create subinventory
- Associate item to a subinventory
- Set up intersubinventory parameters
- Run Replenish Inventory Request REST service
- Process Supply Chain Orchestration Interface process
- Review supply order details
- Mange transfer orders
- Manage shipment lines
- Ship confirm
- Receive expected shipments
- Put away lines

This table describes each step in the example for a PAR replenishment intraorganization internal material transfer.

Step	Description
Define location	First, define the location to serve as your final deliver-to location when performing the deliver or put away transaction. Use an address naming convention that allows receiving personnel to route the material to the appropriate replenishment location. Use the Manage Locations page to set up the location. Next, configure the subinventory to serves as the PAR location you intend to replenish. You must enable the **PAR Location** check box for the subinventory. Also, specify the **Replenishment Count Method** and **Default Replenishment Count Type**. You can also associate a location to the subinventory.

Step	Description
	Optionally, you can create a subinventory group. A subinventory group is a grouping of subinventories that you can use to process PAR replenishment requests. For example, you can define a subinventory group consisting of five individual subinventories. You can then create a replenishment request for all five subinventories instead of creating individual replenishment requests for each subinventory.
Create subinventory	In this example, let's set up the subinventory as non-quantity tracked subinventory. In order to configure a subinventory as non-quantity tracked, set the **Material Status** field to **Active: Not Available for Netting, ATP, and Reservations**. Once the material status is set, you can deselect the **Quantity Tracked** check box. In order to configure the subinventory as a PAR location, you must select the **PAR location** check box. By configuring the subinventory as a PAR location, you can now select the Replenishment Count Method and Default Replenishment Count Type The Replenishment Count Method defined for the subinventory is **Request**. This count method indicates that you will manually enter the order quantity in the replenishment request. The default replenishment count type of **Order Quantity** is defaulted Last, assign a location to the subinventory. This location represents the final deliver-to location when you put away the material receipt into inventory.
Associate item to a subinventory	In this example, the source type is **Organization**. The **Organization** field is mandatory when the source type is organization. For our example, specify the source organization as Seattle Manufacturing. Since this is an intraorganization (transfer from one subinventory to another subinventory), the selected source organization will be the same organization that you're logged in as. For example, if you're logged in as inventory organization Seattle Manufacturing, the organization selected will also be Seattle Manufacturing. Optionally, you can specify a sourcing subinventory if required. Since the replenishment count type is **Order quantity**, the PAR level isn't required. The expectation is that you will manually enter the order quantity in the replenishment request. In this example, let's enter 25 units for the order quantity.
Set up interorganization parameters	When performing an intraorganization transfer, you must define the intersubinventory parameters. The Manage Intersubinventory Parameters task defines the relationship between the source subinventory and the destination subinventory. Additionally, define the receipt routing between the two subinventories.
Run Replenish Inventory Request REST service	When submitting the Replenish Inventory Request REST service, you have the option to specify **Yes** or **No** for the **Submit for Processing** parameter. Selecting **Yes** indicates that the service submits the replenishment request immediately for processing. Selecting **No** indicates that the service doesn't submit the replenishment request immediately for processing. For those replenishment requests that aren't submitted immediately, you can use the Create Inventory Replenishment Request scheduled process to create inventory replenishment requests. The Create Inventory Replenishment Request process supports these submission parameters: • Organization • Item • Subinventory • Subinventory group The supply request batch number always has a prefix with **PAR** for PAR generated replenishment requests. You can use the supply request batch number when submitting the Process Supply Chain Orchestration Interface process.

Step	Description
Process Supply Chain Orchestration Interface process	The Process Supply Chain Orchestration Interface scheduled process creates supply orders based on the Supply Chain Orchestration interface records. To process these records, you can enter the scheduled process parameters and submit the request. Let's use these values for our process parameters: • Supply Request System: Oracle Fusion Cloud Inventory Management • Organization: Enter the inventory organization that generated the PAR replenishment request • From Supply Request Batch Number: The batch number will always start with **PAR**. For example, PAR13001 • To Supply Request Batch Number: Enter the ending batch number for a range or supply request batch numbers • From Supply Request Date: Starting supply request date • To Supply Request Date: Ending supply request date
Review supply order details	When the Process Supply Chain Orchestration Interface completes successfully, you can review the supply order details by navigating to the Manage Supply Lines task. Search by the supply request reference number to review the supply lines. The supply request reference number has a prefix of PAR such as in the example PAR13001. When reviewing the supply order details, you can review the supply lines associated with the supply order. When you click on a supply line, you can review the line details. Navigate to the Execution Documents tab to view the purchase requisition number created for the replenishment request.
Mange transfer orders	You can view the transfer order by navigating to Manage Transfer Orders task.
Manage shipment lines	You can use the transfer order number displayed in the supply order details to search for the shipment in inventory management. You can navigate to the Manage Shipment Lines task to view the shipment line details. In order to view the shipment lines, you must login as a user with data access to the source inventory organization.
Ship confirm	Proceed with the ship confirm process.
Receive expected shipments	The next step in the process is to receive the material at the destination inventory organization.
Put away lines	Depending on the configured receiving process, a put away transaction may be required to deliver the material to the final inventory destination. In this case, you must perform a two-step receipt and complete the put away or delivery transaction to the PAR subinventory. Once you submit the transaction, a confirmation message displays indicating that the receiving created the put away transaction.

How You Disable PAR for Specific Items While Retaining Previous PAR Settings

Set the **Replenishment Count Type** to **Not Planned** at the item subinventory or item locator level to exclude specific items from your PAR process. When set to **Not Planned**, any PAR requests you submit for the item won't be considered for replenishment.

Use this option on the Manage Item Subinventories page or Manage Item Locators page to temporarily disable PAR for specific items while retaining your previously specified PAR settings. With this option, you can keep the item in the PAR location and retain the already established PAR settings and quantities.

Here's how it works:

- When your subinventory is locator controlled and the **Replenishment Count Type** for a specific item is set to **Not Planned** at the item subinventory level, then your item won't be considered for the PAR process regardless of the value set for the **Replenishment Count Type** at the item locator level.
- When your subinventory is locator controlled and the **Replenishment Count Type** for a specific item is set to any value other than **Not Planned** at the item subinventory level and the **Replenishment Count Type** is set to **Not Planned** at the item locator level, then your item won't be considered for the PAR process.
- When your subinventory is locator controlled and the **Replenishment Count Type** for a specific item is set to any value other than **Not Planned** at the item subinventory level and the **Replenishment Count Type** is set to any value other than **Not Planned** at the item locator level, then the item will be considered for the PAR process.
- When the **Replenishment Count Type** is set to **Not Planned** at at either the item subinventory level or item locator level, then it overrides the **Override Replenishment Count Type** value when using the Item Subinventory REST resource.

FAQs for PAR Replenishment

What's a PAR level?

The level at which the quantity is restocked. If the count falls below this quantity, and a PAR maximum quantity hasn't been specified, the PAR level calculates the reorder quantity.

How can I change the PAR location setting of quantity tracked?

In order to deselect the Quantity Tracked check box, you must first change the material status associated with the subinventory. Then, you can update the Quantity Tracked check box on the Manage Subinventories and Locators page.

What's the difference between quantity tracked and not quantity tracked PAR locations?

When creating a subinventory or PAR Location you must determine whether or not the subinventory is quantity tracked or not quantity tracked. Typically, you classify subinventories as not quantity tracked for PAR replenishment. However, you can also configure PAR subinventories as quantity tracked.

When a subinventory is quantity tracked, this indicates that each transaction for the subinventory updates the on-hand quantity. In this case, the **Quantity Tracked** check box is selected by default. In order to deselect the **Quantity Tracked** check box, you must first change the material status associated with the subinventory. Then you can update the **Quantity Tracked** check box on the Manage Subinventories page.

> **Note:** The **Quantity Tracked** check box is only enabled when the associated material status is **Active: Not Available for Netting, ATP, and reservations**.

How can I define the ship-to location associated with the PAR location?

Use the Manage Locations task in the Setup and Maintenance work area to define the ship-to location.

Once you define the ship-to location, you can associate it with the PAR location. Navigate to the Manage Subinventories and Locators task to associate the ship-to location to the PAR location.

What are the replenishment source types supported for PAR replenishment?

Here are the four source types supported for PAR replenishment:

- Movement Request Transfer: Transfer material from a source subinventory to a destination subinventory
- Purchase Requisition: Replenish material from a supplier using a purchase requisition or purchase order
- Interorganization Internal Material Transfer: Transfer material from a source inventory organization to a destination inventory organization using a transfer order
- Intraorganization Internal Material Transfer: Transfer material from a source subinventory to a destination subinventory within an inventory organization using a transfer order

How can I review errors received when submitting the replenishment request?

Use the Review Replenishment Requests in Spreadsheet task available in the Inventory Management work area. This ADFdi user interface enables you to view any errors that you receive when processing replenishment requests.

Inventory Item Attributes

Inventory Item Attributes

You can set inventory specification attributes when defining or updating an item. Let's look at the descriptions, possible values, and verifications for inventory item attributes.

Here are the Inventory sections on the Item Specification tab of the Create Items and Edit Items pages:

- Material Control
- Lot
- Lot Expiration
- Child Lot
- Lot Split or Merge

- Grade Control
- Serial
- Cycle Count
- Status
- Locator
- Project Driven Supply Chain

Material Control

Here are the Material Control fields. All options here include the selection of **Yes** or **No**.

Field	Description	Validation
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 • Transaction Enabled • 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.	You can't turn off reservation control if reservations exist.
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.	You can set this attribute only if you set the **Inventory Item** and **Stocked** attributes. If there are inventory or receiving transactions against an item, you can't change the **Transaction Enabled** option. If the **Transaction Enabled** attribute is controlled at the master item level, the application checks for inventory or receiving transactions in all child organizations.
Reservable	This attribute enables you to create material reservations for the item.	You can reserve an item only when you have sufficient inventory. If the **Reservable** attribute is controlled at the master item level, the application checks for sufficient on-hand quantity in all child organizations.
Check Material Shortage	Indicates to check for material shortages for the item.	This attribute is reserved for future use.

Field	Description	Validation
	Enable this option to trigger a material shortage alert and a shortage notification during transactions of the item.	
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.
Bulk Picked	Enables you to pick items in bulk.	

Lots

Here are the Lot fields.

Field	Description	Validation
Control	Indicates the ability to use lot numbers during material transactions for tracking of batches of Item. Values include: • **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 there is existing on-hand inventory for the item, you can't change the **Control** option. If lot control is controlled at the master item level, the application checks for on hand quantity in all child organizations.
Starting Prefix	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 Number	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.
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
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

Lot Expiration

Here are the Lot Expiration fields.

Field	Description	Validation
Control	Indicates how long items in a given lot remain available. Values include: • **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.	You can establish lot expiration control only for an item that has no quantity on hand. You can't change lot expiration control when on-hand quantity or pending inventory transactions exist for the item. 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.
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 **Self life days** for **Lot Expiration Control**. You can set up shelf life days only for an item that has no quantity on hand. You can't change the shelf life days when on-hand quantity or pending inventory transactions exist for the item.
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
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.	You can't modify this field if pending transactions exist for the item.
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

Child Lot

Let's look at the Child Lot fields.

Field	Description	Validation
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 establish child lot control only for an item that has no quantity on hand. You can't modify this field if inventory transactions or reservations exist or are pending 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.
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, the application verifies that 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.
Copy Lot Attributes	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.	Descriptive flexfield attributes aren't copied.
Prefix	If you choose to generate child lots at the item level, you can optionally choose to enter a child lot prefix.	
Starting Number	Enter the starting number for each child lot.	This field is enabled only if the item is child lot enabled.
Child Lot Generation	Options include **Parent** or **Parent and Child**.	

Lot Split or Merge

Here are the Lot Split or Merge fields.

Field	Description	Validation
Lot Translate Enabled	Enables you to translate lots within a lot controlled item.	
Lot Split Enabled	Indicate whether a lot-controlled item may split into many lots.	
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 modify this field if on-hand quantity or pending and existing transactions exist for the item.

Field	Description	Validation
Lot Substitute Enabled	Indicates whether lots can be substituted in a transaction.	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 Merge Enabled	Indicate whether many lots of a lot controlled item may merge into one lot.	

Grade Control

Let's take a look at the Grade Control fields.

Field	Description	Validation
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.	You can't modify this check box if on-hand quantity or pending inventory transactions exist for the item.
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.	You can change the default grade even if you have performed transactions for the item.

Serial

Here are the Serial fields.

Field	Description	Validation
Generation	Indicate when to create and assign serial numbers to each unit of an item in order to track the item. • **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	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. You can't change the serial number generation if there are pending transactions for the item. Make sure that there aren't any of these pending transactions types: • No on-hand quantity • All completed transactions are interfaced to Costing • No cycle counts pending • No count sequences to approve • No transactions in Costing error • No open movement requests for the item

Field	Description	Validation
	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.	• No pick slips open or stuck • No open transfer orders for the item
Starting Prefix	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.
Starting Number	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 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.

Cycle Count

Here are the Cycle Count fields.

Field	Description	Validation
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.

Field	Description	Validation
		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.
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.
Cycle Count Enabled	Indicates whether the item can be cycle counted. Select **Yes** to count individual items throughout the year to ensure the accuracy of inventory quantities and values. Select **No** if you don't want to count the items.	The item isn't visible to the cycle count process unless you enable this field.

Status

Let's look at the Status fields.

Field	Description	Validation
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 allowing lots **In Quarantine** to be used in planning.	You can select a value in this field if the **Lot Control** field has a value of **Full lot control**. If an item is lot controlled, you can indicate a value for the **Default Lot Status** field. For example, a lot of microprocessors may be at the Quarantine status until a soak test is complete.
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.	You can select a value in this field if the **Serial Generation** field has any value other than **No serial number control**. 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.
Default Lot Status	Indicate the default lot status for the item.	If an item is marked as **Lot Status Enabled**, you can indicate the default lot status. Otherwise, this field isn't available for entry.

Field	Description	Validation
Default Serial Status	Indicate the default serial status of the item.	If an item is marked as **Serial Status Enabled**, you can indicate the default serial status. Otherwise, this field isn't available for entry.

Locator

Here are the Locator fields.

Field	Description	Validation
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.
Restrict Locators	Indicate whether to restrict transactions of this item to or from a locator specified in a list you define with the **Subinventory Information** window.	You can't restrict locators unless you also restrict subinventories.
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.	

Project Driven Supply Chain

Here are the Project Driven Supply Chain fields.

Field	Description	Validation
Default Expenditure Type	Select a default expenditure type.	
Allow Use of Common Supplies	Use this check box to indicate if you want to allow the use of common supplies.	This check box is available for selection if the value in the **Hard Pegging Level** field is set to **Project**, **Project Group**, or **Project and Task**. This check box isn't available if the value of the **Hard Pegging Level** field is **None**.
Hard Pegging Level	For hard pegged items, you can indicate if project references should be added to planned orders.	This option controls only those items whose attributes are set to **Hard Pegging** or **End Assembly/Hard Pegging**.

Field	Description	Validation
	Assign planned orders for hard pegged items at one of these levels: • **Project**: Attach the project number to which the planned order is hard pegged. • **Project Group**: Attach the project group to which the planned order is hard pegged. • **Project and Task**: Attach the project and task number to which the planned order is hard pegged. • **None**: Do not add project or task references to planned orders.	

Related Topics

- Item Inventory Attributes

Transaction Date Validation

Transaction Date Validation

You can configure transaction date validation when you create inventory transactions.

Configure these profile options to enable transaction date validation:

- Set the **Transaction Date Validation Enabled** (INV_TRANSACTION_DATE) profile options to one of these values:
  - **No validation:** (Default) specifies no transaction date validation.
  - **Allow current date only:** Transaction date must be the same as current date.
  - **Validate transaction date**: Transaction date must be within an open cost accounting period.
- If you select **No Validation** for the **Transaction Date Validation Enabled** (INV_TRANSACTION_DATE) profile option, you must also enter a value for the **Maximum Number of Days Prior to Current Date** (ORA_INV_TRANSACTION_CREATION_DATE_VALIDATION) profile option. These two profile options work together.

  For example, let's assume that the **Maximum Number of Days Prior to Current Date** ORA_INV_TRANSACTION_CREATION_DATE_VALIDATION profile option is set to 5 days and the current date is June 15th. If a transaction is entered with the transaction date as 1st June, the user will receive this error message:

  You can't create the transaction because the transaction date is before 2023-06-10. Use Manage Inventory Profile Options setup task to update profile value.

Validation is supported for transactions created via FBDI and REST API.

Note: The default profile value is 5 days. You can change the profile value to meet your specific requirement.

Mobile Inventory

Enable Mobile Inventory

To enable Mobile Inventory, you must enable the **Redwood Mobile Inventory Management Pages Enabled** profile option.

This profile option enables the **Inventory Execution** navigation tile that lets you navigate to the Inventory Management mobile pages.

1. In the Setup and Maintenance work area, search for and select the **Manage Inventory Profile Options** task.
2. On the **Manage Inventory Profile Options** page, search for and select the **Mobile Inventory Management Pages Enabled** profile option.
3. In the Profile Values section, set the Site level to **Yes** or **No**. The default value is **No**.
    - No: Indicates that the **Inventory Execution** navigation tile won't display.
    - Yes: Indicates that the **Inventory Execution** navigation tile will display.
4. Click **Save and Close**. Changes in the profile value will take affect the next time you sign in.

Set up Ingestion for Receiving and Put Aways

To initiate ingestion for mobile inventory, you must submit scheduled process to create an index definition and perform the initial ingest to the Oracle Search Cloud Service (OSCS) scheduled process.

The OSCS scheduled process ingests purchase order request receipts, transfer order expected receipts, advanced shipment notice expected receipts, and receiving transactions as a prerequisite to use both the Receiving Goods and Put Away Goods mobile pages.

Set up Ingestion for Mobile Inventory

To set up ingestion for mobile inventory:

1. Log in as the Supply Chain Application Administrator.
2. From the **Tools** menu, select **Scheduled Processes**, and then click **Schedule New Process**.
3. Search for and select the process name: **ESS job to create index definition and perform Initial Ingest to OSCS**.
   Parameter values for index names to reingest are:
    - fa-scm-rcv-expected-po-receipts
    - fa-scm-rcv-expected-asn-receipts
    - fa-scm-rcv-expected-to-receipts
    - fa-scm-rcv-transactions
    - fa-scm-rcv-expected-rma-receipts

Note: If you don't specify any index names while submitting the process, the process will run for all predefined indexes for all product families. We recommend that you create indexes for the index names listed here.

Set up Ingestion for Receiving

The **Ingest Receiving Search Indexes scheduled** process ingest receipts performed outside of the Receive Goods page. For example, a receipt can be created through the Receiving Receipt Import FBDI, Receiving Receipt Requests REST API, or the existing Receive Expected Shipments page. In these cases, you will need to run this scheduled process to ensure your receipts are ingested.

Additionally, inbound shipments such as Advance Shipment Notices (ASN) and transfer order shipments can be created. In these cases, you also need to run this scheduled process to ensure your inbound shipments are ingested. We recommend to run this process frequently to ensure your receipts and shipments are ingested in a timely manner. Receipts created through the Receive Goods page are ingested automatically.

To ingest receiving search indexes, complete these steps:

1. Log in as the Supply Chain Application Administrator.
2. From the **Tools** menu, select **Scheduled Processes**, and then click **Schedule New Process**.
3. Search for and select the process name: **Ingest Receiving Search Indexes**.

In order to default the destination subinventory and locator while performing a receipt transaction, you must configure item transaction defaults.

1. Log in as the Supply Chain Application Administrator.
2. From the Setup and Maintenance work area, navigate to the **Configure Item Transaction Defaults** task.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Configure Item Transaction Defaults

Enable Delivery Management

To use the Deliver Goods feature, you must enable delivery management by setting up the receiving attributes on the **Manage Receiving Parameters** page.

Select one or both of the following check boxes on the **Manage Receiving Parameters** page to enable delivery management:

- Autocreate deliveries for expense destination receipts
- Autocreate deliveries for PAR location receipts

After you select these parameters, when a receipt is created, a delivery will be scheduled automatically.

Enable Item or MPN Search

To enable the Item or MPN search field, navigate to the Product Information Management work area or the Product Development work area and complete these steps.

After the search field is enabled, you can select an item or MPN from the list of values when performing mobile transactions.

1. On the landing page, click the **Tasks** tab to open the drawer.
2. Click **Configure Index**.
3. Click the **Item** card. The index has a set of predefined attributes that you can use as the starting point for the index.
4. Ensure the **Manufacturer Part Number** attribute is added to the list of attributes.
5. Click **Update** if enabled, and then save the index configuration.
6. Click **Rebuild**.
7. In the **Schedule index rebuild process** dialog box, click **Rebuild**.

   The index rebuild process starts and a job ID will be provided to track the process. The rebuild process is a long running process. You can check the index status on the Index Management page. The Item card has an indicator badge that will show **Ready** when the index rebuild is complete.

Enable Item Class Security

To enable item class security, navigate to the Manage Item Classes setup task and configure security for the root item class.

You must configure data security via the Product Management offering to display the inventory items associated with an inventory organization.

> **Note:** Root item class data security configuration is only required when Oracle Product Hub is licensed.

1. In the **Setup and Maintenance** work area, search for and select the **Manage Item Classes** task.
2. Search for **Root Item Class** in the **Item Class** field.
3. Click the **Root Item Class** link.
4. Click the **Add** icon or the **Add Row** action.
5. Select **Person** under **Principal**.
6. Select **User Name**.
7. Select **Inventory Organization**.
8. Specify the applicable **Start Date** and **End Date**.
9. Click the **Select and Add** action or icon.
10. Search for the **View Item Basic** action and click **Apply**.
11. Click **Save and Close**.

Configure Barcode Formats

Use the **Configure Barcode Formats** setup task to define multiple barcode formats that you scan with a mobile device.

You can specify how to identify the barcode format, the type of data encoded in each format, and outline how to parse and extract the data when the barcode is scanned for a specific field within the mobile page.

For instance, you can utilize this configuration to define and scan a barcode with product information like **+P+AS54888|L+ABC123**, where +, **P+**, and **L+** are identifiers for the barcode, item number, and lot number, respectively, and **|** is used as the delimiter between the data elements.

Here's how to configure barcode formats:

1. Use the **Configure Barcode Formats** task in the Setup and Maintenance work area to add a new barcode format to be supported for scanning with mobile devices.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Configure Barcode Formats
2. On the Configure Barcode Formats page, click the **Create Barcode Format** button to create a new barcode format.
3. In the Header section, set the following fields:

Field Name	Description
Name	Specify the name of the barcode format.
Description	Specify the description of the barcode format.
Barcode Identifier Prefix	Specify the prefix to identify the barcode format. For instance, **]C1** identifies GS-128 barcodes, while for a custom format like $P+AS54888\|L+1152KMB, **$** serves as the identifying prefix.
Retain Prefix while Reading	Specify whether the prefix of the barcode should be retained or removed before parsing the barcode data.
Status	Indicate whether you want to activate or deactivate the barcode format.

4. In the Barcode data identifiers section, set the following fields:

Field Name	Description
Field Name	Specify the target field to which the barcode data should be mapped. Choose from these available field names: - Item - Item - GTIN - Lot number - Serial number - Subinventory - Locator - Receipt number - Delivery - Pick slip number - Packing slip number - Tracking number

Field Name	Description
	○ Order number ○ Receiving order number
Data Identifier	Specify the prefix of the encoded barcode data that identifies the type of data within the barcode. For example, the data identifier for an item number might be **P+**. If the encoded item number is **AS54888**, the barcode reflects **P+AS54888** to signify it is an item number, with the part number being **AS54888**.
Description	Specify the description of the data identifier.
Data Length Type	Specify whether the length of the barcode data, encoded for the data identifier, is fixed or variable. For fixed lengths, specify the number of characters in the barcode data. For variable lengths, denote the end of the value using the group separator or delimiter character.
Length	Specify the number of characters of the barcode data encoded for the data identifier if the data length type is fixed.
Group Separator	Specify whether the GS1 group separator is used to indicate the end of the value in the case of variable data length.
Delimiter	Specify the character used to indicate the end of the value for variable data length.
Data Type	Specify the type of value encoded for the data identifier. Options include: ○ Text ○ Number ○ Date
Date Format	Specify the date format of the value encoded for the data identifier.
Includes Check Digit	Indicate whether the last character of the value serves as a check digit. When selected, the last character of the value is excluded.
Multiple Data Elements	For Healthcare Industry barcode labels, indicates whether the data identifier contains multiple values.
Sequence Number	For Healthcare Industry barcode labels, indicates the sequence of the data.

5. Click **Submit** to create the barcode format.

Note: In the **Configure Barcode Formats** setup task, the **Item (GTIN)** field name can be utilized when scanning a barcode containing the Global Trade Item Number (GTIN) as the identifier for the item, provided that a relationship between an internal item and the Global Trade Item Number is established.

Set up Printing for Barcode Labels

Use the **Manage Inventory Business Event Configurations** task from the Setup and Maintenance work area to print barcode labels through an external printing application.

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Inventory Management
- Task: Manage Inventory Business Event Configurations

1. On the Manage Inventory Business Event Configurations page, click **Create** to add an event type.
2. Select **Print label** for the **Event Type** field.
3. Select a value for the **Event Name** field:
    - **Print delivery label** to generate an event when the delivery label is requested.
    - **Print item label** to generate an event when the item label is requested.
    - **Print location label** to generate an event when the location label is requested.
4. Select a value for the **Organization** field. If the **Organization** is blank, the value selected in the **Publish** column applies to all inventory organizations where a record isn't specified.
5. Click **Save**.

Infolets

How You Hide Inventory Management Infolets

Infolet cards display on the landing page of the Inventory Management work area to make key performance indicators easy to view, understand, and act upon. If you choose to build personalized dashboards using Oracle Transactional Business Intelligence, you can hide the seeded infolets.

You can permanently hide the seeded infolets for your entire organization at once, so each user doesn't have to do it individually. On the Edit Features page, use the **Hide Inventory Management** feature to select which infolets to hide. Once you hide the infolets for the entire organization, individual users won't have the ability to unhide them.

Related Topics

- Inventory Management Work Area
- How You Use and Personalize Infolets in Oracle Fusion Cloud SCM and Procurement
- Overview of Infolets

9 Receiving

Receiving Parameters

Overview of Implementing Receiving

Oracle Receiving functionality lets you manage inbound logistics such as receiving, inspecting, and putting away material. You can set up receiving so that your users can manage inbound transactions in the warehouse. Define and maintain setup components for Receiving including receiving parameters, profile options, value sets, and descriptive flexfields.

This table describes the setup tasks in the Define Receiving task list.

Setup Task	Required or Conditional	Description
Manage Receiving Profile Options	Conditional	Define profile option settings and values to control receiving behavior such as Aging Period for Extended Receipt Settlement.
Manage Receiving Value Sets	Conditional	Create and edit receiving value sets.
Manage Receiving Descriptive Flexfields	Conditional	Define validation and display properties of descriptive flexfields for receiving. Descriptive flexfields are used to add user-defined attributes to entities.
Manage Receiving Parameters	Conditional	Configure receiving parameters to specify default receiving options for the organization.

Here are the steps to access the tasks for your Receiving setup:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receiving
2. On the Setup: Manufacturing and Supply Chain Materials Management page, select **All Tasks** from the **Show** drop-down list.

Common Tasks That You Perform for Receiving

Receiving requires that you perform the following common tasks:

- Manage Profile Options
- Manage Value Sets
- Manage Descriptive Flexfields

These tasks are common to most Oracle applications. For details about how to perform them, see the Oracle Fusion Cloud SCM: Implementing Common Features for Oracle SCM guide.

General Receiving Parameter Options

Receiving parameters define receiving preferences at the organization level. General receiving parameters must be set up before you can use Oracle Receiving for recording and transacting receipts.

In the Setup and Maintenance work area, use the **Manage Receiving Parameters** task to set up your general receiving parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving
- Task: Manage Receiving Parameters

General Receiving Parameters

This table describes the general receiving parameters.

Receiving Parameter Display Name	Effect
Ship-to Exception Action	Determines whether the supplier can put away to a receiving location that differs from the ship-to location. Select one of the following options: • **None**: The receiving location may differ from the ship-to location. • **Reject**: No receipts are permitted when the receiving location differs from the ship-to location. • **Warning**: A warning message is displayed, but receipts are permitted when the receiving location differs from the ship-to location.
ASN Control Action	Determines the action if receiving against purchase order shipments for which an advance shipment notice (ASN) exists. Select one of the following options: • **None**: Does not prevent or warn you when you receive against a purchase order shipment for which an ASN exists. • **Reject**: Gives you a message and prevents you from receiving against a purchase order shipment for which an ASN exists. • **Warning**: Gives you a message informing you that an ASN exists for the purchase order shipment. It lets you decide whether or not to receive against the purchase order shipment or its ASN.
Early Receipt Tolerance in Days	Sets the maximum acceptable days early for a receipt.
Late Receipt Tolerance in Days	Sets the maximum acceptable days late for a receipt.
Receipt Days Exceed Action	Determines the action for when receipts are earlier or later than the allowed number of days. Select one of the following options: • **None**: Receipts may exceed the allowed days early or late.

Receiving Parameter Display Name	Effect
	• **Reject**: Rejects receipts when the receive date is outside the range defined by the early and late receipt tolerances. • **Warning**: Displays a warning message, but permits receipts outside the selected number of days early or late.
Over-Receipt Action	Determines how the application handles receipts that exceed the received quantity tolerance. Select one of the following options: • **None**: Receipts may exceed the selected tolerance. No over-receipt tolerance is enforced. • **Reject**: Rejects receipts that exceed the selected tolerance. You receive an error message and can't receive quantities that exceed the order quantity by more than the over-receipt tolerance percent. • **Warning**: Receipts may exceed the selected tolerance with a warning. A warning message appears if you accept receipts over the quantity determined by the over-receipt tolerance percent. The application does perform the receipt. **Note:** You can also set up quantity tolerances for the item at the purchase order level during purchase order creation. If tolerances are set up at both the purchase order level and the organization level, the tolerance settings at the purchase order level override the tolerance settings at the organization level.
Over-Receipt Tolerance	Enter the percentage of quantity that can be received in excess of the order quantity.
Receipt Routing	Sets the default receipt routing that you assign goods. You can override this option at receipt time by changing the destination type for specific suppliers, items, and orders if the **Allow Routing Override** user profile is enabled. Select one of the following options: • **Direct Delivery**: Receive shipments and put away to a specific location in one transaction. • **Standard Receipt**: Receive shipments and put away items in a separate transaction. • **Inspection Required**: Requires quality assurance inspection after receipt and before put away.
Use quality inspection plan	If enabled, let's you complete inspection through a quality inspection plan using the Quality Inspection pages.
Allow substitute receipts	If enabled, you can receive defined substitutes in place of ordered items. You must define substitute items on the Item Relationships page before you can receive them. You can override this option for specific suppliers, items, and orders.
Allow unordered receipts	If enabled, you can receive an item without documentation. If you select this option, you can later match the unordered receipt to the appropriate document number. If you enable this option, you can override it for specific suppliers and items.
Enforce blind receiving	If enabled, the quantity due or quantity ordered for each shipment isn't visible on the receipt. Blind receiving helps you ensure that receivers record the exact amount they receive. Receiving ignores all quantity receipt tolerances to help ensure that you can receive the exact amount that the supplier shipped.
Print receipt traveler	If enabled, automatically generates summary reports of receipt performance.

Receiving Parameter Display Name	Effect
	Note: To specify a printer and print the report, launch the Print Receipt Traveler Report from the Scheduled Processes work area.
Include closed purchase orders for receipts	If enabled, you can receive closed purchase orders.
Allow routing override	If enabled, you can override the receipt routing at receipt time. You can override this option at receipt time by changing the destination type for specific suppliers, items, and orders.
Process all lines together	If enabled, ensures that individual lines are processed if all expected lines don't arrive.
Print shipping documents for returns to suppliers	If enabled, requires the printing of shipping documents for return to supplier transactions. This calls a two-step return process in which you create the return to supplier transaction in Receiving and then the shipping agent must ship confirm the return shipment in Oracle Shipping.
Print shipping documents for drop ship orders	If enabled, requires the printing of shipping documents for drop ship orders. This option creates the shipments for drop ship orders after the supplier creates the ASN for the drop ship order.
Print shipping documents for return material authorizations	If enabled, requires the printing of shipping documents for return material authorizations. This option creates the shipments for return material authorization orders after RMAs are created in Oracle Fusion Cloud Order Management.
Publish transactional business events	If enabled, you can publish all transactional events such as receipt, put away, correction, and return. Events are published at all times, even without internal integration needs.
Allow defaulting of lots and serial numbers from ASN	If enabled, let's you select the **Default Lots and Serial Numbers from ASN** check box to accept all the lot and serial numbers entered on the ASN or ASBN in a single transaction (without going to the Record Lots and Serial Numbers page). This option is applicable to these pages: • Receive Lines • Receive Line • Put Away Lines • Put Away Line

Receipt Number Receiving Parameter Options

Receiving parameters define receiving preferences at the organization level. Receipt number receiving parameters must be set up before you can use Oracle Receiving for recording and transacting receipts.

In the Setup and Maintenance work area, use the **Manage Receiving Parameters** task to set up your receipt number receiving parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving

- Task: Manage Receiving Parameters

Receipt Number Receiving Parameters

This table describes the receipt number receiving parameters.

Receiving Parameter Display Name	Effect
Generation	Defines the receipt number generation method for receipt numbers. Choices include **Automatic** and **Manual**.
Type	Defines the receipt number type that you want to use for receipt numbers. Options include **Numeric** or **Alphanumeric**. If you select the manual receipt number generation option, you can select numeric or alphanumeric numbers. You can change the receipt number type from numeric to alphanumeric at any time. You can change the receipt number type from alphanumeric to numeric only if all of your current receipt numbers are numeric. **Note:** These notes apply to the receipt number type: • If you select automatic receipt number generation, you can generate only numeric receipt numbers, but you can still import either numeric or alphanumeric values from another application. • If you have any alphanumeric documents in your application, you must select the alphanumeric option as your number type, regardless of your numbering method. • The ordering of numeric values in lists of values can appear random when you use the alphanumeric number type. If you're using alphanumeric numbering, consider entering all numeric values with the same number of digits. For example, if you can assume all numeric values contain six digits, you should enter the first value as 000001.
Next Number	Sets the starting value that you want to use for generating unique sequential receipt numbers if you select the automatic receipt number generation method. The application displays the next receipt number that will be used for a new receipt creation. You can't enter this field if you select the manual receipt generation method. The next number value that you enter here's incremented by 1 to generate the next receipt. For example, if you set the value for the **Next Number** field to **1** and create a new receipt, the new receipt shows a receipt number of **2**.

Note: For Self-Service Receiving, you must select **Automatic** for the **Generation** parameter and **Numeric** for the **Type** parameter.

RMA Receiving Parameter Options

Receiving parameters define receiving preferences at the organization level. Receiving parameters for return material authorizations (RMAs) must be set up before you can use Oracle Receiving for recording and transacting receipts.

In the Setup and Maintenance work area, use the **Manage Receiving Parameters** task to set up your RMA receiving parameters:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving
- Task: Manage Receiving Parameters

RMA Receiving Parameters

This table describes the RMA receiving parameters.

Receiving Parameter Display Name	Effect
Receipt Routing	Defines the default RMA receipt routing that you assign goods. Choices include **Direct Delivery**, **Standard Receipt**, or **Inspection Required**.
RMA Validate Lots	Determines restriction level for RMA. Choices include: • **Restricted**: Enter lot numbers that are mentioned on the RMA. If you enter lot numbers that are different than those on the RMA, the application displays an error message. • **Restricted with warning**: Enter lot numbers that are mentioned on the RMA. If you enter lot numbers that are different than those on the RMA, the application displays a warning message. • **Unrestricted**: Enter any lot number. **Note:** This RMA receiving parameter is only supported when the return order is created through File Based Data Import (FBDI), Rest API, and SOAP Service.
Validate Serial Numbers	If enabled, restricts the list of serial numbers displayed for an RMA line to valid serial numbers only. **Note:** This RMA receiving parameter is only supported when the return order is created through File Based Data Import (FBDI), Rest API, and SOAP Service.

Receiving Parameters for Brazil Organizations

We use fiscal documents for Brazil inventory organizations to document trade between suppliers and customers. The fiscal document serves as a bill of lading to detail the quantity of items transported from the supplier to the customer.

The fiscal document also serves as a proxy invoice from the supplier that documents the material costs, supplier charges, and taxes payable by the customer.

To support the fiscal document, Brazil organizations have several receiving parameters set by default. This table shows the receiving parameters that are set by default.

Parameter	Setting
Receipt Routing	Automatically set to Standard receipt. You can update this option at receipt time to Inspection Required or Direct Delivery if the **Allow Receipt Routing** user profile is enabled. In the Setup and Maintenance work area, use the following to enable this option: • Offering: Manufacturing and Supply Chain Materials Management • Functional Area: Receiving • Task: Manage Receiving Parameters
Allow unordered receipts	Not selected. You cannot change this option.
Print shipping documents for returns to suppliers	Automatically selected. You cannot change this option.

Receiving determines whether or not an organization is a Brazil organization by checking if the Fiscal Document Generation feature is enabled for a billing business unit. If the Fiscal Document Generation feature is enabled for an organization, it's implied that the organization is a Brazil inventory organization.

For more information about Brazil fiscal documents, see the Oracle Fusion Cloud SCM: Using Fiscal Document Capture guide.

Related Topics

- General Receiving Parameter Options
- Overview of Fiscal Document Capture
- Manage Fiscal Documents

Examples of Receiving with Early and Late Receipt Tolerances

Use these scenarios to understand how early and late receipt tolerances work for receiving items.

Receiving with an Early Receipt Tolerance

You enter 3 days as the early receipt tolerance. The promise date is Friday. Therefore, you can receive the item on Tuesday.

You enter 3 days as the early receipt tolerance. You set the Receipt Days Exceed Action parameter to **None**. You try to receive a receipt 5 days before the promise date. The application lets you receive the receipt because no receipt date action is enforced.

You enter 3 days as the early receipt tolerance. You set the Receipt Days Exceed Action parameter to **Reject**. You try to receive a receipt 5 days before the promise date, and the application rejects the receipt and displays an error.

You enter 3 days as the early receipt tolerance. You set the Receipt Days Exceed Action parameter to **Warning**. You try to receive a receipt 5 days before the promise date. You receive a warning message, but you are permitted to receive the receipt.

> **Note:** Oracle Receiving uses regular calendar days (including weekends and holidays) in this calculation. If the promise date does not exist, the application uses the need-by date.

Receiving with a Late Receipt Tolerance

You enter 2 days as the late receipt tolerance. The promise date is a Monday. Therefore, you can receive the item on Wednesday.

You enter 2 days as the late receipt tolerance. You set the Receipt Days Exceed Action parameter to **None**. You try to receive a receipt 5 days after the promise date. The application lets you receive the receipt because no receipt date action is enforced.

You enter 2 days as the late receipt tolerance. You set the Receipt Days Exceed Action parameter to **Reject**. You try to receive a receipt 5 days after the promise date, and the application rejects the receipt and displays an error.

You enter 2 days as the late receipt tolerance. You set the Receipt Days Exceed Action parameter to **Warning**. You try to receive a receipt 5 days after the promise date. You receive a warning message, but you are permitted to receive the receipt.

> **Note:** Oracle Receiving uses regular calendar days (including weekends and holidays) in this calculation. If the promise date does not exist, the application uses the need-by date.

Print Shipping Documents

Considerations for Printing Shipping Documents on RMAs

You can select whether or not you want to print shipping documents for your customer returns.

To print shipping documents for RMAs (return material authorizations), select the **Print shipping documents for return material authorizations** option on the Manage Receiving Parameters page.

To set access to the Manage Receiving Parameters page, in the Setup and Maintenance work area, use the **Manage Receiving Parameters** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving
- Task: Manage Receiving Parameters

> **Note:** The **Print shipping documents for return material authorizations** option is a onetime setup step for your organization. You don't set this up per transaction.

Print Shipping Documents

If shipping documents are required, your organization may select the **Print shipping documents for return material authorizations** option on the Manage Receiving Parameters page. For example, this can happen when your customer returns an item through a RMA (return material authorization). The return transaction is then completed in two steps as follows:

1. Creation of a shipment upon receipt of the RMA in Oracle Receiving.

   Shipment lines are created for each item on the RMA order.
2. Confirmation of the shipment in Oracle Shipping upon put away of the receipt in Receiving.

   This leads to the closure of the shipment. You can now generate shipping documents for the RMA order based on the shipment number.

Not Printing Shipping Documents

If shipping documents aren't required, don't select the **Print shipping documents for return material authorizations** option on the Manage Receiving Parameters page. Your customer return is completed in one step and you don't have to confirm the shipment in Shipping.

Considerations for Printing Shipping Documents for Drop Ship Orders

You can select whether or not you want to print shipping documents for drop ship orders. To print shipping documents for these transactions, select the Print shipping documents for drop ship orders option on the Manage Receiving Parameters page.

In the Setup and Maintenance work area, use the following:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving
- Task: Manage Receiving Parameters

> **Note:** The **Print shipping documents for drop ship orders** option is a one-time setup step for your organization. You don't set this up per transaction.

Print Shipping Documents

If shipping documents are required for your drop ship orders, then your organization selects the **Print shipping documents for drop ship orders** option on the Manage Receiving Parameters page. For example, you might select this option when the supplier for your organization creates an advance shipment notice (ASN) for the drop ship order. This option is a one-time setup step for your organization and can't be changed for individual transactions. Complete the drop ship order in two steps:

1. The supplier creates an ASN in the Supplier Portal. Alternatively, a warehouse manager can enter an ASN by clicking the **Create ASN** task from the task panel of the Inventory Management work area.
2. The ASN creates a shipment in **Closed** status for the drop ship order. The shipping manager can print the packing slip, bill of lading, and commercial invoice for drop shipments.

Note: The shipping paperwork for a drop ship order is similar to that of a regular sales order.

Not Printing Shipping Documents

If shipping documents aren't required, don't select the **Print documents for drop ship orders** option on the Manage Receiving Parameters page. Your drop ship order is completed in one step.

Related Topics

- How You Record the Shipment of Drop Ship Products to the Customer
- How You Use the AP Invoice Option for Drop Ship Purchase Orders
- Create an ASN on a Drop Ship Purchase Order

Considerations for Printing Shipping Documents on Return to Supplier Transactions

You can select whether or not you want to print shipping documents for your return to supplier transactions.

To print shipping documents for these transactions, select the **Print Shipping Documents for Returns to Suppliers** option on the Manage Receiving Parameters page.

To set access to the Manage Receiving Parameters page, in the Setup and Maintenance work area, use the Manage Receiving Parameters task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Receiving
- Task: Manage Receiving Parameters

Note: The **Print Shipping Documents for Returns to Suppliers** option is a one time setup step for your organization. You don't set this up per transaction.

Print Shipping Documents

If shipping documents are required, or if several people are involved in the process to ship the product back to the supplier then your organization may select the **Print Shipping Documents for Returns to Suppliers** option on the Manage Receiving Parameters page. For example, this can happen when your organization's customers return the item to your organization, and then you must return the items to the supplier. This is a one time setup step for your organization and it can't be changed for individual transactions. The return to supplier transaction is then completed in two steps as follows:

1. Creation of the return to supplier transactions in Oracle Receiving.
2. Confirmation of the return to supplier shipment in Oracle Shipping. This leads to the closure of the shipment and creation of the shipping documents.

Not Printing Shipping Documents

If shipping documents aren't required, don't select the **Print Shipping Documents for Returns to Suppliers** option on the Manage Receiving Parameters page. Your return to supplier transaction is completed in one step and you don't have to confirm the shipment in Shipping.

Related Topics

- How Return to Supplier Transactions with Shipping Documents Are Processed

How Return to Supplier Transactions with Shipping Documents Are Processed

When you need to return items to the supplier, you may choose to print shipping documents for transporting the returned items back to the supplier.

Returns may be needed when a customer rejects an item from their received shipment, a defect is found internally, and so forth. To print shipping documents for the return, follow the two-step return process that starts in Oracle Receiving and continues through to Oracle Shipping.

Settings That Affect Return to Supplier Transactions

To print shipping documents for your return to supplier transactions select the **Print Shipping Documents for Returns to Suppliers** option on the Manage Receiving Parameters page.

> **Note:** The **Print Shipping Documents for Returns to Suppliers** option is a one-time setup step for your organization. You don't set this up per transaction.

Shipping documents print for return to supplier transactions when all of these conditions are true:

- The material is delivered (through put away receipts or direct receipt).
- The customer is returning to the supplier (and not returning to receiving).
- The goods are delivered to an inventory location (subinventory and locator) and not to an expense location.

If any of these conditions aren't satisfied, the print shipping documents aren't printed.

How Return to Supplier Transactions Are Processed

Return to supplier transactions are processed in two steps:

1. Create the return to supplier transaction in Receiving.

   The receiving agent has an offline interaction with the supplier to obtain the return material authorization number for the return. Then, the receiving agent creates the return to supplier transaction by providing details such as the returned quantity and return material authorization (RMA) number. Finally, the receiving agent submits the transaction for processing and the transaction moves to Shipping.
2. Create and confirm the return to supplier shipments in Shipping.

   Shipping treats the items on the return to supplier transaction as a noninventory shipment and stages the items without creating a shipment. Noninventory shipments don't generate inventory transactions or affect on-hand balances. Therefore, the application skips actions such as backorder, cycle count, pick release, and record serials, since these actions aren't applicable to noninventory shipments. The shipping manager searches for the return transactions, assigns the return to supplier lines to shipments, and performs ship confirm. Upon ship confirm, Shipping generates the shipping documents for the customer, and creates and sends the automatic shipment notices (ASNs) automatically to the supplier.

Corrections to Return to Supplier Transactions With Shipping Documents

You can make corrections to return to supplier transactions. The corrections are reflected on shipping documents up until the returned products are shipped within the Shipping application. If you make corrections after the products are shipped, the changes are still accepted in Receiving. Receiving maintains automated interfaces with Oracle Payables, Oracle Cost Management, and Oracle Purchasing to share the corrected quantity information The table explains when changes are allowed within the Shipping application based on the type of correction to the return to supplier transaction and the associated shipment status.

Action	Status of Shipment in Shipping	Shipping Response
The return to supplier transaction sends an update with an **increase** in quantity.	Shipped	An increase in the quantity is accepted at the end of shipping and a new delivery line is created.
The return to supplier transaction sends an update with an **increase** in quantity.	Not shipped	Updates are accepted in Shipping.
The return to supplier transaction sends an update with an **increase** in quantity.	Partially shipped	Updates are accepted in Shipping for the unshipped lines. Updates for the lines already shipped aren't accepted.
The return to supplier transaction sends an update with a **decrease** in quantity.	Shipped	No updates are accepted in Shipping.
The return to supplier transaction sends an update with a **decrease** in quantity.	Not shipped	Updates are accepted in Shipping.
The return to supplier transaction sends an update with a **decrease** in quantity.	Partially shipped	Updates are accepted in Shipping for the unshipped lines. Updates for the lines already shipped aren't accepted.
The return to supplier transaction sends an update that reduces the quantity to **zero**.	Shipped	No updates are accepted in Shipping.
The return to supplier transaction sends an update that reduces the quantity to **zero**.	Not shipped	Shipping accepts the change, but setting the quantity to zero cancels the shipment in Shipping.
The return to supplier transaction sends an update that reduces the quantity to **zero**.	Partially shipped	Updates are accepted in Shipping for the unshipped lines. Other lines aren't accepted because that part of shipment is canceled.
The return to supplier transaction makes further updates after setting the quantity to **zero**.	Canceled	You can't make further updates to a transaction that's already canceled. You must create a new return to supplier transaction.

Example

When your organization's customer initiates a return, they return the item to your organization. Your organization must then send the items back to the outsourced manufacturer or supplier. Therefore, instead of your customers returning the items directly to the suppliers, your customer's items are routed through your organization to your organization's suppliers. In this instance, you must create shipping documents for transporting the items back to the suppliers.

Related Topics

- What's a noninventory shipment?

FAQs for Print Shipping Documents

When do shipping documents print for return to supplier transactions?

Shipping documents print for return to supplier transactions when all of these conditions are true:

- The material is delivered (through put away receipts or direct receipt).
- The customer is returning to the supplier (and not returning to receiving).
- The goods are delivered to an inventory location (subinventory and locator) and not to an expense location.
- The **Print Shipping Documents for Returns to Suppliers** option is enabled for the organization on the Manage Receiving Parameters page.

If any of these conditions aren't satisfied, the print shipping documents aren't printed.

> **Note:** The material needs to be in inventory. If material is returned before put away, no inventory is created. And, if you're doing a return to receiving, then shipping documents aren't applicable because you aren't returning to a supplier.

Receipt Transaction Date Validations

Receiving Transaction Date Validations

You can validate the receiving transaction date during receipt transactions for inventory, expense, and work order destination purchase orders, transfer orders, return material authorizations (RMAs), and in-transit shipments.

Here are the receiving transactions that include receipt validation:

- Receipt creation
- Put aways
- Inspections
- Corrections
- Returns

You can also enter the past date for receive, inspect, put away, correct, and return transactions based on the values of these inventory and receiving profile options:

- **Transaction Date Validation Enabled** inventory profile option is set to **No validation**.
- **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** inventory profile option is set to the default value of **5 days**.

  You can modify this default value based on how many days you want to allow for back dating receiving transactions. Use this profile option for inventory and work order destination transactions.
- **Maximum Number of Days Prior to Current Date in Which an Expense Destination Transaction Can Be Created** receiving profile option is set to the default value of **180 days**.

  You can modify this default value based on how many days you want to allow for back dating receiving transactions. Use this profile option for expense destination transactions.

The application also validates the shipped date entered during ASN creation for drop ship purchase orders.

Receipt validation occurs for receiving transactions created through the UI, as well as through file based data import (FDBI), and REST and SOAP services. You receive an error message in the UI when the entered date isn't within the acceptable threshold. For inventory transactions created using the Receiving Receipt FDBI, the error message displays in the Receiving interface. For receiving transactions created using REST and SOAP services, the error message displays in the service response. You can correct the transaction date and reprocess the transaction.

Examples of Validating Receiving Transaction Dates

You can validate receiving transaction dates for inventory and expense destination purchase orders, return material authorizations (RMAs), transfer orders, and in-transit shipments.

The receiving transaction date validations depend on three profile option settings:

- Transaction Date Validation Enabled

  Values include:

  - No validation
  - Allow current date only
  - Validate transaction date

  Inventory profile option used for both inventory and work order destination receipts.
- Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created

  Default value is 5 days.

  Inventory profile option used for inventory and work order destination receipts.
- Maximum Number of Days Prior to Current Date in Which an Expense Destination Transaction Can Be Created

  Default value is 180 days.

  Receiving profile option used for expense destination receipts.

When the **Transaction Date Validation Enabled** profile option is set to **No Validation**, the value entered for the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** profile option (for inventory and work order destination receipts) is important for date validation. When the **Transaction Date Validation Enabled** profile option is set to **Allow current date only** or **Validate transaction date**, the value entered for the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** profile option isn't considered.

The ASNs for drop ship purchase orders also process based on the values of these two settings.

Let's look at a few examples:

- Validate Receiving transaction dates for past dated transactions
- Validate Receiving transaction dates for current date
- Validate Receiving transition dates for open costing period

Validate Receiving Transaction Dates for Past Dated Transactions

Transaction Date Validation Enabled profile option = **No validation**

You can enter the past date for a receive or put away transaction when the **Transaction Date Validation Enabled** profile option is set to **No validation**. Also, the value of the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** profile option must be within your threshold.

For example, considers these values for an inventory destination receipt:

- Current date = 3-July-20
- Maximum days prior = 5 days

If the current system date is 3-July-20 and the value for the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** option is set to 5 days, you can create a receipt for an inventory destination purchase order on or after 28-June-20. However, if you attempt to create a receipt transaction prior to 28-June-20, you receive an error message.

Validate Receiving Transaction Dates for Current Date

Transaction Date Validation Enabled profile option = **Allow current date only**

You can perform receive or put away transactions for the current system date when the **Transaction Date Validation Enabled** profile option is set to **Allow current date only**. When **Allow current date only** is selected, the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** profile option isn't considered. Also, the ASN creation for drop ship purchase orders takes place only when the shipped date is entered as the current date.

For example, considers these values:

- Current date = 3-July-20
- Maximum days prior = (doesn't matter)

If the current system date is 3-July-20, you can create a receipt for an inventory destination purchase order only when the receipt or transaction date is entered as 3-July-20. You receive an error message if you attempt to create a receipt, inspect, put away, correct, or return for a date other than the current system date.

Validate Receiving Transaction Dates for Open Costing Period

Transaction Date Validation Enabled profile option = **Validate transaction date**

With this profile setup, the application lets you perform receive or put away transactions only when the transaction dates correspond to an open costing period. Also, the ASN creation for drop ship purchase orders can take place when the shipped date corresponds to an open costing period.

The value for the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** profile option isn't considered when the **Transaction Date Validation Enabled** profile option is set to **Validate transaction date**.

For example, considers these values:

- Current date = 3-July-20
- Maximum days prior = (doesn't matter)

If the current system date is 3-July-20 (which corresponds to an open costing period), you can perform a receipt for an inventory destination purchase order, transfer order, RMA, or in-transit shipment for transaction dates of 3-July-2020 and 2-July-2020. These dates correspond to an open cost accounting period. If you try to perform receive or deliver transactions for the June 2020 period, you receive an error because the cost accounting period for June 2020 is closed.

Set Up Receiving Transaction Date Validations for Inventory and Work Order Destinations

To set up receiving transaction date validations for inventory and work order destination transactions, configure the Transaction Date Enabled and Maximum Number of Days Prior to Current Date in Which a Destination Transaction Can Be Created inventory profile options.

Transaction Date Enabled

1. In the Setup and Maintenance work area, select the **Manage Inventory Profile Options** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Profile Options
2. On the Manage Inventory Profile Options page, enter **Transaction Date Validation Enabled** in the **Profile Display Name** field and click **Search**.
3. Select a value of **No validation**, **Allow current date only**, or **Validation transaction date** in the **Profile Value** field for the profile level of **Site** and click **Save**.

Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created

1. In the Setup and Maintenance work area, select the **Manage Inventory Profile Options** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Profile Options
2. On the Manage Inventory Profile Options page, enter **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** in the **Profile Display Name** field and click **Search**.
3. Enter the maximum number of days in the **Profile Value** field for the profile level of **Site** and click **Save**.

Set Up Receiving Transaction Date Validations for Expense Destinations

To set up receiving transaction date validations for expense destination transactions, configure the Maximum Number of Days Prior to Current Date in Which an Expense Destination Transaction Can Be Created profile option.

1. In the Setup and Maintenance work area, select the **Manage Receiving Profile Options** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receiving
    - Task: Manage Receiving Profile Options
2. On the Manage Receiving Profile Options page, enter **Maximum Number of Days Prior to Current Date in Which an Expense Destination Transaction Can Be Created** in the **Profile Display Name** field and click **Search**.
3. Enter the maximum number of days in the **Profile Value** field for the profile level of **Site** and click **Save**.

    The default value of this profile option is set as 180. This profile option is created only for expense destination receipts and it's not dependent on the **Transaction Date Validation Enabled** or **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** inventory profile options.

FAQs for Receipt Transaction Date Validations

Can I enter a past date for receiving transactions?

Yes, you can enter a past date for a receive, inspect, put away, correct, or return transaction when the Transaction Date Validation Enabled inventory profile option is set to No validation.

Also, the value of the **Maximum Number of Days Prior to Current Date in Which a Transaction Can Be Created** inventory profile option (for inventory and work order destination transactions) must be within your threshold.

The **Maximum Number of Days Prior to Current Date in Which an Expense Destination Transaction Can Be Created** receiving profile option can be set for expense destination transactions, and it works irrespective of the setting for the **Transaction Date Enabled** inventory profile option.

Integrate with 3PL and Warehouse Management Systems

Third-Party Logistics and Warehouse Management Systems

A third-party logistics (3PL) provider typically specializes in integrated operation, warehousing, and transportation services that can be scaled and configured to customer need based on market conditions. A warehouse management system (WMS) is a software application designed to support warehouse or distribution center management and staff.

This application facilitates management of available resources to move and store materials into, within, and out of a warehouse, while supporting staff in material movement and storage

Oracle Fusion Cloud Applications provide a central integration framework that coordinates communication with a 3PL system or WMS to support purchase order receipts, returns to suppliers, internal material transfers, inventory transactions, and sales order shipments. Using Simple Object Access Protocol (SOAP)-based web services or REST resources, Oracle Fusion Cloud Inventory Management communicates receiving advice and shipment requests to a 3PL provider or external WMS for processing. After completion of processing in the 3PL system or WMS, Inventory Management accepts receipt confirmations, shipment confirmations, and inventory transactions from the 3PL system or WMS.

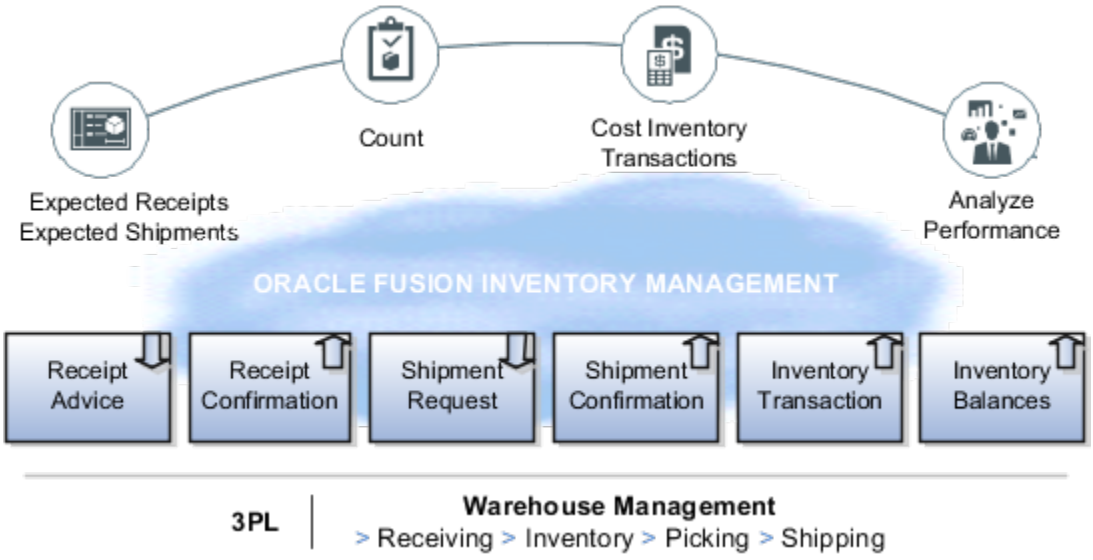
For more information, see these guides:

- REST API for Oracle Fusion Cloud SCM
- Oracle Fusion Cloud SCM: SOAP Web Services for SCM

Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Oracle Fusion Cloud Inventory Management supports a central integration framework for working with third-party logistics (3PL) providers and warehouse management systems (WMS). The inventory management suite of products includes Oracle Receiving, Oracle Inventory Management, and Oracle Shipping.

The following figure illustrates how Inventory Management integrates with 3PL and WMS systems. The subsections following the figure provide more detail for this integration.



Receiving Integration

Receiving integration addresses the following points:

- Sends a receipt advice to the WMS for the various documents, such as purchase order (POs), advanced shipment notices (ASNs), and return material authorizations (RMAs).
- Receives and processes receipt confirmations to acknowledge the receipt of material, updates the source documents and on-hand details for quantities and other related information, such as lots, serials, and external packing units, and the return of rejected material. This includes reference to the WMS transactions for reconciliation.

Shipping Integration

Shipping integration addresses the following points:

- Sends the shipment requests to the WMS for the various documents, such as sales orders and transfer orders.
- Receives and processes shipment confirmations to acknowledge the shipment of material and updates the source documents. This includes reference to the WMS transactions for reconciliation.
- Updates the on-hand details for quantities and other related information, such as lots and serials and splitting of the unfulfilled portions.

Inventory Management Integration

Inventory Management integration addresses the following points:

- Receives and processes various inventory transactions that can happen within a WMS that might affect the material location and on-hand details. Such inventory transactions include adjustments, miscellaneous receipts and issues, and transfers. This includes reference to the WMS transactions for reconciliation.
- Receives and processes inventory balance updates for solving inventory reconciliation challenges.

Related Topics

- Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow
- Inventory Balances Integration with External Systems

Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow

Oracle Fusion Cloud Inventory Management integration with third-party logistics (3PL) and warehouse management systems (WMS) provides you the ability to outsource part or all of your supply chain management functions.

Using this integration, you can:

- Improve customer service by minimizing total delivery time and costs using a 3PL provider.

- Improve visibility to expected shipment and receipt detail to better plan import and customs clearance by way of web service or REST payloads.
- Accept returns from your customers with authorization from the manufacturer by way of receipt advices.
- Maintain tighter controls between Inventory Management and the execution system for greater transparency for 3PL or WMS activities.
- Monitor inventory accuracy.

This figure shows a high-level overview of this integration process flow. Details of this flow are provided after the figure.

The web service Send Receipt Advice, available by way of Oracle Receiving, or the REST resource Receipt Advice Lines (GET method), enable Inventory Management to communicate expected shipment lines sent to and received by a 3PL system or WMS. Then, the 3PL system or WMS, by way of the Receive Receipt Confirmation web service in Receiving, or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), communicate confirmation and receipt details of the expected shipment lines.

The web service Material Shipment Line, available by way of the GenerateShipmentRequest operation in Oracle Shipping, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, enable inventory management users to send shipment requests to a 3PL system or WMS. The 3PL system or WMS can accept and confirm the shipment requests by way of the CreateandConfirm operation on the Material Shipment web service in Shipping or the REST resource Shipment Transaction Requests (POST method, with CreateAndConfirmShipment action code).

Also, within Shipping, you can use the tasks in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering so that you can send a shipment request directly from the Inventory Management work area. Additionally, when shipment confirmation errors occur from the 3PL system or WMS, you can select a task in the Inventory Management work area to view the error in a spreadsheet, correct the error, and reprocess the shipment. This action brings the confirmation details into the shipping tables.

The web service Inventory Transaction Manager or the REST resource Inventory Staged Transactions (POST method) enable you to receive material transaction updates made by the 3PL system or WMS to keep on-hand balances synchronized with Inventory Management.

For more information, see the REST API for Oracle Fusion Cloud SCM guide.

Supported Roles for Inventory Management Integration with 3PL and WMS Systems

The features for Inventory Management integration with 3PL and WMS systems are predefined, and you can access them through the following existing job roles:

- Warehouse manager
- Receiving and inspection manager
- Shipping manager

The users roles associated with this feature are:

- Warehouse operator
- Receiving agent
- Shipping agent

Change Management for Sales Orders in 3PL and WMS Systems

You can now make changes to sales order lines in Order Management. This means you can check order status, communicate order changes and shipping holds, and cancel orders in the 3PL or WMS system when the shipping organization is changed. Therefore,

- Any changes you make to the sales order are communicated to the WMS seamlessly without any additional interaction.
- The changes to the order are rejected if the order has progressed in the WMS and the current state does not allow any changes.
- The type of changes to the order can include quantity, scheduled ship dates, shipping method, customer, and other key attributes.
- Shipping holds that can be placed on sales orders are communicated to the WMS.

Related Topics

- Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Implementation Decision Points and Setup Best Practices for 3PL and Warehouse Management Systems Integration

Consider the following when implementing integration to third-party logistics (3PL) provider or external warehouse management system (WMS).

Oracle provides services to integrate Oracle Fusion Cloud Inventory Management, Oracle Receiving, and Oracle Shipping to a third-party logistics (3PL) provider or external warehouse management system (WMS). These product areas work together cohesively to support transfer orders, inventory transactions, reconciliation of inventory balances, and so forth.

Decision Points

Before implementing your external systems integration, consider the following points.

- If you plan to receive material using a 3PL provider or WMS, then use the predefined scheduled processes to generate a receipt advice.
- If you plan to ship material using a 3PL provider or WMS, then use the predefined scheduled processes to generate shipment requests.

Setup Best Practices

The following setup best practices are recommended before integrating with external systems.

- Use a 3PL provider or WMS at the inventory organization level. By representing the 3PL provider or WMS as an inventory organization, virtual tracking and visibility of inventory at the 3PL or WMS location is available to users in real time.
- For simplicity, set up a receiving subinventory and one subinventory for each material status used in the implementation of Oracle Inventory Management. For example, you might set up subinventories for receiving, quality assurance, rejected, and available inventory.
- Use security rules to control access to transactions performed in the 3PL or WMS organization.

Additional Considerations

Keep in mind the following additional considerations when planning your 3PL or WMS implementation.

- Don't track locator and packing unit information because this data isn't tracked in Inventory Management.
- Process inventory transactions only when the item status has changed or the item is received into or issued out of Inventory Management. For example, when a third party performs material transactions within locations or packing units at their facility, these transactions aren't tracked in Inventory Management.
- Track inventory transactions for lot and serialized items in Inventory Management. This tracking is a requirement when lot and serialized items are issued out of inventory to support install base and product genealogy.

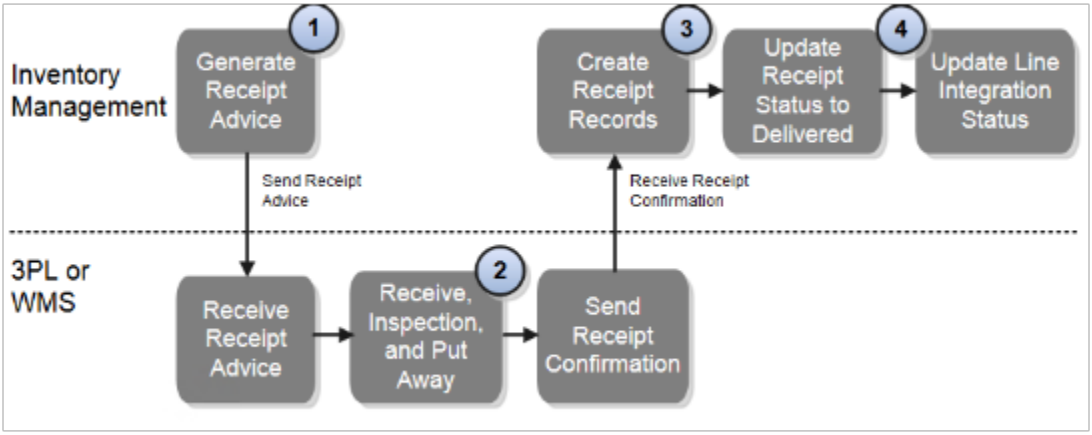
Receipt Advice and Receipt Confirmation Processes for External Systems Integration

This topic describes the receipt advice and receipt confirmation integration flow between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

Inventory Management communicates receipt advices to the 3PL system or WMS for processing. After completion of the processing in the 3PL system or WMS, Inventory Management accepts the receipt confirmations from the 3PL system or WMS.

For receiving, the web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) enables Inventory Management to communicate expected shipment lines to be received by a 3PL system or WMS. Then the Receive Receipt Confirmation web service or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method) enable the 3PL system or WMS to communicate confirmation and receipt details of the expected shipment lines that were communicated.

This figure shows the receipt advice and receipt confirmation integration flow.



Explanation of callouts:

1. The scheduled process Generate Receipt Advice publishes an event to notify the 3PL system or WMS that receipt advices are ready to be interfaced. The web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) provide the ability for the 3PL system or WMS to receive the actual receipt advices with the expected shipment lines for purchase orders (POs), transfer orders, and return material authorizations (RMAs).
2. After the 3PL system or WMS receives the receipt advices, the 3PL system or WMS performs receiving-related processes including receiving, inspection, and put away.
3. The web service Receive Receipt Confirmation, or the REST resource Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), is initiated, and receipt confirmation is sent to Inventory Management. The web service or REST resource provides the ability for the 3PL system or WMS to send the material and receiving details for the expected shipment lines received. The web service or REST resource also interprets and transforms the message, and creates the necessary records in Inventory Management. These records carry all the reference information from the external system to easily identify them for performing any future returns or corrections.
4. Inventory Management validates and processes the receiving transactions by processing the receipt confirmation messages and by updating the release status and integration status.

You can use the scheduled process Manage Receiving Transactions to automatically validate and process the transactions received. If an error occurs while processing the transactions, you can review and correct pending and error transactions using the **Review Receipts Interface** task in the Inventory Management work area, and resubmit the transactions for processing. When the transactions have successfully processed, the associated document is updated accordingly. For example, the status on an associated purchase order document is updated to **Closed for Receiving**.

You can use the scheduled process Generate Changed Receipt Advice to manage changes. For example, if there was a change to a purchase order line that was already interfaced but not confirmed, the service sends a changed receipt advice to communicate the associated change to the 3PL system or WMS.

You can use the Receive Expected Shipments page in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering to perform receiving of expected shipment lines to record various details, such as integration status. Integration status values include Ready to Interface, Interfaced, and Confirmed.

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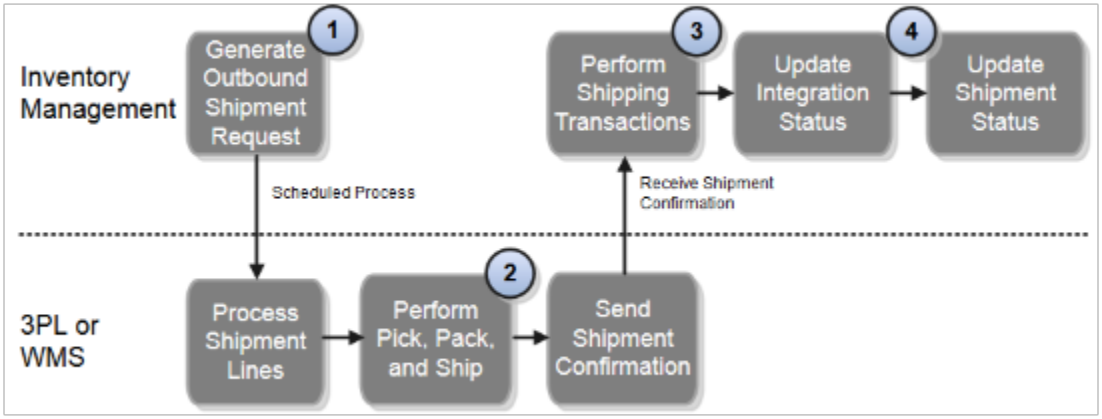
Shipment Request and Shipment Confirmation Processes for External Systems Integration

This topic describes the shipment request and shipment confirmation flows between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

This figure shows the shipment request and shipment confirmation flow.



Explanation of callouts:

1. The outbound shipment request integration process between Oracle Inventory Management and a 3PL system or WMS starts with a shipment request. The scheduled process Generate Shipment Request enables inventory management users to manually send shipment lines to the 3PL system or WMS using the task Create Outbound Shipment request in the Shipping UI, or they can automate the process using a scheduled process. The shipment request web service Material Shipment Line, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, uses the existing pick wave release rules to provide the criteria for selecting the shipment lines.

   Alternatively, the 3PL system or WMS can initiate the shipment request service voluntarily at specified intervals to retrieve shipment requests from Inventory Management.
2. After the 3PL system or WMS receives the shipment request, the pick, pack, and ship processes are performed.
3. The web service Material Shipment or the REST resource Shipment Transaction Requests (POST method, with the CreateAndConfirmShipment action code), when initiated with the required input, receives and processes the shipment confirmation messages. This service or resource interprets and transforms the message, and creates the necessary records in the shipping open interface tables. This transformation provides the mechanism for the 3PL system or WMS to send the material and shipping details for the shipment lines fulfilled.

The scheduled process Perform Shipping Transactions processes the pending transaction records received into the open interface tables. The process validates the data on the transaction records received from the 3PL system or WMS before processing them. Any errors from the validation step are recorded, and the transaction records remain in the open interface tables. The interface records with errors are available for users to view, edit, or resolve the errors, or reprocess.

In the event an error occurs while processing the shipment confirmation messages, users can access the **Manage Shipping Transaction Corrections in Spreadsheet** task to manage pending transactions by way of a spreadsheet interface using Application Development Framework Desktop Integration (ADFdi) technology. This interface supports management of interface transactions and corresponding errors related to shipment confirmations received from 3PL system and WMS. You can access this task in the Inventory Management work area of the Manufacturing and Supply Chain Materials Management offering.

> **Note:** The Manage Shipping Transaction Corrections spreadsheet displays only one error at a time for each sheet even if the shipment processing has more than one error.

After the shipment lines are successfully confirmed, the integration status and shipment status are updated accordingly.

Inventory Transaction Processes for External System Integration

All internal material transactions that occur within a third-party logistics (3PL) or warehouse management system (WMS) must be integrated appropriately to keep the inventory picture accurate in Oracle Fusion Cloud Inventory Management.

You can use the web service Transaction Manager or the REST resource Inventory Staged Transactions (POST method) to maintain inventory accuracy in Inventory Management with the 3PL system or WMS for the following:

- Miscellaneous account alias issues and receipts
- Subinventory transfers
- Interorganization transfers
- Cycle count adjustments
- Physical inventory adjustments
- Material status updates

The web service or REST resource inserts data into the applicable transaction interface tables and calls the transaction manager to process the rows that are ready for processing. If the transaction manager completes successfully, you can view the completed transaction on the Review Completed Transactions page. If the transaction processing fails, you can view the error details as well as transaction data on the Manage Pending Transaction page. From this page, you can correct the data and resubmit to the manager for reprocessing. You can access these pages in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Related Topics

- Inventory Transaction Interface

Inventory Balances Integration with External Systems

Using Oracle Fusion Cloud Inventory Management's inventory balances integration capabilities, you can outsource warehousing and manufacturing processes to efficiently lower costs, service local markets, reduce cycle times, and so on.

A central integration framework across Oracle Purchasing, Oracle Fusion Cloud Order Management, and Oracle Inventory Management tracks interactions between the various external systems. You can receive inventory balance details from external systems, such as third-party logistics providers, warehouse management systems, or contract manufacturers and use this information to reconcile inventory balances. Inventory on-hand details can include subinventory, locator, lot, serial number, and external packing unit.

The inventory balances integration feature enables you to:

- Use the Inventory Balance Transactions REST resource to post inventory balance messages from an external system
- Import inventory balance messages in bulk using a SaaS spreadsheet
- Enable users to resolve any processing exceptions
- Purge inventory balance messages periodically

Note: This feature is automatically available and is included with the shipped job roles (warehouse manager and inventory manager).

Use the following processes and task to interface with external systems to improve tracking and visibility across your supply chain, including partners:

- Manage Inventory Balances Processes
- Manage Inventory Balance Messages in Spreadsheet (ADFdi)
- Manage Inventory Transaction Process
- Purge Inventory Balance Messages Process

Manage Inventory Balances Process

This scheduled process processes the imported inventory balance messages in the interface tables.

Manage Inventory Balance Messages in Spreadsheet (ADFdi)

Use this task, in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering, to review and resolve any exceptions while processing the inventory balance messages.

Manage Inventory Transaction Process

This scheduled process processes the necessary adjustment transactions to reconcile the inventory balances.

Purge Inventory Balance Messages Process

Use this scheduled process to purge the historical balance inventory messages collected over time in the interface tables. Using the processing status parameter, you can purge error, successful, or all messages between a date range.

Related Topics

- Manage Inventory Balances Process
- Manage Inventory Transactions
- Purge Inventory Balance Messages

Inventory Business Event Configuration

Create an inventory business event configuration to associate business events with event types and organizations. You can manage business event configurations at the inventory organization or site level.

You can use business events to integrate with your external third-party logistics (3PL) or warehouse management system (WMS) using REST or Simple Object Access Protocol (SOAP) services. Use the **Manage Inventory Business Event Configurations** task to select which business event to raise when integrating with your external 3PL or WMS for these functions:

- Outbound receipt advices
- Outbound shipment requests
- ASN and ASBN creation
- ASN and ASBN cancellation
- Transfer order creation
- Transfer order update
- Transfer order cancellation
- Pick confirm

Note: You can only select a REST event type for pick confirm and transfer orders.

On the Manage Inventory Business Event Configurations page, you can create, edit, search, and delete the business event configurations.

Note: If you don't configure a business event, SOAP is used for the 3PL or WMS integration.

For more information about inventory business events, see the Using the Oracle ERP Cloud Adapter with Oracle Integration guide.

Related Topics

- How can I choose REST or SOAP services to integrate with a 3PL system or WMS integration?
- Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow
- Overview of Inventory Management Integration with 3PL and Warehouse Management Systems
- Supported SCM and Procurement Business Events

FAQs for Integrating with 3PL and Warehouse Management Systems

Can I synchronize master data with third-party logistics or warehouse management systems?

Yes. Oracle Product Hub, Oracle Purchasing, and the Oracle Fusion Cloud Sales integration solutions work together to provide integration capabilities to support automated integration for items, suppliers, and customers.

How can I choose REST or SOAP services to integrate with a 3PL system or WMS integration?

Configure business events to specify whether to use REST or SOAP services to integrate with your external 3PL or WMS.

1. To configure inventory business events, use the **Manage Inventory Business Event Configurations** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Inventory Management
    - Task: Manage Inventory Business Event Configurations
2. On the Mange Inventory Business Event Configurations page, click the **Add** icon to add a new business event configuration.
3. Select an operation such as **Outbound Receipt Advice** or **Outbound Shipment Request** for the event type.
4. Select an event name to adopt either SOAP or REST services.

    For example, for the event type of **Outbound Receipt Advice**, choosing an event name of **Outbound receipt advice** adopts REST, while choosing **Receipt advice event notification** adopts SOAP.
5. Select an organization.

    > **Note:** If you don't specify an organization, the business event applies to all organizations.

6. Click **Save and Close**.

What's an inventory business event?

Business events let you integrate Oracle Fusion Cloud Inventory Management transactions with third-party logistics (3PL) or warehouse management systems (WMS).

Use the **Manage Inventory Business Event Configuration** task to choose if you want to use REST or SOAP services to integrate with your external 3PL or WMS.

What happens if I don't configure a business event?

If you don't configure a business event, SOAP is used for the 3PL or WMS integration.

Electronic Signatures and Electronic Records

Set Up Electronic Signatures and Electronic Records for Receiving Transactions

You need to enable the ability to capture Electronic Signatures and Electronic Records for receiving transactions to be able to view them.

You need to set up receiving transactions and a business rule.

Steps for Setting Up Receiving Transactions

Here's how you set up receiving transactions.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Configure Electronic Signature Preferences
2. On the Configure E-Signature Preferences page, select your organization and then select the **Signature Enabled** check box for the relevant transaction.
3. Click **Save and Close**.

Steps for Setting Up a Business Process Rule

Here's how you set up a business process rule.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Task Configurations for Supply Chain Management
2. On the BPM Worklist page that appears, click the **MtlManagementEresInlineTask** task to be configured and create or edit the relevant business rule.
3. Click **Advanced**.
4. Deselect **Ignore Participant**.
5. Click **Save** and then click **Commit Task**.

Note: Receive, put away, and corrections are receiving transactions. The e-record for those are available on the Receiving Transaction History page, not on the Review Completed Transactions page. The e-record ID is system-generated sequentially so the record ID for a miscellaneous transaction and a put away transaction can be the same. That is why the Inventory Transactions page shows the ID for miscellaneous transactions only and not the ID for transactions that originate in Receiving. You can view transactions that originate in Receiving on the Receiving Transaction History page only. For more information about implementing E-Signatures and generating E-Records, refer to the Oracle SCM Cloud Implementing Manufacturing and Supply Chain Materials Management guide.

Related Topics

- Receipt Creation

Self-Service Receipts

Enable Self-Service Receiving on the Behalf of Others

You can create receipts for requisitions when you're not the requester or preparer.

To enable users to create self-service receipts on the behalf of others, complete these steps:

1. Click **Navigator** > **Tools** > **Security Console**.
2. Click the **Create Role** button.
3. Enter a value for the **Role Name**.

   For example, enter **Self Service Receiving All Requisitions**.
4. Enter a value for the **Role Code**.

   For example, enter **SELF_SERVICE_RECEIVING_ALL_JOB**.
5. Select **SCM Job Roles** as the **Role Category**.
6. Enter the **Role Description**.

   For example, enter **Job role to receive self-service receipts for all procurement requesters**.
7. Click **Next**.
8. Click **Add Function Security Policy**.
9. Add Function Security Policy:
   - Function Security Policy: Create Self-Service All Requisition Receiving Receipt
   - Description: Allows creation of self-service receipts by any other person apart from the requisition requester or preparer
10. Click the **Add Privilege to Role** button.
11. Click **Next**.
12. On the User's Step, click the **Add User** button.
13. Select the appropriate user to add to the newly created job role.
14. Click the **Add User to Role** button.
15. Click the **Save and Close** button on the last step of the process.

Responsive Self-Service Receiving Application

How You Set Up the Responsive Self-Service Receiving Application

Before using the Responsive Self-Service Receiving Application, you must configure duty roles and set up profile options and inventory transaction reasons.

To access this feature, you must configure roles that contain the duty role Receiving Self-Service Responsive Application User and assign them to users. You can configure the role from the Oracle Security Console by logging in as IT Security Manager.

Users who are assigned a configured job role that contains the **Manage Receipt for Advanced Receiver with the Responsive Self Service Receiving Application (RCV_MANAGE_RECEIPT_ADVANCED_RECEIVER_PWA)** privilege, can perform advanced receiving activities, such as receiving goods and services on behalf of others.

> **Note:** The **Manage Receipt for Advanced Receiver with the Responsive Self Service Receiving Application (RCV_MANAGE_RECEIPT_ADVANCED_RECEIVER_PWA)** privilege isn't delivered in a predefined job role. You must configure job roles that contains this privilege.

You also need to set up:

- Receiving profile options
- Administrator profile options
- Inventory transaction reasons

Receiving Profile Options

Use the **Manage Receiving Profile Options** task to set up these receiving profile options:

- **Redwood Self-Service Receiving Pages Enabled**: To enable Redwood Self-Service Receiving, you must enable the Redwood Self-Service Receiving Pages Enabled profile option . After you enable this profile option, the **My Receipts (New)** navigation tile will be displayed.
  - **No**: Indicates that the **My Receipts** navigation tile will be displayed.
  - **Yes**: Indicates that the **My Receipts (New)** navigation tile will be displayed.
- **Blind Receiving for Self-Service Procurement Enforced**: Determines whether the **Receive Now** or **Receive with Details** button displays as the promoted button.
  - **No**: Indicates that the **Receive Now** button displays as the primary action on the Orders to Receive page. An icon displays allowing you to Receive with Details.
  - **Yes**: Indicates that the **Receive with Details** button displays as the primary action on the Orders to Receive page. The **Receive Now** button won't be displayed.

- **Display item unit price in self-service receiving**: Determines whether the item's unit price displays on the New Receipt page.
  - **No**: Indicates that the item's unit price won't display on the New Receipt page.
  - **Yes**: Indicates that the item's unit price will display on the New Receipt page.

Administrator Profile Options

Use the **Manage Administrator Profile Values** task to confirm the values for these profile options:

- **Enable/Disable Search Ext Framework** (ORA_FND_SEARCH_EXT_ENABLED) profile is set to **Yes**.
- **Row fetch count for initial ingest process** (ORA_FND_SEARCH_FETCH_COUNT) profile is set to **100**.

Inventory Transaction Reasons

When returning items to a supplier, you have the option to specify the reason for return. You can define the reason name and reason type using the **Manage Inventory Transaction Reasons** setup task. When defining a new transaction reason, select **Supplier return** as the reason type.

How Your Requisition Preparer Can Receive Goods and Services

You can allow your requisition preparer to receive goods and services using the responsive Self-Service Receiving application.

Assign the Create Receipt for Procurement Preparer with the Responsive Self-Service Receiving Application privilege (RCV_CREATE_RECEIPT_PROCUREMENT_PREPARER_PWA) to your requisition preparers to allow them to receive goods and services using the Responsive Self-Service Receiving application on their mobile device, tablet, or desktop. This privilege isn't included in any predefined job role. You must configure roles that contain the Create Receipt for Procurement Preparer with the Responsive Self Service Receiving Application privilege.

Related Topics

- Orders to Receive

10 Shipping

Introduction

Overview of Implementing Shipping

The shipping functionality lets you manage outbound logistics so that you can process shipments, satisfy customer demand, and at the same time manage the pick, pack, and ship cycle.

You can set up shipping so that your users can manage and release pick waves, capture freight costs, pack material in containers or onto trucks, and create shipping documents. You can define and maintain shipping setup, including release sequence rules, ship confirmation rules, shipping cost types, shipping exceptions, shipping zones, and so on.

Set up shipping so that your users can use the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering to streamline picking and shipping:

- Monitor pick and ship activities to manage outbound shipments.
- Use a guided process that helps your users pick, pack, and ship tasks so that Inventory Management can fulfill orders quickly and accurately.
- Set up shipping so that your users can use the Manage Shipping Exceptions task in the Setup and Maintenance work area to identify and resolve exceptions and backlogs to efficiently move materials through the warehouse.

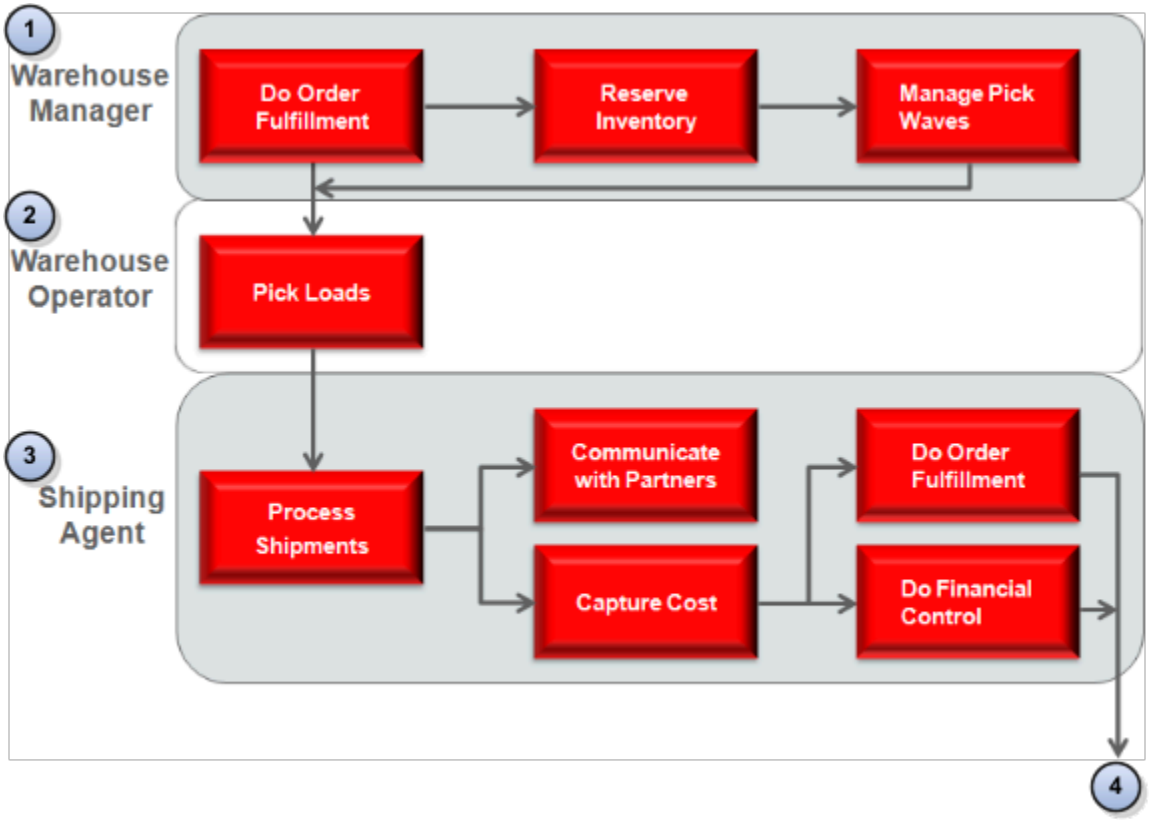
Use roles and tasks to optimize the user experience:

- Click links to tasks or search directly from work areas so that your users can access important pick and ship activities.
- Drill into line details so that your users can perform the next logical action in a guided way.
- Access important information about items during pick and ship transactions. Use visual images, detailed item specifications, and links to online collaboration tools.

User Roles That You Perform During Shipping

The shipping flow includes multiple roles that your organization must perform, from receiving the sales order, processing the shipment, and recording the financials.

The following figure illustrates the user roles that are involved during the shipping flow.



Explanation of Callouts

1. The warehouse manager does the following work:
    - Receives a sales order from Oracle Fusion Cloud Order Management.
    - Does order fulfillment work, including processing the sales order.
    - Creates a reservation that reserves material for the sales order. This reservation prevents some other demand source from using this material.
    - Monitors and releases sales orders that this process can use to pick product in the warehouse.
    - Creates pick slips that this process can use to pick material for the outbound material movement.
    - Uses a variety of criteria to create, manage, and release pick waves that results in efficient warehouse operation.
2. The warehouse operator does the following work:
    - Pick loads, including monitoring and performing the picking activity, and create pick slips for outbound shipments, replenishment, and requisition.
    - Search for a pick slip and confirm the pick slip in a single action. The warehouse manager can also create and distribute pick slip reports and provide instructions to the warehouse operator regarding material movement.

3. The shipping agent does the following work:
    - Process outbound shipments, including packing, creating shipments, and resolving exceptions, confirming receipt, and doing end-of-day activities.
    - Create outbound shipping documentation, such as the carrier bill of lading when the agent confirms the shipment.
    - Send shipping messages and updates to trading partners, including the contents or a shipment, shipment status, shipment arrival details, and shipment requests. This capability lets you integrate shipping with an external system.
    - Capture the shipping costs that are associated with the shipment and assign them to a shipment, shipment line, or packing unit.
    - Do order fulfillment work, including processing bills and receivables.
    - Do financial control, including financial reporting and cost accounting.
4. Inventory Management sends shipping information to Order Fulfillment and Cost Management for downstream processing.

How the View Shipment Privilege is Used in Oracle Cloud Applications

The View Shipment privilege is assigned to the predefined Oracle Fusion Cloud Manufacturing job role, Production Supervisor.

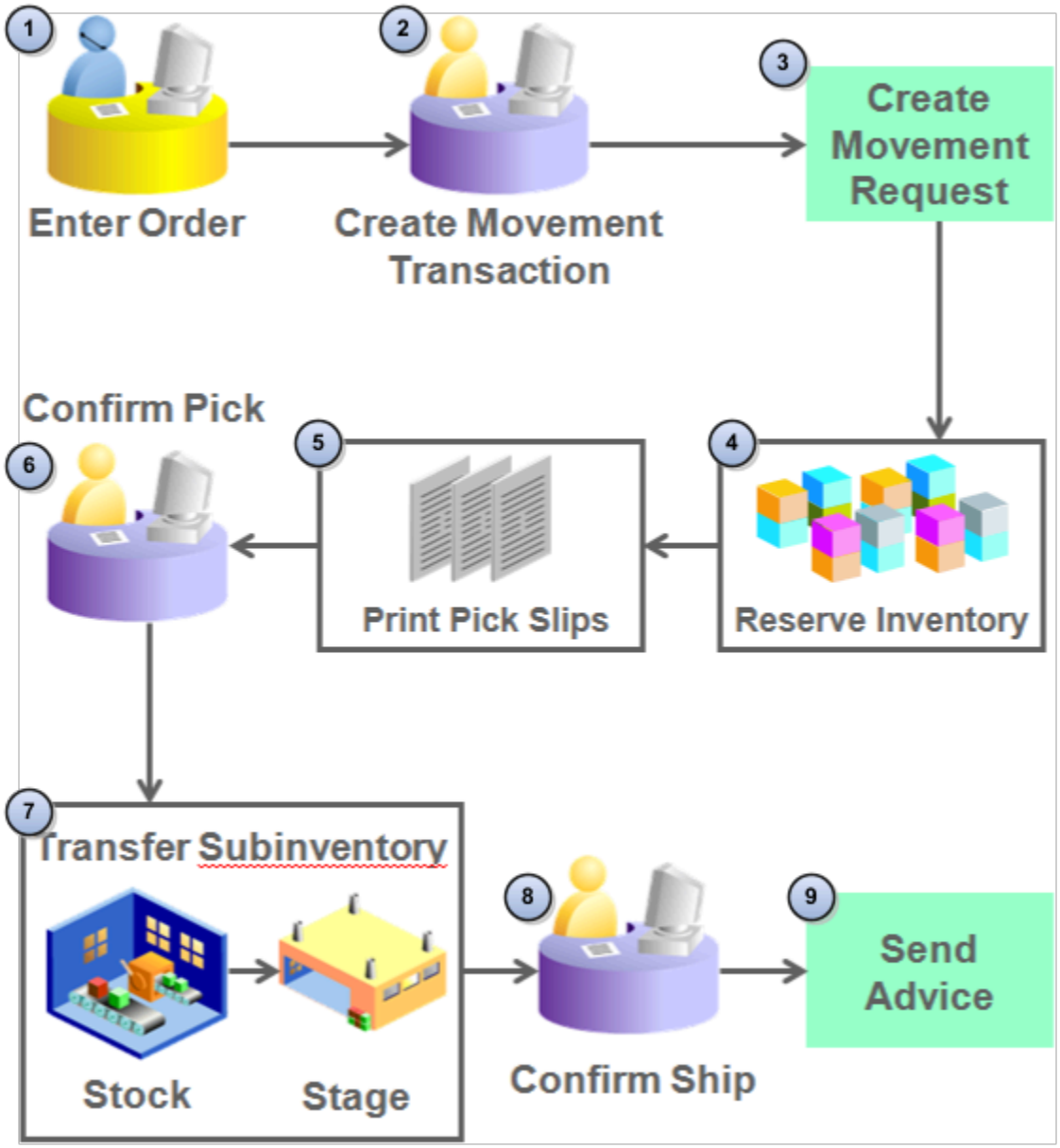
This privilege is used to view shipment details from the Manufacturing work area by using a shipment number. This privilege can't be used as a standalone privilege to view shipments.

How the Reserve, Pick, and Confirm Shipments Process Works

The process to reserve, pick, and confirm shipments begins with a sales order and ends with the movement of the material to a ship-to location.

The process that you use to reserve, pick, and confirm shipments begins when Oracle Fusion Cloud Inventory Management receives a sales order from Oracle Fusion Cloud Order Management or a source order from a source system, and ends when Oracle Inventory Management sends a confirmation to Oracle Order Management that it completed the movement of this material to the customer ship-to location. You can specify how Oracle Inventory Management does this movement.

The following figure illustrates the reserve, pick, and confirm process.



Explanation of Callouts

1. A user uses an order entry system, such as Oracle Order Management, to enter a sales order.
2. A Warehouse Manager uses Oracle Inventory Management to create a movement transaction.
3. Oracle Inventory Management creates an approved movement request for the sales order, which is now awaiting shipping. A movement request is a request to transfer material from the subinventory that stocks the material to the subinventory that stages this material. You can specify the staging subinventory in Oracle Order Management or on the Manage Shipping Parameters page. Oracle Inventory Management allows only one staging subinventory for each pick wave.

4. Allocate inventory for the movement request. If the Autoconfirm Pick option on the Create Pick Wave page:
    - Contains a check mark. Oracle Inventory Management allocates inventory for the movement request.
    - Doesn't contain a check mark. You must manually allocate inventory from the Confirm Pick Slip page.

    Note the following:
    - You must allocate inventory before you print pick slips.
    - A movement request uses inventory picking rules to determine how to allocate the material.
    - Shipping uses the Release Sequence Rule that you enter on the Pick Wave page or that Oracle Inventory Management defaults from the Shipping Parameters page to determine the sequence that fulfills the movement request.
    - Shipping sets the default sourcing values for subinventory, locator, revision, lot, and serial number on the movement request. You can use the Confirm Pick Slip page to modify these default values.
5. Shipping uses the Pick Slip Grouping Rule that you specify on the pick wave or that Inventory Management defaults on the Shipping Parameters page to determine how to print the pick slips.
6. Confirm the movement request for the pick slips. Note the following:
    - If the Autoconfirm Picks option on the Create Pick Waves page contains a check mark, or if the Pick Confirmation Required option on the Inventory Organization Parameters page doesn't contain a check mark, then Oracle Inventory Management confirms the pick during the picking process.
    - If Oracle Inventory Management doesn't confirm the pick during Pick Release, then you can use the Confirm Pick Slip page to confirm the pick.
7. The Pick Confirm transaction moves the material from the stock subinventory to the staging subinventory.
8. Confirm that the shipment is complete. Shipment is complete when Oracle Inventory Management loads all lines in the shipment to the customer ship-to location. A shipment includes a set of shipment lines, grouped according to common shipping attributes that Oracle Inventory Management schedules to ship to the ship-to location on a date and time. To confirm a shipment, a user in the warehouse selects the shipment on the Manage Shipments page or the Edit Shipment page, and then selects the Ship Confirm option. Note the following:
    - You must select a ship confirm rule or specify ship confirm options before you can confirm the shipment.
    - You must resolve shipping exceptions before you can confirm the shipment.
    - You must record the lot number and serial number for each item that requires these numbers.
    - You can confirm a shipment only after you confirm that you picked all the shipment lines that the shipment references.
    - Confirming a shipment might result in shipment lines that are in a variety of statuses, such as Shipped, Backordered, Staged, or Cycle Counted. Confirming a shipment is complete only when you record the quantity picked as Shipped.
9. Oracle Inventory Management sends a shipment advice that includes shipment details to Oracle Order Management.

Set Up Shipping

Preform these tasks to set up shipping.

To set up shipping, use the following:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Shipping
- Show: All Tasks

Perform the tasks in the Preparation column in the following table in the order presented.

Note: Oracle recommends that you finish the work described in the Preparation column before you start your implementation. You must perform each task.

Task	Preparation
Manage Release Sequence Rules	Determined how we will release shipment lines. Determined the level of priority that we will assign to the order that contains the lines that we will release.
Manage Ship Confirm Rules	Identified the tasks that we will specify with shipment confirmation. Identified the options that we will provide for shipped quantities that users don't manually enter.
Manage Shipping Cost Types	Determined the date range that we will use for the cost type. Determined the cost type that we will use for each currency.
Manage Transportation Schedules	Determined the schedule that we will use to ship and receive shipments.
Manage Shipping Exceptions	Determined the types of shipping exceptions that we will define and how we will define them. Determined whether we must modify exception severity levels.
Manage Default Packing Configurations	Identified the mode of transport that we most commonly use to deliver shipments. Determined the storage requirement for the items that we ship.
Manage Shipping Zones	Determined the configurations that we require for zones and zone types.
Manage Shipping Parameters	Determined how we will create, process, and confirm shipments.
Manage Pick Wave Release Rules	Determined how we will select lines for picking. Determined how we will process and fulfill the selected lines.

Common Tasks That You Perform for Shipping

Shipping requires that you perform the following common tasks:

- Manage Shipping Value Sets

- Manage Shipping Descriptive Flexfields
- Manage Shipping Lookups
- Manage Shipping Document Sequences

These tasks are common to any Oracle application. Shipping doesn't require specific setup for these tasks, so you can follow the instructions that you use to perform them for any Oracle application. For details about how to perform these common tasks, see the guide titled Oracle Fusion Cloud SCM: Implementing Common Features for SCM.

How You Set Up Shipping for Drop Ship Transactions

Oracle Fusion Cloud Applications support drop shipments. Drop ship is an order fulfillment strategy where the seller doesn't keep products in inventory, but relies on suppliers to build, store, and ship orders to customers. Material flows directly from the supplier to the customer.

You can select whether or not you want to print shipping documents for drop ship orders. To print shipping documents for these transactions, do the following:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receiving
    - Task: Manage Receiving Parameters
2. Select your organization.
3. On the Manage Receiving Parameters page, select the **Print shipping documents for drop ship orders** option.

This option is a one-time setup step for your organization. You don't need to set this up per transaction.

Related Topics

- Considerations for Printing Shipping Documents for Drop Ship Orders

Manage Release Sequence Rules

Release Sequence Rules

Release sequence rule enables you to specify the order in which the picking lines are pick released to inventory. You must assign a release priority in ascending or descending order to the selected release sequence.

These aspects of defining a release sequence rule will assist you in releasing picking lines according to your preference:

- Criteria for releasing picking lines
- Release priority

Criteria for release

You can release picking lines by:

- Sales order
- Initial ship date
- Scheduled ship date
- Outstanding invoice value
- Shipping priority

Release priority

You must assign at least one of the criterion specified above to a release priority in the range of 1 to 5 with 1 being the highest priority and 5 being the lowest. You must select the order, ascending or descending, in which the specified criterion will be made effective. For example, if you select the ascending order for the Scheduled date criterion, then the picking lines with the earliest scheduled date are released first.

Considerations for Release Priority

Release priority impacts the way a picking line is released when a release sequence rule is applied.

Before assigning release priority to a release criteria, consider these questions:

- How you release shipment lines in your organization?
- What is the level of priority your organization assigns to the order in which lines are released?

Considerations for releasing shipment lines

Before selecting the release criteria, you must plan how your organization will release shipment lines. Consider the following:

- What is the most commonly used criteria based on which shipment lines are released?
  Consider your organization's preferred criteria for releasing shipment lines. It can be based on sales order number, outstanding invoice value, scheduled date, initial ship date, and shipping priority. This directly impacts how and when the shipment line is released.

Considerations for assigning release priority

Consider these dependencies before assigning attributes to the release priority:

- You can assign a priority level to one attribute with 1 being the highest and 5 being the lowest.
  Consider your organization's usage of a specific attribute.

  Note: You can select an attribute only once while deciding the relative priorities.

- You can assign the order, ascending or descending, in which the specified attribute will be made effective.
  For example, if you select the ascending order for attribute Sales Order number, the shipment lines are released by ascending sales order number. Sales Order 1 is released first, then Sales Order 2, Sales Order 3, and so on.

- You can't assign both the Outstanding invoice value attribute or the Sales Order number attribute to a release priority in the same release sequence rule.

Manage Ship Confirm Rules

Ship Confirm Rules

Ship confirm rule enables you to determine how shipments are ship confirmed.

The following aspects of defining a ship confirm rule provide you the flexibility to:

- Specify tasks along with shipment confirmation
- Specify options if shipped quantities aren't manually entered
- Specify the document job set

Specify tasks along with shipment confirmation

You can specify your organization's preference of tasks to be completed along with shipment confirmation, by selecting one or more of the following check boxes:

- Create shipment for remaining staged quantities

  A new shipment will be created for lines with remaining staged quantities. Remaining staged quantity is applicable when shipped quantity is different from picked quantity on the line.
- Create bill of lading and packing slip

  A bill of lading and packing slip is created.

  > **Note:** You must define sequences of type "Automatic" for the application and module "Shipping." The sequences must be assigned to document sequence categories "BOL" or "PKSLP."

- Close shipment

  The shipment status is set to closed and as a result all the shipment lines status is set to shipped.
- Defer sending inventory updates to integrated applications

Specify options if shipped quantities aren't manually entered

You must specify an option that will be applied during ship confirm if the shipped quantity isn't manually entered for a staged line or lines. For example, consider a scenario where a shipment has 10 staged lines, and the shipped quantity is manually entered for eight of the lines. The ship confirm rule must indicate what to do with the two lines for which the shipped quantity isn't manually entered. The options are:

- Backorder

  The two staged lines are set to Backorder status and are unassigned from the shipment.
- Cycle count

The two staged lines are marked for cycle count, set to Backorder status, and unassigned from the shipment.

> **Note:** The quantities transferred for cycle counting aren't considered for selection during the next pick release.

- Ship requested quantities

  The requested quantity on the two staged lines is shipped.
- Stage

  The two staged lines remain staged, but are unassigned from the shipment.

Specify the document job set

When a ship confirm rule is used, you can associate the document job set to use during shipment confirmation.

Considerations for Ship Confirm Rules

You must set up all the ship confirm rules in a manner that they're reusable and service varied needs of different organizations.

You can have only one default ship confirm rule per organization and the this rule is associated by the shipping parameters for the organization. Before setting up default shipping rules, consider:

- Understand shipping processes and anticipate current and future needs of the organization
- Follow naming conventions
- Associate the most commonly used rules while defining shipping parameters

Understand shipping processes

You must understand the shipping processes to be able to evaluate and anticipate current and future needs of your organization before defining shipping rules. Consider the most commonly used scenario for the business so that the scenario will be served well with the default rule. This will enable you to create effective rules that optimize performance and reduce the need for granularity, which in turn reduces maintenance.

Follow naming conventions

You must follow naming conventions so as to minimize chances of confusion resulting out of cryptic naming.

Associate most commonly used rules

You must associate the most commonly used rules while defining shipping parameters. For example, you must associate a rule that's used most frequently in your organization. This enables you to minimize the need for overriding the default ship confirm rule.

Override a Shipping Method

You can override a shipping method.

Here's how:

1. In the Setup and Maintenance work area, go to the **Manage Ship Confirm Rules** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
2. On the Manage Ship Confirm Rules page, select your ship confirm rule and click **Actions > Edit**.
3. On the Edit Ship Confirm Rule page, select the shipping method that you want to use as the default shipping method from the **Override Shipping Method** drop-down list.
4. Click **Save and Close**.

Manage Shipping Cost Types

Overview of Shipping Cost Types

Shipping cost types are shipment-related costs such as administration fee, duty fee, insurance, handling cost, export fee, or transportation charge.

You can define a cost type within a category with a suggested amount. Shipping costs can be recorded at any point in time for a shipment, shipment line, or packing unit. Shipping cost types provide you the flexibility to:

- Defining a uniform shipping cost under a specific category for future reference
- Specifying an effective date range for the validity of the cost type
- Defining a cost type in preferred currency

Define shipping cost

You can define a shipping cost type under a specific category. This ensures uniformity of service charges under the selected category across the organization for the same service.

Note: You can override the cost type and suggested amount during or after the recording of shipping cost.

Specify effective date range

You can specify a date range for the validity of the cost type.

Define cost type in preferred currency

You can define a cost type in your functional currency. You can modify the currency at any point in time.

Manage Transportation Schedules

Transportation Schedules

Transportation schedules enable you to define valid shipping and receiving days and hours for trading partners such as organizations, suppliers, customers, and carriers.

Transportation schedules enable you to:

- Determine when shipments can be shipped and received.
- Assist Oracle Global Order Promising in planning valid shipping and receiving days.

Determine shipping and receiving schedule

The shipping and receiving schedules are used to determine when your customers, customer sites, suppliers, supplier sites, and internal organizations can ship and receive. The ship confirm process uses the defined transportation schedules to warn you of invalid shipping days and hours. The initial ship date on the shipment is validated according to shipping schedule for the warehouse and the planned delivery date is validated according to the receiving schedule for the customer or customer site.

For example, you're shipping a shipment from your warehouse in Florida on Monday, September 12, to arrive at your customer's site in New York on Wednesday, September 14. In this case, ship confirm checks the warehouse's shipping schedule and the customer's receiving schedule for the initial ship date and planned delivery date respectively to confirm the following:

- Monday, September 12, is a valid initial ship date for your warehouse in Florida to ship goods.
- Wednesday, September 14, is a valid delivery date for your customer's site in New York to receive goods.

If the initial ship date or planned delivery date is invalid, then ship confirm displays a message requesting a review of the dates entered.

Transportation schedules are also used when a pick release process is submitted.

The pick release process also consults your defined transportation schedules and adjusts ship dates as necessary. When you create a pick wave using the pick release process, you can specify a pick wave release rule that defines the scheduled ship dates and requested ship dates on the pick wave. If a shipping transportation schedule is defined for your organization, then the scheduled and requested ship dates on the pick wave are compared against the valid shipping days on the transportation schedule. If either the scheduled or requested ship date falls on an invalid shipping day for your organization, then the dates are automatically adjusted to the next valid shipping day specified in the transportation schedule. For example, if your shipping transportation schedule allows shipments Monday through Friday, and the pick wave release rule calculates a ship date that occurs on a Saturday, then the ship date is automatically moved to the following Monday.

> **Note:** If the transportation schedules aren't defined, then every day and time is assumed to be valid for shipping and receiving.

Assist Oracle Global Order Promising in planning valid shipping and receiving days

Global Order Promising uses the transportation schedule assignments when determining supply availability dates for customer orders.

- Shipping schedule: The shipping schedule indicates the valid working dates for shipping originating from suppliers and organizations. Global Order Promising uses the shipping schedule to determine when material can be shipped from warehouses to customers.
- Receiving schedule: The receiving schedule indicates the valid working dates for receiving goods at the organizations or customer sites. Global Order Promising uses the receiving schedule to determine when material can arrive at the customer site.
- Carrier schedule: The carrier schedule indicates the working and nonworking days and times for material that's in transit using different means of transport. Global Order Promising uses the carrier schedule to determine the transit time from a warehouse to the customer site. For example, a carrier has a transit time of three days but doesn't work on weekends. This implies that the carrier can deliver a shipment that was shipped on Monday afternoon on Thursday afternoon. However, the carrier can deliver a shipment that was shipped on Friday only on Wednesday since Saturday and Sunday are nonworking days.
- Global Order Promising uses shipping, carrier, and receiving schedules to determine when internal transfers between internal manufacturing sites and warehouses can be scheduled to meet customer demands at a warehouse.

  For example, shipping, receiving, and carrier schedules are used for shipping from an internal organization such as a plant to another internal organization such as a warehouse. The plant's shipping schedule is open from Tuesday to Friday. The warehouse's receiving schedule and the carrier schedule are open from Monday to Friday. The transit time is two days. In this case, the warehouse will receive shipments from the plant on Thursday, Friday, and Monday. The warehouse will not have shipments arriving on Wednesday since the plant cannot ship on Monday. If supplies are needed on Wednesday, then Global Order Promising will try to ship from the plant on the previous Friday to arrive on Tuesday.

Related Topics

- Examples of Creating Transportation Schedules
- Schedule Components

Examples of Creating Transportation Schedules

You can use several combinations of trading partner, schedule name, and schedule usage to create the transportation schedules suitable for your business requirements.

Examples of creating transportation schedules are discussed for the following scenarios:

- Shipping schedule for a warehouse
- Receiving schedule for a customer

Shipping schedule for a warehouse

You want to set up a shipping schedule for your warehouse so that you can schedule shipments from your warehouse and calculate shipping and planned delivery dates for your customers. In order to ensure that your warehouse has accurate shipping days and times, you can create a transportation schedule for an organization from where your

goods will be shipped, and select shipping as your schedule usage for that organization. You can activate the schedule assignment at the organization trading partner level by selecting the schedule and marking it as active.

Receiving schedule for a customer

You want to set up a receiving schedule so that you can schedule shipping and receiving days and calculate shipping and planned delivery dates for your customers. In order to ensure that the customer has accurate receiving days and times, you can create a transportation schedule for the customer to whom your goods will be shipped, and select receiving as your schedule usage for that customer. You can activate the schedule assignment at the customer trading partner level by selecting the schedule and marking it as active.

Site Level Schedules

Define and activate sites for a trading partner and assign a different schedule for each trading partner site.

Trading partner type can be customer, supplier, carrier, and organization. The schedule usage you define for every trading partner type determines what the schedule assigned to the trading partner is used for. For example, if shipping is defined as schedule usage for a trading partner organization, then that schedule is used for shipping. You can define and activate one or more sites for a trading partner. You can assign a different schedule for each trading partner site. Note that setting up schedules at the site level is optional. If a schedule isn't defined at the site level, then the schedule defined at the trading partner level is used. For example, a trading partner has 20 ship-from sites and 18 of those sites have the same schedule for shipping days. In this case, one shipping schedule can be defined for the trading partner and two other shipping schedules for the sites.

Site level schedules enable you to:

- Determine when shipments can be shipped and received at the site
- Validate shipping and receiving days

Determine site level shipping and receiving schedule

Enables you to define a shipping and receiving schedule for a trading partner site.

For example, a trading partner site (referred to in the following list as customer site) is receiving a shipment on Thursday. In this case, ship confirm checks the trading partner site schedules to confirm the following::

- The customer site is activated to receive shipments.
- The customer site can receive goods on Thursday.

Validate shipping and receiving days

The ship confirm process consults your defined site level schedules and warns you about invalid shipping days and hours as necessary.

When you ship confirm a shipment using the ship confirm process, the initial ship date and planned delivery date is checked in the trading partner site schedule. If a trading partner site schedule is defined for your trading partner site, then the initial ship date and planned delivery date are compared against the valid shipping and receiving days on the site schedule. If either the initial ship date or the delivery date falls on an invalid shipping or receiving day for your warehouse and customer site respectively, then alternative valid dates are suggested. For example, if your shipping site schedule allows shipments Monday through Friday, and the ship confirm process calculates an initial ship date that occurs on a Saturday, then Monday is suggested as the alternative initial ship date.

FAQs for Manage Transportation Schedules

What happens if a transportation schedule isn't defined for a trading partner?

If a transportation schedule isn't defined, then every day and time is assumed to be valid for shipping and receiving.

Manage Shipping Exceptions

Overview of Shipping Exceptions

A shipping exception is an unexpected event resulting out of a conflict between the requirements of the shipper, customer, or transportation carrier.

Define and Maintain New Shipping Exceptions

You can define and maintain new exceptions. The exceptions can be of three types:

- Shipment: exceptions that are logged against shipments.
- Picking: exceptions that are logged during the picking process.
- Batch: exceptions logged to store the messages generated during the automated shipping processes such as automatically pack and ship confirm.

You can inactivate a user-defined exception that's no longer in use by your organization. Disable the **Active** check box on the Edit Shipping Exception page.

> **Note:** You can inactivate a user-defined exception only if the exception isn't currently in use by a shipment, shipment line, or packing unit.

Modify Severity Levels of Exceptions

You can define and maintain the following severity levels of user-defined shipping exceptions:

- Error: Requires resolution before the transaction can be closed.
- Warning: Can be superseded and doesn't require resolution to close the transaction.
- Information: Provides information on a particular transaction. The user isn't required to act on the information exception to close the transaction.

Related Topics

- Predefined Exceptions

Predefined Exceptions

Predefined exceptions are already defined in Oracle Shipping. They are defined for the most common scenarios that may lead to the creation of an exception.

Note: You can't modify a predefined exception, except for its description.

This table lists the predefined exceptions available for your organization.

Exception Name	Description	Severity Level
Requested Quantity Changed	Requested quantity changed due to change in order line quantity.	Error
Shipment Grouping Changed	One or more shipment grouping attributes were changed.	Error
Scheduled Date Postponed	The scheduled date was postponed.	Error
Scheduling Attributes Changed	One or more scheduling attributes were changed.	Error
Pick Release Error	Pick release detailing completed with an expected error.	Error
Shipment Request Error	Line has shipment request errors in shipment message interface.	Error
Shipment Line on Hold	The shipment line was placed on hold by a shipment request.	Error
Manifest Request Cancellation Accepted	Manifest request cancellation accepted by carrier manifesting.	Information
Manifest Request Cancellation Rejected	Manifest request cancellation rejected by carrier manifesting.	Information
Backordered at Picking	The shipment line was backordered at picking.	Information
On Hold at Picking	The line had a hold at picking.	Information
Shipment Line Unassigned by Shipment Request	Line unassigned from shipment after processing shipment request.	Information

Exception Name	Description	Severity Level
Invalid Packing	Items should be unpacked from the packing unit.	Information
Change Due to Party Merge	Party merge has changed the shipment line or packing unit.	Information
Pick Release Detailing Warning	Pick release detailing completed with warnings.	Information
Batch Message	This message was logged by a batch program.	Information
Pick Release Warning	Pick release completed with warnings.	Information
Added by Append Shipments	Line added to a shipment through the append shipments process.	Warning
Appended Shipment Could Not Be Marked as Planned	The shipment couldn't be updated to planned at the end of the append shipment process.	Warning

FAQs for Manage Shipping Exceptions

When do shipping exceptions occur?

Shipping exceptions occur when predefined criteria for shipment creation, processing, and delivery aren't met or fail.

Predefined exceptions are logged automatically against shipments, shipment lines, and packing units when specific events occur.

You can also log shipping exceptions manually for a specific shipment, shipment lines, and packing units.

Can I inactivate an exception?

Yes. Remove the Active check box selection in the Edit Shipping Exception page. You can inactivate a manually defined exception only if the exception isn't currently in use by a shipment, shipment line, or packing unit.

Note: You can't inactivate a predefined exception.

Manage Default Packing Configurations

Pack Shipments

Packing shipments is the process of packing items into packing units for shipping to the customer.

Packing shipments provides the flexibility to:

- Manually pack
- Automatically pack

Pack Shipments Manually

You can pack shipment lines manually by creating packing units and specifying the lines that are packed in each of the packing units. Packing can be done for items as well as packing units. You can pack items into a packing unit and pack those packing units into another packing unit. For example, you can pack items into a box and many boxes onto a pallet.

Here's how you pack shipments manually:

1. From the Shipment work area, click the **Manage Shipment Lines** task.
2. Search for a shipment line and then click **Actions** > **Pack**.
3. In the Select and Pack dialog box, search for and select a Packing Unit and then click **Create Packing Unit**.
4. In the Create Packing Unit dialog box, select the Ship-from Organization, Packing Unit Type, and Name Generation fields, and then click **Save and Close**.
5. In the Select and Pack dialog box, click **Close**.

Pack Shipments Automatically

You can choose to automatically pack shipment lines into packing units by selecting the **Automatically Pack** option for the specific lines. The selected shipment lines are grouped by shared attributes, such as the ship-to location, and are then packed based on the preferred default packing configuration.

> **Note:** You can automatically pack a shipment that's open and has at least one shipment line assigned to it. You can automatically pack shipments if packing configurations have been defined.

Here's how you pack shipments automatically:

1. From the Shipments work area, click the **Manage Shipment Lines** task.
2. Search for a shipment line and then click **Actions** > **Pack Automatically**.

Pack Shipments Report

Oracle Transactional Business Intelligence lets you create ad hoc reports using real-time transactional data from Oracle Fusion Cloud Inventory Management in order to monitor your materials management processes. The Packing Unit dimension is available under the Shipment Line dimension of the Shipments Real Time subject area. The Packing Unit dimension includes the following attributes for generating a report for your shipment lines:

- Packing Unit

- Description
- Weight UOM
- Maximum Load Weight
- Gross Weight
- Tare Weight
- Net Weight
- Maximum Volume
- Volume
- Volume UOM
- Percentage Filled
- Minimum Fill Percent
- Master Serial Number
- Seal Number

For more information, see these guides:

- Oracle Fusion Cloud Applications: Using Common Features
- Oracle Fusion Cloud SCM: Subject Areas for Transactional Business Intelligence in SCM
- Oracle Fusion Cloud SCM: Creating and Administering Analytics and Reports for SCM

Default Packing Configuration

Default packing configuration enables you to assign a packing unit type to an item.

Default packing configuration provides you the flexibility to:

- Specify maximum quantity of an item that can be packed into the chosen packing unit type
- Automatically pack shipments

Specify Maximum Item Quantity

You can specify maximum quantity of an item that can be packed into the chosen packing unit. This assists in calculating the number of packing units required for a shipment line while packing automatically.

Automatically Pack Shipments

You can automatically pack items into packing units, which in turn can be further packed into larger packing units. Examples of larger packing units are pallet or boxcar.

Considerations for Packing Units

Every packing unit can be classified into a broader packing unit type meant for a specific kind of packaging and shipping.

Packing units are defined in Oracle Fusion Cloud Inventory Management. For example, the airline container packing unit is used to pack shipments that are delivered by air. Before assigning a packing unit to an item, consider

- What is the most commonly used mode of transport used to deliver shipments by your organization?
- What is the storage requirement for the items shipped from your organization?

Mode of Transport to Deliver Shipments

Consider which modes of transport are most commonly used by you organization to deliver shipments. Your organization's preferred modes of transport indicate the packing units most likely to be used during shipping.

Storage Requirement

Consider the weight and volume of the items being shipped from your organization to determine the packing unit to be used.

Manage Shipping Zones

Zone Types and Zones

You can create zone types and zones for the use of defining boundaries to be used in, for example, tax or shipping zones.

In order to create a zone boundary you need to define the following:

- Zone types
- Zones

Zone Types

Zone types categorize and group zones together, for example, the zone types of Income Tax and Shipping Regions.

Zone types need to be created before you define a zone for the geographical boundary. You can create a zone type which will contain geographical boundaries from anywhere in the world, or you can create a zone type that will only contain geographies from within a specified country. When you create a zone type that's bounded by a country you can define which geography types or geographies you will be able to choose when you create a zone.

Zones

Zones are geographical boundaries for a zone type, for example, the San Jose Tax zone. Zones are based on the master reference geography hierarchy data.

Zones are created within a zone type, and you can associate geographies to define the zone. For example, for the Shipping Regions zone type you can create a West Coast zone which has the state of California as one of its geographies. Within a geography you can specify a postal range. So for the state of California, for example, you can specify that the zone spans from postal code 90001 to 90011.

Manage Zone Types and Zones for Shipping and Tax

This example shows how to create a zone type and zone for shipping and tax.

Create a new zone type which is limited to one country, specify which geography types you want to select for a zone, and create a zone.

Create a Zone Type

When you're creating a zone you can either create the zone under an existing zone type, or create a new zone type and then create the zone. In this example, a suitable zone type doesn't exist in the application, and so you create a new zone type.

When you're creating a new zone type you can allow zone types to span across countries, however the zone type you're creating in this example is limited to geographies within the United States.

1. On the Manage Zone Types page, click **Actions** > **New**.
2. On the Create Zone Type page, enter a name for the zone type in the **Zone Type** field.
3. Click the **Bounded by country** option.
4. In the Boundary section, click the **Country** list.
5. Click **Search**.
6. Enter United states in the **Name** field.
7. Click **Search**.
8. Select the United States row.
9. Click **OK**.
10. In the Boundary section, click **Zone Created Allowed** for the **State**, **County**, **City**, and **Postal Code** geography types.
11. Click **Save and Close** to go back to the Manage Zone Types page.

Edit a Zone Type

1. On the Manage Zone Types page, select a zone type.
2. Click **Actions** > **Edit**.
3. Click the Bounded by country option.
4. In the Boundary section, click the Country list.
5. Click Search, select a country, and click OK.
6. In the Boundary section, click Zone Created Allowed for the State, County, City, and Postal Code geography types.
7. Click Save and Close to go back to the Manage Zone Types page.

Create a Zone

Now that you have created a zone type, you want to create a zone for the zone type. In this example, the zone contains State geographies.

1. On the Manage Zone Types page, click **Next**.
2. Click **Actions** > **New**.
3. On the Create Zone page, enter a name for the zone in the **Zone** field.

4. Enter a unique name for the zone in the **Code** field.
5. Enter the date you want the zone to be effective from in the **Start Date** field.
6. Enter the date you want the zone to be inactive from in the **End Date** field.
7. Now you need to enter the geographical boundaries of the zone by adding geographies. In the Associated Geographies section, click **Actions** and then click **New**.
8. Enter **State** in the **Geography Type** field.
9. Enter **CA** in the **Geography Name** field.
10. Click **Search**.
11. Highlight the **California** geography, and click **Save and Close**.
12. Repeat steps 7 to 11 for every geography you want to enter for the zone.
13. Click **Save and Close**.
14. Create as many zones as you require for your zone type.
15. Click **Save and Close** on the Manage Zones for Zone Type page.

Edit a Zone

1. On the Manage Zone Types page, click Next.
2. Select a Zone.
3. Click **Actions** > **Edit**.
4. Modify the required changes.
5. Click **Save and Close**.

Manage Shipping Parameters

Enable Shipping Method for a Shipment

You can enable shipping method for a shipment.

Here's how:

1. In the Setup and Maintenance work area, go to the **Manage Shipping Parameters** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
2. Select your organization.
3. On the Manage Shipping Parameters page, in the Optional Shipment Grouping Attributes section, select **Shipping method** and click **Save and Close**.

    You can specify a shipping method while creating an order. See the Oracle Fusion Cloud SCM: Using Order Management guide for details.

Considerations for Managing Shipping Parameters

Shipping parameters affect how Oracle Shipping creates and confirms a shipment, and how it interacts with Oracle Fusion Cloud Inventory Management.

Consider the following questions when you set shipping parameters:

- How will your organization create, process, and confirm shipments?
- How will Oracle Shipping update Oracle Inventory Management?

Create and Confirm Shipments

Before selecting the shipping parameters, you must plan how your organization will create, process, and confirm shipments. Consider the following before configuring the shipping parameters for each of your ship-from organizations.

- Which shipment creation criteria to use?

  Consider your organization's criteria for creating shipments; if a shipment can be created across sales orders or must be created from within a sales order.
- Which confirm rule to use?

  Consider your organization's usage of a specific confirm rule and decide which can be used as the default rule during confirmation. Select the commonly used rule in your organization to save time and quickly confirm shipments.
- What weight UOM class and volume UOM class to use?
- What currency to specify?

  Consider your organization's range of transactions in a particular currency.
- Whether to enable automatic packing?

  Consider your organization's usage of packing shipment lines into packing units. Note that the shipment lines to be automatically packed are grouped together by shared attributes such as ship-to location and the shipment line information can't be changed until the shipment is unpacked.
- Whether to consolidate backordered lines?

  Consider your organization's policy on consolidating a line that was split and backordered with other backordered lines.
- Whether to enforce packing?

  Consider your organization's practice of requiring every shipping line in a shipment to be packed.
- Whether to enforce shipping method?

  Consider your organization's practice of requiring a record of shipping method for each shipment.
- Whether to enable future ship date?

  Consider your organization's policy on recording an actual ship date in the future.
- Whether to enable carrier manifesting?

  Consider if you want to enable carrier manifesting for the shipments in the warehouse.
- Whether to send fully reserved lines, partially reserved lines, or all lines without creating reservations to an external execution system?

  Consider your organization’s requirement on sending shipment lines to an external execution system with or without checking reservation and material availability. Also, consider your organization’s policy on splitting and sending partial shipment lines based on material availability to an external execution system.

Update Oracle Inventory Management

Consider the following dependencies before configuring your organization's shipping parameters on updating Oracle Inventory Management tables.

- Whether to defer sending inventory updates to integrated applications?

  Consider your organization's preference on delaying updates to Oracle Inventory Management tables once the shipment is confirmed. If you choose to defer sending inventory updates to integrated applications, then the Shipping interface does not initiate updates to Oracle Inventory Management interface tables and in turn, the inventory processor does not pick up or update the inventory tables.
- Whether to defer online processing of inventory updates?

  Consider your organization's preference on delaying processing of records in Oracle Inventory Management.
- How much inventory interface batch size to specify?

  Specify the number of records that are selected for processing in a batch in Oracle Inventory Management. Consider the maximum number of records your organization would prefer to be processed in a batch. Note that an optimum batch size reflects inventory updates faster in the application.

Set Shipping Parameters

Consider the following items when you set a shipping parameter on the Manage Shipping Parameters page in the Setup and Maintenance work area.

Parameter	Description
Appending Limit	Select one of the following values: • Do Not Append. Do not enable Shipping to append a shipment. • Start of Staging. Enable Shipping to append a shipment after it stages at least one of the fulfillment lines that the shipment references. • End of Staging. Enable Shipping to append a shipment after it stages all fulfillment lines that the shipment references.
Packing Slip Document Sequence Category	Select a value that specifies the document sequence category to use for the packing slip. You can use this parameter to specify the starting packing slip number, or to specify whether or not the sequence contains gaps or is continuous without gaps.
Bill of Lading Document Sequence Category	Select a value that specifies the document sequence category to use for the bill of lading. You can use this parameter to specify the starting bill of lading number, or to specify whether or not the sequence contains gaps or is continuous without gaps. If you don't select a value, the document sequence category is based on the preseeded category `ONT:1`.
Commercial Invoice Document Sequence Category	Select a value that specifies the document sequence category to use for the commercial invoice. You can use this parameter to specify the starting commercial invoice number, or to specify whether or not the sequence contains gaps or is continuous without gaps. If you don't select a value, the document sequence category is the same as the shipment number.
Consolidate Backordered Lines	If this parameter is selected, Oracle consolidates any line that was split and then subsequently backordered. It consolidates this line with the backordered lines that existed before the split. Shipping searches for existing backorders for the shipment line when a backorder occurs. If it finds an existing

Parameter	Description
	backorder, then it consolidates the current backordered shipment line with the existing backordered shipment line. Shipping only consolidates backordered lines that aren't assigned and not packed.
Required on Packing Slip	Select the options to print on the packing slip: • Packing Slip Status. Print Draft or Final on the packing slip. • Shipment Description. Print the description that the user enters for the shipment. • Transportation Reason. Print the reason for sending the goods that the user enters for the shipment. The options selected for this parameter print on the packing slip. By default, no options are selected.
Enable Carrier Manifesting	If this parameter is selected, Shipping sends shipments to the carrier manifesting system so that this system can confirm the shipment. Only shipments that are open and that include lines that are assigned, staged, and packed are sent. Packing is performed prior to manifesting because Shipping can only manifest packed lines. A shipper can use carrier manifesting to process shipments that use carriers that are integrated with Shipping. The carrier manifesting process does the following work: • Weigh parcels. • Calculate freight cost. • Create shipping documents. • Send manifest data to systems that third party carriers use.
Publish Transactional Events	If this parameter is selected, the shipping transaction event for backordered quantities is always published.
Reservation Behavior for Integration to External Systems	Select one of the following values: • Fully reserved lines. If you select this parameter, Shipping sends fully reserved shipment lines as shipment requests to your third-party logistics provider or warehouse management system. • Partially reserved lines. If you select this parameter, Shipping sends partially reserved shipment lines (from available on-hand goods) as shipment requests to your third-party logistics provider or warehouse management system. • All lines without creating reservation. If you select this parameter, Shipping sends all shipment lines based on demand selection criteria as shipment requests to your third-party logistics provider or warehouse management system without checking material availability and creating reservations By default, this shipping parameter doesn't have a value. The default behavior is the same as **Fully reserved lines**.
Pick Release Batch Size	If you don't set this parameter, the default pick release batch size is set to 50 lines. Setting a small value, less than 1,000, for the batch size might generate more shipments than expected. Any value greater than 999 for this parameter is interpreted as 999 by the application
Trade Compliance Screening Method	Select one of the following values to set the default screening method for all shipment lines: • **None**. Shipment lines aren't screened for trade compliance.

Parameter	Description
	• **Pick confirm**. You must submit shipment lines for trade compliance screening as soon as the lines are picked and staged. However, for outside processing and return to supplier order types, you must submit shipment lines for trade compliance screening as soon as the lines are created. • **User initiated**. You must manually submit shipment lines for trade compliance screening after the lines have been picked and staged.
Shipping Tolerance Behavior	Select one of these values: • Under Tolerance: Closes the fulfillment line as soon as the shipped quantity is either equal to or greater than under tolerance quantity • Requested Quantity: Closes the fulfillment line as soon as the shipped quantity is either equal to or greater than the requested quantity.
Process outbound shipment lines before raising event	If this parameter is selected, the Generate Shipment Request scheduled processes will select shipment lines based on demand criteria, reserve them if appropriate, update the Batch ID field on all eligible lines, mark the lines as interfaced, and then raise the Outbound Shipment Request event. If this parameter is not selected, the Generate Shipment Request scheduled process creates a shipment request batch containing the demand and processing criteria and then raises the Outbound Shipment Request event. In this case, you must use the Shipment Line Change Request REST resource or Material Shipment Line SOAP service in the integration layer to process the shipment lines.
Overshipment Tolerance for Transfer Orders	Select a value that specifies the overshipment tolerance percentage for the organization.
Undershipment Tolerance for Transfer Orders	Select a value that specifies the undershipment tolerance percentage for the organization.

Considerations for Selecting Shipment Grouping Attributes

Shipment grouping attributes determine how shipment lines are grouped on a shipment.

Shipment grouping attributes are defined for Ship-from Organization. Ship-to Location and Ship-from Organization are always applied during grouping of shipment lines into shipments. Before selecting shipment grouping attributes, consider:

- How would you like to group your shipment line into shipments?
- Do you need to further refine your grouping criteria?

Group Shipment Lines

You must consider your organization's business preference for grouping shipment lines into shipments. For example, there are two types of freight terms; Prepaid and Collect. If you enable the grouping attribute Freight Terms, then the shipment lines that share the same freight term, Prepaid, will be grouped into one shipment. And the shipment lines that share the freight term, Collect, will be grouped into another shipment. The following tables illustrate the example and the consequent grouping of shipment lines into shipments based on selection of the grouping attribute, Freight Terms.

This table shows an example of shipment lines and their attributes.

Shipment Lines	Ship-from Organization	Ship-to Location	Freight Terms
1234A	Organization 1	San Jose	Prepaid
1234B	Organization 1	San Jose	Collect
1234C	Organization 1	San Jose	Collect
1234D	Organization 1	San Jose	Prepaid

This table shows an example of how the shipment lines were grouped into a shipment when the grouping attributes were applied.

Shipment Lines	Ship-from Organization	Ship-to Location	Freight Terms	Shipment
1234A	Organization 1	San Jose	Prepaid	Shipment 1
1234B	Organization 1	San Jose	Collect	Shipment 2
1234C	Organization 1	San Jose	Collect	Shipment 2
1234D	Organization 1	San Jose	Prepaid	Shipment 1

When a shipment is created, it inherits the enabled grouping attributes from the lines. For example, Freight Terms is enabled as a grouping attribute and a shipment is created for the lines with the term Prepaid. In this case, the shipment will automatically have the freight term, Prepaid upon creation.

When an optional attribute is enabled as a grouping criteria and there are shipment lines that don't have a value specified for the enabled attribute, then all those shipment lines are grouped together on a separate shipment. You can also choose to not select any of the optional grouping attributes.

Refine Grouping Attributes

You must consider your organization's preference for assigning Customer, Shipping Method, FOB, and Freight Terms as grouping criteria for creating shipments.

You can select more than one grouping attribute to further refine your grouping criteria. For example, if you select Customer and Shipping Method, then shipment lines with the same customer and shipping method will be grouped into one shipment.

Overview of Printing Shipping Documents for Configured Items

You can print the details of the model and options selected for configured items on fulfillment documents.

This is known as the sales order view. The application calls a service at the time of shipment confirmation that provides this information. You can view the details of the configured product on the packing slip and commercial invoice

throughout the receiving, inventory, and shipping processes. This helps avoid confusion when shipping configured products because the contents of the shipment are indicated on the documents.

> **Note:** The quantities of the components contained in the configured item display on the documents in terms of a single unit quantity. This means that the documents show the number of required components when the configured item quantity equals one.

Related Topics

- Overview of Configure-to-Order

FAQs for Manage Shipping Parameters

What happens if I select different appending limit options during shipment creation?

You can select a variety of appending limit options during the creation of a shipment.

Select **Do Not Append** to prohibit automatic appending to an existing shipment. Select **Start of Staging** to allow automatic appending to a shipment until one of the lines is staged. Select **End of Staging** to allow automatic appending to a shipment till all the lines are staged.

What happens if I enable carrier manifesting?

Carrier manifesting is a method used by shippers to process shipments that use carriers that are integrated into Oracle Shipping. The carrier manifesting process includes weighing parcels, calculating freight cost, generating shipping documents, and submitting manifest data to third party carrier systems.

When you enable carrier manifesting, open shipments with assigned lines that are staged and packed are sent to be ship confirmed in the carrier manifesting system. Packing is performed prior to manifesting since only packed lines can be manifested.

Why am I not able to cancel a transfer order?

You can't cancel a transfer order of a confirmed shipment if carrier manifesting is enabled for an organization. In Setup and Maintenance, on the Manage Shipping Parameters page, disable Enable carrier manifesting for the organization. Then open the shipment and cancel the transfer order.

Why am I not able see some shipment details in my shipment?

You need to enable the Shipping method, Freight terms, FOB, and Customer fields on the Manage Shipping Parameters page in the Optional Shipment Grouping Attributes section for them to appear in your shipment.

What happens if I enter a secondary shipped quantity that's greater than the secondary requested quantity during quick ship?

For quicker shipment of goods, you can skip pick release and pick confirmation on transfer orders and sales orders.

Suppose the inventory organization is enabled for quick ship and you enter a secondary shipped quantity for a dual UOM controlled item. On the Manage Shipment Lines page, you can enter a secondary shipped quantity greater than the secondary requested quantity if the amount entered is within the specified deviation factor for the item attribute.

What happens if I enter a secondary shipped quantity that's greater than the secondary picked quantity for Dual UOM Items?

When the inventory organization is not enabled for quick ship, you can enter a secondary shipped quantity for a dual UOM controlled item that's greater than the secondary picked quantity if the amount is within the specified positive deviation factor for that item.

Can I ship goods without sufficient on-hand quantity using quick ship?

You can ship goods even if there is insufficient on-hand quantity available during quick shipments.

You can perform a quick ship transaction for zero, negative, or positive on-hand quantity, provided the inventory organization is enabled for Allow Negative Balances. Here's what can be shipped:

- Plain items
- Lot-controlled items
- Serial-controlled items with serial generation for
  - Entry at inventory pick
  - Entry at sales order, transfer order or work order issue

Note:

1. Quick ship transactions for on-hand quantity greater than zero is only allowed for serial-controlled items with serial generated as:
   - A predefined serial number
   - A dynamic entry at inventory receipt
2. You can report ship confirmations from 3PL or WMS to drive the on-hand quantity negative when the inventory organization is enabled for Allow Negative Balances, but is not enabled for Enable Quick Ship parameter on the Manage Shipping Parameters page.

Manage Pick Wave Release Rules

Pick Waves

A pick wave is a batch of shipment lines that are pick released together based on certain business-related criteria.

Examples of when you might want to use pick waves include:

- Fulfilling a particular customer demand
- Optimizing transportation
- Fulfilling backorders to reduce delay in shipment

Fulfill a Particular Customer Demand

If your organization has customers who have specific quality demands, then you can create a pick wave to perform extra quality checks or follow special procedures during shipping.

Optimize Transportation

You can process a batch of shipment lines that are bound by common ship-to location, shipping method, and shipping priority in order to optimize transportation. If your organization has several customers in one location, then your organization can choose to collect all the shipment lines for those customers and ship them together through a common carrier. For example, if an organization has 10 customers in location B, then it can collect all shipment lines for location B and create a pick wave to ship them together using a common carrier, such as UPS truck service.

Fulfill Backorders to Reduce Delay in Shipment

If your organization chooses to fulfill backorders by putting them on a faster shipping schedule, then you can create a pick wave for all the backordered lines and ship them using a faster shipping method, such as Air.

Pick Wave Release Rules

Pick wave release rule defines the criteria to determine the order lines to select for pick release and how they need to be processed.

The optional processing includes:

- Creating shipments
- Picking and staging the material
- Packing the material
- Ship confirming the lines

The following criterion based on which you can define a pick wave release rule will assist you in planning and meeting your organization's needs:

- Effective Start and End Date range
- Demand Selection criteria
- Process criteria
- Fulfillment criteria

Note: Pick wave release rules don't have the option to store time zone information. It currently accepts only UTC time.

Date range

Effective start and end date range for the rule.

Demand Selection Criteria

Enables you to specify criteria pertaining to shipping organization, order, order date, item, and shipping details.

Process Criteria

Enables you to specify the release sequence rule, pick slip grouping rule, ship confirm rule, document job set, and also if the shipment should be automatically packed among others.

Fulfillment criteria

Enables you to specify the pick-from subinventory and staging subinventory of the shipping organization.

Related Topics

- Considerations for Pick Wave Release Rules

Considerations for Pick Wave Release Rules

Pick wave release rule defines the criteria to determine the order lines to select for pick release and how they must be processed.

Before creating a pick wave release rule consider:

- How you select lines for picking in your organization?
- How do you process and fulfill the selected lines?

Select shipment lines

You must consider your organization's preference before selecting lines for picking. Before selecting the order, date, and item details you must plan how your organization creates a pick wave. Consider the following:

- Which subinventory to use?

  Your choice of subinventory results in the selection of those order lines that are planned to be sourced from the specified subinventory. The source subinventory is specified for the order lines in the sales order creation stage.
- Which sales order to select?

  Determine if the shipment lines to be pick released for a specific sales order.
- Which customer to select?

  Determine if the shipment lines to be pick released are for a specific customer.
- Which shipment set to select?

  If your organization groups order lines within a sales order based on customer specification to ship together, then those set of lines are shipped together in the same shipment. You can select the appropriate shipment set number from where the order lines will be selected.
- Which destination type to select?

  Determine if the shipment lines to be pick released for specific geography, zone, or ship-to location.
- What are specified date ranges?

  Determine the from and to scheduled ship dates and from and to requested ship dates.
- What item details to specify?

  Consider if you're creating a pick wave for a specific item. If yes, then specify the catalog and category name along with the item name and description.
- What shipping details to specify?

Determine the preferred shipping method. The selected shipping method enables selection of those order lines that are planned for shipping using the specified shipping method.

Process shipment lines

You must consider your organization's preference for the way lines are fulfilled and processed. Consider the following:

- What pick-from subinventory and pick-from locator to specify?

  Consider your organization's usage of a specific subinventory and locator to pick material from.

  Note: This is an optional criterion.

- What staging subinventory and locator to specify?

  Consider your organization's usage of a specific subinventory and locator to finally deposit picked material.
- What release sequence rule to specify?

  Consider your organization's preference regarding the order in which lines are allocated during pick release.
- What pick slip grouping rule to specify?

  Consider your organization's preference regarding how lines grouped onto pick slips.
- What ship confirm rule to specify?

  Consider if your organization prefers shipments to be ship confirmed as part of pick release.
- Whether to automatically confirm pick slips?
- Whether to create shipments?
- Which shipment creation criteria to use?

  Consider your organization's criteria for creating shipments; if a shipment can be created across orders or must be created from within an order.
- Whether to automatically pack shipments?
- Whether to append existing shipments?

Set Pick Wave Release Rules

Consider the following items when you set pick wave release rule criteria on the Manage Pick Wave Rules page in the Setup and Maintenance work area.

Criteria	Description
Initial Destination	Select the initial destination for the shipment and shipment lines for the pick wave. The transportation shipment must have been planned in a transportation management system.
Trade Compliance Screening Method	Select one of the following values to set the default screening method for all pick wave releases: • **None**. Shipment lines aren't screened for trade compliance. • **Pick confirm**. You must submit shipment lines for trade compliance screening as soon as the lines are picked and staged. However, for outside processing and return to supplier order types,

Criteria	Description
	you must submit the shipment lines for trade compliance screening as soon as the lines are created. • **User initiated**. You must manually submit shipment lines for trade compliance screening after the lines have been picked and staged.
Transportation Shipment	Select the transportation shipment that represents the shipment and corresponding shipment lines that are planned to ship together.

Set Ship Confirm Rule in Pick Wave Release Rule

You can set a ship confirm rule in pick wave release rule.

Here's how you can:

1. In the Setup and Maintenance work area, go to the **Manage Pick Wave Release Rules** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
2. On the Manage Pick Wave Release Rules page, select your pick wave release rule and click **Actions > Edit**.
3. On the Edit Pick Wave Release Rule page, Options tab, select a **Ship Confirm Rule** from the Processing section, and enable **Create Shipments**.
4. Click **Save and Close**.

Considerations for Pick Wave Options

Options criteria impact the way lines are fulfilled and processed.

Before selecting the options criteria, consider:

- Fulfillment criteria
- Processing criteria

Fulfillment Criteria

Before you select the fulfillment criteria, you must plan how your organization prefers lines to be fulfilled.

- What pick-from subinventory and pick-from locator will you specify?

  Consider your organization's usage of a specific subinventory and locator to pick material from.

  > **Note:** This is an optional criteria.

- What staging subinventory and locator will you specify?

  Consider your organization's usage of a specific subinventory and locator to deposit the picked material for staging.

Processing Criteria

Before you select the processing criteria, you must consider your organization's preference for processing lines.

- What release sequence rule will you specify?

  Consider your organization's preference regarding the order in which lines are allocated during pick release.
- What pick slip grouping rule will you specify?

  Consider your organization's preference regarding grouping of lines onto pick slips.
- What ship confirm rule will you specify?

  Consider if your organization prefers shipments to be ship confirmed as part of pick release.
- Will you automatically confirm pick slips?

  Consider if your organization prefers pick slips to be automatically confirmed during pick release.
- Will you create shipments?

  Consider if your organization prefers shipments to be created during the pick release process.
- Which shipment creation criteria will you use?

  Consider your organization's criteria for creating shipments--whether a shipment can be created across orders or must be created from within an order.
- Will you automatically pack shipments?

  Consider if your organization prefers shipments to be automatically packed.
- Will you append existing shipments?

  Consider if your organization prefers to append shipment lines to the existing shipments.

> **Note:** Here are the prerequisites for appending shipment lines:
>
> - The appending limit must be defined as a value other than Do not append on the Manage Shipping Parameters page.
> - An organization must be specified.
> - Create shipments functionality must be enabled.
> - Shipment creation criteria must be defined as across orders.
> - Autoconfirm pick slips functionality must be disabled.

Integrate Shipping with Transportation and Trade Management Systems

Overview of Integrating Shipping with Transportation and Trade Management Systems

Oracle Shipping provides seamless integration with any transportation management or trade management solution.

Using Shipping with transportation and trade management solutions, you can:

- Avoid fines by complying with the crucial regulatory compliance requirements
- Reduce the risk associated with global shipments
- Reduce costs by shipment optimization and carrier outsourcing
- Improve process flows by managing holistically across businesses and geographies
- Improve customer satisfaction by reducing order cycle time

Note: Although these integrations are available to any third-party solutions, Shipping is designed to work directly with Oracle Fusion Cloud Transportation Management and Oracle Fusion Cloud Global Trade Management. For more information about these products, see the Oracle Fusion Cloud Logistics documentation available on the Oracle Help Center.

The integration features for Shipping are predefined, and you can access them through the following existing job roles:

- Warehouse manager
- Shipping manager
- Warehouse operator
- Shipping agent

Related Topics

- How Shipping Integrates with Transportation and Trade Management Systems

How Shipping Integrates with Transportation and Trade Management Systems

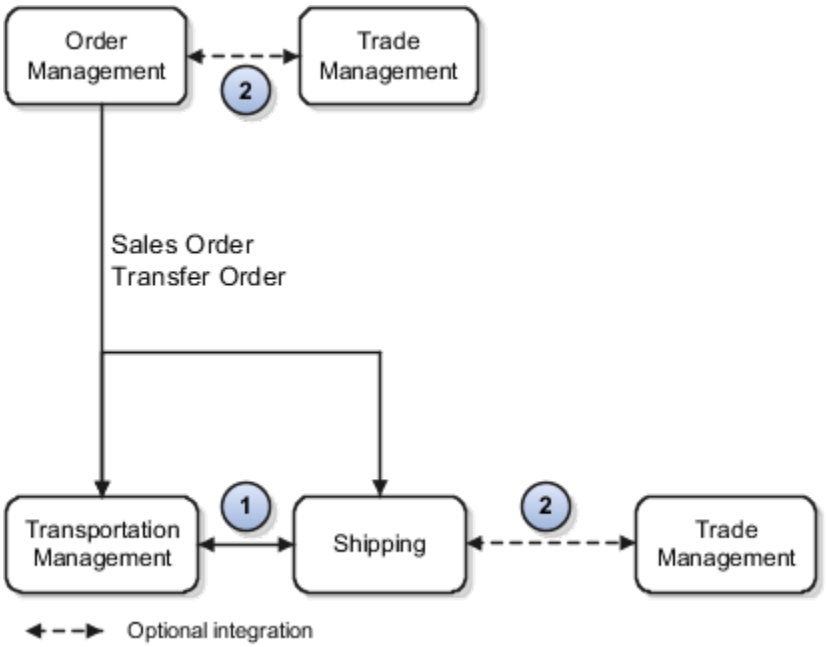
Oracle Shipping provides seamless integration with any transportation management or trade management solution.

When you integrate Shipping with a:

- Transportation management system, you can schedule and optimize shipments, and tender shipments to carriers.

- Trade management system, you can ensure compliance by properly screening transactions and managing legal, regulatory, and corporate requirements for cross-border transactions.

The graphic shows a high-level overview of this cross-product business process flow.



Explanation of callouts:

1. Order managers can send order lines to a transportation management system for planning. After the order lines are planned, the transportation details are sent back to Shipping for further processing.

2. Order managers can perform compliance screening directly from both Oracle Fusion Cloud Order Management and Shipping. Order managers can request compliance screening for order lines, and shipping users can check trade compliance for shipment lines.

The following subsections provide more detailed information about how Shipping integrates with Order Management, transportation management, and trade management systems.

Shipping Integration with Order Management

Order Management and the Oracle Fusion Cloud Inventory Management suite of products (Shipping, Receiving, and Inventory Management) work together to fulfill orders that your users enter directly in Order Management or that you import from some other source.

You can integrate Order Management with a transportation management system so that it sends sales orders to that system for transportation planning, and to receive updates at fulfillment milestones, such as plan completion or proof of delivery. For more information about Order Management integration with a transportation management system, see the Oracle Fusion Cloud SCM: Implementing Order Management guide.

Shipping Integration with Transportation Management Systems

Integrating Shipping with a transportation management system enables your order managers to send order lines to that system for planning. After your order lines are planned, the transportation details are sent back to Shipping for further processing.

Some of the advantages of this integration include:

- Shipping automatically receives transportation planning details, such as transportation shipment information, shipping method details, and shipping dates.
- Warehouse personnel can perform actions on shipment lines collectively based on the associated transportation shipment.
- The transportation management system is automatically notified of backordered quantities.
- Shipping communicates the final shipment information to the transportation management system, which helps in the generation of more accurate shipping documents.
- Third-party logistics (3PL) applications and warehouse management systems (WMS) can integrate directly with transportation management systems, and Shipping communicates directly with the 3PL application and WMS.

For more information about transportation management, see the Oracle Fusion Cloud Logistics documentation available on the Oracle Help Center.

Shipping Integration with Trade Management Systems

Integrating Shipping with a trade management system enables order managers to perform compliance screening directly from Order Management and Shipping. Order managers can request compliance screening for order lines, and shipping users can check trade compliance for shipment lines.

Some of the advantages of this integration include:

- Shipping users can request shipment lines to be screened at a stage that's appropriate to your business. For example, shipping users can request compliance screening when the lines are staged automatically, or manually before the material is shipped.
- Warehouse personnel can perform actions on shipment lines collectively based on your compliance screening needs.
- The trade management system is automatically notified of backordered quantities.
- You can communicate the final shipment information to the trade management system, which helps in releasing any licenses withheld and generating export documentation.
- Third-party logistics (3PL) applications and warehouse management systems (WMS) can integrate directly with a trade management system, and Shipping communicates directly with the 3PL application and WMS.

Related Topics

- Overview of Integrating Shipping with Transportation and Trade Management Systems
- Considerations for Integrating Shipping with Transportation and Trade Management Systems
- How Order Management Integrates with Transportation Management

Considerations for Integrating Shipping with Transportation and Trade Management Systems

The following are points to consider when integrating Oracle Shipping with transportation management or trade management systems.

- Integrations are available for any third-party solutions, however, Shipping is designed to work together with Oracle Fusion Cloud Transportation Management and Oracle Fusion Cloud Global Trade Management.
- Visibility is not available within Shipping to determine if shipment lines were previously screened in Oracle Fusion Cloud Order Management.
- Shipment lines can't be shipped using Oracle Fusion Cloud Inventory Management for organizations controlled by external systems, such as third-party logistics (3PL) applications or warehouse management systems (WMS). Contract manufacturing is the exception.
- Shipment lines related to outside processing, transfer orders, and return to supplier that you create directly in Shipping can be integrated with Oracle Global Trade Management but not with Oracle Transportation Management.
- Printing of shipping documents is performed using the transportation management system.
- Printing of commercial invoices is performed using the trade management system.

Related Topics

- Overview of Integrating Shipping with Transportation and Trade Management Systems
- How Shipping Integrates with Transportation and Trade Management Systems

How You Set Up Shipping for Backordered Shipment Line Notifications

With Oracle Shipping, backordered line notifications are available for the shipment lines you have enabled for transportation planning and compliance screening. However, if you need these notifications for integrations or implementations, then you must enable the Publish Transactional Events shipping parameter.

To enable the Publish Transactional Events shipping parameter, do following.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Shipping Parameters
2. On the Manage Shipping Parameters page, select a value for **Appending Limit** as required.

When this parameter is selected, the shipping transaction event for backordered quantities is always published.

Related Topics

- Considerations for Managing Shipping Parameters
- Notifications for Backordered Shipment Lines

Notifications for Backordered Shipment Lines

Oracle Shipping provides new events that enable you to work with backordered shipment lines and pull shipment information.

For these events to be available, do the following:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Shipping Parameters
2. On the Manage Shipping Parameters page, enable the **Publish Transactional Events** parameter.

These events are available by way of Integrated Cloud Service (ICS) and include transportation shipment and trade compliance screening attributes to assist with such integrations. ICS is an end-to-end integration orchestration platform that simplifies how to use and apply product integrations offered within the cloud. Shipping creates a shipment advice event that is published after confirming a shipment.

When integrating Shipping with a transportation management system, you can keep the transportation shipment up to date for the backorder quantities. The shipment advice event enables you to also update the transportation shipment incrementally and complete it in an orderly fashion. After completion, the transportation shipment information is final and accurate so that you can generate applicable shipping documents.

Related Topics

- How You Set Up Shipping for Backordered Shipment Line Notifications

Transportation Planning Details for Shipment Lines

You can integrate Oracle Shipping with a transportation management system.

By doing so, you can:

- Receive planning details for shipment lines from transportation applications
- Automatically split shipment lines for partial shipments
- Allow users to review, delete, and resubmit a shipment request if there are issues

Receive Transportation Details for Shipment Lines

You can receive the transportation planning details using the batch method of the Shipment Request public web service.

These details include transportation shipment, transportation shipment line, initial destination, shipping method, and scheduled ship date. You manage transportation planning details for shipment lines using the Manage Shipment Lines page in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Shipping can receive one transportation shipment at a time. You must split shipment lines if you plan to ship partially on a transportation shipment. You can review any errors and resubmit the shipment request using the Manage Shipment Message Interface task in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Shipping Support for Transportation Systems

With Shipping support for transportation shipments, you can:

- Group one or more shipments into a single transportation shipment.

When you combine one or more shipments into a single transportation shipment, you can progress the shipment lines for customers independent of each other, even though the lines belong to the same transportation shipment. Shipping communicates the shipment information to the transportation management system in an incremental fashion, that is, one shipment at a time.

- Enable pick release of all shipment lines for a transportation shipment or initial leg destination location.
- Support planned and unplanned lines within a single organization, however, Oracle Fusion Cloud Order Management decides which lines require planning.
- Enable manual updates to transportation attributes on the lines by way of the Manage Shipment Lines page in the Inventory Management work area.

You manage shipping details for transportation shipments using the Create Pick Wave page in the Inventory Management work area.

How You Screen Shipment Lines for Trade Compliance

Oracle Shipping integration with a trade management system enables you to screen shipment lines for trade compliance.

You can:

- Publish trade screening request events that are visible in Integration Cloud Service (ICS)
- Enable users to determine which lines to screen
- Enable the trade management system to receive shipment lines and send back screening results

How Compliance Screening Works for Shipment Lines

You can publish a new trade compliance screening event as soon as it's staged or anytime thereafter. This event includes a list of shipment line identifiers and is available by way of ICS. ICS is an end-to-end integration orchestration platform that simplifies how to use and apply product integrations offered within the cloud.

The determination of when an event is published for a shipment line is based on the trade compliance screening method selected for the line. The choices are:

- **None**. Shipment lines are not screened for trade compliance.
- **Pick confirm**. You must submit shipment lines for trade compliance screening as soon as the lines are picked and staged. However, for outside processing and return to supplier order types, you must submit shipment lines for trade compliance screening as soon as the lines are created
- **User initiated**. You must manually submit shipment lines for trade compliance screening after the lines have been pick and staged. You do so by initiating the **Check for Trade Compliance** action from the Manage Shipments page or the Manage Shipment Lines page in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Using this screening event, the trade management system pulls the list of shipment lines that are ready for compliance screening. After screening is complete, the trade management system sends back shipping line updates to Shipping with the screening results.

Shipping Support for Trade Compliance

Shipping enables the trade management system to receive shipment lines and send back the screening results.

The decision to screen shipment lines for trade compliance is transacted independently within the Shipping application. Any setup or decisions made about screening in the order management functions does not have an impact in Shipping. You select the screening method for a shipment line based on the selection made when releasing the line for picking. The trade compliance screening details are available to be included in the shipping documents.

Related Topics

- Considerations for Pick Wave Release Rules

Impact on 3PL and WMS Integration with Shipping

Third-party logistics (3PL) applications and warehouse management systems (WMS) enable integration to transportation and trade management systems directly.

When integrating Oracle Shipping with a 3PL application or WMS, Shipping does not communicate with transportation and trade management systems directly. Shipping facilitates the external applications to perform the necessary integrations by:

- Communicating fulfillment, transportation planning, and compliance requirement-related attributes to the external system
- Using the shipment information regardless of the planning and compliance statuses

Integrate with 3PL and Warehouse Management Systems

Third-Party Logistics and Warehouse Management Systems

A third-party logistics (3PL) provider typically specializes in integrated operation, warehousing, and transportation services that can be scaled and configured to customer need based on market conditions. A warehouse management system (WMS) is a software application designed to support warehouse or distribution center management and staff.

This application facilitates management of available resources to move and store materials into, within, and out of a warehouse, while supporting staff in material movement and storage

Oracle Fusion Cloud Applications provide a central integration framework that coordinates communication with a 3PL system or WMS to support purchase order receipts, returns to suppliers, internal material transfers, inventory transactions, and sales order shipments. Using Simple Object Access Protocol (SOAP)-based web services or REST resources, Oracle Fusion Cloud Inventory Management communicates receiving advice and shipment requests to a 3PL provider or external WMS for processing. After completion of processing in the 3PL system or WMS, Inventory Management accepts receipt confirmations, shipment confirmations, and inventory transactions from the 3PL system or WMS.

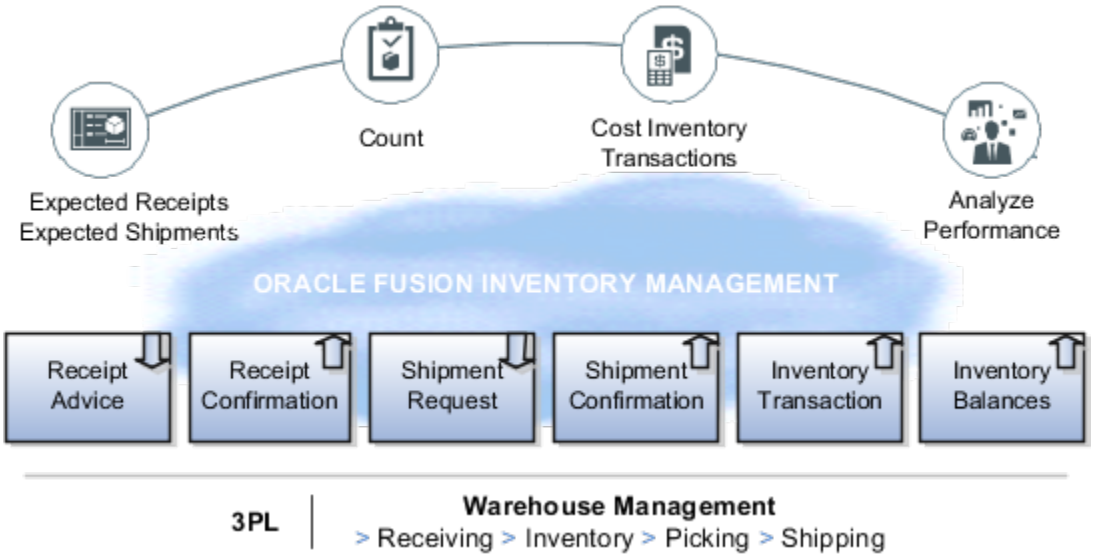
For more information, see these guides:

- REST API for Oracle Fusion Cloud SCM
- Oracle Fusion Cloud SCM: SOAP Web Services for SCM

Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Oracle Fusion Cloud Inventory Management supports a central integration framework for working with third-party logistics (3PL) providers and warehouse management systems (WMS). The inventory management suite of products includes Oracle Receiving, Oracle Inventory Management, and Oracle Shipping.

The following figure illustrates how Inventory Management integrates with 3PL and WMS systems. The subsections following the figure provide more detail for this integration.



Receiving Integration

Receiving integration addresses the following points:

- Sends a receipt advice to the WMS for the various documents, such as purchase order (POs), advanced shipment notices (ASNs), and return material authorizations (RMAs).
- Receives and processes receipt confirmations to acknowledge the receipt of material, updates the source documents and on-hand details for quantities and other related information, such as lots, serials, and external packing units, and the return of rejected material. This includes reference to the WMS transactions for reconciliation.

Shipping Integration

Shipping integration addresses the following points:

- Sends the shipment requests to the WMS for the various documents, such as sales orders and transfer orders.
- Receives and processes shipment confirmations to acknowledge the shipment of material and updates the source documents. This includes reference to the WMS transactions for reconciliation.
- Updates the on-hand details for quantities and other related information, such as lots and serials and splitting of the unfulfilled portions.

Inventory Management Integration

Inventory Management integration addresses the following points:

- Receives and processes various inventory transactions that can happen within a WMS that might affect the material location and on-hand details. Such inventory transactions include adjustments, miscellaneous receipts and issues, and transfers. This includes reference to the WMS transactions for reconciliation.
- Receives and processes inventory balance updates for solving inventory reconciliation challenges.

Related Topics

- Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow
- Inventory Balances Integration with External Systems

Inventory Management Integration with 3PL and Warehouse Management Systems Process Flow

Oracle Fusion Cloud Inventory Management integration with third-party logistics (3PL) and warehouse management systems (WMS) provides you the ability to outsource part or all of your supply chain management functions.

Using this integration, you can:

- Improve customer service by minimizing total delivery time and costs using a 3PL provider.
- Improve visibility to expected shipment and receipt detail to better plan import and customs clearance by way of web service or REST payloads.
- Accept returns from your customers with authorization from the manufacturer by way of receipt advices.
- Maintain tighter controls between Inventory Management and the execution system for greater transparency for 3PL or WMS activities.
- Monitor inventory accuracy.

This figure shows a high-level overview of this integration process flow. Details of this flow are provided after the figure.

The web service Send Receipt Advice, available by way of Oracle Receiving, or the REST resource Receipt Advice Lines (GET method), enable Inventory Management to communicate expected shipment lines sent to and received by a 3PL system or WMS. Then, the 3PL system or WMS, by way of the Receive Receipt Confirmation web service in Receiving, or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), communicate confirmation and receipt details of the expected shipment lines.

The web service Material Shipment Line, available by way of the GenerateShipmentRequest operation in Oracle Shipping, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, enable inventory management users to send shipment requests to a 3PL system or WMS. The 3PL system or WMS can accept and confirm the shipment requests by way of the CreateandConfirm operation on the Material Shipment web service in Shipping or the REST resource Shipment Transaction Requests (POST method, with CreateAndConfirmShipment action code).

Also, within Shipping, you can use the tasks in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering so that you can send a shipment request directly from the Inventory Management work area. Additionally, when shipment confirmation errors occur from the 3PL system or WMS, you can select a task in the Inventory Management work area to view the error in a spreadsheet, correct the error, and reprocess the shipment. This action brings the confirmation details into the shipping tables.

The web service Inventory Transaction Manager or the REST resource Inventory Staged Transactions (POST method) enable you to receive material transaction updates made by the 3PL system or WMS to keep on-hand balances synchronized with Inventory Management.

For more information, see the REST API for Oracle Fusion Cloud SCM guide.

Supported Roles for Inventory Management Integration with 3PL and WMS Systems

The features for Inventory Management integration with 3PL and WMS systems are predefined, and you can access them through the following existing job roles:

- Warehouse manager
- Receiving and inspection manager
- Shipping manager

The users roles associated with this feature are:

- Warehouse operator
- Receiving agent
- Shipping agent

Change Management for Sales Orders in 3PL and WMS Systems

You can now make changes to sales order lines in Order Management. This means you can check order status, communicate order changes and shipping holds, and cancel orders in the 3PL or WMS system when the shipping organization is changed. Therefore,

- Any changes you make to the sales order are communicated to the WMS seamlessly without any additional interaction.
- The changes to the order are rejected if the order has progressed in the WMS and the current state does not allow any changes.
- The type of changes to the order can include quantity, scheduled ship dates, shipping method, customer, and other key attributes.
- Shipping holds that can be placed on sales orders are communicated to the WMS.

Related Topics

- Overview of Inventory Management Integration with 3PL and Warehouse Management Systems

Implementation Decision Points and Setup Best Practices for 3PL and Warehouse Management Systems Integration

Consider the following when implementing integration to third-party logistics (3PL) provider or external warehouse management system (WMS).

Oracle provides services to integrate Oracle Fusion Cloud Inventory Management, Oracle Receiving, and Oracle Shipping to a third-party logistics (3PL) provider or external warehouse management system (WMS). These product areas work together cohesively to support transfer orders, inventory transactions, reconciliation of inventory balances, and so forth.

Decision Points

Before implementing your external systems integration, consider the following points.

- If you plan to receive material using a 3PL provider or WMS, then use the predefined scheduled processes to generate a receipt advice.
- If you plan to ship material using a 3PL provider or WMS, then use the predefined scheduled processes to generate shipment requests.

Setup Best Practices

The following setup best practices are recommended before integrating with external systems.

- Use a 3PL provider or WMS at the inventory organization level. By representing the 3PL provider or WMS as an inventory organization, virtual tracking and visibility of inventory at the 3PL or WMS location is available to users in real time.
- For simplicity, set up a receiving subinventory and one subinventory for each material status used in the implementation of Oracle Inventory Management. For example, you might set up subinventories for receiving, quality assurance, rejected, and available inventory.
- Use security rules to control access to transactions performed in the 3PL or WMS organization.

Additional Considerations

Keep in mind the following additional considerations when planning your 3PL or WMS implementation.

- Don't track locator and packing unit information because this data isn't tracked in Inventory Management.
- Process inventory transactions only when the item status has changed or the item is received into or issued out of Inventory Management. For example, when a third party performs material transactions within locations or packing units at their facility, these transactions aren't tracked in Inventory Management.
- Track inventory transactions for lot and serialized items in Inventory Management. This tracking is a requirement when lot and serialized items are issued out of inventory to support install base and product genealogy.

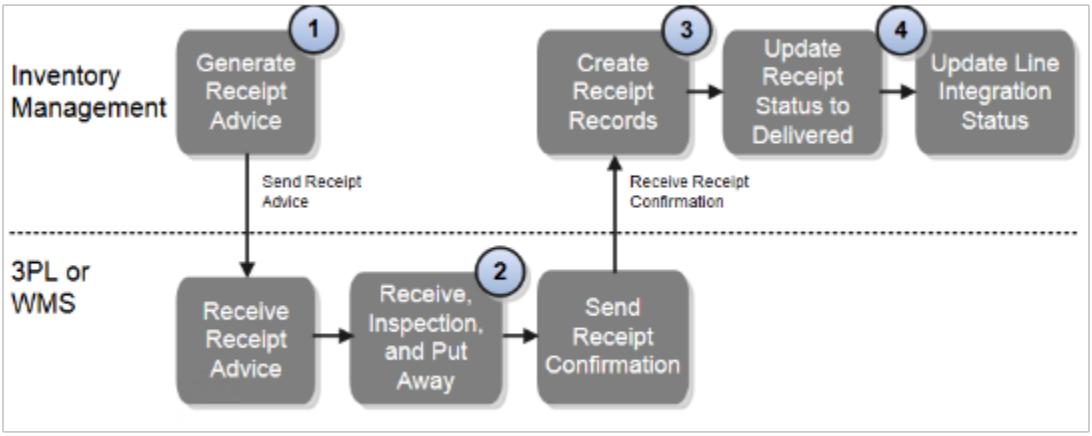
Receipt Advice and Receipt Confirmation Processes for External Systems Integration

This topic describes the receipt advice and receipt confirmation integration flow between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

Inventory Management communicates receipt advices to the 3PL system or WMS for processing. After completion of the processing in the 3PL system or WMS, Inventory Management accepts the receipt confirmations from the 3PL system or WMS.

For receiving, the web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) enables Inventory Management to communicate expected shipment lines to be received by a 3PL system or WMS. Then the Receive Receipt Confirmation web service or the REST resources Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method) enable the 3PL system or WMS to communicate confirmation and receipt details of the expected shipment lines that were communicated.

This figure shows the receipt advice and receipt confirmation integration flow.



Explanation of callouts:

1. The scheduled process Generate Receipt Advice publishes an event to notify the 3PL system or WMS that receipt advices are ready to be interfaced. The web service Send Receipt Advice or the REST resource Receipt Advice Lines (GET method) provide the ability for the 3PL system or WMS to receive the actual receipt advices with the expected shipment lines for purchase orders (POs), transfer orders, and return material authorizations (RMAs).
2. After the 3PL system or WMS receives the receipt advices, the 3PL system or WMS performs receiving-related processes including receiving, inspection, and put away.
3. The web service Receive Receipt Confirmation, or the REST resource Receiving Receipt Requests (POST method) or Requests for Receiving Transactions (POST method), is initiated, and receipt confirmation is sent to Inventory Management. The web service or REST resource provides the ability for the 3PL system or WMS to send the material and receiving details for the expected shipment lines received. The web service or REST resource also interprets and transforms the message, and creates the necessary records in Inventory Management. These records carry all the reference information from the external system to easily identify them for performing any future returns or corrections.
4. Inventory Management validates and processes the receiving transactions by processing the receipt confirmation messages and by updating the release status and integration status.

You can use the scheduled process Manage Receiving Transactions to automatically validate and process the transactions received. If an error occurs while processing the transactions, you can review and correct pending and error transactions using the **Review Receipts Interface** task in the Inventory Management work area, and resubmit the transactions for processing. When the transactions have successfully processed, the associated document is updated accordingly. For example, the status on an associated purchase order document is updated to **Closed for Receiving**.

You can use the scheduled process Generate Changed Receipt Advice to manage changes. For example, if there was a change to a purchase order line that was already interfaced but not confirmed, the service sends a changed receipt advice to communicate the associated change to the 3PL system or WMS.

You can use the Receive Expected Shipments page in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering to perform receiving of expected shipment lines to record various details, such as integration status. Integration status values include Ready to Interface, Interfaced, and Confirmed.

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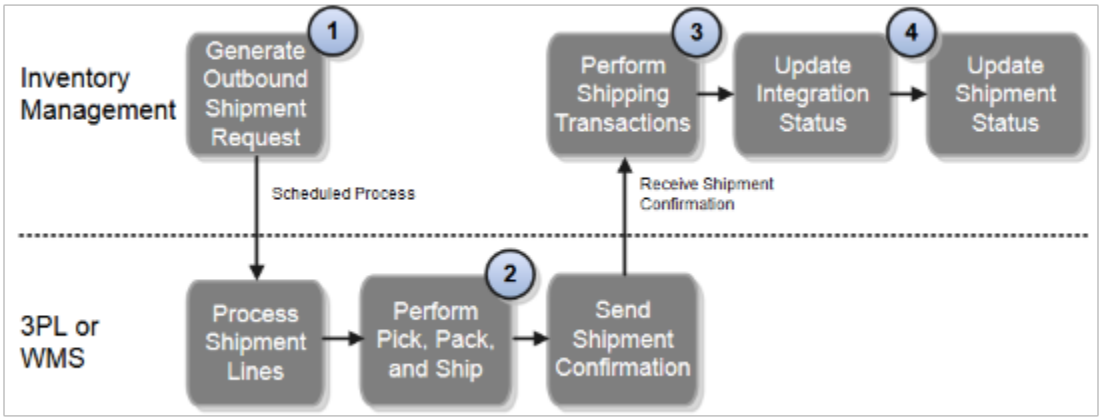
Shipment Request and Shipment Confirmation Processes for External Systems Integration

This topic describes the shipment request and shipment confirmation flows between Oracle Fusion Cloud Inventory Management and external systems, such as third-party logistics (3PL) and warehouse management systems (WMS).

This figure shows the shipment request and shipment confirmation flow.



Explanation of callouts:

1. The outbound shipment request integration process between Oracle Inventory Management and a 3PL system or WMS starts with a shipment request. The scheduled process Generate Shipment Request enables inventory management users to manually send shipment lines to the 3PL system or WMS using the task Create Outbound Shipment request in the Shipping UI, or they can automate the process using a scheduled process. The shipment request web service Material Shipment Line, or the REST resources Shipment Line Change Requests (method: Generate a shipment request) or Shipment Lines, uses the existing pick wave release rules to provide the criteria for selecting the shipment lines.

   Alternatively, the 3PL system or WMS can initiate the shipment request service voluntarily at specified intervals to retrieve shipment requests from Inventory Management.
2. After the 3PL system or WMS receives the shipment request, the pick, pack, and ship processes are performed.
3. The web service Material Shipment or the REST resource Shipment Transaction Requests (POST method, with the CreateAndConfirmShipment action code), when initiated with the required input, receives and processes the shipment confirmation messages. This service or resource interprets and transforms the message, and creates the necessary records in the shipping open interface tables. This transformation provides the mechanism for the 3PL system or WMS to send the material and shipping details for the shipment lines fulfilled.

The scheduled process Perform Shipping Transactions processes the pending transaction records received into the open interface tables. The process validates the data on the transaction records received from the 3PL system or WMS before processing them. Any errors from the validation step are recorded, and the transaction records remain in the open interface tables. The interface records with errors are available for users to view, edit, or resolve the errors, or reprocess.

In the event an error occurs while processing the shipment confirmation messages, users can access the **Manage Shipping Transaction Corrections in Spreadsheet** task to manage pending transactions by way of a spreadsheet interface using Application Development Framework Desktop Integration (ADFdi) technology. This interface supports management of interface transactions and corresponding errors related to shipment confirmations received from 3PL system and WMS. You can access this task in the Inventory Management work area of the Manufacturing and Supply Chain Materials Management offering.

> **Note:** The Manage Shipping Transaction Corrections spreadsheet displays only one error at a time for each sheet even if the shipment processing has more than one error.

After the shipment lines are successfully confirmed, the integration status and shipment status are updated accordingly.

Inventory Transaction Processes for External System Integration

All internal material transactions that occur within a third-party logistics (3PL) or warehouse management system (WMS) must be integrated appropriately to keep the inventory picture accurate in Oracle Fusion Cloud Inventory Management.

You can use the web service Transaction Manager or the REST resource Inventory Staged Transactions (POST method) to maintain inventory accuracy in Inventory Management with the 3PL system or WMS for the following:

- Miscellaneous account alias issues and receipts
- Subinventory transfers
- Interorganization transfers
- Cycle count adjustments
- Physical inventory adjustments
- Material status updates

The web service or REST resource inserts data into the applicable transaction interface tables and calls the transaction manager to process the rows that are ready for processing. If the transaction manager completes successfully, you can view the completed transaction on the Review Completed Transactions page. If the transaction processing fails, you can view the error details as well as transaction data on the Manage Pending Transaction page. From this page, you can correct the data and resubmit to the manager for reprocessing. You can access these pages in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering.

Related Topics

- Inventory Transaction Interface

Inventory Balances Integration with External Systems

Using Oracle Fusion Cloud Inventory Management's inventory balances integration capabilities, you can outsource warehousing and manufacturing processes to efficiently lower costs, service local markets, reduce cycle times, and so on.

A central integration framework across Oracle Purchasing, Oracle Fusion Cloud Order Management, and Oracle Inventory Management tracks interactions between the various external systems. You can receive inventory balance details from external systems, such as third-party logistics providers, warehouse management systems, or contract manufacturers and use this information to reconcile inventory balances. Inventory on-hand details can include subinventory, locator, lot, serial number, and external packing unit.

The inventory balances integration feature enables you to:

- Use the Inventory Balance Transactions REST resource to post inventory balance messages from an external system
- Import inventory balance messages in bulk using a SaaS spreadsheet
- Enable users to resolve any processing exceptions
- Purge inventory balance messages periodically

Note: This feature is automatically available and is included with the shipped job roles (warehouse manager and inventory manager).

Use the following processes and task to interface with external systems to improve tracking and visibility across your supply chain, including partners:

- Manage Inventory Balances Processes
- Manage Inventory Balance Messages in Spreadsheet (ADFdi)
- Manage Inventory Transaction Process
- Purge Inventory Balance Messages Process

Manage Inventory Balances Process

This scheduled process processes the imported inventory balance messages in the interface tables.

Manage Inventory Balance Messages in Spreadsheet (ADFdi)

Use this task, in the Inventory Management work area in the Manufacturing and Supply Chain Materials Management offering, to review and resolve any exceptions while processing the inventory balance messages.

Manage Inventory Transaction Process

This scheduled process processes the necessary adjustment transactions to reconcile the inventory balances.

Purge Inventory Balance Messages Process

Use this scheduled process to purge the historical balance inventory messages collected over time in the interface tables. Using the processing status parameter, you can purge error, successful, or all messages between a date range.

Related Topics

- Manage Inventory Balances Process
- Manage Inventory Transactions
- Purge Inventory Balance Messages

Release Shipment Requests to an External 3PL or WMS Using Release Sequence Rules

You can ensure that your shipping requests are released to your third-party logistics provider or warehouse management system in the order you want by setting release sequence rules.

Here's how you can set these rules:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Pick Wave Release Rules
2. On the Manage Pick Wave Release Rules page, select the required pick wave release rule and click **Actions > Edit**.
3. On the Edit Pick Wave Release Rule page, click the **Options** tab.
4. In the Processing section, select the relevant **Release Sequence Rule**.
5. Click **Save and Close**.

For more information see the topic, Manually Interface Shipment Lines to External Systems, in the Using Shipping guide available on Oracle Help Center.

Send Shipment Lines Using Only a Specific Subinventory for Nonlot Items

You can customize how shipment lines are sent to a third-party logistics provider or warehouse management system. This provides you more control over how shipment lines are sent to an external execution system, thereby helping you prioritize your customer's orders.

You can now:

- *Send shipment lines using only a specific subinventory.*
- *Send only shipment lines with prior reservations.*

How You Send Shipment Lines Using Only a Specific Subinventory

You can send shipment lines to an external execution system only when on-hand quantity available in a specific subinventory.

Subinventories provide a way for you to separate your on-hand quantities to meet specific segregation requirements. You can create outbound shipment requests for a specific Pick-from Subinventory using the Create Outbound Shipment Request process.

Here's how it works:

1. The process will first evaluate all the shipment lines available for release against the selected subinventory.
2. The shipment lines are sent to the external system if a sufficient quantity is available to fulfill the request.
3. The shipment lines are either partially sent or not sent at all if there isn't a sufficient quantity available to fulfill the request.

Note: You can interface the shipment lines for full or partial quantity depending on the on-hand availability in Pick-from Subinventory and Pick-from Locator in the Outbound Shipment Request page and the Reservation Behavior for Integration to External Systems parameter in the Manage Shipping Parameters page.

- If the Reservation Behavior for Integration to External Systems option is set to Partially reserved lines and on-hand quantity is partially available in the Pick-from Subinventory, you can interface the Shipment lines for partial quantity.
- If the Reservation Behavior for Integration to External Systems option is set to Fully reserved lines and on-hand quantity is fully available in the Pick-from Subinventory, you can interface the Shipment lines for full quantity.
- If the Reservation Behavior for Integration to External Systems option is set to All lines without creating reservation, the Pick-from Subinventory is ignored and all shipment lines are sent without creating any reservations.

Additional Considerations

Here are a few points to consider before you send shipment lines to a 3PL or WMS:

1. You can send shipment lines to external systems by running the Create Outbound Shipment Request process with the Prior Reservations Only option in conjunction with the Pick-from Subinventory option. This ensures the creation of detailed reservations only for shipment lines with prior reservations.
2. When the subinventory provided on the order line does not have enough on-hand quantity to send the shipment lines, you can override the source subinventory with a different Pick-from Subinventory.

How you send only the shipment lines with prior reservations

You can select and send only the shipment lines that are previously reserved to a 3PL or WMS.

A new checkbox Prior Reservations Only is added to the Create Outbound Shipment Request process for this purpose. When this checkbox is selected, only the shipment lines that were previously reserved are sent to the external execution system, whereas the shipment lines that do not have an existing reservation are skipped.

Note: If the order quantity is only partially reserved, the shipment lines are either partially sent or not sent at all depending on the Reservation Behavior for Integration to External Systems parameter in the Manage Shipping Parameters page.

- If the Reservation Behavior for Integration to External Systems option is set to Partially reserved lines, the shipment lines are sent only for the partially reserved quantity.
- If the Reservation Behavior for Integration to External Systems option is set to Fully reserved lines, the shipment lines are sent only if the entire ordered quantity is fully reserved.
- If the Reservation Behavior for Integration to External Systems option is set to All lines without creating Reservation, the Prior Reservations Only option is ignored, and all shipment lines are interfaced.

Additional Considerations

Here are a few points to consider before you send shipment lines to a 3PL or WMS:

- You can send shipment lines to external systems by running the Create Outbound Shipment Request process with the Prior Reservations Only option in conjunction with the Pick-from Subinventory option. This ensures the creation of a detailed reservation.
- You can create reservations for the requested quantity even if you didn't enable the Prior Reservations Only option. This allows you to create reservations for the ordered quantity when they are not made available for a shipment line.

FAQs for Integrating with 3PL and Warehouse Management Systems

Can I synchronize master data with third-party logistics or warehouse management systems?

Yes. Oracle Product Hub, Oracle Purchasing, and the Oracle Fusion Cloud Sales integration solutions work together to provide integration capabilities to support automated integration for items, suppliers, and customers.

Shipping Documents

Overview of Shipping Documents

Complex processes involving multiple applications and multiple fulfillment scenarios result in the generation of a series of shipping documents.

These include the distribution of the documents by multiple mechanisms to a variety of trading partners, the documents required to accompany a shipment, and the documents to be filed with various fiscal agencies.

As a Warehouse Manager or Shipping Manager, you can define sets of shipping documents, called shipping document job sets, and use them to generate shipping documents at pick release or shipment confirmation.

How You Set up Shipping Document Job Sets

A shipping document job set is grouping of reports generated at the time of pick release or shipment confirmation.

For example, a shipping document job set could include required shipping paperwork such as the bill of lading, packing slip, and commercial invoice. Use the Enterprise Scheduler Jobs for Financial and Supply Chain Management and Related Applications task to create and manage your shipping document job sets. You can define a group of standard or user-defined shipping reports as document sets or job sets for any business scenario.

Manage Job Sets

A job set is a collection of several jobs in a single process set that you can submit instead of running individual jobs separately.

To create the job sets, do the following.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Manufacturing Master Data
    - Task: Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications
2. On the Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications page, open the Manage Job Sets tab, click **Actions** > **Create**.
3. On the Create Job Sets, page, enter the required details and then click **Save and Close**.

Related Topics

- Set Up Document Classes

How You Manage Shipping Document Job Set Rules

You can set up the business rules for selection of the document job set. To determine which shipping documents are generated use the Manage Shipping Document Job Set Rules task.

Define Shipping Document Job Set Rules

To define shipping documents job set rules:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Shipping Document Job Set Rules

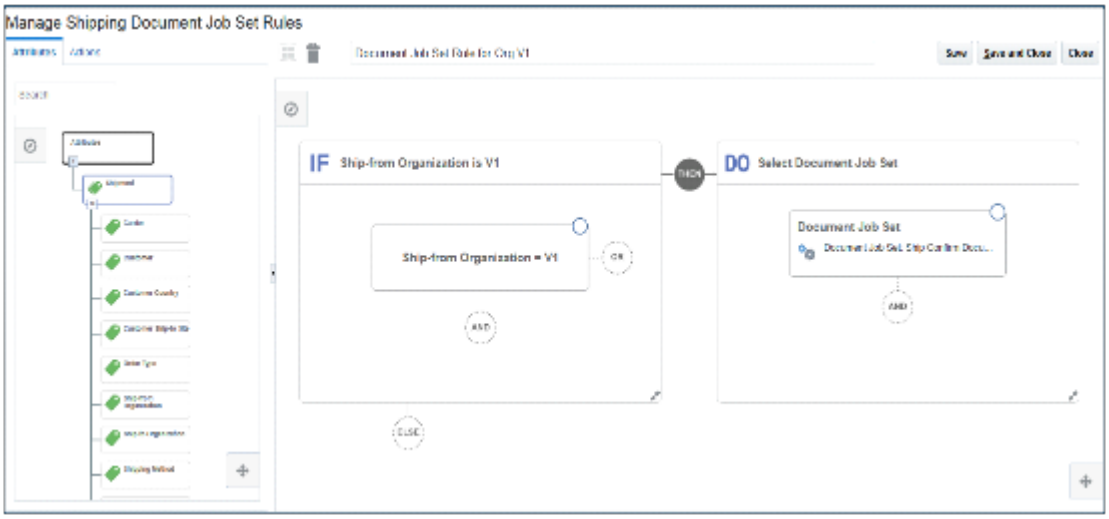
2. On the Manage Shipping Document Job Set Rules page, click **Create New Rule**. The page displays the Attributes and Actions tabs, which display a tree-view of the available values.
3. In the **Attributes** tab, search for or select the attribute from the tree view, and move it to the IF node to create an IF rule condition. You can use the following attributes to define a shipping document job set rule:
    - Ship-from Organization
    - Ship-to Organization
    - Customer
    - Customer Ship-to
    - Supplier
    - Supplier Order Type
    - Customer Country
    - Carrier
    - Shipping Method

    The Create Condition dialog box appears, which is used to define the rule.

    > **Note:** Alternatively, you can click the **New Condition** icon in the IF node. The Create Condition dialog box appears, where you can enter the attribute and the rule condition.

4. Enter the IF rule condition by selecting the operator from the list of operators and entering the value in the text box. Click **OK**.
5. Click THEN, select DO, and select **Perform an Action**.
6. Enter the DO rule action.

    The following figure illustrates the document job set rule for organization V1 in the following use case: IF Ship-from Organization = V1 THEN DO Document Job Set = Ship Confirm Documents.



7. Click **Save and Close**.

Publish a Shipping Document Job Set Rule

To publish a shipping documents job set rule:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Shipping Document Job Set Rules
2. On the Manage Shipping Document Job Set Rules page, select the rule and click **Publish**.
3. In the rule dialog box, select **Activate Rule** and click **Save and Close**.

    The rule is activated.

Overview of Managing Shipping Document Output Preferences

You can automate the delivery of the shipping documents by setting output preferences and the delivery mechanism for the documents.

Use the Manage Shipping Document Output Preferences page to:

- Define shipping document output preference such as email, fax, and printer
- Define output preferences based on user, job role, organization, and subinventory
- Attach shipping documents to a shipment as attachments

You can define output preferences either at the job set level or at the job level. Some job level preferences like format and layout will default from the Oracle Analytics Publisher server.

Define Document Job Set Output Preferences

You can define the job set output preferences for shipping documents.

To define document job set output preferences:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Manufacturing Master Data
    - Task: Manage Shipping Document Output Preferences
2. On the Manage Shipping Document Output Preferences page, click **Actions** > **Create**.
3. In the Create Shipping Document dialog box, select the Job Set Name created using the **Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications** task.
4. Select the values for the following fields:
    - Job Name
    - Layout

- Format
- Start Date
- End Date

To enable this document to be automatically attached to the shipment, select **Attach Document**.

5. Do one of the following:
   - Click **Save and Close** to save the new document and close the Create Shipping Document dialog box.
   - Click **Save and Create Another** to save the new document and create another document.
6. Search for the shipping documents.
7. Select the shipping document you created in Search Results and in the Output Preferences section, click **Actions** > **Create**.
8. In the Create Output Preferences dialog box, select values for User, Job role, Organization, and Subinventory and set the following:
   - To configure the shipping document output as a physical copy, set the values in the Printer section.
   - To configure the shipping document output as an email, set the values in the Email section.
   - To configure the shipping document output as a fax, set the values in the Fax section.
9. Click **Save and Close**.

For more information on setting up delivery destinations, see the Oracle Fusion Middleware Administrator's Guide for Oracle Analytics Publisher.

Generate and Print a QR Code on Shipping Documents for Organizations in Portugal

To comply with changes in Portugal tax authority regulations, you must generate and print a unique QR code.

The QR code is printed at the bottom of all pages of the shipping documents: packing slips, bill of ladings, and commercial invoices.

Note: You can generate and print a QR code for use by organizations based in Portugal only.

You enable this feature on the Manage Standard Lookups page by taking these steps:

1. In the Setup and Maintenance work area, open the Tasks panel tab and search for **Manage Standard Lookups**.
2. On the Manage Standard Lookups page, search for the **JE_ENABLE_FEATURE** lookup type.
3. In the JE_ENABLE_FEATURE: Lookup Codes section, click **Actions** > **New**.
4. Create an entry for the **PT_21B_OI_QR_CODE** lookup code.
5. Click **Save and Close**.

11 Receipt Accounting

Overview of Receipt Accounting

Oracle Receipt Accounting is used to create, manage, review, and audit purchase accruals. It includes the following features:

- Create Receipt Accounting Distributions. Create accounting distributions for receipts of accrue at receipt purchase orders.
- Review Receipt Accounting Distributions. Review the accrual accounting distributions created by receipt accounting for purchase order transactions, such as receipts, returns, corrections, and matches of uninvoiced receipts to purchase orders. You can also review the accounting distributions created by receipt accounting for deliveries that are expensed rather than stored as inventory.
- Manage Accrual Clearing Rules. Define business rules for the automatic clearing of balances in the purchase order accrual accounts, set the conditions for each rule, and set the order in which rules must be applied.
- Match Receipt Accruals. Match purchase order receipt accruals with invoices from the payables application.
- Clear Receipt Accrual Balances. Automatic clearing of accrual balances based on predefined rules.
- Review Receipt Accrual Clearing Balances. Review the General Ledger accounted accrual balances on a periodic basis.
- Adjust Accrual Clearing Balances. Review accrual balances that aren't cleared and perform adjustments. Manually adjust or clear accrual balances to inventory valuation for accounts not covered by automatic clearing rules, or reverse such clearing adjustments.
- Run reports and analytics for Receipt Accounting. The reports available include the following:
    - Accrual Clearing
    - Accrual Reconciliation
    - Uninvoiced Receipt Accrual
    - Receipt Accounting Period Close
    - Landed Costs

Note:

- You can run the Create Receipt Accounting Distributions (`ReceiptAccrualProcessMasterEssJobDef`), Match Receipt Accruals (`MatchReceiptAccrualMasterEssJobDef`), and Clear Receipt Accrual Balances (`AccrualClearRulesMasterEssJobDef`) scheduled processes for either all your business units or for a selected business unit. You can also run these processes using the ERP integration service or process sets.
- Data security in Oracle Receipt Accounting is at the business unit level. You must assign the required predefined job role or a configured job role with the relevant privileges to the business units. Also, you must have data access to the business units to run the scheduled processes on them.

Related Topics

- Receipt Accrual, Reconciliation, and Clearing
- Accrual Reversals

Set Up Receipt Accounting

To set up Receipt Accounting, complete the setup tasks displayed in the Setup and Maintenance work area.

1. In the Setup and Maintenance work area, perform the tasks from the Receipt Accounting functional area.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receipt Accounting
2. Perform the tasks in the same sequence that the list displays them.

    The following table describes the setup tasks for Receipt Accounting.

Setup Task	Required or Optional	Description
Manage Accounting Methods	Required	Create and maintain method used to record the financial impact of subledger transactions, such as accrual basis, cash basis, or combined basis accounting.
Manage Subledger Journal Entry Rule Sets	Required	Define lookup codes for extensible lookup types.
Manage Account Rules	Required	Create and maintain the rules that are used to determine the accounts for subledger journal entries.
Manage Mapping Sets	Required	Create and maintain the rule that determines the segment or entire account value based on certain transaction attribute values. Mapping sets are used in account rules.

Note: Data security in Oracle Receipt Accounting is at the business unit level. You must assign the required predefined job role or a configured job role with the relevant privileges to the business units. Also, you must have data access to the business units to run the scheduled processes on them.

Related Topics

- Configure Offerings

Configure Tax Calculation and Accounting

Configure the following to automatically calculate and account taxes. You must have the Application Implementation Consultant role to do these tasks.

- In the Offerings work area, enable the Tax Calculation on Receipt Accounting Distributions feature at the Financials offering level.
- Enable delivery-based tax calculation for invoices:
    a. In the Setup and Maintenance work area, use the **Manage Configuration Owner Tax** task:
        - Offering: Financials
        - Functional Area: Transaction Tax
        - Task: Manage Configuration Owner Tax
    b. From the **Configuration Owner** drop-down list, select the relevant business unit.
    c. From the **Application Name** drop-down list, select Payables.
    d. From the **Event Class** drop-down list, select Standard Invoices.
    e. From the **Tax Point Basis** drop-down list, select Invoice.
    f. From the **Tax Point Date** drop-down list, select Receipt Date.

    For more information about configuring and calculating taxes, see the Oracle Fusion Cloud Financials: Using Tax guide available on the Oracle Help Center.
- Configure the application to automatically calculate taxes for trade receipt accrual:
    a. In the Setup and Maintenance work area, go to the following:
        - Offering: Manufacturing and Supply Chain Materials Management
        - Functional Area: Supply Chain Financial Flows
        - Task: Manage Supply Chain Financial Orchestration System Options
    b. Select **Calculate tax for trade receipt accrual**.
- Configure the application to automatically calculate and account nonrecoverable taxes on intercompany invoices:
    a. Navigate to the Financial Orchestration work area.
    b. In the Tasks pane, click **Manage Documentation and Accounting Rules**.
    c. Click the required documentation and accounting rule.
    d. Under Required Tasks, select **Intercompany Invoices**.

Related Topics

- Configure Offerings

Set Up Legal Entity Time Zones

The accounted date of Inventory and Manufacturing transactions determines the accounting period in which the transactions are booked. You can configure whether cost transactions and accounting entries use the time zone of the server, or the time zone of the legal entity.

To enable legal entity time zone, perform the following steps.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Task: Manage Legal Entity Configurator Profile Options
2. In the Profile Option Code field, query for the option XLE_ENABLE_LEGAL_ENTITY_TIMEZONE.
3. In the Profile Values record, add a new row, and complete the required fields. The fields are described in the following table.

Field	Description
Profile Level	Set the profile level to Site. Don't use any other level because it would result in inconsistent data in Cost Management.
Profile Value	This field is configured using the following options. - Set the profile value to Yes to enable the legal entity time zone for transaction and accounting dates in Cost Management. If the profile value is set to Yes, then the legal entity address determines the time zone to be used for transaction and accounting dates. You can check the legal entity address by using the Manage Legal Entity task. - Set the profile value to No to disable the legal entity time zone and to use the server time zone for transaction and accounting dates in Cost Management.

4. On the Setup: Manufacturing and Supply Chain Materials Management page, select the Manage Legal Addresses task.
5. Locate the legal entity by querying on the address field.
6. Set the legal entity time zone in the Time Zone field, and save your changes.

Considerations for Accrual Settings

The key policy decision that you need to make for receipt accounting is whether or not you want to accrue at receipt.

This table outlines the points to consider for each accrual option.

Accrual Setting	Points to Consider
Accrue at Receipt	• Purchases are accrued at receipt. An accrued liability account is credited when the goods are received. • Optional for expense destination purchases, and mandatory for inventory purchases. • More accounting and more reconciliation than when accruing at period end. The receipt accounting application provides tools to help reconcile the accrued liability clearing account. • Accounting is more timely than when accruing at period end.
Accrue at Period End	• The accounts payable account is credited when the supplier invoice is processed in accounts payable. Receipt accounting has a function to accrue uninvoiced receipts at period end. • Less accounting and less reconciliation than when accruing at receipt. • Accounting may be less timely than when accrued at receipt, but will be accrued by period end.

The accrual options are configured in the Procurement offering. For more information on configuring the accrual options, see the related topics section.

Related Topics

- Guidelines for Common Options for Payables and Procurement
- How Purchase Order Schedule Defaults Work
- Receipt Accrual, Reconciliation, and Clearing

Implement Subledger Accounting

You can configure rules in Subledger Accounting to automatically transform subledger transactions into detailed journal entries. Flexible rules help define accounting policies and generate accounting for legal and corporate reporting. Reconciling accounting to transaction data enables drill down from general ledger to underlying subledgers and standard reports.

Based on your requirement, implement subledger accounting for Cost Accounting and Receipt Accounting using any of these methods.

Use Predefined Mapping Sets

For using predefined mapping sets, specify transaction attributes and account combinations.

Use Standard Implementation

Do the following to use the standard implementation:

- Create an accounting method.
- Set up user defined journal entry rule sets.
- Assign user defined journal entry rule sets to accounting method.
- Activate journal entry rule sets assignments.
- Preview accounting results.

When you use predefined mapping sets, the commonly used transactional attributes are available to you to define the accounting rules. Whereas, if you opt for the standard implementation, then you can leverage the full feature set of transaction attributes for accounting purposes.

Set up tasks are available for implementing subledger accounting for Cost Accounting and Receipt Accounting.

Along with the information provided here, see Oracle Fusion Financials, Implementing Subledger Accounting documentation for more information on the core features of Subledger Accounting.

Accounting Method

Accounting methods group subledger journal entry rule sets. This facilitates the definition of consistent accounting treatment for each accounting event class, and accounting event type, for all subledger applications.

This grouping enables a set of subledger journal entry rule sets to be assigned collectively to a ledger.

For example:

- A subledger accounting method can be defined to group subledger journal entry rule sets that adhere to and comply with US Generally Accepted Accounting Principles (GAAP) criteria.
- By assigning a different subledger accounting method to each related ledger, you can create multiple accounting representations of transactions.

Accounting rules can be defined with either a top-down, or a bottom-up approach.

- Top-Down: Define the accounting method, followed by components of each rule that must be assigned to it.
- Bottom-Up: Define components for each rule and then assign them as required.

The Create Accounting process uses the accounting method definition with active journal entry rule set assignments to create subledger journal entries.

When an accounting method is initially defined its status changes to Incomplete. The status will also be Incomplete after modifying a component of any accounting rule associated with the assigned journal entry rule set.

> **CAUTION:** The accounting method must be completed, by activating its journal entry rule set assignments, so that it can be used to create accounting.

The following definitions are used to define the journal entries, and are applied as updates to the accounting method:

- Updates to the predefined accounting method
- Assignment of journal entry rule sets for an accounting event class and accounting event type from the accounting methods page
- Assignment of accounting methods to ledgers
- Activation of subledger journal entry rule set assignments

Updates to the Predefined Accounting Method

You may update a predefined accounting method by end dating the existing assignment and creating an assignment with an effective start date.

Assignment of Journal Entry Rule Set for Accounting Event Class and Accounting Event Type

You create the assignment of a journal entry rule set for an accounting event class and accounting event type using the accounting method page.

The following should be considered for assigning rule sets:

- If the accounting method has an assigned chart of accounts you can use journal entry rule sets that:
  - Use the same chart of accounts
  - Are not associated with any chart of accounts
- You can assign to existing journal entry rule sets or create a new one.

Assignment of Accounting Methods to Ledgers

If the accounting method has an assigned chart of accounts, it may only be used by ledgers that use the same chart of accounts.

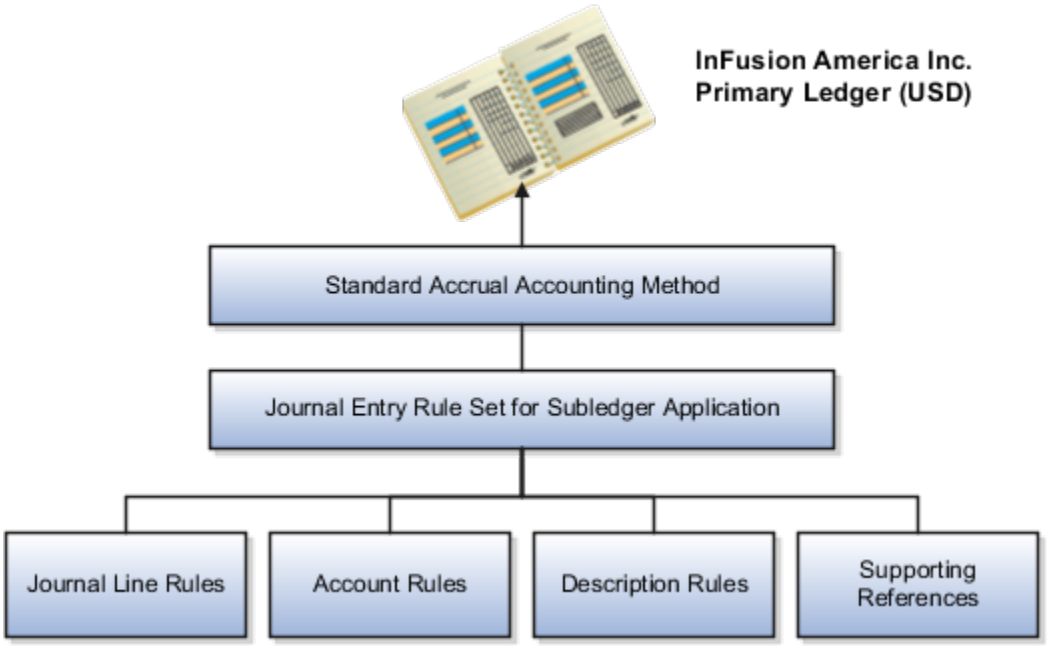
If the accounting method doesn't have an assigned chart of accounts, the accounting method can be assigned to any ledger.

Activation of Subledger Journal Entry Rule Set Assignments

You can activate the subledger journal entry rule set assignments from the Accounting Method page. You can also submit the Activate Subledger Journal Entry Rule Set Assignments process to validate and activate your accounting set ups.

Accounting Method and Accounting Rules

This figure illustrates the relationship of the components used in an accounting method.



Related Topics

- Subledger Journal Entry Rule Set
- Journal Line Rules
- Account Rules
- Description Rules

Subledger Journal Entry Rule Set

Subledger journal entry rule sets provide the definition for generating a complete journal entry for an accounting event.

Select the option to define the subledger journal entry rule set for a particular accounting event class or accounting event type.

If you're using multiple ledgers to meet divergent and mutually exclusive accounting requirements, you can vary journal entry rule sets by ledger. Each of the subledger journal entry rule sets can meet a specific type of accounting requirements.

For example, use US Generally Accepted Accounting Principles (GAAP) oriented subledger journal entry rule sets for a ledger dedicated to US GAAP reporting. Use French statutory accounting conventions for a ledger dedicated to French statutory reporting. These two sets of definitions have differences based on the setup of the various components that make up their subledger journal entry rule sets.

Predefined subledger journal entry rule sets are provided for all Oracle subledgers. If specific requirements aren't met by predefined subledger journal entry rule sets, create a copy of the predefined definitions, rename, and modify the copied definitions and their assignments.

Subledger journal entry rule set assignments can be made at two levels, header and line. The following are the subcomponents of a subledger journal entry rule set:

- Description rules
- Journal line rules
- Account rules

Assignment at Header Level

Header assignments define subledger journal header information and line assignments define journal line accounting treatment.

A header assignment includes the following:

- Accounting date (required)
- Accrual reversal accounting date (optional)
- Description rule (optional)

Assignment at Line Level

You can define multiple subledger journal entry rule sets for an accounting event class or accounting event type. Using the line assignment of the journal entry rule set assigned to the accounting event class or type, a single journal entry is generated per accounting event per ledger.

The following can be assigned to a journal entry line:

- Journal line description rule
- Journal line rule
- Account rule
- Supporting references

Assignment of Description Rules

If a description rule is defined with sources, the sources must also be assigned to the accounting event class that's assigned to the journal entry rule set. The description rule may be assigned at either the header or line level of the journal entry or to both levels.

Assignment of Journal Line Rules

When assigning the journal line rule, you must identify the line type: Gain, Loss, Gain or Loss, Credit, or Debit. The journal line rule must be assigned to the same accounting event class as the one assigned to the subledger journal entry rule set.

When assigning a journal line rule that's enabled for accounting for a business flow, the account combination and certain accounting attribute values are copied from its related journal line having the same business flow class as the current line. Optionally, copy the description rule into the current line instead of assigning a separate description rule.

When assigning a journal line rule that's enabled to copy from the corresponding line within the same journal entry, you have the option to copy the account combination, the segment value, or the line description from the corresponding line into the current line.

Assignment of Account Rules

The account rule assignment defines which accounts are used for the subledger journal line. If the account rule is set up with a chart of accounts, it must have the same chart of accounts as the one assigned to the journal entry rule set. When account rules are defined with sources, the sources must also be assigned to the accounting event class that's assigned the journal entry rule set.

There are two types of account rules:

- Account Combination Rule: Assign an account combination rule to derive the account combination.
- Segment Rule: Assign a segment rule to derive a specific segment of an account. For example, a cost center or a natural account segment.

Assignment of Supporting References

Supporting references may be used to capture transaction values on journal entry lines. A supporting reference can be used on a journal entry rule set only if it's assigned a source from the event class of the journal entry rule set.

Related Topics

- Journal Line Rules
- Description Rules
- Account Rules
- Supporting References

Create an Accounting Method

To create an accounting method, do the following:

1. Click **Navigator** > **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Accounting Methods** task.
5. In the **Manage Accounting Methods** page, click **Actions** and then click **Create**.
6. In the **Create Accounting Method** page, provide the required information and then click **Save and Close**.

Note: You can also duplicate the standard accrual accounting method instead of creating a new method.

Viewing Predefined Journal Line Types

In Journal Line Rules, there are various event classes and journal line types for each event class.

To view predefined journal line types:

1. Click **Navigator** > **Setup and Maintenance**.

2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Journal Line Rules** task.
5. In the **Manage Journal Line Rules** page, set the **Created By Application** to **Yes**, select the event class and search.

   The Search result lists the predefined journal line types for the selected event class.

Set Up User-Defined Account Rules

Use account rules to create simple or complex rules to assign general ledger accounts to accounting events.

There are several predefined accounting rules that are available and are easily identifiable by looking at the **Created By Application** column. The predefined account rules aren't ready-to-use as they aren't created in the context of the chart of accounts. The predefined account rules are provided to help you create your own rules by using them as templates.

For example, create an account rule for identifying the general ledger account rules for the **Cost of Goods Sold** event class.

1. Click **Navigator** > **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Account Rules** task.
5. In the **Manage Account Rules** page, search for the predefined account rule for **Cost of Goods Sold**.

   The **Cost of Goods Sold** event class is discussed here as an example.

   To identify the predefined rules, set the **Created by Application** search parameter to **Yes**.
6. Click the **Duplicate** icon to create a duplicate of the predefined account rule for **Cost of Goods Sold**. Enter a rule name, a short name (in capital letters) and then select the chart of accounts.

   Once chart of accounts is assigned to an account rule and this task is saved, you cannot modify the assignment.
7. Click **Save and Close**.

   The **Edit Account Rule** page is displayed.
8. Specify the account selection criteria in the **Rules** region; however, don't change any values in the **Conditions** region.
9. In the **Rules** region, the **Value Type** column has four options.
   - **Source**
   - **Constant**
   - **Accounting Rule**

- **Mapping Set**

Source Value Type

Source is only applicable to the **Accrual Account Rule** in Receipt Accounting and the **Offset Account Rule** in Cost Accounting when the account is retrieved from the purchase order for the Accrual account and from the Miscellaneous Transaction for the Offset account.

If you select **Source** as **Value Type**, then set the value as **Code Combination Identifier**.

Constant Value Type

If the **Value Type** is set to **Constant**, you can select the specific account from the chart of accounts as the default general ledger account type of the Journal line type.

Accounting Rule Value Type

Use this value type to retrieve values from the accounting rule.

Mapping Set Value Type

A mapping set is useful when you have a matrix of input values that produce distinct output values. For each input value, specify a corresponding account combination. One or more related pairs of these input values with the account combination output values form a mapping set. Ensure that a Chart of Accounts is associated with the mapping set.

Once a mapping set is defined, you can associate the mapping set to an account rule. Copy each predefined account rule and create a rule.

For more information on these four options, see documentation on Oracle Fusion Financials, Implementing Subledger Accounting Account Rules.

Set Up User-Defined Journal Entry Rule Sets

To set up journal entry rule sets:

1. Create a journal entry rule set.
2. Copy the predefined journal entry rule sets to associate the user-defined account rules.
3. Set the **Created by Application** option to **Yes** and then click **Search**.

   The predefined journal entry rules sets are displayed.

To create a journal entry rule for associating the user-defined account rules:

1. Create a copy of the predefined journal entry rule set by highlighting the row and clicking the **Duplicate** icon.
2. Provide information for name, short name, description, and chart of accounts.
3. Click **Save and Close**.
4. In the **Edit Journal Entry Rule Sets** user interface, replace the predefined account rules with the account rules that you have created.
5. After you have replaced all the account combination rules within the journal entry rule set, click **Save and Close**.

   The original search results are displayed.

Repeat the previous steps to create all the necessary journal entry rule sets.

Assign User-Defined Journal Entry Rule Sets to Accounting Method

To associate the recently created journal entry rule sets to the newly created accounting method:

1. Select the accounting method that you created while performing the activity, Creating an Accounting Method.
2. In the **Edit Accounting Method** user interface, add the journal entry rule sets that you created.
3. Identify the account class and the event type in the predefined journal entry rule sets that you want to replace with the new value after you have replaced all the account combination rules within the journal entry rule set you created earlier. Delete the row that you identified for replacement and add a new row with the same event class and event type and enter the new value once you have replaced all the account combination rules within the journal entry rule set. (Optional) Enter the effective start date and save the row.

   For example, to replace the **Sales Order Issue** predefined journal entry rule set after you have replaced all the account combination rules within the journal entry rule set with the newly created **Sales Order Issue 2** journal entry rule set.

   a. Select the predefined journal entry rule set assigned to this subledger accounting method and delete it.
   b. Once this is deleted, add the new rule set **Sales Order Issue 2** to this accounting method.
   c. Click **Save and Create Another** to replace all the predefined journal entry rule sets with the journal entry rule sets that you have newly created.

Activate Assigned Journal Entry Rule Sets

After the setup is complete, you must activate the journal entry rule sets that are newly assigned to the subledger accounting method. You can do this directly from the Edit Accounting Method user interface or from the separate task provided.

To run the accounting method activation as a separate process:

1. In the **Navigator**, click **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Accounting Methods** task, and then activate the subledger journal entry rule set assignments.
5. Run this process for the accounting method and subledger application with **Incomplete Status Only** set to **No**.

   This step is recommended for activating an accounting method especially if many changes were made to the journal entry rule sets.
6. You can review the status of the process from the **Scheduled Processes** task.

7. (Recommended) Archive the current accounting rule setup configuration by initiating the **Accounting Setups** Report.

Preview Accounting Results

To ensure that the correct general ledger accounts are selected:

1. Run **Create Accounting**.
   Once complete, check the results.

Mapping Sets

Mapping sets provide an efficient way to define a segment or account combination value for one or more transaction or reference attribute values. Using such input and output mappings is simpler than using complex conditions on account rules.

Based on the value of the source input, a single segment or a full account is derived.

Examples of source input value types:

- Transaction attributes
- Reference attributes

With mapping sets you can:

- Use up to 10 transaction or reference attributes as inputs into a mapping.
- Define default output value to use when actual input values don't match the mappings.
- Use wildcards for multiple input mapping sets to indicate that the value of a particular input should be ignored for certain mappings.
- Enter the mappings directly on the user interface or use the spreadsheet available in the Export option, and then import.
  Export allows:
  - Exporting a template to create mappings.
  - Exporting all mappings created for the mapping set to add or edit the current mappings.

Example

Assume a business operates in several regions, including:

- East
- South
- West

The business has a Region segment in their chart of accounts.

The region name can be the input for the mappings to derive the value of the region segment. You can create a mapping set that maps region names to the corresponding region code.

This table contains region names and segment values used in this example.

Input Value (Region Name)	Segment Value
East	01
South	02
West	03

Additional transaction information, such as transaction type and salesperson name, could also be used as inputs to help derive a different segment value for each combination of the input values.

Note: Constant values that are used in any Conditions region must not contain the following characters:

- "
- ,
- &
- |
- (
-)
- '

For example, in the condition "Project Type" = ABC (123), the constant value following the equal sign, ABC (123), contains restricted characters ( ) that enclose 123 and is invalid.

Related Topics

- How You Define Mapping Sets
- Accounting Sources

Overview of Predefined Mapping Sets

There are predefined mapping sets for all the journal line rules with commonly used sources. For each journal line rule, there are three to five sources such as Inventory Organization, Sub-Inventory, Item Category, and Item.

The benefits of using predefined mapping sets for implementation include:

- Enabling quick implementation of subledger accounting.
- Providing commonly used transaction source attributes.
- Enabling easy maintenance when compared with defining and maintaining the user-defined account rules.

Unique mapping sets are predefined for each journal line rule. Some of the predefined mapping sets for Cost Accounting are, **Consigned Clearing**, **Consigned In-Transit**, **Consigned Inspection**, and so on. View Cost Accounting user interface for the complete list of mapping sets. Predefined Mapping Sets for Receipt Accounting are, **Consigned Accrual**, **Consigned Clearing**, **Consigned Inspection**, and so on. View the Receipt Accounting user interface for the complete list of mapping sets.

The mapping set created for each journal line type is added to a predefined account rule.

Use Predefined Mapping Sets

Use predefined mapping sets for Cost Accounting.

The steps to use predefined mapping sets are:

1. Select chart of accounts.
2. Specify the transaction attributes as input and account combinations as output for every chart of accounts.

   Set up input parameters for every chart of accounts. While specifying inputs, you must provide input sources, that is, provide the transaction attributes.

   For example, if you are using the mapping set, **Consigned Clearing**, then you have to provide one or more of the following input sources.

   - **Inventory Organization Code**
   - **Costing Category Identifier**
   - **Subinventory Code**
   - **Item Number**
3. For the mapping set **Consigned Clearing**, provide an account combination as the output type.
4. Automatically enable or disable the account derivations using **Effective Dates**.
5. (Optional) Set account combinations as default to support subledger accounting activities for which specific rules are not set up.
6. Use spreadsheet based import and export functionality.

FAQs for Receipt Accounting

How can I create subledger account rules and subledger journal entry rule sets for receipt accounting?

Create your subledger account rules on the Manage Account Rules page. It is recommended that you highlight the account rules predefined by Oracle, copy, and modify them as needed.

Create your subledger journal entry rule sets on the **Manage Subledger Journal Entry Rule Sets** page. It is recommended that you highlight the journal entry rule sets predefined by Oracle, copy, and modify them as needed. For each journal line rule specify the copied account combination rule.

In the **Setup and Maintenance** work area, you can access both the **Manage Account Rules** task and the **Manage Subledger Journal Entry Rule Sets** task in the **Manufacturing and Supply Chain Materials Management** offering.

> **Note:** You must configure the account rules and journal entry rule sets before proceeding with the setup of subledger accounting rules for receipt accounting.

How do I set up accounts for different receipt accounting events?

You can define account rules to assign general ledger accounts to accounting events. Also, you can create mapping sets to define a segment or account combination value for one or more transaction or reference attribute values.

Related Topics

- Set Up User-Defined Account Rules
- Mapping Sets
- Use Predefined Mapping Sets

How can I resolve errors in the accounting results?

If the Create Accounting process ends with errors or warnings, you can resolve these errors or warnings using any of the following methods.

1. Review errors in the **Create Accounting Execution** report.
2. If you have selected viewing errors for a specific transaction, query the transaction from the **Review Cost Accounting Distributions** user interface.
3. Navigate to the **Journal Entries** tab. If errors are present, then they are listed against each line.
4. Use **Advanced Diagnostic**. For activating this feature, refer to the **Accounting Event Diagnostic** Report.

How can I modify predefined mapping sets?

You can modify existing predefined mapping sets by:

- Adding input and output conditions.
- Adding new chart of accounts.

Adding a new source to an existing predefined mapping set is not supported. Use standard implementation for creating mapping sets with new sources.

12 Cost Accounting

Overview of Cost Accounting

Oracle Fusion Cost Accounting is used to plan, manage, review, and analyze inventory and manufacturing costing. It includes the following features:

- Review Item Costs
- Manage Standard Cost Definitions
- Manage Standard Cost Import Exceptions
- Analyze Standard Purchase Cost Variances
- Manage Accounting Overhead Rules
- Create Cost Accounting Distributions
- Manage Cost Accounting Periods
- Analyze Product Gross Margins
- Review Journal Entries

Set Up Cost Accounting

To set up Cost Accounting and Cost and Profit Planning, you must complete the setup tasks displayed in the Setup and Maintenance work area.

1. In the Setup and Maintenance work area, perform the tasks from the **Cost Accounting** functional area:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Cost Accounting
2. Perform the tasks in the same sequence that the list displays them.
   The following table describes the setup tasks to implement Cost Accounting, and states whether each task is required or optional.

Setup Task	Required or Optional	Description
Manage Costing Key Flexfields	Required	Define the costing key flexfield segments and validation for use as costing classification keys. The costing key flexfield must be defined for costing to operate correctly.
Manage Costing Lookups	Optional	Define lookup codes for extensible lookup types.

Setup Task	Required or Optional	Description
Manage Costing Descriptive Flexfields	Optional	Define validation and display properties of descriptive flexfields for costing. Descriptive flexfields are used to add attributes to entities.
Manage Cost Organizations	Required	Create and edit cost organizations. Cost accounting setup data policies and user security policies for cost management are established in these organizations.
Manage Cost Books	Required	Create and edit cost books that are used for inventory transaction accounting.
Manage Cost Organization Relationships	Required	Associate inventory organizations to cost organizations and assign cost books to cost organizations.
Define Cost Accounting Policies	Required	Specify cost elements, configure mapping between cost components and cost elements, and specify cost profiles and valuation unit structures.
Define Cost Accounting Book Policies	Required	Configure default cost profiles, item cost profiles, and valuation units for items.
Manage Cost Organization Data Access for Users	Required	Manage cost organization data access for user provisioned roles.
Manage Overhead Expense Pools	Optional	Create and edit definitions of expense pools for overhead rules that are used in overhead absorption.

Set Up Cost Accounting Using Quick Setup

Quick Setup guides you through the setup process, and provides default setup values for some tasks according to recommended practices. The setup process automatically performs the following setup tasks:

- Manage cost organizations
- Manage cost book
- Manage cost organization relationships
- Manage cost element

- Manage cost component
- Manage cost component mappings
- Manage valuation structures
- Manage cost profiles
- Manage default cost profiles

To set up Cost Accounting using Quick Setup, complete the following steps.

1. From the Navigator menu, select Setup and Maintenance.
2. On the Setup and Maintenance page, select the Manufacturing and Supply Chain Materials Management offering, and then click Setup.
3. Click the Quick Setup icon next to Cost Accounting, and follow the on screen instructions.

   For more information about using Quick Setup, see Quick Start Guide for Manufacturing and Supply Chain Materials Management.

Related Topics
- Configure Offerings

Set Up Legal Entity Time Zones

The accounted date of Inventory and Manufacturing transactions determines the accounting period in which the transactions are booked. You can configure whether cost transactions and accounting entries use the time zone of the server, or the time zone of the legal entity.

To enable legal entity time zone, perform the following steps.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Task: Manage Legal Entity Configurator Profile Options
2. In the Profile Option Code field, query for the option XLE_ENABLE_LEGAL_ENTITY_TIMEZONE.
3. In the Profile Values record, add a new row, and complete the required fields. The fields are described in the following table.

Field	Description
Profile Level	Set the profile level to Site. Don't use any other level because it would result in inconsistent data in Cost Management.
Profile Value	This field is configured using the following options.

Field	Description
	○ Set the profile value to Yes to enable the legal entity time zone for transaction and accounting dates in Cost Management. If the profile value is set to Yes, then the legal entity address determines the time zone to be used for transaction and accounting dates. You can check the legal entity address by using the Manage Legal Entity task. ○ Set the profile value to No to disable the legal entity time zone and to use the server time zone for transaction and accounting dates in Cost Management.

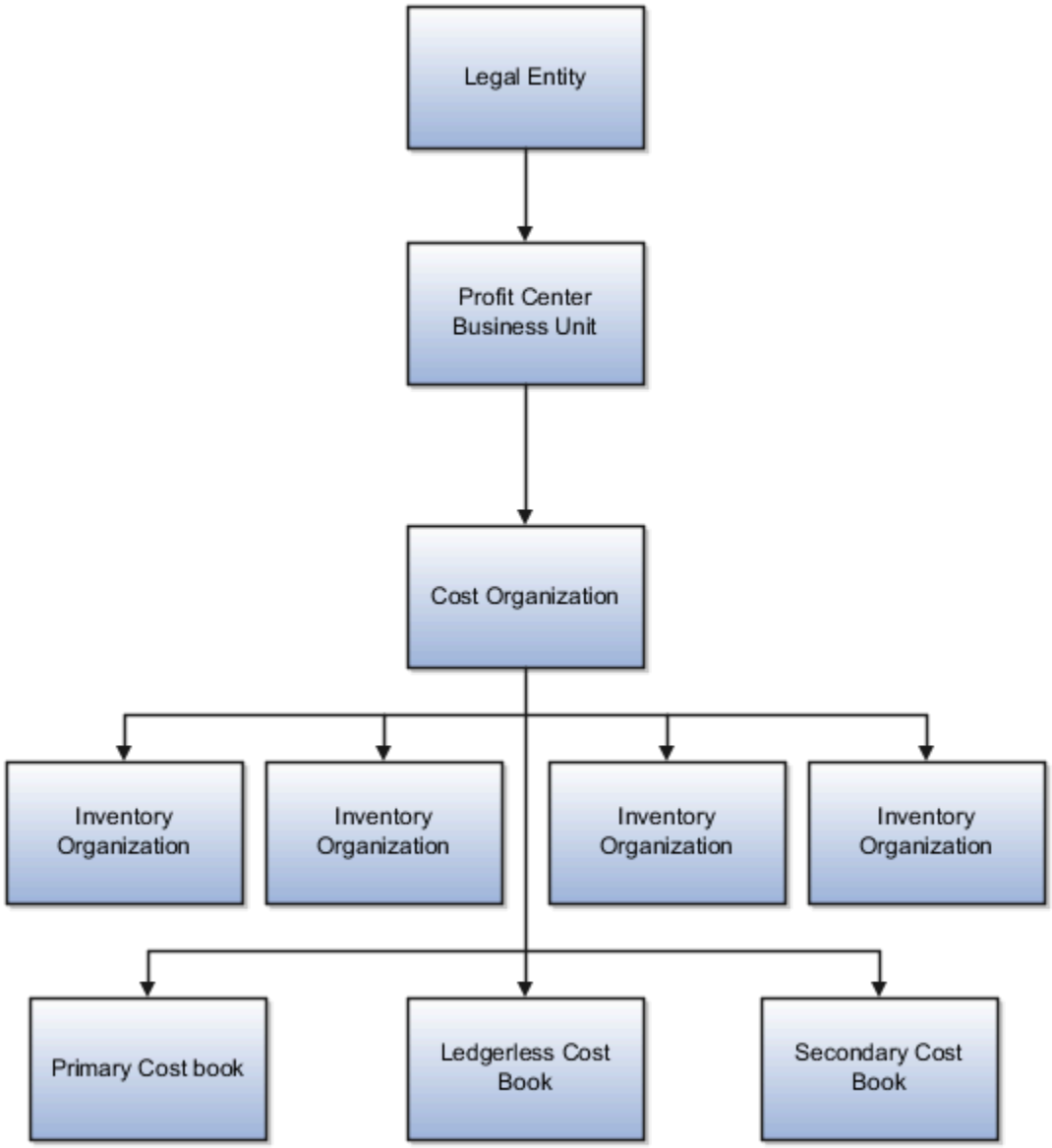
4. On the Setup: Manufacturing and Supply Chain Materials Management page, select the Manage Legal Addresses task.
5. Locate the legal entity by querying on the address field.
6. Set the legal entity time zone in the Time Zone field, and save your changes.

Manage Cost Organizations and Cost Books

How Cost Organizations, Inventory Organizations, and Cost Books Fit Together

A cost organization structure comprises cost organizations, inventory organizations, and cost books. Your accounting and business needs determine how you set up your cost organization structure, which in turn determines how the cost processors create cost accounting distributions and accounting entries for inventory transactions.

This figure illustrates the relationship between profit center business units, cost organizations, inventory organizations, and cost books.



Legal and Management Structures

An organization has:

- A legal structure consisting of legal entities that establish contractual rights across the enterprise.
- A management structure consisting of the strategic management team and operational business units:
    - Strategic management is responsible for setting strategic goals and business plans. It is typically at a high level in the corporate structure and reports directly to the holding company.
    - The operational business units report to strategic management and are responsible for managing the business operations and resources, usually organized along product lines or geographic regions. Operational business units can belong to one or more legal entities.

Profit Center Business Units

A profit center is an operational business unit that:

- Reports to a single legal entity.
- Supports strategic directives on products, pricing, investments, and financial planning.
- May contain one or many inventory organizations and cost organizations.
- Measures contributions by its organizations to enterprise profits, and tracks profit contributions against targets.
- Enters into intercompany and intracompany trade agreements with other profit centers for various supply chain trade flows, such as customer drop shipments, internal transfers, and global procurement.
- Is a segment in the chart of accounts for financial reporting.
- Is on trade execution documents such as Purchase Orders, Sales Orders, Accounts Payable Invoices, and Accounts Receivable Invoices.
- Is on costing transactions for operational analysis and management accounting.

Cost Organizations and Inventory Organizations

A cost organization can represent a single inventory organization, or a group of inventory organizations that roll up to a profit center business unit. You can group several inventory organizations under a cost organization for financial reporting purposes as long as they all map to a single profit center business unit. Because the inventory organizations that are assigned to a cost organization must all belong to the same business unit, it follows that they also belong to the business unit's legal entity.

The inventory organizations that are assigned to a cost organization must all belong to the same legal entity.

For each cost organization, define an item validation organization from which the processor should derive the default units of measure. You can designate one of the inventory organizations assigned to the cost organization to be the item validation organization, or you can designate the item master organization to be the item validation organization.

Cost Books

A cost book sets the framework within which accounting policies for items can be defined. You can define different cost books for each of your financial accounting, management reporting, and analysis needs. By assigning multiple cost books to a cost organization, you can calculate costs using different rules simultaneously, based on the same set of transactions.

When you associate a cost book with a cost organization, you can optionally associate it with a ledger. The cost book then inherits the currency, conversion rate, cost accounting periods, and period end validations of that ledger. If you associate a cost book without a ledger, then you define these elements manually.

Every cost organization must have one primary cost book that's associated with the primary ledger of the legal entity to which the cost organization belongs. You can also associate one or more secondary ledger-based cost books for other accounting needs.

For simulation and analysis purposes, you can associate ledger-less cost books, which are cost books without an associated ledger, to a cost organization. For example, you could define a primary cost book for financial reporting, a secondary cost book for business analysis, and a third cost book to simulate results using different cost calculations. The cost processor creates distributions for the ledger-less cost book but excludes them from accounting and posting to the general ledger.

If you want to use the periodic average cost method for a cost book, you can select the Periodic Average Cost options when creating the cost book. All items for a periodic average cost enabled cost book can only use item cost profiles that have the cost method set to periodic average cost.

Related Topics

- Considerations for Setting Up the Cost Organization Structure
- Item Master Organizations

Considerations for Setting Up the Cost Organization Structure

Set up your cost organization structure to accommodate your costing and accounting needs. The following discusses considerations for creating cost organizations, their association with inventory organizations, and their assignment to cost books.

Considerations for Creating Cost Organizations

When deciding what cost organizations to set up, consider the following:

- Financial reporting and responsibility accounting. A profit center business unit may contain one or more cost organizations depending on use case requirements.
- Data security needs. The cost organizations that you create may be determined by the separation of duties and security requirements for your users.

Considerations for Using Cost Organization Sets

By assigning cost organizations to a set, the entities defined at the set level can be shared by all the cost organizations belonging to that set. A cost organization set enables you to streamline the setup process, and helps you avoid redundant setup by sharing set-level definitions of your cost profiles, valuation structures, cost elements, and cost component groups across the cost organizations that belong to the set.

You also have the flexibility to assign cost organizations to different sets, for example if they're in different lines of business. That way you can segregate the definitions that are shared.

Considerations for Associating Inventory Organizations with Cost Organizations

Your operation may lend itself to a simple configuration of one inventory organization to one cost organization. Or, when there are many inventory organizations in the same business unit, you may group several inventory organizations under a single cost organization for any of the following reasons:

- Costing responsibilities. You may want to group inventory organizations that roll up to the manager of a profit center business unit, or a cost accounting department within the business unit.
- Uniform cost accounting. For example, to define your overhead rules just once and apply them to transactions from several inventory organizations, you can group those inventory organizations into one cost organization.
- Cost sharing. If there are items in more than one inventory organization for which you want a single average cost, those inventory organizations must fall under the same cost organization.

Considerations for Assigning Cost Books to Cost Organizations

Every cost organization must be assigned one primary cost book that's associated with the primary ledger of the legal entity to which the cost organization belongs. You may also assign several secondary cost books as needed for

other purposes such as: business analysis and management reporting, local currency accounting, or profit tracking of inventory items.

You can also assign cost books that don't have an associated ledger to a cost organization for simulation purposes.

Related Topics

- How Cost Organizations, Inventory Organizations, and Cost Books Fit Together
- Examples of Setting Up a Cost Organization Structure
- How can I create and maintain a cost organization?

Examples of Setting Up a Cost Organization Structure

The following examples illustrate cost organization structures that support different cost accounting needs.

Example 1

Set up three inventory organizations to optimize materials management across three different locations. Because they all belong in the same business unit and are managed by one cost accounting department, you could group them under a single cost organization; or you could assign each inventory organization to its own cost organization and then assign all three cost organizations to the same business unit.

Example 2

Three inventory organizations are geographically dispersed, or have autonomous managers responsible for the location's profits for internal management purposes. Create three cost organizations, and assign each inventory organization to its own cost organization.

Example 3

Four inventory organizations are geographically dispersed, or have autonomous managers responsible for the location's profits for internal management purposes. Two of them fall under one business unit, and two fall under another business unit. You could group the inventory organizations under two cost organizations corresponding to the two business units; or you could assign each inventory organization to its own cost organization.

Example 4

Two inventory organizations in the same business unit need to share a single average cost for some items. These inventory organizations must belong to the same cost organization.

Related Topics

- Considerations for Setting Up the Cost Organization Structure
- How Cost Organizations, Inventory Organizations, and Cost Books Fit Together

Create a Cost Organization

A cost organization can represent an inventory organization or a group inventory organizations. This helps you manage and set policies, perform financial accounting of the supply chain transactions, and capture cost metrics for decision making and performance management.

You can either create a new cost organization or mark an existing inventory organization as a cost organization. You create a new cost organization when you want to map more than one inventory organization to the cost organization.

Before you start

Prior to creating a cost organization, you must define the legal entity, profit center business units, and the inventory organizations. For inventory organizations to be associated with cost organizations they must be mapped to profit center business units. All the inventory organizations mapped to a cost organization must belong to the same profit center business unit, and therefore, the same legal entity.

Here's what to do

1. In the Setup and Maintenance work area, go to the Manage Cost Organizations task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting
    - Task: Manage Cost Organizations
2. Click the Create icon.
3. Select the required option.
    - Create new - To create a new organization.
    - Select an existing organization to define as a Cost Organization – To define an existing inventory organization as a cost organization.
4. Enter the value for these fields.

Field	Description
Effective Start Date	The date from which the cost organization will be effective. The default date is 01/01/0001.
Name	Name of the cost organization .
Status	Status of the cost organization. The cost organization needs to be active for the cost processor to cost the corresponding transactions.
Cost Organization Code	A code for the cost organization.
Legal Entity Name	The legal entity to which the cost organization belongs.

5. Click **Save and Close**.

Create a Cost Book

A cost book sets the framework within which accounting policies for items can be defined. A cost organization must have one primary cost book that's associated with the primary ledger of the legal entity to which the cost organization belongs.

1. In the Setup and Maintenance work area, go to the Manage Cost Books task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting
    - Task: Manage Cost Books
2. Click **Add Row**.
3. Enter a name for the cost book.
4. Optionally, you can enter a description and additional information, and also include attachments.
5. Select **Periodic Average Cost** to enable the cost book for periodic average cost method.

   If enabled, for this cost book, all items will be costed using the periodic average cost.

   > **Note:** If you enable Periodic Average Cost, then you can't disable it after the cost book is associated with a cost organization using the Manage Cost Organization Relationships task.

6. Click **Save**.

Cost Organization Relationship

You associate a cost organization with inventory organizations and cost books by using the Manage Cost Organization Relationships task.

When defining the cost organization relationship, you need to assign an item validation organization to the cost organization. This is used to derive the item setups, including the item attributes and units of measure. It's advised, you use an item master organization as the item validation organization and not to use it as a transactional inventory organization. Also, the cost organization and the item validation organization must have the same legal entity.

You can associate one or more inventory organizations to a cost organization, but all these inventory organizations should belong to the same business unit and legal entity, which is same as the legal entity of the cost organization. Also, an inventory organization can't be associated with more than one cost organization.

You also need to associate at least one cost book to a cost organization. The primary ledger of the legal entity to which the cost organization belongs must be assigned to this cost book. This is the primary cost book and is used to post the transactions to the primary ledger.

You can associate additional cost books that are associated with secondary or reporting ledgers. Ledger-less cost books can be used to analyze the costing data. Accounting distributions for ledger-less cost books are not transferred to the General Ledger.

For each cost book associated with the cost organization, you define the period end validations that must run before closing a period for the respective cost book. This process verifies if any transaction has failed a validation. For example, the validations can check for any unaccounted transactions in the period. The decision to close the costing period is

based on the validation result. You can specify what action should be taken if a particular validation has failed; either ignore it or show an error.

Most of the validations listed here can be run at Period Close and Final Period Close. In the case of periodic average cost enabled cost book, you can run the validations also at Pending Period Close.

- Completed work orders not closed
- Pending accounting event creation *
- Pending accounting overhead rates absorption *
- Pending cost processing
- Pending create accounting in final mode
- Pending Interface
- Pending preprocessing
- Pending preprocessing for manufacturing transactions
- Pending preprocessing of trade events
- Pending processing of trade events
- Pending resource rates and standard costs absorption *
- Pending revenue recognition events import

Note:

- The Pending accounting event creation and Pending create accounting in final mode can only be run at Final Period Close.
- The validations in the list marked with * are only applicable for periodic average cost enabled cost books.

Important Points to Know Before Creating Cost Organization Relationships

Go through the points listed here before you start creating cost organization relationships.

- If you're unable to associate an inventory organization to the cost organization, then check whether:
  - A Profit Center Business Unit is assigned to the inventory organization.
  - The legal entity of the inventory organization is same as that of the cost organization.
  - The Profit Center Business Unit assigned to the inventory organization is same as that of other inventory organizations already associated with the cost organization.
  - The **Below Legal Entity** option is enabled in Assign Business Unit Business Function.
  - The inventory organization isn't already associated with another cost organization.
  - The inventory organizations share the same item master organization.
- If the required ledger isn't listed when associating a cost book, then first run the Update Subledger Application Options process from the Scheduled Processes work area.

When you save a cost organization relationship:

- If not specified, the effective end date for a cost organization-inventory organization relationship defaults to 12/31/12 (MM/DD/YY). In this case, the year is 4712 and not 2012.

- For each associated cost book, costing internally creates the costing periods from the first opened period onwards. You can't change the periods after the cost organization relationship is saved.

The restrictions listed here become effective after you create a cost organization relationship:

- The effective start date for an inventory organization can't be changed after the relationship is saved.
- An inventory organization can't be deleted from the relationship after the cost processor processes a transaction for this inventory organization.
- An inventory organization can't be associated with another cost organization after transactions are processed for the existing cost organization - inventory organization combination.
- Only one ledger can be assigned to a cost book and the ledger can't be changed after transactions are processed for the cost organization – cost book combination.
- The effective start date and first opened period for a cost book can't be changed. If there are any cost processing errors for this period, you need to resolve them.

Note:

- If no transactions are processed for a cost organization - inventory organization combination, then the inventory organization can be deleted from the relationship and associated with another cost organization.
- If transactions are processed for a cost organization – cost book combination, then to associate a new ledger, you must first create a new cost book and then associate it with the new ledger in the cost organization relationship.

The effective start date for a cost organization - cost book relationship and the first opened period for the cost book might not match. If the first opened period is later than the effective start date , then all such transactions that are done in the interim period will be costed in the first opened period.

For example, if the effective start date of the cost organization - cost book relationship is 10-Jan-2019 and the first opened period is April 2019, then all transactions from 10-Jan-2019 through 31-March-2019 will be costed in the April 2019 period.

Create Cost Organization Relationships

Using the Manage Cost Organization Relationships task, you can associate one or more inventory organizations and cost books with a cost organization.

1. In the Setup and Maintenance work area, go to the Manage Cost Organization Relationships task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting
    - Task: Manage Cost Organization Relationships
2. On the Manage Accounting Cost Organization Relationships page, click Add Row.
3. Select the Cost Organization.

   The Cost Organization Code and Legal Entity Name are derived from the Cost Organization.
4. Select the Item Validation Organization.

   The Item Validation Organization is usually the Item Master Organization that stores all the items and their attributes relevant for costing, such as Inventory Item Flag, Asset Flag, Costing Enabled, and so on.
5. On the Set Assignments tab under the Relationships section, click **Add Row**.

6. Optionally, select the Reference Data Object and the corresponding Reference Data Set Name.

   Assigning cost organizations to sets enables sharing of the set reference data. You can use the seeded data sets or create and use a custom data set, if necessary.

7. Select the Inventory Organizations tab and click **Add Row**.
8. Select the required inventory organization and set the **Effective Start Date**.

   The effective start date determines the date from which the transactions performed in the inventory organization will be costed. For Example, if the effective start date is 01-Jan-2019 and a transaction is performed in the inventory organization dated 31-Dec-2018, then this transaction won't be costed.

   When you save the record, the Effective End Date defaults to 12/31/12 (MM/DD/YY). In this case, the year is 4712 and not 2012.

   Repeat the prior step and this step for each inventory organization that you want to associate to the selected cost organization.

9. Select the Cost Books tab and click **Add Row**.
10. On the Create Cost Book Association dialog, select the Cost Book and Ledger.

    If you select periodic average cost enabled cost book, then Periodic Average Cost is checked for the cost book association.

    If you select a primary ledger, then the cost book is marked as a primary cost book.

11. Enter the appropriate values for the parameters listed here.

Parameter	Description
Currency	If you select a ledger, this is automatically populated. If you don't select a ledger, then you must manually set the currency.
Accounting Calendar	If you select a ledger, this is automatically populated. If you don't select a ledger, then you must manually set the accounting calendar.
Effective Start Date	The effective start date determines the date from which the transactions performed will be costed with this cost book.
First Opened Period	The first opened period for this cost book. This period is determined based on the effective start date.
Maximum Open Periods	The maximum number of periods than can be open simultaneously for this cost book. As a best practice, this must be same as the open GL periods for the ledger. For periodic average cost enabled cost books, this defaults to 1 and can't be edited.
Conversion Rate Type	The conversion rate type for the selected currency.
Create Accounting	If you select a primary ledger, this is automatically selected and can't be changed. If you select a secondary ledger, this is selected by default, but you can change it if you don't want the corresponding transactions to

Parameter	Description
	be accounted. If you don't select a ledger, then this parameter can't be selected.
Effective End Date	You can optionally set the effective end date for this cost organization-cost book relationship.

You can optionally select the **Constant Dollar Reporting Rate Type** and the **US Dollar Reporting Rate Type**.

12. Repeat steps 9 through 11 for each cost book that you want to associate to the selected cost organization.
13. In the Period End Validations section, for each cost book associated with the cost organization, select the period end validations that must run before closing a period for the respective cost book.

    For each validation, select whether they must run at Pending Period Close, Period Close, Final Period Close, or any combination of these. The Pending Period Close is only applicable for periodic average cost enabled cost books.

    Also, in the Action field indicate the action that should be taken if a particular validation has failed. The value is defaulted to Error for all the validations. If you want to ignore transactions that fail the validation for a specific period, you can change the value to Ignore. You can set this back to Error after the particular period is closed.

Manage Cost Profile

Set Up a Cost Profile

A cost profile defines the cost accounting policies for items, including the cost method and valuation rules. Before an item can be costed, it must be associated with a cost profile.

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Cost Accounting
   - Task: Manage Cost Profiles
2. Select **Create** from the **Action** menu to create a cost profile.
3. On the Create Cost Profile page, enter the basic cost profile information.

Field	Description
Cost Profile Set	Select a Cost Profile Set. Cost profiles use set-level definitions, and all cost organizations belonging to a set can share the same cost profile definitions.
Cost Profile	Name of the cost profile.
Description	An optional description of the cost profile.

4. Enter the accounting information.

Field	Description
Cost Method	Defines how the costing application calculates the transaction cost. The available cost methods are: ○ **Standard cost** - Inventory is valued at a predetermined standard value. You track variances for the difference between the standard cost and the actual transaction cost and periodically update the standard cost to bring it in line with the actual costs. ○ **Actual cost** - Tracks the actual cost of each receipt into inventory. When depleting inventory, the processor identifies the receipts that are consumed to satisfy the depletion, and assigns the associated receipt costs to the depletion. ○ **Perpetual average** - The average cost of an item that's derived by continually averaging its valuation after each incoming transaction. The average cost of an item is the sum of the debits and credits in the inventory general ledger balance, divided by the on-hand quantity. ○ **Periodic average** - The average cost of an item that's derived by averaging its valuation for a specific period. A cost profile with periodic average cost method can be only used with a periodic average cost enabled cost book.
Quantity Depletion Method	Determines how the inventory quantity is depleted when costing inventory transactions. The costing application uses the first in, first out (FIFO) method. If the cost method is set to periodic average, then the depletion method is not applicable for costing.
Process Negative Quantity	Determines how to treat depletion of inventory when the depletion quantity exceeds the inventory on hand. When receipts are processed that correct the negative inventory state, Cost Accounting automatically resolves previously negative inventory. The available options are: ○ **Always** - Apply the cost for the entire transaction, including negative balances. If the cost method is set to periodic average, then this is set to Always and can't be changed. ○ **To zero** - Apply cost only for quantity on hand, and hold the remaining shortfall until inventory is replenished. ○ **Never** - Don't apply cost for the transaction until quantity is sufficient to cover the entire transaction.
Account Intravaluation Unit Transfers	Select this option to ensure that all transfers are costed and accounted, including subinventory and locator transfers. If the valuation unit is at inventory organization level and transfers or pick transactions occur at subinventory level, then select this option to cost such transactions. You must deselect this option only if you don't want to cost such transactions.
Account Intravaluation Unit Pick Transactions	Select this option if you want to process and account pick transactions that are within the valuation unit. The option is available only if you've selected the Account Intravaluation Unit Transfers option. If your inventory valuation is tracked at a lower level than the valuation unit and you want to get better performance from the cost processor, you can deselect this option.

Note: If you opt-in for the Use Enhanced Period Inventory Valuation and Gross Margin Reporting feature, all transfers between inventory organizations or subinventories are always costed and accounted even if the **Account Intravaluation Unit Transfers** option isn't enabled in the cost profile.

5. Define the valuation rules.

Field	Description
Valuation Structure Code	Select the control attributes used to define the cost of an item. You can maintain your cost calculation at any combination of the Cost Organization, Inventory Organization, Subinventory, Locator, Country of Origin, Project, Task, Lot, and Serial levels. If you have set the cost method to standard cost or periodic average cost, then the valuation structure must be at the level of Inventory Organization or Cost Organization. Costing doesn't support costs maintained in a more granular valuation structure, such as at the Subinventory or Lot level, for these cost methods. You can create multiple cost profiles with different cost methods for the purpose of cost planning. Depending on the valuation structure type, the cost profile is categorized as asset cost profile, expense cost profile, or consigned cost profile.
Cost By	Whether to use the primary UOM or the secondary UOM for costing.

Note: The Project and Task levels are applicable only if you have opted-in for and set up Project-Driven Supply Chain.

6. Define the work order valuation rules.

Field	Description
Provisional Completions	Determines the valuation method used for partial work order completions. For example, in a manufacturing work order for a total quantity of 100 units, the first 10 units are completed put into finished goods inventory. The cost of the work order won't be known until the entire work order is completed, but there needs to be a way to value the partially completed quantity. Once the work order has been completed and closed, the provisional valuation will be adjusted to the actual cost of the work order. The available options are: o **Value at last actual cost** - Use the cost of the last receipt processed for the same item and for the same cost organization, cost book, and valuation unit. This option can be used when the cost method is set to **Actual cost** or **Perpetual average**. o **Value at perpetual average cost** - Use the perpetual average cost that's effective when the partial work order completion is processed. This option can be used when the cost method is set to **Perpetual average**. o **Value at standard cost** - Use the standard cost, if defined, for the item and valuation unit. If you haven't defined a standard cost for the item then the cost is set after the work order is closed. You can use this option to avoid write-off costs if you don't expect partial completions for your work orders. This option can be used when the cost method is set to **Standard cost**, **Perpetual average**, or **Periodic average**. o **Value at prior periodic average cost** - Use the periodic average cost from prior period that's effective when the partial work order completion is processed. This option can be used when the cost method is set to Periodic average. o **Value at work order close** - This option is available when the cost method is set to **Actual cost** or **Perpetual average**. When this option is used, partial completions aren't processed

Field	Description
	until the work order is closed. This option is recommended for work orders that have a short duration, thereby avoiding estimated provisional costs and cost adjustments. o **Value using accumulated work in process balances** - This option is available when the cost method is set to **Actual cost**, **Perpetual average**, or **Periodic average**. When this option is used, the costs for product completions are calculated using the work in process balances. The **Value using accumulated work in process balances** option is used to estimate the cost for first time completions, if the costs can't be estimated using the otherwise set option.
Provisional Completion for Process Manufacturing	The available options are: o **Value at last actual cost** - Use the cost of the last receipt processed for the same item and for the same cost organization, cost book, and valuation unit. This option can be used when the cost method is set to **Actual cost** or **Perpetual average**. o **Value at perpetual average cost** - Use the perpetual average cost that's effective when the partial work order completion is processed. This option can be used when the cost method is set to **Perpetual average**. o **Value at standard cost** - Use the standard cost, if defined, for the item and valuation unit. If you haven't defined a standard cost for the item then the cost is set after the work order is closed. You can use this option to avoid write-off costs if you don't expect partial completions for your work orders. This option can be used when the cost method is set to **Standard cost**, **Perpetual average**, or **Periodic average**. o **Value at prior periodic average cost** - Use the periodic average cost from prior period that's effective when the partial work order completion is processed. This option can be used when the cost method is set to Periodic average. o **Value at work order close** - This option is available when the cost method is set to **Actual cost** or **Perpetual average**. When this option is used, partial completions aren't processed until the work order is closed. This option is recommended for work orders that have a short duration, thereby avoiding estimated provisional costs and cost adjustments. o **Value using accumulated work in process balances** - This option is available when the cost method is set to **Actual cost**, **Perpetual average**, or **Periodic average**. When this option is used, the costs for product completions are calculated using the work in process balances.
Operation Scrap Valuation	Determines when to account for scrap items. The available scrap valuation methods are: o **Value at work order close** - Use this method if you don't want to see the approximate scrap costs in the general ledger and want to keep the entry adjustments to a minimum. This option isn't applicable if provisional completions is set to **Value using accumulated work in process balances**. o **Value immediately and at work order close** - Use this method if you want to see an immediate approximation of the scrap cost amount in your general ledger. After the work order is complete and actual costs become known, the application can compute the correct scrap cost, post adjustments to the previous approximation. If the cost method is set to **Periodic average**, then the scrap valuation can be only set to Value immediately and at work order close. o **Value at cost cut off date and at work order close** - Determines the boundary for managing period end. You can avoid generating approximate scrap costs during the period, but for work orders that are work in process at period end (not completed), Cost Accounting can generate approximate scrap accounting entries for financial reporting.
Operation Scrap Accounting	Determines whether the scrap value is included in the inventory value, or expensed.

Field	Description

Note: Although you can update the **Provisional Completions** and **Provisional Completions for Process Manufacturing** options in an existing cost profile, the changes will be applicable only for transactions that aren't already processed.

7. Set the Cost Component Mapping Group.

   The cost component mapping group maps the incoming cost components to cost elements that are used to cost transactions.

   Note: The Analysis Mapping option is deprecated and ignored by the application. This option isn't available if you've enabled the new user experience.

8. Define the transaction costing rules.

Field	Description
Receipt Without Cost	Specifies that for incoming receipts without a cost, the cost processor uses the first or last receipt layer cost for the actual cost method and average cost for the perpetual average and periodic average cost methods, if you've set up a default cost element.
Referenced RMA Cost	Specifies how the cost processor determines what cost to use for sales returns. The processor uses an average of the actual cost layers from the shipments on the original sales order. ○ If the sales order consumed only one FIFO layer from inventory, then the actual cost of the shipment is used. ○ If the sales order is fulfilled by multiple shipments, or a single shipment that consumed multiple FIFO layers, then the average cost is used. For periodic average cost method, the average cost of the original sales order is used.
Propagate Cost Adjustment	Whether to propagate cost adjustments down the supply chain to Cost of Goods Sold. This option is only applicable if the cost method is set to **Actual cost**.
Unreferenced RMA Receipt Cost	Specifies what cost to use for unreferenced sales returns. ○ Existing Item Cost: The RMA receipt is costed using the existing item cost. In the case where a current cost is unavailable, the item is costed with zero cost, if you've setup a default cost element. ○ Price on RMA Order: The RMA receipt is costed using the price entered on the RMA order excluding taxes.
Enforce Processing of Costs by Transaction Date	Select this option to enforce processing of costs by transaction date. If a transaction with an earlier transaction date isn't fully costed, then the create cost accounting distribution process won't process a subsequent transaction for the same item and valuation unit combination. This can be useful for dependent transactions, such as Transfer Order Issue and Transfer Order Receipt.

Field	Description
	However, do keep in mind that if a transaction isn't processed for an item and valuation unit combination, then all subsequent transactions for this combination won't be processed and will be held up. This can become critical during period close. This option is available for all cost methods, except standard cost and periodic average. You must set **Process Negative Quantity** to **Always** and deselect **Propagate Cost Adjustment** before you select this option. This option is enabled by default for new cost profiles.

You must keep in mind these points with reference to the Unreferenced RMA Receipt Cost option:

- If you set this option to Price on RMA Order in an existing cost profile, all item cost profiles associated with the updated cost profile will use the RMA line price.
- Only charges with price type as One time and charge subtype as Price on the RMA order are considered when costing the RMA receipt using this option. Recurring charges on an RMA order are ignored. The net sale price is used as the acquisition cost for the RMA receipt.
- When you set this option to Existing Item Cost, then the RMA receipt for an item is costed at zero price, if it's the first transaction for the item in the valuation unit and if you have set up a default cost element. If you haven't set up a default cost element, then this transaction will be kept on hold awaiting a transaction cost to be staged for the valuation unit.
- A kit that's made up of several items, the price on the RMA order is for the kit and not the individual items. However, the shipment and return receipt is created for each individual item and not the kit as a whole. In this case, if the option is set to Price on RMA Order, the RMA receipts for the individual items is costed at zero price.

> **Note:** If a return is received in a cost organization that's different than the cost organization where the original shipment was costed, the RMA receipt is costed based on the value set for the Unreferenced RMA Receipt Cost option in the cost profile.

9. Set the summarization rules.

Field	Description
Summarize Cost Transactions for Serial Controlled Items	Enable this option if you want to summarize distributions created for inventory transactions of items that are serial tracked, but the associated valuation structure doesn't have the Serial costing attribute. The serial level costs can be summarized at the sub inventory or organization level, thereby improving the processing performance. The Review Cost Accounting Distributions page shows the summarized transaction instead of transactions for each serial number level.
Summarize Cost Transactions for Lot Controlled Items	Enable this option if you want to summarize distributions created for inventory transactions of items that are lot tracked, but the associated valuation structure doesn't have the Lot costing attribute. The lot level costs can be summarized at the sub inventory or organization level, thereby improving the processing performance.

Field	Description
	The Review Cost Accounting Distributions page shows the summarized transaction instead of transactions for each lot number level.

10. Click **Save and Close**.

Related Topics

- Can I delete or modify a cost profile, a default cost profile, or an item cost profile?
- Standard Cost Method
- Actual Cost Method

Set Up a Default Cost Profile

Use this task to create and edit cost profiles that can be automatically assigned to items at the cost organization, cost book, or item category level. A cost profile must be associated with an item before the item can be costed.

To create a default cost profile, perform the following steps.

1. In the Setup and Maintenance work area, use the **Manage Default Cost Profiles** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Cost Accounting
    - Task: Manage Default Cost Profiles
2. Click the Create icon to create a new default cost profile, and complete the required fields. The fields are described in the following table.

Field	Description
New Item Profile Creation	Determines how the default cost profile is assigned to new items for cost processing. The following settings are available. - Automatic. The preprocessor automatically assigns the default cost profile to new items, and the new item cost profiles can be used by the cost processor. - Review Required. The preprocessor generates the cost profiles for new items based on the default cost profile and sets them to Awaiting Approval status. The new item cost profiles must be reviewed and approved before they can be used by the cost processor. It is recommended that you set this field to Automatic if you want to use file-based data import or the ADF Desktop Integrator to import cost data.
Cost Organization	Specifies that the associated cost profile will be assigned to all of the items in this cost organization.
Category Name	Specifies that the associated cost profile will be assigned to all of the items in this category.

Related Topics

- Standard Cost Method
- Actual Cost Method

Manage Cost Accounting Profile Options

Manage Cost Accounting Profile Options

You can enable specific cost accounting features by setting the appropriate profile option code, level, and value.

To configure the profile options:

1. In the Setup and Maintenance work area, go to the Manage Cost Accounting Profile Options task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting
    - Task: Manage Cost Accounting Profile Options
2. On the Manage Cost Accounting Profile Options page, search for the required profile option code or profile name.

    For example, use the `CST_USE_ORDER_LINE_CLOSE_DATE` profile option code or the profile name "Use Order Line Close Date for Cost of Goods Sold Recognition", to use the order line closed date as the accounting date for cost of goods sold recognition in the case of ship-only flows.
3. Select New from the Actions menu under profile values.
4. Select the profile level and profile value.

    For example, for the `CST_USE_ORDER_LINE_CLOSE_DATE` profile option code, set the profile level as **Site** and profile value as **Y**.
5. Click **Save and Close**.

Set Default Cost Organization Context

You can set the default cost organization context for Cost Accounting landing page and other relevant pages in Cost Accounting and Cost Planning.

When you open the Cost Accounting landing page, the default cost organization is derived based on the value you configured for the ORA_CST_DEFAULT_COST_ORG profile option.

1. In the Setup and Maintenance work area, search for and select the **Manage Administrator Profile Values** task.
2. On the Manage Administrator Profile Values page, search for and select the ORA_CST_DEFAULT_COST_ORG profile option code.
3. Configure the cost organization at one or both levels:
    - User: Specifies the default cost organization for an individual user.
    - Site: Specifies the default cost organization for users who don't have a valid user-level value.
4. Select **Save and Close**.

When both values are configured, the valid user-level value takes precedence over the site-level value.

The default cost organization or the cost organization selected on the landing page is carried forward to the Cost Accounting and Cost Planning pages opened through quick actions. Where applicable, the application also derives related values such as business unit, ledger, primary cost book, and period from the selected cost organization. The default cost organization is also applied as filter on the relevant pages

Enable COGS Recognition upon Sales Order Line Close for Ship Only Lines

For ship-only sales orders, the cost of goods sold recognition uses the shipment date. However, you can configure costing to use the order line closed date as the accounting date for cost of goods sold recognition.

If you use a third-party billing system and rely on a proof of delivery or a similar event to recognize revenue and cost of goods sold, you can ensure that the cost of goods sold and the revenue recognition both use the proof of delivery date as the accounting date.

You need to create and enable the `CST_USE_ORDER_LINE_CLOSE_DATE` profile option to use the sales order line close date for ship-only sales orders as the cost of goods sold recognition accounting date.

1. From the **Setup and Maintenance** work area and locate the **Manage Profile Options** task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting
    - Task: Manage Profile Options
2. Click **Add** to create a new profile option:
    - Profile Option Code: `CST_USE_ORDER_LINE_CLOSE_DATE`
    - Profile Display Name: **Use Order Line Close Date for Cost of Goods Sold Recognition**
    - Application: **Cost Management**
    - Module: **Cost Management**
3. Navigate to **Manage Cost Accounting Profile Options** UI from the **Setup and Maintenance** work area.
4. On the Manage Cost Accounting Profile Options page, search for the `CST_USE_ORDER_LINE_CLOSE_DATE` profile option code.
5. Select **New** from the Actions menu under profile values.
6. Select the profile level as **Site** and profile value as **Y**.
7. Click **Save and Close**.

Note: This profile option is applicable only for the ship-only flows.

Run Rebuild Rolled-up Costs Process Automatically

When you run the Roll up Costs process for a cost scenario, it automatically runs the Rebuild Rolled-up Costs process. The Rebuild Rolled-up Costs process uses the rolled-up costs of the cost scenario to populate the View Rolled-up Costs page.

However, you might not want to run this process automatically if you have a high volume of make items in your inventory organization that need to be rolled-up.

You can streamline running this process by turning off the corresponding cost accounting profile option. Set the profile value to **No** for the profile option code `ORA_CST_REBUILD_ROLLEDUP_COSTS`. The corresponding profile name is "Run Rebuild Rolled-up Costs Process After Roll up Costs Process". This profile option must be set at the Site level.

After you turn off the profile option, the Rebuild Rolled-up Costs process won't run automatically whenever you run the Roll up Costs process. You can use the Costed BOM OTBI report to verify the rolled-up costs of the items, after the items costs have been rolled up. Alternately, you can manually run the Restore Rolled-up Costs process for the cost scenario from the Actions menu on the Manage Cost Scenarios page. This process will populate the costs in the View Rolled-up Costs page. You can run this process even for a published cost scenario if the rolled-up costs for that scenario aren't available to review via the View Rolled-up Costs page.

Hide Cost Accounting Infolets

The infolets in the Cost Accounting work area are visible by default. However, you can hide one or more infolets by using the profile option Hide Cost Accounting Infolets.

The profile option code `ORA_CST_HIDE_INFOLETS` can be set on the Manage Cost Accounting Profile Options page.

The infolets and their corresponding profile values are listed in the table.

Infolet	Profile Value
All infolets	All
Gross Margin	GROSS_MARGIN
Inventory Valuation	INVENTORY_VALUATION
Last Cost Rollup	LAST_COST_ROLLUP
Purchase Price Variance	PURCHASE_PRICE_VARIANCE
Recent Exceptions	RECENT_EXCEPTIONS
Recent Processes	RECENT_PROCESSES
Transaction Status	TRANSACTION_STATUS
Work in Process Balances	WIP_BALANCES
Work Order Costs	WORK_ORDER_COSTS

Set the profile value to **All** to hide all the infolets. To hide a specific infolet, set the corresponding profile value. To hide more than one infolet, enter the corresponding profile values separated by commas.

> **Note:** When you hide infolets using this profile option, the infolets won't be visible in the Cost Accounting work area and you can't enable then from My Infolets.

For example, you don't want the Work in Process Balances and Work Order Costs infolets to be made available. In this case, you must set the profile option code `ORA_CST_HIDE_INFOLETS` with the profile value **WIP_BALANCES,WORK_ORDER_COSTS** at the **Site** level.

Include Supplier Supplied Items in Work Order Costs

You can include transactions related to components with supply type set to Supplier for work order calculations. During cost planning, these components are considered in the cost rollup and you can avoid unnecessary variances and achieve more accurate cost calculations for work orders.

By including supplier-related transactions in work order calculations you can ensure that cost of components with supply type set to Supplier are no longer expensed out. Instead, they accurately reflect in the inventory valuation. Also work order calculations become more precise, leading to better project planning and resource allocation.

The inclusion of supplier-related transactions creates a transparent and traceable audit trail for all work order calculations. You can easily validate the financial accuracy of work orders and supplier-related costs, ensuring compliance and accountability.

To include supplier-related transactions in work order calculations, set the profile value to **Yes** for the profile option code `ORA_CST_INCL_SUPP_COMP_COSTS`. The corresponding profile name is "Cost Supplier Components in Work Order". This profile option must be set at the Site level.

> **Note:**
>
> - All transactions created before the profile option is set will be marked as Excluded and won't be included in work order cost calculations.
> - If the profile option is changed, any return transactions will use the profile value selected at the time of material issue.

Apply Project Identifiers and Asset Categories from Physical Organizations in Drop Shipment Flows

You can capitalize the project costs by using the asset category attribute defined in the Purchasing item organization of an item for across multiorganization project costing flows, such as customer drop shipment and internal drop shipment, without assigning the item to every logical inventory organization in the flow.

You can do this for simple as well as complex, multinode variants of customer drop shipment, internal drop shipment, and trade-sale scenarios where there are no physical inventory transactions in the financial or trade organization.

This delivers policy-driven capitalization that aligns with IFRS/US GAAP, ensures accurate asset class mapping from the first cost capture, and automates end-to-end flows by removing unnecessary item-organization dependencies. It

strengthens controls and auditability with a single, deterministic derivation source, supports granular componentization for large programs, for example data centers and network builds, and scales globally without duplicating master data across many organizations.

You first need to create the `CST_PJC_ASSET_CATEGORY` profile option.

1. In the Setup and Maintenance work area, search for and select the **Manage Profile Options** task.
2. On the Manage Profile Options page, click the New icon to create a new profile option.
3. Set the parameters on the Create Profile Option page.
    - Profile Option Code: **CST_PJC_ASSET_CATEGORY**
    - Profile Display Name: CST_PJC_ASSET_CATEGORY
    - Application: **Cost Management**
    - Module: **Cost Management**
    - Description: Use the project identifiers and the asset category defined for item from the physical inventory organization when transferring project costs from logical organizations in drop-shipment flows.
    - SQL Validation: `Select MEANING, LOOKUP_CODE from FND_LOOKUPS where LOOKUP_TYPE='YES_NO'`
    - Start Date: Date when you want this profile to start
4. Click **Save and Close**.
   In the Profile Option Levels section, enable the level as needed, preferably at the site level. Ensure both the Enabled and Updatable checkboxes are selected.

After the `CST_PJC_ASSET_CATEGORY` profile option is created, you need to enable it.

1. In the Setup and Maintenance work area, access the **Manage Cost Accounting Profile Options** task.
2. On the Manage Receipt Accounting Profile Options page, search for and select the **CST_PJC_ASSET_CATEGORY** profile option code.
3. In the Profile Values section, set the Site level to **Yes**.
    - Yes = Uses the new logic to derive the purchasing asset category for sending to projects.
4. Click **Save and Close**.
   Change in the profile value will take effect the next time you sign in.

To derive from the item validation organization of the cost organization, create and enable the `CST_PJC_MASTER_ORG_ASSET_CATEGORY` profile option similar to the `CST_PJC_ASSET_CATEGORY` profile option.

Manage Receipt Accounting Profile Options

Manage Receipt Accounting Profile Options

You can enable specific receipt accounting features by setting the appropriate profile option code, level, and value.

To configure the profile options:

1. In the Setup and Maintenance work area, go to the Manage Receipt Accounting Profile Options task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional area: Cost Accounting

- Task: Manage Receipt Accounting Profile Options

2. On the Manage Receipt Accounting Profile Options page, search for the required profile option code or profile name.

   For example, use the `ORA_CMR_IGNORE_AP_INV_VAR_ALL` profile option code or the profile name "Ignore Invoice Variances for Inventory Destination Purchase Orders", for the exclude invoice cost variances feature.
3. Select New from the Actions menu under profile values.
4. Select the profile level and profile value.

   For example, for the `ORA_CMR_IGNORE_AP_INV_VAR_ALL` profile option code, set the profile level as **Site** and profile value as **Yes**.
5. Click **Save and Close**.

Exclude Invoice Cost Variances from Cost Management

Oracle Fusion Cloud Cost Management provides an ability to value your inventory at the true acquisition costs. During receipt into inventory, inventory is valued at either purchase order price, including tax and any landed cost charges, or standard.

Any differences between the standard cost and the purchase order price are expensed as a purchase price variance. Subsequently, any additional costs that are imported from Payables, such as invoice price variance, exchange rate variance and tax rate variance, are used to true up the inventory cost by applying them as acquisition cost adjustments. The true up of inventory cost is carried out based on the cost method.

- Actual cost (FIFO): acquisition cost adjustments apply to on-hand inventory as well as any consumption transactions such as sales order issues, work order issues, and transfers.
- Average cost: acquisition cost adjustments apply only to the extent of on-hand inventory and any adjustments pertaining to inventory that's consumed are expensed out into cost variance.
- Standard Cost: acquisition cost adjustments are always expensed out as a purchase price variance up to the extent of quantity delivered.

The amount being applied as an acquisition cost adjustment depends on proration to receipt quantity. As a result, the receiving inspection account will contain the balance arising from the differences between receipt quantity and Invoice quantity. In the case of standard costing, the remaining amount in the receiving inspection account reflects in the balance sheet instead of an income statement account. This poses an accounting challenge because the accounting of these variances as an expense is already complete in Payables that subsequently gets reversed into the balance sheet.

You can now exclude payables invoice cost variances from inventory valuation for inventory and work order destination purchase orders. You can use this for all cost methods when you don't intend to apply invoice cost variances as acquisition cost adjustments to item cost and inventory value.

Enable the exclude invoice cost variances feature by using the receipt accounting profile options. The profile option code for this feature is `ORA_CMR_IGNORE_AP_INV_VAR_ALL`. The corresponding profile name is "Ignore Invoice Variances for Inventory Destination Purchase Orders". This profile option must be set at the Site level.

When you set the profile value to Yes, unprocessed invoices in costing for both uninvoiced and partially invoiced PO distributions aren't used for creating additional receipt accounting distributions. The invoice variance amounts, if any, aren't considered for true up of inventory valuation or Purchase price variance.

When you change the profile value to No, unprocessed invoices in costing for both uninvoiced and partially invoiced PO distributions are used for creating additional receipt accounting and cost accounting distributions for acquisition cost adjustment based on existing logic.

Note:

- When you collect costs in Oracle Fusion Cloud Project Portfolio Management from Oracle Cost Management, the invoice cost adjustments aren't imported to a project for inventory and work order destination flows when the profile option is configured as 'Yes'. Invoice cost adjustments for expense destination purchases will continue to be processed and accounted in receipt accounting.
- Although you can enable or disable this feature at any point in time, keep in mind that frequently enabling or disabling of this profile option could potentially lead to discrepancy in cost and accounting balances. Therefore, frequent changes to this profile option isn't recommended.

Implementation Decision Points for Exclude Invoice Cost Variances

Before you set the costing profile option, consider these decisions and their corresponding impact.

Decision	Impact
If items are standard costed, enable this feature.	Invoice cost variances will be expensed out as a part of invoice accounting and won't be additionally processed in receipt and cost accounting for acquisition cost adjustments to purchase price variance. As a result, receiving inspection account won't contain unresolved balances related to invoice cost variances.
If items are actual or average costed and there can be significant variances between PO price and invoice price, don't enable this feature.	Existing logic will continue to apply.
If items are actual or average costed and there is a requirement to send additional invoice costs to Projects, don't enable this feature.	Existing logic will continue to apply and any additional invoice cost variances will be sent to projects.
If certain items are standard costed while others use actual or average cost method and there is a need to true up inventory value for those items based on invoice cost variances, don't enable this feature.	This feature is applied at the site level and is applicable across all cost and inventory organizations. If you enabling this feature, invoice cost variance based adjustments to inventory value will be disabled also for actual and average cost items.

Ignore Invoice Exchange Rate Variances for Inventory, Expense, and Work Order Destination Purchases

Exchange rate variance (ERV) is a change in the Payables liability in the ledger currency due to the exchange rate fluctuations when the invoice is in a currency different from the ledger currency.

You can also exclude the ERV recorded on payables invoices in Receipt Accounting and Cost Accounting transactions. This prevents the impact of ERV on inventory valuation when receiving purchase orders with inventory, expense, and

work order destinations. For all cost methods, you can exclude ERV for item costs and inventory valuation. Some of the benefits of excluding ERV are:

- Adhere to regulatory requirements for inventory valuation by classifying ERV as a period expense that's recorded in the period it's incurred.
- Ensure accurate unit item costs and inventory valuation.

You must enable the profile option Ignore Invoice Exchange Rate Variances for Inventory, Expense, and Work Order Destination Purchases (`ORA_CMR_IGNORE_AP_ERV_TERV`) to exclude ERV.

If enabled, any exchange rate variance distributions lines will be ignored from receipt and cost processing and where applicable, such lines won't be interfaced to Projects.

Note: Consigned purchase orders aren't impacted by this profile option.

Related Topics

- Variance Absorption

Exclude Receipt Accounting for Noncosted Item Receipts Without Financial Orchestration

Interorganization transfers involving both source and destination organizations marked as noncosted can be excluded from period-end cost exceptions. These transfers, used solely for inventory tracking, won't be marked as exceptions for missing costs during period close activities.

In certain industries, such as Telecommunications, Mobile, and Wireless Services, equipment like modems and routers provided to customers are typically treated as asset items. While these items are tracked as on-hand inventory across distribution networks, their costs are amortized through monthly rental charges and not directly accounted for in inventory costing.

By excluding receipt accounting for noncosted item receipts without financial orchestration, period-end reconciliation is simplified and eliminates noise from operational transfers that don't impact cost accounting, particularly benefiting high-volume service providers and network operators.

You first need to create the CMR_EXCLUDE_COSTING_DISABLED_TOS profile option.

1. In the Setup and Maintenance work area, search for and select the **Manage Profile Options** task.
2. On the Manage Profile Options page, click the New icon to create a new profile option.
3. Set the parameters on the Create Profile Option page.
    - Profile Option Code: **CMR_EXCLUDE_COSTING_DISABLED_TOS**
    - Profile Display Name: CMR_EXCLUDE_COSTING_DISABLED_TOS
    - Application: **Receipt Accounting**
    - Module: **Receipt Accounting**
    - Description: Exclude Receipt Accounting for Noncosted Item Receipts Without Financial Orchestration
    - SQL Validation: `Select MEANING, LOOKUP_CODE from FND_LOOKUPS where LOOKUP_TYPE='YES_NO'`
    - Start Date: Date when you want this profile to start
4. Click **Save and Close**.

In the Profile Option Levels section, enable the level as needed, preferably at the site level. Ensure both Enabled and Updatable check boxes are selected.

After the CMR_EXCLUDE_COSTING_DISABLED_TOS profile option is created, you need to enable it.

1. In the Setup and Maintenance work area, search for and select the **Manage Receipt Accounting Profile Options** task.
2. On the Manage Receipt Accounting Profile Options page, search for and select the **CMR_EXCLUDE_COSTING_DISABLED_TOS** profile option code.
3. In the Profile Values section, set the Site level to **Yes**. The default value is No.
    - Yes = Excludes interorganization receipts from period-end exceptions for items with costing disabled.
    - No = Reports interorganization receipts in period-end exceptions for missing transfer cost.
4. Click **Save and Close**. Change in the profile value will take effect the next time you sign in.

When you enable the profile option to exclude, you can review the count of interorganization transfer receipts in the receipt accounting distributions processor logs. Only transfers for items with costing disabled without financial orchestration are excluded. If the item is later enabled for costing, subsequent rerun of the costing and receipt accounting processors will process and account the item cost.

Hide Receipt Accounting Infolets

The infolets in the Receipt Accounting work area are visible by default. However, you can hide one or more infolets by using the profile option Hide Receipt Accounting Infolets.

The profile option code `ORA_CMR_HIDE_INFOLETS` can be set on the Manage Cost Accounting Profile Options page.

The infolets and their corresponding profile values are listed in the table.

Infolet	Profile Value
All infolets	All
Accrual Write Off	ACCRUAL_WRITE_OFF
Charge Line Status	CHARGE_LINE_STATUS
Cost of Receipts	COST_OF_RECEIPTS
Exceptions	EXCEPTIONS
Open Charge Invoice Associations	INVOICE_ASSOCIATIONS
Recent Processes	RECENT_PROCESSES
Trade Operations	TRADE_OPERATIONS
Unmatched Accrual Balances	UNMATCHED_ACCRUAL_BALANCES

Infolet	Profile Value

Set the profile value to All to hide all the infolets. To hide a specific infolet, set the corresponding profile value. To hide more than one infolet, enter the corresponding profile values separated by commas.

> **Note:** When you hide infolets using this profile option, the infolets won't be visible in the Receipt Accounting work area and you can't enable then from My Infolets.

For example, you want to hide the Recent Processes and Trade Operations infolets from all users. In this case, you must set the profile option code `ORA_CMR_HIDE_INFOLETS` with the profile value **RECENT_PROCESSES,TRADE_OPERATIONS** at the **Site** level.

FAQs for Managing Cost Organizations and Cost Books

What's a set-level definition?

A set-level definition enables you to segment and share your reference data. Entities that are defined at the set level can be shared by all cost organizations belonging to that set.

For example, to segment your cost element reference data by country, you can define cost elements for each country set; and the cost organizations belonging to the country set can share the cost elements within that set. You can also use the **Common** set to share the same reference data across all cost organizations. This saves you redundant setup, and streamlines the process.

Can I change the legal entity of a cost organization?

No. You cannot change the legal entity of a cost organization once transactions are processed under that cost organization.

How can I create and maintain a cost organization?

You can create, edit, or delete a cost organization in the Oracle Fusion Global Human Resources application, on the Manage Cost Organization page.

Can I associate an inventory organization with more than one cost organization?

No. You can associate an inventory organization with only one cost organization.

Can I delete or deactivate a cost book or a cost book assignment to a cost organization?

Yes. You can delete or deactivate a cost book or a cost book assignment to a cost organization if there are no costing transactions or other references that depend on the cost book or cost book assignment.

Do this by first deleting references to the cost book in other cost management setup, then delete the cost book. Likewise, first delete references to the cost book assignment in other cost management setup, then delete the cost book assignment.

You can deactivate a cost book or cost book assignment to a cost organization at any time. To deactivate a cost book or cost book assignment, set the effective end date to a current or future date; however, all past assignments remain in effect.

Can I set up a secondary cost book for the purpose of internal analysis?

Yes, you can set up multiple additional cost books on the Manage Cost Books page for the purpose of internal analysis. If you want to avoid posting to the general ledger, you can set up a cost book without an assigned ledger.

Can I delete or deactivate the association of an inventory organization with a cost organization?

Yes. You can delete or deactivate the association of an inventory organization with a cost organization, but only if there are no costing transactions or other references that depend on the inventory organization and cost organization relationship.

Do this by first deleting all references to the inventory organization and cost organization association in other cost management setup, then delete the association. You can also deactivate the association of an inventory organization with a cost organization by setting the effective end date to a current or future date; however, all past associations remain in effect.

Cost Elements and Analysis Groups

Manage Cost Elements and Analysis Groups

Map cost elements to analysis codes within analysis groups. This enables you to define alternate views of item costs, and summarize costs for different reporting needs. You can use the analysis group to view data on the Review Item Costs page and the relevant reports.

Map cost elements to as many analysis group and analysis code combinations as you need. For example, group cost elements into fixed and variable analysis groups, or direct and indirect analysis groups.

You can assign a cost element to multiple analysis codes. An analysis code must be unique within an analysis group, and it can be reused in multiple analysis groups. For each analysis group you can set up a default analysis code that's used for cost elements that aren't assigned to an analysis code.

The following table describes examples of cost elements mapped to analysis codes and analysis groups.

Analysis Group	Analysis Code	Cost Element
AG1	Variable Cost	Direct Material
AG1	Variable Cost	Inbound Freight
AG1	Variable Cost	Material Handling
AG1	Variable Cost	Outbound Freight
AG1	Variable Cost	Direct Labor
AG1	Variable Cost	Internal Profits
AG1	Fixed Cost	Store Supervisor
AG1	Fixed Cost	Factory Rent
AG2	Indirect Cost	Outbound Freight
AG2	Indirect Cost	Internal Profits
AG2	Indirect Cost	Store Supervisor
AG2	Indirect Cost	Factory Rent
AG2	Indirect Cost	Electricity
AG2	Indirect Cost	Depreciation
AG2	Direct Cost	Direct Material
AG2	Direct Cost	Inbound Freight
AG2	Direct Cost	Material Handling

Analysis Group	Analysis Code	Cost Element
AG2	Direct Cost	Direct Labor
AG2	Default	Miscellaneous Cost

Related Topics

- How Cost Components, Cost Elements, and Cost Component Groups Work Together
- Can I delete or edit the mapping of a cost element to an analysis group?
- Can I delete or edit the mapping of a cost component to an analysis group?

FAQs for Managing Cost Components and Analysis

Can I delete or edit a cost component group mapping?

Yes. You can delete or edit a cost component group mapping only if it is not referenced in a cost profile.

Can I delete or edit the mapping of a cost element to an analysis group?

Yes. You can delete or edit the mapping of a cost element to an analysis group, even if the cost element is mapped to a cost component group that's referenced in a cost profile.

Can I delete or edit the mapping of a cost component to an analysis group?

Yes. You can delete or edit the mapping of a cost component to an analysis group, even if the cost component or the cost component group is referenced in a cost profile.

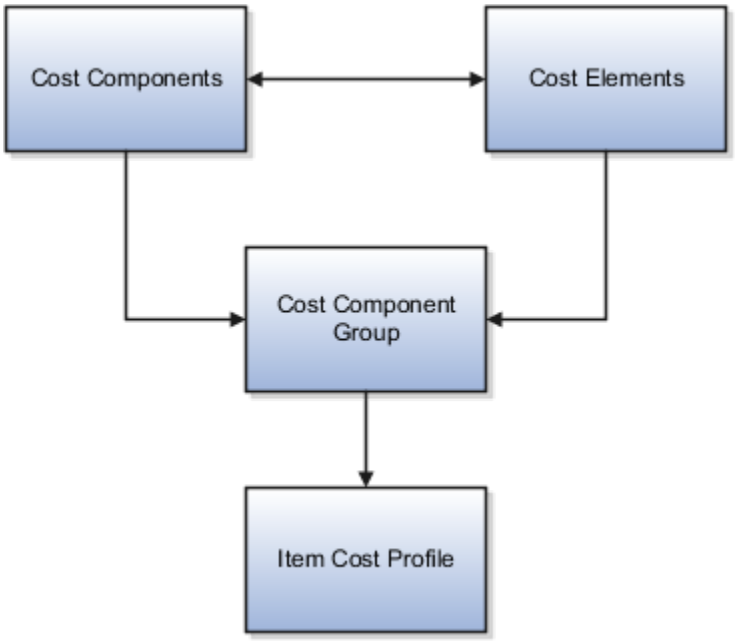
Cost Accounting Policies

How Cost Components, Cost Elements, and Cost Component Groups Work Together

Cost components are user-defined or come from external sources, and are mapped to cost elements which the costing application uses to track the cost of items.

Use cost component groups to map cost components to cost elements, and to map source cost elements to destination cost elements when items are transferred from one inventory organization to another.

This figure illustrates the relationship between cost components, cost elements, cost component groups, and cost profiles.



Cost Components

Cost components are the most granular representation of item costs. Examples of cost components are purchase order item price, material, freight, tax, and overhead. Cost Components come from different sources:

- Predefined costs from external sources such as Purchasing, Accounts Payable, and Inventory Management
- Landed cost charges from Oracle Fusion Landed Cost Management.

Cost Elements

A cost element is the level where the costs of an item are tracked through the inventory accounting life cycle. Cost components are mapped to cost elements, which enables you to calculate item costs at different granularity levels for different business needs. For example, you may want more granularity for high-value than for low-value items.

You can define cost elements for four types of costs:

- Material cost element type for incoming material cost components.
- Overhead cost element type for costs that are calculated by the cost processor based on user-defined overhead rules.
- Profit in Inventory cost element type for tracking of internal margins when items are transferred from one inventory organization to another, including global procurement and drop shipment flows. For cost elements of this type, indicate the Profit in Inventory organization that incurs the gain or loss due to the transfer of goods.
- Adjustment cost element type for separate tracking of cost adjustments, which provides a more detailed view of item costs and profit margins.

Cost elements are defined at the set level and thereby have the advantages of set-level definitions for sharing and segregation. A Profit in Inventory cost element must be assigned to the Common cost element set so that it can be shared across cost organizations.

The following table gives examples of cost element definitions:

Cost Element Set	Cost Element	Cost Element Type	Inventory Organization
Country 1	Metals Material	Material	Not Applicable
Country 1	Plastic Material	Material	Not Applicable
Country 1	Miscellaneous Material	Material	Not Applicable
Country 1	Miscellaneous Material	Adjustment	Not Applicable
Country 1	Plant Depreciation	Overhead	Not Applicable
Country 1	Equipment Depreciation	Overhead	Not Applicable
Country 1	Freight Charges	Overhead	Not Applicable
Common	Internal Margin	Profit in Inventory	Seattle
Country 2	Dairy Material	Material	Not Applicable
Country 2	Miscellaneous Material	Material	Not Applicable
Country 2	Dairy Material	Adjustment	Not Applicable

Cost Component Groups

Use cost component groups to define mappings of cost components from external sources to cost elements in the costing application. These mappings provide flexibility in the granularity level where you track costs. You can map one cost component to one cost element for a detailed cost breakdown, or several cost components to one cost element for a less granular view of costs. For cost components and cost elements that are related to landed cost charges, you can choose to capitalize them into inventory value, or expense them. All other costs are automatically capitalized.

You can also map source cost elements to destination cost elements when transferring items from one inventory organization to another. This helps to maintain visibility of the item cost structure from the source application and across the supply chain.

You can specify a default cost component mapping to cost element to be used in cases where the source cost element doesn't have a matching destination cost element. The default cost component mapping is helpful when:

- The detailed mapping of a cost component to cost element isn't required, and you want to map it to a single cost element.
- The designated mapping for a cost component is missing. If the mapping is missing, the transaction automatically picks up the default cost component mapping.

Note: If the cost component mapping is missing, the cost processor logs a message in the processing log. If the cost component mapping is missing and there is no default mapping, you can create the mapping and the transactions will be processed in the next run. If there is a default mapping, the transaction is processed and you can review the message log to decide if you want to take further action: you can correct the mapping for future transactions, and you can create a cost adjustment to reclassify the costs as needed.

Cost component groups are one of the attributes of cost profiles, which the cost processor uses to determine how to calculate item costs. Cost component groups are defined at the set level and thereby have the advantages of set-level definitions for sharing and segregation. Cost component groups and cost profiles are both set enabled; therefore, only those cost component groups belonging to the same set as the cost profile are available to that cost profile.

Example 1: The following table describes mapping of one cost component to one cost element.

Mapping Group	Cost Component	Cost Element
MG1	PO Item Price	Material
MG1	PO Tax	Tax
MG1	Profit in Inventory	PII
MG1	Interorganization Freight	Freight Charges
MG1	Invoice Price Variance	IPV
MG1	Exchange Rate Variance	ERV
MG1	Tax Invoice Price Variance	TIPV

Example 2: The following table describes mapping of cost components to one or more cost elements.

Mapping Group	Cost Component	Cost Element
MG2	PO Item Price PO Tax NR Tax Invoice Price Variance Exchange Rate Variance Tax Invoice Price Variance	Material
MG2	Interorganization Freight	Freight Charges

Mapping Group	Cost Component	Cost Element
MG2	Profit in Inventory	PII

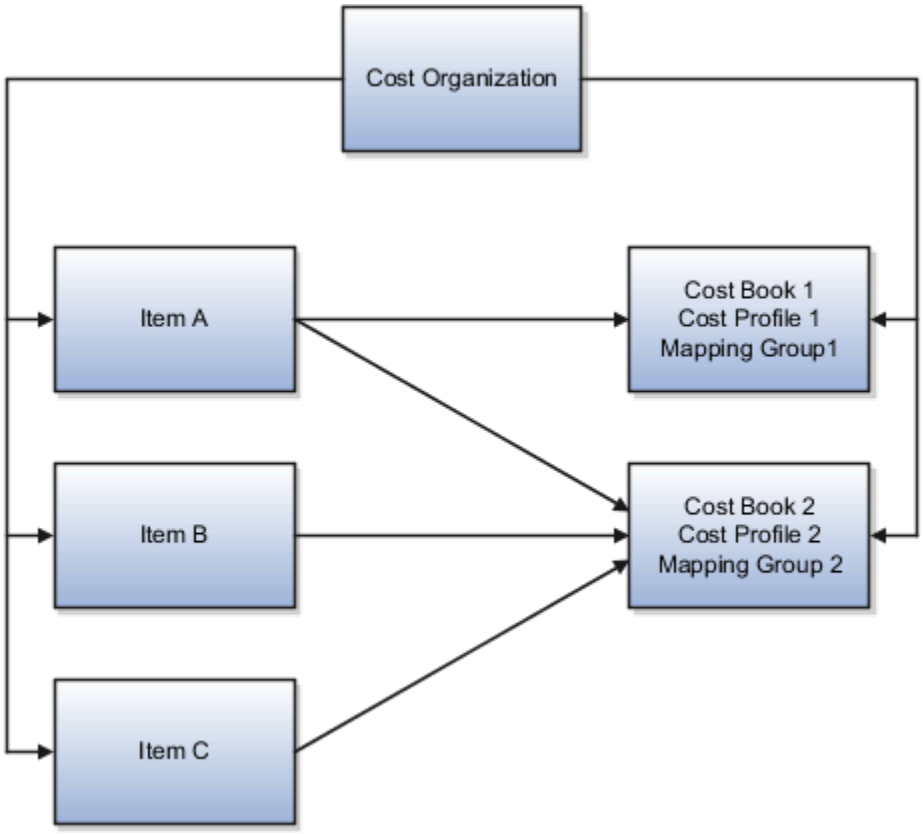
Example 3: The following table describes mapping of source cost elements to destination cost elements in an interorganization transfer.

Mapping Group	Source Cost Element Set	Source Cost Element	Destination Cost Element Set	Destination Cost Element
MG3	Country 1	Material Tax	Country 2	Material
MG3	Country 1	Freight Charges	Country 2	Freight Charges
MG3	Country 1	Other	Country 2	Other

You have flexibility in how you map cost component groups to items:

- Different items in a cost organization and book combination can have the same or different cost component group mappings if they use different cost profiles.
- One item can have different cost component group mappings in different cost books.
- Several cost organizations can share the same cost component group mappings if they belong to the same set, or if they're defined the same way in different sets.

The following figure illustrates different mappings of cost component groups to items. That is, in a cost organization, Item A maps to two cost groups, and item B and Item C maps to only one cost group.



Related Topics

- Cost Profiles, Default Cost Profiles, and Item Cost Profiles
- Manage Cost Elements and Analysis Groups
- Can I delete or edit a cost component group mapping?

Cost Profiles, Default Cost Profiles, and Item Cost Profiles

Cost profiles define the cost accounting policies for items. The cost processor refers to the attributes of a cost profile to calculate costs and create accounting distributions for inventory and trade transactions.

Each item in a cost organization book requires a cost profile to calculate the inventory transaction costs.

Cost Profile Definition

A cost profile has the following attributes:

- Cost profile set. Cost profiles use set-level definitions, and all cost organizations belonging to that set can share the same cost profile definitions.
- Cost method. Establishes how cost is calculated. The costing application uses the perpetual average cost , actual cost , or standard cost method.
- Valuation structure. Sets the granularity level at which items are costed, for example Cost Organization level, or Inventory Organization, Lot, and Grade level.

- Valuation structure type. Asset, Expense, or Consigned type.
- Cost component group. Maps incoming cost components to cost elements, which are used to cost transactions.
- Costing unit of measure (UOM). Used to cost the item. Some items have primary and secondary units of measure, and there is no fixed conversion factor between the two. For example, you can calculate the cost of chickens by chicken or by weight.
- Quantity depletion method. Sets how inventory quantity is depleted when inventory transactions are costed. The method used by the costing application is first in, first out (FIFO).
- Method for processing negative quantity. Establishes how to treat depletion of inventory when the depletion quantity exceeds inventory on hand. Options are Always, To Zero, or Never.
- Propagate cost adjustment. Option to propagate cost adjustments down the supply chain, available only if using the actual cost method.
- Receipt without cost. Specifies that for sales returns without a Return Material Authorization RMA reference or missing incoming cost, the cost processor uses the first or last receipt layer cost.
- Referenced RMA cost. Specifies what the cost processor uses for sales returns with an RMA reference. For the Actual cost method, the processor uses the average cost of the original sales issue. For the Average cost method, the processor uses the current perpetual average cost. For the Standard Cost method, it uses the current standard cost.
- Accounting distribution basis. Defines accounting for consigned inventory transactions. Options are At Zero, or Actual Cost.

Cost Profile Assignment to Items

Assign cost profiles to items in each cost organization and book combination where there are item transactions. Cost organizations can have multiple cost books and the same item can have different cost profiles in different cost books used by the cost organization. This is useful when you want to use different books for various financial reporting and decision making purposes, such as statutory reporting, or management reporting.

Items can also use different cost profiles in various cost organization and book combinations, when they require different cost accounting policies.

> **Note:** An item can have only one Asset, one Expense, and one Consigned cost profile in each cost organization book. You must assign at least one cost profile to the cost organization book.

You can simplify the effort by assigning default cost profiles at the cost organization book level, or at the item category level within the cost organization book. Default cost profiles are generally used if the costing policy is the same for all items in the cost organization book, or in the item category.

Override default cost profiles by assigning specific item cost profiles at the individual item level. You can modify or delete a default cost profile assignment at any time before transactions have been processed. Once transactions for an item are processed you can't change the cost profile of the item.

> **Note:** For a periodic average cost enabled cost book, you can only assign a cost profile with the periodic average cost as the default cost profile or item cost profile.

You can assign cost profiles in three ways:

- Automatic without approval. If the default cost profile has the item profile creation mode set to Auto, the preprocessor automatically generates and assigns the default cost profile to new items. This means that the

cost processor uses the same cost profile for all items within that cost organization book, or within the item category.

- Automatic with approval. If the default cost profile has the item profile creation mode set to Review Required, you must review and approve the generated cost profile before the cost processor assigns it to new items.
- Manual. Manually assign the cost profile to a new item before the cost processor processes the first transaction. This cost profile then remains in effect for subsequent transactions. The manually assigned cost profile always takes precedence over the default cost profile.

Note: When you're manually assigning a cost profile to an item, the options available are both:

- Cost profiles belonging to the set that's specific to the cost organization of the item.
- Cost profiles belonging to the Common set which spans all cost organizations.

Related Topics

- Overview of Units of Measure
- How Cost Components, Cost Elements, and Cost Component Groups Work Together
- Valuation Structures
- What happens when I select different options for processing negative inventory quantities?
- What are the accounting distribution basis options for consigned inventory transactions?

Item Cost Profile Creation: Review and Approval Process

One of the attributes of a default cost profile is the creation mode of item cost profiles, which can be set to Auto or Review Required. The creation mode determines how an item cost profile is created.

Cost Profile Creation Mode Settings

If you set the cost profile creation mode on a default cost profile to Auto, the preprocessor automatically assigns the default cost profile to new items, and the new item cost profiles can be used by the cost processor. If you set the cost profile creation mode to Review Required, then you must review and approve the new item cost profiles before they are used.

Review and Approval of Item Cost Profiles

When a default cost profile is in Review Required mode, the preprocessor generates the cost profiles for new items based on the default cost profile and sets them to Awaiting Approval status.

Review the cost profiles on the Review and Approve Item Cost Profiles page which is accessed from the Manage Default Cost Profiles page, or from the Cost Accounting work area. After reviewing the cost profiles that are in Awaiting Approval status, set them to Approved or Rejected status. If you approve them, the creation source becomes Default Cost Profile. If you reject the cost profiles, you can manually modify them, and the creation source becomes Manual.

Save your changes and rerun the preprocessor for final assignment of the item cost profiles.

Related Topics

- Cost Profiles, Default Cost Profiles, and Item Cost Profiles

Valuation Structures and Valuation Units

Valuation Structures

Valuation structures and valuation units define the granularity level at which the cost of an item is maintained. You can maintain the cost calculation at any combination of the Project, Task, Lot ID, Serial ID, and Item levels.

The average cost for an item can span more than one inventory organization. Standard Cost Planning supports items assigned with a cost profile that uses a valuation structure at the Inventory Organization or Cost Organization level. It doesn't support costs maintained in a more granular valuation structure, such as at the Subinventory or Lot level.

A valuation structure defines the level at which item costs are maintained. It contains the costing attributes that are used to segregate costs. Valuation structure is one of the attributes of an item cost profile. When a cost profile is assigned to an item, the cost processor uses the valuation structure of the cost profile to determine how to calculate the item cost.

The flexfield structure defines the costing attributes that are enabled for a valuation structure. The costing attributes include Cost Organization (mandatory), Inventory Organization, Subinventory, Locator, Country of Origin, Project, Task, Lot, Serial, and Grade. The costing attributes must be consistent with the inventory attributes, and can't be at a lower level of granularity than the inventory on hand.

The lowest node of the costing attributes in valuation structure determines the level at which the cost is maintained. For example, if the item cost would be different for different inventory organizations, then the costing attributes of the valuation structure can be at the Cost Organization - Inventory Organization level. However, if the item needs to be costed with the same cost for all inventory organizations, then the costing attributes of the valuation structure can be at the Cost Organization level.

Similarly, if the item cost needs to be maintained for each subinventory or locator, then the costing attributes of the valuation structure can be at Cost Organization – Inventory Organization – Subinventory or Cost Organization – Inventory Organization – Subinventory – Locator levels respectively.

Note:

- If you set the cost method as standard cost or periodic average cost in the cost profile, then the costing attributes of the valuation structure set on the cost profile can be only at the Cost Organization level or the Cost Organization – Inventory Organization level. For these cost methods, you can’t maintain costs at a more granular level.
- The Project and Task costing attributes are applicable only if you have opted-in for and set up Project-Driven Supply Chain.
- After transactions are performed against a valuation structure, you must not change the valuation structure by adding or deleting costing attributes. Doing so could cause unpredictable results, especially if some transactions are already costed using the original valuation structure.

Valuation structures can be of these types:

- Asset - An asset valuation structure is used for receipts of items that are valued as inventory on the balance sheet. A cost profile with an asset valuation structure is an asset cost profile.
- Expense - An expense valuation structure is used to account for receipts to inventory of items that are expensed rather than treated as assets on the balance sheet. A cost profile with an expense valuation structure is an expense cost profile.

- Consigned - A consigned valuation structure is used to account for consigned inventory transactions. A cost profile with a consigned valuation structure is a consigned cost profile.

Related Topics

- Valuation Structure Rules
- Valuation Units
- Cost Profiles, Default Cost Profiles, and Item Cost Profiles
- How Cost Components, Cost Elements, and Cost Component Groups Work Together
- Examples of Using Valuation Structures to Calculate Item Costs

Valuation Structure Rules

The valuation structure is one of the attributes of an item cost profile which is used to cost inventory items. However, conflicts may arise if the costing attributes in the valuation structure don't match the inventory attributes of the inventory items.

Valuation Structure Conflict Resolution

In cases where the valuation structure contains a costing attribute that's missing on the item, the cost processor applies these rules:

- If the costing attribute is mandatory, then the association of the valuation structure to the item is disallowed.
- If the costing attribute is optional, then the association of the valuation structure is allowed, and the valuation unit will have a Null value for the costing attribute.

For example, an item isn't lot enabled, but Lot is a costing attribute in the valuation structure. In this case, if the Lot costing attribute isn't mandatory, the valuation structure is considered valid for the item, and the processor applies Null to the lot value. However, if the attribute is mandatory, the valuation structure is considered invalid.

A costing attribute can be changed from mandatory to optional at any time to accommodate missing values. However, it can't be changed from optional to mandatory, if any transaction using that valuation structure has been processed.

Related Topics

- Valuation Structures

Create a Valuation Structure

You can define the level at which items costs must be calculated in the application by creating valuation structures and setting them on the cost profiles.

1. In the Setup and Maintenance work area, click the **Manage Valuation Structures** task in the Cost Accounting functional area.
2. Click **Create** in the **Actions** menu to create a valuation structure.
3. In the Create Valuation Structure dialog, select the Valuation Structure Set.

   Because valuation structures are defined at the set level, they have the advantages of set-level definitions for sharing and segregation.
4. Select the **Valuation Structure Type**.

   The applicable types are **Asset**, **Expense**, and **Consigned**.
5. Enter a code and an optional description for the valuation structure.
6. Select the **Valuation Structure Mode**.

The mode determines whether the valuation units are created manually, or automatically by the cost processor, or both. The applicable values are:

- **Auto** - Use this option for valuation structures that tend to be unlimited and unknowable in advance, such as lot IDs and serial IDs. The cost processor automatically creates a new valuation unit code as transactions for new lot IDs or serial IDs are processed. For consigned valuation structures, the mode can only be Auto.
- **Manual** - Use this option for valuation structures that tend to have a finite list of possibilities, such as subinventories. When you use this option, the transactions that don't meet one of the expected possibilities will trigger an error condition.
- **Both auto and manual** - Use this option for cases where you can either define the anticipated valuation units before they enter the processor, or you can let the processor automatically create the valuation units if you haven't already created them manually.

7. Select the appropriate **Flexfield Structure**.
8. Click **Save and Close**.

Valuation Units

A valuation unit defines a set of values for the costing attributes defined in the corresponding valuation structure. When you define the valuation structure, you can specify whether the valuation units must be generated automatically.

For example, valuation unit V1 comprises cost organization A and lot L1, and valuation unit V2 comprises cost organization B and lot L2. The processor calculates two different costs for an item, a cost for valuation unit V1 and a cost for valuation unit V2.

The cost processor automatically generates the valuation units if the valuation structure mode is set to Auto or Both auto and manual. You can also manually create valuation units under a valuation structure by using different combinations of the corresponding costing attributes.

Based on the valuation structure type, the valuation unit can be an asset valuation unit, expense valuation unit, or consigned valuation unit.

Manual Valuation Unit

When you define a valuation structure, you can set whether the valuation units must be generated automatically, which is the recommended option, or whether you want to manually define the valuation units. Typically, you would opt to create manual valuation units only if you want to group entities and share a common cost for them.

We'll explore this with an example. Consider you're using average cost method for an item and you've defined the valuation structure at the cost organization, inventory organization, and subinventory level. Also, you've defined the cost organization, inventory organization, and subinventory as listed here:

- Cost Organization - M1
  - Inventory Organization - L1
    - Subinventory - FG
    - Subinventory - WIP
    - Subinventory - MRB
  - Inventory Organization - L2
    - Subinventory - FG
    - Subinventory - WIP

Let's say you've set the valuation unit creation to Auto and you perform a product completion as the first transaction in the subinventory FG. Because a valuation unit doesn't exist for the cost organization, inventory organization, and subinventory combination, the application would create a new valuation unit for this combination. Subsequent transactions for this combination of cost organization, inventory organization, and subinventory will be processed by the cost processor using this valuation unit. This approach is recommended because it has the least manual intervention and, therefore, likely to be error free.

However, let's say you have a requirement to group inventory control attributes to have different costs for different combinations of subinventory. You want to use the same cost for the FG and WIP subinventories but have a different cost for the MRB subinventory. You can then create a manual valuation unit where you attach both the FG and WIP subinventories to the same valuation unit.

Create a Valuation Unit

You can create valuation units for a cost organization and cost book combination to define the set of values for the costing attributes that are used to cost the items.

1. In the Setup and Maintenance work area, click the **Manage Valuation Units** task in the Cost Accounting functional area.
2. Click **Create** in the **Actions** menu to create a valuation unit.
3. On the Create Valuation Unit page, select the **Cost Organization** and **Cost Book**.
   The valuation unit is used to cost the items in this cost organization and cost book combination.
4. Enter a name and an optional description for the valuation unit.
5. Select the **Valuation Structure Code** that the valuation unit must use.
6. Click **Actions** > **Add Row** and enter the segment values.
   You can add multiple rows to define the segment values for which the valuation unit will be applicable.
7. Click **Save and Close**.

Examples of Using Valuation Structures to Calculate Item Costs

Let's go through a few examples of how the cost accounting application maintains costs for an item using different valuation structures.

Assume that a cost organization stocks an item in four stores under two inventory organizations, as given in the table.

Cost Organization	Inventory Organization	Subinventory	Lot	Item	Quantity	Cost per Unit	Total Cost
CO-US	Retail Store 1	Store 1A	A	Gadget A	50	50	2500
CO-US	Retail Store 2	Store 2B	C	Gadget A	45	44	1980
CO-US	Retail Store 2	Store 2A	C	Gadget A	60	45	2700
CO-US	Retail Store 1	Store 1B	B	Gadget A	40	48	1920

Item Cost at Cost Organization Level

The application calculates and maintains the item cost at the cost organization level. It maintains one cost for the item across all inventory organizations in the cost organization. The table lists the cost distribution.

Valuation Structure	Unit Average Cost
Cost Organization	46.67

Item Cost at Inventory Organization Level

The application calculates and maintains the item cost separately for each inventory organization in the cost organization. The table lists the cost distribution.

Valuation Structure	Inventory Organization	Unit Average Cost
Cost Organization - Inventory Organization	Retail Store 1	49.11
Cost Organization - Inventory Organization	Retail Store 2	44.57

Item Cost at Subinventory Level

The application calculates and maintains the item cost separately for each subinventory in the cost organization. The table lists the cost distribution.

Valuation Structure	Inventory Organization	Subinventory	Unit Average Cost
Inventory Organization - Subinventory	Retail Store 1	Store 1A	50
Inventory Organization - Subinventory	Retail Store 1	Store 1B	48
Inventory Organization - Subinventory	Retail Store 2	Store 2A	45
Inventory Organization - Subinventory	Retail Store 2	Store 2B	44

Item Cost at Lot Level for Each Subinventory and Inventory

The application calculates and maintains the item cost separately for each lot under each subinventory and inventory organization. The table lists the cost distributions.

Valuation Structure	Inventory Organization	Subinventory	Lot	Unit Average Cost
Inventory Organization - Subinventory - Lot	Retail Store 1	Store 1A	A	50
Inventory Organization - Subinventory - Lot	Retail Store 1	Store 1B	B	48

Valuation Structure	Inventory Organization	Subinventory	Lot	Unit Average Cost
Inventory Organization - Subinventory - Lot	Retail Store 2	Store 2A	C	45
Inventory Organization - Subinventory - Lot	Retail Store 2	Store 2B	C	44

Item Cost at Lot Level for Each Inventory

The application calculates and maintains the item cost separately for each lot under each inventory organization. The table lists the cost distributions.

Valuation Structure	Inventory Organization	Subinventory	Lot	Unit Average Cost
Inventory Organization - Lot	Retail Store 1	Store 1A	A	50
Inventory Organization - Lot	Retail Store 1	Store 1B	B	48
Inventory Organization - Lot	Retail Store 2	Store 2A	C	44.57
Inventory Organization - Lot	Retail Store 2	Store 2B	C	44.57

Items, Valuation Units, and Cost Profiles

You can define different cost profiles for asset items and expense items. You can define an asset cost profile or an expense cost profile for an asset item. For an expense item you define an expense cost profile.

You can manually associate cost profile to items or create a default cost profile rule to automatically associate them to items when they are encountered for the first time by the costing processor.

The cost processor identifies the appropriate cost profile to be applied on the transaction based on the **Inventory Asset Value** flag on the item and the **Asset subinventory** flag on the sub-inventory.

	Asset Subinventory	Expense Subinventory
Asset Item	Asset cost profile	Expense cost profile
Expense Item	Expense cost profile	Expense cost profile

The cost processor maintains the cost, inventory balances, and distributions separately based on the cost profile. For example, the same item could have two different costs for a Cost Organization – Cost Book – Valuation Unit combination. As listed in the table here, the item RCV-101 has two different costs. It costs $3.25 when costed using expense cost profile and $1.10 when costed using asset cost profile.

Item	Valuation Unit	Cost Profile	Total Unit Cost	Quantity	Inventory Value
RCV-101	ORG4-V1	ZCST-Expense	$3.25	10	32.5
RCV-101	ORG4-V1	ZCST-Asset	$1.10	15	16.5

Also, the inventory valuation is maintained separately for asset and expense valuation structure types. You can view this on the Review Inventory Valuation page. The valuation structure type is also available as a parameter in all reports so that you can review the on-hand value separately by asset and expense valuation structure types.

Units of Measure to Cost an Item

Overview of Units of Measure

You can cost an item using different units of measure (UOMs) for different business purposes, such as pricing, reporting or tracking costs.

The UOM is one of the attributes of a cost profile. You can calculate different costs for an item by assigning it cost profiles with different UOMs.

Primary and Secondary UOMs

To illustrate the use of a primary or secondary UOM, consider the case of chickens that can be costed by a UOM of each or of pounds. There's no standard conversion from one UOM to the other. In such a case, the costing UOM depends on how the chickens are sold, priced, or tracked. It may be more logical to cost the chickens by pound if that's how they're sold. However it may be more useful to cost them by each for planning and tracking purposes. In this case, the primary UOM could be each, and the secondary UOM could be pounds.

When an item in a cost organization and book combination is assigned a cost profile that specifies the use of the primary or secondary UOM, the cost accounting application uses the primary or secondary UOM that's defined in the item validation organization.

Related Topics

- Cost Profiles, Default Cost Profiles, and Item Cost Profiles
- How Cost Organizations, Inventory Organizations, and Cost Books Fit Together
- Example of Using Different Units of Measure

Example of Using Different Units of Measure

This example illustrates how to calculate costs for an item using different units of measure.

Scenario

Consider a jewelry retail business that sells gold rings. The company purchases the rings in dozens, and maintains inventory costs in dozens and single units.

Shipment Quantities and Costs

The company receives five shipments of rings as follows.

Shipment No.	No. of Rings	Total Shipment Cost
1	2 dozen	4,800 USD
2	3 dozen	5,400 USD
3	5 dozen	10,500 USD
4	2 dozen	5,400 USD
5	6 dozen	7,200 USD

Analysis

Define a primary unit of measure of dozens and a secondary unit of measure of single units. You can calculate two different costs for each shipment using the primary unit of measure and the secondary unit of measure.

Resulting Costs in Primary and Secondary Units of Measure

The costs using the primary versus the secondary units of measure are as follows.

Shipment No.	Cost in Primary Unit of Measure	Cost in Secondary Unit of Measure
1	2,400 USD	200 USD
2	1,800 USD	150 USD
3	2,100 USD	175 USD
4	2,700 USD	225 USD
5	1,200 USD	100 USD

Exclude Nonquantity Tracked Subinventory Locations from Inventory Valuation

Periodic automatic replenishment (PAR) locations are commonly configured as nonasset and nonquantity-tracked because the supplies are consumed as expenses rather than held as inventory. Cost Management distinguishes eligible nonquantity-tracked PAR subinventories from quantity-tracked expense subinventories. It processes their transactions in a separate valuation unit of the expense cost profile, recognizes receipts into these locations as expenses without tracking inventory value, and excludes them from revaluation when costs change.

This applies only for a PAR subinventory where the Quantity tracked and Asset subinventory options aren't selected. Cost Management derives the expense cost profile for transactions in the subinventory and uses the QUANTITY_TRACKED valuation segment to direct eligible transactions to the nonquantity-tracked valuation unit.

For cost methods other than standard cost, receipt transactions created with use item cost in the nonquantity-tracked valuation unit are costed at zero cost. For the standard cost method, receipts use the existing standard cost. If a transaction, such as a purchase order receipt or miscellaneous receipt, carries its own cost, Cost Management books the difference between that cost and the standard cost as a variance.

For upgrades using the standard cost method, Cost Management adjusts the on-hand amount associated with nonquantity-tracked subinventories in the expense valuation unit so that Inventory Valuation reports show the actual expense value for quantity-tracked subinventories. The postupgrade correction is controlled through the CST_UPG_NQTY_ONHAND_CALC profile option.

1. In the Setup and Maintenance work area, search for and select the **Manage Costing Key Flexfields** task.
2. Select the **VALU** key flexfield code.
3. Select **Manage Structures** and search for the valuation structure to update or create a valuation structure that includes the required costing segments and the QUANTITY_TRACKED segment.

   For an existing valuation structure, edit the structure. Always add QUANTITY_TRACKED as the last segment and configure it as follows:

Field	Value
Segment Code	QUANTITY_TRACKED
API Name	quantityTracked
Name	QUANTITY_TRACKED
Prompt	QUANTITY_TRACKED
Short Prompt	QUANTITY_TRACKED
Enabled	Yes
Display Width	25
Column Name	QUANTITY_TRACKED
Default Value Set Code	ORA_CST_QTY_TRACKED
Sequence Number	Next available or highest sequence number in the structure

4. Select **Save and Close** after creating or editing the QUANTITY_TRACKED key flexfield segment.
5. Select **Done** on the Manage Key Flexfield Structures page.
6. Deploy the flexfield and select **Done** on the Manage Costing Key Flexfields page.

If you're using the standard cost method, after upgrade:

1. Navigate to Setup and Maintenance work area and select the **Manage Profile Options** task.
2. Verify that the CST_UPG_NQTY_ONHAND_CALC profile option is available at the site or user level.
3. Select the **Manage Administrator Profile Values** task.
4. Set the site or user value to Yes for the profile option.
5. Select **Save and Close**.

The change takes effect the next time that you sign in.

FAQs for Defining Cost Accounting Policies

Can I delete or modify a cost profile, a default cost profile, or an item cost profile?

No. You can't delete or modify a cost profile after it has been used to cost transactions for an item. However, if a cost profile hasn't been used to cost any transactions, you can delete or modify it after you delete references to it in other cost management setup.

What happens when I select different options for processing negative inventory quantities?

The options for processing inventory quantities when the transaction quantity exceeds the quantity on hand are:

- Always: applies cost for the entire transaction, including negative balances. The cost processor costs the transaction as follows:
    - If the cost method is perpetual average cost, it applies the average cost for the entire transaction quantity.
    - If the cost method is actual cost, it applies the FIFO layer cost for the entire transaction quantity, and then processes a cost variance when the next receipt replenishes inventory.
- To Zero: applies cost only for quantity on hand, and holds the remaining shortfall until inventory is replenished.
- Never: does not apply cost for the transaction until quantity is sufficient to cover the entire transaction.

What happens if the Project segment is added to a Valuation Structure that doesn't have the Inventory Organization segment?

The costing of the transactions happens at the valuation unit level and receipts/issues are processed based on the FIFO logic maintained in the costing application. Now, if the valuation unit doesn't have inventory organization, then the receipts and issues are treated like this.

Let's say you have a project PJ1 effective in the INV1 and INV2 inventory organizations. The tables lists the receipts and issues in the inventories.

Date	Receipt/Issue	Inventory Organization	Project	Quantity
01 Jan	Receipt	INV1	PJ1	1000
02 Jan	Receipt	INV2	PJ1	900
03 Jan	Issue	INV2	PJ1	500

If the valuation unit is at Cost Organization - Project level and both INV1 and INV2 are part of the CORG1 cost organization, then the depletion layers will be like this.

```
1st Jan CORG1-PJ1 Receipt 1 +1000
2nd Jan CORG1-PJ1 Receipt 2 +900
```

```
3rd Jan CORG1-PJ1 Issue 1 -500 from Receipt 1
```

Overheads Absorption

How Expense Pools, Cost Element Groups, and Overhead Accounting Rules Fit Together

Use expense pools, cost element groups, and overhead accounting rules to calculate overhead absorption for inventory transactions. Overhead expenses can be absorbed and capitalized into inventory, or they can be absorbed and reclassified as an expense.

Overhead Costs Expensed or Capitalized

On inbound transactions and inventory transfer transactions, overhead expenses can be absorbed and capitalized into inventory value, or the absorption can be redirected to an expense account: a credit to an absorption account and a debit to either an inventory or expense account. On outbound transactions, overhead absorption is redirected to an expense account, and will be included in the gross margin calculation.

For example, consider a receipt of inventory items that cost $10 each to purchase, and you would like to absorb overhead cost of $2 each on the inbound transaction. When the item is sold, you would like to absorb additional overhead of $3 each on the outbound transaction. The total cost of goods sold is $15 each.

Expense Pools

Expense pools represent a collection of general ledger expense accounts that can be absorbed as overhead costs. Expense pools are defined at the cost organization level. Overhead rules are defined for expense pools, and an expense pool can have many overhead rules that absorb it.

Expense pools are mapped to a cost element, and a cost element can contain one or more expense pools. When overhead is absorbed, an accounting distribution is created for each expense pool, so you can define accounting rules crediting the absorption account at the expense pool level. Once the inbound transaction is in inventory, the application tracks the value of inventory at the cost element level, so that you can track costs through inventory at the desired level of granularity.

Cost Element Groups

Cost element groups tell the processor which cost elements to sum when the overhead rule is a percentage of cost. Cost element groups can be system defined or user defined, and they're set at the cost organization level.

There are two predefined cost element groups, Transaction Cost and Material. You can also define your own cost element groups.

Overhead Accounting Rules

The application uses the overhead accounting rules that you define to determine when and how overhead costs should be calculated. Overhead calculations are based on cost element pools or cost element groups.

Overhead accounting rules are defined at the cost organization book level. You can set the calculations to absorb overhead at the level of the cost organization, inventory organization, item category, or item.

Related Topics

- Example of Using Expense Pools and Cost Element Groups to Calculate Overhead Absorption

Example of Using Expense Pools and Cost Element Groups to Calculate Overhead Absorption

This example shows how to use expense pools and cost element groups to define overhead accounting rules, and calculate overhead absorption for transactions.

Scenario

Your cost organization is a bicycle retail store with:

- Monthly overhead costs of 10,000 USD for rent 500 USD for water, 1,500 USD for electricity, and 1,000 USD for gas.
- Additional costs of 50 USD freight per incoming receipt; and 10 USD inspection fees per unit.

You want to calculate overhead absorption for 5 transactions during the month:

- 2 receipts of bike X
- 3 receipts of bike Y

Transaction Details

You combine the water, electricity, and gas costs into one utility expense pool of 3,000 USD. Then define the expense pools on the **Manage Overhead Expense Pools** page as described in this table.

Expense Pool	Cost Element
Rent	Warehouse Overhead
Utilities	Warehouse Overhead
Freight	Freight Overhead
Inspection	Warehouse Overhead

Next, define a Materials cost element group on the Manage Overhead Cost Element Groups page. You use this cost element group to calculate overhead costs as a percentage of material costs. Your material costs are:

- 500 USD per unit for bike X
- 300 USD per unit for bike Y

Finally, you want overhead costs to include cost organization administrative and inventory organization facilities costs.

Analysis

Define the overhead accounting rules and absorption rates so that, for each month, the total amount absorbed by the transactions equals the overhead expense pools.

This table describes the overhead accounting rules and absorption rates:

Overhead Accounting Rule	Transaction Group	Transaction Type	Item or Item Category	Expense Pool	Cost Element	Cost Basis	Based On Cost Element Group	Rate
Rule1	Purchase Order Transactions	Purchase Order Receipt	Item Bike X	Rent	Warehouse Overhead	Per unit	Not Applicable	150
Rule2	Purchase Order Transactions	Purchase Order Receipt	Item Bike X	Rent	Warehouse Overhead	Per transaction	Not Applicable	500
Rule3	Purchase Order Transactions	Purchase Order Receipt	Item Bike Y	Rent	Warehouse Overhead	Percentage	Materials	45%
Rule4	Purchase Order Transactions	Purchase Order Receipt	Category Bike	Utilities	Warehouse Overhead	Percentage	Materials	12%
Rule5	Purchase Order Transactions	Purchase Order Receipt	Category Bike	Freight	Freight Overhead	Per transaction	Not Applicable	50
Rule6	Purchase Order Transactions	Purchase Order Receipt	Category Bike	Inspection	Warehouse Overhead	Per unit	Not Applicable	10
Rule7	Purchase Order Transactions	Purchase Order Receipt	Category Bike	Administrative	Warehouse Overhead	Percentage	Materials	5%
Rule8	Purchase Order Transactions	Purchase Order Receipt	Category Bike	Inventory Organization Facilities	Warehouse Overhead	Percentage	Materials	5%

Note: The value type in the Rate column is determined by the Cost Basis column. All Rate values not listed as percentages are in the currency of the applicable cost book.

Resulting Overhead Costs

The following table describes the overhead cost calculations based on the rules defined.

Transaction	Item	Quantity	Rent	Utilities	Freight	Inspection	Cost Organization Administrative Costs	Inventory Organization Facilities
1	Bike X	10	2,000	600	50	100	250	250
2	Bike X	15	2,750	900	50	150	375	375
3	Bike Y	10	1,350	360	50	100	150	150
4	Bike Y	15	2,025	540	50	150	225	225
5	Bike Y	10	1,350	360	50	100	150	150
Total Overhead Absorption	Not Applicable	Not Applicable	9,475	2,760	250	600	1,150	1,150

Related Topics

- Overhead Accounting Rules
- How Expense Pools, Cost Element Groups, and Overhead Accounting Rules Fit Together

Overhead Accounting Rules

Overhead accounting rules establish how to absorb overhead costs into inventory value and into cost of goods sold.

The overheads processor checks for the rule based on the type of transaction. If a rule is defined and set to active, the processor applies overhead absorption to the transaction.

You can define the overhead accounting rules from the Manage Accounting Overhead Rules page in the Cost Accounting work area.

Overhead Accounting Rule Attributes

Associate an overhead accounting rule with a cost organization, cost book, and expense pool. The cost element from the expense pool definition is displayed automatically.

Also specify the following attributes:

- Transaction group (mandatory) and transaction type (optional). The transaction groups are predefined and they include one or more transaction types. You can define overhead rules at the transaction group level, or at the transaction type level. The transaction group options are Interorganization Transfers, Intraorganization Transfers, Inventory Transactions, Purchase Order Transactions, Sales Order Issues, and Sales Order Returns. The transaction group controls the transaction type options, which are more granular. If the transaction type detail isn't provided, then the overhead absorption occurs for all transaction types within the transaction group.
- Transaction flow (mandatory). Options are Issue or Receipt.

- Inventory organization. Required only when absorbing overhead at the level of the inventory organization. If this attribute is blank, then the overhead is applied to all transactions in all inventory organizations under the cost organization.
- Category name and item. Required only if you're absorbing overhead at the item category or item level.

Cost Drivers

In addition to the attributes, specify the cost drivers for the rule.

The cost drivers include:

- Cost basis (required). Options are Per Lot, Per Transaction, Per Unit, or Percentage Value. Lot is based on the standard lot size defined in the item master. The processor divides the per lot overhead rate by the standard lot size to arrive at the per unit overhead cost. For example, suppose the lot size is 100 units, the overhead rate is 10 per lot, and the quantity is 150 units; then the overhead cost per unit is 10/100 = 0.1; and the overhead absorbed is 0.1 * 150.
- Based on. Mandatory if the cost basis is Percentage Value, and it specifies the cost element group that the percentage is based on.
- Rate (mandatory). Represents either the overhead percentage amount that you want to apply to the predefined cost element group, or the currency amount that you want to apply per unit or per transaction.
- Absorption type (mandatory). Options are Include in Inventory, and Expense. The following are examples of different kinds of absorption:
    - Absorb to inventory value when overhead is applied to incoming transactions, including transfers from other inventory organizations.
    - Absorb and redirect as a period expense when overhead is applied to incoming transactions.
    - Absorb overhead from the expense pool and redirect to cost of goods sold when overhead is applied to outgoing transactions.

Note:

- If you select the Transaction Type as Purchase Order Receipt Into Work Order, the Absorption Type options are Include in Work Order, instead of Include in Inventory, and Expense.
- For maintenance work orders:
    - If you set the Absorption Type to Expense, the overhead component debits the Expense accounting line type.
    - If you set the Absorption Type to Include in Work Order, the overhead component debits the Maintenance Expense accounting line type.
- For standard costed items, only overhead absorption rules with the Absorption Type set to Expense will be considered for cost processing.

Overhead Accounting Rules for Periodic Average Cost

When defining the overhead rules for a periodic average cost enabled cost book, you can set rules for cost owned and cost derived transactions.

In the case of cost owned transactions, you can define overhead rules with absorption type set to Inventory, WIP, and Expense. Overheads absorbed into Inventory or WIP are considered for calculating the periodic average cost. Overheads with absorption type as Expense are absorbed as period expense.

In the case of cost derived transactions, you can define overhead rules with absorption type as Expense only. This will be absorbed as period expense for the period.

> **Note:** Receipt transactions without cost, such as miscellaneous receipt without cost, are cost derived transactions. However, if you define an overhead rule with transaction type as Inventory transaction, then this overhead rule won't be applied to the cost derived receipt transactions. The rule will only be applied for cost owned receipt transactions.

The table lists the applicable overhead absorption for different transaction flow.

Transaction Flow	Cost Owned/Cost Derived	Overhead Absorption
Direct Intraorganization transfers	Cost derived	Expense
Direct Interorganization transfer within valuation unit	Cost derived	Expense
Interorganization transfer receipt across valuation units	Cost owned	Inventory or WIP and Expense
Interorganization transfer issue across valuation units	Cost derived	Expense
Inventory transactions with cost	Cost owned	Inventory and Expense
Inventory transactions without cost	Cost derived	Expense
Purchase order transactions	Cost owned	Inventory and Expense
Sales order issue	Cost derived	Expense
RMA against original sales order across periods	Cost owned	Inventory and Expense
Unreferenced RMA and RMA within same period	Cost derived	Expense
WIP material transactions	Cost owned	WIP and Expense
WIP completion transactions	Cost owned	Inventory and Expense
Trade events	N/A	Expense

When you are creating or modifying a rule revision, you must specify the starting period and an optional ending period. You can define rules for periods that are in the never opened, open, or pending close status.

An overhead rule is applicable from the first date of the starting period to the last date of the ending period. When you define a rule for the current open period, it will be applicable from the first date of the period, irrespective of the current date. This is different from defining overhead rules for cost books with the periodic average cost option not enabled, where you can't define rules with an earlier start date than the current date.

If you define a rule to be valid across multiple periods or if you don't set the ending period for the rule, the rule is carried forward to the next open period when the current period is closed. You can add and modify rules as long as the period is not closed. When a period is closed, the rules are frozen for that period and can't be updated. However, you can

revise the rules for the next open period. When you revise the rule, you must modify the ending period of the latest rule revision to ensure that there are no overlapping periods.

For example, you've defined an overhead rule in the period January'22.

Revision Number	From Period	To Period	Start Date	End Date	Rate	From Period Status
1	Jan'22	Jun'22	1/1/22	6/30/22	5.00000	Open

In the period April'22, you want to revise the rate to 6 percent. Then the rule revision will be as shown in the table.

Revision Number	From Period	To Period	Start Date	End Date	Rate	From Period Status
2	Apr'22	Jun'22	4/1/22	6/30/22	6.00000	Open
1	Jan'22	Mar'22	1/1/22	3/31/22	5.00000	Permanently Closed

Note: If you haven't set the ending period for a rule, when you add revision with a new starting period, the existing revision is automatically end dated.

Related Topics

- How Expense Pools, Cost Element Groups, and Overhead Accounting Rules Fit Together
- How Cost Organizations, Inventory Organizations, and Cost Books Fit Together
- Periodic Average Cost Method
- Periodic Average Costing Process

Standard Cost Overhead Absorption Rules

You can define an item standard cost to include overhead cost elements. The overhead costs are absorbed and accounted for against all receipt transaction types by default.

However, you can define which transaction groups and transaction types must absorb the overhead for standard costed items. This lets you to account for overhead absorption for specific transactions, such as purchase order receipt, while not absorbing overheads for other transactions, such as miscellaneous receipts or subinventory transfers.

By defining the standard cost overhead accounting rules, you can minimize over-absorption by specifying the types of transactions that don't require overhead absorption. For example, absorbing freight overhead may not be required for miscellaneous receipts or subinventory transfers if the overheads are already absorbed on a purchase order receipt. This eliminates the manual creation of journal entries to correct the excess absorption and, also, simplifies your accounting setup in Subledger Accounting.

In the Cost Accounting work area, select the Standard Cost Overhead Absorption Rules tab on the Manage Accounting Overhead Rules page to define whether the overheads must be absorbed for standard costed items by a transaction group and transaction type. Click the Add Row button and set the parameter values.

- Transaction Group (mandatory) and Transaction Type (optional). The transaction groups are predefined and they include one or more transaction types. You can define overhead rules at the transaction group level or at the transaction type level. The transaction group controls the transaction type options, which are more granular. If the transaction type isn't provided, then the overhead absorption occurs for all transaction types within the transaction group.
- Absorb Overheads (mandatory). Options are Yes and No.

Tips and Considerations

Make a note of the tips and considerations listed here:

- You can change the value of Absorb Overheads. However, the changes will only apply to future transactions.
- Overhead absorption rule defined at the lowest level takes precedence. For example, you define a rule at the transaction group level for Inventory transactions with Absorb Overheads set to No. You also define a rule at transaction type level for Miscellaneous Receipt, which belongs to the transaction group Inventory transactions, with Absorb Overheads set to Yes. In this scenario, all transaction types belonging to the Inventory transactions group, except Miscellaneous Receipt, won't absorb overheads. This lets you to define overhead absorption rules with exceptions.
- RMA receipt transactions don't absorb overhead costs and isn't available for setup on the Standard Cost Overhead Absorption Rules tab.
- Return transactions for purchase orders and transfer orders derive the overhead absorption setting from the corresponding receipt transactions.
- Adjustment transactions use the same overhead absorption setting as the original transaction.
- Absorbing overhead costs for work order product completion and work order product return transactions for standard cost method items are set up in the Manage Overhead Rates page.

Transaction Groups and Transaction Types

You can define the standard cost overhead absorption rules only for the applicable transaction groups and transaction types listed in the table. The table also lists the accounting line type if Absorb Overheads is set to No for a transaction group or transaction type. If Absorb Overhead is set to Yes, the default behavior, then the accounting line type is Overhead Absorption.

Transaction Group	Transaction Type	Accounting Line Type
Interorganization transfers	Direct Organization Transfer	Transfer Price Variance
Interorganization transfers	In Transit Receipt	Transfer Price Variance
Interorganization transfers	Transfer Order Interorganization Receipt	Transfer Price Variance
Interorganization transfers	Transfer Order Interorganization Transfer	Transfer Price Variance
Interorganization transfers	Transfer Order Return Receipt	Transfer Price Variance

Transaction Group	Transaction Type	Accounting Line Type
Interorganization transfers	Transfer Order Return Transfer	Transfer Price Variance
Intraorganization transfers	Cycle Count Transfer	Offset
Intraorganization transfers	Inventory Lot Merge	Offset
Intraorganization transfers	Inventory Lot Split	Offset
Intraorganization transfers	Inventory Lot Translate	Offset
Intraorganization transfers	Movement Request Transfer	Offset
Intraorganization transfers	Physical Inventory Transfer	Offset
Intraorganization transfers	Project Transfer	Offset
Intraorganization transfers	Sales Order Pick	Offset
Intraorganization transfers	Subinventory Transfer	Offset
Intraorganization transfers	Transfer Order Intraorganization Receipt	Offset
Intraorganization transfers	Transfer Order Pick	Offset
Intraorganization transfers	Transfer Order Return Pick	Offset
Intraorganization transfers	Transfer to Owned	Offset
Intraorganization transfers	Work in Process Pick	Offset
Inventory transactions	Account Alias Receipt	Offset
Inventory transactions	Account Receipt	Offset
Inventory transactions	Cycle Count Adjustment	Offset
Inventory transactions	Miscellaneous Receipt	Offset
Inventory transactions	Physical Inventory Adjustment	Offset
Purchase order transactions	Purchase Order Receipt	Purchase Price Variance

Transaction Group	Transaction Type	Accounting Line Type
Purchase order transactions	Purchase Order Receipt Into Work Order	Purchase Price Variance
Trade costing events	Trade In Transit Receipt (Global Procurement)	Purchase Price Variance or Transfer Price Variance
Trade costing events	Drop Ship Delivery (Simple Procurement Customer Drop Ship)	Purchase Price Variance

Note: For the Trade costing events transaction group listed in the previous table, keep these points in mind:

- In the case of a global procurement flow, the overheads are absorbed by the supplier facing organization for the Trade in Transit Receipt transaction. Therefore, the standard cost overhead absorption rule for the Trade In Transit Receipt transaction is only applicable for the global procurement flow.
- The standard cost overhead absorption rule for the Drop Ship Delivery transaction type is only applicable for a customer drop ship delivery with a simple procurement flow.

FAQs for Defining Overheads Absorption

Can I delete or deactivate a cost element group?

Yes. You can deactivate a cost element group by first deactivating all rules where it is referenced. However, you cannot delete a cost element group after it has been used to define an overhead accounting rule because historical records are maintained for audit purposes.

Can I delete or deactivate an expense pool?

Yes. You can deactivate an expense pool by first deactivating all rules where it is referenced. However, you cannot delete an expense pool after it has been used to define an overhead accounting rule because historical records are maintained for audit purposes.

Can I delete or deactivate an overhead accounting rule?

Yes. You can deactivate overhead accounting rules. However you cannot delete overhead accounting rules that have been used to calculate overhead absorption in any transactions because historical records are maintained for audit purposes.

Subledger Accounting

Implement Subledger Accounting

You can configure rules in Subledger Accounting to automatically transform subledger transactions into detailed journal entries. Flexible rules help define accounting policies and generate accounting for legal and corporate reporting.

Reconciling accounting to transaction data enables drill down from general ledger to underlying subledgers and standard reports.

Based on your requirement, implement subledger accounting for Cost Accounting and Receipt Accounting using any of these methods.

Use Predefined Mapping Sets

For using predefined mapping sets, specify transaction attributes and account combinations.

Use Standard Implementation

Do the following to use the standard implementation:

- Create an accounting method.
- Set up user defined journal entry rule sets.
- Assign user defined journal entry rule sets to accounting method.
- Activate journal entry rule sets assignments.
- Preview accounting results.

When you use predefined mapping sets, the commonly used transactional attributes are available to you to define the accounting rules. Whereas, if you opt for the standard implementation, then you can leverage the full feature set of transaction attributes for accounting purposes.

Set up tasks are available for implementing subledger accounting for Cost Accounting and Receipt Accounting.

Along with the information provided here, see Oracle Fusion Financials, Implementing Subledger Accounting documentation for more information on the core features of Subledger Accounting.

Define Subledger Accounting Rules

Overview of Accounting Methods

Accounting methods group subledger journal entry rule sets. This facilitates the definition of consistent accounting treatment for each accounting event class, and accounting event type, for all subledger applications. This grouping enables a set of subledger journal entry rule sets to be assigned collectively to a ledger.

For example:

- A subledger accounting method can be defined to group subledger journal entry rule sets that adhere to and comply with US Generally Accepted Accounting Principles (GAAP) criteria.
- By assigning a different subledger accounting method to each related ledger, you can create multiple accounting representations of transactions.

Accounting rules can be defined with either a top-down, or a bottom-up approach.

- Top-Down: Define the accounting method, followed by components of each rule that must be assigned to it.
- Bottom-Up: Define components for each rule and then assign them as required.

The Create Accounting process uses the accounting method definition with active journal entry rule set assignments to create subledger journal entries.

When an accounting method is initially defined its status changes to Incomplete. The status will also be Incomplete after modifying a component of any accounting rule associated with the assigned journal entry rule set.

> **CAUTION:** The accounting method must be completed, by activating its journal entry rule set assignments, so that it can be used to create accounting.

The following definitions are used to define the journal entries, and are applied as updates to the accounting method:

- Updates to the predefined accounting method
- Assignment of journal entry rule sets for an accounting event class and accounting event type from the accounting methods page
- Assignment of accounting methods to ledgers
- Activation of subledger journal entry rule set assignments

Updates to the Predefined Accounting Method

You may update a predefined accounting method by end dating the existing assignment and creating an assignment with an effective start date.

Assignment of Journal Entry Rule Set for Accounting Event Class and Accounting Event Type

You create the assignment of a journal entry rule set for an accounting event class and accounting event type using the accounting method page.

The following should be considered for assigning rule sets:

- If the accounting method has an assigned chart of accounts you can use journal entry rule sets that:
  - Use the same chart of accounts
  - Are not associated with any chart of accounts
- You can assign to existing journal entry rule sets or create a new one.

Assignment of Accounting Methods to Ledgers

If the accounting method has an assigned chart of accounts, it may only be used by ledgers that use the same chart of accounts.

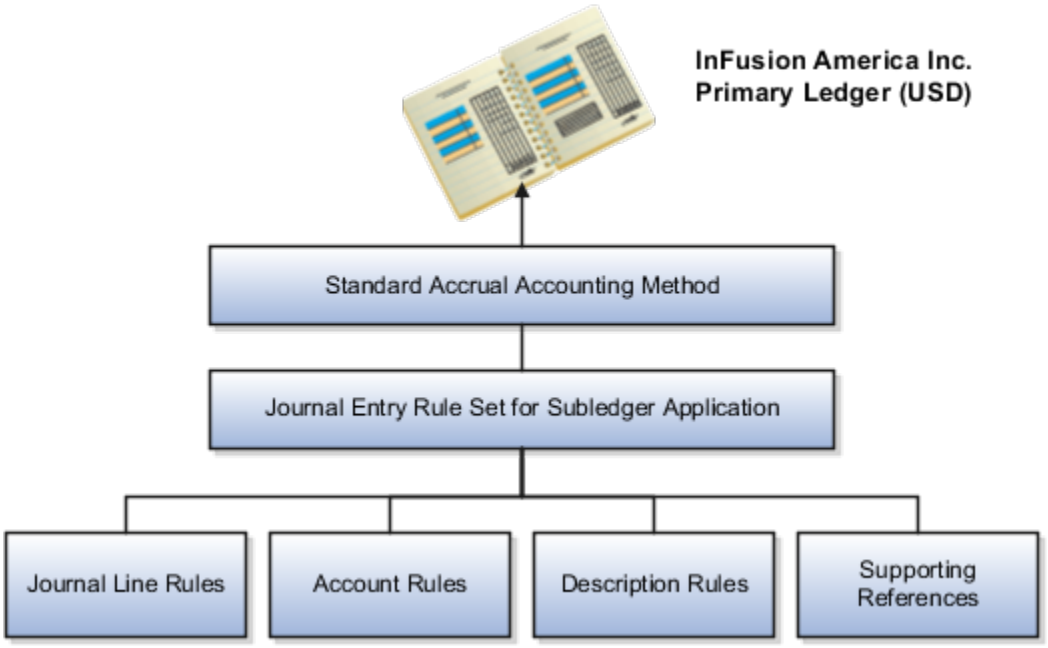
If the accounting method doesn't have an assigned chart of accounts, the accounting method can be assigned to any ledger.

Activation of Subledger Journal Entry Rule Set Assignments

You can activate the subledger journal entry rule set assignments from the Accounting Method page. You can also submit the Activate Subledger Journal Entry Rule Set Assignments process to validate and activate your accounting set ups.

Accounting Method and Accounting Rules

This figure illustrates the relationship of the components used in an accounting method.



Overview of Subledger Journal Entry Rule Set

Subledger journal entry rule sets provide the definition for generating a complete journal entry for an accounting event.

Select the option to define the subledger journal entry rule set for a particular accounting event class or accounting event type.

If you're using multiple ledgers to meet divergent and mutually exclusive accounting requirements, you can vary journal entry rule sets by ledger. Each of the subledger journal entry rule sets can meet a specific type of accounting requirements.

For example, use US Generally Accepted Accounting Principles (GAAP) oriented subledger journal entry rule sets for a ledger dedicated to US GAAP reporting. Use French statutory accounting conventions for a ledger dedicated to French statutory reporting. These two sets of definitions have differences based on the setup of the various components that make up their subledger journal entry rule sets.

Predefined subledger journal entry rule sets are provided for all Oracle subledgers. If specific requirements aren't met by predefined subledger journal entry rule sets, create a copy of the predefined definitions, rename, and modify the copied definitions and their assignments.

Subledger journal entry rule set assignments can be made at two levels, header and line. The following are the sub-components of a subledger journal entry rule set:

- Description rules
- Journal line rules
- Account rules

Assignment at Header Level

Header assignments define subledger journal header information and line assignments define journal line accounting treatment.

A header assignment includes the following:

- Accounting date (required)
- Accrual reversal accounting date (optional)
- Description rule (optional)

Assignment at Line Level

You can define multiple subledger journal entry rule sets for an accounting event class or accounting event type. Using the line assignment of the journal entry rule set assigned to the accounting event class or type, a single journal entry is generated per accounting event per ledger.

The following can be assigned to a journal entry line:

- Journal line description rule
- Journal line rule
- Account rule
- Supporting references

Assignment of Description Rules

If a description rule is defined with sources, the sources must also be assigned to the accounting event class that's assigned to the journal entry rule set. The description rule may be assigned at either the header or line level of the journal entry or to both levels.

Assignment of Journal Line Rules

When assigning the journal line rule, you must identify the line type: Gain, Loss, Gain or Loss, Credit, or Debit. The journal line rule must be assigned to the same accounting event class as the one assigned to the subledger journal entry rule set.

When assigning a journal line rule that's enabled for accounting for a business flow, the account combination and certain accounting attribute values are copied from its related journal line having the same business flow class as the current line. Optionally, copy the description rule into the current line instead of assigning a separate description rule.

When assigning a journal line rule that's enabled to copy from the corresponding line within the same journal entry, you have the option to copy the account combination, the segment value, or the line description from the corresponding line into the current line.

Assignment of Account Rules

The account rule assignment defines which accounts are used for the subledger journal line. If the account rule is set up with a chart of accounts, it must have the same chart of accounts as the one assigned to the journal entry rule set. When account rules are defined with sources, the sources must also be assigned to the accounting event class that's assigned to the journal entry rule set.

There are two types of account rules:

- Account Combination Rule: Assign an account combination rule to derive the account combination.
- Segment Rule: Assign a segment rule to derive a specific segment of an account. For example, a cost center or a natural account segment.

Assignment of Supporting References

Supporting references may be used to capture transaction values on journal entry lines. A supporting reference can be used on a journal entry rule set only if it's assigned a source from the event class of the journal entry rule set.

Journal Line Rules

Journal line rules are defined within the context of accounting event classes. A journal line rule can be used in a subledger journal entry rule set that has the same event class. You may also assign conditions to the journal line rule.

How You Create Journal Line Rules

Journal line rules are assigned to journal entry rule sets.

To create a journal line rule, select values for options such as:

- Side (Debit, Credit, Gain or Loss)

  For example, when a payables invoice is generated, the liability account should normally be credited. The journal line rule must therefore specify the Side option as Credit. On the other hand, the payment of the Payables invoice must be accounted with a debit to the liability account. A separate journal line rule must be defined to create this debit line.

- Merge Matching Lines: To summarize subledger journal entry lines within each subledger entry. Journal entry lines with matching criteria are merged. Here is the list of matching criteria that are used:
    - Account combination
    - Accounting class
    - Anchor line (for PeopleSoft Accounting Hub Cloud)
    - Budgetary control status
    - Business flow class
    - Conversion date
    - Conversion rate
    - Conversion rate type
    - Currency
    - Description
    - Encumbrance type
    - Gain or loss
    - Gain or loss reference
    - Merge matching lines
    - Multiperiod accounting class
    - Reconciliation reference
    - Replaced account
    - Rounding class
    - Supporting references
    - Switch side
    - Third party
    - Third-party site
    - Third-party type
    - Transaction rounding reference

When Merge Matching Lines = All, DR and CR lines with the same merge criteria are merged together with a net amount. It will only result in 1 line, either in DR or CR.

When Merge Matching Lines = No, accounting lines are not merged even when merge criteria have the same values.

When Merge Matching Lines = Debit or Credit, DR and CR lines with the same merge criteria are merged separately by the side. DR lines are merged to DR and CR lines are merged to CR. It may result in both debit and credit lines.

- Accounting Class
    - Select an accounting class to classify journal entry lines.
    - For example, when a validated Payables invoice is accounted, the Item Expense and Liability journal lines are created. In this case, the journal line rules used in the accounting rules are assigned Item Expense and Liability accounting classes respectively.
- Switch Debit and Credit: Reverses a debit for a credit and a credit for a debit. For example, you can select this option to ensure that if a negative amount is entered for a journal, the journal line is created with positive amount in the opposite side.
- Conditions: To restrict the use of a journal line rule by controlling when a particular journal line rule is used by the Create Accounting process.
- Accounting Attributes: When creating a journal line rule, accounting attribute assignments are automatically established. These are based on the default accounting attribute assignments for that journal line rule's accounting event class. You can override this default mapping of standard sources to accounting attributes. The list of values for the source override includes all sources assigned to the accounting attribute, for the event class associated with the journal line rule.
- Advanced Options
    - The Subledger Gain or Loss Option: Applies only to amount calculations for the primary ledger. Gain or loss amounts aren't converted to reporting currency or nonvaluation method secondary ledgers. If the option is selected, the journal line holds the gain or loss amounts calculated by the subledger.

      The gain or loss amount is calculated as the difference in applied amounts due to fluctuations in conversion rates, based upon conversion to the ledger currency. Foreign exchange gain or loss amounts occur when two related transactions, such as an invoice and its payment, are entered in a currency other than the ledger currency, and the conversion rate fluctuates between the times that the two are accounted.
    - The Rounding Class Option: Along with transaction rounding, groups journal lines together and calculates transaction rounding. Subledger transaction rounding differences can occur when a transaction has multiple-related applied-to transactions, such as a Receivables invoice that has multiple associated receipts.
    - The Link Journal Lines Option: Determines whether the journal line rule is set up to establish a link between the accounting of transactions that are related both within the same application, and across applications. The alternatives are described in this table:

This table contains the Link Journal Line Options and their descriptions.

Link Journal Lines Option	Description
None	Retains the existing business rules enforced by the journal line rule definition. Choose this option when the journal line doesn't rely on any other journal entry.
Copy from corresponding line	Copies the GL account combination or specific segment values from the offsetting line of the current journal entry. For example, you can overlay the balancing segment value on the credit line with the balancing segment value from the debit line. This option works only when there is exactly one offsetting line in the journal entry.

Link Journal Lines Option	Description
Business flow	Establishes a link between accounting entries of related transactions within the same application or across applications. This allows key accounting attributes, such as GL account, currency conversion rate, and supporting references, to be preserved across related transactions instead of being rederived. This helps maintain consistent balances throughout the lifecycle of a business flow.

Note: In Accounting Hub, only None and Copy from corresponding line advanced options are supported. The Business flow option isn't available for Accounting Hub implementations.

Defining Conditions for Journal Line Rules

You may set conditions to specify whether the journal line rule is used to create a subledger journal entry line. If the conditions are true, the line rule is used to create a subledger journal entry line. Use sources to create these conditions.

For example, you can set up a condition that creates a journal line to record tax, only if there's tax for an invoice. The line type and account class mentioned here are examples of sources.

- The condition for a Payables invoice tax journal line rule could be:
  - Where Line Type = Tax
  - When this condition is true, there's tax for a payables invoice line. A journal entry line is created to record the accounting impact of the tax.
- Similarly, the condition for an invoice tax journal line rule could be:
  - Where Account Class = Tax
  - In this case, if there's an account class of Tax, the journal line is used to record the accounting impact of the tax.

Another example is a condition that creates a journal line for freight when there are freight charges on an invoice.

Journal line rule conditions determine whether a journal line rule and its associated account rules and description rules are used to create the subledger journal entry line. If the conditions of all the journal line rules assigned to the journal entry rule set aren't met, the transaction is processed without the creation of any subledger journal entries, and the event status is set to Processed.

Note: Constant values that are used in any Conditions region must not contain the following characters:

- "
- ,
- &
- |
- (
-)
- '

For example, in the condition "Project Type" = ABC (123), the constant value following the equal sign, ABC (123), contains restricted characters ( ) that enclose 123 and is invalid.

Related Topics

- Examples of Creating Condition

FAQs for Defining Subledger Accounting Rules

How can I create subledger account rules and subledger journal entry rule sets for cost management?

Create your subledger account rules on the Manage Account Rules page. It is recommended that you highlight the account rules predefined by Oracle, copy, and modify them as needed.

Create your subledger journal entry rule sets on the **Manage Subledger Journal Entry Rule Sets** page. It is recommended that you highlight the journal entry rule sets predefined by Oracle, copy, and modify them as needed. For each journal line rule specify the copied account combination rule.

In the **Setup and Maintenance** work area, you can access both the **Manage Account Rules** task and the **Manage Subledger Journal Entry Rule Sets** task in the **Manufacturing and Supply Chain Materials Management** offering.

Note: You must configure the predefined account rules and journal entry rule sets before proceeding with the setup of subledger accounting rules for cost management.

Why are duplicate accounting events generated in the subledger?

If you've implemented custom accounting rules, you need to verify your implementation to avoid generation of duplicate accounting events.

Create an Accounting Method

To create an accounting method, do the following:

1. Click **Navigator** > **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Accounting Methods** task.
5. In the **Manage Accounting Methods** page, click **Actions** and then click **Create**.
6. In the **Create Accounting Method** page, provide the required information and then click **Save and Close**.

Note: You can also duplicate the standard accrual accounting method instead of creating a new method.

Viewing Predefined Journal Line Types

In Journal Line Rules, there are various event classes and journal line types for each event class.

To view predefined journal line types:

1. Click **Navigator** > **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Journal Line Rules** task.
5. In the **Manage Journal Line Rules** page, set the **Created By Application** to **Yes**, select the event class and search.

   The Search result lists the predefined journal line types for the selected event class.

Set Up User-Defined Account Rules

Use account rules to create simple or complex rules to assign general ledger accounts to accounting events.

There are several predefined accounting rules that are available and are easily identifiable by looking at the **Created By Application** column. The predefined account rules aren't ready-to-use as they aren't created in the context of the chart of accounts. The predefined account rules are provided to help you create your own rules by using them as templates.

For example, create an account rule for identifying the general ledger account rules for the **Cost of Goods Sold** event class.

1. Click **Navigator** > **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.

3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Account Rules** task.
5. In the **Manage Account Rules** page, search for the predefined account rule for **Cost of Goods Sold**.

   The **Cost of Goods Sold** event class is discussed here as an example.

   To identify the predefined rules, set the **Created by Application** search parameter to **Yes**.
6. Click the **Duplicate** icon to create a duplicate of the predefined account rule for **Cost of Goods Sold**. Enter a rule name, a short name (in capital letters) and then select the chart of accounts.

   Once chart of accounts is assigned to an account rule and this task is saved, you cannot modify the assignment.
7. Click **Save and Close**.

   The **Edit Account Rule** page is displayed.
8. Specify the account selection criteria in the **Rules** region; however, don't change any values in the **Conditions** region.
9. In the **Rules** region, the **Value Type** column has four options.

   - **Source**
   - **Constant**
   - **Accounting Rule**
   - **Mapping Set**

   Source Value Type

   Source is only applicable to the **Accrual Account Rule** in Receipt Accounting and the **Offset Account Rule** in Cost Accounting when the account is retrieved from the purchase order for the Accrual account and from the Miscellaneous Transaction for the Offset account.

   If you select **Source** as **Value Type**, then set the value as **Code Combination Identifier**.

   Constant Value Type

   If the **Value Type** is set to **Constant**, you can select the specific account from the chart of accounts as the default general ledger account type of the Journal line type.

   Accounting Rule Value Type

   Use this value type to retrieve values from the accounting rule.

   Mapping Set Value Type

   A mapping set is useful when you have a matrix of input values that produce distinct output values. For each input value, specify a corresponding account combination. One or more related pairs of these input values with

the account combination output values form a mapping set. Ensure that a Chart of Accounts is associated with the mapping set.

Once a mapping set is defined, you can associate the mapping set to an account rule. Copy each predefined account rule and create a rule.

For more information on these four options, see documentation on Oracle Fusion Financials, Implementing Subledger Accounting Account Rules.

Set Up User-Defined Journal Entry Rule Sets

To set up journal entry rule sets:

1. Create a journal entry rule set.
2. Copy the predefined journal entry rule sets to associate the user-defined account rules.
3. Set the **Created by Application** option to **Yes** and then click **Search**.

   The predefined journal entry rules sets are displayed.

To create a journal entry rule for associating the user-defined account rules:

1. Create a copy of the predefined journal entry rule set by highlighting the row and clicking the **Duplicate** icon.
2. Provide information for name, short name, description, and chart of accounts.
3. Click **Save and Close**.
4. In the **Edit Journal Entry Rule Sets** user interface, replace the predefined account rules with the account rules that you have created.
5. After you have replaced all the account combination rules within the journal entry rule set, click **Save and Close**.

   The original search results are displayed.

   Repeat the previous steps to create all the necessary journal entry rule sets.

Assign User-Defined Journal Entry Rule Sets to Accounting Method

To associate the recently created journal entry rule sets to the newly created accounting method:

1. Select the accounting method that you created while performing the activity, Creating an Accounting Method.
2. In the **Edit Accounting Method** user interface, add the journal entry rule sets that you created.
3. Identify the account class and the event type in the predefined journal entry rule sets that you want to replace with the new value after you have replaced all the account combination rules within the journal entry rule set you created earlier. Delete the row that you identified for replacement and add a new row with the same event class and event type and enter the new value once you have replaced all the account combination rules within the journal entry rule set. (Optional) Enter the effective start date and save the row.

   For example, to replace the **Sales Order Issue** predefined journal entry rule set after you have replaced all the account combination rules within the journal entry rule set with the newly created **Sales Order Issue 2** journal entry rule set.

   a. Select the predefined journal entry rule set assigned to this subledger accounting method and delete it.

b. Once this is deleted, add the new rule set **Sales Order Issue 2** to this accounting method.
c. Click **Save and Create Another** to replace all the predefined journal entry rule sets with the journal entry rule sets that you have newly created.

Activate Assigned Journal Entry Rule Sets

After the setup is complete, you must activate the journal entry rule sets that are newly assigned to the subledger accounting method. You can do this directly from the Edit Accounting Method user interface or from the separate task provided.

To run the accounting method activation as a separate process:

1. In the **Navigator**, click **Setup and Maintenance**.
2. On the **Setup and Maintenance** page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the **Setup: Manufacturing and Supply Chain Materials Management** page, based on your requirement, click the **Cost Accounting** or the **Receipt Accounting** functional area.

   The subledger accounting related setup tasks are in the respective functional areas.
4. Click the **Manage Accounting Methods** task, and then activate the subledger journal entry rule set assignments.
5. Run this process for the accounting method and subledger application with **Incomplete Status Only** set to **No**.

   This step is recommended for activating an accounting method especially if many changes were made to the journal entry rule sets.
6. You can review the status of the process from the **Scheduled Processes** task.
7. (Recommended) Archive the current accounting rule setup configuration by initiating the **Accounting Setups** Report.

Preview Accounting Results

To ensure that the correct general ledger accounts are selected:

1. Run **Create Accounting**.

   Once complete, check the results.

Overview of Mapping Sets

Mapping sets provide an efficient way to define a segment or account combination value for one or more transaction or reference attribute values. Using such input and output mappings is simpler than using complex conditions on account rules.

Based on the value of the source input, a single segment or a full account is derived.

Examples of source input value types:

- Transaction attributes
- Reference attributes

With mapping sets you can:

- Use up to 10 transaction or reference attributes as inputs into a mapping.
- Define default output value to use when actual input values don't match the mappings.
- Use wildcards for multiple input mapping sets to indicate that the value of a particular input should be ignored for certain mappings.
- Enter the mappings directly on the user interface or use the spreadsheet available in the Export option, and then import.
  Export allows:
  - Exporting a template to create mappings.
  - Exporting all mappings created for the mapping set to add or edit the current mappings.

Example

Assume a business operates in several regions, including:

- East
- South
- West

The business has a Region segment in their chart of accounts.

The region name can be the input for the mappings to derive the value of the region segment. You can create a mapping set that maps region names to the corresponding region code.

This table contains region names and segment values used in this example.

Input Value (Region Name)	Segment Value
East	01
South	02
West	03

Additional transaction information, such as transaction type and salesperson name, could also be used as inputs to help derive a different segment value for each combination of the input values.

Overview of Predefined Mapping Sets

There are predefined mapping sets for all the journal line rules with commonly used sources. For each journal line rule, there are three to five sources such as Inventory Organization, Sub-Inventory, Item Category, and Item.

The benefits of using predefined mapping sets for implementation include:

- Enabling quick implementation of subledger accounting.
- Providing commonly used transaction source attributes.

- Enabling easy maintenance when compared with defining and maintaining the user-defined account rules.

Unique mapping sets are predefined for each journal line rule. Some of the predefined mapping sets for Cost Accounting are, **Consigned Clearing**, **Consigned In-Transit**, **Consigned Inspection**, and so on. View Cost Accounting user interface for the complete list of mapping sets. Predefined Mapping Sets for Receipt Accounting are, **Consigned Accrual**, **Consigned Clearing**, **Consigned Inspection**, and so on. View the Receipt Accounting user interface for the complete list of mapping sets.

The mapping set created for each journal line type is added to a predefined account rule.

Use Predefined Mapping Sets

Use predefined mapping sets for Cost Accounting.

The steps to use predefined mapping sets are:

1. Select chart of accounts.
2. Specify the transaction attributes as input and account combinations as output for every chart of accounts.
   Set up input parameters for every chart of accounts. While specifying inputs, you must provide input sources, that is, provide the transaction attributes.
   For example, if you are using the mapping set, **Consigned Clearing**, then you have to provide one or more of the following input sources.
   - **Inventory Organization Code**
   - **Costing Category Identifier**
   - **Subinventory Code**
   - **Item Number**
3. For the mapping set **Consigned Clearing**, provide an account combination as the output type.
4. Automatically enable or disable the account derivations using **Effective Dates**.
5. (Optional) Set account combinations as default to support subledger accounting activities for which specific rules are not set up.
6. Use spreadsheet based import and export functionality.

Enable Account Combination Derivation for Costing Distributions with the Periodic Average Cost Method

In the periodic average cost method, the cost of an item can change every time you run the cost processor because the cost is calculated based on all the cost owned transactions in the period. To view the impact on accounting during the period and before the period is closed, you can derive the account combinations when you run the Create Cost Accounting Distributions process if you're using the periodic average cost method.

Using the **Transaction Account Definition** option in Cost Accounting, you can set up mapping sets to identify and stamp the account combinations on costing transactions.

To enable this, you must perform these tasks:

1. Set up subledger accounting options.
2. Create the CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC profile option.

3. Enable the CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC profile option.
4. Configure the mapping sets.

Set up Subledger Accounting Options

1. In the Setup and Maintenance work area, navigate to **Cost Accounting > Manage Subledger Accounting Options**.
2. Search for the required ledger.
3. Select the Cost Management subledger for the selected ledger and click edit in Accounting Options.
4. Set the Transaction Account Definition option to **Costing Transaction Accounting Definition for Standard Accrual**.
5. Click **Save and Close**.

Create the CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC Profile Option

1. In the Setup and Maintenance work area, access the **Manage Profile Options** task.
2. Click the new (+) icon.
3. Set the parameters on the Create Profile Option page.
    - Profile Option Code: **CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC**
    - Profile Display Name: **Derive distributions for costing transactions**
    - Application: **Cost Management**
    - Module: **Cost Accounting**
    - Description: **Derive distributions for costing transactions**
    - SQL Validation: **Select MEANING, LOOKUP_CODE from FND_LOOKUPS where LOOKUP_TYPE='YES_NO'**
    - Start Date: First date of the current open period or today's date
4. Click **Save and Close**.

Enable the CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC Profile Option

1. In the Setup and Maintenance work area, access the **Manage Cost Accounting Profile Options** task.
2. Search for the **CST_DERIVE_CCID_DISTRIBUTIONS_FOR_PAC** profile option code.
3. Click the new (+) icon in Profile Values and set the parameters:
    - Profile Level: **Site**
    - Profile Value: **Yes**

    Click **Save and Close**.

Configure the Mapping Sets

In the Setup and Maintenance work area, access the Manage Transaction Account Definitions task. The Transaction Account Definition uses the predefined Account Combination Rules. You can use the predefined mapping sets that are linked to these Transaction Account Types to set up the mapping sets. For example, for the Inventory Valuation account, you need to identify the mapping set linked to the Inventory Valuation account combination rule and modify it as per your requirements. Because this is a predefined mapping set, you can only add the chart of accounts and enter the conditions in the Mappings section.

Related Topics

- Overview of Mapping Sets
- Overview of Predefined Mapping Sets
- Use Predefined Mapping Sets

FAQs for Subledger Accounting

How do I identify the sources available for a transaction type?

Cost Management has nearly 1000 accounting sources that are seeded and associated to event classes. Not all sources are relevant for all event classes. Use the Manage Subledger Transaction Objects page to identify if a source is associated with an event class.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Cost Accounting
    - Task: Manage Subledger Application Transaction Objects
2. Select the event class to which the specific transaction type belongs.
3. Click **View Source Assignments**.

The page shows all the sources associated with the event class.

Can I use the sources defined for other subledgers in Cost Accounting?

Some of the sources created for the Receipt Accounting subledger are also available for Cost Accounting. Similarly, some of the sources created for the Cost Accounting subledger are also available for Receipt Accounting. You can use the Manage Subledger Transaction Objects page to confirm if the source that you're looking for is associated with the event class.

When searching for the sources in the Mapping Set or the Description Rule page in the Cost Accounting subledger, ensure that you select Receipt Accounting to search for these sources. Likewise, when searching in the Mapping Set or the Description Rule page in the Receipt Accounting subledger, select Cost Accounting to search for these sources.

These are few examples of sources that are created for Cost Accounting but also available in Receipt Accounting for select event types:

- Inventory Category
- Item Sales Account
- Source Sub-inventory
- Transfer Order Destination Indicator
- Unit of Measure

These are few examples of sources that are created in Receipt Accounting but also available in Cost Accounting for select event types:

- Purchase Order Accrual Account
- PO Number
- Deliver to Business Unit
- Destination Type Code
- Purchase Order Charge Account

Key sources from Project Cost Accounting have also been included for most of the relevant event classes in Cost Accounting and Receipt Accounting.

What if a source is available but the mapping set isn't working with that source?

In some cases, although a source is associated with an event class, it might not be relevant for a specific event type.

For example, a sub-inventory code is associated with the event class, but the sub-inventory isn't stamped on a specific event type of that event class. You can identify whether the selected source is stamped for the specific transaction by reviewing the Accounting Event Diagnostics report.

To enable the diagnostics report:

1. In the Setup and Maintenance work area, select the Manufacturing and Supply Chain Materials Management offering.
2. Select the Cost Accounting functional area.
3. Search for and select the Manage Subledger Accounting Profile Options task.
4. Search for the profile with the Profile Display Name as Diagnostics Enabled.
5. Add a row with these information and click **Save**.
    - Profile Level: User
    - User Name: User name of the user who runs the Create Accounting process.
    - Profile Value: Yes
6. Now, run the Create Accounting process.
7. Run the Accounting Event Diagnostic Report process and download the diagnostics report.

> **Note:** Set the profile value to No after you download the report. Keeping the profile value as yes will lead to poor performance of the Create Accounting process.

What are the options available if the Value Type is set to Source when defining an account rule?

If you select the value type as Source, these code combination identifiers are available for use in the account rule:

- Code Combination Identifier from the Miscellaneous Transactions

- Destination Business Unit Charge Account
- Destination Business Unit Variance Account
- Item Sales Account (from the Item Validation Organization Item Details)
- Purchase Order Charge Account
- Purchase Order Variance Account
- Sales Representative Revenue Account (refers to the revenue account mapped to the sales representative)
- Sales Revenue Account (Don't use; this is for Oracle Internal use only)

How can I resolve errors in the accounting results?

If the Create Accounting process ends with errors or warnings, you can resolve these errors or warnings using any of the following methods.

1. Review errors in the **Create Accounting Execution** report.
2. If you have selected viewing errors for a specific transaction, query the transaction from the **Review Cost Accounting Distributions** user interface.
3. Navigate to the **Journal Entries** tab. If errors are present, then they are listed against each line.
4. Use **Advanced Diagnostic**. For activating this feature, refer to the **Accounting Event Diagnostic** Report.

How can I modify predefined mapping sets?

You can modify existing predefined mapping sets by:

- Adding input and output conditions.
- Adding new chart of accounts.

Adding a new source to an existing predefined mapping set is not supported. Use standard implementation for creating mapping sets with new sources.

13 Landed Cost Management

Overview of Landed Cost Management

Oracle Landed Cost Management gives your organization financial visibility into your supply chain costs, including transportation and handling fees, insurance, duties, and taxes. These types of charges can compose a significant portion of the cost of an item.

Landed Cost Management enables you to incorporate the charges accurately into overall financial processes and decision-making activities. You can initially estimate these costs and later update them with actual amounts as they become known, allocating them to shipments, orders, and products.

Landed Cost Management helps you perform three main tasks:

- Capture charges: You can capture charges such as freight, insurance, and tax. These charges are captured and grouped under an entity called trade operation. A trade operation is a logical entity that denotes a single instance of a business transaction or process in which you would like to capture all the charges; for example a single shipment or a container.
- Perform allocations: You can associate charges on a trade operation to invoices, for purcase orders and transfer orders. You can then distribute and allocate the charge amount to the respective orders and further on to the receipts performed on those orders.
- Create accounting: You can transfer the charge information to Receipt Accounting and Cost Accounting, as a final step to account for all the charges that were incurred.

Landed Cost Management interfaces with these applications:

- Oracle Purchasing: Landed Cost Management receives the material PO information. Trade operation charges are associated with PO schedules and allocated proportionately to PO schedules and receipts.
- Oracle Receipt Accounting: Tasks performed when managing landed costs use the data from Receipt Accounting, and Receipt Accounting creates the accounting entries to accrue landed cost charges.
- Oracle Cost Accounting: Charges from Landed Cost Management are absorbed as part of the item cost in Cost Accounting. After the goods are delivered to inventory, the landed cost charges are absorbed into inventory valuation.
- Oracle Tax: Taxes may be applicable to charges coming from Landed Cost Management. The charges are defined in Landed Cost Management. Taxes are automatically calculated, when applicable, by calling the Tax application.
- Oracle Payables: In most cases, suppliers send invoices for the services they provide (particularly for freight). When these invoices relate to charges defined in a landed cost trade operation, it's possible to automatically associate an invoice amount to a landed cost charge applied to a receipt. For example, when there is a receipt of items, the bill of lading number from the freight supplier is specified in the receipt. Then when the freight supplier invoice is processed, the invoice line references that bill of lading number. When the freight supplier invoice is interfaced to the landed cost application, the bill of lading number that is common to the receipt and invoice lines is automatically associated. As a result, the landed cost application compares the estimated amount of freight charge in the receipt to the actual amount of freight charge billed in the invoice, and adjusts the cost of the receipt for any calculated cost variance.
- Oracle Receiving: The receipt information is automatically copied to the trade operation based on associated purchase order schedules, purchase order shipments, and transfer order shipments. The allocation process also prorates the estimated amount to the receipt.

Implementing Oracle Receipt Accounting is a prerequisite for Landed Cost Management. Implementing Oracle Cost Accounting is optional. If you implement Cost Accounting, the landed cost charges are also visible in Cost Accounting. Several options are available for implementing Landed Cost Management, based on the source of these landed cost charges. You can implement a combination of one or more of these options, where the source of the landed cost charges can be:

- A payable invoice from a service provider or supplier
- A supplier purchase order for the service
- An estimate provided by a supplier or any other source

Related Topics

- Landed Cost Management Tasks
- Create Estimated Landed Costs
- Analyze Landed Cost Charges and Variances

How You Set Up Landed Cost Management

Set Up Landed Cost Management

To set up Landed Cost Management, you must complete the setup tasks displayed in the Setup and Maintenance work area.

1. In the Setup and Maintenance work area, perform the tasks from the **Landed Cost Management** functional area.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Landed Cost Management
2. Perform the setup tasks in the order in which they're listed.

The following table describes the setup tasks to implement Landed Cost Management, and states whether each task is required or optional.

Setup Task	Required or Optional	Description
Manage Charge Names	Required	Define landed cost charges and configure default attributes. These charges are regular expenses that are incurred while transporting material from the supplier to a receiving location. For example, freight, taxes, duties, handling fee, and so on.
Manage Landed Cost Reference Types	Optional	Define charge reference types representing unique business documents and other references which drive a trade operation.
Manage Routes	Optional	Define routes for classifying similar trade operations into a higher level entity.

Related Topics

- Configure Offerings

Considerations for Setting Up Landed Cost Management

When setting up Landed Cost Management, consider the following:

- Map landed costs to cost components in Cost Accounting
- Create trade operation templates

Map Landed Costs to Cost Components in Cost Accounting

In the Setup and Maintenance work area, use the Manage Cost Component Mappings task in the Manufacturing and Supply Chain Materials Management offering to map landed costs to cost elements in cost accounting, and to capitalize landed costs.

Cost elements are the level where you want to track costs through inventory. Use cost component mappings to define cost component groups, which map cost components to cost elements, and to map source cost elements to destination cost elements when items are transferred from one inventory organization to another. The mapping group is referenced later by item cost profiles, which are used to specify cost policies for items.

Create Trade Operation Templates

A trade operation is used to capture and allocate the landed cost charges that are incurred for material shipments. Trade operations can be modeled on a single shipment or a group of shipments. A trade operation template can be used to create trade operations quickly, in cases where a business performs similar trade transactions and makes regular shipments.

Use the Create Trade Operation Template page to set up the most frequently incurred charges, and the amounts for these charges. When you create a trade operation by using the template, all of the charges and related information are automatically copied onto the trade operation.

Charge Names

Manage Charge Names

The landed cost of purchased items includes their material cost as well as supplier and third-party charges incurred to deliver them to their final destination.

In the Setup and Maintenance work area, use the Manage Charge Names task in the Manufacturing and Supply Chain Materials Management offering to define landed cost charge names that are used to capture and analyze landed cost charge amounts.

User-defined landed cost charges can include the following examples:

- Freight and transportation costs, from the supplier to the buyer's ultimate location.

- Costs associated with the physical preparation of the goods in order for them to be transported such as labeling, picking, packaging and packing goods, including all inventory, distribution center, and warehouse costs.
- Loading and unloading costs, loading penalties, and other surcharges.
- Haulage, storage, and detention fees.
- Equipment and container fees.
- Sales tax and value added tax (VAT).
- Import and export charges, import VAT fees, customs brokerage fees, and excise taxes.
- Port or pier fees, cargo handling fees, and harbor maintenance fees.
- Currency revaluations, with currency fluctuations and multiple currency conversions.

When you define landed cost charges, use the Manage Cost Component Mappings task to define how landed cost charges map to cost elements in Cost Accounting.

Related Topics

- Considerations for Setting Up Landed Cost Management

FAQs for Charge Names

What are landed costs?

Landed cost refers to the total cost of acquiring goods in a particular location. It includes the cost of the product along with all additional expenses incurred during the procurement and transportation process.

What's a landed cost charge?

Landed cost charges are additional material supplier charges and third party charges that are incurred in the process of receiving material into ownership or possession, including consigned scenarios where custody may be with another party.

Can I modify a landed cost charge name?

Yes, you can modify a charge name before it's associated with a PO schedule or a trade operation. However, you can't modify a charge name after it's associated with a PO schedule or a trade operation.

Landed Cost Reference Types

Manage Landed Cost Reference Types

Landed Cost charge reference types are unique references of trade documents executed as a part of a trade operation.

In the Setup and Maintenance work area, you can access the Manage Charge Names task in the Manufacturing and Supply Chain Materials Management offering. Use the Manage Charge Names task to:

- Set up Landed Cost charge names.

- Configure default charge attributes.
- Define applicable tax attributes, reference types, and analysis groups.

Charge reference types are associated to a landed cost charge during setup to indicate the default business documents that generally drive the charge. The reference types associated to a charge name during charge definition will default to a trade operation charge and to the invoice line when it's classified with a Landed Cost charge name. You can associate one or multiple default reference types to charge names. You can leverage reference types to facilitate invoice association by assigning an appropriate reference type to a charge.

FAQs for Landed Cost Reference Types

What's a landed cost reference type?

Reference types are business documents, such as bills of lading, that are associated with landed cost charges in trade operations to provide an audit trail of the charges. Reference types are also matched with invoices to capture actual charge amounts.

What's a trade operation?

A trade operation is an entity that's used to group landed cost charges expected to be incurred for material shipments. You can create a trade operation for an upcoming shipment to capture the landed cost charges incurred for that shipment.

You can also create the trade operation after the actual shipment.

Routes

Manage Routes

In the Setup and Maintenance work area, use the Manage Routes task in the Manufacturing and Supply Chain Materials Management offering to define routes through which materials will be transported. Defining routes enables you to group trade operations and analyze global shipping costs.

For example, if you assign trade operations to routes, you can answer questions such as what the total costs are to ship goods from China to Singapore and then to the warehouses in India, Australia, and the United States.

Note: Defining routes in Landed Cost Management is an optional setup task.

FAQs for Routes

What's a route?

Landed Cost Management routes are setup entities that you can use to group multiple trade operations. This helps in analyzing the cost of trade operations from a geographical region.

14 Fiscal Document Capture

Overview of Fiscal Document Capture

Oracle Fiscal Document Capture allows you to document trade between suppliers and customers.

Fiscal documents serve as a bill of lading that details the quantity of items being transported from the supplier to its customers or from customers to suppliers. Also, they serve as a proxy invoice from the supplier with information on the material costs, supplier charges, and taxes that are payable by the customer.

Specify Freight Fiscal Flow Preferences

You can have either the regular freight acquisition fiscal flow or a bookkeeping version or both.

There is no difference in the XML format of a regular freight acquisition fiscal document and the only bookkeeping fiscal document. If you want to use both options of the freight fiscal flow, you must specify the preference for automatic flow identification.

To define a preference for the automatic flow identification as part of the XML import flow:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Management
    - Functional Area: Receipt Accounting
    - Task: Manage Mapping Sets
2. Search for Mapping Set Fiscal Document Freight Fiscal Flow and click Edit the Mapping Set.
3. In the Value Set area, click **Add**.
4. Select 'ORA_CMF_FREIGHT_FISCAL_FLOWS_VS' and click **OK**.
5. Click **Save**.
6. In the Mappings area, click Add to map the Model, Business Unit Identifier and Freight Document Fiscal Flow.
7. You can further refine this mapping by Receiver Taxpayer ID and Supplier Taxpayer ID.
8. You can import and export to manage mass uploads of data.

Note: Add only one value set to the mapping set. If you add more than one value set to the mapping set, the fiscal documents fail to import through XML.

Automatically Derive the Inbound CFOP During XML Import

During XML import you can automatically derive the inbound CFOP based on the fiscal document's CFOP. This seamless capture is possible by configuring the predefined mapping set: Fiscal Document CFOP Mapping.

To automatically derive the inbound CFOP, do the following:

1. In the Setup and Maintenance Work Area, go to the Manufacturing and Supply Chain Materials Management Offering:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receipt Accounting
2. Click on the Manage Mapping Sets task.
3. Search and select the seeded mapping set: Fiscal Document CFOP Mapping.
4. Navigate to the Value Set region and add the seeded value set: ORA_CMF_INBOUND_CFOP and click Save.

    Note: Add only one value set to the mapping set. If you add more than one value set, then during the XML import the fiscal documents will not be processed.

5. Click the Add icon to create mapping between the fiscal document CFOP which is also known as Transaction Business Category and the Inbound CFOP.
6. You can further refine this mapping by Intended Use and Fiscal Flow Name.

    Note: Fiscal Document CFOP is mandatory for considering it as a valid mapping.

7. You can use the export and import option available on the tool bar to manage mass upload of the data.

Once these prerequisite steps are done, on XML import, on the Edit Fiscal Document page, under Lines, the Inbound CFOP is automatically derived based on the combination of Outbound CFOP, Fiscal Flow, and Intended Use defined in the mapping set. However, if there is no combination available in the mapping set, the Outbound CFOP remains blank, and the FD status remains New. You also get a validation error that you must specify the Inbound CFOP. To resolve this, you can either define mapping sets with relevant combination and re-run the validation OR manually select the Inbound CFOP from the drop-down, save, and re-run the validation.

Note: If you would like to avoid this validation error, disable the mapping set or remove the value set from value set region and process the fiscal document.

Automatically Derive Default Charge Account for Fiscal Document Lines Without a Source Document

You would need to provide a distribution account on the fiscal document when capturing FD lines without source for creating an invoice in Accounts Payable.

You can streamline this process especially when you are bringing in huge volumes of fiscal documents using XML using the new predefined mapping set.

To automatically derive the default charge account, do the following:

1. In the Setup and Maintenance work area, use the Manage Work Centers task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Receipt Accounting
    - Task: Manage Work Centers
2. Search for Fiscal Document Distribution Account Derivation and select to edit it.

3. In the Chart of Accounts area, click Add.
4. From the List of Values, select the chart of account mapped to the primary ledger of the legal entity enabled for Brazil localization for which the fiscal documents are captured.

   Note: Chart of Accounts is defined for a ledger. If your business has multiple legal entities and multiple ledgers, ensure that you add the respective primary ledgers under the Chart of Accounts, and define the mapping for each of the chart of accounts individually. You can define a default distribution account as output in the mapping region at a granular level using various input sources available.Distribution account defined at a granular level is prioritized over a generic mapping during fiscal document processing.

5. In the mappings area, you can either click Add to define a default charge account for a combination of variables or use the export, import capability for bulk upload.
6. Click Save and Close.

Note: You can create a mapping set of your choice and add that mapping set name to the Meaning of the ORA_CMF_DEFAULT_DISTR_ACCT_MAP lookup. On next fiscal document import, the application uses that new mapping set, and automatically derives the account based on the parameters defined in it.

Automatically Derive Sold to Legal Entity and Business Unit During XML Import

For businesses with complex and shared legal entity enterprise structures, you can automatically derive the Sold to Legal Entity and Business Unit values for incoming Fiscal Documents using XML import.

To automatically derive these values, do the following:

1. In the Setup and Maintenance work area, go to the Manage Profile Options task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Task: Manage Profile Options
2. On the Manage Profile Options page, enable the `ORA_CMF_DERIVE_LE_BU_FROM_PARTY` profile option.
3. Click Save and Close.

Once you enable this option, during XML import, the application uses the CNPJ details on the incoming XML fiscal document to identify the Legal Reporting Unit and derive the Sold to Legal Entity and Bill to Business Unit details from the LRU.

In scenarios where either there is no business unit or there are multiple business units associated with the LRU, Business Unit having the legal Entity of the LRU as Default LE, will be derived as Bill to BU. However, if multiple business units or no business unit have the reference of the Legal Entity of LRU as Default LE, derivation will not happen and will require manual intervention from the Manage Interface Exceptions page.

Automatically Derive Acknowledged Date

You can configure the ORA_CMF_DEFAULT_ACKDATE_TO_SYSDATE profile option to default the acknowledged date of the fiscal document to the system date while importing the fiscal document.

The legal entity's time zone setup is also considered while determining the default date.

To automatically derive the acknowledged date, do the following:

1. In the Setup and Maintenance work area, use the Manage Administrator Profile Values task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: SCM Common
    - Task: Manage Administrator Profile Values
2. On the Manage Administrator Profile Values page, enable the ORA_CMF_DEFAULT_ACKDATE_TO_SYSDATE profile option at Site or Product or User level.
3. Validate the same from the Manage Profile Options page.

Use PO for Freight Fiscal Flows

You can use purchase order for Freight Fiscal Flows except Freight Acquisition Fiscal Flow.

During XML import, you can capture the freight fiscal documents sent by the third-party service provider against a purchase order with automatic matched invoices. This seamless capture is possible by configuring the default source document source as purchase order.

To configure the default source document source as purchase order, do the following:

1. In the Setup and Maintenance Work Area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Task: Manage Standard Lookups
2. On the Manage Standard Lookups page, search for the lookup type ORA_CMF_SYSTEM_OPTIONS.
3. Against this lookup type, select the lookup value ORA_CMF_FREIGHT_WITH_PO and update the meaning to ORA_CMF_FREIGHT_WITH_PO_Y to import the freight fiscal documents by default as PO Matched.

Use Receipt Creation Date as Acknowledgement Date

You can set the acknowledgement date for the fiscal document to be overridden based on when the actual receipt record is processed.

To use receipt creation date as acknowledgement date. do the dollowing:

1. In the Setup and Maintenance work area, search for and select the Manage Administrator Profile Values task.
2. On the Manage Administrator Profile Values page, search for and select the ORA_CMF_DEFAULT_ACKDATE_TO_RECEIPT_DATE profile option code.
3. In the Profile Values section, set the Site level to Yes or No. The default value is No.
    - Yes = enables the feature
    - No = disables the feature
4. Click Save and Close. Changes in the profile value will take effect the next time you sign in.

15 Subledger Accounting for France

Overview of Subledger Accounting for France

Subledger accounting for France provides secondary accounting entries to support accounting events for inventory, manufacturing, purchasing and sales to meet French regulatory accounting requirements. For the French accounting features, all purchases are considered as expenses, and none of the transactions affect the on-hand inventory account.

Parallel accounting is supported for analysis purposes, in addition to regulatory accounting. The Cost Management Subledger Accounting application provides seed data to create the additional accounting entries for French accounting. Mapping sets can be used to accelerate the setup of the Subledger Accounting for France features.

Related Topics

- Mapping Sets
- Configure Offerings

How You Set Up Subledger Accounting for France

To set up Subledger Accounting for France, you perform the Subledger Accounting set up tasks in the same sequence in which they're displayed in the Setup and Maintenance work area.

The following tasks are used to set up the subledger accounting for France features.

- Manage Accounting Methods
- Manage Subledger Journal Entry Rule Sets
- Manage Journal Line Rules
- Manage Account Rules
- Specify Ledger Options
- Manage Mapping Sets

Before You Start

The Cost Accounting and Financials modules should be set up before setting up the Subledger Accounting for France features.

Set Up Subledger Accounting for France

To set up Subledger Accounting for France, complete the following steps.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Cost Accounting

- Task: Manage Accounting Methods

2. Search for the Accounting Method where the Name is Standard Accrual and the Created By Application value is set to Yes.
3. Select the Standard Accrual record and click on the Duplicate icon
4. Complete the Create Accounting Method fields using the examples provided in the following table.

Field	Value
Name	Standard Accrual (France)
Short Name	STANDARD_ACCRUAL_FR
Description	Subledger accounting method for France

5. Click Save and Close.
6. Click on the Accounting Method just created. The Edit Accounting Method page is launched.
7. Select the Standard Accrual (France) accounting method on the Journal Entry Rule Set Assignments page and Click Activate.
8. When the activation process completes verify that the status of all of the records updates to Active.
9. On the Journal Entry Rule Set Assignments page, delete the Resource Absorption rule set record described in the following table.

Field	Value
Event Class	WIP Resource Transaction
Event Type	Resource Absorption
Rule Set	Resource Absorption

10. Create the replacement Rule Set described in the following table.

Field	Value
Event Class	WIP Resource Transaction
Event Type	Resource Absorption
Rule Set	Resource Absorption (France)

11. Repeat steps 12 and 13 for each event type that you want to use.

12. Select the Standard Accrual (France) accounting method on the Journal Entry Rule Set Assignments page and Click Activate.
13. Select Specify Ledger Options.
14. In the Subledger Accounting section set the Accounting Method to Standard Accrual (France).
15. Configure the seeded mapping sets or create new account rules. For more information on mapping sets, see the topic Using Seeded Mapping Sets.
16. (Optional) To verify that the accounting distributions have been set up correctly, run the Create Accounting process on the Cost Accounting page, setting the Accounting Mode to Draft.

Related Topics

- Mapping Sets
- Configure Offerings

Overview of Mapping Sets for France

Mapping sets provide an efficient way to define a segment or account combination value for one or more transaction or reference attribute values. Using such input and output mappings is simpler than using complex conditions on account rules.

Based on the value of the source input, a single segment or a full account is derived.

Examples of source input value types:

- Transaction attributes
- Reference attributes

With mapping sets you can:

- Use up to 10 transaction or reference attributes as inputs into a mapping.
- Define default output value to use when actual input values don't match the mappings.
- Use wildcards for multiple input mapping sets to indicate that the value of a particular input should be ignored for certain mappings.
- Enter the mappings directly on the user interface or use the spreadsheet available in the Export option, and then import.

  Export allows:

  - Exporting a template to create mappings.
  - Exporting all mappings created for the mapping set to add or edit the current mappings.

Example

Assume a business operates in several regions, including:

- East
- South
- West

The business has a Region segment in their chart of accounts.

The region name can be the input for the mappings to derive the value of the region segment. You can create a mapping set that maps region names to the corresponding region code.

This table contains region names and segment values used in this example.

Input Value (Region Name)	Segment Value
East	01
South	02
West	03

Additional transaction information, such as transaction type and salesperson name, could also be used as inputs to help derive a different segment value for each combination of the input values.

Overview of Predefined Mapping Sets for Subledger Accounting for France

There are predefined mapping sets for all the journal line rules with commonly used sources, there are three to five sources for each journal line rule, such as Inventory Organization Code, Subinventory Code, Costing Category Identifier, Work Order Sub Type, and Item Number.

The benefits of using predefined mapping sets are as follows:

- Provides an out-of-box approach to implement subledger accounting.
- Enables quick implementation of subledger accounting.
- Provides commonly used transaction source attributes and these sources are assigned to the predefined mapping sets.
- Enables easy maintenance when compared with maintaining user-defined account rules.

Unique mapping sets are predefined for each journal line rule. Predefined mapping sets specific to Subledger Accounting for France are **Expense Bridging**, **Bridging**, **Work In Process Bridging**, and **In-transit Bridging**. View Cost Management user interface for the complete list of mapping sets.

The mapping set created for each journal line type is added to a predefined account rule.

Use Predefined Mapping Sets for Subledger Accounting for France

To use predefined mapping sets for implementing Subledger Accounting for France, do the following:

1. Select chart of accounts.

2. Specify the transaction attributes as input and account combinations as output for every chart of accounts.

   Set up input parameters for every chart of accounts. While specifying inputs, you must provide the transaction attributes.

   For example, if you're using the mapping set, **Bridging**, then you have to provide one or more of the following input sources.

   - **Inventory Organization Code**
   - **Costing Category Identifier**
   - **Item Number**

3. For the mapping set **Bridging**, provide an account combination as the output type.
4. Automatically enable or disable the account derivations using **Effective Dates**.
5. (Optional) Set account combinations as default to support subledger accounting activities for which specific rules aren't set up.
6. Use spreadsheet based import and export functionality.

16 Intrastat Reporting

Overview of Intrastat Reporting

Intrastat Reporting enables companies to collect, record, and report statistics related to trade as per their respective government legislations.

Intrastat is the system for collecting and producing trade statistics for movement of goods within the member countries of the European Union (EU). Intrastat Reporting is available within the Manufacturing and Supply Chain Materials Management offering.

The EU developed the Intrastat system to collect information directly from enterprises about dispatches and arrivals of commodities among member countries. This system is based on basic EU regulations that apply to all countries; however, the practical application differs within the individual countries. Each country has its own handbook of what and how this works.

An Intrastat declaration must be made whenever goods cross from one country to another within the EU. However, instead of completing a form at the borders, Intrastat declarations are typically submitted monthly. The information that's tracked by the Intrastat system is based strictly on the actual physical movement of goods between member countries of the EU.

> **Note:** Intrastat information doesn't apply to the movement of monetary amounts or the placement of orders between member countries.

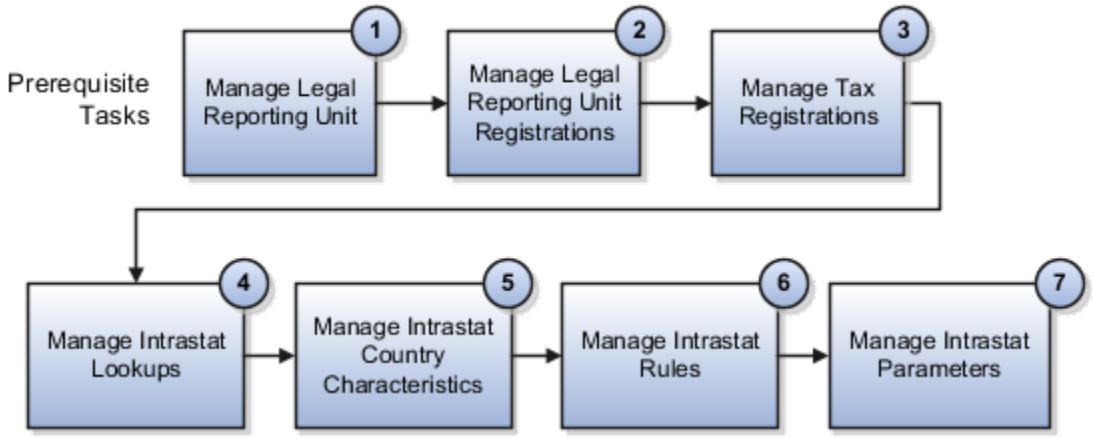
Set Up Intrastat Reporting

You must define Intrastat Reporting rules to set up the features that derive key Intrastat Reporting attributes based on country-specific legislation requirements.

Intrastat Reporting, provided in the Manufacturing and Supply Chain Materials Management offering, provides a tool for gathering basic information about the Intrastat transactions between countries of an economic zone. Oracle's Intrastat Reporting provides predefined country-level attributes for several European Union (EU) countries. For information about managing country characteristics, see *Manage Intrastat Country Characteristics*.

Intrastat Reporting setup is based on country characteristics, rules, and parameters enabled at the legal reporting unit and country levels. This task enables you to collect various transactions from Oracle Fusion Cloud products (such as Inventory Management, Shipping, Receiving, and Distributed Order Orchestration) and then validate for exceptions. Ultimately, you report and print the validated transactions or export them for processing with external software.

The following figure shows the tasks associated with setting up Intrastat Reporting. The numbered steps are described in detail in the procedure that follows the figure.



Note: The first three tasks are performed in the Financials offering functional work areas. The remaining tasks are performed in the Intrastat Reporting functional area which is part of the Manufacturing and Supply Chain Materials Management offering.

To set up Intrastat Reporting, perform the tasks described in this table in the order presented.

Setup Task Name	Prerequisite Task?	Description	Offering or Product Area	For More Information
1. Manage Legal Reporting Unit	Yes	Define legal reporting units such as branches, divisions, establishments, inventory organizations, and physical locations, which are components of legal entities. Legal reporting units, together with their tax registration number, are the units that Oracle Fusion Cloud Financials creates automatically when creating a new legal entity. Legal reporting units are required for the purpose of tax calculations related to a legal entity.	Legal Entity Configurator product in the Financials offering	Oracle Fusion Cloud Financials: Implementing Enterprise Structures and General Ledger guide
2. Manage Legal Reporting Unit Registrations	Yes	Define the identity-related details of a legal reporting unit with the appropriate government or legal authorities for the purpose of claiming and ensuring legal or commercial rights and responsibilities.	Legal Entity Configurator product in the Financials offering	Oracle Fusion Cloud Financials: Implementing Enterprise Structures and General Ledger guide
3. Manage Tax Registrations	Yes	Create and maintain tax registration information related to a party's transaction tax or withholding tax obligation	Tax product in the Financials offering	Oracle Fusion Cloud Financials: Implementing Tax guide

Setup Task Name	Prerequisite Task?	Description	Offering or Product Area	For More Information
		with a tax authority for a tax jurisdiction where it conducts business.		
4. Manage Intrastat Lookups	No	Review and maintain lookup values, such as modes of transport, delivery terms, port of loading or unloading, flow indicator, and son on.	Supply Chain Localization	Chapter on defining applications core configuration in the Oracle Fusion Cloud SCM: Implementing Common Features for SCM guide
5. Manage Intrastat Country Characteristics	No	Configure the Intrastat reporting characteristics that apply to a particular country within an economic zone, such as the EU.	Supply Chain Localization	Manage Intrastat Country Characteristics topic
6. Manage Intrastat Rules	No	Configure rules for nature of transaction code, statistical procedure code, fiscal regime code, supplementary UOM rules, and attribute validation rules, as well as freight factor for statistical value and exclusion criteria.	Supply Chain Localization	Manage Intrastat Rules: Procedure topic
7. Manage Intrastat Parameters	No	Enable Intrastat reporting for a particular legal reporting unit.	Supply Chain Localization	Manage Intrastat Parameters: Procedure topic

Related Topics

- Intrastat Country Characteristics
- Manage Intrastat Country Characteristics
- Manage Intrastat Rules
- Manage Intrastat Parameters

Intrastat Country Characteristics

Intrastat Country Characteristics

The European Union (EU) has developed a statistical system, known as Intrastat, to collect information directly from enterprises about dispatches and arrivals of commodities among member countries.

At the country setup level, you can configure the data attributes that are required for reporting Intrastat transactions in a specific country.

Each Intrastat member country in the EU has an official reporting currency and a group of commodity codes expressed in Intrastat Common Nomenclature. The commodity codes are defined in the individual Intrastat catalogs for each member country. Individual country characteristics define the catalog used, invoicing advice, currency and weight rounding rules, and the methods for processing returns, kit reporting, and triangular trade transactions.

You must initiate an **Intrastat declaration** whenever goods cross from one country to another within the EU. However, instead of completing a form at the borders, you submit Intrastat declarations (typically on a monthly basis). The information that's tracked by the Intrastat system is based strictly on the actual physical movement of goods between member countries of the EU.

> **Note:** Intrastat information doesn't apply to the movement of monetary amounts or the placement of orders between member countries.

As of 2015, there are 28 countries within the EU. Intrastat Reporting provides predefined country characteristics for the following countries:

- Belgium
- France
- Germany
- Italy
- Netherlands
- Portugal
- Spain
- United Kingdom

Related Topics

- Manage Intrastat Country Characteristics

Manage Intrastat Country Characteristics

Manage Intrastat Country Characteristics is a setup task in the Manufacturing and Supply Chain Materials Management offering. This task enables you to configure the Intrastat reporting characteristics that apply to a particular country within an economic zone, such as the European Union (EU).

Predefined country-level characteristics for several countries are available for your use. The characteristics are based on the current Intrastat guidelines for each member country, but you can modify these characteristics to comply with the latest regulations. You can also define Intrastat characteristics for any other country in the EU or for a new country that joins the EU community in the future. For a list of the currently predefined countries, see Managing Intrastat Country Characteristics: Explained.

This procedure shows you how to configure the attributes of an EU country. This is a step in setting up Intrastat Reporting.

1. In the Setup and Maintenance work area, go to the Manage Intrastat Country Characteristics task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Intrastat Reporting

- Task: Manage Intrastat Country Characteristics

2. On the Manage Intrastat Country Characteristics page, do one of these steps:

   - If you want to modify a predefined EU country, click that country, and then select **Edit** to change the attributes for that country. Click **Save and Close**.
   - If you want to add a new EU country, select **Create**, enter the country and the attributes for that country based on the latest legislations, and then click **Save and Close**.

Some of the key country characteristics are provided in this table in alphabetic order. A section for the required arrival and dispatch attributes follows the table.

Country Characteristic	Description
Conversion Rate Type	Type of conversion rate between currencies for the same period. You can use different rate types for different business needs.
Intrastat Catalog	A group of items with common characteristics in the context of Intrastat transactions.
Reference Period	The date a movement transaction occurred, either the invoice date or the shipment date. Choices are: • **Invoice**. The date the transaction is invoiced. • **Shipment**. The date the transaction takes place. By default, the reference period is Shipment. **Pending Invoice Days**: The number of days wherein the invoice is anticipated to be issued. The default value is 15 days. The Intrastat record remains in Pending status until the invoice is issued. The Intrastat record changes to Open status and is ready for validation and reporting after the number of days entered. The transaction date is the day entered. **Advance Invoice Days**: The number of days prior to the shipment date wherein the advance invoice is anticipated to be issued. The default value is 30 days. Because tax regulations can differ among the EU countries, the interpretation of the reference period isn't consistent and varies throughout the EU. For example, France, Denmark, and the UK have different rules for assigning the reference period.
Required Attributes	A required set of attributes for arrivals and dispatches that you must report in the Intrastat report for an individual country. For detailed information, see the Required Attributes section later in this topic.
Triangulation Method	A method for specifying how triangular trade transactions will be analyzed for the generation of Intrastat reports of an individual country. Choices are: • **Invoice**. A triangulation trade transaction is reported in the Intrastat report based on the issue of an invoice. A record is created based on the invoice rather than the physical movement of goods. • **Shipment**. A triangulation trade transaction is reported in the Intrastat report based on the physical movement of goods. A record is created based on the physical movement of goods rather than the invoice. If you anticipate transactions between three trading partners in three countries, and at least two of these three partners are within the same economic zone, then you must specify the triangulation method. You can also specify who declares the transaction when the seller is the same country as the shipper and the customer to avoid duplication of records in the Intrastat report. For scenarios for using triangulation, see the using triangulation method examples topic.

Country Characteristic	Description
UOM	The unit of measure for the reporting weight.

Required Attributes

The Intrastat authority of an individual country requires that a specific set of attributes be included in the Intrastat report for both arrival and dispatch of materials.

Before selecting the required attributes, consider these questions:

- What is the required set of attributes for the individual country for arrival of materials?
- What is the required set of attributes for the individual country for dispatch of materials?

The available attributes for arrival and dispatch of materials are provided in this table. All descriptions are applicable to both arrival and dispatch unless otherwise noted.

Required Attribute	Description
Commodity description	A description of the commodities arriving in the country.
Freight terms	Freight terms or Incoterms applicable for the transaction.
Mode of transport	Mode of transport for each transaction.
Region of destination	Details of the region within the destination or receiving country where the goods will be consumed. This attribute is applicable only to arrivals.
Country of origin	Details of the dispatch country from where the goods originated.
Region of origin	The details of the region within the dispatching country from where the goods are dispatched. This attribute is applicable only to dispatches.
Nature of transaction code	Details of the transaction. Nature of transaction code is published by an individual country's Intrastat authority and can vary based on country.
Fiscal regime	The fiscal regime details for the transaction. This attribute is often provided in addition to the nature of transaction code.
Statistical procedure	The statistical procedure code details for the transaction. This attribute is often provided in addition to the nature of transaction code. You can provide either the fiscal regime attribute or the statistical procedure attribute.
Net mass	The net mass is the quantity of items multiplied by the unit weight of the item.
Invoice amount	The actual invoice amount created for the transaction.

Required Attribute	Description

Related Topics

- Examples of Triangulation Trade Transactions
- Intrastat Country Characteristics
- Set Up Intrastat Reporting

Examples of Triangulation Trade Transactions

You can specify how triangular trade transactions will be analyzed for the generation of Intrastat report of an individual country.

You can report triangular trade transactions by:

- Invoice- A triangular trade transaction is reported in the Intrastat report based on the issue of an invoice. A record is created based on the invoice and not the physical movement of goods.
- Shipment- A triangular trade transaction is reported in the Intrastat report based on the physical movement of goods. A record is created based on the physical movement of goods and not the invoice.

You can also specify who declares the transaction when the seller is the same country as the shipper and the customer to avoid duplication of records in the Intrastat report.

Examples of the how triangular trade transactions are reported are discussed for these scenarios:

Shipment based triangular trade transactions

Your company based in Italy receives an order from a German company. To fulfill the order, you order goods from your supplier in the France. The goods are delivered from the French company to the German company.

These transactions are created as a result of this triangular trade:

- You send a sales order to your customer in Germany
- You invoice your customer in Germany
- You create a purchase order to your supplier in France
- Your supplier in France sends you an invoice
- France creates a shipment to Germany, fulfilling the sales order

If you have selected Shipment as your triangulation method, then no record is generated for inclusion in the Intrastat report since no physical movement of goods occurred in Italy. However, Germany is required to declare the arrival of goods from France.

Invoice based triangular trade transactions

Considering the example of the triangular trade transaction scenario given above. If you have selected Invoice as your triangulation method, then:

- A sales order or dispatch record is generated from Italy to Germany with this information:

- Movement Amount: zero (no movement of goods took place between these countries)
- Movement Quantity: zero (no movement of goods took place between these countries)
- Extended Value: calculated as the invoice quantity multiplied by invoice price
- Dispatch Country: Italy
- Destination Country: Germany
- Triangulation Country: France

Note: Germany is required to declare the arrival of goods from France.

- A purchase order or arrival record is generated in Italy for France with this information:
  - Movement Amount: calculated as the receipt quantity multiplied by unit price
  - Movement Quantity: zero (no movement of goods took place between these countries
  - Extended Value: is calculated as the receipt quantity multiplied by unit price
  - Dispatch Country: France
  - Destination Country: Germany

Note: Germany is required to declare the arrival of goods from France.

Invoice Triangulation Method for Determining Country of Supply

You have the option to derive the country of supply for Intrastat Reporting from the legal reporting unit association (instead of the legal entity) when using the invoice triangulation method.

Deriving the country of supply from the legal reporting unit is beneficial for organizations that operate within the European Union (EU) and have a complex enterprise structure. Specifically those that have business units and inventory organizations in multiple EU countries that belong to a single legal entity.

Let's look at the important aspects of using the invoice triangulation method for determining the country of supply:

- Triangular trade
- Example
- Conditions

Triangular Trade

Intrastat Reporting supports the concept of a triangular trade transaction. This is any transaction between three trading partners in three countries, where at least two of the parties are part of the economic zone.

This table lists the two possible triangulation methods.

Triangulation Method	Definition
Invoice	Movement record is based on the invoice and not the physical movement of goods.
Shipment	Movement record is created only on the physical movement of goods

You can use the legal reporting unit to determine the country of supply when using the invoice triangulation method.

Example

Let's say you have a selling entity where the legal entity, business unit, and inventory organization are all located in Austria. Additionally, you have a supply warehouse located in Germany where the business unit and inventory organization are located, but the legal entity is in the Netherlands.

This table outlines the location for each entity.

Entity	Location
Selling Entity (legal entity, business unit, and inventory organization) location	Austria
Supply Warehouse (business unit and inventory organization) location	Germany
Legal Entity location	Netherlands
Country of Supply location	Germany

Now, a customer in Austria places an order with your Austria entity, but you need to source the goods from your warehouse in Germany. You ship the goods from the Germany warehouse directly to the customer in Austria. An intercompany transaction resolves the financial obligation between the country of supply and selling business unit entities. Using the invoice triangulation method, you can ensure that when your warehouse in Germany rolls up to a legal entity in the Netherlands, Intrastat lists the country of supply as Germany, instead of deriving it from the legal entity (Netherlands).

This is possible by creating and associating a legal reporting unit in Germany with the business unit where the goods are shipped from, also in Germany.

Conditions

When using the legal reporting unit for determining the country of supply with the Invoice triangulation method, these conditions apply:

- Intrastat looks to the legal reporting unit (instead of the legal entity) to derive the country of supply.
- You must create legal reporting units for each business unit under the legal entity and associate the legal reporting units to the business units.
- Intrastat uses the invoices created for the transaction to derive the country of supply based on the legal reporting unit and business unit association.

- If a legal reporting unit isn't associated with a business unit, or a business unit is associated with multiple legal reporting units, Intrastat derives the country of supply from the address of the legal entity.

Note: You can use the invoice triangulation method to determine the country of supply for sales orders, return material authorizations, and purchase order transactions.

Related Topics

- Manage Intrastat Country Characteristics
- Examples of Triangulation Trade Transactions

How You Derive the Country of Supply for Intrastat Reporting from the Legal Reporting Unit

You can enable your company to derive the country of supply for Intrastat Reporting from the legal reporting unit association when using the Invoice triangulation method.

To do this, you must first associate the legal reporting unit and business unit from which the goods are physically shipped. Otherwise, Intrastat derives the country of supply from the legal entity address of the receivables invoice. To make this association, complete these steps:

1. From the Setup and Maintenance work area, go to the **Manage Legal Reporting Unit** task:
    - Offering: Financials
    - Functional Area: Legal Structures
    - Task: Manage Legal Reporting Unit
2. In the Select Scope dialog box, select the **Manage Legal Reporting Unit** option.
3. In the **Legal Entity** field, select either **Select and Add** or **Create New**.
4. Click the **Apply and Go to Task** button to access the Manage Legal Entities page where you can select an existing legal entity or create a new one.
5. Select a legal entity, and click the **Save and Close** button. If you need to create a new legal entity, select **Create** from the **Actions** menu of the Manage Legal Entities page.
6. When you return to the Select Scope dialog box, select a value for the **Legal Reporting Unit** field. Select either **Select and Add** or **Create New**.
7. Click the **Apply and Go to Task** button to access the Manage Legal Reporting Units page where you can select an existing legal reporting unit or create a new one.
8. On the Manage Legal Reporting Unit page, select **Manage Business Entities** from the **Actions** menu to access the Manage Associated Business Entities page.
9. On the Manage Associated Business Entities page, create a business unit association for your legal entity.
10. Click **Save and Close**.

Related Topics

- Invoice Triangulation Method for Determining Country of Supply
- Plan Legal Reporting Units

How You Capture the Country of Supply for Intrastat Reporting

You have the option to capture the country of supply for Intrastat Reporting.

When collecting arrival of goods or items for Intrastat Reporting, it's important that the country of supply matches the country a supplier shipped the items from. The country of supply is recorded from the supplier site provided on the purchase order. In some cases, a supplier might ship items from a different location. This change of location determines whether the arrival of items needs to be reported for Intrastat Reporting. To account for the location change, during receipt of goods, you update the **Ship-from Site** field to the country from where the supplier shipped the goods. The default value for the **Ship-from Site** field is the supplier site defined on the purchase order. However, you can update it to the location from where you receive the items. The supplier site updated on receipt is considered as a trading partner site. The **Country Of Origin** field for an Intrastat transaction is updated based on the **Ship-from Site** field entered in the receipt.

Here's how you update the supplier site for a receipt:

1. From the Inventory Management work area, select **Receipts** in the **Show Tasks** field of the task panel. Then, select **Receive Expected Shipments**.
2. On the Receive Expected Shipments page, search for a purchase order.
3. Select a purchase order in the search results and click **Receive**.
4. On the Receive Lines page, select an item and click **View Details**.
5. Enter the quantity and subinventory.
6. In the Tax Determinants section, search for a **Ship-from Site**.

   > **Note:** You can update this field if a purchase order is shipped from a site different from a site in which the purchase order was created. The country of origin for the supplier site is updated based on the value chosen in the **Ship-from Site** field.

7. On the Search and Select: Ship-from Site dialog box, search for an address and click **OK**.
8. Verify the value in the **Ship-from Site** field and click **OK**.
9. Click **Create Receipt** and then **Submit**.
10. Note the receipt number and click **Done**.
11. On the Inventory Management page, click **Search**. Select **Received Lines** and **Receipt** from the drop-down lists, and search for the receipt number you noted in step 10.
12. On the Manage All Lines page, click the receipt to view the invoice created for the purchase order.
13. Click **Submit** to run Intrastat collections.
14. Use the Enterprise Scheduler to view the status of the Intrastat collections.
15. On the Manage Intrastat Transactions page, search for the purchase order to review the arrival Intrastat transaction.
16. Select an Intrastat transaction and go to the **Source Transaction** tab. The **Trading Partner Site** field reflects the supplier site updated during receipt creation and not the supplier site mentioned in the purchase order.

Related Topics

Intrastat Reporting for the United Kingdom of Great Britain and Northern Ireland

For the UK's exit from the European Union, Her Majesty's Revenue and Customs department (HMRC) issued guidance on Intrastat reporting requirements when trading goods with the UK. You can now specify when to exclude Great Britain for legal reporting units subject to Intrastat collections.

> **Note:** Dispatch and arrival transactions between any EU country and any Northern Ireland county are collected by the Intrastat report regardless of the value of the **Exclude Dispatches From** and **Exclude Arrivals To** parameters for a United Kingdom LRU. This ensures compliance with the Intrastat regulations published by HMRC for the UK's exit from the EU.

Set Up Intrastat Reporting for the UK

If you do business with any Northern Ireland county, you need to ensure that a location is associated with an inventory organization, supplier site, customer site, or legal entity address based on the Northern Ireland county's postal code.

1. In the Setup and Maintenance work area, go to the Manage Locations task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Enterprise Profile
2. On the Manage Locations page, make sure a postal code is specified for legal addresses, supplier sites, and customer sites based in Northern Ireland counties. If a postal code isn't specified, select the entry you want to update and click **Edit** > **Correct**. Add the postal code. Then click **Submit**.

Add United Kingdom to a Tax Zone

1. In the Setup and Maintenance work area, go to the Task panel and search for the **Manage Tax Zone Types** task.
2. Click the **Manage Tax Zone Types** task.
3. Click **Search** on the Manage Zone Types page. (You don't need to enter anything, just click **Search**.)
4. In the search results, select **Economic Regions** and click **Next**.
5. On the Manage Zones for Zone Type page, click **Search**. (You don't need to enter anything, just click Search.)
6. In the search results, click **European Economic Community**.
7. On the European Economic Community page, in the Associated Geographies section, locate the United Kingdom geography. If either the United Kingdom geography isn't specified or the end date has passed, you need to create a new economic region and add the United Kingdom geography to it. Steps 9 and 10 explain how. If you don't need to create the United Kingdom geography, you can skip those steps. You can follow step 10 to create other geographies if you need them.
8. Click **Done** to go back to the Manage Zones for Zone Type page.
9. Create a new economic region:
    - In the Search Results section, click **Actions > Create**.
    - Enter a name for the zone in the **Zone** field.
    - Enter a code for the zone in the **Code** field.

- Make sure the end date is in the future.

10. Associate a geography to the economic region:
    - In the Associated Geographies section, click **Actions > Add**.
    - Enter United Kingdom in the Country field.
    - Enter **Country** in the **Geography Type** field.
    - Enter **United Kingdom** in the **Geography Name** field.
    - Make sure the end date is in the future.
    - Repeat this step to add other geographies as needed.
    - Click **Save and Close** when you've finished adding geographies.

Intrastat Collection Report

As part of Great Britain's exit from the European Union (EU), updated Intrastat regulations clarify the different country codes to use when dispatching goods from Northern Ireland in Great Britain. To comply with this guidance, The Intrastat Collection Report prints the country of origin as **XI** when goods are dispatched from Northern Ireland. Also, the CSV file generated after running the **Export Intrastat Collections** process prints the country of origin as **XI**. The country of origin on the Manage Intrastat Transaction page continues to show **United Kingdom** for dispatches from Northern Ireland in Great Britain.

Intrastat Rules

Manage Intrastat Rules

Manage Intrastat Rules is a setup task in the Manufacturing and Supply Chain Materials Management offering.

This task enables you to configure rules for nature of transaction code, statistical procedure code, fiscal regime code, freight factor for statistical value, exclusion criteria, supplementary UOM, and validation rules.

You use Intrastat rules to configure Intrastat reporting as per the requirement of an individual country. These rules enable you to define the guidelines and validations that are applicable for creating the Intrastat declaration. You can share these rules across legal reporting units or keep them specific to just one legal reporting unit.

This procedure shows you how to configure Intrastat rules. This is a step in setting up Intrastat Reporting.

1. In the Setup and Maintenance work area, go to the Manage Intrastat Rules task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Intrastat Reporting
    - Task: Manage Intrastat Rules

    Note that you might need to select **Show All Tasks** for this task to appear.

2. On the Manage Intrastat Rules page, do one of these steps:
    - If you want to modify an existing rule, click the rule set for which you want to make changes, select **Edit**, and then make the appropriate changes.
    - If you want to add a new rule, select **Create**, and then enter the attributes.
    - If you want to delete a rule, select it, and then select **Delete**.

This table provides descriptions of the predefined Intrastat rule types. You can reconfigure these rules or add new ones.

Intrastat Rule Type	Description
Validation	Validation rules enable you to define the criteria for validating the collected and manually entered Intrastat transactions. You can report only those transactions that are validated successfully as per the specified criteria in the Intrastat declaration. You define validation rules for a combination of source transaction and Intrastat reporting attribute. Validation rules provide the: • Required attribute to be reported for a particular source transaction. • Value set that you must use for validating the values of the specific attributes. If an attribute is defined as required for a source transaction, then an exception is logged if the collected transaction doesn't have that attribute.
Supplementary UOM	Supplementary UOM rules enable you to define the requirement for reporting Intrastat transactions in a supplementary unit of measure other than the weight UOM. The movement of goods or specific items is reported in an UOM other than the weight UOM. For example, use this rule type to specify that movement of an oil commodity must be reported in Barrels. Supplementary UOM rules are defined for a category code under the Intrastat catalog. And that category code, in turn, defines the UOM in which the Intrastat transaction is reported. Whenever there is an item in an Intrastat transaction that belongs to the specific category code, then the supplementary UOM rule is applied. The quantity of the item is thereby derived in supplementary UOM based on the UOM conversion factor.
Nature of transaction code	Nature of transaction code is used to define the category of the Intrastat transaction. The nature of transaction codes is published by the Intrastat authority of an individual country, and therefore differ based on country. The codes can be either in single digit or double digits. The nature of transaction code rules enable you to define the nature of transaction code applicable based on source transaction, inventory organization, item, and trading partner attributes of the base transaction. The rules defined at a specific or granular level are given priority over rules defined at a higher level. For example, given there are two rules; one for a source transaction and another for a source transaction and item. In this case, the rule for source transaction and item is given higher priority wherever applicable.
Fiscal regime code	Fiscal regime code is used in some countries in addition to nature of transaction code to categorize transactions. Fiscal regime rules define the fiscal regime code applicable based on source transaction, inventory organization, item, and trading partner attributes of the base transaction. Similar to the nature of transaction code rules, the fiscal regime code rules defined at a specific or granular level are given priority over rules defined at a higher level. You can only define either a fiscal regime code or a statistical procedure code for a particular transaction.
Statistical procedure code	Statistical procedure code is used in some countries of the European Union (EU) in addition to nature of transaction code to categorize transactions. Statistical procedure code enables you to define the statistical code applicable for deriving the statistical procedure of the collected transaction. This is

Intrastat Rule Type	Description
	based on source transaction, inventory organization, item, and trading partner attributes of the base transaction. You can only define either a statistical procedure code or a fiscal regime code for a particular transaction.
Statistical value calculation	Statistical value calculation rules enable you to specify the freight factor that's included in the statistical value. Freight factor is defined in percentage and indicates the component of freight charge to be included in the statistical value. You can define this rule based on country, organization, item, freight terms, and mode of transport of the base transaction. You can then specify the freight factor, which is a percentage of the freight charge. This freight factor is included while calculating the statistical value. For example, when you want to calculate the freight charge only up to a country's border, you specify the statistical value calculation by defining a freight factor that accounts for the freight charge only up to that country's border. In cases where freight charges are applicable for shipments across two countries within the EU, you're required to only include the freight charge for moving the goods from the establishment to the border of that establishment's country. **Note:** Freight charges are captured on interorganization shipments, not on purchase orders, sales orders, or transfer orders.
Exclusion	Exclusion rules enable you to define the criteria to exclude specific goods movement transactions from collections. You can exclude a specific item that you don't want to be reported in the Intrastat collections by defining the exclusion criteria in the rule. For example, you don't require service items to be included in the collection. You can define this rule based on source transaction, organization, category code, item, and trading partner of the base transaction. You can specify the exclusion criterion that includes the source transaction, category code, and item details of the transaction containing the service items. This ensures that the specified items aren't included in the collections.

Related Topics

- Set Up Intrastat Reporting

Intrastat Parameters

Manage Intrastat Parameters

Manage Intrastat Parameters is a setup task in the Manufacturing and Supply Chain Materials Management offering. You can enable Intrastat reporting for a particular legal entity or legal reporting unit and define the parameters for gathering data on Intrastat transactions.

You can define Intrastat parameters only for the legal reporting units for which you have defined country characteristics. If you define Intrastat parameters for a secondary legal reporting unit, then you must associate the secondary legal reporting unit with an inventory organization. You enter Intrastat parameters for each combination of legal entity, legal

reporting unit, economic zone, and country. These parameters define the details of the Intrastat authority, location, reference, and address to which declarations must be submitted for each member nation. Several predefined legal reporting units are available for your use.

This procedure show you how to configure Intrastat parameters. This is a step in setting up Intrastat Reporting.

1. In the Setup and Maintenance work area, go to the Manage Intrastat Parameters task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Intrastat Reporting
    - Task: Manage Intrastat Parameters
2. On the Manage Intrastat Parameters page, do one of these steps:
    - If you want to modify attributes for an existing legal reporting unit, click the legal reporting unit for which you want to make changes, select **Edit**, and then make the appropriate changes.
    - If you want to add a new legal reporting unit, select **Create**, and then enter the attributes. Click **Save and Close**.

Some of the key Intrastat parameters are provided in this table in alphabetic order.

Parameter	Description
Branch Reference	Name of the legal entity branch. This reference is printed on the European Union Intrastat Declaration.
Economic Zone	Economic zones where you conduct business, such as the European Economic Community (EEC) and the North American Free Trade Association (NAFTA). The economic zones for Oracle Intrastat Reporting are applicable to the EEC.
Exclusion Rules	Optional rule that excludes specific Intrastat transactions from collections.
Fiscal Regime Rules	Fiscal regime details of a transaction. This parameter is mandatory when arrival and dispatch country characteristics are selected.
Nature of Transaction Code Rules	Nature of transaction code details of a transaction. This parameter is mandatory when arrival and dispatch country characteristics are selected. Nature of transaction codes are published by an individual country's Intrastat authority and can vary based on country.
Reporting Calendar	Calendar for reporting Intrastat transactions. The calendar you use for Intrastat reporting purposes is independent of the accounting calendar for your organization.
Statistical Value Calculation Rules	Freight factor that's included in the statistical value. (Freight factor is defined in percentage and indicates the component of freight charge that's included in the statistical value.)
Supplementary UOM Rules	Rules governing the supplementary unit of measure as applicable to certain classes of products.
Tax Office Code	Tax office code of the tax office to which your legal entity reports.
Tax Office Name	Name of the tax office to which your legal entity reports.

Parameter	Description
Tax Office Location	Location of the tax office to which your legal entity reports.
Validation Rules	Rules that define the criteria for validating the collected and manually entered Intrastat transactions.
VAT Registration	VAT registration number that you're registered with to pay VAT. VAT is a value-added tax or goods and services tax (GST) that's considered a consumption tax.

For more information about legal reporting units, VAT, and taxes, see the Financials implementation guides.

Related Topics

- Set Up Intrastat Reporting

FAQs for Intrastat Reporting

What's Intrastat?

Intrastat is the system for collecting and producing trade statistics for movement of goods within the member countries of the European Union (EU). The EU developed the Intrastat system to collect information directly from enterprises about dispatches and arrivals of commodities among member countries.

Can I define Intrastat parameters for any legal reporting unit?

No, you cannot define Intrastat parameters for every legal reporting unit.

You can only define Intrastat parameters for the legal reporting units where the country characteristics are defined for the country of the legal reporting unit. If you define Intrastat parameters for a secondary legal reporting unit, then you must associate the secondary legal reporting unit with an inventory organization.

Can I configure Intrastat according to individual country guidelines?

Yes, you can use Intrastat rules to configure Intrastat reporting as per the guidelines of an individual country of the European Union (EU).

You specify the validations that are applicable for creating the Intrastat declaration. Predefined country-level characteristics for several countries are provided for your use. The characteristics are based on the current Intrastat guidelines for each member country, but you can modify these characteristics to comply with the latest regulations.

Can I derive the county of supply from the legal reporting unit for Intrastat Reporting?

Yes, if you use the invoice triangulation method to determine Intrastat transactions, you can choose to have Intrastat look to the legal reporting unit association (rather than the higher-level legal entity) to determine the country of supply.

This is beneficial when you have multiple entities across European Union countries all reporting to a single legal entity. You must first create legal reporting units for each business unit under the legal entity, and then associate the legal reporting units to the business units.

Can I identify exceptions in the Intrastat collected transactions?

Yes, you can use an Exception Validation rule to identify exceptions in the collected transactions. The exception validation process uses validation rules to identify if there are any exceptions in the transactions that might cause noncompliance issues during submission of declarations.

Can I use the supplementary UOM Intrastat reporting requirements for specific item categories?

Yes. You use supplementary UOM rules to define Intrastat reporting requirements for certain commodity codes or item categories in alternate UOMs other than the weight UOM. For example, you might be required to report liquids in liters.

Can I use freight factor to calculate the adjusted statistical value for Intrastat reporting?

Yes. You can use freight factor to calculate the Adjusted Statistical Value to represent the freight factor for a country, organization name, category code, item, freight terms, and mode of transport.

Can I use freight factor in my Intrastat report?

Some countries require that you include in the Adjusted Statistical Value the freight cost incurred in the country of reporting. In such cases, you can use the adjusted statistical value to specify the freight values in your Intrastat report.

Freight charges are captured on interorganization shipments, not on purchase orders, sales orders, or transfer orders.

How often must I generate Intrastat reports?

A detailed Intrastat declaration is typically required on a monthly basis.

What's the deadline for submission of Intrastat declarations?

The deadline for submission of Intrastat declarations is country-specific, however, timing is typically the 15th of every month following the referenced month.

How can I print or export Intrastat reports?

You can print or export Intrastat reports in the following formats: HTML, PDF, RTF, Excel (MHTML), and Data. If you export your reports to external software, you must export comma-separated values (CSV) files.

Can I include information about the movement of monetary amounts or placement of orders in the Intrastat declaration?

No. You can only provide information in the Intrastat declaration that applies to the physical movement of goods between member countries of the European Union (EU).

What's the prerequisite for collecting and validating Intrastat transactions through the Oracle Enterprise Scheduler?

The corresponding arrival and dispatch transactions must have completed before collecting the Intrastat transactions.

What happens if I validate an intrastat transaction?

When a transaction is selected for validation:

1. Checks are performed on it based on the rules applicable for the legal reporting unit.

2. One of the following validation statuses is set:
    - Not validated: The transaction hasn't yet been validated.
    - Error: The transaction contains exceptions indicated by the number in the **Exceptions** column.
    - Validated: The transaction is validated.

> **Note:** Only validated transactions are reported in the declaration.

17 Manufacturing

How You Set Up Manufacturing

To set up Oracle Manufacturing, you perform the setup tasks specified in the Manufacturing and Supply Chain Materials Management offering on the Setup and Maintenance work area.

Manufacturing is an optional functional area in the Manufacturing and Supply Chain Materials Management Offering, and must be selected for implementing Manufacturing. The Manufacturing functional area consists of the following hierarchy:

- Manufacturing Master Data
- Structures

This topic lists the manufacturing setup tasks under the following three categories:

- Manufacturing Master Data Functional Area
- Structures Functional Area
- Common Setup Tasks

Manufacturing Master Data Functional Area

There are some tasks that may be included in the Manufacturing Master Data functional area, and if the tasks are required or optional. For more information about adding tasks to the Manufacturing Master Data functional area, see Implementing Manufacturing chapter of the *Implementing Manufacturing and Supply Chain Materials Management* guide.

The following table describes some tasks in the Manufacturing Master Data functional area with their descriptions and whether the tasks are required or optional:

Task	Required or Optional	Description
Manage Plant Parameters	Required	Configure parameters at a plant level that are relevant to manufacturing setup, work definition, and work execution.
Manage Production Lookups	Optional	Create and maintain lookups that are used in manufacturing setup, work definition, and work execution.
Manage Work Areas	Required	Create and maintain work areas to represent the specific regions in the plant where work activities are executed.
Manage Work Centers	Required	Create and maintain work centers to represent the grouping of resources where work is performed and is composed of resources having similar capabilities.

Task	Required or Optional	Description
Manage Production Resources	Optional	Create and maintain resources to model the labor or equipment and to track their usages during production execution.
Manage Manufacturing Plant Data Access for Users	Required	Manage manufacturing plant data access for user provisioned roles. **Note:** Although you're required to provide data access to the manufacturing plant, you can follow the common procedure to do so.

The setup tasks specified in the Manufacturing Master Data functional area that don't require specific setup for manufacturing are listed under the Common Tasks section.

Structures Functional Area

None of the setup tasks specified in the Structures functional area require any specific setup for manufacturing. So they're listed under the Common Tasks section.

Note: Item structure is currently supported for only the discrete manufacturing work method.

Common Tasks

Some tasks are included in the Manufacturing Master Data or Structures functional area, but don't require specific setup for manufacturing:

The following table lists the tasks in the Manufacturing Master Data functional area which require no specific setup:

Task	Required or Optional	Description
Manage Plant Profiles	Required	Review and maintain profile values for manufacturing facilities.
Manage Production Value Sets	Optional	Create and maintain production value sets.
Manage Work Setup Descriptive Flexfields	Optional	Define validation and display properties of the descriptive flexfields for work setup. Descriptive flexfields are used to add user-defined attributes to entities.
Manage Work Execution Descriptive Flexfields	Optional	Define validation and display properties of the descriptive flexfields for work execution. Descriptive flexfields are used to add user-defined attributes to entities.

Task	Required or Optional	Description
Manage Enterprise Scheduler Jobs for Manufacturing Applications	Optional	Manage Oracle Enterprise Scheduler jobs and their list of value sources for the Manufacturing applications.
Define Basic Product Structures	Optional	Create and edit structures for the items.
Manage Structure Header Descriptive Flexfields	Optional	Create and edit item structure type descriptive flexfield attributes.
Manage Item Structure Type Details	Optional	Create and edit structure type details.
Manage Structure Component Descriptive Flexfields	Optional	Create and edit item structure component descriptive flexfield attributes.
Genealogy Build Deferred During Execution	Optional	Specify whether the product genealogy is built online immediately or you can decide to defer it. It has two values of Yes and No with the default value being No. The profile value can be set up only at site level.

These tasks are common to any Oracle Cloud application. Manufacturing doesn't require any specific setup for them, so you can follow the instructions that you use to perform them for any Oracle application. For details about how to perform them, refer to the *Implementing Common Features for SCM* guide.

Note: None of the setup tasks specified in the Structures functional area require any specific setup for manufacturing. So they're listed under the Common Tasks section.

Profile Options Affecting Manufacturing

You can enable specific manufacturing features by setting the appropriate profile option code, level, and value.

As an applications implementation consultant, you can configure the profile options:

1. In the Setup and Maintenance work area, go to the Manage Administrator Profile Values task.
2. On the Manage Administrator Profile Values page, search for the required profile option code or profile display name.
3. Select **New** from the Actions menu under profile values.
4. Select the profile level and profile value.
5. Click **Save and Close**.

The following table shows the profile options that affect manufacturing. You must configure them as a one-time set up.

Profile Display Name	Profile Code	Explanation	Profile Level
SCM Common: Default UOM Class for Service Duration	RCS_DEFAULT_UOM_CLASS_CODE_FOR_SVC_DURATION	Captures the Unit of Measure (UOM) class, which models time units in the application.	Site

Profile Display Name	Profile Code	Explanation	Profile Level
		The Resources whose Usage UOM belongs to this class can be set as Scheduled = Yes in Standard Operations, Work Definition, and Work Orders. This profile affects scheduling and lead-time calculation.	
Hour Unit of Measure	ORA_RCS_HOUR_UOM	Captures the UOM, which represents an hour of time. The application uses this profile for UOM conversions during scheduling. The UOM set by this profile should belong to the UOM class specified by the profile SCM Common: Default Service Duration Class.	Site
Default Manufacturing Plant Organization	RCS_DEFAULT_MFG_PLANT_ORG	Captures the default plant you can access in the Oracle Manufacturing. If this isn't explicitly set, the application will automatically set it when the user logs in to Oracle Manufacturing for the first time.	User
Time Duration Decimal Precision	RCS_DURATION_DECIMAL_PRECISION	Captures the decimal precision that will be used to round off the lead time values that will be calculated by the lead time scheduled process.	Site
Quantity Decimal Precision	INV_QUANTITY_DECIMAL_PRECISION	Captures the decimal precision that will be used to round off quantity fields used in manufacturing.	Site
Enable Genealogy Build Deferred During Execution	ORA_WIE_DEFER_GENEALOGY_BUILD	Specifies whether the product genealogy is built online immediately, or you can decide to defer it. It has two values, Yes and No, with the default value being No. **Note:** For more information, refer to the Enable Genealogy Build Deferred During Execution section in this topic.	Site
Enforce Gapless Numbering for Work Orders	ORA_WIE_ENFORCE_GAPLESS_NUMBERING	Enforce gapless numbering for manufacturing and maintenance work orders, including orderless transactions. Performance	Site

Profile Display Name	Profile Code	Explanation	Profile Level
		improvements can be achieved by setting the value as No.	

Manage Descriptive Flexfields for Manufacturing Objects

You can optionally set up descriptive flexfields (DFFs) to capture additional information for setup, work definition entities, and work execution entities.

DFFs set up for an entity, such as a work definition can't be propagated to another entity, such as a work order.

Note: DFFs aren't supported for work definition header.

The following table shows the DFFs that can be optionally set up to capture additional information for setup and work definition entities. As an applications implementation consultant, you can configure the descriptive flexfields for setup and work definition entities using the Manage Work Setup Descriptive Flexfields task.

Flexfield Name	Flexfield Code
Work Area	WIS_WORK_AREAS
Work Center	WIS_WORK_CENTERS
Production Resource	WIS_RESOURCES
Equipment Resource Instance	WIS_EQUIPMENT_RESOURCE_INSTANCES
Labor Resource Instance	WIS_LABOR_RESOURCE_INSTANCES
Standard Operations	WIS_STANDARD_OPERATIONS
Standard Operation Resources	WIS_STD_OPERATION_RESOURCES
Work Definition Operations	WIS_WD_OPERATIONS_B
Work Definition Operation Resources	WIS_WD_OPERATION_RESOURCES
Work Definition Operation Materials	WIS_WD_OPERATION_MATERIALS
Work Definition Operation Outputs	WIS_WD_OPERATION_OUTPUTS

The following table shows the DFFs that can be optionally set up to capture additional information for work execution entities. As an applications implementation consultant, you can configure the descriptive flexfields for work execution entities using the Manage Work Execution Descriptive Flexfields task.

Flexfield Name	Flexfield Code	Module
Work Order Header	WIE_WORK_ORDERS	Work Orders
Work Order Operation	WIE_WO_OPERATIONS	Work Orders
Work Order Operation Resource	WIE_WO_OPERATION_RESOURCES	Work Orders
Work Order Operation Item	WIE_WO_OPERATION_MATERIALS	Work Orders
Work Order Operation Resource Instances	WIE_WO_OPERATION_RESOURCE_INSTANCES	Work Order Operation Resource Instances
Work Order Operation Outputs	WIE_WO_OPERATION_OUTPUTS	Work Order Operation Outputs
Work Order Operation Transactions	WIE_OPERATION_TRANSACTIONS	Work Order Operation Transactions
Work Order Resource Transactions	WIE_RESOURCES_TRANSACTIONS	Work Order Resource Transactions

Note: For more information, refer to the Flexfields chapter in the Oracle Applications Cloud Configuring and Extending Applications guide.

Enable Genealogy Build Deferred During Execution

To improve the performance of Genealogy, some modifications have been made. A new profile has been introduced. The profile name is **Genealogy Build Deferred During Execution** (Code: ORA_WIE_DEFER_GENEALOGY_BUILD). You have to specify whether the build of product genealogy is deferred. If it's not deferred, then genealogy builds at the same time as the transaction.

To enable Genealogy Build Deferred During Execution, perform the following steps.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Task: Manage Administrator Profile Values
2. In the Profile Option Code field, query for the option Genealogy Build Deferred During Execution (Code: ORA_WIE_DEFER_GENEALOGY_BUILD).

Using this profile, you can specify whether the product genealogy is built online immediately or you can decide to defer it. It has two values, Yes and No, with the default value being No. The profile value can be set up only at site level.

- If you set the profile value to No, genealogy details are interfaced to the genealogy repository immediately and genealogy builds at the same time as the transaction.
- If you set the profile value to Yes, genealogy will be not be built immediately. The related transaction records will be available in the interface. You must schedule the Retry in-Error Genealogy Transactions scheduled process at an appropriate time to resubmit the records for processing and build genealogy. After the genealogy is built, the records are removed from the interface.

Enable Audit Trail for Manufacturing Work Orders

If you're an application administrator, you can enable audit trail for manufacturing work orders to comply with US Code of Federal Regulations (CFR 21 Part 11) for electronic record and electronic signature requirements. By doing so, you let your internal and external auditors have more visibility of the work order change history.

Here's how you can enable audit trail for discrete or process manufacturing work orders.

1. Click **Navigator**, and then click **Setup and Maintenance**.
2. On the Setup page, select the **Manufacturing Supply Chain and Materials Management** offering.
3. Search for the **Manage Audit Policies** task.
4. On the Manage Audit Policies page, click **Configure Business Object Attributes**.
5. On the Configure Business Object Attributes page, select the **Common Work Execution** product to view the work order object.
6. Select the check box for the work order objects to enable audit trail.
7. Select the check boxes for all or any of the child objects for audit. The attributes of that selected object, enabled for audit displays. The key attributes of each object are available by default.
8. Click **Create** in the Audited Attributes section which is displayed on the right side of the page to add more attributes.
9. Click **Save** if you want to add more attributes to your configuration to enable auditing, or click **Save and Close** if you're done.

View Audit Reports for Manufacturing Work Orders

Here's how you can view the audit reports for manufacturing work orders and you must have the internal auditor role to view the audit reports.

1. Click **Navigator**, and then click **Audit Reports**.
2. Select the **Common Work Execution** product and **Work Order** business object type and enter the date or date range.
3. Enter the work order number that needs to be audited in the **Description** field.
4. Select **Include Child Objects** if you want to see the work order child objects in the audit report, and click **Search**.

Here are the sample values you can enter in the **Description** field to get the audit report.

Search Text	Results
M1-1106	All Work Orders starting with M1-1106 and its child objects.
Work Order:M1-1106	All Work Orders starting with M1-1106 and its child objects.
Work Order:M1-1106:Operation:Testing	All Operations and its child objects with Operation name starting with Testing for Work Order M1-1106.
Work Order:M1-1106:Serial Number:PM	All Product Serial Numbers starting with PM for Work Order M1-1106.

Enforce Gapless Numbering for Work Orders

This profile is used to enforce gapless numbering for work orders created using the User Interface, REST services, File-based data import (FBDI), and Orderless transactions.

To enable Enforce Gapless Numbering for Work Orders, perform the following steps.

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Task: Manage Administrator Profile Values
2. In the Profile Option Code field, query for the option Enforce Gapless Numbering for Work Orders (Code: ORA_WIE_ENFORCE_GAPLESS_NUMBERING).

The profile value can be set up only at site level.

Profile option values are:

- Yes - Gapless numbers are always enforced; there won't be any gaps in work order numbers generated even in case of orderless transactions.
- No - Work order numbers aren't guaranteed to be gapless. Though they may still be in all likelihood gapless, there may be situations in which certain generated work orders could be discarded.

Unless your business requires enforcement of gapless numbers due to regulatory requirements or other reasons, it's recommended that you maintain the value of this profile to No. By not enforcing gapless numbering, you will experience better performance and lesser errors when creating work orders in quick succession, such as through work order import or releasing planned orders through the Supply Order Orchestration process.

Note:

The default value of the profile option is No for newly provisioned customer pods. For existing customers (prior to 24A update), the profile option value will be retained.

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Set Up a Manufacturing Plant

The manufacturing plant parameters are analogous to system parameters and they enable you to specify various functionality of a manufacturing plant. Before setting up the plant parameters, you must set the organization as the manufacturing plant.

Setting a Manufacturing Plant

A manufacturing plant is a type of inventory organization and can be further categorized into: in-house manufacturing plant and contract manufacturing plant.

To set an organization as a manufacturing plant, perform the following steps:

1. In the Manage Inventory Organizations page, select an existing organization or create a new one from the Search Results region. Then, click the **Manage Inventory Organization Parameters** button to edit the organization settings.
2. In the Manage Inventory Organization Parameters page,
    - Select the **Organization is a manufacturing plant** check box to set an organization as in-house manufacturing plant.

- Select the **Organization represents a contract manufacturer** check box to set an organization as contract manufacturing organization.

Note: If the organization is set as a contract manufacturing plant, you must also provide the supplier and supplier site information for the plant.

Note: If the organization needs to track on hand balances by the country of origin, you must select Enable Tracking by Country of Origin.

Setting the Manufacturing Plant Parameters

Once an organization is set as manufacturing plant, you can set the parameters that determine each functionality of the plant.

Related Topics

- Critical Choices for Setting Up Plant Parameters

Critical Choices for Setting Up Plant Parameters

This topic discusses the manufacturing plant parameters in detail. It provides information about the parameters, their acceptable values, and the default values if any.

Plant Details Parameters

Here's a table that discusses plant details parameters:

Parameters	Required	Description
Manufacturing Calendar	Yes	Refers to the schedule used in the manufacturing plant. The schedule and its shifts must be of type Time. The values for Shift Detail Type supported are None and Punch. Production plants require specific start and end times for resources when scheduling work orders. Neither the Duration and Elapsed schedules are supported, nor the Time schedules with Shifts using the Shift Detail Type of Flexible are supported.

Parameters	Required	Description
		CAUTION: If you delete the calendar in the Setup and Maintenance work area, then the delete can lead to data corruption and unwanted consequences in the work order scheduling and lead time calculations. You should change which calendar is used for the Manufacturing calendar instead. However, when you change the Manufacturing calendar, validations are performed to alert you if the change impacts your existing resource and shift assignment setup data.
Enable Process Manufacturing	No	Specifies if the plant is enabled for process manufacturing, in addition to discrete manufacturing.
Default Work Method	No	Specifies the default work method when the plant is enabled for process manufacturing. The possible values are Discrete Manufacturing and Process Manufacturing. The default plant parameter value is Discrete Manufacturing.

Material Parameters

Here's a table that discusses material parameters:

Parameters	Required	Description
Default Supply Subinventory	Yes	For work definitions: Specifies the default supply subinventory for work definition operation item if there is no supply subinventory defined for the work center or item master. For work orders: Specifies the supply subinventory to be used when backflushing components that don't have default values defined at the work order operation item or the inventory item level. For orderless transactions: Specifies the supply subinventory to be used when backflushing components that don't have default values defined at the work definition operation item or the inventory item level.
Default Completion Subinventory	Yes	For work orders:

Parameters	Required	Description
		Specifies the completion subinventory to be used for storing the completed product if a default isn't defined at the work order level. For orderless transactions: Specifies the completion subinventory to be used for storing the completed product if a default isn't defined at the work definition level.
Default Supply Locator	No	For work definitions: Specifies the default supply locator for work definition operation item if there is no supply locator defined for the work center or item master. For work orders: Specifies the supply locator to be used when backflushing components that don't have default values defined at the work order operation item or the inventory item level. For orderless transactions: Specifies the supply locator to be used when backflushing components that don't have default values defined at the work definition operation item or the inventory item level.
Default Completion Locator	No	For work orders: Specifies the completion locator to be used for storing the completed product if a default isn't defined at the work order level. For orderless transactions: Specifies the completion locator to be used for storing the completed product if a default isn't defined at the work definition level.
Default Pick Slip Grouping Rule	No	For work orders: Specifies the grouping rules that are defaulted from Inventory and are used as the basis to group the pick slips for work order material picking.
Print pick slips	No	For work orders: Specifies whether or not to print the pick slips that are generated when the Pick Materials for work Orders scheduled process is run and movement request is created to move materials from the warehouse to either directly issue to a work order or to a destination subinventory.

Parameters	Required	Description
Include pull components for pick release	No	For work orders: Specifies whether or not to allow materials with the supply type operation pull and assembly pull to be considered for the pick release activity.
Issue push components on pick release	No	For work orders: Specifies that when a pick slip is confirmed for the work order materials the materials with supply type push will be directly issued to the work order.

Work Definition Parameters

Here's a table that discusses work definition parameters:

Parameters	Required	Description
Starting Operation Sequence	No	Specifies the default sequence number for the first operation in a work definition and work order. The value must be a positive integer.
Operation Sequence Increment	No	Specifies the incremental value by which the sequence of the operation is to be increased in the work definition and work order. The value must be a positive integer.
Phantom Operation Inheritance	No	Specifies whether the phantom components and resources are inherited at the same operation that the phantom is assigned in the parent item work definition. The valid values are: • *Material Only:* On selecting this value, when creating the work order, all of the phantom components are inherited at the same operation that the phantom is assigned in the parent item work definition. • *Material and Resources:* On selecting this value, when creating the work order, all of the phantom components and resources are inherited at the same operation that the phantom is assigned in the parent item work definition. The default value is Material Only.

Parameters	Required	Description
		This parameter is applicable for standard item work order creation, and not for configured item work order creation. A phantom under an ATO model will be exploded using its item structure to get the materials.

Work Execution Parameters

Here's a table that discusses work execution parameters:

Parameters	Required	Description
Work Order Prefix	No	Specifies the prefix to use when autogenerating the work order names when creating the work orders. A maximum length of 30 characters is allowed.
Work Order Starting Number	Yes	Specifies the initial number to pass in to the document sequence which is created when a record is saved. The value must be a positive integer greater than zero. The default value is 1000. This field can be updated up to a maximum of 100 times per plant. Each update will create a replacement document sequence in the background. **Note:** You can't reuse a work order number by changing this value because during a work order creation, the application will incrementally move the document sequence forward to the first value that's not used yet.
Default Overcompletion Tolerance Percentage	No	Specifies the percentage of assemblies that you can overcomplete on work orders if not defined at the work order level. The value must be between 1 and 100. The default value is Null. **Note:** For process manufacturing, the tolerance is applicable for the Operation quantity.
Default Undercompletion Tolerance Percentage	No	Specifies the percentage of assemblies that you can undercomplete on work orders if not defined at the work order level.

Parameters	Required	Description
		The value must be between 1 and 100. The default value is Null. **Note:** For process manufacturing, the tolerance is applicable for the Operation quantity.
Purchase Requisition Trigger	No	Specifies the timing of creation of the purchase requisition for outside processing. The valid values are: • Work Order Release : If set to Work Order Release, purchase requisitions are created for all supplier operations of a work order when the work order is released. • Prior Operation Completion : If set to Prior Operation Completion, purchase requisitions are created for a supplier operation of a work order when quantities are completed at the prior count point operation. If the supplier operation happens to be the first count point operation, then the purchase requisition for the supplier operation is created when the work order is released.
Maximum Scheduling Duration in Months	Yes	Specifies the maximum scheduling duration for work order creation and update. You can set the duration by providing any value between 3 and 48. The default value is 12 months.
Default Lot Number for Product Completion	Yes	Specifies the preassign lot number that can be setup to default the lot number in the work order and product completion. The default values are 'No default' and 'Work order number.'
Supply Types to Include in Planning by Default for Operation Items	Yes	Specifies the include in planning behavior for item supply types supplier and bulk by selecting this new plant parameter. The default values are Bulk and Supplier. If you can deselect these items in the plant parameter, all work orders created after that wouldn't consider these items for planning by default.
Include component yield in material requirements	No	Indicates whether the component yield is factored into the work order material

Parameters	Required	Description
		requirements and the component quantities during the material transactions. If you use standard cost roll-up and deselect this parameter, you can get unexpected usage variances in cost accounting. Cost roll-up only looks at work definition to calculate the required quantity for components whereas cost accounting receives the component quantities from work order transactions. You deselect this parameter to avoid rounding the decimal quantities. The rounding can inflate transaction quantities causing inaccurate representation of requirements.
Include operation yield in material and resource requirements	No	Indicates whether the material and resource requirements in a work order are calculated based on the operation yield values if these are specified in the work definition. This is applicable for discrete manufacturing.
Allow splitting of work orders for multiple execution runs	No	Lets you split a work order into multiple, consecutive execution runs and track production transactions for each execution run.
Automatically associate serial numbers during work order import	No	Indicates whether the serial numbers are to be automatically generated and associated when importing a work order.
Allow direct purchases for work orders	No	Indicates whether the direct purchases for work orders are allowed or not. The check box is checked by default for maintenance organizations. The check box is unchecked by default for manufacturing organizations and must be checked to enable the parameter.
Allow reservations for work order materials	No	Indicates whether or not the reservations for work order materials are allowed. The check box is checked by default for maintenance organizations. The check box is unchecked by default for manufacturing organizations and must be checked to enable the parameter.
Allow repeated consumption of materials in discrete work orders and flow schedules	No	Indicates whether multiple instances of the same material are combined or retained as separate instances in an operation for a discrete manufacturing work order or flow schedule.
Default Transaction Mode	No	Specifies whether the materials and resources are defaulted from the work order operation when reporting the material or resource transactions. The valid values are:

Parameters	Required	Description
		• *All:* On selecting this value, all the components and resources that are associated to the work order operation are defaulted and you can transact against them. • *Entered:* On selecting this value, the components and resources that are associated to the work order operation aren't defaulted and you're required to enter the specific component or the resource to transact. The default value is All.
Default Transaction Quantity	No	Specifies whether the transaction quantity is to be defaulted as that of the required quantity during the material or resource transactions in a work order. However, you're allowed to make changes to the defaulted quantity. The valid values are: • *None:* On selecting this value, the transaction quantity isn't defaulted as that of the required quantity during the material or resource transactions in a work order. • *Material:* On selecting this value, the transaction quantity is defaulted as that of the required quantity during the material transactions in a work order. • *Resources:* On selecting this value, the transaction quantity is defaulted as that of the required quantity during the resource transactions in a work order. • *Both:* On selecting this value, the transaction quantity is defaulted as that of the required quantity during the material and resource transactions in a work order. The default value is Both.
Capture Level for Serialization Enabled Operations	No	Level at which start or pause events are captured for serialization-enabled operations. The valid values are as follows: • Operation: When you select this value, start or pause events are captured for serialization-enabled operations at an operation level. This is a default option. • Item Serial: When you select this value, start or pause events are captured at individual serial units for serialization-enabled operations.
Material Reporting Level for Serialization Enabled Operations	No	Level at which operators report materials for serialization-enabled operations. The valid values are as follows:

Parameters	Required	Description
		• Operation: When you select this value, material reporting would be enabled only at the operation level. This is a default option. • Item Serial: When you select this value, material reporting would be enabled at individual serial units for serialization-enabled operations.
Allow Quantity Changes During Backflush	No	Specifies whether changing the transaction quantity is allowed or not. The valid values are: • *None:* On selecting this value, during backflushing, you can't modify the transaction quantity of the pull components required in an operation and can't report the consumption of the ad hoc material. During automatic charging, you can't modify the charge quantity of the automatic resources required in an operation and can't report the usage of the ad hoc resources. • *Material:* On selecting this value, during backflushing, you can modify the transaction quantity of the pull components required in an operation and can report the consumption of the ad hoc material. During automatic charging, you can't modify the charge quantity of the automatic resources required in an operation and can't report the usage of the ad hoc resources. • *Resources:* On selecting this value, during backflushing, you can't modify the transaction quantity of the pull components required in an operation and can't report the consumption of the ad hoc material. During automatic charging, you can modify the charge quantity of the automatic resources required in an operation and can report the usage of the ad hoc resources. • *Both:* On selecting this value, during backflushing, you can modify the transaction quantity of the pull components required at an operation and can report the consumption of the ad hoc material. During automatic charging, you can modify the charge quantity of the automatic resources required at an operation and can report usage of ad hoc resources. The default value is None.

Parameters	Required	Description
Lot Selection During Backflush	No	Specifies whether lots should be manually entered or defaulted during backflush. This is applicable for both Report Operation Transactions (Complete with Details) as well as Report Orderless Completion user flows. The valid values are: • Manual: Lots aren't defaulted and need to be manually entered. This is the default setting. • Lot FIFO: Lots are defaulted using the receipt date or first in first out (FIFO) basis. • Lot FEFO: Lots are defaulted using the expiration date or first expiration first out (FEFO) basis.
Allow negative issue without serial number entry	No	Specifies whether negative material transaction can be performed without serial number, for material with serial generation set up at work order issue.
Manually issue assembly to rework work order	No	Specifies whether or not to enable the execute a rework work order with manual control. When this parameter is enabled, the assembly item is issued manually to a rework work order with appropriate revision. The operation completion is performed up to the quantity of the assembly component item that you issued to work order.
Restrict lot numbers during returns	No	Specifies whether or not to restrict lot numbers during material returns. When this parameter is enabled, the production operators are restricted to return only lot numbers, which have been transacted at the work order operation. **Note:** For more information about the User Privilege to allow production operators ability to return lot number which wasn't transacted, see the Security Reference for Manufacturing and Supply Chain Materials Management guide.
Default Work Order Traveler Template	No	Specifies the name of the template to be used for printing the work order traveler or the labels for the plant. You may use your own BI publisher templates by specifying the file path and file name of your templates in this parameter. If the parameter is left blank, the default template defined in the BI publisher report definition settings is used for all the plants.

Parameters	Required	Description
		Note: You can find separate default templates for discrete and process manufacturing work orders. A maximum string length of 400 characters is allowed.
Default Label Template	No	Specifies the name of the template to be used for printing the work order traveler or the labels for the plant. You may use your own BI publisher templates by specifying the file path and file name of your templates in this parameter. If the parameter is left blank, the default template defined in the BI publisher report definition settings is used for all the plants. A maximum string length of 400 characters is allowed.
Print product labels using external applications	No	Indicates whether product labels are printed using external printing applications. When selected, the native printing functionality into PDF is suppressed and a print product label business event is generated. External printing applications can listen to the business event to generate labels externally.
Automate manufacturing execution with robotic and industrial equipment	No	Specifies whether resources in the plant can be defined as automation equipment to automate manufacturing execution through bidirectional communication with robotic and industrial equipment.
Default lot from material reservations during material issue transactions	No	Specifies whether reserved lot information is carried forward in material transactions for a work order operation.

Related Topics

- Set Up a Manufacturing Plant

Considerations for Setting Up Lookups for Manufacturing

Lookups in applications are used to represent a set of codes and their translated meanings. For instruction on setting up lookups that are common to any Oracle application, refer to the Implementing Common Features for SCM guide, Define Applications Core Configuration chapter.

In addition to the common lookups, Oracle Fusion Cloud Manufacturing uses some specific lookups.

The following table lists the lookups specific to Oracle Manufacturing and descriptions of the lookup codes which you can populate accordingly:

Lookup Name	Lookup Code	Description
Resource Class	ORA_WIS_RESOURCE_CLASS	Enables you to group resources into resource group for the planning activities.
Work Center Resource Group	ORA_WIS_WC_RESOURCE_GROUP	Enables you to group resources for the work center planning activities.
Work Order Operation Transaction Reason Codes	ORA_WIE_REASON_CODE	Captures the reason codes for scrap and reject transactions.
Work Order Sub Type	ORA_WIE_WO_SUB_TYPE	Captures the work order subtype that describes the specific nature of work being performed. The predefined values are Standard Production, Prototype, Repair, Pilot Lot, and Test Lot. You can add additional lookup values as needed.
Work Definition Operation Resource Activity	ORA_WIS_RESOURCE_ACTIVITY	Captures the activity name of the work definition operation resource. The predefined values are Setup, Run, and Tear Down. You can add additional lookup values as needed.

How You Manage Work Areas

A work area is a specific region in the manufacturing plant where you execute production activities. The work area is a physical, geographical, or logical grouping of work centers.

Here's an illustration of how work areas relate to manufacturing plants and work centers.

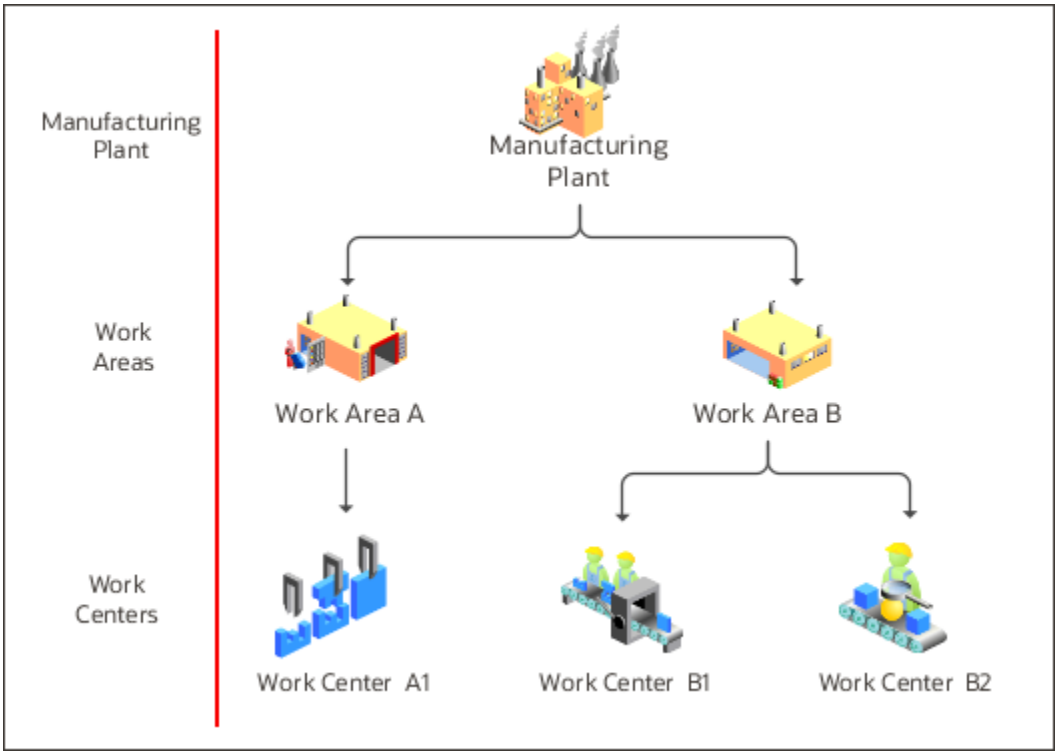


Figure 2 An illustration of how work areas relate to manufacturing plants and work centers.

As a manufacturing engineer, you must define at least one work area for a manufacturing plant and at least one work center for each work area. Use the **Manage Work Areas** page to create, edit, and delete work areas.

A production operator can report material, resource, and operation transactions performed at work centers that belong to a specific work area.

Navigate to the **Manage Work Areas** page using one of two ways:

- Click **Navigator** > **Work Definition**.

  In the Tasks pane, select **Manage Work Areas**.
- In the Setup and Maintenance work area, go to the following:
  - Offering: Manufacturing and Supply Chain Materials Management
  - Functional Area: Manufacturing Master Data
  - Task: Manage Work Areas

Related Topics

- How You Manage Work Centers
- How You Manage Resources
- Overview of Manufacturing Plants

How You Manage Resources

Resources are people, machines, and tools allocated to a work center. Resources are of two types:

- Labor
- Equipment

If you're responsible for manufacturing engineer tasks for your enterprise, you can search for, create, edit, and delete the resources using the **Manage Resources** page.

Navigate to the **Manage Resources** page using one of two paths:

- Click **Navigator** > **Work Definition**.

  In the Tasks pane, select **Manage Work Areas**.
- In the Setup and Maintenance work area, go to the following:
  - Offering: Manufacturing and Supply Chain Materials Management
  - Functional Area: Manufacturing Master Data
  - Task: Manage Production Resources

Here's an illustration of how the resources and resource instances associate to a work center.

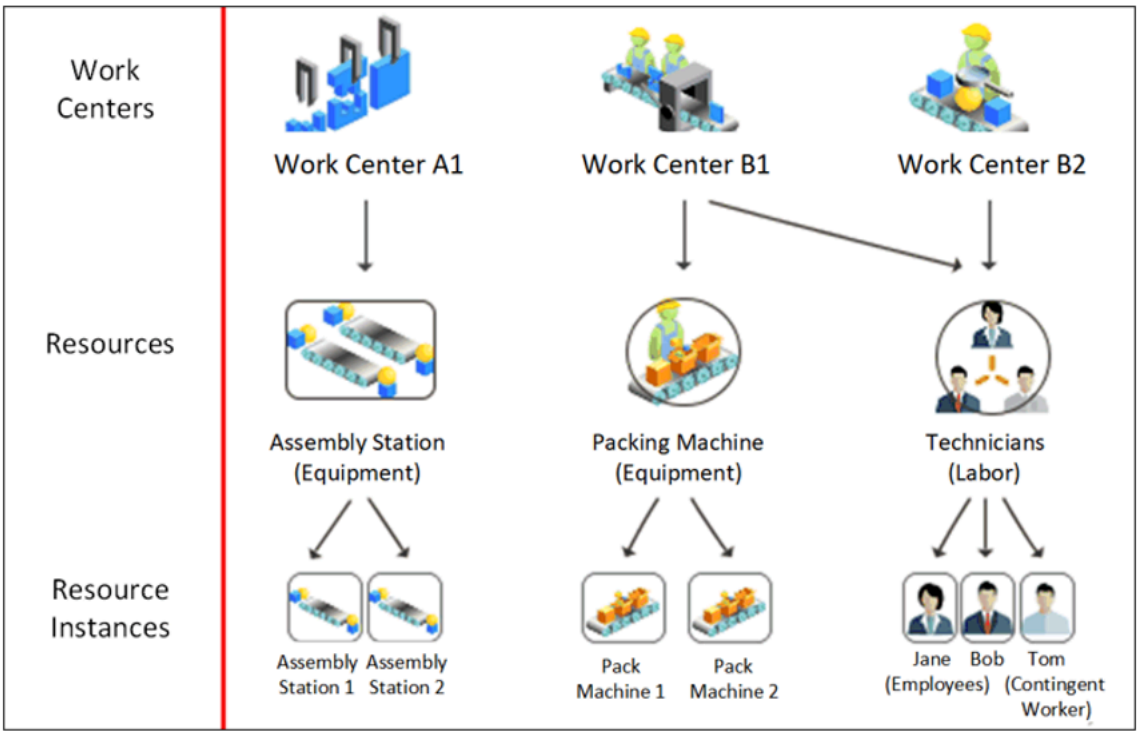


Figure 3 An illustration of how the resources and resource instances associate to a work center.

You can schedule a resource in a work definition and work order if the usage UOM belongs to the UOM class as defined in the profile SCM Common: Default Service Duration Class (RCS_DEFAULT_UOM_CLASS_CODE_FOR_SVC_DURATION).

For any scheduled resource, it's recommended that this profile be set to a UOM class that represents units of measure for Time.

Resource Instances

Resource instances are granular representations of a resource in the Oracle Fusion Cloud Manufacturing application. One or more resource instances can be associated to a resource. You can identify a resource by a unique code known as the identifier, and a name.

You can also optionally assign a primary work center to the resource instance to identify the department or location that the resource instance primarily works in.

> **Tip:** Assigning a primary work center to a resource instance helps in quick assignment of the resource instance in work orders and work execution transactions.

You can deactivate or reactivate a resource instance by updating the Inactive On field. When a resource instance is deactivated, it's not available for further use until reactivated. You can delete a resource instance only if it's not used in work execution.

Associate Labor Resource Instances

A labor resource instance represents the names of actual people working in the manufacturing shop floor. A labor resource instance can be optionally associated to a person record available in the Oracle Trading Community Architecture. Such associations are unique within a plant.

> **Note:** Oracle Trading Community Architecture represents a repository of person and organization parties identified through their party usages. Oracle Manufacturing allows the subset of Oracle Trading Community Architecture person party records to assign person type resource instances.

Person types in Oracle Trading Community Architecture that can be associated to a resource instance and can be any of the following:

- Employee
- Contingent Worker
- Partner Contact

You can define persons of types Employees or Contingent Workers in Oracle Fusion Cloud Human Capital Management (HCM) and are automatically propagated to the Oracle Trading Community Architecture through the HCM - Oracle Trading Community Architecture auto-sync process.

You can set up persons of type Partner Contact in the Oracle CRM application, which are automatically available in the Oracle Trading Community Architecture.

Associate Equipment Resource Instances

An equipment resource instance represents the names of actual machines being used in the manufacturing shop floor. An equipment resource instance can optionally associated to an Asset Number defined in Oracle Fusion Cloud Maintenance. Such associations are unique within a plant.

Assets must be defined in a location corresponding to the plant and a location type work center in order to be eligible for association to the equipment resource instance.

If you intend to use the equipment qualification feature, then you must associate an asset number to the equipment resource instance. You can view the qualifications defined for the asset number in Maintenance Management using the View Asset qualifications button.

Related Topics

- How You Manage Work Centers
- How You Manage Work Areas
- Overview of Manufacturing Plants

How You Manage Work Centers

Work centers are specific production units that consist of people or equipment. You can associate each work center with an active work area.

As a manufacturing engineer, here's what you can do using the Manage Work Centers page in the Work Definition work area:

- Create, edit, and delete work centers
- Add resources to a work center and allocate resources to different shifts
- View and manage exceptions associated to the resources

Navigate to the **Manage Work Centers** page using one of two paths:

- Click **Navigator** > **Work Definition**.

  In the Tasks pane, select **Manage Work Centers**.
- In the Setup and Maintenance work area, go to the following:
  - Offering: Manufacturing and Supply Chain Materials Management
  - Functional Area: Manufacturing Master Data
  - Task: Manage Work Centers

Related Topics

- How You Manage Work Areas
- How You Manage Resources
- How You Manage Work Center Resource Calendars
- Create a Resource Exception
- Overview of Manufacturing Plants

How You Manage Work Order Statuses

If you're a production controller or supervisor, you can define and update work order statuses to support enterprise-specific business processes. To do so, use the Manage Work Order Statuses page. Here are two ways to find the page:

- In the Tasks pane of the Setup and Maintenance work area, click the Manage Work Order Statuses task.
- In the Setup and Maintenance work area, use this path:
- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Manufacturing Master Data
- Task: Manage Manufacturing and Maintenance Work Order Statuses

A work order status can be either predefined or user-defined. Here are the predefined statuses:

- Unreleased
- Released
- On Hold
- Completed
- Closed
- Canceled

Define a New Work Order Status

To define a new status, click the Add icon. You must provide a unique name and code for the status, and associate it to a system status. For example, you can define the new status **Materials_Unrel**, and associate it to the system status **Unreleased**. This helps you sort, manage, and report work orders more effectively.

> **Note:** You must name the new status in a way that the user understands which system status it's associated to. You can add a prefix or a suffix of the system status. For example, you can use the name UNREL_MATERIAL_UNRELEASED to indicate that the new status is associated to the system status Unreleased.

Edit a User-Defined Work Order Status

You can only update the Name and Description attributes for both system statuses and user-defined statuses. For a user-defined status, you can't update the Code and System Status attributes.

> **Note:** It's recommended to not update the name of the system status. However, if you want to, you must do it in a way that the user can understand and associate it to the original name of the system status.

Related Topics

- How You Manage Work Centers
- How You Manage Work Areas
- Overview of Manufacturing Plants

How You Set Up Items in Oracle Manufacturing

The items used in Manufacturing are created in the Product Information Management work area. You can create work definitions for standard items and ATO models. You can create work orders for only Standard & Configured Items. However, in a contract manufacturing organization, only standard items are supported.

The following table displays items and the attributes relevant while creating a work definition and a work order in Manufacturing:

Attribute Name	Attribute Description	Work Definition	Work Order	Notes
Build in WIP	Indicates whether you can create discrete work orders and process work orders.	You can create a work definition for a Product Item or Primary Output Item when Build in WIP is set to either **Yes** or **No**.	You can create a work order for a Product Item or a Primary Output Item only when Build in WIP is set to **Yes**.	When you need to create a work definition for a prototype, you may want the ability to create work definition. However, you still want to prevent work order creation until the production process is finalized. In such cases, you must set the Build in WIP to **No**.
Inventory Transaction Enabled	Indicates whether transactions can be performed on an item.	You can create a work definition for a Product Item or Primary Output Item when Transaction Enabled is set to either **Yes** or **No**. You can add an operation item when Transaction Enabled is set to either **Yes** or **No**.	You can create work order for a Product Item or a Primary Output Item only when Inventory Transaction Enabled flag is set to **Yes**. Similarly, you can generally add material items to the work order, only when this flag is set to **Yes**. However, you can add material items with this flag set to **No** when the supply type is Bulk. You can perform product and material transactions only if the inventory transaction flag is set to **Yes**.	
Structure Item Type	Indicates the type of bill of material the item can include such as standard, model, planning, and product family.	You can't create a work definition for a PTO model, a PTO option class, an ATO option class, or for an item with planning or product family structure item type.	Not applicable	
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	You can create a work definition for an item with date effective structure only.	Not applicable	

Attribute Name	Attribute Description	Work Definition	Work Order	Notes
	associated with project manufacturing.			
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.	You can't create a work definition for a configured item, which is created based on an ATO model.	You can't create work orders for an ATO model, ATO option class, PTO option class, and PTO model.	
Autocreated Configuration	Indicates whether the item is automatically created. If the base model is null, you can't select this attribute.	You can't create a work definition for a configured item, which is created based on an ATO model.	You can create a work order for a configured item, which is created based on an ATO model.	
Pick Components	Indicates whether an item has a bill of material with options, classes, or included items that are picked from finished goods inventory. Pick-to-order items and models must be set to Yes. Assemble-to-order items and models and regular items (without a bill of material) must be set to **No**.	You can't create a work definition for a PTO model or a PTO option class.	You can't create a work order for a PTO model or a PTO option class.	
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.	You can create a work definition for an ATO model, but not an ATO option class.	You can't create work orders for an ATO model and ATO option class.	
Supply Type	Represents the default supply type at the item level for the material item. Valid values are Push, Bulk, Supplier, Assembly Pull, Operation Pull, and Phantom.	You can add an operation item for all supply types, that's, Push, Bulk, Supplier Assembly Pull, Operation Pull, and Phantom.	You can add an operation item with the following supply types: Push, Bulk, Supplier, Assembly Pull, and Operation Pull.	
Outside Processing Service	Indicates whether the item represents the outside processing service and can be added to a supplier operation in Oracle Manufacturing.	When a supplier operation is defined in a work definition, then you need to associate an outside processing item (Outside Processing Service is set to **Yes**) to the supplier operation.	When a supplier operation is added to the work order, then you need to associate an outside processing item (Outside Processing Service is set to **Yes**) to the supplier operation.	

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

For more information about setting up items, refer to the Outside Processing chapter and the Contract Manufacturing chapter in this guide.

How You Upload Work Definition and Work Definition Operation Attachments Using a SOAP Service

This topic provides specifics for uptaking the ERP Object Attachment SOAP service for the manufacturing business entities work definition and work definition operation.

You can use the ERP Object Attachment SOAP service to perform an automatic, mass upload of attachments for discrete and process manufacturing work definitions. You specify the input parameters for the payload of this service to upload attachments to existing work definitions at the header or operation levels.

Note: To get started, refer to information provided in the Oracle Financials Cloud SOAP Web Services for Financials guide.

- Chapter: Business Object Services
- Section: ERP Object Attachment Service

Request Payload

Here's a table with request payload information.

Element Name	Type	Description
entityName	String	Valid business entity names are: WORK_DEFINITION, WORK_DEFINITON_OPERATION
categoryName	String	Document Category Name associated with the business entity.
allowDuplicate	String	Whether duplicate is allowed. Valid values are: Yes, No.
attachmentRows		List of elements, each containing the details of the attachment to upload. The details include the user keys, attachment type, and title.

attachmentRows Attributes for Work Definition Header

Here's a table with attachmentRows Attributes for Work Definition Header information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.

Attribute Name	Type	Description
UserKeyB	String	Item Number.
UserKeyC	String	Work Definition Internal Name.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

attachmentRows Attributes for Work Definition Operation

Here's a table with attachmentRows Attributes for Work Definition Operation information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Item Number.
UserKeyC	String	Work Definition Internal Name.
UserKeyD	String	Version Number.
UserKeyE	String	Operation Sequence Number.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different.

Attribute Name	Type	Description
		URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Definition Header

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/"
xmlns:erp="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_DEFINITION</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>M1</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>AS54888</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>ORA_MAIN</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>File1</erp:Title>
<!--Optional:-->
<erp:Content>Use Lathe L123.</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

Sample Payload for Work Definition Operation

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/"
xmlns:erp="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_DEFINITION_OPERATION</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>M1</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>AS54888</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>ORA_MAIN</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>1</erp:UserKeyD>
```

```
<!--Optional:-->
<erp:UserKeyE>10</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>Att001</erp:Title>
<!--Optional:-->
<erp:Content>Use Lathe L123.</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

Sample Payload for Work Definition Operation

How You Configure Human Tasks for Oracle Manufacturing

This topic explains how you set up the human task associated with the Manufacturing business objects.

You must use the **Manage Task Configurations for Supply Chain Management** task from the Setup and Maintenance work area to configure the human tasks:

This table lists the human tasks you must configure.

Human Task Name	Description
QualityIssueHumanTask	Human task to notify users for production exceptions.
StructureChangeFYIHumanTask	FYI Human Task Flow to notify users of item structure changes completed in the Product Information Management work area.

Note: For more information about configuring human tasks, refer to the chapter, Configuring Human Tasks of the Developing Business Processes with Oracle Business Process Management Studio guide. This guide is intended for process developers who use the Business Process Studio application to create and implement business processes including the configuring of human tasks.

Set Up Connected Assets and Equipment

Enterprises and manufacturing plants often use smart equipment and assets that can generate and receive operational data and alerts. Operational data can include events related to production updates, such as details on quantities produced, quality inspection results, operational parameters, and alerts related to machine errors or asset failures.

Operational data can also include commands related to set points and program information to be configured on the equipment. You can define set points in a work definition operation, which are used by the equipment to execute the operation for an item corresponding to the work definition.

You can use the data from smart equipment and assets to automate tasks in Manufacturing and Maintenance, such as automatically updating production quantities, performing quality inspections, collecting process parameters, and generating exceptions and maintenance work orders for faults and errors.

Before you start

You need to provision and configure the **SCM Core Service- Smart Operations** service on your instance before you can capture and evaluate events from connected assets in Maintenance and connected equipment in Manufacturing.

To enable this service, you need to log a Service Request (SR). For Manufacturing, use the following SR details:

- Select Product Module - Oracle Fusion Manufacturing Cloud Service.
- Select Category - Work Execution.
- Select Subcategory - Manage Work Orders.
- Select Component: Installation Issue (INSTALL).
- Copy and paste this text into description area of the SR: Enable the SCM Core Service-Smart Operations.

For Maintenance, use the following SR details:

- Select Product Module: Oracle Maintenance Cloud Service.
- Select Category: Maintenance Work Orders.
- Select Subcategory: Maintenance Work Orders.
- Select Component: Installation Issue (INSTALL).
- Select Severity: 3-Minimal Loss of Service.
- Copy and paste this text into description area of the SR: Enable the SCM Core Service-Smart Operations.

Note: You only need to create one SR, using either category, if you are using both Manufacturing and Maintenance.

Once the **SCM Core Service- Smart Operations** service is enabled on your Oracle Public Cloud region instance, follow the implementation steps described in the following sections.

Note: Your IIoT environment or external system should be available and configured. You should have connected your assets and machines, and created the required attributes to identify and generate data.

About Operational Events

Smart equipment and assets can generate events related to production updates, such as details on quantities produced, quality inspection results, and operational parameters. Operational events can also include alerts, anomalies, and failure predictions related to machine errors or asset failures.

Smart Operations currently support the following standard event types:

- **Operation Execution Start:** Indicates the start of a work order operation at a workstation. This event type has the following data attributes:

- WORK_ORDER_NUMBER: Required string.
- OPERATION_SEQUENCE: Required number.
- EXECUTION_RUN_NUMBER: Optional number.

- **Multiple Operations Start:** Indicates the start of multiple work order operations at a workstation. This event type has the following data attributes:
  - WORK_ORDER_OPERATIONS: BLOB value that includes the work order number (WORK_ORDER_NUMBER) and operation sequence (OPERATION_SEQUENCE) details for multiple work order operations.
- **Operation Execution Stop:** Indicates the stopping of work order operation execution at a workstation. This event type has no data attributes.
- **Quantity Report:** Reports production quantities, such as completed and rejected quantities, for a work order operation at a workstation. Also reports inspection results that includes values for the inspection characteristics. This event type has the following data attributes:
  - SERIAL_NUMBER: Optional string.
  - QUANTITY_REPORT_TYPE: Required string. Allowed values are COMPLETE, REJECT, and INSPECT.
  - QUANTITY: Required number.
  - FLOW_SCHEDULE_NUMBER: Optional string for flow schedules in flow manufacturing.
  - INSPECTION_CHARACTERISTICS: BLOB value that supports multiple inspection characteristics with their values (value), inspection comments (comments), and attachments, as applicable. Required only if the QUANTITY_REPORT_TYPE is INSPECT.

    The characteristics should use the inspection characteristic names. For example:

```
{
 "entityCode": "RT39578219-2712",
 "eventTypeCode": "CA_QUANTITY_REPORT",
 "eventTime": "2024-06-04T13:21:14Z",
 "data": {
 "QUANTITY": 1,
 "SERIAL_NUMBER": "SR001",
 "QUANTITY_REPORT_TYPE": "INSPECT",
 "INSPECTION_CHARACTERISTICS": {
 "temperature": {
 "value": 23,
 "comments": "In Range",
 "attachments": [
 {
 "fileName": "TemperatureReading.jpg",
 "mimeType": "image/jpeg",
 "content": "placeholder for image content"
 }
 ]
 },
 "pressure": {
 "value": 3500,
 "comments": "Not in Range",
 "attachments": [
 {
 "fileName": "PressureReading.jpg",
 "mimeType": "image/jpeg",
 "content": "placeholder for image content"
 }
 ]
 }

 }
```

```
}
```

The locale for the characteristic name should also be included in the header. The default is English (`en`).

Optional attributes should be included only if they contain data.

- `OPERATION_COMPLETE`: Optional string. Allowed values are `True` and `False`. Marks a process operation as complete, or the last discrete operation as undercomplete.
- `PRODUCT_ITEM_DETAILS`: BLOB value that identifies details for a controlled item in the last operation of a discrete work order. Depending on the item, details can include secondary quantity (`SECONDARY_QUANTITY`), license plate number (`LICENSE_PLATE_NUMBER`) in case the completion subinventory is LPN-enabled, serial number (`SERIAL_NUMBER`) under serial details (`SERIAL_DETAILS`), and lot details (`LOT_DETAILS`), such as Lot number (`LOT_NUMBER`), parent lot number (`PARENT_LOT_NUMBER`), lot quantity (`LOT_QUANTITY`), expiration date (`LOT_EXPIRATION_DATE`), and grade (`GRADE`).
- `WORK_ORDER_NUMBER`: Optional string that identifies the work order number when executing simultaneous operations.
- `OPERATION_SEQUENCE`: Optional number that identifies the operation sequence when executing simultaneous operations.

- **Product Report:** Reports outputs that are configured for the manual completion type. The report can include the following outputs:
  - Primary product (Process work orders)
  - Co-products and by-products (Process and Discrete work orders, where applicable)
  - Ad hoc outputs (treated as by-products)

  This event type has the following data attributes:

  - `PRODUCT_ITEM_NUMBER`: Required string.
  - `QUANTITY`: Required number.
  - `SECONDARY_QUANTITY`: Optional number.
  - `SERIAL_DETAILS`: BLOB value that identifies the serial details for a serial-controlled product. One serial number (`SERIAL_NUMBER`) is allowed per event.
  - `LOT_DETAILS`: BLOB value that identifies the lot details for a lot-controlled product based on the item and inventory setup. Lot number (`LOT_NUMBER`), parent lot number (`PARENT_LOT_NUMBER`), lot quantity (`LOT_QUANTITY`), expiration date (`LOT_EXPIRATION_DATE`), and grade (`GRADE`) can be provided.
  - `LICENSE_PLATE_NUMBER`: Optional string. Identifies the LPN if the completion subinventory is LPN-enabled.
- **Asset Fault:** Indicates a fault generated by a connected equipment or asset. Faults are associated with fault codes and can be of types diagnostic and failure. This event type has the following data attributes:
  - `FAULT_CODE`: Optional string.
  - `FAULT_TYPE`: Optional string. Allowed values are: `FAILURE` and `DIAGNOSTIC`.
- **Asset Status:** Indicates the status of the connected equipment or asset, such as idle, in-use, or down. This event type has the following data attribute:
  - `STATUS`: Required string. Allowed values are: `IN_USE`, `IDLE`, and `DOWN`.
- **Operational Parameters:** Includes connected equipment attributes to be collected in the context of the operation being performed. These can also be used to detect anomalous behavior. Operational parameters are measurable variables, conditions, or metrics that control and influence the production process's performance,

quality, and efficiency. Operational parameters can include process parameters, such as temperature, pressure, or speed, and environmental parameters, such as humidity and sterility, that directly impact product attributes.
    - Parameter Codes: Optional strings. Should be one of the defined operational parameters and at least one should be present.

> **Note:** See *Create and Use Process Operational Parameters in Work Definitions* in the Using Manufacturing guide for more information on creating operational parameters.

- **Meter Readings:** Includes the usage or operational status of connected equipment or an asset, such as the odometer reading for a vehicle or the hours of operation for a machine. You can use the meter readings to track asset utilization and trigger alerts or maintenance work orders when certain threshold conditions are met for proactive, meter-based preventive maintenance.
    - `METER_READINGS`: BLOB value that supports multiple "`key: value`" pairs. The keys should use the meter code.

> **Note:** See *How You Create Meters for an Asset* in the Using Maintenance guide for more information on creating asset meters.

- **Failure Prediction:** Reports a predicted failure for a monitored entity, such as a machine or an asset. This event type has the following data attributes:
    - `NAME`: Required string. Identifies the prediction type. It's recommended to use "`machine_failure`" for failure predictions on machines.
    - `DESCRIPTION`: Required string. Identifies the prediction detection used for the entity.
    - `PROBABILITY`: Required number. Provides the probability of the failure prediction.
    - `PREDICTION_WINDOW_IN_HOURS`: Required number. Provides the time window within which the failure is predicted.
    - `PREDICTION_WINDOW`: Required object with two timestamps. Provides the start and end times of the predicted time window.
    - `CONFIDENCE_INTERVAL`: Optional object with lower and upper confidence levels as provided by the prediction algorithm.
    - `PREDICTED_OPERATIONAL_PARAMS`: Required object with operational parameters predicted at the end of the time window.
    - `PREDICTION_CONTEXT`: Optional object, provides additional context information, which supports multiple `"key:value"` pairs.
- **Anomaly:** Reports detected anomalies of a monitored entity, such as a machine or an asset. This event type has the following data attributes:
    - `ANOMALY_NAME`: Required string. Identifies the anomaly detection used for the entity.
    - `DURATION`: Required number. Provides the duration of the detected anomaly, in seconds, at the time of reporting.
    - `SEVERITY`: Required string. Recommended values are `LOW`, `MEDIUM`, or `HIGH`.
    - `ANOMALY_CONTEXT`: Optional object, provides additional context information, which supports multiple `"key:value"` pairs.

All event types additionally contain the following metadata about the event and the connected equipment or asset that generates the event:

- `entityCode`: Required string. The code for the connected entity, such as the asset number.
- `eventTypeCode`: Required string. The code for the event type, as described in the Fusion application. Possible values are `CA_OPERATION_EXECUTION_START`, `CA_OPERATION_EXECUTION_STOP`, `CA_QUANTITY_REPORT`, `CA_FAULT`, `CA_STATUS`,

`CA_OPERATIONAL_PARAMETERS`, `CA_METERS`, `CA_FAILURE_PREDICTION`, and `CA_ANOMALY` corresponding to the standard event types.

- `eventTime`: Required string (date-time). Time when the event occurred in ISO 8601 format.

Note: See *Create Operational Events* in the REST API for Oracle Supply Chain Management Cloud guide for sample payload examples.

Your IIoT environment or external system should have been configured to map the relevant equipment or asset attributes to the event payload attributes specification. This includes the following:

- Direct mapping for attributes that are fetched directly from the connected asset or machine:
  - `FAULT_CODE` (String)
  - `WORK_ORDER_NUMBER` (String)
  - `OPERATION_SEQUENCE` (Number)
  - `EXECUTION_RUN_NUMBER` (Number)
  - `SERIAL_NUMBER` (String)
  - `QUANTITY` (Number)
  - `FLOW_SCHEDULE_NUMBER` (String)
  - `INSPECTION_CHARACTERISTICS`(Multiple data types): The various inspection characteristics and their respective data types.
  - Parameter Codes (Number/String): The various operational parameter codes.
  - `METER_READINGS` (Number): The various meter codes.
- Derived mapping for attributes that are transformed into Oracle-specified event attributes, including the supported List of Values (LoV).

  The `STATUS` LoV supports the following: `IN_USE`, `IDLE`, and `DOWN`. The `QUANTITY_REPORT_TYPE` LoV supports `COMPLETE`, `REJECT`, and `INSPECT`.
- Additional optional mappings if required.

  For example, you may need to map fault types to fault codes. Say, fault type `FAILURE` maps to fault codes `E01` and `E03`, and fault type `DIAGNOSTIC` maps to fault codes `E02` and `E04`.

Related Topics

- Use REST APIs for Operational Events
- Use MQTT for Operational Events and Commands

About Operational Commands

Operational commands can send set points and program information to be configured on the equipment, or request for asset meter readings.

Smart Operations currently support the following standard command types:

Set Operational Parameters: Lets you send set points and any program information, such as the program file name, to the equipment before starting the operation or during the operation for better control. The parameters include one or more of the predefined operational parameters.

> **Note:** See *Create and Use Process Operational Parameters in Work Definitions* in the Using Manufacturing guide for more information on creating operational parameters.

Request Meters: Lets you request an asset meter reading on demand. The meters include one or more of the predefined meters.

> **Note:** See *How You Create Meters for an Asset* in the Using Maintenance guide for more information on creating asset meters.

To transmit commands to your IIoT environment or external system, you must use Message Queuing Telemetry Transport (MQTT) integration. The command data publishes to the MQTT topic using the following syntax, which contains metadata about the command and the connected equipment or asset that should receive the command:

```
command/<assetNumber>/<commandTypeCode>
```

Here:

- `command`: Required string. Default syntax on the topic to illustrate that the commands are being published.
- `assetNumber`: Required string. The asset number for the equipment that should receive the command.
- `commandTypeCode`: Required string. The code for the command type, as described in the Fusion application. Possible values are `CA_SET_OPERATIONAL_PARAMETERS` or `CA_REQUEST_METERS` corresponding to the standard command type.
- `data`: Required string. The data that needs to be transmitted to the connected equipment or asset. Here's a sample payload:

```
{
 "data": {
 "parameters" : {
 "NZ_PRESSURE": 100,
 "TEMP_AMB": 30
 }
 }
}
```

Your IIoT environment or external system requires the following to receive the commands:

- Should be subscribed to the publicly reachable MQTT broker for the topic syntax:

  `command/<assetNumber>/<commandTypeCode>.`

  The MQTT broker integration should be added under **Smart Operations Configurations** in Work Execution.
- Should have been configured to map the relevant equipment or asset attributes to the incoming command payload attributes specification. This includes the following:
  - Direct mapping for attributes that can be written back to or requested from the connected asset or machine:

    ```
    Parameter Codes (Number/String): Various operational parameter codes

    Meter Codes (String): Various meter codes
    ```
  - Additional optional mappings if required.

For example, if your application configures the `Temperature` attribute in Fahrenheit, but one of your plants expects it in Celsius, you may need to convert the Unit of Measure (UoM) before writing back onto the connected asset or machine attributes.

Related Topics

- Use MQTT for Operational Events and Commands

Enable Automated Work Execution

For Manufacturing, your workstations need to be enabled to support automatic work execution.

Ensure the following:

- Enable a workstation for automated execution of work order operations by setting the **Enable for automated execution of operations** flag for the workstation.
- To enable equipment resource instances for connected execution, they need to be associated with an asset configured in Oracle Fusion Maintenance Cloud. The asset's location organization should be the same as the equipment resource instance's manufacturing organization. Only assets with items can be associated with resource instances.

Enable Permission Groups

You must enable permission groups to work with connected assets and equipment.

You can enable permission groups for the predefined job role. Alternatively, if you are using your own custom job role for data ingestion, you can enable permission groups and add the appropriate duty role for operational data ingestion to the role hierarchy.

Use the following steps to enable permission groups for the predefined job role:

1. Click **Roles** in the security console.

   To access the security console, click **Navigator > Tools > Security Console**.
2. Search for the `ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB` role.
3. Select the **Edit Role** option from the search result section.
4. Click **Enable Permission Groups** to enable permission groups for the role. Confirm your choice.
5. Click the **Summary** step and click **Save and Close**. You can also navigate to the Summary step by clicking **Next** until you reach the final step.

Use the following steps to use a custom job role:

1. Click **Roles** in the security console.

   To access the security console, click **Navigator > Tools > Security Console**.
2. Search for the `ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB` role.
3. Select the **Copy Role** option from the search result section.
4. Select **Copy top role and inherited roles** in the Copy Options dialog and click **Copy Role**.
5. Optionally edit the name and code for the custom role.
6. Click **Enable Permission Groups** to enable permission groups for the role. Confirm your choice.

7. Click the **Role Hierarchy** step. You can also click **Next** until you reach the Role Hierarchy step.
8. Click the **Roles and Permission Groups** tab and click **Add Role**.
9. Search and add the duty role `ORA_DR_SCM_SMO_INGEST_OPERATIONAL_DATA_DUTY`.
10. Click the **Summary** step and click **Save and Close**. You can also navigate to the Summary step by clicking **Next** until you reach the final step.

Note:

- You should enable permission groups for any predefined or custom roles that you may be using with connected assets and equipment.
- When searching for the duty role (`ORA_DR_SCM_SMO_INGEST_OPERATIONAL_DATA_DUTY`) to add, search by **Roles and Permission Groups** in the Security Console.

To ensure that the changes to the roles have been readily synced, you may need to run the **Import User and Role Application Security Data** and **Retrieve Latest LDAP Changes** scheduled processes:

- See *Schedule the Import User and Role Application Security Data Process* for more help.
- See *Retrieve Latest LDAP Changes* for more help.

Use REST APIs for Operational Events

REST APIs enable creation of events related to the health of connected assets for maintenance, or events corresponding to the operational progress of production activity performed by an equipment resource in a manufacturing plant.

You should have configured the authentication mechanism to post events from your external system or IIoT environment to Smart Operations, as follows:

- The IIoT environment or external system should use OAuth Integration for authentication and authorization to be able to post data for Smart Operations.
- The IIoT environment or external system should have the provision to capture Oracle Client ID, Secret (masked), Scope, Oracle AUTH Token URL, and Oracle Fusion Cloud Endpoint URL.
- The IIoT environment or external system should be able to invoke the Oracle AUTH Token URL with client ID, secret, and scope to retrieve the bearer token.
- The IIoT environment or external system should be able to POST events to the Oracle Fusion Cloud Endpoint URL using the retrieved bearer token.

  Note: See *Create Operational Events* in the REST API for Oracle Supply Chain Management Cloud guide for sample payload examples.

Create an Identity Domain Application and Configure Authorization

Generate a client ID and client secret that can be used to configure OAuth integration in your IIoT environment or external system. You can create one or more identity domain applications for each integration.

1. Sign in to your Oracle Identity Cloud Service console as an administrator.
2. From the navigation menu, select **Identity & Security**.
3. Under **Identity**, click **Domains** and select the identity domain.
4. Click **Integrated applications**.
5. On the Integrated applications page, click **Add application.**

6. In the Add application dialog, select **Confidential Application** and click **Launch workflow.**
7. Provide a name for the application. For example, **SMART_OPERATIONS_HTTP_CLIENT**.
8. On the **Configure OAuth** step, select **Configure this application as a client now** under Client configuration.
9. Under Authorization, select **Client credentials**.
10. Under **Token issuance policy** select **Add resources**.
11. Under Resources, click **Add scope**.
12. Search for the scope **spectra-scm-core**.
13. Under Select scope, select `Urn:opc:resource:fusion:{namespace}:scm-core/api/scm-core/operational-data` and click **Add**.

    Here `{namespace}` is your instance namespace.
14. Click **Next**, then **Finish**.
15. Click **Activate** to activate the application.

    You can get the client ID and client secret under the General Information section.

Assign Job Role to the Client ID

Associate the Smart Operations Service Agent job role (`ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB`) or the custom job role with the confidential application Client ID. This ensures that the Client ID generated for OAuth integration in the IIoT environment or external system is authorized to post events to Smart Operations.

1. In the **Security Console**, switch to the **Application Extensions** tab.
2. Under Custom OAuth Client Applications, click your application name.
3. On the application page, click the **Roles** tab.
4. Click **Add** to add the job role.
5. In the Add Role dialog, search for ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB.
6. Select and add the **Smart Operations Service Agent** role.

Verify Event Payload Transmission

Invoke the Oracle AUTH Token URL with client ID, secret, and scope to retrieve the bearer token. Post events to the Oracle Fusion Cloud Endpoint URL using the bearer token.

> **Note:** Your external system or IIoT environment should be able to get a `SUCCESS` response on event `POST`. If the response is not received, the system should be able to retry to `POST` the event. Additionally, your external system or IIoT environment should be able to capture the logs of both successful and failed `POST` events.

What to Do Next

Smart Operations let users create operational rules for asset faults, asset statuses, and operational parameter events. These operational rules evaluate the incoming events and execute automated workflow actions if the rule conditions are met. To create operational rules using Smart Operations, refer to the user guides for Manufacturing and Maintenance:

- *Use Operational Rules for Connected Equipment*
- *Use Operational Rules to Automatically Create Maintenance Work Orders*

Smart Operations maintain a record of operational data and events, such as operation execution start or stop, quantity report events, asset status events, operational parameters, and meter readings. You can view the accepted and rejected operational event records and also view operational events that failed to process. You can also look at operational commands issued to set operational parameter values on the equipment. Use the **Operational Data** task or action in the Work Execution work area to look at operational events and commands.

Use MQTT for Operational Events and Commands

Use an MQTT broker for Smart Operations to be able to subscribe to events published by your external system or IIoT environment. You can also use the broker to publish commands related to set points and program information to be configured on the equipment.

To use the MQTT PUB-SUB mechanism, you need the following:

- You should have an MQTT broker that is publicly reachable. The broker should support MQTT v5 along with capabilities such as shared subscription and QoS = 2.
- Add your broker integration details under **Smart Operations Configurations**.
- Smart Operations support basic authentication with one-way SSL for integration with MQTT brokers. You can use certificates issued by a Certificate Authority (CA). Self signed certificates are not allowed.
- Your IIoT environment or external system should be able to publish events to the publicly reachable broker using the following topic:
  `operational-data/v1/events`

Create the MQTT Broker Integration

You need to specify the connection details for the MQTT broker to subscribe to events and to publish commands to connected equipment and assets.

To configure the MQTT broker:

1. In the Work Execution work area, click the **Smart Operations Configurations** action or task under Manufacturing Setup.
2. Switch to the **Integrations** tab.
3. Click **Create Integration** to create an integration.
   You can only have one broker configured at a time. If you need to update the broker settings, you can edit the integration, or delete and create a new one.
4. Under Details, provide a **Name**, **Code**, and **Description** for the integration. The integration type is MQTT by default.
5. Add the connectivity information:
   - **Broker Host**: The host name for the MQTT broker.
   - **Port**: The port used to connect to the broker host. For example: 8883.
   - **Authentication Type**: Basic authentication is used by default.
   - **User Name** and **Password**: The credentials used to connect to the broker.
6. Click **Create**.
7. To use a certificate issued by a Certificate Authority (CA), click **Add** under Certificates.
8. Paste the certificate content including any certificate chain in the designated area and click **Add**.
9. To verify the connectivity for an integration, click the **Actions** menu for the integration and select **Connectivity Status**.

Verify Event and Command Transmission

For MQTT subscribe, publish the equipment and asset events to the publicly reachable MQTT broker using the topic:

`operational-data/v1/events`

For MQTT publish, subscribe to the publicly reachable MQTT broker for the topic syntax:

`command/<assetNumber>/<commandTypeCode>`

Use one of the following formats:

- `#`: To subscribe to all the published commands.
- `command/#`: To subscribe to all commands across all assets and equipment.
- `command/#/CA_SET_OPERATIONAL_PARAMETERS`: To subscribe to specific `SET_OPERATIONAL_PARAMETERS` commands across all assets and equipment.
- `command/<assetNumber>/#`: To subscribe a particular asset or equipment to all commands.
- `command/<assetNumber>/CA_SET_OPERATIONAL_PARAMETERS`: To subscribe a particular asset or equipment to specific `SET_OPERATIONAL_PARAMETERS` commands.

What to Do Next

Smart Operations let users create operational rules for asset faults, asset statuses, and operational parameter events. These operational rules evaluate the incoming events and execute automated workflow actions if the rule conditions are met. To create operational rules using Smart Operations, refer to the user guides for Manufacturing and Maintenance:

- *Use Operational Rules for Connected Equipment*
- *Use Operational Rules to Automatically Create Maintenance Work Orders*

Smart Operations maintain a record of operational data and events, such as operation execution start or stop, quantity report events, asset status events, operational parameters, and meter readings. You can view the accepted and rejected operational event records and also view operational events that failed to process. You can also view the accepted and in-error operational commands. Use the **Operational Data** task or action in the Work Execution work area to look at operational events and commands.

Use Workforce Scheduling to Manage Shifts and Operator Assignments

Production supervisors can leverage Oracle Workforce Scheduling, which is a part of Oracle Cloud Human Capital Management (HCM), to view and manage the schedules and availability of operators assigned to their work centers. Supervisors can use this information to assign operators to workstations for work execution.

Manufacturing engineers can map a resource to a scheduling group, and map a work center to a department. The department must belong to the same location as that of the manufacturing plant. You can optionally map multiple work centers to a department and multiple resources to a scheduling group.

Aggregation of the total workloads and the ability to identify a person in a labor resource transaction lets you plan for staffing the work centers and track labor usage at a person level.

Set Up Workforce Structures in Oracle Human Capital Management

Departments and jobs with scheduling groups are essential to define worker assignments. The HCM administrator sets up these entities.

Use the **Workforce Structures** work area under **My Client Groups** to configure departments and jobs.

Use the **Manage Departments** task to create and manage departments. A department used for the scheduling of a manufacturing plant must share the same location as the plant.

Jobs are required to schedule workers. These jobs must be associated with scheduling groups. Schedule administrators can create scheduling groups using the **Manage Common Lookups** task with the `ORA_PER_SCHEDULING_GROUP` lookup type. You can configure jobs under **My Client groups > Workforce Structures > Jobs**.

Persons with active assignments to the job and department are available for scheduling.

Refer to the following HCM documents for more information on Workforce Structures and Workforce Scheduling:

- *HCM Work Structures Documentation*
- *HCM Workforce Scheduling Documentation*

Set Up Workforce Scheduling in Oracle Human Capital Management

The scheduling administrator needs to complete the following Workforce Scheduling tasks in Oracle HCM:

- Set the default scheduling method to Scheduling Group.

  Scheduling groups are required for this setup.
- Define enterprise shifts and schedule generation profiles.
- Set up employee work patterns.

Set the Default Scheduling Method:

Change the default scheduling method from Job to Scheduling Group. Run the REST commands as the user that has the Scheduling Administrator job:

1. Run the `PATCH` command and replace the `<URL>` with your environment URL: `https://<URL>/hcmRestApi/resources/11.13.18.05/scheduleCommonSetups/100105258685623`.
2. Run the preceding `PATCH` command from a REST client with the following body: `{"ParameterValue": "ORA_JOB_SCH_GROUP"}`.

Define the Enterprise Shifts and Schedule Generation Profiles:

You can manage enterprise shifts from **My Client Groups > Workforce Scheduling > Shifts**.

Enterprise shifts must correspond to the SCM facility shifts, which means that the start and end times of the shifts in SCM calendars must be the same as that of the shifts. If required, you can create new shifts for use in supply chain products.

A schedule generation profile must be defined for each calendar in SCM. Create a schedule generation profile from **My Client Groups > Workforce Scheduling > Schedule Generation Profiles**. Add the following details for the schedule generation profile:

Identify operating shifts, which correspond to same shift start and end times, as in the SCM calendar. The scheduling period, departments, and schedule managers are required. Production supervisors should be added as schedule managers for profiles that are defined for the scheduling of a manufacturing plant. This allows supervisors to use the scheduling functionality when managing shifts and workstation operators.

Set Up Employee Work Patterns:

Employees should have work patterns for Workforce Scheduling to assign them to shifts. The work pattern specifies the workdays and shifts for the employees. You can set work patterns from **My Client Groups > Workforce Scheduling > Work Patterns**.

Refer to the following HCM documents for more information on Workforce Structures and Workforce Scheduling:

- *HCM Work Structures Documentation*
- *HCM Workforce Scheduling Documentation*

Map Schedule Generation Profiles to SCM Calendars

The Manufacturing production calendar must map to a schedule generation profile in the workforce schedule. The schedules and shifts defined in SCM integrate with the calendars in HCM Workforce Scheduling. After completing the steps for calendar mapping, you can utilize the work center resource capacity to estimate the workloads required to schedule persons.

To edit facility schedules in SCM, use the **Manage Facility Schedules** task. Navigate to Setup and Maintenance. You can find the **Manage Facility Schedules** task in the **Facilities** functional area.

Click the facility schedule that corresponds to your plant calendar and select the **Schedule Generation Profile** to map the calendar to the schedule generation profile.

> **Note:** For each manufacturing plant, there is a default calendar defined in the Manage Plant Parameters task in Setup and Maintenance under the Manufacturing Master Data functional area. The default calendar of an organization and all override calendars that are used by all the work centers in the plant must be mapped to schedule generation profiles. One facility shift can be mapped to only one shift in a schedule generation profile.

All shifts in a facility schedule are mapped to their equivalent shifts in the schedule generation profile if the start and end times for all shifts in the facility schedule map correctly to their HCM equivalent shifts. Once assigned, you cannot change the mapping.

You can use the **Manage Shifts** task in the **Facilities** functional area to verify that the manufacturing plant shifts are now associated with the corresponding HCM enterprise shifts.

> **Note:** Punch shifts are not supported with Workforce Scheduling integration.

Enable the Plant Parameter to Start Using Workforce Scheduling

To edit the manufacturing plant parameters, use the **Manage Plant Parameters** task. Navigate to Setup and Maintenance. You can find the **Manage Plant Parameters** task in the **Manufacturing Master Data** functional area.

Select **Use HCM workforce scheduling** to enable workforce scheduling for the manufacturing plant. After you enable this parameter:

- All labor resource instances are deactivated. This is an irreversible change. Moreover, you cannot add labor resource instances in this plant.
- Work Centers pages become available for mapping of departments.
- Resource pages become available for mapping of scheduling groups.
- The scheduled process to send workloads for scheduling is enabled.

Map Manufacturing Resources and Work Centers for Workforce Scheduling

The manufacturing engineer can map resources and work centers after the plant parameter for scheduling has been enabled. Use the Work Definition work area to map manufacturing resources and work centers.

To map a manufacturing resource to a scheduling group, click the **Manufacturing Resources** action from the Work Definition Overview page. From the **Actions** menu for a resource, select **Edit**. Select the **Scheduling Group** that corresponds to the resource and click **Update**.

The resource page for the manufacturing resource shows the list of the HCM persons that are part of the mapped scheduling group.

> **Note:** You can also map multiple resources to one scheduling group. Workload consolidation at the plant level allows for accurate aggregation of all the worker units required for each work center and resource.

To map a manufacturing work center to a department, click the **Manufacturing Work Centers** action from the Work Definition Overview page. From the **Actions** menu for a work center, select **Edit**. Select the **Department** that corresponds to the work center and click **Update**.

The work center page for a work center includes the resources for the work center. You can select **View Persons** from the **More Actions** menu for a resource to view all HCM persons associated with the mapped department and scheduling group.

To define resource shift units, select **View Details** from the **Actions** menu for the work center. Under Resource Availability, select **Edit Shift Units** from the More Actions menu of a resource. Adjust the shift units and click **Update**. The shift units are used to calculate the workloads for schedule generation.

> **Note:** You can also map multiple work centers to one department. Workload consolidation at the plant level allows for accurate aggregation of all the worker units required for each work center and resource.

18 Supply Chain Orchestration

Overview

Overview of Setting Up Supply Chain Orchestration

Supply Chain Orchestration comes predefined with supply data that you can use with little or no set up. To meet your specific needs, you can set up business rules that determine how to create supply documents and the processes that manage your supply request.

Set Up Tasks

To set up Supply Chain Orchestration, go to the Setup and Maintenance work area, then go to:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Supply Chain Orchestration

Use these tasks:

Task	Description
Manage Supply Orchestration Lookups	Edit only the name of each predefined lookup that's enabled for extensibility.
Manage Supply Orchestration Attachment Categories	Create attachment categories that meet your business requirements. The predefined categories support the predefined business processes in Oracle SCM Applications.
Manage Supply Order Defaulting and Enrichment Rules	Create rules that determine when to route a transfer order through Oracle Order Management.
Manage Supply Execution Document Creation Rules	Create supply execution rules that determine when to create a purchase order for a transfer order request. Supply Chain Orchestration uses transfer, by default.

Enable Features

Supply Chain Orchestration comes with a variety of features that you might find useful.

1. Go to the Setup and Maintenance work area, then select the Manufacturing and Supply Chain Materials Management offering.
2. Click **Change Feature Opt In**.
3. In the row that has Supply Chain Orchestration in the Name column, click the pencil.
4. On the Edit Features page, enable the features that you need.

More Help

Here is some more help content that you might find useful to do create, read, update, and delete operations for supply orders:

Tool	Where
REST API for Supply Requests	Go to *REST API for Oracle Fusion Cloud SCM*, then expand Inventory Management > Supply Requests.
SOAP Web Service for Supply Requests	Go to *SOAP Web Service*, expand the Business Object Services chapter, then expand Supply Request.
File-based Data Import for Supply Orders	Go to *File-Based Data Import (FBDI) for Oracle SCM*, expand the Supply Chain Collaboration and Visibility chapter, then click Import Supply Order.
Tables and Views for Supply Chain Orchestration	Go to *Oracle Fusion Cloud SCM: Tables and Views for SCM*, then examine the Supply Chain Orchestration chapter.

For details about how to set up a configured item, see *Overview of Configure-to-Order*.

Related Topics

- Use Supply Chain Orchestration in Your Back-to-Back Flows
- Overview of Configure-to-Order

Create Rules

Guidelines for Setting Up Rules That Create Supply

Create a rule that determines the type of supply to transfer between inventory organizations. Specify the business process and document type to use between organizations.

- Supply Chain Orchestration uses a transfer order between inventory organizations to create supply, by default. Your legal or business requirements might need a buy transaction. Set up a rule that creates a purchase order instead of a transfer order.
- Set up the rule at design time. Supply Chain Orchestration applies the rule at run time when it creates supply.
- Supply Chain Orchestration will automatically run your rules. Improve accuracy and timeliness, and reduce cost because you don't need to do it manually.
- Reduce the cost of transferring material between departments in your company.
- Extend your set up to accommodate change in your business environment, such as business growth, reorganization, merge, or acquisition.

Note:

- Supply Chain Orchestration doesn't come predefined with rules that create supply. If you must create supply that doesn't use a transfer order, then you must set up your own rule.

- Use your rule only to create purchase orders for transactions between one source inventory and one destination inventory, or between one source warehouse and one destination warehouse.

Update Party Data

You must update party data.

1. Go to the Scheduled Processes work area, then set up the Maintain Party and Location Current Record Information scheduled process to keep your party data up to date. Use this value when you set it up:

Parameter	Value
Synchronization Type	Party and Location

   Leave all other parameters empty.

   Click **Advanced > Schedule**, then set it up to run at least one time each day.

If you don't run this scheduled process, then you might encounter an error that's similar to:

```
A party could not be found for the requester provided on the line
```

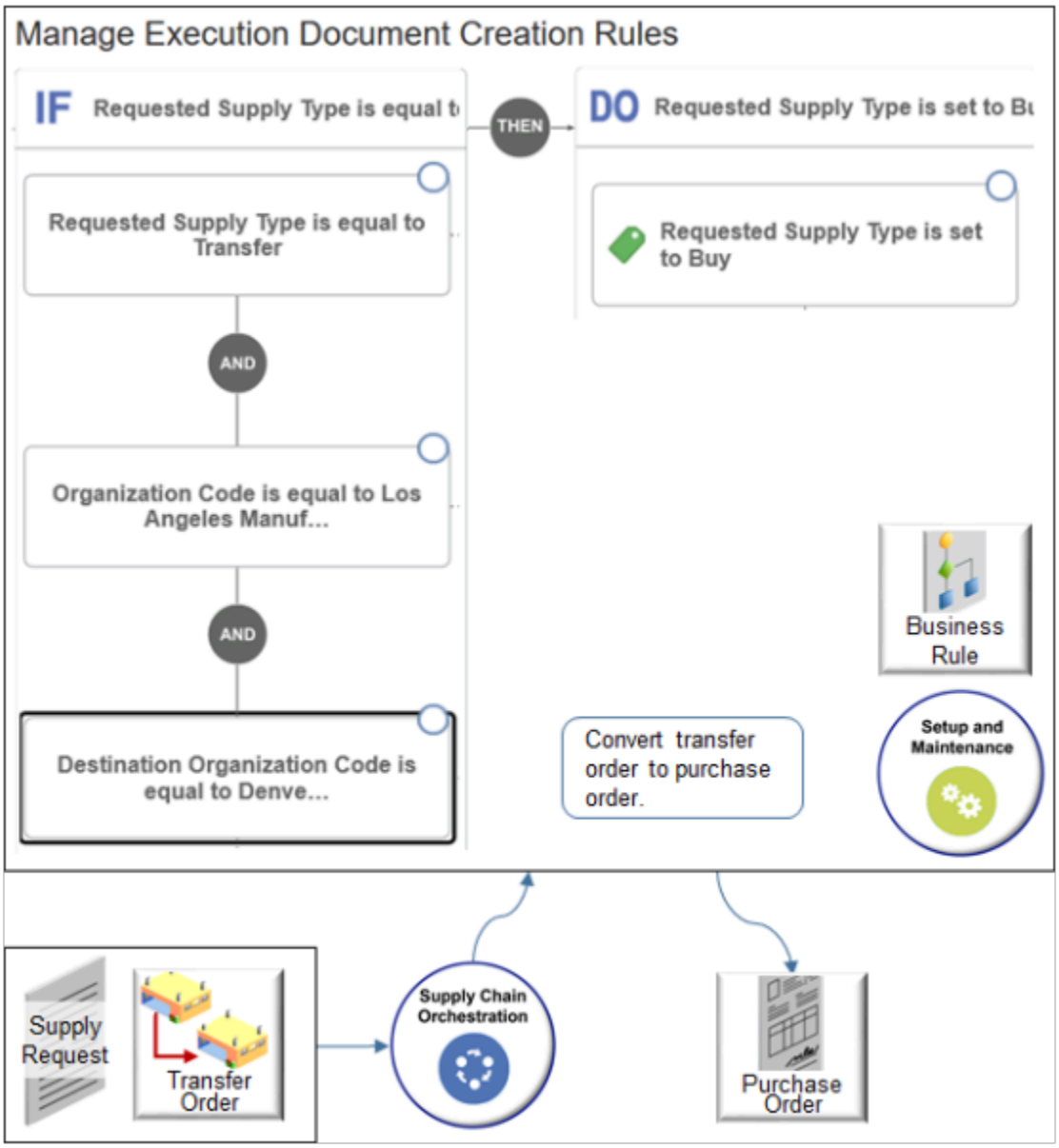
Set Up Rules That Create Supply

Set up a rule that uses a purchase order to create supply between organizations.

Assume you work for Vision Corporation. Vision creates a new factory in Denver to meet an increase in demand. Your main factory is in Los Angeles. You must transfer material from Los Angeles to Denver, but Denver is an independent profit center in Vision, so you need a rule that converts the transfer order to a purchase order:

- If the Requested Supply Type attribute equals Transfer, and if the Organization Code attribute equals Los Angeles, and if the Destination Organization Code attribute equals Denver, then set Requested Supply Type to Buy.

Here's your rule:



Do it.

1. Go to the Setup and Maintenance work area, then go to the Manage Supply Execution Document Creation Rules task.
2. On the Manage Execution Document Creation Rules page:

Attribute	Value
Name	Create Supply for Denver
Description	If moving items from Los Angeles to Denver, then convert transfer order to purchase order.

3. Add the If statement and Do statement.

   Peruse an example that adds statements in a rule. For details, see *Set Up Rules That Create Supply Orders*.

Guidelines for Setting Up Rules for Supply Orders

Set up rules that manage your supply orders.

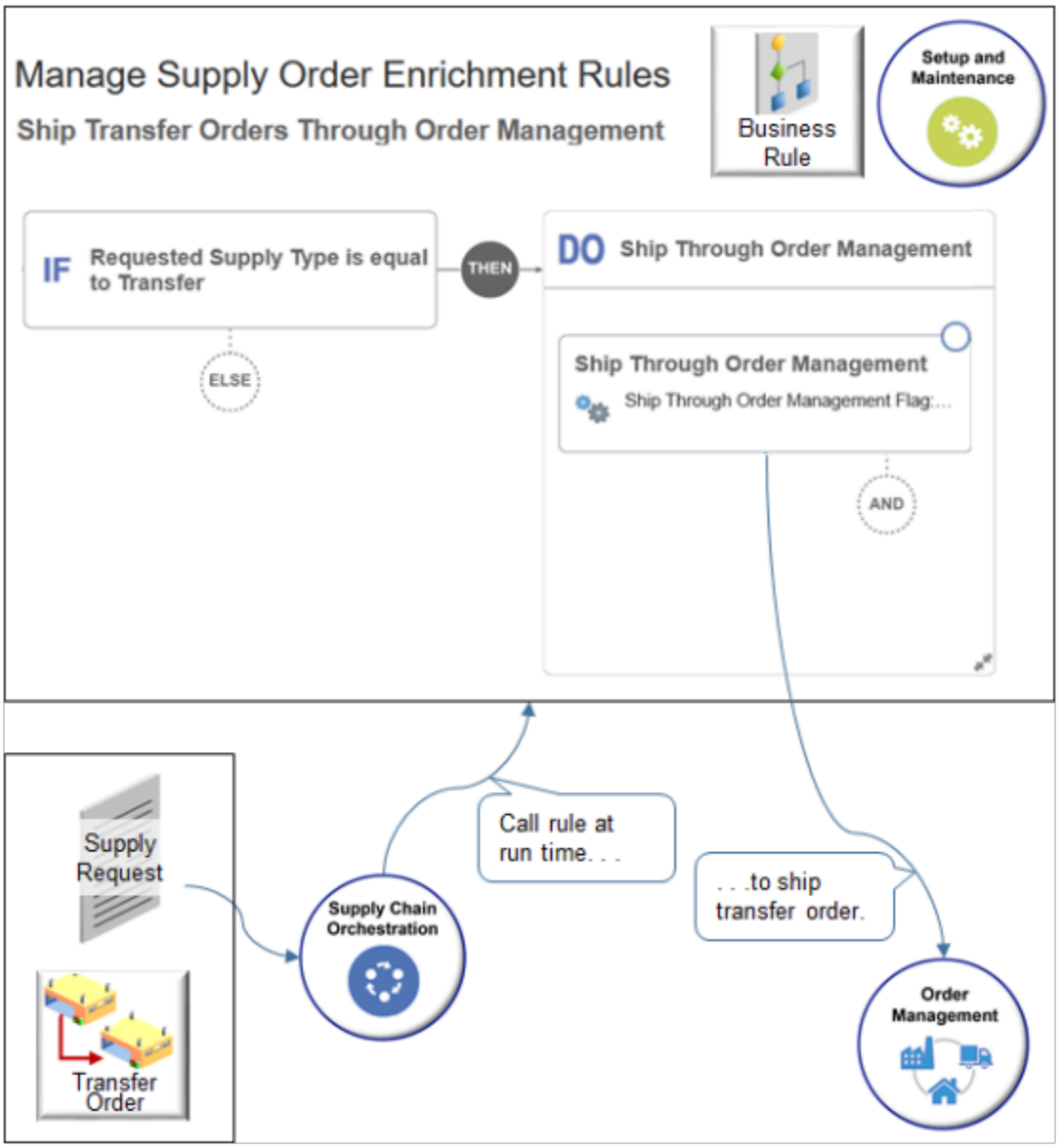
- Specify the transfer orders to track. If a supply order meets the rule criteria you set, then Order Management creates a sales order and uses it to track progress.
- Track items that are high in value or low in supply.
- Track items that require monitoring throughout fulfillment.
- Set up a wide range of conditional logic that meets your business requirements.
- Use different attributes depending on the supply type:
  - The make flow uses the work order status ID for work orders.
  - The transfer flow uses the DOO Shipment status for each back-to-back transfer order.
- Order Management doesn't track transfer order shipments, by default. If you must monitor an item, you must create a rule.

Example

Here's an example rule:

- If Supply Chain Orchestration receives a transfer order, then ship it through Order Management.

Here's the rule you create:

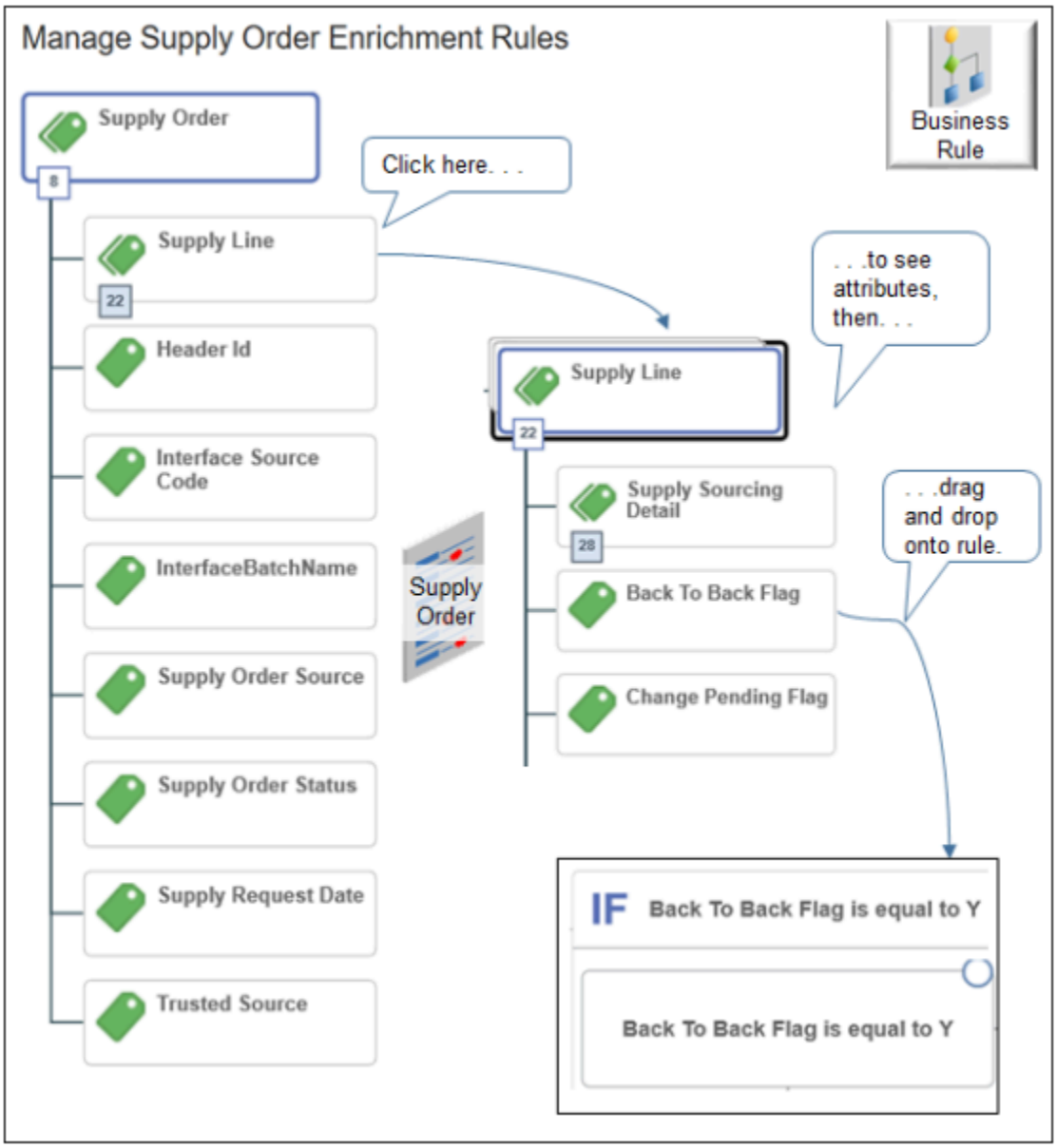


Note:

- Supply Chain Orchestration receives a supply request for a transfer order.
- Supply Chain Orchestration calls your rule at run time.
- The rule ships the transfer order through Order Management.

Use the Supply Order Hierarchy

Use the tree on the Manage Supply Order Enrichment Rules page to find attributes you can use in your rule, then add them:



The tree displays the supply order hierarchy:

- A supply order is an object in Supply Chain Orchestration.
- A supply order includes entities, such as Supply Lines.
- Each entity includes attributes. For example, here are some attributes in the Supply Lines entity:
  - Supply Sourcing Detail
  - Back to Back Flag
  - Change Pending Flag
  - Contract Manufacturing Flag
  - Destination Business Unit
  - And many others

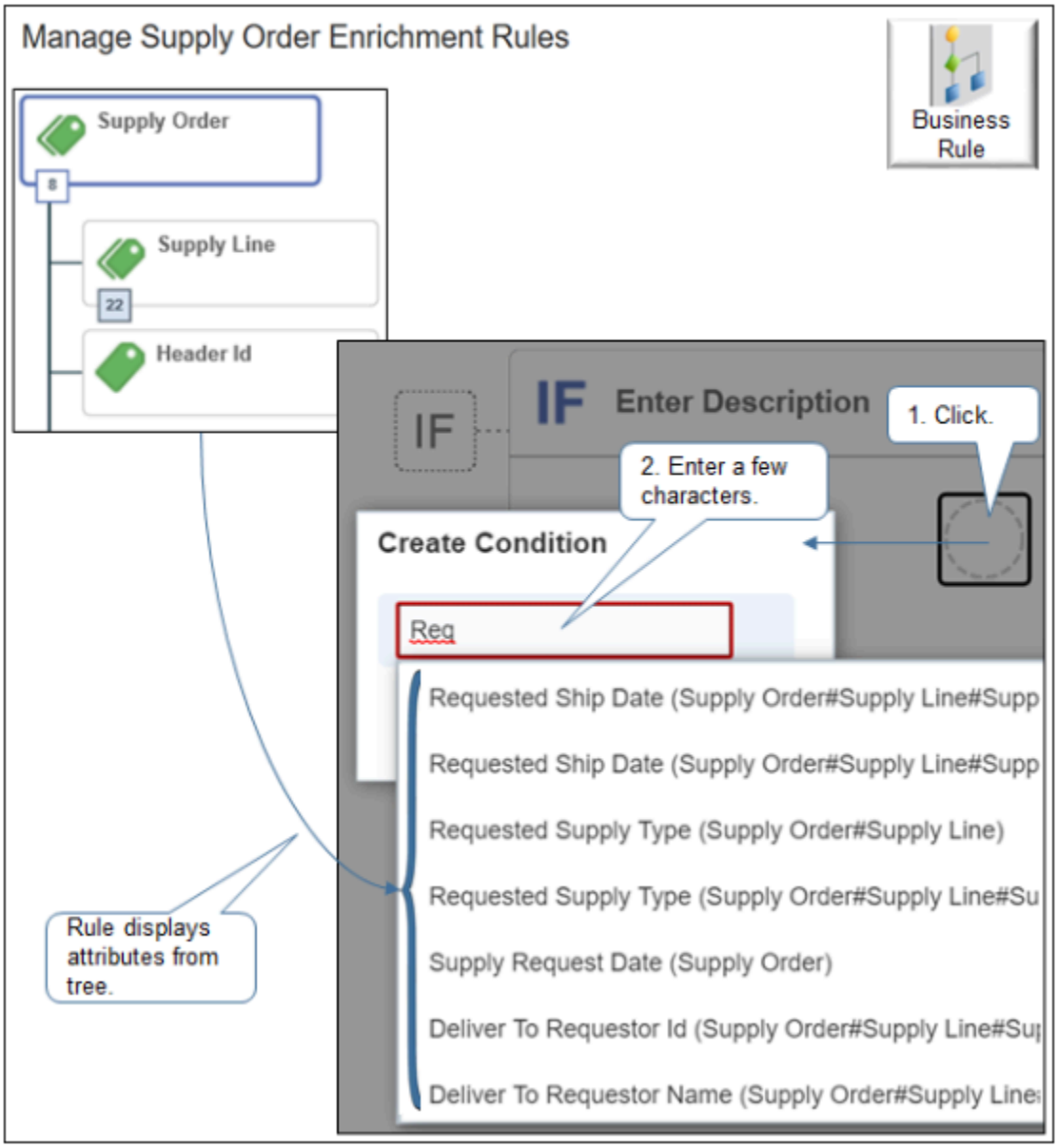
- To add an attribute to your rule, click the attribute, drag, then drop it onto the rule.

  For example, drag the Back to Back Flag attribute onto the If statement of your rule.

You can use the tree to set up a wide range of conditional logic that meets your business requirements. Here are a few examples:

- If the Back to Back Flag attribute is equal to True
- If the Supply Line Status attribute is equal to Closed
- If the Need By Date attribute is before 4/19/2019 6:02 PM in the Make Order Details entity of the Supply Sourcing Detail entity of the Supply Line entity

If you prefer not to use the tree, you can search directly in the If statement or Then statement for the entity, attribute, value, and so on:



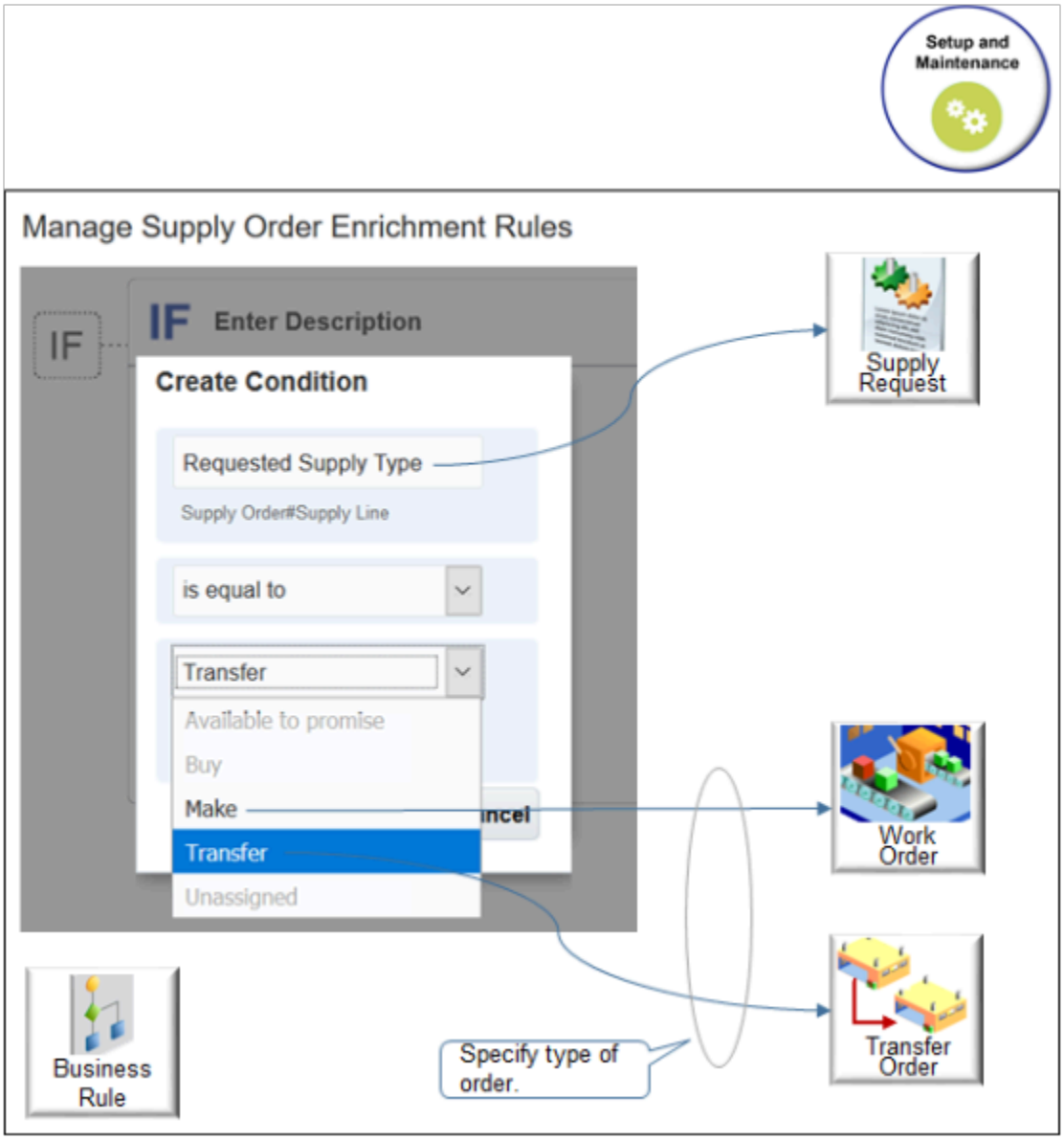
For example, click **New Condition** in the If area, then enter `Req` in the Create Condition dialog. The rule gets all attributes from the tree that contain the string `req`, then displays them in a list.

Each choice in the list includes the attribute name, and then the location of the attribute in the hierarchy. For example:

Choice in the List	Description
Supply Request Date (Supply Order)	Supply Request Date attribute of the Supply Order object.
Requested Supply Type (Supply Order#Supply Line)	Requested Supply Type attribute in the Supply Line entity of the Supply Order object.
Requested Supply Type (Supply Order#Supply Line#Supply Sourcing Detail)	Requested Supply Type attribute in the Supply Sourcing Detail entity of the Supply Line entity of the Supply Order object.
Requested Ship Date (Supply Order#Supply Line#Supply Sourcing Detail#Buy Order Details)	Requested Ship Date attribute in the Buy Order Details entity of the Supply Sourcing Detail entity of the Supply Line entity of the Supply Order object.

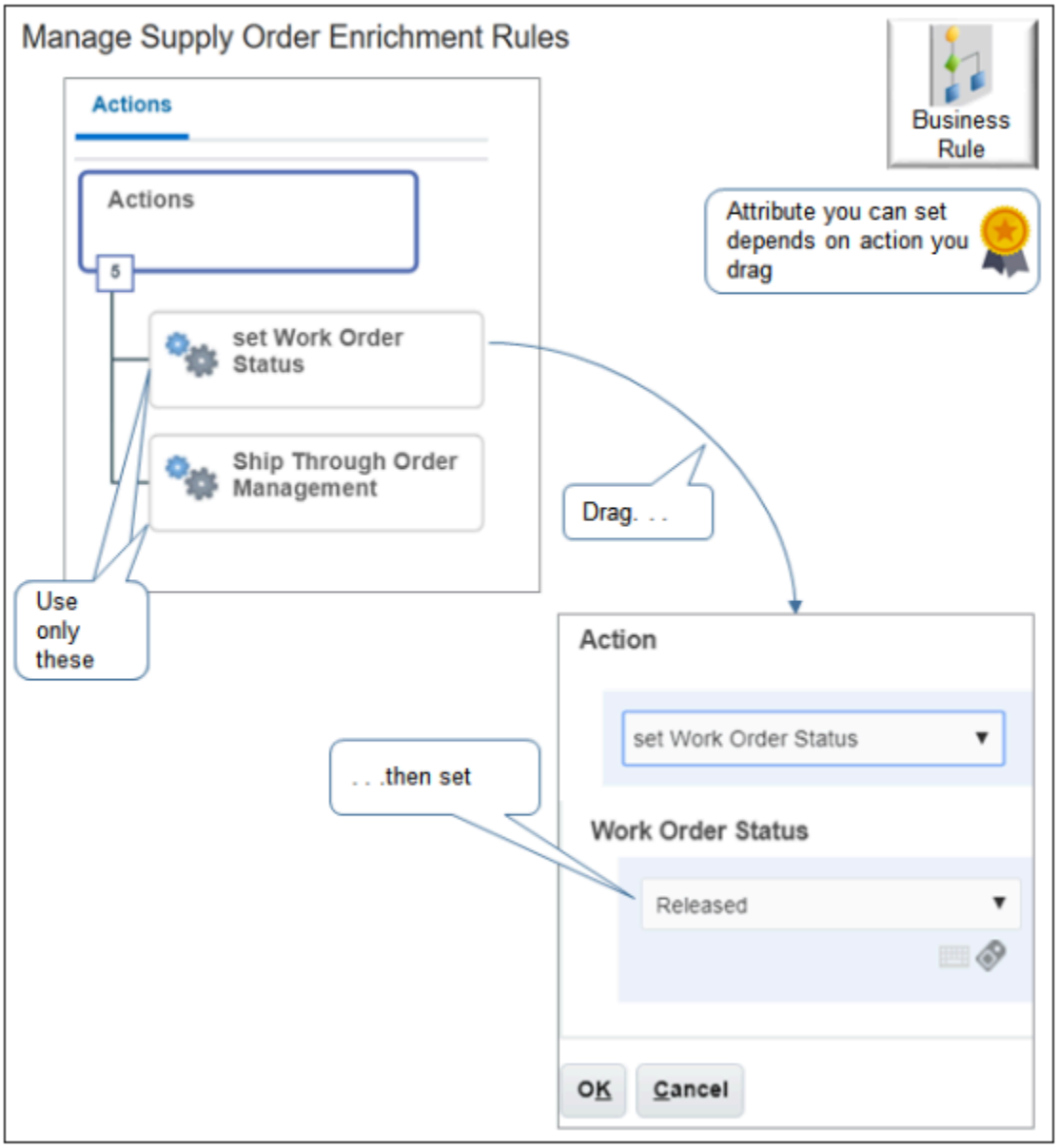
Set the Condition

Use the Create Condition dialog to specify whether you need a work order or transfer order according to the type of supply request:



Set the Action

Use the Actions tree to drag an action onto the Do area:



Note:

- Drag an action:

Action	Description
Set Work Order Status	Set the Work Order Status attribute to Unreleased or Released.
Ship Through Order Management	To ship the order through Oracle Order Management, set this action to Yes.

- Don't use any other action.

Frequently Used Attributes

Here are some of the attributes you might use frequently in your rules:

Supply Order Hierarchy	Attribute
Supply Order	Supply Order Source
Supply Order > Supply Line	Destination Organization Code Destination Business Unit Item Number
Supply Order > Supply Line > Supply Sourcing Detail	Destination Organization Code Destination Business Unit
Supply Order > Supply Line > Supply Sourcing Detail > Transfer Order Details	Shipment Priority Transfer Price Ship To Party Id Organization Code Business Unit

Set Up Rules for Supply Orders

Set up rules that manage your supply orders.

Assume you must create a rule:

- If Supply Orchestration receives a transfer order, then ship it through Order Management.

1. Go to the Setup and Maintenance work area, then go to the Manage Supply Order Defaulting and Enrichment Rules task.
2. On the **Manage Supply Order Defaulting and Enrichment Rules** page, click **Create New Rule**.
3. Enter values:

Attribute	Value
Rule Name	Ship Transfer Orders Through Order Management

4. Specify the type of order you need.
   Use the Create Condition dialog to specify whether you need a purchase order, make order, or transfer order according to the type of supply request.

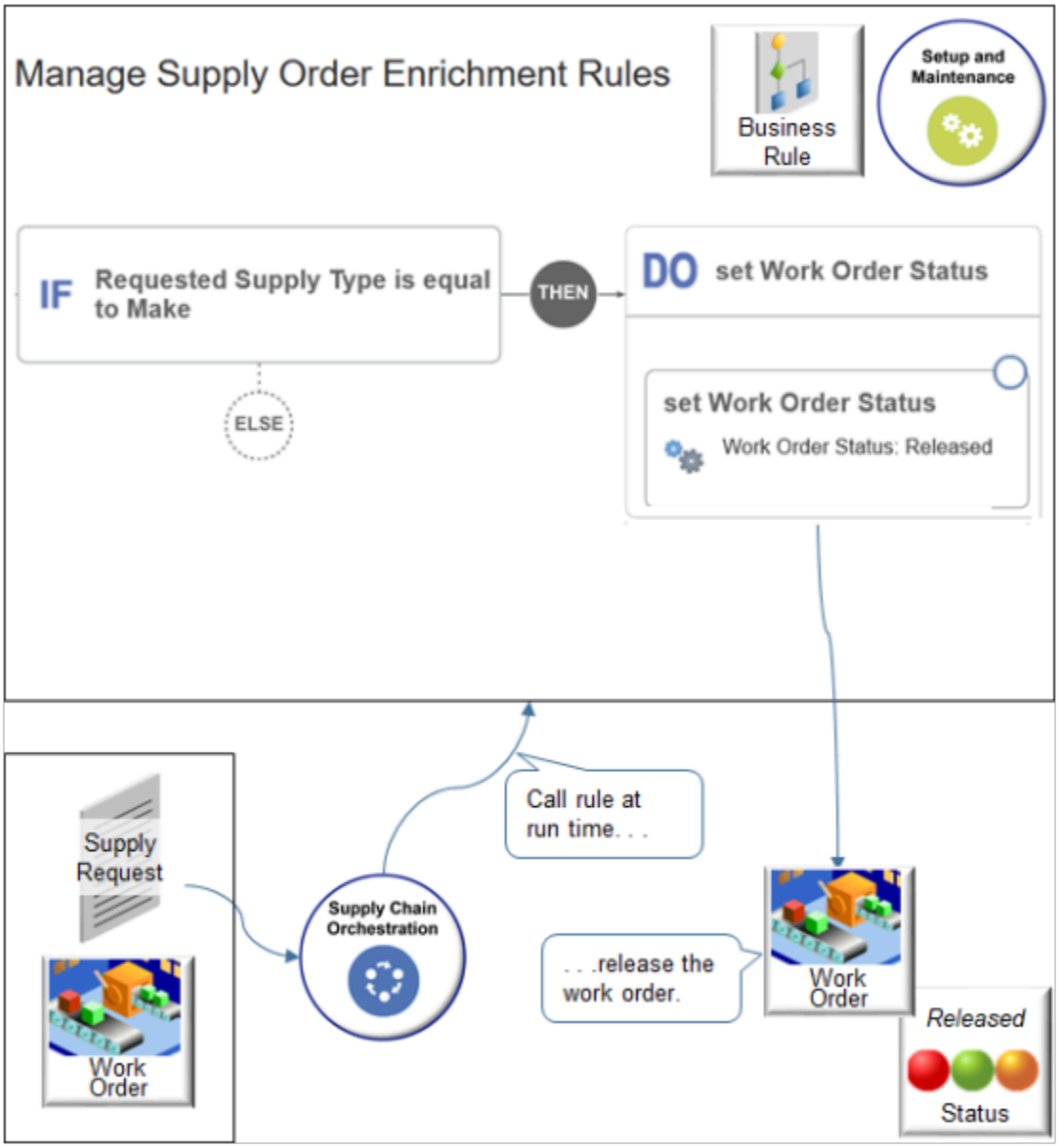
In this example, you need a transfer order:

- In the IF, area click **New Condition**.
- In the Create Condition dialog, enter `Requested Supply Type`, wait a moment, then click **Requested Supply Type (Supply Order#Supply Line)**.
- Set the condition to **Is Equal to Transfer**, then click **OK**.

5. Click **Then > Do**.
6. In the Do area, click **New Action > Perform an Action**.
7. In the Create Action dialog, choose **Ship Through Order Management**.
8. Set the Ship Through Order Management Flag attribute to Yes, then click **OK**.

Example Rule for Work Orders

Here's an example of a rule that processes a work order:



It states:

- If the Requested Supply Type attribute is equal to Make, then set the Work Order Status attribute to Released.

Manage Supply

Use Redesigned Pages to View Supply Requests

Use redesigned pages to view supply requests and their details on your desktop, tablet, or mobile device.

You can use the supply request reference, supply order, supply document, or item to search for your supply requests:

- View details about the supply documents for each supply request.
- Create and save your own search. Make that search your default search.
- View the supply documents that Oracle Supply Chain Orchestration created for each request.
- Drill into the supply request to get details about it and any exception messages that might exist.
- If a supply request is in exception, then you can view a recommended action to fix it.
- Do various actions on each supply request.

Use these attributes to search for your supply requests:

- Supply Request Reference
- Supply Order
- Supply Document
- Item

Use these attributes to filter your search results:

- Supply Requested Date
- Requested Delivery Date
- Supply Status
- Supply Type
- Business Flow

Try It

1. Make sure you have these privileges:
    - Process Supply Order Interface (DOS_PROCESS_SUPPLY_ORDER_INTERFACE_PRIV)
    - View Supply Orders (DOS_VIEW_SUPPLY_ORDERS_PRIV)
    - Manage Supply Request Exceptions (DOS_MANAGE_SUPPLY_REQUEST_EXCEPTIONS_PRIV)
    - View Supply Order Exceptions and Status (DOS_VIEW_SUPPLY_ORDER_EXCEPTIONS_AND_STATUS_PRIV)
    - Manage Scheduled Job Definition
2. Enable the feature:

- Go to the Setup and Maintenance work area, select the Manufacturing and Supply Chain Materials Management offering, then click **Change Feature Opt In**.
- In the row that has Supply Chain Orchestration in the Name column, click the **pencil**.
- Enable the Use Redesigned Pages to View Supply Requests feature, then click **Done**.

  If you enable it, then you can click **Tasks > Supply Requests** in the Supply Orchestration work area. If you don't enable, then the work area won't display the Supply Requests task.

3. Go to the Scheduled Process work area, then run the Create Index Definition and Perform Initial Ingest to OSCS scheduled process. Use this value when you run it:

Parameter	Value
Index Name to Reingest	`fa-scm-dos-supply-requests` You must set a value. If you don't, then the process will run for all predefined indexes, and that will affect performance.

This scheduled process creates the index, then adds details about your existing supply requests to Oracle Search Cloud Service (OSCS). Supply Chain Orchestration will automatically add details into the search index for any new supply requests that you create.

Manage Supply Requests for Projects

You can manage supply requests that include project data in Supply Chain Orchestration.

You can manage:

- Transfer requests across different organizations that include project data from Self Service Procurement.
- Transfer requests within a single organization or across different organizations that include project data from the Supply Request REST API.
- Purchase requests that include project data for outside processing from Manufacturing. Supply Chain Orchestration gets default values for project data and validates cost transactions for each project.

Examine Project Details

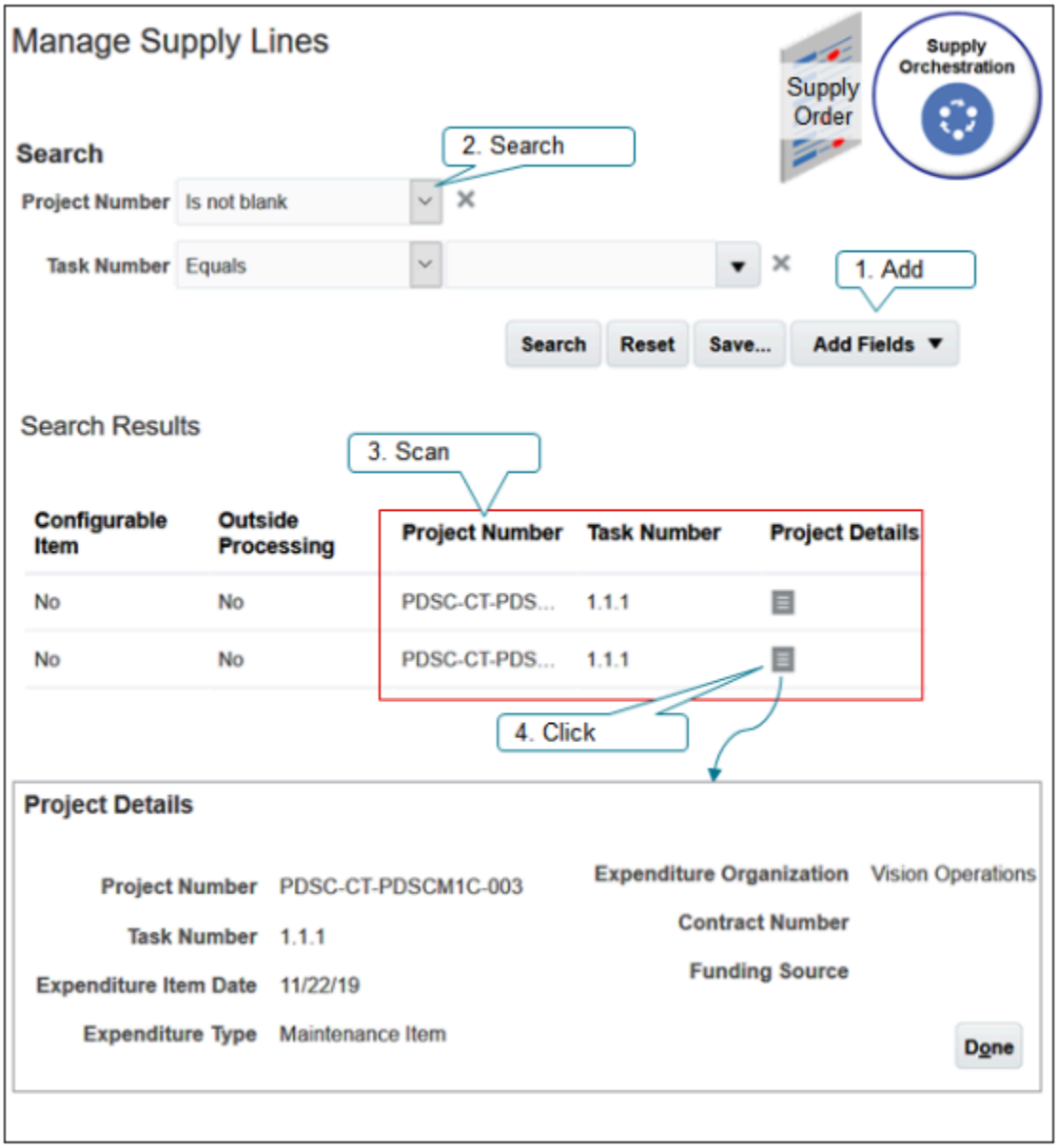
Go to the Supply Orchestration work area, then in the Search area, click **Add Fields** to add the Project Number and Task Number, then use these attributes to search for supply requests that include project data.

You can do your search on various pages in the Supply Orchestration work area:

- Manage Supply Lines
- Supply Order Details
- Manage Supply Request Exceptions

View the full set of project data on each supply line, such as Project Name, Task Number, Expenditure Item Date, Expenditure Type, Expenditure Organization, Contract Number, and Funding Source.

For example, view them on the Manage Supply Lines page:



Points to Consider

- If you use the Supply Request REST API:
  - You can capture project data only for transfer requests.
  - You can capture only the project number and task number, or you can capture the full set of project data. If you capture only the project number and task number, or only part of the full set of project data, then Supply Chain Orchestration keeps the values that you capture and gets default values for the project attributes that you don't capture.

- If validation fails for the project cost transaction, or if a setup or technical error happens, then you can manually correct the error and use the Supply Orchestration work area to resubmit the supply request.

  For example, if the expenditure type isn't active during the expenditure item date, then use the Manage Expenditure Types page to validate the expenditure type date. Resubmit the supply request so orchestration can successfully process the transfer request for the project.

Use Supply That's Specific to Each Project

Use this feature in your back-to-back fulfillment flow for each item that's too expensive to maintain as on-hand inventory when you must fulfill a sales order that has project details:

- Use this feature to make sure the project expenditures that you see in inventory are accurate.
- Your purchase order, transfer order, or work order can include project details from the sales order. Inventory Management uses these details to fulfill the item from inventory that's specific for the project, so you can accurately apply the cost that you incur for carrying inventory to each project.
- If you don't use this feature, then Inventory Management uses common inventory to fulfill the item, and costs get averaged for all items that are in common inventory regardless of whether they're part of a project. This situation can result in project expenditures that aren't accurate because costs aren't specific to the project, and it might affect your project margins.

Enable the Feature

1. Go to the Setup and Maintenance work are, then select the Manufacturing and Supply Chain Materials Management offering.
2. Click **Change Feature Opt In**.
3. In the row that contains Manufacturing and Supply Chain Materials Management in the Name column, click the **pencil**.
4. On the Edit Features page, in the row that contains Create Supply in Back-to-Back Flows for Sales Orders That Include Project Details in the Feature column, add a check mark to the box in the Enable column.

How it Works

1. You create a sales order in Oracle Order Management that includes project details.
2. Order Management sends a supply request that includes project details to Supply Chain Orchestration.
3. Supply Chain Orchestration gets a supply recommendation from Global Order Promising according to the sourcing rules that you set up for your back-to-back fulfillment for the item.
4. Supply Chain Orchestration uses the supply recommendation to create a supply order.
5. Supply Chain Orchestration sends the sales order details to Inventory Management.
6. Inventory Management creates shipment lines to fulfill the item.
7. Your back-to-back fulfillment uses a buy, make, transfer, or on-hand flow to create supply. There are some unique differences for each of these flows.

Buy Orders

- Supply Chain Orchestration creates a purchase requisition that includes project details from the sales order.
- Oracle Procurement converts the requisition into a purchase order.
- Inventory Management receives the item and adds it to inventory that's specific for the project.
- You can't update the project attributes on a back-to-back purchase order.

Make Orders

- Supply Chain Orchestration creates a back-to-back work order that includes project details form the sales order.
- Inventory Management finishes the item and adds it to inventory that's specific for the project.
- You can't update the project and task on the work order that's reserved for the sales order, but you can update other project attributes for a work order that isn't released.

Transfer Orders

- Supply Chain Orchestration creates back-to-back supply that includes project details, then sends these supply details to Inventory Management.
- Inventory Management creates a transfer order that includes the project details, then sends the transfer order to the warehouse.
- The warehouse uses the project details that are on the transfer order to identify the project-specific inventory it will use to fulfill the item, then picks and ships the item.
- You can't update project attributes on the transfer order.

On Hand Supply

- You can use the on-hand flow when on-hand supply is available in the fulfillment warehouse that you use for the back-to-back item.
- Global Order Promising examines the supply chain, then sends a recommendation to reserve on-hand supply.
- Supply Chain Orchestration uses project details from the sales order to reserve on-hand supply for the back-to-back order.
- Inventory Management reserves the on-hand supply.

Notes

- Global Order Promising doesn't consider project details.
- Use the Supply Chain Availability promising mode when set up your available-to-promise rule for each item that you fulfill in a back-to-back flow.
- Consider excluding on-hand supply for your back-to-back item. This will help to avoid a reservation failure for your project-specific inventory.

Orchestrate Supply Requests from Replenishment Planning

Receive and orchestrate movement requests, transfer requests, and buy requests that include subinventory details from Replenishment Planning.

Replenishment Planning maintains optimum inventory levels to meet customer service targets at the lowest inventory cost. Replenishment Planning releases supply recommendations, such as movement requests, transfer requests, and buy requests, to Supply Chain Orchestration. These requests include subinventory details. Supply Chain Orchestration orchestrates and tracks creating supply for movement requests, transfer orders, and purchase orders.

You can use the Supply Orchestration work area to search for these requests and orders. You can limit the search to view only supply requests from Replenishment Planning, or you can include supply requests from other demand sources and get a complete supply picture.

Assume you need to limit your search to view only supply requests from Replenishment Planning:

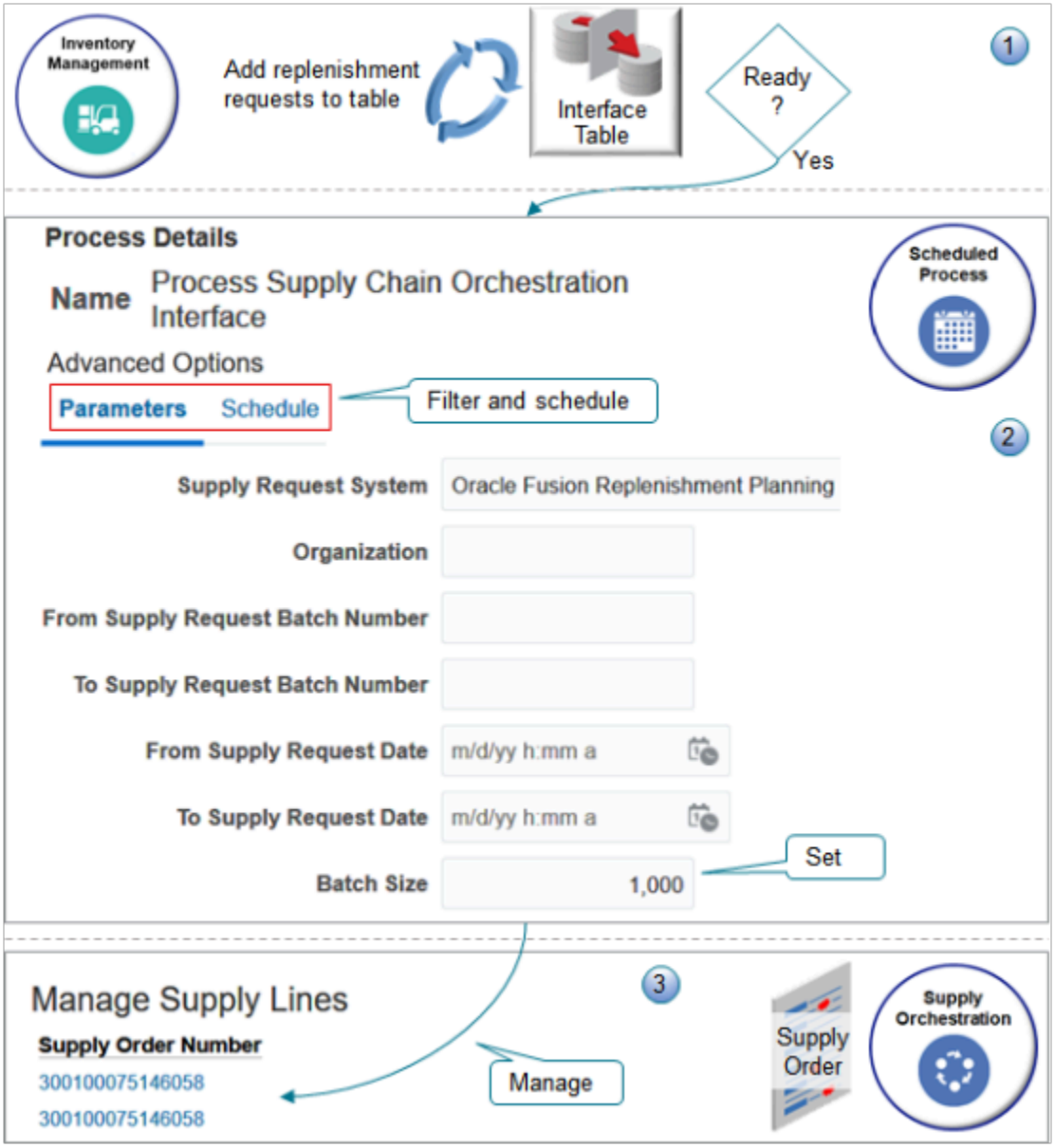
1. Go to the Supply Orchestration work area, then click **Tasks > Manage Supply Lines**.
2. On the Manage Supply Lines page, click **Add Fields**, then add the attributes:
    - Supply Request Source
    - Movement Request
3. In the Search area, set the values, then click **Search**:

Attribute	Value
Supply Request Source	Oracle Replenishment Planning
Movement Request	Yes

4. Examine the search results. They include all the movement requests that Supply Chain Orchestration has received from Replenishment Planning.

Improve Performance

Here's how Supply Chain Orchestration gets its supply requests:



Note

1. Replenishment Planning adds requests to the interface tables over time.
2. The requests in the interface table eventually meet the parameters that the Process Supply Chain Orchestration Interface scheduled process specifies, then the process runs and creates supply orders for the requests.
3. The Manage Supply Lines page in the Supply Orchestration work area displays the supply orders.

The scheduled process comes predefined to process Replenishment Planning requests in a batch, with a maximum of 10,000 requests in each batch, by default. You can't modify the Batch Size parameter for Replenishment Planning requests. However, you can use it when you run the scheduled process manually with other integrations, such as with Inventory, min-max planning, File-Based Data Import, and so on.

You can change the schedule to improve performance.

Assume you need to process Replenishment Planning requests in batches at least one time for each day:

1. Sign in as a user whose assigned the Supply Chain Operations Manager job role.
2. Go to the Scheduled Processes work area.
3. On the Overview page, click **Schedule New Process**.
4. In the Schedule New Process dialog, search for the Process Supply Chain Orchestration Interface scheduled process, then click **OK > OK**.
5. Set a schedule so the scheduled process automatically runs one time each day:
    - Click **Advanced > Schedule**.
    - Enable the Using a Schedule option, then set the values:

Attribute	Value
Frequency	Daily
Days Between Runs	1
End Date	Make sure the end date happens after the start date. You can set the end date to years in advance.

6. Submit.
7. Observe and modify.

    You could run the process every few minutes, but at the cost of consuming a lot of processing resources and degrading performance. Instead, adjust the parameters and the schedule until The Manage Supply Lines page displays supply orders according to your performance and timeliness requirements.

For other examples that use the Process Supply Chain Orchestration Interface scheduled process, see:

- *Example of a PAR Replenishment Purchase Requisition*
- *Example of a PAR Replenishment Interorganization Internal Material Transfer*

Set Parameters for the Process Supply Chain Orchestration Interface Scheduled Process

Use these parameters to filter the data that the scheduled process will look at.

Parameter	Description
Supply Request System	Select a request system. The scheduled process will look only at supply requests that Supply Chain Orchestration receives from the request system that you select. For example, if you set this parameter to Oracle Fusion Order Management, then the process will look only at requests that it received for Order Management.

Parameter	Description
Organization	Select an organization.
From Supply Request Batch Number To Supply Request Batch Number	Filter the data that you want to process according to the batch that contains your supply requests.
From Supply Request Date To Supply Request Date	Filter the data that you want to process according to the supply request's creation date.
Batch Size	Enter a number. For example, enter 1,000, and the scheduled process will process up to a maximum of 1,000 supply requests.

Note

- This scheduled process uses a number of From and To parameters. For important details about how to set them, see *Guidelines for Using Scheduled Processes in Order Management*.
- All parameters are optional, except for Supply Request System, which is required.
- No special combinations are required.
- For other important details, see *Process Supply Chain Orchestration Interface*.

Guidelines for Running the Process Supply Chain Orchestration Interface Scheduled Process

- Supply Chain Orchestration typically processes supply requests automatically. It usually isn't necessary for you to manually run or schedule the Process Supply Chain Orchestration Interface scheduled process, except for a few specific flows.
- You need to run it only for minimum and maximum planning and when you use File-Based Data Import. You don't need to run this scheduled process for Order Management, Manufacturing, REST API, or SOAP because those applications all send details that instruct Supply Chain Orchestration to automatically run the scheduled process.
- To improve performance, make sure you set the Supply Request System parameter each time you run the scheduled process. This filters the records so the scheduled process only processes the records that you need.
- If you don't set any parameters, then the scheduled process will look at all supply requests that Supply Chain Orchestration has ever received. To avoid performance problems, we recommend that you specify a value in at least one parameter, and to specify more parameters rather than fewer parameters.
- Use each From and To set of parameters to filter for a range of values. For example, set the From Supply Request Batch Number parameter to 100, and set the To Supply Request Batch Number parameter to 200, and the process will look at all batches that are in the range of 100 to 200.

Here are some recommendations:

Supply Request System	Flow	Do I Need to Run the Scheduled Process?	Description
External Set Supply Request System to External when you import through File-Based Data Import.	External Load Data	Yes	Run the scheduled process manually or schedule it according to how frequently you import data.
Oracle Inventory Management	Minimum-Maximum Planning	Yes	Minimum-Maximum Planning only loads supply requests. You must manually run the scheduled process or schedule it to run when the Minimum-Maximum Planning process runs.
External Set Supply Request System to External when you use a REST service or SOAP service.	External Request	Depends	If you set the ProcessRequestFlag parameter in REST API or SOAP to: • **True**. You don't need to manually run or schedule the scheduled process. • **False**. You must manually run or schedule the scheduled process. If you expect that REST API or SOAP will send a large volume of requests, then group them into a single run of the scheduled process.
Oracle Planning Central	Release Planned Orders Release Replenishment Orders Plan-to-Produce in Contract Manufacturing	No	Planning automatically starts the scheduled process as part of its release planned orders process.
Oracle Order Management	Back-to-Back Sales Orders	No	Order Management sends a parameter in a payload that specifies to immediately run the scheduled process.
Oracle Common Work Execution for Manufacturing.	Outside Processing	No	Manufacturing sends a parameter in a payload that specifies to immediately run the scheduled process.
Oracle Supply Chain Orchestration to create a supply request Oracle Self Service Procurement	Transfer Order	No	Supply Chain Orchestration immediately processes each request that it receives for a transfer order.

Create Supply for Transfer Orders

Automatically create supply in response to a request for a transfer order.

You can use a reservation to match supply to the transfer order. Oracle Global Order Promising determines the supply source to use for the transfer, such as a work order in manufacturing, a purchase order, or a transfer order from a different warehouse.

For example:

1. Create a routing rule that routes the transfer to Oracle Order Management.

   For details, see *Set Up Rules That Create Supply Orders*.
2. Create transfer order 218891 with a quantity of 20, then submit it to Oracle Inventory Management.

Here's what happens next:

1. Order Management creates sales order 54735 and sends a supply request to Oracle Supply Chain Orchestration.
2. Supply Chain Orchestration communicates with Global Order Promising.
3. Global Order Promising applies rules that result in a Make request.
4. The flow sends a request to Oracle Manufacturing to create a work order.

Assume Manufacturing can only create a quantity of 15 at first, so Manufacturing creates that amount and places it in inventory:

1. The shipping manager manually splits the transfer order's shipping line into line A with a quantity 15 that's in Ready to Ship status, and line B with a quantity of 5 that's not yet in stock.
2. Shipping ships line A, then sends the update to Order Management.
3. Order Management splits the order line into a shipped order line with a quantity of 15 and another order line with a status of Awaiting Shipping and a quantity 5.
4. The inventory manager examines the transfer order and decides not to wait for manufacturing to create more supply. Instead, the inventory manager reduces the quantity on the original transfer order to the shipped quantity of 15, then closes the work order.
5. Inventory sends a change request to Order Management to cancel the remaining quantity.
6. Order Management sends an update to Supply Chain Orchestration, and Orchestration sends a request to Manufacturing to close the work order.

Note

- You can't route a configured item through Order Management because Order Management doesn't accept a configured item as a line item, but you can include a configured item on a transfer that you don't route through Order Management.
- You can't include a kit on a transfer because Inventory doesn't process kits, but you can include a kit on a sales order in Order Management.

For background, see *Guidelines for Setting Up Rules That Create Supply Orders*.

Group Transfer Orders According to Source and Destination

Use this feature to get more flexibility in how you group your transfer orders and improve efficiency. You can specify how you want Oracle Supply Chain Orchestration to group the transfer order requests that it sends to Oracle Inventory Management when it creates each transfer order.

You can use this feature with new transfer supply requests that you create on the Supply Requests page, or that you import through the Supply Requests REST API or through the Import Supply Order file-based data import template. This feature also applies to requests that come from Oracle Supply Planning.

What happens if I. . . :

Enable This Feature?	Description
Yes	Supply Chain Orchestration will group transfer requests according to whatever value it receives in the GROUP_CODE attribute. If that value is empty or the attribute is missing, then Supply Chain Orchestration will use SOURCE_DESTINATION.
No	If Supply Chain Orchestration receives a transfer supply request that contains SOURCE_DESTINATION in the GROUP_CODE attribute, then it will group requests according to the source and destination organizations.

Try It

1. Enable the Group Transfer Orders Using Source and Destination Organizations feature. For details, see *Overview of Setting Up Supply Chain Orchestration*.
2. Go to the Supply Planning work area, then click **Tasks > Manage Plans**.
3. Search for your plan, select it in the search results, then click **Actions > Edit Plan Options**.
4. On the Edit Plan Options dialog, click **Supply**, and then click **Select Advanced Options**.
5. In the Advanced Options dialog, set the value:

Attribute	Value
Transfer Load Group By	Source and Destination

Set Shipment Priorities for Transfer Orders

Use the Supply Request REST API to set the shipment priority on a transfer order line.

Here's how it works:

1. Oracle Applications come predefined to use values in the WSH_SHIPPING_PRIORITY lookup type for the shipping priority, such as Low, Medium, and High.
2. You use the Supply Request REST API to create or update the transfer order. Make sure you reference the value in the Lookup Code attribute from the Manage Shipping Lookups page in your REST API payload for the Shipment Priority.
3. Supply Chain Orchestration sends the shipment priority that you specify in REST API to Oracle Inventory Management, and Inventory Management sets the shipment priority on the transfer order line. Your warehouse manager can use the priority to prioritize shipping for the transfer order.

Here's an example payload.

```
{
 "InterfaceSourceCode": "EXT",
 "InterfaceBatchNumber": "ss_rest_211215011",
 "SupplyRequestStatus": "NEW",
 "SupplyRequestDate": "2021-12-22T11:00:03.503-08:00",
```

```
"SupplyOrderSource": "EXT",
"SupplyOrderReferenceNumber": "211215011",
"SupplyOrderReferenceId": 1,
"ProcessRequestFlag": "Y",
"supplyRequestLines": [
{
"InterfaceBatchNumber": "ss_rest_211215011",
"InterfaceSourceCode": "EXT",
"SupplyOrderSource": "EXT",
"SupplyOrderReferenceLineNumber": "1",
"SupplyOrderReferenceLineId": 12112150511,
"SupplyType": "TRANSFER",
"DestinationOrganizationCode": "M1",
"SourceOrganizationCode": "M2",
"DestinationSubinventoryCode": "Stores",
"SourceSubinventoryCode": "Stores",
"ItemNumber": "DOS-IMT-Trfr-MM2",
"BackToBackFlag": "N",
"NeedByDate": "2021-12-22T01:01:12.123-08:00",
"Quantity": 15,
"UOMCode": "Ea",
"PreparerEmail": sendmail - test - discard @oracle.com,
"DeliverToRequesterEmail": sendmail - test - discard @oracle.com,
"RequestedShipDate": "2021-12-22T01:01:12.123-08:00",
"DestinationTypeCode": "INVENTORY",
"ShipmentPriorityCode": "HIGH"
}
]
}
```

For details, go to *REST API for Oracle Fusion Cloud SCM*, then expand **Inventory Management > Supply Requests**.

Create Your Own Shipment Priority

1. Go to the Setup and Maintenance work area, then go to the Manage Shipping Lookups task.
2. On the Manage Shipping Lookups page, examine the lookup codes. You can reference them in your payload. If you don't see what you need, click **Actions > New** in the Lookup Codes area, then add new ones.

Track Supply for Partial Shipments

Keep up-to-date with the latest changes in supply and manage supply requests in your back-to-back flow even when you ship only part of the order line.

Assume only some of the quantity for your order line is available to ship, Oracle Shipping splits the line, ships the quantity that's available, then Order Management splits order line 1 into two order lines, order line 1-1 and order line 1-2. Line 1-1 has the quantity that's available to ship. Line 1-2 has the quantity that isn't yet available to ship.

Supply Chain Orchestration doesn't close the supply order when Oracle Shipping ships line 1-1. Instead, Supply Chain Orchestration keeps the supply order open until Shipping also ships line 1-2, or until Oracle Order Management cancels the request. Supply Chain Orchestration continues to orchestrate changes in demand and supply for line 1-2 as long as the supply order remains open.

Realize these benefits:

- Save time and work more efficiently. You don't have to manually create a new line for supply that isn't yet available. Supply Chain Orchestration will automatically manage supply that Shipping hasn't yet shipped.
- Track how much supply you have used even when Shipping has shipped only line 1-1.

- Get timely updates so you can accurately track the progress that Supply Chain Orchestration is making to create supply for line 1-2.
- Reduce or eliminate supply disruptions for line 1-2. Supply Chain Orchestration will automatically update supply so it has the latest details for your line.
- Modify line 1-2, and Supply Chain Orchestration will manage that change in your purchasing, inventory, or manufacturing organization.
- Manage an interruption to supply on line 1-2 in the same way that you do when you haven't partially shipped the line.
- Manage supply recommendations even when you have partially shipped one or more of them.
- Manage any number of shipments.
- Track each partial or full cancellation.

Guidelines

- • If you need to take action on line 1-2, then you must revise your sales order and submit the revised order. Supply Chain Orchestration will process the change and send it to your downstream applications.
- If you modify the warehouse or the item on line 1-2, then Supply Chain Orchestration will cancel the supply order and make that supply available to other demand. It will also cancel any new supply that it's currently creating for line 1-2. Supply Chain Orchestration will do this even if you enable the Defer Online Processing of Inventory Updates shipping parameter for the warehouse.
- If you enable the Defer Online Processing of Inventory Updates shipping parameter for the warehouse, then Supply Chain Orchestration won't use the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature for that warehouse.
- The split behavior in Order Management doesn't affect your purchase orders, work orders, or transfer orders.

Use This Feature with Other Features

You can enable the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature, which automatically enables Order Management's Update Attributes On Split Order Lines For Partial Shipments feature, or you can enable only the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature:

Features That You Enable	Description
Enable only the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature.	Supply Chain Orchestration keeps the supply order open, and it will track supply for line 1-2 until Shipping ships line 1-2. You can modify the scheduled ship date or warehouse on line 1-2, and Supply Chain Orchestration will automatically update supply so it has the latest details for line 1-2. You can't modify the quantity on line 1-2 after Shipping ships line 1-1.
Enable both features.	You can modify the quantity, scheduled ship date, or warehouse on line 1-2 even after Shipping ships line 1-1. Order Management will use your revised values to fulfill the line and Supply Chain Orchestration will automatically update supply so it has the latest details for the line. If you enable the Update Attributes on Split Order Lines for Partial Shipments feature, then you also automatically enable the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature. For details, see *Update Attributes on Split Order Lines for Partial Shipments*.
Don't enable either feature.	Supply Chain Orchestration will close the supply order as soon as Shipping ships any part of the order line, and Supply Chain Orchestration won't track any other modifications that you make on the line.

Features That You Enable	Description
	You can't modify the quantity on line 1-2 after Shipping ships line 1-1.

Try It

Want to use this feature? Then you must enable it:

1. Go to the Setup and Maintenance work area.
2. Select the Manufacturing and Supply Chain Materials Management offering.
3. Click Change Feature Opt In.
4. On the Opt In page, in the row that has Supply Chain Orchestration in the Name column, click the pencil.
5. On the Edit Features page, add a check mark to the Improve Supply Tracking for Sales Orders in Your Back-to-Back Flows feature.
6. Click Done.

Note that if you enable the Update Attributes On Split Order Lines For Partial Shipments feature, and then submit a sales order, then you can't disable it. You are committed to using the feature.

Manage Configure to Order Changes Without Canceling Supply

You can modify a configuration and update the same configured item without canceling the existing work order.

Use Oracle Order Management to fulfill an assemble-to-order item that's a one time configuration.

Assume you sell a complex, engineered item that takes several months to build. Each of your customers orders a unique configuration so specific that you'll never use that configuration again for that customer or any other customer. We refer to this as a onetime configuration, and it presents some unique requirements:

- You might need to create a unique work order that remains open for months.
- It takes a long time to build the item, so there's a long fulfillment lead time.
- As part of clarifying scope and concept, your customer might request changes to the design while you're testing and building it. They might request a change to the overall configuration, a configure option, an option's quantity, transactional attribute, and so on.

With a less complex configuration that isn't unique, you would typically cancel the work order, purchase order, or transfer order, then create new supply that meets the revised configuration, but doing this creates problems for a onetime configuration:

- It isn't flexible and assumes that the configuration isn't unique.
- Causes uncertainty and issues in your factory, particularly when changes happen after a significant amount of work is already done.
- Doesn't allow the factory to provide input for the best way to accommodate and manufacture the requested change.
- Doesn't consider the impact that the flow has on expensive customizations.

You need a solution that you can use to finish the item according to whatever options your customer needs, and that incorporates any changes that your customer makes without having to cancel and redo supply:

- For simple changes, you need to manually update the work order instead of canceling it so you don't lose the work that you've already done but can instead move forward with what you already have.
- For complex changes that require you to restart the build, you need to be able to revise the sales order, modify your options, then create a new work order that has the modified options.

To meet these requirements, you can set the item's Match Configuration attribute to One Time:

- Oracle Supply Chain Orchestration will send a change request for the work order and you can continue to update and fulfill demand from the existing work order. Oracle Cost Accounting will consider the latest work definition and work order when it rolls up the cost, and Oracle Supply Planning will consider them when it plans the components.
- If you modify the configuration on the order line, then Order Management won't cancel the work order. Instead, you can manually update it in Oracle Manufacturing to meet the unique configuration's requirements. You can also put the work order on hold while you assess the situation.
- If you determine that the change requires your factory to start over, then you can revise the sales order so it has the change, then create a new work order.

Use this feature to streamline how you manage modifications that you make to the configured item. Maintain a unique configured item and update the existing work order even after you make more than one change request on the order line.
For background, see *Overview of Configure-to-Order*.

How it Works

1. You set the item's Match Configuration attribute to One Time in the Product Information Management work area.
2. You create a sales order, add a configured item to an order line, and configure it.
3. Configure-to-order creates a unique configured item, marks it as one time, and sets a version number for this specific configuration. Each of the following steps communicates the value in the item's Match Configuration attribute and the version number.
4. Oracle Global Order Promising schedules the order line and sends a supply request to Supply Chain Orchestration to create supply for the item.
5. Supply Chain Orchestration creates a supply order, then sends a request to Manufacturing to create the work order.
6. Manufacturing creates the work order, then sends an update to Supply Chain Orchestration.
7. Supply Chain Orchestration records the work order and sends supply details to Order Management.

You Modify the Configuration

Assume you revise the sales order, modify the configuration, then submit it.

1. Configure-to-order examines the value in the item's Match Configuration attribute, then returns the updated configured item and version to Order Management.
2. Order Management sends an update request to Supply Chain Orchestration to update the existing work order with the modified configuration.
3. Supply Chain Orchestration sends an update request to Manufacturing to update the existing work order.

Manufacturing Processes the Update

If the work order is in Released status and Manufacturing hasn't done any transactions, then it automatically updates the work order. If Manufacturing has done transactions, then:

1. Manufacturing sets the work order to On Hold, adds an entry that describes the modification to the log for the Import Work Orders scheduled process, and creates a production exception. The exception contains the log number.
2. The production supervisor examines the exception in their user notification, prints the log and the work order's travel report, then compares the configurations from the reports. To allow the supervisor to access the log, see these articles:
    - *What Job Role Will Allow a Single Fusion User to View all ESS Scheduled Processes/Jobs? (Doc ID 1467664.1)*
    - *How to View the Output of an ESS Jobs Submitted By Another User Based on Role? (Doc ID 1980772.1)*

If the supervisor accepts the modifications, then the supervisor manually updates the work order with the modified configuration and updates the work order's status from On Hold to Released. Supply Chain Orchestration assumes that the modification is now done and successful.

If the supervisor rejects the modification, for example, production has progressed to an extent where the factory can't accept it, then:

1. The supervisor won't update the work order but instead cancels it or cancels the reservation for the work order.
2. Supply Chain Orchestration sends a notification to Order Management that it has an exception to cancel supply.
3. The order manager views the notification in the Order Management work area, then goes to the Supply Chain Orchestration work area to view the exception and the recommended action.
4. The order manager copies the original order line, submits it for scheduling, then cancels the original line.
5. Configure-to-order receives the request for the configured item from Order Management, creates a new configured item that's different from the original one, and then sends it to Order Management.
6. Order Management sends a supply request to Supply Chain Orchestration for the new configured item.
7. Supply Chain Orchestration sends a work order request to Manufacturing and the flow continues as if the supervisor accepted the modification.

Try It

1. Go to the Product Information Management work area, search for, then open your item for editing.
2. Click **Specifications > Item Organization > Manufacturing**.
3. In the Item Structure area, set the value.

Attribute	Value
Match Configuration	One Time

4. Go to the Order Management work area, create a sales order, add the item to an order line, configure it, then submit the sales order.
5. If necessary, create an order revision and modify the item on the order line during fulfillment so it accommodates change requests from your customer, then submit the revision.
6. Manage your work orders so they meet your specific requirements.

Guidelines

- You can use a one time configuration only for a back-to-back make flow, and only on a root, assemble-to-order model. You can't use it on a child assemble-to-order model.

- You can't modify a configuration on the order line while Manufacturing is updating the work order.
- If you use the Standard cost method, then the cost accountant must rerun the cost rollup to recalculate the standard cost according to the components in the latest work order and work definition.
- You can't use a drop shipment with a one time configuration, so you can't set or modify the Supplier attribute or the Supplier Site attribute on the order line or fulfillment line when you create or a revise a sales order in Order Management.

Administer

Set Up Lookups in Supply Chain Orchestration

Get details about each predefined lookup you can use in Supply Chain Orchestration, such as the codes it contains, meaning and description for each code, and so on.

1. Go to the Setup and Maintenance work area, then go to the Manage Supply Orchestration Lookups task.
2. On the Manage Supply Orchestration Lookups page, search for a predefined lookup.
3. Examine the Lookup Configuration Level attribute to determine whether the lookup is extensible or a system lookup.

Don't edit any part of a predefined lookup except for the Meaning attribute.

Here are the Extensible lookups you can modify:

Lookup Type	Where it Displays
ORA_DOS_DOCUMENT_TYPE	Displays in the Execution Documents tab of the Supply Chain Orchestration work area.
ORA_DOS_TARGET_SYSTEM_TYPE	Doesn't display.

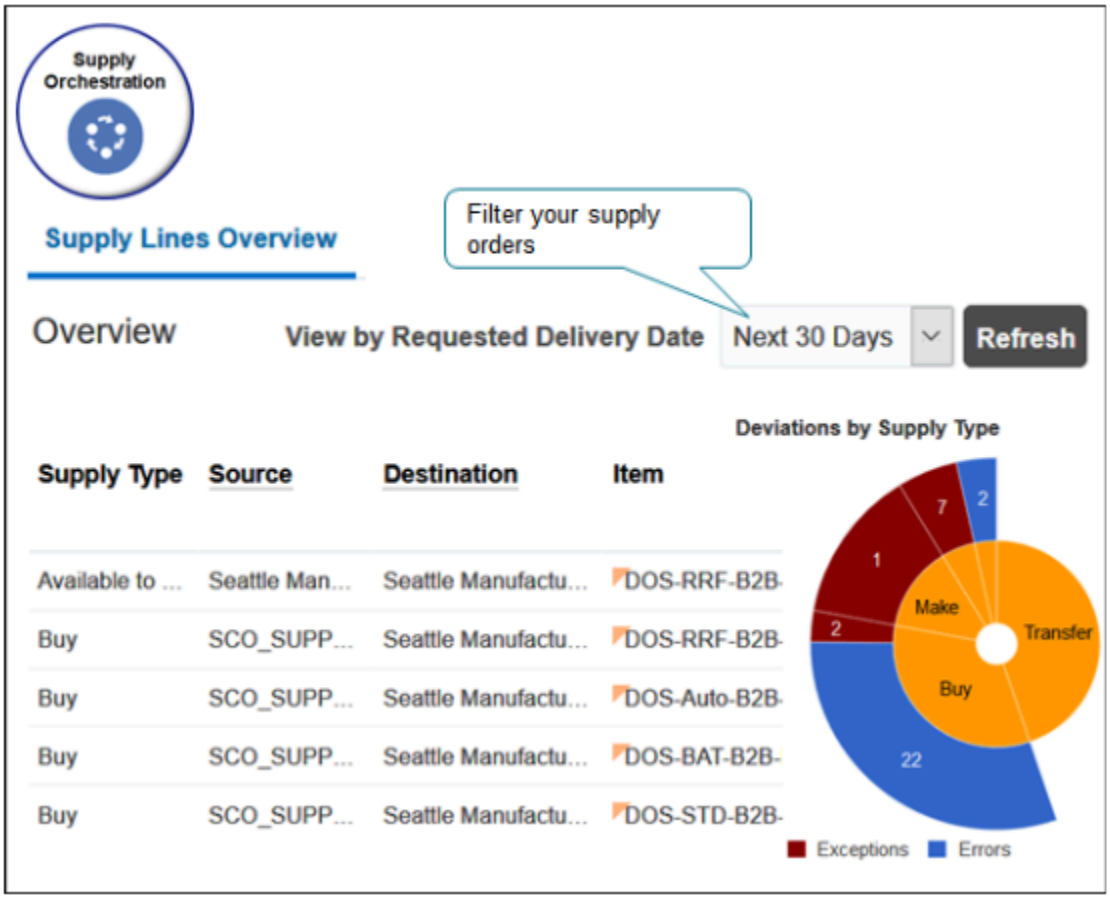
Here are the System lookups. You can't modify them:

Lookup Type	Where it Displays
ORA_DOS_INTERACTION_TYPE	Doesn't display.
ORA_DOS_SUPPLY_ORDER_TYPE	Displays supply type options in the Supply Chain Orchestration work area.
ORA_DOS_SUPPLY_LINE_STATUS	Displays supply status options shown for supply line and tracking line.
ORA_DOS_SUPPLY_ORDER_STATUS	Displays supply order status.
ORA_DOS_SUPPLY_ORDER_SOURCE	Displays search criteria for the source system.

Filter Orders According to the Requested Delivery Date

The Supply Orchestration work area filters data on the Overview page according to the time intervals that you set for the requested delivery date.

The Overview page displays supply orders where the requested delivery date happens during the next 30 days, by default. You can choose another predefined time interval or display all data with no filters:



Here are the values you can set in the View by Requested Delivery Date attribute:

- All
- Last 7 days
- Last 15 days
- Last 30 days
- Next 7 days
- Next 15 days
- Next 30 days

Assume you must filter orders on the Overview page so it only displays orders where the Requested Delivery Date happens during the last seven days, starting with today. For, example, if today is January 10, 2019, then display all orders that contain a Requested Delivery Date that happens on January 4 through January 10.

Enable the feature:

1. Sign in with the Supply Chain Operations Manager job role.
2. Go to the Setup and Maintenance work area.
3. On the Setup page, choose the Manufacturing and Supply Chain Materials Management offering, then click **Change Feature Opt In**.
4. On the Opt In page, in the Supply Chain Orchestration row, click the **pencil**.
5. On the Edit Features page, in the row that contains View Supply Orders According to Requested Delivery Date, add a check mark to the Enable option, then click **Done**.

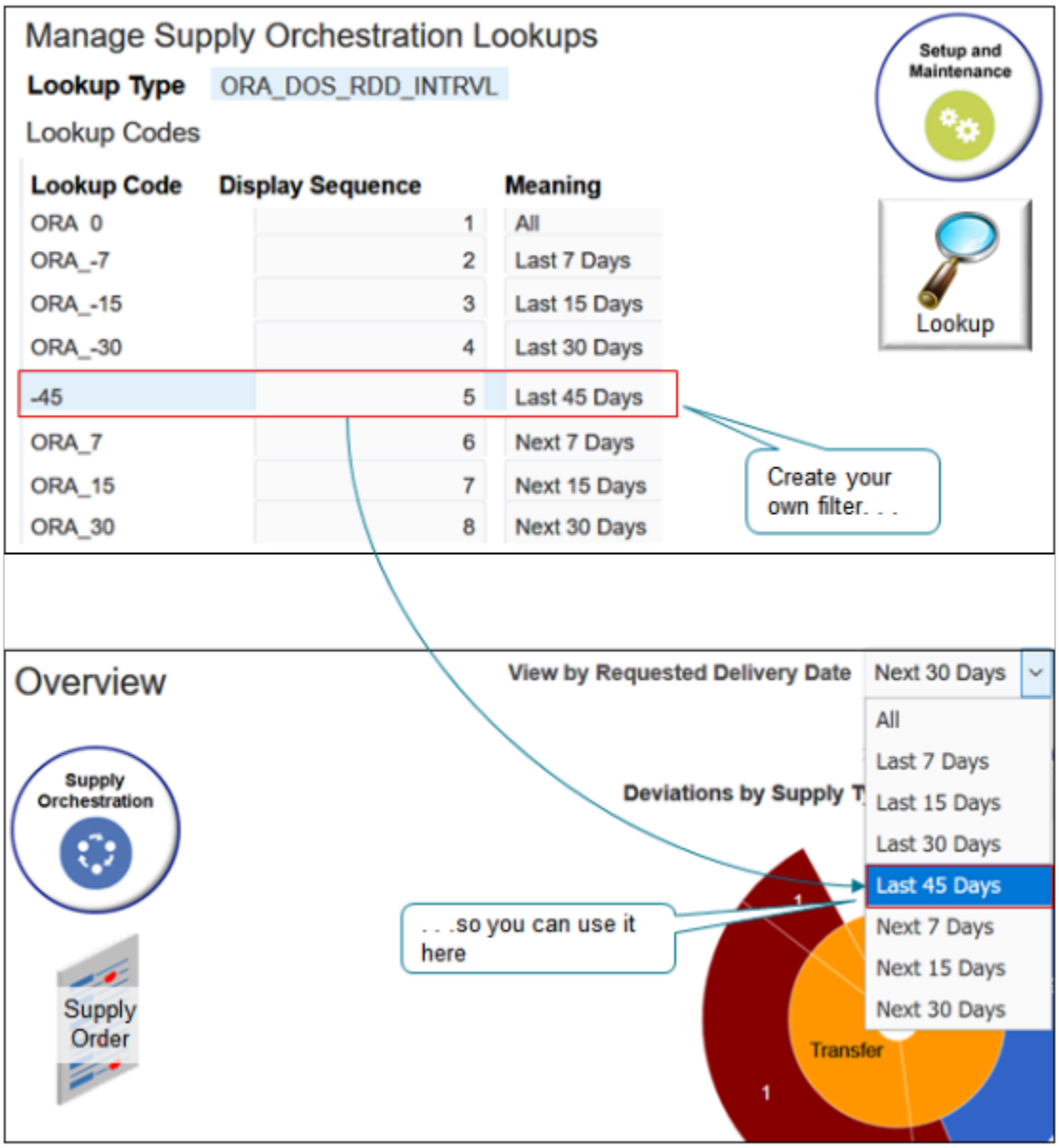
Test your set up:

1. Go to the Supply Orchestration work area.
2. On the Overview page, set the View by Requested Delivery Date attribute to Last 7 Days, then click **Refresh**.
3. Examine the results.

Create Your Own Filter

You can add your own filter or modify filters that already exist for the View by Requested Delivery Date attribute.

Assume you need to filter supply orders according to the last 45 days:



Try it:

1. Go to the Setup and Maintenance work area, then go to the Manage Supply Orchestration Lookups task.
2. On the Manage Supply Orchestration Lookups page, open the ORA_DOS_RDD_INTRVL lookup type for editing.
3. Click **Actions > New**, then set values:

Attribute	Value
Lookup Code	`+ or - number` where o + (plus sign) indicates days into the future. This value is optional. You can leave it unsigned to indicate days into the future.

Attribute	Value
	○ – (negative sign) indicates days into the past. You must include the negative sign to indicate a negative value. ○ `number` is the number of days. For this example, enter `-45`.
Display Sequence	5
Enabled	Contains a check mark.
Start Date	Today's date.
End Date	Leave it empty.
Meaning	Last 45 Days
Description	Display supply orders where the requested delivery date happens within the last 45 days.

4. Test:
    - Go to the Supply Orchestration work area.
    - On the Overview page, verify that you can set View by Requested Delivery Date to Last 45 Days, and that the page correctly applies the filter.

Troubleshoot

Trouble	Shoot
The list of values in View by Requested Delivery Date doesn't display Last 45 Days.	Go to the Manage Supply Orchestration Lookups page and make sure you set a start date, and that the start date happens on or before today. If you set an end date, then make sure it hasn't already happened.
The Overview page doesn't display the View by Requested Delivery Date attribute.	Make sure you enable the View Supply Orders According to Requested Delivery Date opt-in feature.

Examine Attachment Categories in Supply Chain Orchestration

Examine the attachment categories that come predefined with Supply Chain Orchestration.

1. Go to the Setup and Maintenance work area, then go to the Manage Supply Orchestration Attachment Categories task.
2. On the Manage Supply Orchestration Attachment Categories page, search for a predefined category.

Don't edit any part of a predefined attachment category.

Select and Assign Catalogs to Configured Items

You can specify the item catalogs that the configure-to-order process assigns to a configured item at run time when the user configures the item.

To use more catalogs, you can add them to a supply orchestration lookup.

You use an item catalog to categorize each configured item into a meaningful group to help manage the item and to summarize data to meet a variety of needs. For example, group data in a report, for tax purposes, to display sales details, or in a downstream system to manage fulfillment. You add an item catalog to a supply orchestration lookup, then use the lookup in processing that runs in the background to assign the catalog.

Assume you need to add the Configured Item catalog to your configured items:

1. Identify the catalogs that you can use with the item:
    - Go to the Setup and Maintenance work area, then go to the Manage Functional Area Catalogs task.
    - On the Manage Catalogs page, notice the value in the Catalog Name attribute. You can reference any catalog that the Manage Catalogs page displays.
2. For this example, create a new catalog.
    - Click **Create**.
    - In the Create Catalog dialog, set values:

Attribute	Value
Functional Area	Supply Chain Orchestration
Catalog Name	Configured Item
Catalog Code	Configured_Item
Description	Catalog that we can use to arrange configured items into a group.
Controlled At	Master Level
Start Date	Anytime before the current date.
Category Name	Configured Item

Attribute	Value
Category Code	Configured_Item
Description	Category we can use to arrange configured items into a group.
Start Date	Anytime before the current date.
End Date	Leave empty.

- Click **Save and Continue > Save and Close**.

3. Manage the item:
   - Go to the Product Management work area.
   - On the Product Management page, click **Tasks > Manage Items**.
   - On the Manage Items page, search for BJ-VIK_STV_BURNER, then open it for editing.
   - On the Edit Item page, click **Categories**.
   - In the list that displays, notice the values in the Catalog column.

     If the list doesn't contain the catalog you need, then click **Actions > Add Row**, and add it.

     Assume the BJ-VIK_STV_BURNER already has a catalog named Product, and that's the catalog you need.
4. Manage the lookup:
   - Go to the Setup and Maintenance work area, then go to the Manage Supply Orchestration Lookups task.
   - On the Manage Supply Orchestration Lookups page, search for lookup type ORA_CTO_CATALOG_COPY_REQUEST.
   - In the Lookup Codes area, click **Actions > New**, then set values:

Attribute	Value
Lookup Code	Enter one of the names that you noticed on the Manage Catalogs page. For this example, enter Configured Item.
Enabled	Contains a check mark.
Start Date and End Date	Optional. Specify dates when the code is available.

Note

- At run time, Supply Chain Orchestration automatically adds the catalog to the configured item according to the lookup code you specify. For example, when the user clicks Submit while creating a sales order. The add is transparent to the user.

- Adding too many item catalogs to a configured item might affect performance at run time.

For more, see *Overview of Configure-to-Order*.

Related Topics

- Overview of Catalogs
- Overview of Lookups

Use REST API to Manage Supply Chain Orchestration

Use REST API to help you manage Supply Chain Orchestration.

Get Supply Sources

Add flexibility to how you select and use the supply source for each transfer order.

Use the availableSupplySources REST API to get the supply sources that can fulfill a request for a transfer order. Get the one source that can most effectively fulfill the request, or get a list of up to six sources, ranked according to how effectively they can fulfill the request. Get the actual quantity that's currently on hand in each source:

- Use the findBestAvailableSupplySource finder to get the most effective source.
- Use the findAllAvailableSupplySources finder to get the list of all supply sources. This finder gets a maximum of 6 sources, ranked according to how effectively each one fulfills the request.
- Get the actual quantity that's currently on hand for each supply source.
- You can only read data, so you can use only the GET operation.

For details, go to *REST API for Oracle Supply Chain Management Cloud*, then search for availableSupplySources.

Improve Your Error Messages

Add details to a REST API error message and then use them to reduce the amount of time that you need to troubleshoot and fix problems when you import through REST API.

Add the value of the SupplyOrderReferenceNumber attribute and the SupplyOrderReferenceLineNumber attribute as a prefix on each error message that REST API returns when it processes a supply request. Use the prefix to troubleshoot problems with the request.

Here's an example of an error message that REST API returns.

```
{
"title": "Bad Request",
"status": "400",
"o:errorDetails": [
{
"detail": "SupplyOrderReferenceNumber:A190102, SupplyOrderReferenceLineNumber:100, MessageType:ERROR,
 MessageText: Supply Chain Orchestration can't create the supply order because the destination subinventory
 code, source subinventory code, or both aren't correct."
},
{
"detail": "SupplyOrderReferenceNumber:A190102, SupplyOrderReferenceLineNumber:100, MessageType:ERROR,
 MessageText: Supply Chain Orchestration can't create the supply order because the shipment priority isn't
 correct. Make sure you specify a valid shipment priority in the supply request."
}
]
```

```
}
```

Process Supply Request Lines That Pass Validation

Use the AllowPartialRequestFlag attribute in the Create Supply Request REST API to process supply request lines that pass validation.

AllowPartialRequestFlag Enabled

Use this value so you can continue to fulfill lines that do pass validation in the supply request even when some lines fail validation.

If you set AllowPartialRequestFlag Enabled to Y, then REST API:

- Will process all lines that pass validation.
- Won't process any lines that don't pass validation and will mark them in error.
- Will create a supply order if at least one line passes validation. The order will include only the lines that pass validation.

If validation:

- Succeeds for all lines. REST API will return a successful response.
- Fails for any line. REST API will return an error response. The response will include messages for the lines that succeed and for the lines that fail. You must fix the error on each failed line, remove successful lines from your payload, then submit your request. If you don't remove successful lines, then REST API might create more supply than you need for your successful lines.

AllowPartialRequestFlag Not Enabled

If you set AllowPartialRequestFlag Enabled to N, and if any line in the supply request doesn't pass validation, then REST API:

- Will reject all lines in the request, including the ones that do pass validation.
- Won't create a supply order.
- Will include an error message in the response only for the first line that fails. If more than one line doesn't pass validation, then you might need to submit a separate REST request to troubleshoot and fix each line. For example, if 5 lines don't pass validation, you might need to submit 5 separate REST requests as you work through the errors.

REST API will create a supply order only if all lines pass validation.

The default value for AllowPartialRequestFlag is N. If you don't provide any value for AllowPartialRequestFlag, or if you don't include AllowPartialRequestFlag at all, then the import will assume AllowPartialRequestFlag equals N.

Example

Request payload:

```
{
 "InterfaceSourceCode": "EXT",
 "InterfaceBatchNumber": "akp1_020104",
 "SupplyRequestStatus": "NEW",
 "SupplyRequestDate": "2022-12-19T11:00:03.503-08:00",
 "SupplyOrderSource": "EXT",
 "SupplyOrderReferenceNumber": "akp1_020104",
 "SupplyOrderReferenceId": 1,
 "ProcessRequestFlag": "Y",
```

```
"AllowPartialRequestFlag": "Y",
"supplyRequestLines": [
{
"InterfaceBatchNumber": "akp1_020104",
"SupplyOrderReferenceLineNumber": "1",
"SupplyOrderReferenceLineId": 1,
"SourceOrganizationCode": "M11",
...
"DestinationTypeCode": "INVENTORY",
"SupplyType": "TRANSFER",
"distributionDetails": [
{
"DistributionNumber": "-200702"
,
"projectDFF": [
{
"projectId_Display": "BAT-PJCBAT-Proj-04",
"taskId_Display": "1.2"
}
]
}
]
},
{
"InterfaceBatchNumber": "akp1_020104",
"SupplyOrderReferenceLineNumber": "2",
"SupplyOrderReferenceLineId": 2,
...
"DestinationTypeCode": "EXPENSE",
"SupplyType": "BUY"
},
{
"InterfaceBatchNumber": "akp1_020104",
"SupplyOrderReferenceLineNumber": "3",
"SupplyOrderReferenceLineId": 3,
...
"DestinationTypeCode": "INVENTORY",
"SupplyType": "TRANSFER",
"distributionDetails": [
{
"DistributionNumber": "200702"
,
"projectDFF": [
{
"projectId_Display": "BAT-PJCBAT-Proj-04",
"taskId_Display": "1.2"
}
]
}
]
}
]
}
```

Error Response

```
{
"title": "Bad Request",
"status": "400",
"o:errorDetails": [
{
"detail": "SupplyOrderReferenceNumber:230101, SupplyOrderReferenceLineNumber: 1, MessageType:SUCCESS,
MessageText:Line Created Successfully"
},
{
```

```
"detail": "SupplyOrderReferenceNumber:230101, SupplyOrderReferenceLineNumber:2, MessageType:ERROR,
MessageText:The supply order wasnt created because the destination subinventory code, source subinventory
code, or both arent correct.Stores"
},
{
"detail": "SupplyOrderReferenceNumber:230101, SupplyOrderReferenceLineNumber: 3, MessageType:SUCCESS,
MessageText:Line Created Successfully"
}
]
}
```


Manage Purchases

Map Attributes from Your Sales Order to Your Purchase Request and Purchase Order

You can use a view link to create a map between different levels of a supply order to a purchase order, such as mapping an attribute on the supply header to an attribute on the purchase request line.

Use a view link to:

- Map attributes on a work order and a sales order, including an extensible flexfield, without having to use an integration algorithm.
- Map an attribute on one level of a supply order to an attribute on another level of the sales order, purchase order, or work order. For example, map an attribute that sits on the supply order header to an attribute that sits on an order line.
- Map an attribute on a sales order in a back-to-back flow or to an attribute on a work order in an outside processing flow.

You can also use a predefined source in the Sources area of the SupplyOrchestration service mapping to map an entity on the supply order to an entity on a sales order, purchase order, or work order. However, you can only map a single relationship between one entity and another entity. For example, you can't use a predefined source to map between an attribute on the supply order and another attribute on the purchase order. Instead, you can use a view link to do this.

Let's say you need to map the SupplyOrderReferenceNumber attribute on the supply order in Supply Chain Orchestration to the WorkOrderNumber attribute of the work order in Oracle Manufacturing. Here's how:

1. Enter your sandbox. For details, see *Create a Sandbox So You Can Edit Service Mappings*.
2. Go to the Supply Orchestration work area, then click **Tasks > Manage Service Mappings**.
3. On the Manage Service Mappings page, click **SupplyOrchestration**.
4. On the Edit Service Mapping page, click **Sources**, then use Query By Example to filter the Source attribute for ManufactureRequestSource.
5. On the Entity Mappings tab, use Query By Example to filter the Entity attribute for WorkOrderRequest.
6. In the Attribute Mappings tab, click Create a Sandbox So You Can Edit Service Mappings, then set the values:

Attribute	Value
Attribute	WorkOrderNumber

Attribute	Value
	This is the name of the attribute that you're mapping to. In this example, you're mapping to the WorkOrderNumber attribute on the work order.
Expression	`return SupplyHeader.InterfaceSourceCode=='SCO'||'DOO'||'YPS'||'INV'? SupplyHeader.InterfaceSourceCode +'-'+SupplyHeader.SupplyOrderReferenceNumber` where o SupplyHeader is the name of the view link. o SupplyOrderReferenceNumber is the name of the attribute on the supply order that you're mapping from. o SCO is the product short code for Oracle Supply Chain Orchestration. o DOO is the product short code for Oracle Distributed Order Orchestration. Distributed Order Orchestration is another name Oracle Order Management. They mean the same thing. o YPS is the product short code for Oracle Supply Planning o INV is the product short code for Oracle Inventory Management

This example works for Manufacturing. If you need to integrate with Procurement, you can put an expression into a time stamp descriptive flexfield on the purchase request line:

```
return SupplyTrackingLine.NeedByDate;
```

Extensible Flexfields

If your link involves an extensible flexfield that's on the:

- Order header, then you must link to an attribute on the purchase request header.
- Order line, then you must use link to an attribute on purchase request line.

Synchronize Documents Between Supply Chain Orchestration and Procurement

Keep your data up to date so Supply Chain Orchestration has the latest purchasing details and can accurately orchestrate supply for your sales orders.

Use this feature in your outside processing flow when Supply Chain Orchestration can't record a purchase requisition or purchase order because of a technical failure.

Try It

Enable the feature.

1. Go to the Setup and Maintenance work area, then select the Manufacturing and Supply Chain Materials Management offering.
2. Click **Change Feature Opt In**.

3. In the row that has Supply Chain Orchestration in the Name column, click the **pencil**.
4. On the Edit Features page, enable the Use the Supply Chain Orchestration Work Area to Synchronize Supply Documents feature, then click **Done**.

Synchronize

1. Go to the Supply Orchestration work area, then click **Tasks > Manage Supply Lines**.
2. On the Manage Supply Lines page, click a **link** in the Supply Order Number column, such as 300100083428746.
3. On the Supply Order Details page, click **Actions > Synchronize Supply Documents**.

Supply Chain Orchestration will synchronize data for your purchase requisitions and purchase orders between Supply Chain Orchestration and Oracle Procurement.

When Should I Use it

Use this feature when:

- Procurement has a purchase request or purchase order but it's missing in Supply Chain Orchestration.
- Supply Chain Orchestration processes a purchase request or purchase order but doesn't communicate it to Oracle Manufacturing.
- You modify a supply line in Manufacturing but Supply Chain Orchestration doesn't receive the update request.
- You don't create a purchase order, and the update on the supply line fails in Manufacturing.
- You reduce the quantity on the purchase order in Procurement, but change management doesn't modify or cancel the shipment request.

Guidelines

- Don't split a requisition to reduce quantity. Use this feature only to create a purchase order when you have more than one supplier.
- If you split a requisition, and if you need to split it again, then wait at least two minutes before you do the subsequent split.
- If Supply Chain Orchestration is processing a purchase order, then don't update the date or quantity on the supply line. Wait until Supply Chain Orchestration finishes processing the purchase order, then update the date or quantity.

Organize Your Purchase Requests into Groups

Use your own group to manage purchase requests in the Replenishment Planning work area.

You can use a predefined group such as Buyer, Category, Item, Location, Supplier, or None. You can also create your own group, and then use it to organize purchase requests into a group and take advantage of price breaks, order minimums, and so on. Supply Chain Orchestration will send your custom group for each purchase request to Oracle Procurement. Procurement will group these purchase requests into purchase requisitions according to the value that you set in the Group attribute.

Assume you have a replenishment plan named REPL-VISION-OPERATIONS. You want to group all of that plan's purchase orders that you get from your Vision Manufacturing supplier and that are marked for release into a group named Vision's Purchase Orders.

1. Make sure you have buyer planning privileges. If you don't have them, you won't be able to access the Replenishment Planning work area.
2. If you have a pop-up blocker on your browser, disable it.
3. Go to the Replenishment Planning work area.
4. Click **Plans** (it's the icon immediately below the Tasks icon).
5. Expand **Plans**, click **REPL-VISION-OPERATIONS**, then click **Actions > Open**.

   Notice that the work area opens a new tab that has the REPL-VISION-OPERATIONS plan.
6. On the REPL-VISION-OPERATIONS tab, click **Actions > View Buyer Planning**.

   Notice that the work area opens a new browser tab.
7. In the new browser window, click **Buyer Planning**.
8. On the Buyer Planning page, find the row that has your supplier:

Attribute	Description
Supplier	Vision Manufacturing

9. Click the **link** in the Order Lines attribute on that row. The work area opens a new page.
10. Click the Order Type **header** to sort the rows alphabetically on the new page.
11. Add a check mark to the check box on each row that contains these values:

Attribute	Description
Status	Marked for Release You can only group rows that are Marked for Release.
Order Type	Purchase Order

12. Click **Group Orders**.
13. In the dialog that displays, enter the value, then click **Save**:

Attribute	Description
Group Name	Vision's Purchase Orders

Supply Chain Orchestration will send all lines that are in the Vision's Purchase Orders group to Oracle Procurement as a group. Procurement will group these lines into a single purchase requisition.

Process More Than One Change Request in a Single Purchase Order

Improve the efficiency of how you handle change requests.

If you receive more than one change request for a purchase order, then you can use this feature to group them and process them together in one purchase order. Use this feature when the change request starts with a sales order in your back-to-back flow or with a work order in your outside processing flow.

Here's how it works:

1. Order Management or Manufacturing sends one or more change requests for a purchase order to Supply Chain Orchestration.
2. Supply Chain Orchestration groups these change requests then waits according to a duration that you specify. If it receives any more change requests for the purchase order during the duration, then it adds them to the group.
3. Supply Chain Orchestration sends the group of change requests to Purchasing when the duration expires.
4. Purchasing processes all the change requests that are in the group together.

Note:

- If Purchasing is already processing another change for the purchase order when it receives the change requests in a group, then Supply Chain Orchestration marks all the supply lines in that group as in error and displays an error message. You can use the Supply Chain Orchestration work area to manually resubmit the change request.
- If you select at least one supply line, then Supply Chain Orchestration automatically picks all supply lines in the group and resubmits the change request to Purchasing.

Set it Up

1. Enable the feature:
    - Go to the Setup and Maintenance work area, then select the Manufacturing and Supply Chain Materials Management offering.
    - In the row that contains Supply Chain Orchestration in the Name column, click the **pencil**.
    - Enable the Process More Than One Change Request in a Single Purchase Order feature.
    - Click **Done > Done**.
2. Specify the time frame to aggregate requests:
    - On the Setup page, click **Tasks > Search**, then search for and open the Manage Administrator Profile Values task.
    - On the Manage Administrator Profile Values, search the Profile Display Name attribute for Time to Wait While Processing Multiple Change Requests.
    - In the Profile Value attribute, specify the number of minutes to wait and aggregate change requests. The default value is 5 minutes.
    - Click **Save and Close**.

Related Topics

- Set Up Rules That Create Supply Orders

Hold Changes from Manufacturing Until Purchase Orders Are Ready

Use Oracle Supply Chain Orchestration to temporarily hold the changes that you receive from Oracle Manufacturing.

Use this feature in your outside processing flow when a work order or an operation undergoes change, but Oracle Purchasing hasn't created the purchase order or is revising it.

Use this feature to increase your processing efficiency and prevent failures that happen when you send an update request to Purchasing. Instead of having Supply Chain Orchestration send every request that it receives from Manufacturing to Purchasing, wait until Purchasing creates or finishes revising the purchase order, then send only the latest request.

Here's how it works:

1. A work order or an operation undergoes a change in your outside processing flow, and then Oracle Manufacturing sends an update request to Supply Chain Orchestration. Manufacturing might send another request each time a work order or operation undergoes change.
2. If Purchasing hasn’t created the purchase order or is revising it, then Supply Chain Orchestration temporarily holds the update request.
3. Purchasing creates or finishes revising the purchase order, and then Supply Chain Orchestration automatically sends the most recent update request that it has received from Oracle Manufacturing to Purchasing.

Try It

1. Make sure you have these privileges:
    - Process Supply Order Interface (DOS_PROCESS_SUPPLY_ORDER_INTERFACE_PRIV)
    - View Supply Orders (DOS_VIEW_SUPPLY_ORDERS_PRIV)
    - Manage Supply Request Exceptions (DOS_MANAGE_SUPPLY_REQUEST_EXCEPTIONS_PRIV)
    - View Supply Order Exceptions and Status (DOS_VIEW_SUPPLY_ORDER_EXCEPTIONS_AND_STATUS_PRIV)
2. Enable the Hold Changes from Manufacturing Until Purchase Orders Are Ready In Outside Processing Flows feature. For details, see *Overview of Setting Up Supply Chain Orchestration*.

Extend

Extend Supply Chain Orchestration's Integration With Procurement

Use a service mapping to help you integrate Order Management, Supply Chain Orchestration, and Procurement.

Use the mapping to help meet your specific integration requirements. Create a sales order in Management, orchestrate supply in Supply Chain Orchestration, then create a purchase order in Procurement. As an option, use an extensible flexfield to integrate data that's specific to your implementation.

Summary of the Setup

1. Enable the feature.
2. Create your mappings and algorithms.

Enable the Feature

1. Go to the Setup and Maintenance work area, select the Manufacturing and Supply Chain Materials Management offering, then click **Change Feature Opt In**.
2. On the Opt In page, in the Supply Chain Orchestration row, click the **pencil** in the Features column.
3. On the Edit Features page, in the Use Service Mappings to Extend Supply Chain Orchestration's Integration with Procurement row, click the **pencil**.
4. In the dialog that displays, select the flows that you need to integrate.
    - Back-to-Back Buy
    - External Buy
    - Plan-To-Produce Buy
    - MinMax Buy
    - Outside Processing Buy

Create Your Mappings and Algorithms

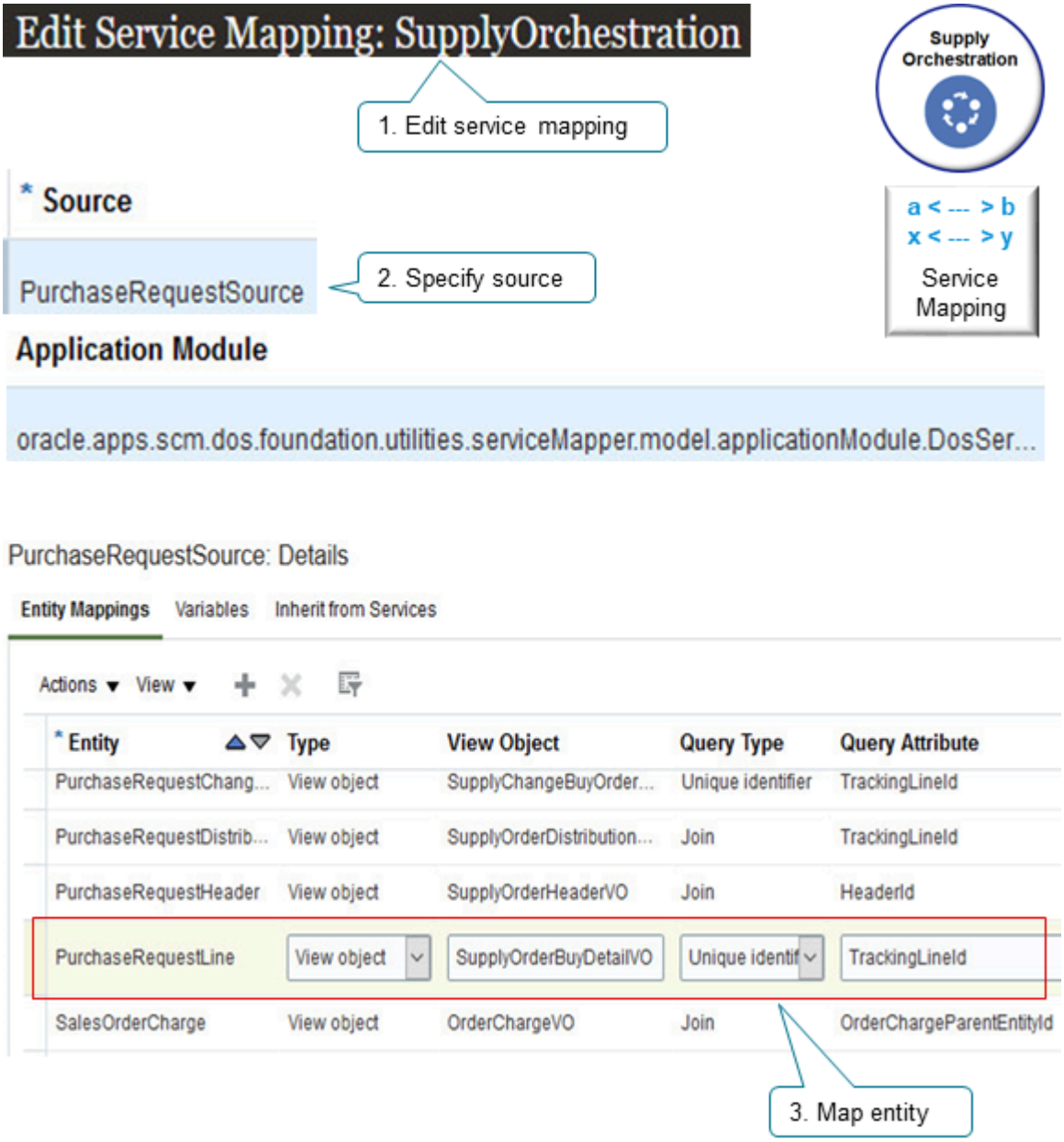
1. Get the predefined privileges that you need to manage service mappings and algorithms.
    - Manage DOS Service Mappings
    - Manage DOS Algorithms
    - Administer Sandbox
    - View Modified Data, so you can view the runtime results
2. Go to the Supply Orchestration work area, then click **Tasks > Manage Service Mappings**.
3. On the Manage Service Mappings page, click **SupplyOrchestration**.
4. On the Edit Service Mapping, click Sources, then click the row that has this value.

Attribute	Value
Source	PurchaseRequestSource

5. In the Details area, modify the mapping so it meets your requirements.

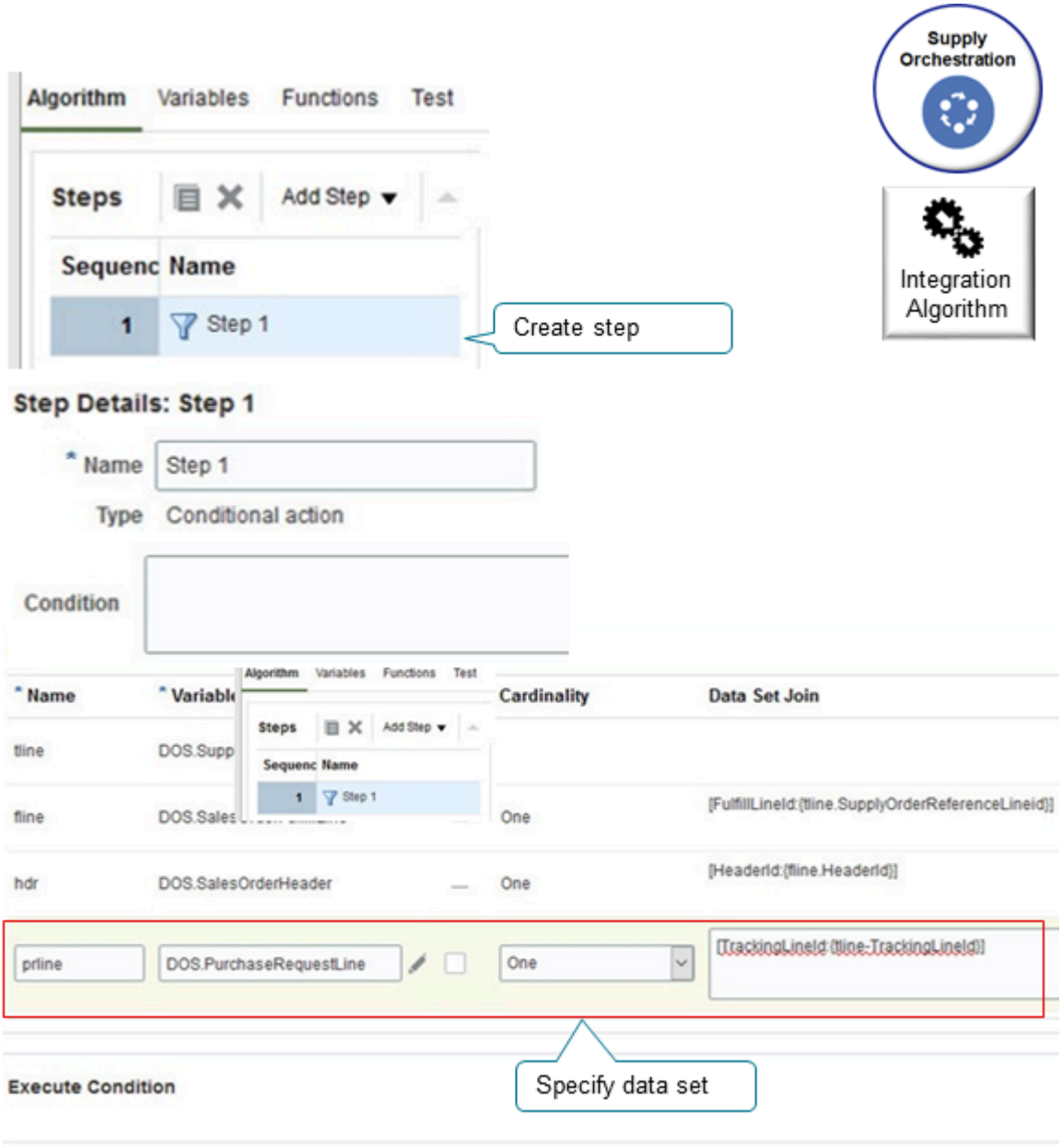
Examples

Here's part of an example service mapping that uses the SupplyOrderBuyDetailVO view object to map various attributes on the purchase request line, such as CarrierId, SupplyBuyOrdDtlsId (supply buy order details identifier), and others.



Integration Algorithm

As an option, you can also use an integration algorithm to implement your own logic. Here's part of an integration algorithm that references the PurchaseRequestLine attribute. It uses the SupplyOrderReferenceLineId attribute on the tracking line to help identify the fulfillment line that supply orchestration is integrating with procurement.



The screen print might be hard to read. Here the values for the data set that this example uses.

Name	Variable	Cardinality	Data Set Join
`prline`	DOS.PurchaseRequestLine	One	[TrackingLineId:{fline-TrackingLineId}]

To create an integration algorithm, go to the Supply Orchestration work area, then click **Tasks > Manage Algorithms**.

Guidelines

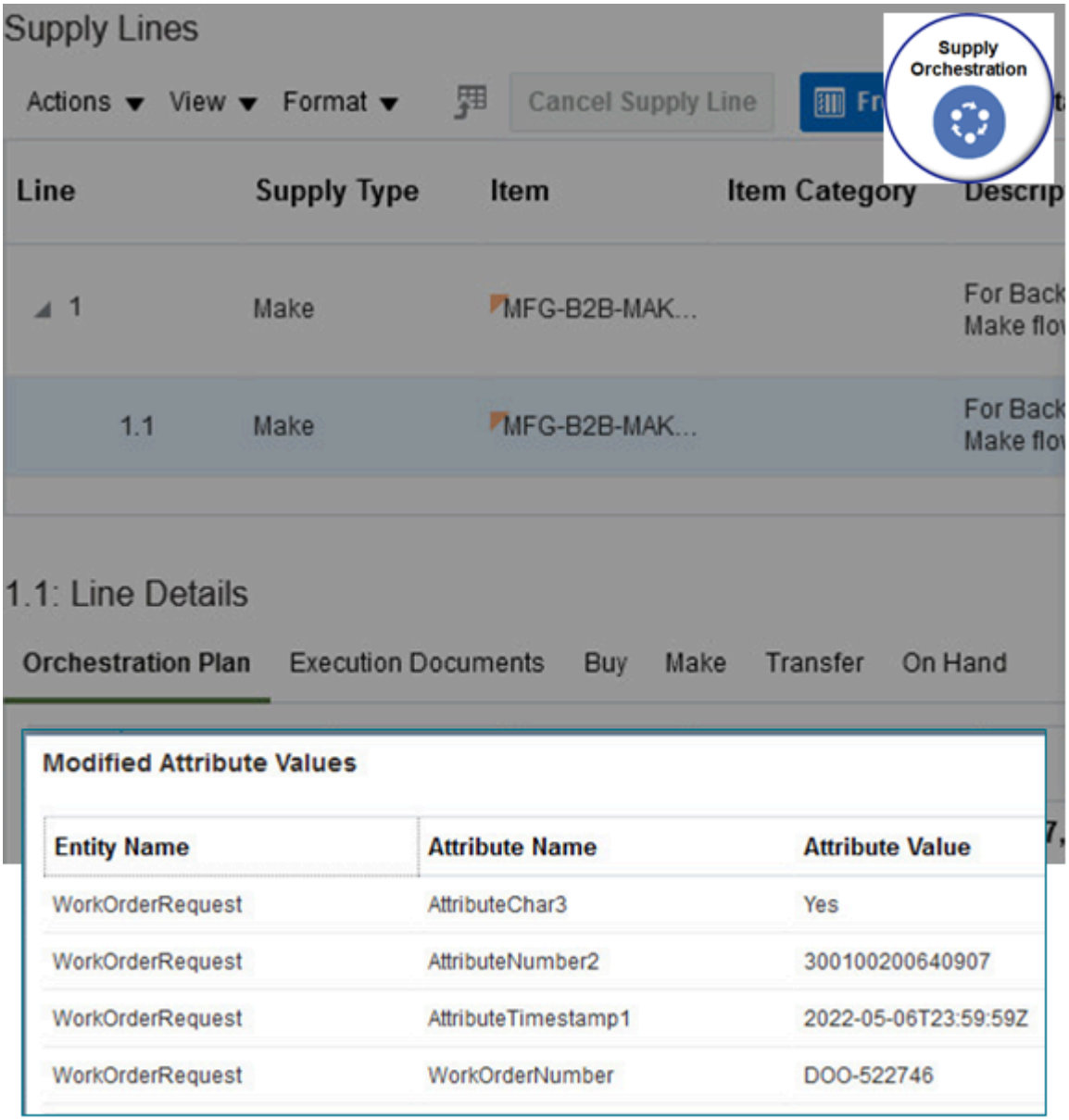
- You can edit the predefined SupplyOrchestration service mapping. It already has a bunch of entities, attributes, sources, and service that you'd typically need to integrate with Procurement, such as PurchaseRequestLine.
- Make sure your integration can send the validations that Procurement applies. Your import payload might be fine, but Procurement might not accept the request. For example, if the Name attribute and Id attribute don't reference the same customer, then Procurement uses only Id.
- Check for null conditions when you write expressions in your algorithms, especially when you query more than one request line. A null condition at runtime might create errors.
- If you encounter an error, fix it, then use the Supply Chain Orchestration work area to resubmit your request.
- The concepts, guidelines, tools, demonstrations and procedures that you use to integrate Supply Chain Orchestration with Order Management and Procurement are similar to the ones that you use to integrate Order Management with other Oracle applications. For details, see the content that starts at *Overview of Integrating Order Management with Other Oracle Applications*.
- Use the predefined privileges to set up this feature.
    - Manage DOS Service Mappings
    - Manage DOS Algorithms
    - Administer Sandbox
    - View Modified Data, so you can view the runtime results

Extend Supply Chain Orchestration's Integration with Manufacturing

Use a service mapping to help you integrate Oracle applications and meet your specific integration requirements in your back-to-back flow. Create a sales order in Order Management, orchestrate supply in Supply Chain Orchestration, then create a work order in Manufacturing.

You can also use a service mapping to integrate data that travels from Planning and Inventory, to Supply Chain Orchestration, and then to Manufacturing.

As an option, use an extensible flexfield to integrate data that's specific to your implementation.



Set Up

The set up that you do to integrate with Manufacturing is similar to the set up that you do to integrate with Procurement. So do the work described in *Extend Supply Chain Orchestration's Integration With Procurement*, but with these differences:

- Enable the Use Service Mappings to Extend Supply Chain Orchestration's Integration with Manufacturing feature.

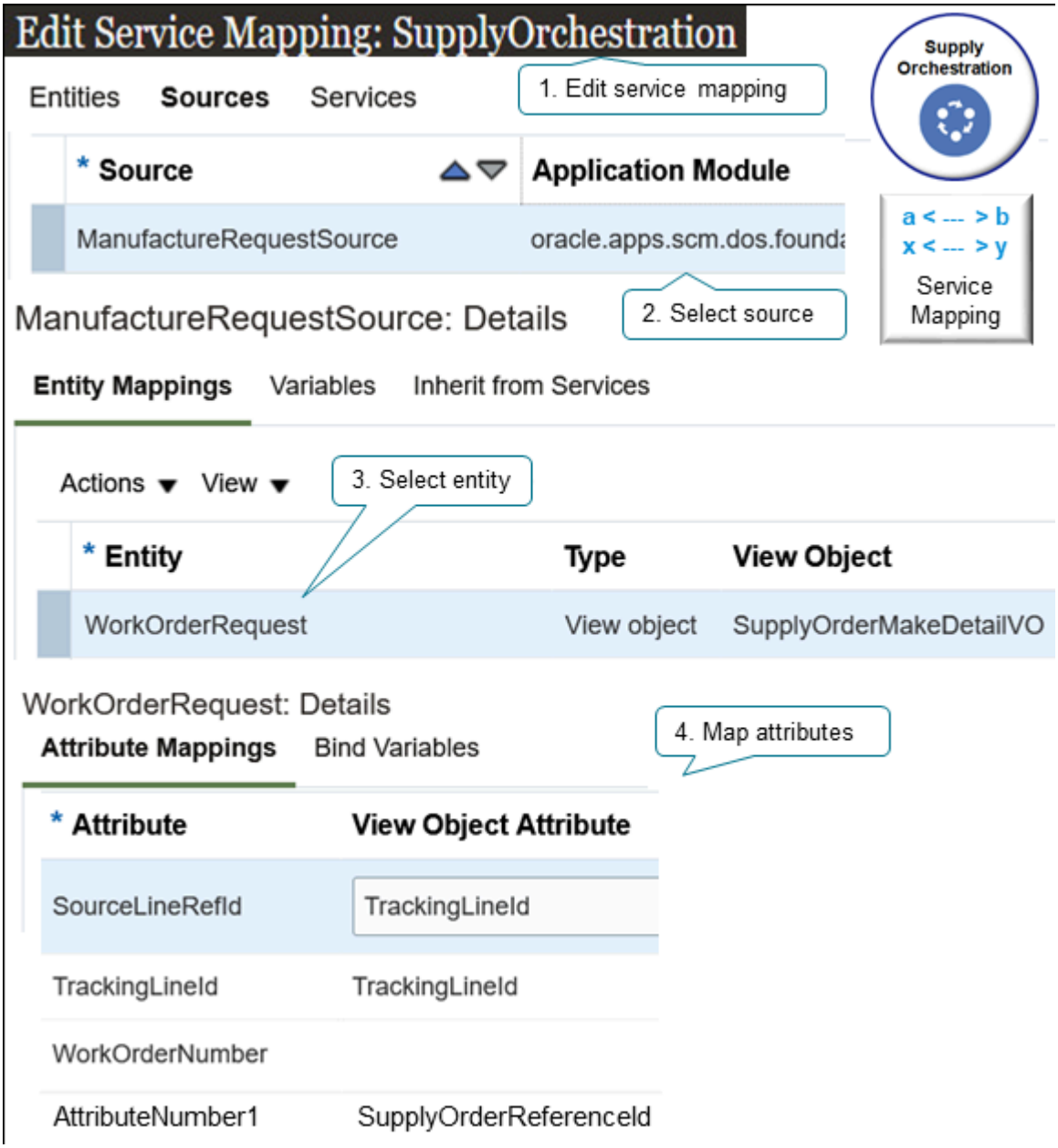
- Select the flows that you need when you enable the feature.
  - Back-to-Back Make
  - Plan-To-Produce Make
  - MinMax Make
- When you modify the mapping, modify ManufactureRequestSource instead of PurchaseRequestSource.

Notes

- Make sure your integration can send the validations that Manufacturing applies. Your import payload might be fine, but Manufacturing might not accept the request. For example, if the Name attribute and Id attribute don't reference the same customer, then Manufacturing uses only Id.
- Consider whether you need to map the same attribute differently for different flows. For example, Order Management ships supply to your customer in a back-to-back flow, but an internal material transfer might keep supply in an internal warehouse.
- The plan-to-produce flow and the minimum-maximum flow might create supply orders that have a large number of lines. If you use these flows, then test your mapping to make sure it doesn't have a negative impact on performance.

Example

Here's an example service mapping that uses the WorkOrderRequest entity in the ManufactureRequestSource source.



Here's what it does.

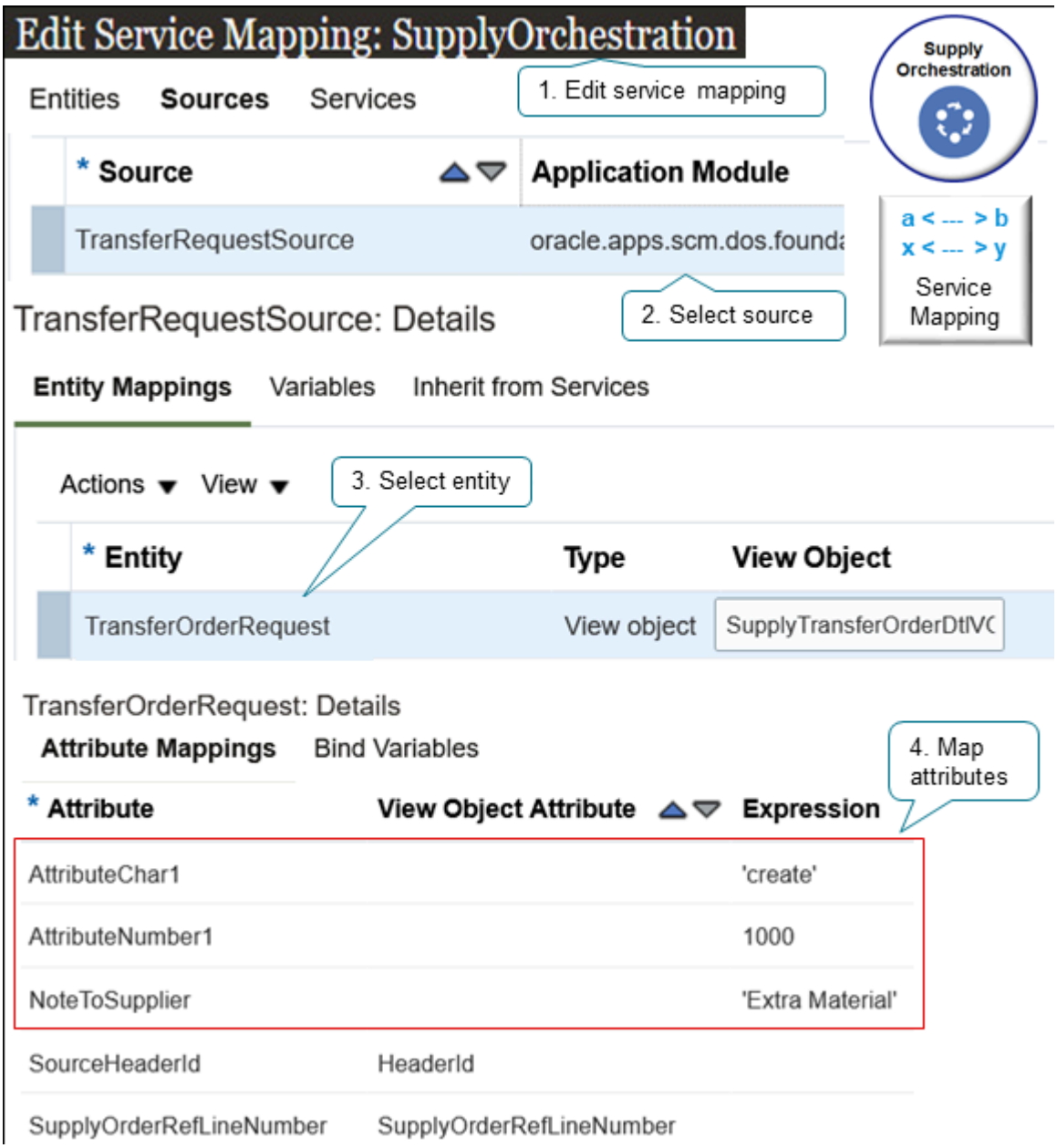
- Sends a request to create a work order from Supply Chain Orchestration to Manufacturing
- Uses the WorkOrderNumber attribute to send the work order number
- Uses the AttributeNumber1 attribute to send the SupplyOrderReferenceId

Extend Supply Chain Orchestration's Integration with Inventory

Use a service mapping to meet specific integration requirements in your transfer order flow.

Create a sales order in Oracle Order Management, orchestrate supply in Oracle Supply Chain Orchestration, then create a transfer order in Oracle Inventory Management. As an option, use an extensible flexfield to integrate data that's specific to your implementation. You can also use a service mapping to integrate data that travels from planning and purchasing, to Supply Chain Orchestration, and then to inventory.

For example, create a service mapping that uses the TransferOrderRequest entity in the TransferRequestSource service.



The service sends a request to create a transfer order from Supply Chain Orchestration to Inventory Management:

1. Edit the SupplyOrchestration service mapping.
2. Select the TransferRequestSource source.
3. Select the TransferOrderRequest entity.

4. Map your attributes. For example:

Attribute	Expression
AttributeChar1	'create'
AttributeNumber1	1000
NotetoSupplier	'Extra Material'

Set Up

The set up that you do to integrate with Oracle Inventory Management is similar to the set up that you do to integrate with Oracle Procurement. So do the work described in *Extend Supply Chain Orchestration's Integration With Procurement*, but with these differences:

- Enable the Use Service Mappings to Extend Supply Chain Orchestration's Integration with Inventory feature.
- Select the flows that you need when you enable the feature:
  - Back-to-Back Transfer
  - Plan-To-Produce Transfer
  - MinMax Transfer
  - Supply Request Transfer
  - Self Service Request Transfer
  - External Transfer

  Select only the flows that you need. Selecting fewer flows simplifies the setup that you will do next. For example, if you select only Back-to-Back Transfer, then some of the steps that you do during setup will filter values so you can choose only values that apply in a back-to-back transfer flow.
- When you modify the mapping, modify the TransferRequestSource source instead of PurchaseRequestSource.
- Use the Entity Mappings tab to select the entity that represents the data that you need to map between Supply Chain Orchestration and Inventory Management. For example, select the:
  - SalesOrderChargeAdjustment entity to map a charge adjustment to Inventory Management
  - TransferOrderRequestChangeEntryDetail entity to map a change in the request for a transfer order to Inventory Management.

Guidelines

- Make sure your integration can meet the validations that Inventory Management applies. Your request payload might be fine, but Inventory Management might not accept the request.
- Make sure the objects that you reference in your integration algorithm exist, especially when you query for more than one request line. If you reference an object that doesn't exist at runtime, you might encounter an error.
- Consider whether you need to map the same attribute differently for different flows. For example, Order Management typically ships the item to your customer in a back-to-back flow, but supply might remain in the warehouse for other flows.

- Consider whether you have supply requests that might affect performance. For example, plan-to-produce flows and minimum-maximum flows can produce supply orders that have a lot of lines.
- If you encounter an error, fix it, then use the Supply Chain Orchestration work area to resubmit your request.

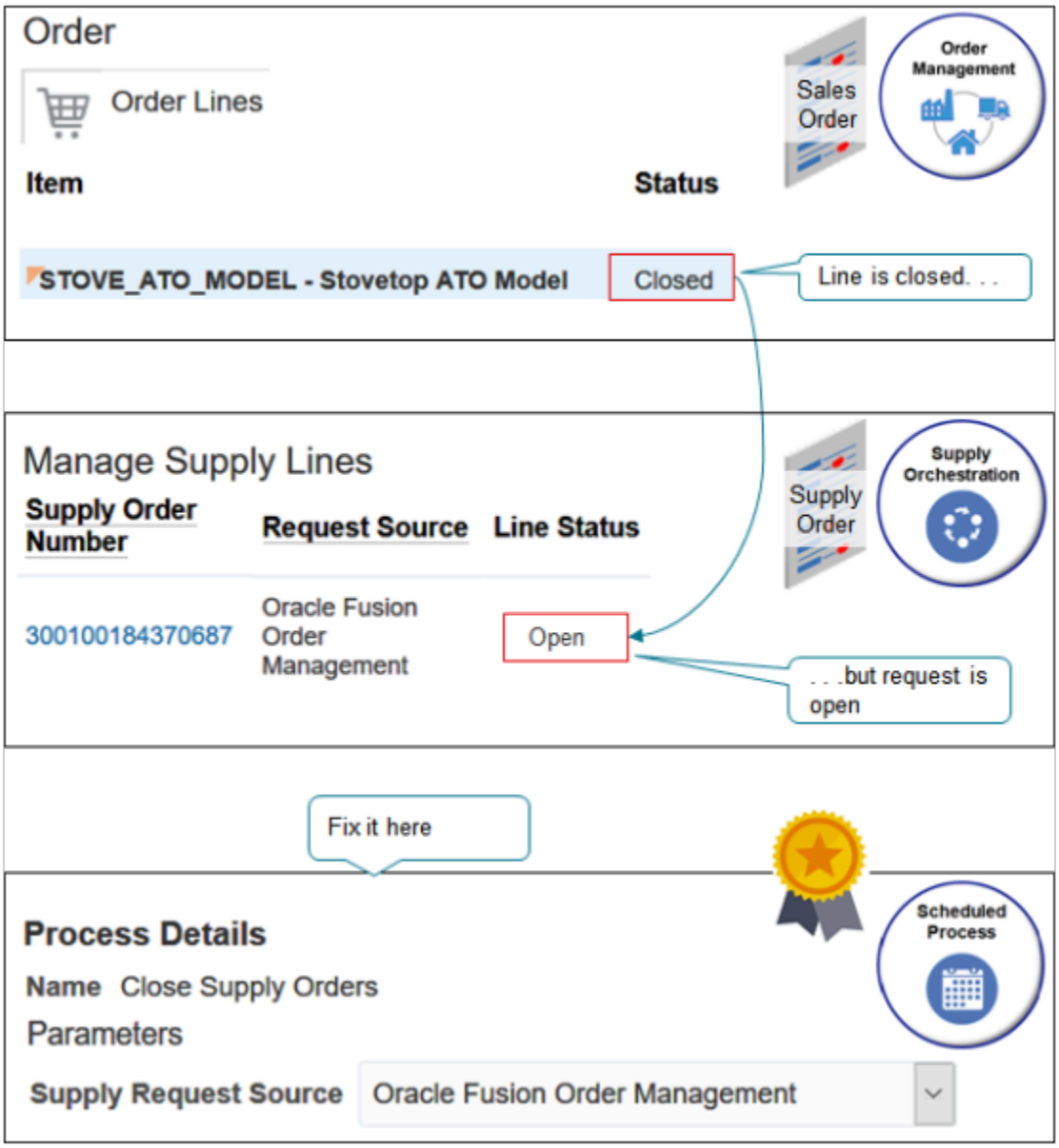
Maintain

Close Supply Orders That Are Open

Use a scheduled process to close supply orders that are open but that don't have pending actions.

If an unexpected system downtime or unexpected technical error happens, then Supply Orchestration might not update the status for a supply order, and the supply order might be left in an open status even though fulfillment is done for the supply order.

Assume you create and submit sales order 86954 in the Order Management work area, and Supply Chain Orchestration creates supply order 300100184370687 to fulfill 86954. A week later you experience a power outage. You restore power then notice that the status for all order lines in 86954 is Closed, but the status for 300100184370687 remains Open:



You notice a similar situation for 20 other sales orders. You can use the Close Supply Orders scheduled process to fix the problem.

Assume you need a report of all open supply orders for requests that you received from Order Management, but the supply orders don't have any pending fulfillment actions:

1. Sign in with the Supply Chain Operations Manager job role.
2. Go to the Scheduled Processes work area.
3. On the Overview page, click **Schedule New Process**.
4. In the Schedule New Process dialog, search for Close Supply Orders, set values, then submit:

Parameter	Description
Report Only	Add a check mark to create a report but don't close any orders.

Parameter	Description
	If you don't enable this option, then the scheduled process creates a report and closes the orders.
Supply Request Source	Choose the source that sends the request to create supply to Supply Chain Orchestration. Search for supply orders when you do contract manufacturing: o For an outside processing flow, set Supply Request Source to Oracle Fusion Common Work Execution and set Supply Type to Buy. o For a plan-to-produce flow, set Supply Request Source to Oracle Fusion Planning Central and set Supply Type to Make. For example, select: o **Oracle Fusion Supply Chain Orchestration** to search only for requests that you create in the Supply Orchestration work area. o **Oracle Fusion Order Management** to search only for requests that Order Management sends to Supply Chain Orchestration.
Supply Request Reference	Leave empty, or select a value to search only for supply orders associated with a single sales order, purchase order, or work order. If you set Supply Request Source to: o **Order Management**, then set Supply Request Reference to the sales order. o **Procurement**, then set Supply Request Reference to the purchase order. o **Inventory Management**, then set Supply Request Reference to the work order.
Supply Request Batch Number	Leave empty, or choose a batch to narrow the search. This parameter identifies the import batch number on the interface table. If you specify it, then the scheduled process will process all supply orders in the import batch. Learn about import. For details, see *External Data Integration Services for Importing Data*.
Supply Type	Select a flow to narrow the search. For example, select Transfer to search only for supply orders that involve a transfer order.
Item	Select an item to search only for supply orders that contain the item. For example, select the AS54888 Standard Desktop to search only for supply orders that fulfill the AS54888.
From Creation Date To Creation Date	Filter the data that you want to process according to the supply order's creation date.

Parameter	Description

This scheduled process uses From and To parameters. For important details about how to set them, see *Guidelines for Using Scheduled Processes in Order Management*.

All parameters are optional except for Supply Request Source and From Creation Date, which are required. For more, see *Close Supply Orders*.

5. On the Overview page, in the search results, click **Refresh** until the status for your process is Succeeded.
6. In the Log and Output area, next to Attachment, click the **link** inside the parentheses, such as (**1 more.**), then click the .txt file, such as **103648.txt**.
7. Examine the report output.

Here's part of an example report:

This scheduled process processes supply orders differently depending on the flow:

Type of Flow	Description
Transfer Order	Process supply orders that are open only when the transfer order or purchase order for the transfer is closed or canceled.
Back-to-Back	Process supply orders that are open only when the order line is shipped or canceled.

Set the Duration

You can use the From Creation Date and the To Creation Date parameters to specify the duration that Close Supply Orders will use when it looks at supply orders:

- Both dates must happen on or before the current date.
- Run the scheduled process in small durations to improve performance, depending on the number of orders that you need to close. If you have lots of orders to close, use smaller durations.
- The duration must not exceed 90 days. For example, you can specify January 1 to March 31 because that duration has 90 days, but you can't specify January 1 to April 1 because that duration has 91 days.
- If you need more than 90 days, then you must run the scheduled process more than one time. Assume today is August 31, and you need to close supply orders starting today and roughly the previous 120 days. You must run the scheduled process two times:
    - Set the duration to July 1 to August 1, then run the scheduled process.
    - Set the duration to May 1 to June 30, then run the scheduled process again.
- If you set Supply Request Reference or Supply Request Batch Number, then you don't need to set the dates.

Other Guidelines

- Run the Close Supply Orders scheduled process with the Report Only option enabled the first time you run it. This report doesn't modify any data but it does provide details about any supply orders that Close Supply Orders won't be able to close. It also includes details about supply orders that are currently open that Close Supply Orders will close, transfer orders, work orders, purchase orders, and reservations. Examine the report, the output file, and the log files. If you're satisfied with what you see, then run Close Supply Orders with Report Only disabled, and it will close your supply orders.
- If you have a supply order that's open in a back-to-back flow, and if the sales order that the supply order supplies already shipped, then Close Supply Orders will close the supply order.
- If the supply order is in an outside processing flow, and if the work order that the supply order supplies is closed, then Close Supply Orders will close the supply order.
- Close Supply Orders only closes supply orders that are open and cancels whatever reservations you have in inventory for those supply orders. It doesn't modify or close any transfer orders, work orders, or purchase orders that provide supply to the supply orders. You can use the report to identify these transfer orders, work orders, or purchase orders, and then use another application to close them. For example, use Oracle Procurement to close purchase orders.

Purge Supply Orders

Now that you have closed the supply orders that you don't need, you can use the Purge Supply Orders scheduled process to delete them:

- This scheduled process removes records from database tables, and that reduces the load on your queries. We recommend that you run it regularly to help manage how much data you keep for your supply orders.
- You can also use this scheduled process when you want to see whether the supply order is related to a sales order in a back-to-back flow. If there's still a relationship, you can use a parameter to choose not to delete the supply order.

Use these parameters to filter the data that the scheduled process will look at.

Parameter	Description
From Creation Date To Creation Date	Filter the data that you want to process according to the supply order's creation date.
Supply Type	Specify the type of supply, such as Buy, Make, Transfer, and so on. The scheduled process will look only at the type of supply orders that you specify. For example, set it to: • **Buy**. The process will only look at purchase orders. • **Make**. The process will only look at work orders. • **Transfer**. The process will only look at transfer orders.
Supply Request Source	Specify an application. The scheduled process will look only at supply orders that it created for the application that you specify. For example, if you set this parameter to Order Management, the process will look only at supply orders that it created for Order Management. If you have sales orders in a back-to-back flow for Order Management, and if any of these orders are open, then don't delete the supply orders that are providing supply for these sales orders. If you do, the open sales orders won't be able to reference the supply orders.
From Supply Request Reference Number To Supply Request Reference Number	Filter the data that you want to process according to the supply request's reference number. For details about reference numbers, see *Create Supply Requests*.
From Supply Order Number To Supply Order Number	Filter the data that you want to process according to the supply order number.
From Item To Item	Filter the data that you want to process according to the item name.
From Destination Organization To Destination Organization	Filter the data that you want to process according to the destination organization. The destination organization is the organization that receives the supply that Supply Chain Orchestration creates, such as your customer.

Note

- This scheduled process uses a number of From and To parameters. For important details about how to set them, see *Guidelines for Using Scheduled Processes in Order Management*.
- All parameters are optional, except for To Creation Date, which is required.
- No special combinations are required.
- For more, see *Purge Closed Supply Orders*.

Guidelines

- Run the Close Supply Orders scheduled process before you run the Purge Close Supply Orders scheduled process. This will help to make sure you delete all supply orders that are ready to delete.
- To avoid performance problems, we recommend that you specify more parameters rather than fewer parameters.

- You can use Purge Close Supply Orders only to delete supply orders. It doesn't modify or close any transfer orders, work orders, or purchase orders that provide supply to the supply orders.
- Purge Close Supply Orders only deletes orders that are closed or canceled. It doesn't delete orders that are open.
- Use each From and To set of parameters to filter for a range of values. For example, set the From Supply Order Number parameter to 100, and set the To Supply Order Number parameter to 200, and the process will look at all supply orders that are in the range of 100 to 200.
- Use each From and To set of parameters to specify a single value. For example, set the From Supply Order Number parameter to 100, and set the To Supply Order Number parameter to 100, and the process will look only at supply order 100.

Avoid performance problems. If you have a large number of records, then use one or more sets of From and To parameters to filter the number of records that you will process, and run the process more than one time. Assume you want to look at all supply orders that you received during the month of March. You received approximately 100 requests on each day. You can run the process three times and process about 1,000 records on each run instead of processing about 3,000 records on a single run:

Run	From Creation Date	To Creation Date
1	March 1	March 10
2	March 11	March 20
3	March 21	March 31

Related Topics

- Overview of External Data Integration Services for Importing Data

Manage Interface Tables for Supply Chain Orchestration

Use a scheduled process to delete supply requests and keep your interface tables running at optimal performance.

This scheduled process removes records from database tables, and that reduces the load on your queries.

1. Go to the Scheduled Processes work area.
2. Click **Schedule New Process**.
3. Search for the Purge Supply Chain Orchestration Interface scheduled process.
4. Set the parameters:

Parameter	Description
Supply Request Status	Specify the status of the supply request that you want this process to consider. The process will look only at supply requests that are in the status you specify. For example, set it to Success, and the process will only look at supply requests that have a Success status.
From Creation Date	Filter the data that you want to process according to the supply request's creation date.

Parameter	Description
To Creation Date	
Supply Type	Specify the type of supply. The scheduled process will look only at the type of supply requests that you specify. For example, set it to: o **Buy**. The process will look only at purchase orders. o **Make**. The process will look only at work orders. o **Transfer**. The process will look only at transfer orders.
Supply Request Source	Specify an application. The scheduled process will look only at supply requests that it received from the application that you specify. For example, if you set this parameter to Order Management, the process will look only at supply requests that it received for Order Management.
From Supply Request Batch Number To Supply Request Batch Number	Filter the data that you want to process according to the supply request's batch number.
From Supply Request Reference Number To Supply Request Reference Number	Filter the data that you want to process according to the supply request's reference number. For details about reference numbers, see *Create Supply Requests*.

Note

- This scheduled process uses a number of From and To parameters. For important details about how to set them, see *Guidelines for Using Scheduled Processes in Order Management*.
- All parameters are optional except for To Creation Date, which is required.
- For more, see *Purge Supply Chain Orchestration Interface*.

Guidelines

- We recommend that you run this scheduled process regularly to help manage how much data you keep for your supply requests. We recommend that you keep data for the past three months to support troubleshooting efforts.
- If you set the Supply Request Status parameter to On Hold, then the process will delete records that remain on hold after the item ships.

  The scheduled process normally deletes records when they move through various statuses, such as Success and Closed. In some rare instances, back-to-back processing might not finish as expected, records that are in the On Hold status don't get updated to the current status, such as Closed, so they don't get deleted. You can use the scheduled process to delete them.
- Get a report that includes a summary of what the scheduled process achieved, and details about the records that the scheduled process deleted. If you enable the Report Only option, then the scheduled process will create a report that you can use to see what records the scheduled process will remove before you actually remove them. If all looks good, you can run the scheduled process again but disable the Report Only option.

- Use each From and To set of parameters to filter for a range of values. For example, set the From Supply Request Batch Number parameter to 100, and set the From Supply Request Batch Number parameter to 200, and the process will look at all supply requests that in batches 100 through 200.
- Avoid performance problems. If you have a large number of records, then use one or more sets of From and To parameters to filter the number of records that you will process, and run the process more than one time. Assume you need to delete all supply requests that you received during the month of March. Assume you received approximately 100 requests on each day. You can run the process three times and process about 1,000 records on each run instead of processing about 3,000 records on a single run:

Run	From Creation Date	To Creation Date
1	March 1	March 10
2	March 11	March 20
3	March 21	March 31

Troubleshoot Supply Chain Orchestration

Troubleshoot problems that you encounter with administering Supply Chain Orchestration.

I encounter a message.

```
The supply request failed because Global Order Promising didn't create a supply recommendation.
```

Here are some solutions you can try:

- Go to **Home > Order Management > Order Management (New) > Manage Orders**. Search for, then open your sales order. Click **Fulfillment Lines > Check Availability > View Availability Options**. Examine the supply that Global Order Promising recommends. If the recommended supply doesn't meet demand for the sales order, then you might need to revise your set up in Global Order Promising.
- Go to the Global Order Promising work area, click **Tasks > Manage ATP Rules**, then set the Infinite Availability Time Fence Definition attribute to a larger value.
- In the Global Order Promising work area, click **Tasks > Manage Sourcing Rules**, then set the Organization Assignment Type attribute to Local for the sourcing rule that applies to the line. If the item is a configured item, then make sure you have a sourcing rule for each configurable option.
- Go to the Work Definition work area, click **Tasks > Manage Work Definitions**, open the work definition for the item that's on the order line, then make sure it doesn't have any errors. For details, see *How You Configure Manufacturing to Support Back-to-Back Fulfillment*.
- Collect data to make sure Global Order Promising uses your latest set ups. For details, see *Collect Planning Data for Order Management*.

Related Topics

- Overview of Back-to-Back Fulfillment
- Overview of Contract Manufacturing
- Set Up Rules That Create Supply Orders
- Overview of Collecting Promising Data for Order Management
- Overview of Configure-to-Order

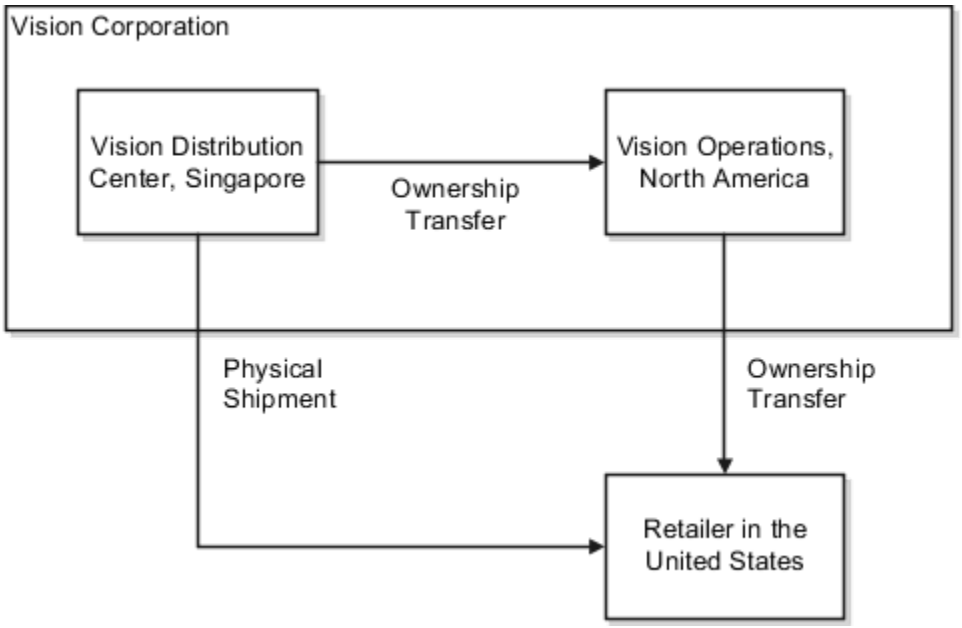
19 Supply Chain Financial Orchestration

Overview of Supply Chain Financial Orchestration

Oracle Supply Chain Financial Orchestration enables you to run financial orchestration flows and define business rules for financial orchestration. Using Supply Chain Financial Orchestration, you can:

- Manage intercompany transactions and intracompany flows. Intracompany flows are present when a financial orchestration exists between two different profit center business units that belong to the same legal entity. You can separate the physical part of this transaction from the financial part of the transaction.
- Support complex global structures without compromising supply chain efficiency.
- Model your corporate tax structures in a global environment efficiently without impacting the physical movement of goods. You can deliver goods and services to your customers as quickly as possible, and lower your total supply chain costs at the same time.
- Optimize operational efficiency by centralizing sourcing and order management functions.
- Reduce implementation costs and cycle time.
- React effectively to corporate reorganizations or acquisitions.

The following figure illustrates an example of an intercompany transaction for the Vision Corporation.



In this example, a financial orchestration flow exists between the Vision Distribution Center, located in Singapore, and Vision Operations, located in North America. The Vision Distribution Center sends the physical product that's involved in the transaction to retailers. It also sends the financial information and transfers ownership of the product in the financial books for the transaction to Vision Operations in North America. Each organization is a separate legal entity in Vision Corporation. However, these organizations are located in different countries. They require separate accounting and tax reporting. You can use Supply Chain Financial Orchestration to capture, process, and perform an accounting of the

events. The events occur during an intercompany transaction in an enterprise that's similar to Vision Corporation. For example, you can use it to do the following:

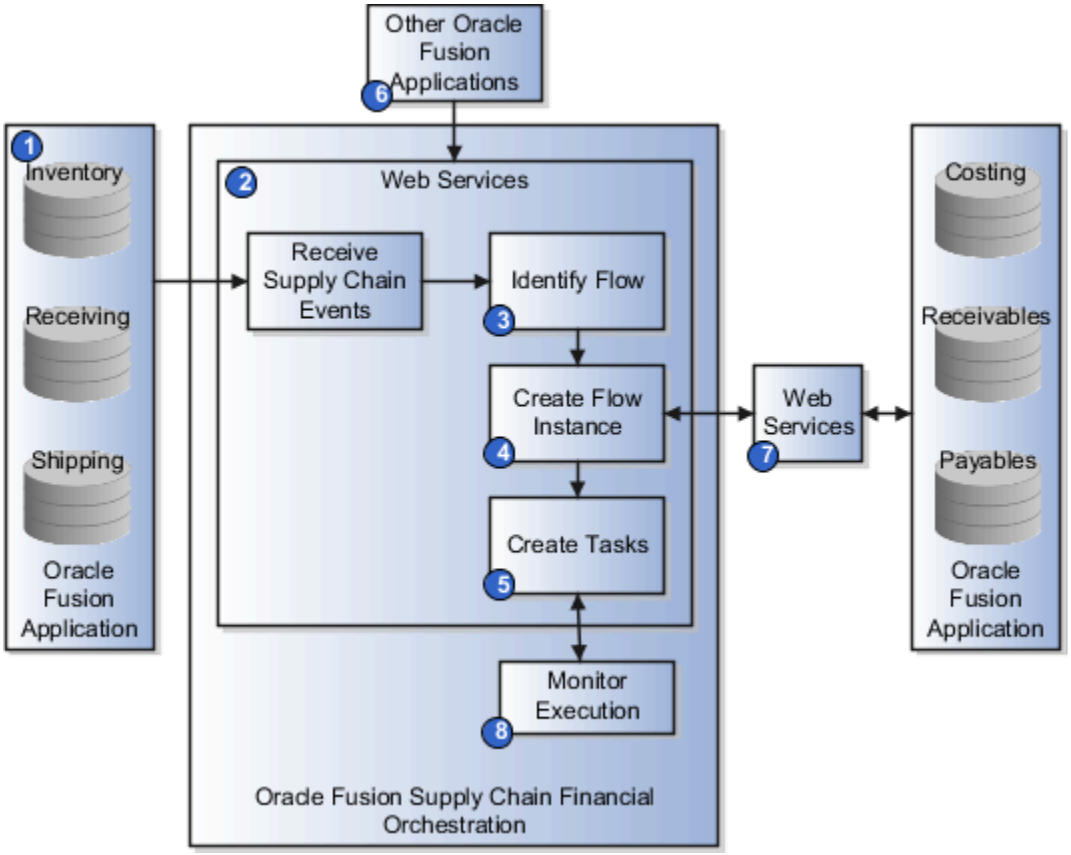
- Create documentation and accounting rules that specify the type of accounting documentation to create. For example, whether or not to create an intercompany invoice, to track profits in inventory, or to track trade distributions.
- Create transfer pricing rules that specify whether to use the transaction cost, a purchase order price, or the sales order price as the basis to calculate the intercompany transfer price between the seller and the buyer. You can create transfer pricing rules that apply a markup or markdown percentage on the internal sale.
- Create intercompany buyer profiles and intercompany seller profiles that Financial Orchestration uses to create the intercompany invoice. You can specify the business units that provide the following:
    - Procurement and payables invoicing for the profit center business unit.
    - Business unit that provides receipt accounting information.
    - Bill-to business unit and bill-to locations.
    - Procurement business unit.
- Create financial orchestration qualifiers that specify when to run a financial orchestration flow. For example, you can create a rule to run an orchestration flow only if a particular supplier is involved in the transaction.
- Create financial orchestration flows. You can specify the following:
    - Legal entities and business units that are involved in a flow.
    - Financial orchestration qualifiers that control when to use the flow.
    - Financial routes to use for the flow.
    - Transfer pricing rules and documentation accounting rules.
    - Date when the flow goes into effect.
- Specify a priority among different flows.

In general, the term financial orchestration is used to describe the Financial Orchestration work area and the related tasks. This work area is part of the Manufacturing and Supply Chain Materials Management offering. For more information about implementing supply chain financial orchestration, see the Implementing Manufacturing and Supply Chain Materials Management guide.

Financial Orchestration Flow

A financial orchestration flow automates the execution of the components within a financial flow once the movement of goods or fulfillment of services happens in the supply chain flow.

The following figure describes a typical financial orchestration flow.



Components of the Flow

A financial orchestration flow is triggered when an Oracle Fusion Supply Chain application sends a notification that a supply chain event occurred, such as a shipment transaction. The applications can be Oracle Fusion Inventory, Oracle Fusion Receiving, and so on. The financial orchestration flow includes the following steps:

1. Receive the supply chain event.
2. Identify the financial orchestration flow to use in reply to the event. It uses the configuration that you specify to identify this flow:
    - **Manage Supply Chain Financial Orchestration Qualifiers**
    - **Manage Supply Chain Financial Orchestration Flows**
3. Create an instance of the financial orchestration flow identified in the previous step.
4. Create the tasks to run the instance.
5. Interact with one or more Oracle Fusion applications. It can exchange information about the instance with these applications automatically, so you need not do any configuration to enable these interactions. It can interact with the following Oracle Fusion applications while the instance runs:
    - **Oracle Fusion Distributed Order Orchestration**: Provides the orchestration order information for shipment flows.
    - **Oracle Fusion Procurement**: Provides the purchase order information for procurement flows. It confirms whether a financial orchestration flow that does validation is available when it creates or updates a global procurement purchase order.
    - **Oracle Fusion Product Information Manager**: Provides information about the products that financial orchestration uses for each supply chain transaction.

- **Oracle Fusion Financials**: Using the advanced global intercompany that you specify during its setup, Oracle Fusion Financials provides information about the supplier and customer that financial orchestration associates with each legal entity. Financial orchestration interfaces the intercompany receivables and payables invoices to Oracle Fusion Financials.
- **Oracle Fusion Materials Management and Logistics**: Sends a notification indicating that a transaction occurred in the physical supply chain, such as a shipment or a receipt. It also sends other details about the transaction.
- **Oracle Fusion Managerial Accounting**: Tracks cost elements.

6. Financial Orchestration uses various web services to interact with other Oracle Fusion applications that provide and store costing, receivables, and payables data.
7. Check the Monitor Financial Orchestration Execution page for any issues that occur during the execution of a financial orchestration flow.

Related Topics

- Financial Orchestration Qualifiers
- Financial Orchestration Flows

Implement Supply Chain Financial Orchestration

This topic describes how to implement Oracle Supply Chain Financial Orchestration.

1. Sign in to Oracle.

   Ensure you use a login that enables you to add a new implementation project that includes the Manufacturing and Supply Chain Materials Management product offering. Contact Help Desk to determine the login that you must use.
2. Create an implementation project:
   a. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
   b. On the **Implementation Projects** page, click **Actions**, and then click **Create**.
   c. In the **Name** field, enter a value that describes your project, and then click **Next**.

      For example, enter **My Financial Orchestration Project**.
      - On the **Create Implementation Project**: **Select Offerings to Implement** page, include the Manufacturing and Supply Chain Materials Management offering, and click **Save and Open Project**.

        The application creates an implementation project that you can use to modify the financial orchestration flow.
3. In the Setup and Maintenance work area, go to the following.
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Financial Flows
   - Task: Manage Supply Chain Financial Orchestration System Options
4. Complete the **Manage Supply Chain Financial Orchestration System Options** task and click **Done**.
5. Complete the tasks in the following sequence:

- Manage Supply Chain Financial Orchestration System Options
- Manage Supply Chain Financial Orchestration Documentation and Accounting Rules
- Manage Supply Chain Financial Orchestration Transfer Pricing Rules
- Manage Profit Center Business Unit Party Relationship
- Manage Supply Chain Financial Orchestration Qualifiers
- Manage Supply Chain Financial Orchestration Flows
- Manage Drop Ship Financial Flows.

> **Note:** Oracle recommends that you follow the tasks in the specified sequence. Some tasks depend on the completion of a previous task in the sequence. For example, you must create a transfer pricing rule first, so that you can specify this rule when you create a financial orchestration flow.

6. Import the business units, customers and suppliers required to create relationships for intercompany invoices.

   This information is required to create the profit center business unit to party relationship. During the Export and Import Application Setup process, ensure that you import the business objects of the Financials offering first before you import the business objects of Manufacturing and Supply Chain Materials Management offering.

Financial Orchestration System Options

You can specify the following financial orchestration system options on the Manage Supply Chain Financial Orchestration System Options page. Financial Orchestration uses the following options to process a financial orchestration flow:

- Item Validation Organization: Specify the organization that financial orchestration uses to validate each item according to the qualifiers that you create.
- Consider service item for descriptive global purchase order processing: Select this check box to configure the global procurement business process flow for description lines either with a service item or without the service item setup.
- Service Item: Specify the service item that various financial orchestration tasks use.
- Maximum Number of Records per Batch: Specify the number of records that financial orchestration gets when it processes supply chain events. You can use this value to tune the performance of your server environment.

In addition you can also use the following options to determine how a financial orchestration flow is processed:

- Calculate tax for trade receipt accrual: Select this check box to calculate taxes on the intercompany accrual transaction.
- Ignore bill only flows: Select this check box to ignore all financial orchestration for bill-only flows. Some scenarios where you may use this option:
  - Credit only customer returns against an intercompany drop shipment sales order
  - Bill-only flows for shippable items

Related Topics

Documentation and Accounting Rules

Currency Options in Accounting Rules

You can define the currency to use in the financial orchestration flow. For example, you can use the same currency as the seller or the legal entity. You can set the currency option while creating or updating an accounting rule.

The currency options that you can set are:

- **Selling Node**: Use the same currency that the seller uses. For example, if the seller uses the US dollar and if the buyer uses the Euro, then the supply chain financial orchestration process uses the US dollar throughout the entire transaction. This includes invoice data.
- **Buying Node**: Use the same currency that the legal entity uses in the primary ledger. This legal entity resides in the business unit.
- **Source document**: Use the currency that the source document uses.
- **Standard currency**: Use a standard currency. This option generates intercompany invoices in a standard currency selected by you.

  For example, you have Profit Center Business Units defined for Singapore BU (ledger currency SGD) and the European BU (ledger currency EUR). But you may want the transfer price to be calculated in USD for your intercompany transactions. You can do so by configuring the Currency Option to Standard Currency and selecting USD as the currency for transfer pricing.

You can select the Currency Option in the Documentation and Accounting Rules dialog box.

Conversion Types for Currency

Define a conversion type if there are different currencies involved in the supply chain financial orchestration process. A conversion type is used to calculate the transfer price automatically. You can specify a conversion type while creating or updating a documentation and accounting rule.

You can select a conversion type from the Documentation and Accounting rules dialog box that appears when you create or edit a documentation rule. Select a conversion type from the list of values in the Conversion Type field.

Related Topics

- Guidelines for Creating Conversion Rate Types

Trade Distributions

Oracle Cost Management uses trade distributions when it does the cost accounting distributions for the transactions that financial orchestration sends. These are the accounting distributions that Cost Management uses for intercompany accrual, intercompany cost of goods sold, and so on.

How You Track Profits in Inventory

You can now track intercompany profit in the physical inventory's item costs in a separate cost element type.

For example, lets assume Vision Operations, an inventory organization, owns inventory valued at 10.00 USD which was transferred from another inventory organization, Vision Manufacturing. Vision Manufacturing added a markup of 1.50 USD to its item cost of 8.50 USD to arrive at a sales price of 10.00 USD to Vision Operations. In Vision Operation's item cost, the intercompany profit in inventory of 1.50 USD is tracked in a separate cost element type with the cost element as Vision Manufacturing, the source organization which incurred this gain.

Tracking Profit in inventory separately enables you to eliminate the intercompany profits in the inventory valuation during financial consolidation process. You can enable or disable this feature using the **Track Profit in Inventory** option while creating the Documentation and Accounting rule.

Related Topics

- How Cost Components, Cost Elements, and Cost Component Groups Work Together

Intercompany Invoices in Financial Orchestration

If you use the Intercompany invoice option on the Manage Documentation and Accounting Rules page to include intercompany invoices, then Financial Orchestration creates the following intercompany invoices during the transaction:

- Accounts payable invoice. A transaction that records the payable accounting when one business unit buys goods or services from another business unit.
- Accounts receivable invoice. A transaction that records the receivable accounting for the shipping business unit in an intercompany flow. It records journal entries in accounts receivables for the seller, it records revenue, and it records tax and freight charges. It adds journal entries to the inventory asset account and the cost of goods sold account for the shipping warehouse.

If you specify to not include intercompany invoices, then Financial Orchestration does not create any intercompany invoices during the transaction. An intercompany invoice is not required. For example, an intracompany trade that occurs between business units that belong to the same legal entity might not require an intercompany invoice. In this situation, a trade distribution in cost accounting handles the accounting for the receivables and payable balances.

For all transactions except nonshippable sales, generation of intercompany invoices is optional. This option can be configured in the documentation and accounting rules.

Note: For nonshippable sales, you must deselect the Trade Distributions option, and enable Inter Company Invoices on the Create Documentation Accounting Rules page.

This table summarizes the role requirements and parameter information to run the scheduled processes that generate intercompany invoices for financial orchestration flows.

Invoice	Scheduled Process	Parameter to Set
Accounts Receivable	Import AutoInvoice	Set the Transaction Source parameter to ORA_ Supply Chain Financial Orchestration.
Accounts Payable	Import Payables Invoices	Set the Source parameter to Supply Chain Financial Flow Orchestration.

Related Topics

- Implement Supply Chain Financial Orchestration
- How AutoInvoice Processes Data During Import
- How Payables Standard Invoice Import Data Is Processed

Financial Orchestration Transfer Pricing Rules

Accounting Transfer Price

Accounting transfer price is the intercompany transfer price that financial orchestration uses for the documents and transactions created in a financial orchestration flow. You can specify the account transfer price on the Transfer Pricing Rules dialog box.

This table gives the options available for accounting transfer price. You can select one of these options.

Option	Description
Transaction Cost Basis	Use the production cost that the seller incurs to produce the product. • Nonshippable Sales: This price basis isn't supported for nonshippable sales. Transaction Cost is the cost of underlying transactions such as the receipt or shipment in Cost Accounting. Depending on the cost method, this could be the existing standard cost, layer actual cost, or average cost of the valuation unit the issue or receipt is processed in.
Source Document Price Basis	Use the price in the sales order or a purchase order based on the business process type. • Procurement: Use the price in the purchase order line. • Shipment: Use the selling price from the sales order line. • Internal Transfer: This price basis isn't supported for internal transfers.

Option	Description
	• Drop Ship: Use the line price in the purchase order line. Use the check box to select the sales order price instead of the purchase order price. **Note:** Financial Orchestration excludes the shipping charges in the sales order line from the selling price when it calculates the transfer price. It also treats a recurring charge on a sales order line as a one-time charge when it calculates the transfer price. Financial Orchestration doesn't support a sales order line that includes a recurring charge.
Item Cost Basis	Use this option to process the intercompany transactions based on the item's current cost applicable at ownership change in the financial orchestration flow. **Note:** Mixing of transfer price options isn't supported for multi node transfers. This means you can't mix the transfer option of item cost basis for the first node with the transaction cost basis for other nodes. Instead, you can either use the transaction cost for all nodes or use the pricing list with transaction cost basis. Item cost is the existing cost the user would see in the Review Item Cost page for an item, cost organization, and primary cost book. It doesn't require the transaction to actually be cost processed.

Recalculating Transfer Price

Oracle Supply Chain Financial Orchestration recalculates a new transfer price in these scenarios:

- When a backordered shipment line is fulfilled in a shipment flow.
- When a backordered transfer order shipment line is fulfilled in an internal transfer flow.
- When global procurement receipts occur in partial quantities.
- When drop ship receipts occur in partial quantities.

The transfer price for each event is recalculated based on the cost and markup percentages applicable at the time of the transfer price calculation, resulting in an accurate transfer pricing based on the latest cost and setup data. Oracle Cost Management uses the recalculated transfer price to process the intercompany transactions.

Transfer Pricing Markup Percentage

You can use the Markup Percentage on the Manage Supply Chain Financial Orchestration Transfer Pricing Rules page to enable the seller to earn a profit or to incur a loss on an intercompany transaction.

To determine the intercompany transfer price, Financial Orchestration multiples the Markup Percentage with the value of the Accounting Transfer Price. For example, if an item costs 1.00 USD, and if you set Markup Percentage to 15, then Financial Orchestration sets the transaction price for this item to 1.15 USD.

You can also enter a negative value to incur a loss. For example, assume the Singapore Distribution Center must mark down the items that it sells to retailers by 15%. So, if an item costs 1.00 USD, and if you set Markup Percentage to -15, then Financial Orchestration sets the intercompany transfer price for this item to 0.85 USD.

Related Topics

Profit Center Business Unit to Party Relationships

Profit Center Business Units

A profit center business unit is a part of a company that you treat as a separate business. Your organization calculates the profits and losses for this profit center separately from other parts of the organization.

A profit center business unit represents a portion of a legal entity that's tracked for profitability, revenue, and costs. You can set up a profit center to have trade agreements with other profit centers for the following business flows:

- Global procurement
- Intercompany drop shipment
- Inter-organization transfer of inventory

When defining inventory organizations, you must specify a profit center business unit to generate intercompany trade transactions for various business flows. If you don't associate a profit center business unit to an inventory organization, it may result in trade transaction errors during cost processing.

> **Note:** Updating the profit center business unit for transactions that are in process results in data corruption and errors during cost processing. It also results in transactions errors causing scenarios that hold up period-end processing.

Related Topics

- Set Up a Business Unit as a Profit Center

Intercompany Buyer Profile

An intercompany buyer profile must be defined for profit center business units that act as a buyer in a buy and sell relationship. A buyer profile consists of two sections:

- Setup for the buyer's payable invoice and purchase order
- Customer locations for the seller's receivables invoice and sales order

Setup for Buyer's Payable Invoice and Purchase Order

Procurement and Payables Invoicing are business functions. A business unit acting as a shared service center can provide these services to a profit center business unit. You can define this relationship in the setup for the Buyer's Payable invoice and PO. The procurement business unit and the bill-to business units defined here are used to create intercompany payables invoices in the buying business unit. The bill-to business unit is also used to derive the attributes required for receipt accounting in Oracle Cost Management. Hence, the procurement and bill-to business unit have to be defined even when intercompany invoices aren't expected to be created for the buy and sell relationship.

Customer Locations for Seller's Receivables Invoice and Sales Order

The profit center business unit that acts as a buyer in a buy and sell relationship also must be defined as a bill-to location. This bill-to location is used to create intercompany receivables invoices in the selling business unit. The bill-to location associated with a buying business unit should belong to the customer account associated with the Buying business unit's Legal Entity in the Manage Intercompany Supplier Customer association task.

The customer bill-to locations belongs to a reference data set called customer address set. The buying profit center business units are represented by customer bill-to locations. The customer bill-to locations belong to a reference data set called customer address set. The selling profit center business unit can use the bill-to locations belonging to the customer address set to which it has subscribed to. The bill-to location representing the buying profit center business unit must be available in the customer address set subscribed by the selling business unit. The customer locations need not be associated if intercompany invoices aren't expected to be created for the buy and sell relationships.

Intercompany Seller Profile

You can specify the intercompany seller profile in the Profit Center BU Profiles section of the Create Profit Center BU to Party Relationship page.

You must specify it for a profit center business unit that acts as a seller in a buy and sell relationship. You can use the following sections:

- **Business Unit for Seller's Receivables Invoice**. In the **Receivables Business Unit** list of values, select the profit center business unit where Financial Orchestration sends the receivables invoice.
- **Supplier Site for Buyer's Payables Invoice and Purchase Order**. You can use the following list of values:
    - **Buyer's Procurement Business Unit**. Select the profit center business unit that acts as the seller in the buy and sell relationship.
    - **Buyer's Bill to Business Unit**. Select the business unit where Financial Orchestration sends the bill.
    - **Supplier Site**. Select the supplier site that Financial Orchestration uses to create the intercompany payables invoice.

Related Topics

FAQs for Profit Center Business Unit to Party Relationships

What happens if I modify the supplier or customer for the legal entity?

If you define an intercompany seller profile, and then at some later point you modify this profile, then Financial Orchestration displays an error message.

This error message explains that you updated the supplier profile and that you must also update the seller profile with new supplier information. To fix this error, you must use the Profit Center BU Profiles section of the Edit Profit Center BU to Party Relationship page to modify the seller profile. If you do this modification, then this page displays the name of the supplier that you modified in the Supplier field. You must also do similar work if you modify the buyer. For example, if you modify the intercompany buyer profile, then you must also modify this profile with the new buyer information.

When can I delete an intercompany buyer or seller profile?

You can delete an intercompany buyer or seller profile based on the profit center business unit. The profit center business unit must not be a buying business unit in any financial route of a supply chain financial orchestration flow.

Financial Orchestration Qualifiers

A financial orchestration qualifier is a rule that specifies when to run one of the financial orchestration flows that you create in the Manage Supply Chain Financial Orchestration Flows task.

If you don't create any qualifier, Financial Orchestration runs the financial flow for all the transactions that it receives. This table lists the qualifiers used for each of the business process type in the Supply Chain Financial Orchestration Qualifier Flow.

Business Process Type	Qualifiers
Procurement	• Asset Item • Item • Item Class • Purchasing Category • Ship to Organization • Supplier • Supplier Country • Supplier Site Code • User Item Type • User-Defined Category
Shipment	• Asset Item • Bill to Country • Bill to Party • Financial Orchestration Category • Item • Item Class • Order Type • Purchasing Category • Ship from Organization • Ship to Address • Ship to Country • Ship to Party • Sold to Country • Sold to Party

Business Process Type	Qualifiers
	• User Item Type • User-Defined Category
Internal Transfer	• Asset Item • Destination Type • Financial Orchestration Category • Item • Item Class • Ship from Organization • Ship to Organization • User Item Type • User-Defined Category
Drop Shipment	• Asset Item • Bill to Country • Bill to Party • Financial Orchestration Category • Item • Item Class • Order Management Business Unit • Order Type • Purchasing Category • Ship to Address • Ship to Country • Ship to Party • Sold to Country • Sold to Party • Supplier • Supplier Country • Supplier Site Code • User Item Type • User-Defined Category
Nonshippable Sales	• Asset Item • Bill to Country • Bill to Party • Financial Orchestration Category • Item • Item Class • Order Type

Business Process Type	Qualifiers
	• Sold to Country • User Item Type • User-Defined Category

Manage Supply Chain Financial Orchestration Flows

Financial Orchestration Flows

You can use a financial orchestration flow to do the following:

- Manage the internal trade relationships that exist between two entities. These entities might reside in the same organization but in widely dispersed physical locations, including in different countries.
- Define the trade relationship that exists between two entities, including business rules, internal controls, regulatory compliance, and other terms and conditions. You can use these controls to run, monitor, and evaluate the transactions that occur in the trade relationships that exist between two entities.
- Orchestrate supply chain events that occur as the result of a transaction that is associated with a financial orchestration flow. This includes events that this flow receives from an external source application.
- Start tasks in an external application that is part of the financial orchestration flow.
- Create a series of financial movements of goods that can provide equitable distribution of the product margin to the countries and tax jurisdictions that are involved in a transaction.
- Set a date that indicates when to start using a financial orchestration flow. This dating enables you to configure Financial Orchestration so that it creates transactions that are associated with a source document that occur before the date when the modified financial orchestration flow goes into effect. Financial Orchestration can also associate transactions with this flow when your source system creates the source document after this date.

Primary Routes

A primary route indicates an agreement to transact goods and services between the two primary profit center business units. The start node represents the internal seller and end node represents the internal buyer. A financial orchestration flow can have more than one primary route. The terms and conditions of financial settlement are defined as part of financial route. In the primary route in a financial orchestration flow, you can specify the start and end business units.

The start and end business units of a primary route may differ based on the business process type of the financial orchestration flow.

The following table lists the start and end business units of a primary route.

Business Process Type	Start Business Unit	End Business Unit
Procurement	Sold to Business Unit	Receiving Business Unit
Shipment	Shipping Business Unit	Selling Business Unit

Business Process Type	Start Business Unit	End Business Unit
Internal Transfer	Shipping Business Unit	Receiving Business Unit

Each primary route may have one or more financial routes. During the financial orchestration process, a primary route is first identified for each source order. If a financial orchestration flow does not have multiple intermediary financial organizations under the primary routes, you can use a simplified view in the Create Financial Orchestration page. This is the default view. You can use a combined table to define the primary and financial routes.

If a financial orchestration flow has multiple intermediary financial organizations under the primary routes, select the **Separate Primary and Financial route** check box to view the primary and financial routes separately in the Create Financial Orchestration page.

Financial Routes

A financial route contains the terms and conditions that determine the nature of the intercompany transaction, such as the documentation, accounting and pricing rule to use.

Each primary route must have at least one financial route. You could optionally specify the sell side and buy side tax determinants. This is used to calculate the taxes in the intercompany receivables invoice and intercompany payables invoice respectively. You must provide a receivables invoice type, a credit memo type and payment terms when intercompany invoices have to be created between the selling and buying business unit of the financial route. There can be more than one financial route for a primary route when one or more intermediary business units are expected.

Register a Third-Party Transfer Price Calculation Web Service

In some scenarios, you may want to use a third-party pricing web service to calculate the transfer price used in a Supply Chain Financial Orchestration flow. To do so, you must first register the web service.

To register a third-party transfer price web service:

1. Sign in to Oracle Fusion Cloud Supply Chain Management as an Application Implementor or Administrator.
2. In the Setup and Maintenance work area, go to the following.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Financial Flows
    - Task: Register Financial Orchestration Third-Party Transfer Pricing Service
3. Enter the URL of the third-party web service in one of the following formats:
    - If you're using the predefined Service Name (`FinancialOrchestrationTransferPriceCustomService`) and Port Name (`FinancialOrchestrationTransferPriceCustomPort`), use the syntax given in the following table.

Syntax	Example
`{HTTP_Protocol}://{Host_Name}:{Port}/{ServiceName}`	`https://abc.com:8888/ws/FinancialOrchestrationTransferPriceCustomService/1.0`

Syntax	Example

- If you're using a modified Service Name and Port Name, use the syntax given in the following table.

Syntax	Example
`{HTTP_Protocol}://{Host_Name}:{Port}/{ServiceName}, CustomServiceName, CustomServicePort`	`https://abc.com:8888/ws/FinancialOrchestrationTransferPriceCustomService_VS/1.0, CustomFinancialOrchestrationTransferPriceServiceName, CustomFinancialOrchestrationPortName`

4. Select a security policy from the following options:
   - oracle/wss10_username_token_with_message_protection_client_policy
   - oracle/wss11_username_token_with_message_protection_client_policy
   - oracle/wss_http_token_over_ssl_client_policy
   - oracle/wss_saml_token_over_ssl_client_policy
   - oracle/wss_username_token_over_ssl_client_policy
5. Enter a User Name and Password.
6. Enter a Keystore Alias.
7. Click **Save and Close**.

Note: Use the predefined specifications while creating the web service specifications. Specifications, such as the input and output parameters and data types and the operation name, aren't configurable.

The WSDL template to use for the web service is as follows:

```
<wsdl:definitions
 name="FinancialOrchestrationTransferPriceCustomService"
 targetNamespace="http://xmlns.oracle.com/apps/scm/fos/orchestrationProcesses/transferPrice/
transferPriceCustomService"
 xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
 xmlns:tns="http://xmlns.oracle.com/apps/scm/fos/orchestrationProcesses/transferPrice/
transferPriceCustomService"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
 xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
 xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
 >
 <wsdl:documentation>
 <name>Compute Custom Transfer Price</name>
 <docCategories>
 <category>None</category>
 </docCategories>
 </wsdl:documentation>

 <wsdl:types>
 <xs:schema version="1.0" targetNamespace="http://xmlns.oracle.com/apps/scm/fos/orchestrationProcesses/
transferPrice/transferPriceCustomService/proxy/types"
 xmlns:xs="http://www.w3.org/2001/XMLSchema">
 <xs:complexType name="customTransferPriceResponse">
 <xs:sequence>
```

```
<xs:element name="description" type="xs:string" minOccurs="0"/>
<xs:element name="errorsExistFlag" type="xs:boolean" minOccurs="0"/>
<xs:element name="unitPrice" type="xs:decimal" minOccurs="0"/>
</xs:sequence
</xs:complexType>
<xs:complexType name="customTransferPrice">
<xs:sequence>
<xs:element name="agreementFTRId" type="xs:long" minOccurs="0"/>
<xs:element name="currencyCode" type="xs:string" minOccurs="0"/>
<xs:element name="customerDeliverToLocationId" type="xs:long" minOccurs="0"/>
<xs:element name="customerShipToLocationId" type="xs:long" minOccurs="0"/>
<xs:element name="eventId" type="xs:long" minOccurs="0"/>
<xs:element name="flowInstanceId" type="xs:long" minOccurs="0"/>
<xs:element name="fromBusinessUnitId" type="xs:long" minOccurs="0"/>
<xs:element name="fromLegalEntityId" type="xs:long" minOccurs="0"/>
<xs:element name="inventoryItemId" type="xs:long" minOccurs="0"/>
<xs:element name="lineTypeCode" type="xs:string" minOccurs="0"/>
<xs:element name="purchaseOrderDestination" type="xs:string" minOccurs="0"/>
<xs:element name="purchasingCategory" type="xs:string" minOccurs="0"/>
<xs:element name="quantity" type="xs:decimal" minOccurs="0"/>
<xs:element name="quoteModeFlag" type="xs:boolean" minOccurs="0"/>
<xs:element name="requisitionOrganizationCode" type="xs:string" minOccurs="0"/>
<xs:element name="shipFromOrganizationCode" type="xs:string" minOccurs="0"/>
<xs:element name="sourceDocumentId" type="xs:string" minOccurs="0"/>
<xs:element name="sourceDocumentType" type="xs:string" minOccurs="0"/>
<xs:element name="supplierSiteId" type="xs:long" minOccurs="0"/>
<xs:element name="toBusinessUnitId" type="xs:long" minOccurs="0"/>
<xs:element name="toLegalEntityId" type="xs:long" minOccurs="0"/>
<xs:element name="transactionDate" type="xs:dateTime" minOccurs="0"/>
<xs:element name="unitOfMeasure" type="xs:string" minOccurs="0"/>
<xs:element name="CtoSalesRows" minOccurs="0" maxOccurs="unbounded">
<xs:complexType>
<xs:sequence>
<xs:element name="configItemId" type="xs:long" minOccurs="0"/>
<xs:element name="inventoryItemId" type="xs:long" minOccurs="0"/>
<xs:element name="subItemType" type="xs:long" minOccurs="0"/>
<xs:element name="lineId" type="xs:long" minOccurs="0"/>
<xs:element name="parentLineId" type="xs:long" minOccurs="0"/>
<xs:element name="unitQty" type="xs:decimal" minOccurs="0"/>
<xs:element name="unitUom" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema" targetNamespace="http://xmlns.oracle.com/apps/scm/fos/
orchestrationProcesses/transferPrice/transferPriceCustomService"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:tns="http://xmlns.oracle.com/apps/scm/fos/
orchestrationProcesses/transferPrice/transferPriceCustomService"
xmlns:ns1="http://xmlns.oracle.com/apps/scm/fos/orchestrationProcesses/transferPrice/
transferPriceCustomService/proxy/types">
<import namespace="http://xmlns.oracle.com/apps/scm/fos/orchestrationProcesses/transferPrice/
transferPriceCustomService/proxy/types"/>
<xsd:complexType name="computeCustomTransferPrice">
<xsd:sequence>
<xsd:element name="arg0" type="ns1:customTransferPrice"/>
</xsd:sequence>
</xsd:complexType>
<xsd:element name="computeCustomTransferPrice" type="tns:computeCustomTransferPrice"/>
<xsd:complexType name="computeCustomTransferPriceResponse">
<xsd:sequence>
<xsd:element name="return" type="ns1:customTransferPriceResponse"/>
</xsd:sequence>
</xsd:complexType>
<xsd:element name="computeCustomTransferPriceResponse" type="tns:computeCustomTransferPriceResponse"/>
```

```
    </schema>
    </wsdl:types>
    <wsdl:message name="computeCustomTransferPriceInput">
    <wsdl:part name="parameters" element="tns:computeCustomTransferPrice"/>
    </wsdl:message>
    <wsdl:message name="computeCustomTransferPriceOutput">
    <wsdl:part name="parameters" element="tns:computeCustomTransferPriceResponse"/>
    </wsdl:message>
    <wsdl:portType name="FinancialOrchestrationTransferPriceCustom">
    <wsdl:operation name="computeCustomTransferPrice">
    <wsdl:input message="tns:computeCustomTransferPriceInput" xmlns:ns1="http://www.w3.org/2006/05/addressing/
  wsdl"
    ns1:Action=""/>
    <wsdl:output message="tns:computeCustomTransferPriceOutput" xmlns:ns1="http://www.w3.org/2006/05/
  addressing/wsdl"
    ns1:Action=""/>
    </wsdl:operation>
    </wsdl:portType>
    <wsdl:binding name="FinancialOrchestrationTransferPriceCustomSoapHttp"
    type="tns:FinancialOrchestrationTransferPriceCustom">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="computeCustomTransferPrice">
    <soap:operation soapAction=""/>
    <wsdl:input>
    <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
    <soap:body use="literal"/>
    </wsdl:output>
    </wsdl:operation>
    </wsdl:binding>
    <wsdl:service name="FinancialOrchestrationTransferPriceCustomService">
    <wsdl:port name="FinancialOrchestrationTransferPriceCustomPort"
    binding="tns:FinancialOrchestrationTransferPriceCustomSoapHttp">
    <soap:address location="http://localhost:7101/FinancialOrchestration-FosTransferPriceService-webapp/
  FinancialOrchestrationTransferPriceCustomService"/>
    </wsdl:port>
    </wsdl:service>
  </wsdl:definitions>
```

How You Set Priorities for Financial Orchestration Flows

You can set the Priority of a financial orchestration flow to specify which flow to use when more than one flow is available for two primary trade partners. A lower number indicates a higher priority.

For example, if you set the Priority to 1 for Flow A, and 2 for Flow B, then financial orchestration will use Flow A.

The following table gives an example to describe the use of priority for a financial orchestration flow.

Financial Orchestration Flow	Priority	Shipping Business Unit	Selling Business Unit	Qualifier Rule
1	10	BU A	BU B	Category = Category B
2	20	BU A	BU B	Category = Category A

Financial Orchestration Flow	Priority	Shipping Business Unit	Selling Business Unit	Qualifier Rule
3	30	BU A	BU B	None. Applicable to all documents.

The following table summarizes how to set up the priority for each financial orchestration flow in this example.

Source Document	Financial Orchestration Flow	Priority	Result
DOO fulfillment line 1	Flow 1	Priority for Flow 1 is 10. Priority for Flow 3 is 30.	Financial Orchestration assigns Flow 1 the highest priority.
DOO fulfillment line 2	Flow 2	Priority for Flow 2 is 20. Priority for and Flow 3 is 30.	Financial Orchestration assigns Flow 2 the highest priority.
DOO fulfillment line 3	Flow 3	Only Flow 3 is assigned.	Financial Orchestration doesn't use the Priority.

Related Topics

Supply Chain Financial Orchestration Validations for Brazil

If the buyer business unit is located in Brazil, internal material transfers must comply with specific requirements.

The Brazil-specific requirements are as follows:

- Transfer of ownership on shipment
- All fiscal documents must be in Brazilian Real (BRL)
- No tax calculation in intercompany invoices

To comply with these requirements, Oracle Fusion Cloud Supply Chain Financial Orchestration provides additional validations for all internal material transfer related financial orchestration flows. For example, a buyer business unit in Brazil must indicate the following:

- In the Manage Documentation and Accounting Rule page, the currency option is set to **Buying node**.
- In the Manage Documentation and Accounting Rule page, the ownership change event for forward flow, **Internal Transfer**, is set to **Interorganization Shipment**.
- In the Manage Supply Chain Financial Orchestration page, the **Transaction Business Category** is set in Sell Side Tax Determinants, and is passed to the intercompany receivables invoice and Oracle Fusion Tax. Oracle Fusion Tax is configured to not apply taxes for this transaction business category.

Create Financial Orchestration Flows

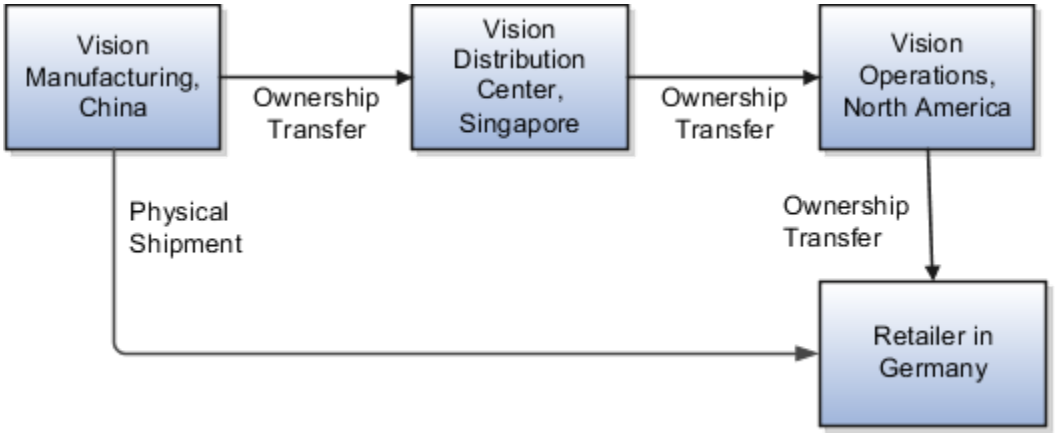
Shipment Flow

This example demonstrates how to create a financial orchestration flow of shipment type for Vision Corporation, a multinational company that makes and sells computerized toys.

It describes how to create a financial orchestration flow between the following units:

- Vision Operations: The selling business unit located in the United States.
- Vision Distribution Center: The financial intermediary business unit located in Singapore.
- Vision China: The shipping business unit located in China.
- Schatze Toy Company: A retailer with locations in Germany.

The following figure illustrates the financial orchestration flow for Vision Corporation discussed in this example. It demonstrates how this flow separates the physical flow of goods from the financial flow for this transaction.



The following table summarizes the key decisions for this example.

Decisions to Consider	In this Example
Flow Type	Shipment
Selling business unit	Vision Operations
Customer	Schatze Toy Company
Shipping business unit	Vision Manufacturing
Intermediary business unit	Vision Distribution Center
Qualifier	All asset items

Decisions to Consider	In this Example
Sales order currency	USD (United States Dollar)
Sales order price	100.00 USD
Intercompany transfer price	Vision Manufacturing, Vision Distribution Center: Cost plus 15% Vision Distribution Center, Vision Operations: Sales order price less 10%
Intercompany trade currency	Vision Manufacturing, Vision Distribution Center: SGD Vision Distribution Center, Vision Operations: USD
Intercompany invoice	Vision Manufacturing, Vision Distribution Center: Required Vision Distribution Center, Vision Operations: Required
Track profit in inventory	Vision Manufacturing, Vision Distribution Center: Yes Vision Distribution Center, Vision Operations: Yes

Summary of the Tasks

The tasks involved to create a financial orchestration flow are:

1. Creating documentation and accounting rules
2. Creating transfer pricing rules
3. Creating profit center business unit party relationships
4. Creating financial orchestration qualifiers
5. Creating financial orchestration flows
6. Setting financial orchestration system options
7. Testing your financial orchestration flow

Creating Documentation and Accounting Rules

In this example, we create two documentation and Accounting rules:

1. Vision Manufacturing Documentation and Accounting Rule
2. Vision Distributions Documentation and Accounting Rule

Creating the Vision Manufacturing Documentation and Accounting Rule

For the trade between Vision Manufacturing and Vision Distributions, Vision Manufacturing is the seller. It uses the currency of the buyer, Vision Distributions and it uses the standard currency rate that Vision Corporation uses. Vision Manufacturing uses trade distributions, tracks profits in inventory, and requires an intercompany invoice. To create the documentation and accounting rules, do the following:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management

- Functional Area: Supply Chain Financial Flows
- Task: Manage Supply Chain Financial Orchestration Documentation and Accounting Rules

2. On the **Manage Documentation and Accounting Rules** page, click **Actions**, and then click **Create**.
3. On the **Create Documentation and Accounting Rule** page, set the values listed in the following table.

Field	Value
Name	Vision Operations Documentation and Accounting Rule
Currency Option	Buying Node
Conversion Type	Corporate
Trade Distributions	Selected
Track Profits In Inventory	Selected
Intercompany Invoices	Selected
Effective Start Date	Today's date

4. Click **Save and Close**.

Creating the Vision Distributions Documentation and Accounting Rule

For the trade between Vision Distributions and Vision Operations, Vision Distributions is the seller. It uses the currency of the sales order and it uses the standard currency rate that Vision Corporation uses. Vision Distributions uses trade distributions, tracks profits in inventory, and requires an intercompany invoice. To create the documentation and accounting rules, do the following

1. In the Setup and Maintenance work area, go to the following:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Financial Flows
   - Task: Manage Supply Chain Financial Orchestration Documentation and Accounting Rules
2. On the **Manage Documentation and Accounting Rules** page, click **Actions**, and then click **Create**.
3. On the **Create Documentation and Accounting Rule** page, set the values listed in the following table.

Field	Value
Name	Vision Distributions Documentation and Accounting Rule
Currency Option	Source Document

Field	Value
Conversion Type	Corporate
Trade Distributions	Selected
Track Profits In Inventory	Selected
Intercompany Invoices	Selected
Effective Start Date	Today's date

4. Click **Save and Close**.

Creating Transfer Pricing Rules

In this example, we'll create two transfer pricing rules:

1. Vision Manufacturing Transfer Pricing Rule.
2. Vision Distributions Transfer Pricing Rule.

Creating the Vision Manufacturing Transfer Pricing Rule

Vision Manufacturing must use the production cost that it incurs to produce computerized toys as the transfer pricing rule. It requires a 15% markup on this cost so that it can realize a profit when it sells products to internal buyers. To create the intercompany transfer price between Vision Manufacturing and Vision Distributions, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the **Task** list, click **Go To Task** next to **Manage Supply Chain Financial Orchestration Transfer Pricing Rules**.
3. On the **Manage Transfer Pricing Rules** page, click **Actions**, and then click **Create**.
4. On the **Create Transfer Pricing Rule** dialog box, set the values listed in the following table.

Field	Value
Name	Vision Manufacturing Transfer Pricing Rule
Accounting Transfer Price	Cost Basis.
Markup Percentage	15
Effective Start Date	Today's date.

5. Click **Save and Close**, and then click **Done**.

Creating Vision Distributions Transfer Pricing Rule

Vision Operations is the selling business unit. It retains a 10% margin on the sales order price when it sells products to external sellers. To create the intercompany transfer price between Vision Distributions and Vision Operations, do the following work:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the Task list, click **Go To Task** next to **Manage Supply Chain Financial Orchestration Transfer Pricing Rules**.
3. On the **Manage Transfer Pricing Rules** page, click **Actions**, and then click **Create**.
4. On the **Create Transfer Pricing Rule** dialog box, set the values listed in the following table.

Field	Value
Name	Vision Distributions Transfer Pricing Rule
Accounting Transfer Price	Source Document Price Basis
Markup Percentage	-10
Effective Start Date	Today's date.

5. Click **Save and Close**, and then click **Done**.

Creating Profit Center Business Unit Party Relationships

In this example, we will create the profit center BU Party relationship for the following business units:

1. Intercompany buyer profile for Vision Operations
2. Intercompany seller and buyer profile for Vision Distributions
3. Intercompany seller profile for Vision Manufacturing

Creating Intercompany Buyer Profile for Vision Operations

To create the party relationship for the Vision Operations profit center business unit, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the **Task** list, click **Go To Task** next to **Manage Profit Center Business Unit Party Relationships**.
3. On the **Manage Profit Center BU to Party Relationships** page, click **Actions**, and then click **Create**.
4. On the **Create Profit Center BU to Party Relationships** page, set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Profit Center Business Unit	Vision Operations
Default Trade Organization	V1

Field	Value
Ship-to Location	Leave empty
Customer	Vision Distribution Center
Supplier Number	20061

Vision Operations is an intercompany buyer. It buys the goods from an internal organization, Vision Distribution Center.

5. In the **Profit Center BU Profiles** section, edit the Intercompany buyer profile.
6. In the **Bill to BU for Payables Invoice and PO**, set the values listed in the following table. Leave all other fields at their default value, and then click **OK**.

Field	Value
Procurement Business Unit	Vision Operations
Bill to Business Unit	Vision Operations

7. In the **Customer Locations for Seller's Receivable Invoice and Sales Order**, set the values listed in the following table. Leave all other fields at their default value, and then click OK.

Field	Value
Seller's Customer Address Set	Vision Operations
Bill-to location	CDRM_112

8. On the **Create Profit Center BU to Party Relationships** page, click **Save and Close**.

Intercompany Seller Profile for Vision Manufacturing

To create the party relationship for the Vision Manufacturing profit center business unit, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the Task list, click **Go To Task** next to **Manage Profit Center Business Unit Party Relationships**.
3. On the **Manage Profit Center BU to Party Relationships** page, click **Actions**, and then click **Create**.

4. On the **Create Profit Center BU to Party Relationships** page, set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Profit Center Business Unit	Vision Manufacturing
Default Trade Organization	C1
Ship-to location	Leave Empty
Customer	Vision Distributions
Supplier Number	20061

Vision Manufacturing is an intercompany seller. It sells the goods to an internal organization, Vision Distributions.

5. In the **Profit Center BU Profiles** section, edit the Intercompany buyer profile.
6. In the **Bill to BU for Payables Invoice and PO**, set the values listed in the following table. Leave all other fields at their default value, and then click OK.

Field	Value
Receivables Business Unit	Vision Manufacturing
Customer Address Set	Vision Manufacturing Set

7. In the Supplier Site for Buyer's Payable Invoice and PO, set the values listed in the following table. Leave all other fields at their default value, and then click OK.

Field	Value
Buyer's Procurement Business Unit	Vision Distributions
Buyer's Bill to Business Unit	Vision Distributions
Supplier Site	VMG_SUPPLIER_SITE

8. On the **Create Profit Center BU to Party Relationships** page, click **Save and Close**.

Creating Financial Orchestration Qualifiers

You must create the financial orchestration qualifiers that configure Financial Orchestration to run the financial orchestration flow for Vision Operations only when the C1, a warehouse that belongs to the Vision Manufacturing ships an asset item. To create these qualifiers, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the **Task** list, click **Go To Task** next to **Manage Supply Chain Financial Orchestration Qualifiers**.
3. On the **Manage Financial Orchestration Qualifiers** page, click Actions, and then click **Create**.
4. On the **Create Financial Orchestration Qualifier** page, set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Name	Vision Operations Qualifiers
Description	Asset Item = "Yes" AND ship-from organization = "C1"
Business Process Type	Shipment
User-Defined Catalog	ASCP Item Category

5. Click **Actions**, **Add Before**, and then set the values listed in the following table.

Field	Value
Parameter	Asset Item
Operator	Equals
Value	Yes

6. Click **Actions**, **Add Before**, and then set the values listed in the following table.

Field	Value
Parameter	Ship-from organization
Operator	Equals
Value	C1

Field	Value
	C1 is a warehouse that belongs to Vision Manufacturing.

7. Click **Save and Close**.

Creating Financial Orchestration Flows

You must create a financial orchestration flow. To create this flow, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the **Task** list, click **Go To Task** next to **Manage Supply Chain Financial Orchestration Qualifiers**.
3. On the **Create Financial Orchestration Qualifier** page, set the values listed in the following table Leave all other fields at their default value.

Field	Value
Name	Vision Operations Financial Orchestration Flow
Business Process Type	Shipment
Priority	1
Effective Start Date	Today's date

4. On the **Create Financial Orchestration Flow** page, in the **Primary Routes** section, click **Actions**, click **Add Row**, and then set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Shipping Business Unit	Vision Manufacturing
Shipping Legal Entity	Vision China
Selling Business Unit	Vision Operations
Selling Legal Entity	Vision Operations
Effective Start Date	Today's date

5. On the **Create Financial Orchestration Flow** page, in the **Primary Routes** section, click **Actions**, click **Add Row**, and then set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Selling Business Unit	Vision Manufacturing
Selling Legal Entity	Vision China
Buying Business Unit	Vision Distributions
Buying Legal Entity	Vision Singapore
Selling Trade Organization	Leave empty.
Buying Trade Organization	D1
Transfer Pricing Rule	Vision Manufacturing Transfer Pricing Rule
Documentation and Accounting Rule	Vision Manufacturing Documentation and Accounting Rule
Receivables Invoice Type	Intercompany
Receivables Credit Memo Type	Credit Memo
Payment Terms	Immediate

6. On the **Create Financial Orchestration Flow** page, in the **Primary Routes** section, click **Actions**, click **Add Row**, and then set the values listed in the following table. Leave all other fields at their default value.

Field	Value
Selling Business Unit	Vision Distributions
Selling Legal Entity	Vision Singapore
Buying Business Unit	Vision Operations
Buying Legal Entity	Vision Operations

Field	Value
Selling Trade Organization	Leave empty.
Buying Trade Organization	V1
Transfer Pricing Rule	Vision Manufacturing Transfer Pricing Rule. Alternatively, you can define the transfer pricing rules in Oracle Pricing and associate the Transfer Pricing Rule attribute to the value Pricing Strategy.
Documentation and Accounting Rule	Vision Distributions Documentation and Accounting Rule
Receivables Invoice Type	Intercompany
Receivables Credit Memo Type	Credit Memo
Payment Terms	Immediate

7. Click **Save**.

Setting Financial Orchestration System Options

You must set the Financial Orchestration system options. To create these options, do the following:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the **Implementation Project** page, in the **Task** list, click **Go To Task** next to **Manage Supply Chain Financial Orchestration system options**.
3. On the **Manage Financial Orchestration system options** page, click **Actions**, and then click **Create**. Enter the values listed in the following table.

Field	Value
Item Validation Organization	V1
Consider service item for descriptive global purchase order processing	Select this check box to configure the global procurement business process flow for description lines either with a service item or without the service item setup.
Service Item	RR_RP_Item24
Maximum Number of Records per Batch	100

Field	Value
Calculate tax for trade receipt accrual	Select this check box

4. Click **Save and Close**.

Testing Your Financial Orchestration Flow

Perform the following steps to make sure your financial orchestration flow works correctly:

1. Sign in to your order capture system, and then use it to create a sales order that will start the financial orchestration flow that you configured in this example.
2. Make sure the order includes an asset item that a warehouse belonging to the Vision Manufacturing must ship to the Schatze Toy Company. The values listed in the following table are examples that will start this flow. Your order capture system might use different field.

Field	Value
Business Unit	Vision Operations
Ship-to customer	Schatze Toy Company
Warehouse	C1

3. Pick Release and ship the sale order line.
4. Verify Financial Orchestration Execution.
    - Navigate to the **Financial Orchestration** work area, and then the **Monitor Financial Orchestration Execution** page.
5. Issue a query that locates the order. For example, in the Sales Order field, enter the Orchestration Order number that you noticed in step 1, such as 181094.
6. Verify that the Search Results shows the sales order and its status. The financial orchestration flow created by you has been used for financial orchestration execution. Click **View Tasks** to show the list of financial orchestration tasks that will be created for this sales order.

Related Topics

Global Procurement Flow

Global sourcing strategies can help make your supply chain resilient and cost-efficient. Two such strategies are centralized procurement and global procurement.

Let's look at both these strategies with examples.

Centralized procurement: In our example, we have a centralized procurement flow with these entities:

- Procurement BU – Vision Corporation in Hong Kong, also referred to as Vision HK
- Requisitioning BU – Vision Corporation in Seattle, USA also referred to as Vision US1
- Sold-to legal entity (LE) – Vision US1

Here, Vision US1 is your Receiving BU as well as the Sold-to Legal entity (LE) that will pay the supplier. This means that while Vision HK BU is only facilitating the purchase, the entity that will be receiving the material as well as making the payment to the supplier is the same, that is Vision US1. Hence there is no intercompany financial transaction involved. This one-step payment process is centralized procurement.

Global procurement: Now let us consider a global procurement flow with these entities:

- Procurement BU – Vision HK
- Receiving BU – Vision US1
- Sold-to LE – Vision China

Here, the sold-to LE on the PO line isn't Vision USA, it's Vision China. Even though the material will be received by Vision USA, the supplier will send an invoice to the Vision China legal entity and Vision China will make the payment to the supplier. The BU that receives the material and the one that pays the supplier are different entities. This is a global procurement. Global procurement can be orchestrated across two different Profit Center Business Units (PCBUs) those belong to the same legal entity or across two different legal entities.

Global Procurement in Financial Orchestration

Implement global procurement if these situations apply:

- If you require intercompany billing
- If you want to create intercompany accounting with transfer pricing

Entities in a Global Procurement Flow

Let's look at the Global Procurement flow in detail. These are the entities in a global procurement flow:

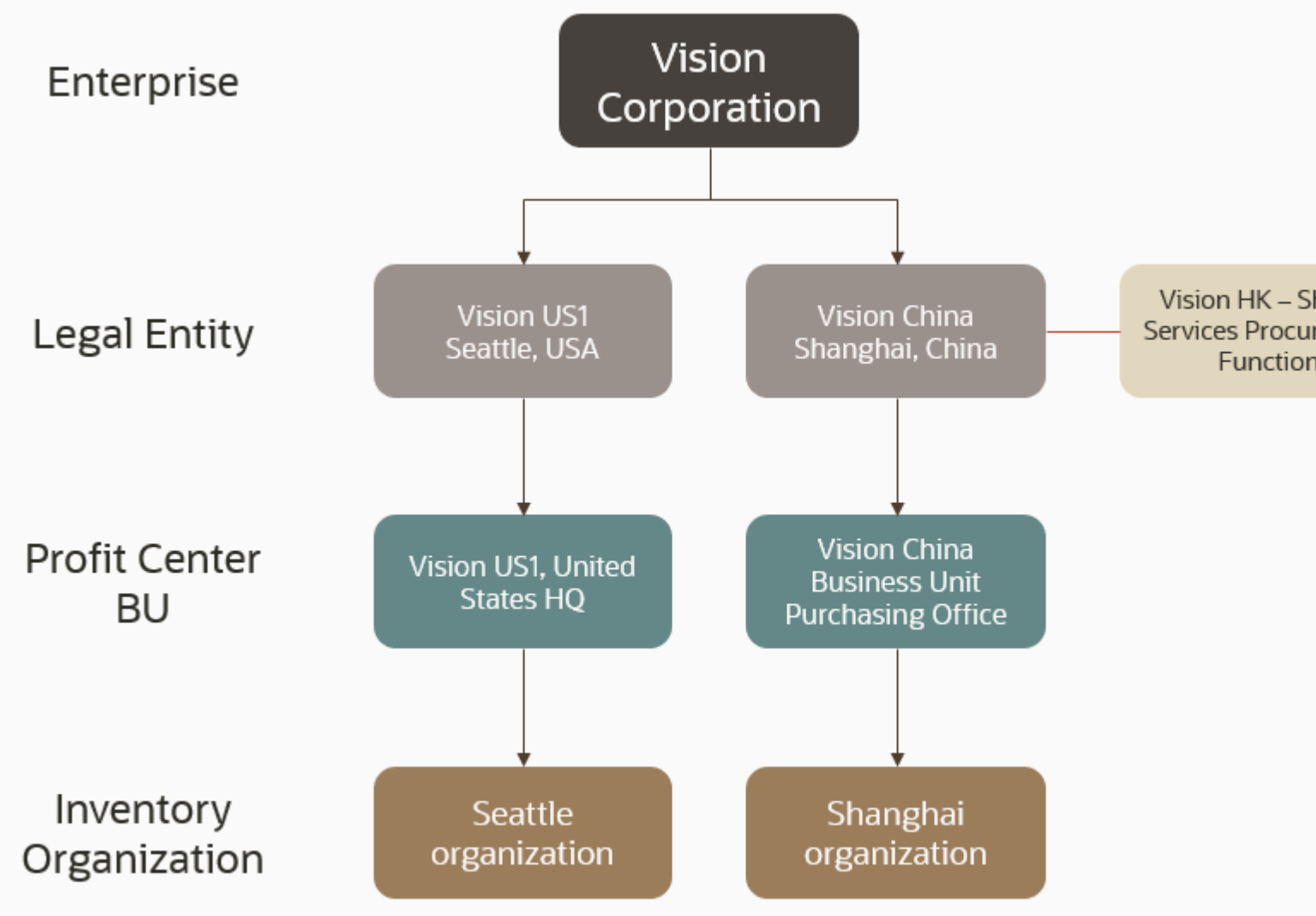
1. Requisitioning BU: A business unit that creates the requisition for the goods or services.
2. Receiving BU: A business unit that receives goods or services from an external supplier used for financial orchestration.
3. Procurement BU: A business unit that manages procurement contracts and purchase orders.
4. Bill-to-BU: A business unit that manages the accounts payable invoice for the purchase transaction.
5. Sold-to LE (BU): The legal entity that owns the supplier liability.

In global procurement the receiving BU and sold-to legal entity stamped on the PO are different. Global procurement can also be routed through one or more financial intermediary nodes.

In this example, we'll create a financial orchestration flow for Vision Corporation, a multinational company that engages in a global procurement strategy for sourcing supplies internationally.

- Vision Corporation is a hi-tech product design and manufacturing company, with headquarters in California, USA. It is modeled as an enterprise in Oracle Fusion Cloud Financials.
- Vision US1 is the business unit that manages sales for the US region with its sales office in Seattle, WA. It is defined as a legal entity and as a business unit.
- Vision Hong Kong or Vision HK is the procurement BU. It provides a global procurement function for Vision US1. It facilitates sourcing of goods from local suppliers in China.

- Vision Corporation has a legal entity located in Shanghai, China. For the purposes of this example, we'll refer to it as Vision China. This BU will receive the payables invoices from the suppliers of the China region. So it will be the Sold-to BU for this global procurement flow.
- Fantastic Laptops is a supplier in China from whom Vision US1 imports laptops for office use. The goods are directly shipped from the supplier's warehouse in China to Vision US1 in Seattle.



These are the business decisions you'll take:

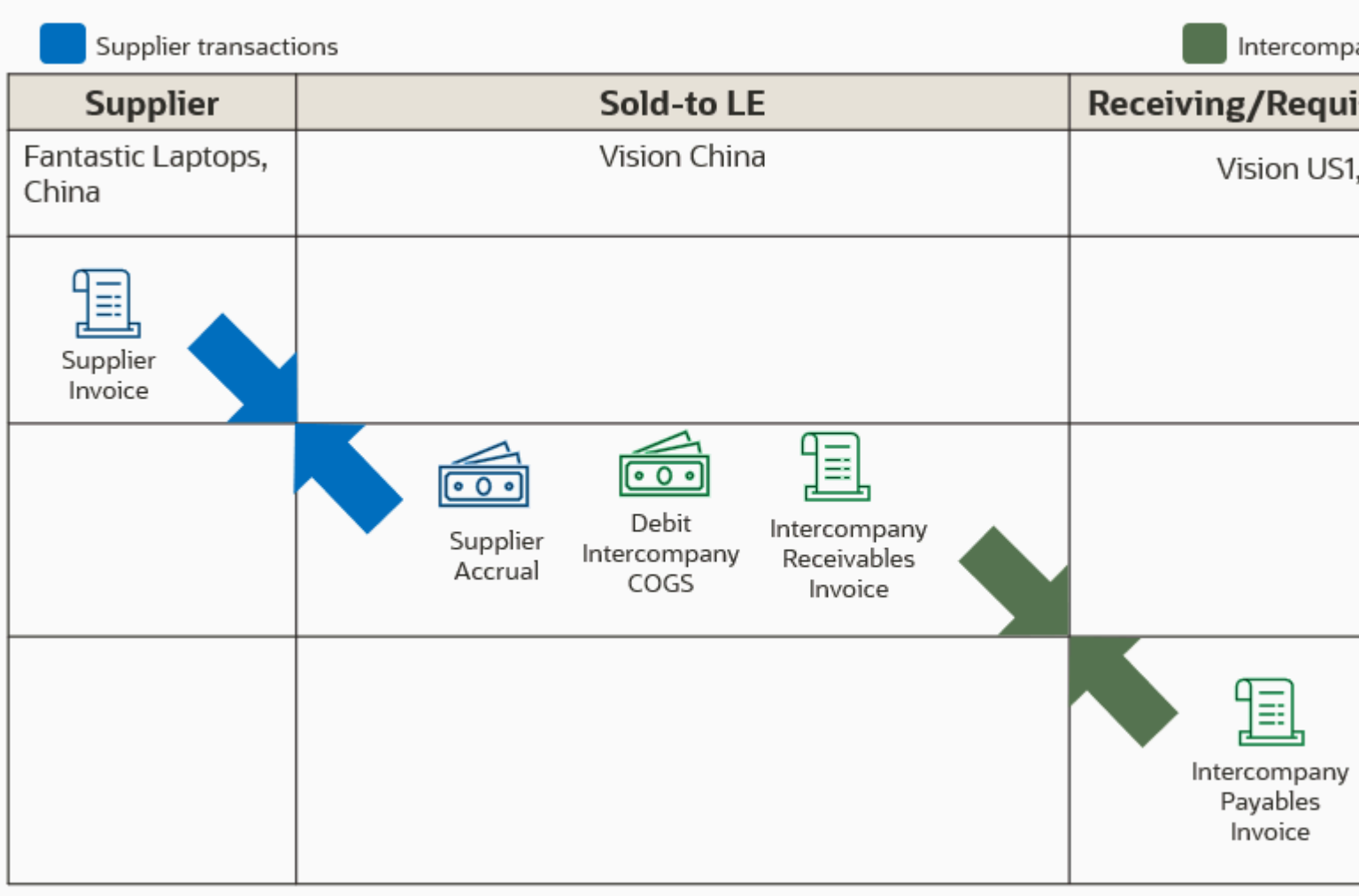
Decisions to consider	In this example
Flow Type	Procurement
Sold to Business Unit	Vision China
Requisition Business Unit	Vision US1 business unit
Receiving Business Unit	Vision US1 business unit
Buyers Procurement Business Unit	Vision HK

Decisions to consider	In this example
Buyers Bill-to Business Unit	Vision China
Supplier Site	Fantastic Laptops, Shanghai
Qualifier	Optional
Accounting Transfer Price	Based on source document price
Markup percentage	10
Currency Option	Source document
Trade Distributions	Required
Track Profit In Inventory	Required
Intercompany Invoices	Required
Item Purchased	Laptops

Global Procurement Transactions

The transfer pricing rules allow the Vision China business unit to retain 10% of its intercompany margin when it engages with the Vision US1 entity. As part of the guidelines, intercompany payables and receivables invoices are required for the trade transactions upon ownership change which happens during the receipt of goods into the Vision US1 Seattle warehouse.

Here's a summary of the transactions that take place in our example.



When Vision US1 business unit receives the laptop against the PO, it initiates the transactions as follows:

1. Vision China pays the supplier Fantastic Laptops $1000 for their product. This is the price on the purchase order line.
2. Vision China has a markup of 10% of its document price when it engages in trade relationship with Vision US1. So, the intercompany invoices are of the amount $1100.
3. Vision China books an Intercompany COGS of $1000 and raises intercompany receivables invoice on Vision US1 for $1100.
4. Vision Corporation USA books an intercompany accrual and creates the intercompany payable invoice to Vision China for $1100.

Accounting at the Supplier Facing BU (Sold-to LE): Vision China			Accounting at the Receiving BU: Vision US1		
Trade receipt accrual	Trade clearing	Debit $1000	Trade receipt accrual	Trade clearing	Debit $1100
	Supplier accrual	Credit $1000		Intercompany accrual	Credit $1100
Trade in transit receipt	Trade in transit	Debit $1000	Trade in transit receipt	Trade in transit	Debit $1100
	Trade clearing	Credit $1000		Trade clearing	Credit $1100

Accounting at the Supplier Facing BU (Sold-to LE): Vision China			Accounting at the Receiving BU: Vision US1		
Trade in transit issue	Intercompany COGS	Debit $1000	Physical receipt	Receiving inspection	Debit $1100
	Trade in transit	Credit $1000		Trade in transit	Credit $1100
Supplier payables invoice	Supplier accrual	Debit $1000	Physical receipt delivery	Inventory valuation	Debit $1100
	Supplier payables	Credit $1000		Receiving inspection	Credit $1100
Intercompany receivables invoice	Intercompany receivables trade	Debit $1100	Intercompany payables Invoice	Intercompany accrual	Debit $1100
	Intercompany receivables revenue	Credit $1100		Intercompany payables	Credit $1100

Summary of Tasks

The tasks involved to create a financial orchestration flow are:

1. Creating documentation and accounting rules
2. Creating transfer pricing rules
3. Creating profit center business unit party relationships
4. (Optional) Creating financial orchestration qualifiers
5. Creating financial orchestration flows
6. Setting financial orchestration system options
7. Testing your financial orchestration flow

Creating Documentation and Accounting Rule

1. In the Setup and Maintenance work area, access this task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Financial Flows
    - Task: Manage Supply Chain Financial Orchestration Documentation and Accounting Rules
2. On the **Manage Documentation and Accounting Rules** page, click **Actions**, and then click **Create**.
3. On the **Create Documentation and Accounting Rule** page, set the values listed in this table.

Field	Value
Name	Vision China Documentation and Accounting Rule
Currency Option	Buying Node
Conversion Type	Corporate
Trade Distributions	Selected
Track Profits In Inventory	Selected
Intercompany Invoices	Selected
Effective Start Date	Today's date

4. Click **Save and Close**.

Creating Transfer Pricing Rule

Let's create the Vision China Transfer Pricing Rule. The China business unit requires a 10% markup on the document price or PO price to realize a profit.

1. In the Setup and Maintenance work area, access this task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Financial Flows
   - Task: Manage Supply Chain Financial Orchestration Transfer Pricing Rules
2. On the **Manage Transfer Pricing Rules** page, click **Actions**, and then click **Create**.
3. On the **Create Transfer Pricing Rule** dialog box, set the values listed in this table.

Field	Value
Name	Vision China Transfer Pricing Rule
Accounting Transfer Price	Source Document Price Basis
Markup Percentage	10
Effective Start Date	Today's date

4. Click **Save and Close**, and then click **Done**.

Creating Profit Center Business Unit Party Relationships

In this example, we will create the profit center BU Party relationship for the following business units:

1. Intercompany buyer profile for Vision US1 BU
2. Intercompany seller profile for Vision China BU

Intercompany Buyer Profile for Vision US1 BU

Let's create the party relationship for the Vision US1 BU profit center business unit. Vision Operations US1 is an intercompany buyer. It buys the goods from an internal organization, Vision China.

1. In the Setup and Maintenance work area, access this task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Financial Flows
   - Task: Profit Center Business Unit Party Relationships
2. On the Manage Profit Center BU to Party Relationships page, click **Actions**, and then click **Create**.
3. On the Create Profit Center BU to Party Relationships page, set the values listed in this table. Leave all other fields at their default value.

Field	Value
Profit Center Business Unit	Vision US1 BU

Field	Value
Default Trade Organization	V1
Ship-to Location	Leave empty
Customer	Vision Distribution Center
Supplier Number	20061

4. In the Profit Center BU Profiles section, edit the Intercompany buyer profile.
5. In the Bill to BU for Payables Invoice and PO section, set the values listed in this table. Leave all other fields at their default value, and then click **OK**.

> **Note:** The bill-to BU stamped on the PO is not the one provided by Supply Chain Financial Orchestration. Bill-to BU is derived by the Oracle Procurement module from the supplier site assignment for the client BU.

Field	Value
Procurement Business Unit	Vision HK BU
Bill to Business Unit	Vision US1 BU

6. In the Customer Locations for Seller's Receivable Invoice and Sales Order section, set the values listed in the following table. Leave all other fields at their default value, and then click OK.

Field	Value
Profit Center Business Unit	Vision China
Default Trade Organization	C1

7. On the Create Profit Center BU to Party Relationships page, click **Save and Close**.

Intercompany Seller Profile for the Vision China BU

To create the party relationship for the Vision Manufacturing profit center business unit, do the following:

1. On the Manage Profit Center BU to Party Relationships page, click **Actions**, and then click **Create**.
2. On the **Create Profit Center BU to Party Relationships** page, set the values listed in this table. Leave all other fields at their default value.

Field	Value
Profit Center Business Unit	Vision Manufacturing
Default Trade Organization	C1
Ship-to location	Leave Empty
Customer	Vision US1

Field	Value
Supplier Number	20061

Vision China BU is an intercompany seller. It sells the goods to an internal organization, Internal-Vision US1.

3. In the Profit Center BU Profiles section, edit the intercompany seller profile. Set the values as listed in this table. Leave all other fields at their default value, and then click OK.

Field	Value
Receivables Business Unit	Vision China BU
Customer Address Set	Vision China

4. Edit the intercompany buyer profile and set the values listed in the following table. Leave all other fields at their default value, and then click OK.

Field	Value
Buyer's Procurement Business Unit	Vision US1
Buyer's Bill to Business Unit	Vision US1
Supplier Site	Shanghai-Internal

5. On the Create Profit Center BU to Party Relationships page, click **Save and Close**.

Creating Financial Orchestration Flows

Let's see how to create a financial orchestration flow for global procurement.

1. In the Setup and Maintenance work area, access this task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Financial Flows
   - Task: Manage Financial Orchestration Flows
2. On the Create Financial Orchestration Flow page, in the Primary Routes section, click Actions, Add Row. Set the values listed in this table. Leave all other fields at their default value.

Field	Value
Sold To Business Unit	Vision China
Sold To Legal Entity	Vision China
Receiving Business Unit	Vision US1 BU
Receiving Legal Entity	Vision Corporation
Effective Start Date	Today's date

3. On the Create Financial Orchestration Flow page, in the Primary Routes section, click Actions, Add Row. Set the values listed in this table. Leave all other fields at their default value.

Field	Value
Selling Business Unit	Vision China BU
Selling Legal Entity	Vision China
Buying Business Unit	Vision US1
Buying Legal Entity	Vision Corporation
Selling Trade Organization	Vision China Org
Buying Trade Organization	Leave empty
Transfer Pricing Rule	Vision China Transfer Pricing Rule
Documentation and Accounting Rule	Vision China Documentation and Accounting Rule
Receivables Invoice Type	Intercompany
Receivables Credit Memo Type	Credit Memo
Payment Terms	Immediate

4. Click **Save**.

Setting Financial Orchestration System Options

Set the Financial Orchestration system options by following these steps:

1. In the Setup and Maintenance work area, from the Tasks menu, click **Manage Implementation Projects**.
2. On the Implementation Project page, in the Task list, open the Manage Supply Chain Financial Orchestration System Options task.
3. On the **Manage Financial Orchestration System Options** page, click **Actions** and **Create**. Enter the values listed in this table.

Field	Value
Item Validation Organization	V1
Consider service item for descriptive global purchase order processing	Select this check box to configure the global procurement business process flow for description lines either with a service item or without the service item setup.
Service Item	RR_RP_Item24
Maximum Number of Records per Batch	100

Field	Value
Calculate tax for trade receipt accrual	Select this check box
Process referenced RMA without forward flow as unreferenced	Select this check box if you want to automatically process RMA transactions that do not have forward flows associated to it.

4. Click **Save and Close**.

Related Topics

- Financial Orchestration Flow
- Financial Orchestration Qualifiers

20 Maintenance

Set Up Maintenance

Maintenance Management is an optional functional area in the Manufacturing and Supply Chain Materials Management offering that you must select for implementing Oracle Maintenance. In the Offerings work area, enable the Maintenance Management functional area at the offering level to make available the tasks for setting up some of these components.

You may refer to this information in the Get Started with Your Implementation section of the Getting Started with Your Maintenance Implementation guide.

Define Master Data

After you enable the Maintenance Management functional area, follow these steps to set up and define master data for maintenance:

- Set up one or more maintenance-enabled inventory organizations. Complete these setup tasks for each organization:
    - Set up plant parameters
    - Set up work areas
    - Set up work centers
    - Set up resources
    - Define resource instances (optional)
- Define a validation organization for customer assets in the Asset Maintenance Parameters of Functional Setup Manager. The validation organization you define:
    - Is used when you create customer assets. If you don't define a validation organization, you get an error when you create assets.
    - Can be an item or an inventory organization. An item organization is used to validate the properties of the item for which you're creating a customer asset. However, you can't create serial or lot controlled assets using an item organization.

- Review these optional areas to determine if additional setup is required:
    - Define maintenance lookups
    - Define maintenance descriptive flexfields (DFFs)
    - Define common descriptive flexfields (DFFs)
    - Define and configure the asset object using application composer
    - Define custom work orders statuses
    - Define custom work orders subtypes
    - Define Suppliers to allow the purchasing of Items (Assets)
    - Define Suppliers for reference as a Warranty Provider in Supplier Warranty (optional)
    - Define Manufacturers for reference in Supplier Warranty (optional)
    - Define Costing for Items, Resources and Equipment for Maintenance Work Orders
    - Set up maintenance organization relationships
    - Set up electronic signatures
    - Set the profile for the Manage Maintenance Work Orders page search criteria
    - Define Quality Inspection plans
    - Enable Smart Search for Assets
    - Enable Smart Search for Maintenance Work Orders
    - Enable AI Assist for work orders in the My Maintenance Work pages
    - Enable Guided Journeys for pages or regions
    - Set up work requests using the Help Desk offering

You may want to consider licensing this additional offering that complements Maintenance:

License, enable, and setup the Help Desk offering to manage work requests

- Define custom internal work order statuses (optional)
- Review the Maintenance user guide for additional details

Redwood Pages

Redwood is Oracle's next-generation user experience. Redwood brings state-of-the-art, consumer-grade user experiences to the sophisticated enterprise scenarios that Oracle enables. Many of the maintenance application pages and task flows have been re-created in Redwood to improve the user experience and, in some cases, to introduce enhanced capabilities, such as improved search. Additional details are covered in the Enable and Setup Redwood Pages section.

Additional Setup

After you complete the setup and define the master data, complete these additional steps to begin using the application. These steps are further covered in the Using Maintenance guide:

- Define inventory items in the Product Information Management work area for each of your inventory organizations:
    - Assets that are maintained require an inventory item that's asset-tracked and serial controlled.
    - Assets that are stocked in inventory require an inventory item that may be serial or lot controlled.
    - Assets that aren't maintained or stocked in inventory can be optionally based on an inventory item. These are considered descriptive assets.
    - Items and Assets may move between or be maintained across organizations over time. Therefore, it is recommended to have a consistent serial control policy across organizations to ensure a uniform and consistent tracking experience.
    - Inventory Items that are defined as parts list items in an asset should also be defined. These items are used during the repair of an asset and can be purchased, received, stocked, issued, and returned from a maintenance work order.
    - Enable each item for your inventory stock, manufacturing, and maintenance-enabled organizations. Items must be enabled for all maintenance locations in which you could create and execute work orders for a repair of an asset.
    - Define a default repair transaction code for each item, using a condition event code, that describes the item's reference by system, assembly, and component (optional).
    - Assign Item Class access to users for each organization where they manage or use items. For example, users need it for managing supplier warranty coverages and execution of work orders that include issue or return of items during the reporting of work accomplishment.
- Define condition event codes for use in maintenance programs, standard operations, supplier warranty, quality inspection, operation rules, operational parameters, and failure capture (optional).
- Define failure sets and chains (optional). Capturing asset failures, causes, and resolutions helps organizations to measure and analyze asset reliability and availability that further helps in assessing maintenance effectiveness and efficiency. Additional details are covered in the guide Using Maintenance, under the Execute Maintenance Work chapter and section entitled Failure Capture for Work Order Assets.
- Define operational parameters and rules for connected assets (covered in the section below).
- Define standard operations (optional but recommended):
    - Within a standard operation, define condition event codes for use in supplier warranty (optional).
- Define maintenance work definitions with and without standard operation references:
    - If you enable maintenance programs for assets across organizations, then you must have work definitions with the same code value in each organization where the work requirement may be used to create work orders.
    - You can define work definitions globally in a master organization that's enabled for maintenance and then replicate them to each child maintenance organization.
    - Define operational parameters (optional). This will be used in a future version by maintenance. (covered in the section below).

- Set up one or more utilization meter template definitions:
  - Define item applicability in the meter templates definitions (optional). This must be defined prior to asset creation if you expect asset meters to be automatically created (recommended).
- Define supplier warranty coverage template definitions.
  - Reference covered items, meters, and repair transactions codes (optional).
- Create asset group rules, asset groups, and associate assets to groups (optional).
- Create customers with location details such as site, site use, and address
- Create trading community locations, which can be used as an external location address for an asset
- Create internal addresses in HCM, which can be used as an internal location address for an asset
- Create new enterprise assets and, if needed, customer assets.
- Create historical or initial meter readings for each asset (optional).
- Create preventative maintenance programs for assets (optional).
  - Define the historical last accomplished date and interval prior to cutover (optional).
- Define material availability rules (optional).
- Define asset and maintenance work order attachment categories (optional).
- Define work order custom work order subtypes (optional). Additional details are covered in the How You Manage Lookups for Maintenance section.
- Define supplier warranty provider labor rates using REST API or manage page (optional).
- Define supplier warranty standard repairs using REST API or manage page (optional).
- Define work order supplier warranty repair defaulting options by work order type and subtype (optional).
- Define asset maintenance parameters (covered in the section below).
- Enable the Oracle Search for the Assigned To field in a warranty claim (covered in the section below).
- Enable AI Assist for maintenance pages.
- Configure settings using the Asset Maintenance Parameters page in the Functional Setup Manager.

Here's a comparison of the available methods for creating the master data, definition, and execution objects required to use Maintenance:

Object	Manual Setup	REST API	File-Based Data Import Upload
Work area	Yes	Yes, using the Manufacturing Work Area REST API.	Not available
Work center	Yes	Yes, using the Manufacturing Work Area REST API.	Not available
Resources	Yes	Yes, using the Production Resources REST API.	Not available
Resource Instances	Yes	Yes, using the Production Resources REST API.	Not available
Standard Operations	Yes	Yes, using the Manufacturing Standard Operations REST API.	Not available.

Object	Manual Setup	REST API	File-Based Data Import Upload
			Note: You can mass create and update the standard operations and resources by using the Oracle Application Development Framework Desktop Integration (ADFdi). Find additional details in the Using Maintenance guide
Work Definitions	Yes	Yes, using the Manufacturing Work Definitions REST APIs: • Create, update, and delete using the Work Definition Requests REST API. • View using the Work Definitions REST API.	Yes, using the Maintenance Work Definition Import.
Item	Yes	Yes, using the Items REST API in Product Lifecycle Management	Yes, using the Item Import in Product Master Data Management
Meter Template	Yes, in the context of an asset or the Meter Template task flow	Yes, using the Meter Templates REST API	Not available
Meter Template: item applicability	Yes, but only in the Meter Template task flow	Yes, using the Meter Templates REST API	Not available
Asset Meter Association	Yes, you can manually associate a meter in the context of an asset	Not directly available through REST API; however, if item applicability is defined for a meter template by an item, asset meters can be automatically created during asset creation through the Installed Base Asset REST API	Not directly available through REST API; however, if item applicability is defined for a meter template by an item, asset meters can be automatically created during asset creation through the Installed Base Asset import process
Meter Readings	Yes, in the context of an asset or using the Complete with Details option in the Dispatch List for an operation	Yes, using the Meter Readings REST API	Yes, using the Meter Readings Import
Assets	Yes	Yes, using the Asset REST API	Yes, using the Asset Import
Condition Event Codes	Yes	Not available	Not available
Warranty Repair Codes	Yes	Yes, using the Condition Event Codes REST API	Not available

Object	Manual Setup	REST API	File-Based Data Import Upload
Failure Codes	Yes	Yes, using the Condition Event Codes REST API	Not available
Failure Sets	Yes	Yes, using the Failure Sets REST APIs	Not available
Supplier Warranty Coverages	Yes	Yes	Yes, using the Warranty Coverages Import
Supplier Warranty Contracts	Yes	Yes	Not available
Supplier Warranty Entitlements	Yes, using the Manage Claims task flow	Yes	Not available
Supplier Warranty Claims	Yes	Yes	Not available
Supplier Warranty Provider Labor Rates	Yes	Yes	Not available
Supplier Warranty Provider Standard Repair Times	Yes	Yes	Not available
Work order warranty repair defaulting options by work order type and subtype	Yes, in the Manage Asset Parameters page in FSM	Not available	Not available
Work Requests (Internal Service Requests)	Yes	Yes	Not available
Preventative Maintenance Programs	Yes	Yes, using the Maintenance Programs REST API	Yes
Preventative Maintenance Programs History	Yes	Yes, using the Maintenance Programs REST API. You can define the historical last completed date and interval to initialize the forecast for an asset.	Not available
Asset Rules and Group Definitions	Yes	Yes, using the Asset Group Rules and Asset Groups REST APIs	Not available
Asset Assignments to Groups	Yes, in the context of an asset or group	Yes, using the Asset Groups REST API	Yes, using the Asset Import for active groups
Customer	Yes, customer, account, and site details	See Oracle Customer Data Management and Purchasing documentation	See Oracle Customer Data Management and Purchasing documentation
External Address	Not available	External addresses are setup using a SOAP service. For more details about setting up a trading community location, refer to the Business Object Services chapter of the SOAP Web Services for CX Sales and B2B Service guide.	Not available
Internal Address	Yes, locations are defined in HCM	See HCM documentation	See HCM documentation

Object	Manual Setup	REST API	File-Based Data Import Upload
Attachment Categories	Yes, using the setup task Manage Attachment Categories for an Asset or Work Order object	Not applicable	Not applicable

Common Tasks That You Perform for Maintenance Management

Some tasks that are included in the Maintenance Management functional area also apply to Manufacturing, as both offerings share many objects in the work setup and execution. For details about how to perform them, see the Oracle Applications Cloud: Using Functional Setup Manager guide.

Task	Required or Optional	Description
Manage Maintenance Value Sets	Optional	Create and maintain maintenance value sets
Manage Maintenance Descriptive Flexfields	Optional	Create attributes for the maintenance entities, define related validation, and display properties of descriptive flexfields maintenance work orders.
Manage work order subtypes	Optional	Create and maintain custom work order subtypes
Manage Search Indexes	Optional	Maintain attributes for entities that are searchable using the Oracle Search Extension Framework.

Site Profile for The Manage Maintenance Work Orders Search Page

The keyword search looks across work order records using a **contains** search criteria. For example, if you were searching for all work orders for assets that would be included an asset number range of **Truck_ModelB_Version1** to **Truck_ModelB_Version10**, you can search by ModelB, Version, or Truck. However, if you have an extremely large volume of work orders, then you may find the time required to search to be inefficient and perhaps even timeout in the page. Therefore, you can optionally change the search to use a **starts with** method to improve performance. If set, the same search would require you to search by Truck or Truck_ModelB. The search method is set by a system administrator by changing the profile option ORA_MNT_ALLOW_CONTAINS_OP_IN_KEYWORD_SEARCH from Yes to No.

Define Asset Maintenance Parameters

Set up the Asset Maintenance parameters available on the *Manage Asset Maintenance Parameters* page of the Setup and Maintenance work area. The parameters you need to set up are under the following tabs:Work Order Defaults, Additional Parameters.

Work Order Defaults

This page is used to control the defaulting of work order header attributes if the work order asset has supplier warranty defined or not. Warranty Claims can be automatically created only for work orders that are identified as a warranty

repair. During work order creation, the Warranty Repair checkbox is set to Yes on a work order header if one or more active contracts are found.

However, for work orders created from the preventative maintenance forecast, you may wish to turn off the automatic setting of the Warranty Repair checkbox for a work order asset, as this type of repair or service isn't eligible for warranty reimbursement. To define an override by work order type:

- Select Preventive for work order type and Planned for subtype.
- Set the Repair checkbox value to No.

If no overrides are required, do not define any rows in the table. Additionally, it is not recommended to define any rows with a Repair checkbox value of Yes. This is not required or supported.

Additional Parameters

On the Additional Parameters page, define parameters that control different functions, validations, rules, and page defaulting options. Here are the parameters you can define:

Parameter	Default Value	Overview
Default Master Organization for Maintenance Management	Null	The Default Master Organization for Maintenance Management parameter should be defined using your main master organization. The value can then be used for defaulting in the Manage Meter Templates and Fault Analysis Setup task flows. If not defined, then in these flows the user must manually enter the Master Organization Code value. The organization must be enabled for inventory.
Validation Organization for Customer Assets	Null	The Validation Organization for Customer Assets must be defined to create customer assets. The value is used as the Item Validation Organization to validate the properties of the item for which the customer asset is being created or updated. If the value isn't defined, you will be presented an error during asset creation. The organization can be an item or inventory organization. However, if you define it as an item organization, you can't create serial or lot-controlled assets.
Allow Suppress and Merge across Work Requirements in a Maintenance Program	Yes	This option is used when generating the forecast for a maintenance program. When set to Yes, then forecasts may merge or suppress across work requirements for matching assets and due dates in some scenarios, making it hard to understand the forecast output. Therefore, it is recommended to set this parameter to a value of No if you don't wish for merge and suppress to be considered across work requirements. Generally, merge and suppress should only be modeled within a work requirement and not across work requirements. Additionally, setting this parameter to value of No provides these benefits: ♂ You will see improved performance of the Generate Maintenance Forecast process, as it will not need to consider merge and suppress across work requirements. ○ You will be able to generate forecasts at the work requirement or asset levels, in addition to the default method of generating for an entire program
Consider Organization Relationships When Creating Maintenance Work Orders Program	Yes	This option is used when manually creating maintenance work orders. When set to Yes, you must define organization relationships to create work orders across organizations. When set to No, you will only need to define organization relationships to support assets that operate in a non-maintenance organization by a maintenance program. Additional details are in the section below entitled Set Up Maintenance Organization Relationships.

Parameter	Default Value	Overview
		Note: If you intend for assets to routinely require maintenance across organizations, it is recommended to set the parameter Consider Organization Relationships When Creating Maintenance Work Orders Program to a value of No. Only if you wish to control which organizations can support each other should relationships be defined, and the value of the parameter be set to Yes.
Enforce User Resource Assignments During Work Order Operation Completions	No	This option is used in the My Maintenance Work page. When set to No, the application won't enforce the completion of work orders for assigned resources. When set to Yes, the system requires assignments to work order operation resources to complete work orders. Each assigned user must complete their assigned operations to complete the work order. **Note:** Before you set this to Yes, ensure that each operation in a work order has a resource defined. Operations can have different resources defined and more than one resource can be assigned to an operation. If operations don't have resource assignments, then they won't be available for completion. A user must either be pre-assigned or can self assign to each operation before they can complete a work order. Each assigned user must complete the operation before they complete the next operation or a work order.
Enforce User Resource Qualifications During Work Order Operation Completions	No	This option is used in the My Maintenance Work page. It is defaulted to No and can't be updated. The application won't require user qualifications in work order operation resources to complete work orders.
Generate Maintenance Forecasts from a Maintenance Program	Yes	This option is used by the Manage Maintenance Programs pages. When set to Yes, the action to generate the forecast for a program is enabled in the pages. However, for performance and business best practice reasons, you may wish to disable this option and set to No. When set to No, you can only perform the full refresh of the forecast for a program based on the submittal of the scheduled process. It is recommended to set this up to run periodically, such as once a day during a low period of activity. Additionally, when set to No, you can generate forecasts at the work requirement or asset levels, if the profile option Allow Suppress and Merge across Work Requirements in a Maintenance Program is set to No. Therefore, you will still be able to incrementally update the forecast after creating or editing work requirements, without the unnecessary refresh of the entire forecast for the program.
Generate Work Orders from a Maintenance Program	Yes	This option is used by the Manage Maintenance Programs pages. When set to Yes, the action to create work orders for due dates in a program is enabled in the pages. When set to No, you can only perform the creation of work orders for a program based on the submittal of the scheduled process. It is recommended to set this up to run periodically, such as once a day during a low period of activity.

Parameter	Default Value	Overview
		Additionally, when set to No, you can still manually create work orders for individual due dates using the Maintenance Forecasts page.
Allow Maintenance Forecast to Adjust Future Due Dates When Using the Last Completion Option	No	This option is used when generating the forecast for a maintenance program. This option is only considered when you model a work requirement using a day and/or meter forecast method and select the Last Completion option. When set to No, the system will not adjust the next due dates based on the last work order in history. When set to Yes, the system will adjust the next due dates based on the last active work order in the forecast sequence. For this option to work, you should either use the next work order option as Yes or have a forecast window that will allow only one active work order at the time. Additionally: • Prior to work order completion, if the work order date is update, then the next refresh of the forecast will push or pull the next due dates. • After work order completion, the system will adjust the future forecast based on the actual completion date.
Use Production Scheduler to Schedule and Assign Work Orders	No	This option is used by the schedule process entitled Schedule and Assign to Maintenance Work Orders. When set to No, the scheduled process will not expose options to create or update a Production Schedule. When set to Yes, you scheduled process will expose options to create or update a Production Schedule. You must license and setup the Production Scheduling application.
Default Work Order Items Catalog Category to Schedule and Assign Work Orders	Null	This option is used by the schedule process entitled Schedule and Assign to Maintenance Work Orders. If you are using Production scheduler, then you must define this value with the item catalog.
Default Work Order Components Catalog Category to Schedule and Assign Work Orders	Null	This option is used by the schedule process entitled Schedule and Assign to Maintenance Work Orders. If you are using Production scheduler, then you must define this value with the components catalog.
Default Horizon Number of Days to Schedule and Assign Work Orders	10	This option is used by the schedule process entitled Schedule and Assign to Maintenance Work Orders. The value will be used to forward schedule the work orders using Production Scheduling.
Maximum Percentage for Resource Assignment to Schedule and Assign Work Orders	80%	This option is used by the schedule process entitled Schedule and Assign to Maintenance Work Orders. The value will be used to control the maximum percent of a resource instance's time that can assigned to work order resources using this program.
Automatically Submit the Bulk Ingest Job After Batch Processing	No	This option is used to control if smart search indexes are updated after the processing of data using other scheduled processes. These include: • Creation or update of work orders using File-based import or via asynchronous update. • Creation or update of maintenance forecast due dates. When set to No, you must manually schedule the reingest of these indexes in regular intervals.

Parameter	Default Value	Overview
		When set to Yes, the reingest of data will be automatically submitted after the creation or update of data. Examples are the creation or update of work orders using File-based import and the refresh of a maintenance forecast. Once a forecast has been generated, setting this option to Yes will reingest the data and it will be available in the Maintenance Forecast page. Care should be taken when setting this option to Yes. If you are running the base processes to create and update maintenance data on a routine basis during the day, then you may wish to only reingest the data on a scheduled basis, perhaps hourly or daily, as determined by your business processes

Enable the Oracle Search for the Assigned To field in a Warranty Claim

The warranty claim has an optional field for assigning a primary contact for a claim. The Assigned To field allows you to search and select a worker's name from the HCM workers list of values. Be default, the Assigned To list of values will not use Oracle Search. If you wish to enable it, then you can follow the guidance in the *Using Common Features for HCM* guide.

Additionally, ensure your users have this privilege to search and select values in the Assigned To field:

- Use REST Service - Workers List of Values(PER_REST_SERVICE_ACCESS_WORKERS_LOV_PRIV)

Enable Guided Journeys on Pages and Regions

A journey is a collection of tasks to facilitate a business process. Its supports users by providing guidance, such as tutorials, company policies, and best practices in the context of a setup or execution flow. You can create a journey by building on an existing template or create a brand-new template. A journey can be assigned manually or automatically. Addition details are found in the guide, Implementing and Using Journeys in the Human Resources offering.

Guide Journeys can be optionally enabled for these maintenance pages and regions:

- Maintenance Forecasts page
- My Maintenance Work page
- Preview Work page
- Report Work page
- Complete Work page
- Failure capture region on the Report Work page

Related Topics

- Configure Offerings
- How do I update existing setup data?

Set Up A Maintenance Organization

A maintenance organization is typically an inventory organization in which the maintenance and repair of the assets is carried out.

To set an organization as a maintenance organization, perform the following steps:

1. On the **Manage Inventory Organizations** page, select an existing organization or create a new one from the **Search Results** region. Then, click the **Manage Inventory Organization Parameters** button to edit the organization settings.
2. On the **Manage Inventory Organization Parameters** page, on the **General** tab, in the **Additional Usages** region, select the **Organization performs maintenance activities** check box. Now, the organization is set as a maintenance organization.
3. On the Manage Inventory Organization Parameters page, on the Lot, Serial Number, and Packing Unit tab, in the Serial Number Generation region, select the Uniqueness, Generation and Starting Serial number attributes, as required. Serial control starts with defining how serial number control should perform at an organizational level. Next, you define item-specific serial controls at the item level. You can define additional serial attributes to capture attributes specific to certain industries and businesses. For more details, refer to the Lot and Serial Numbers chapter of the Using Inventory Management guide
4. On the Functional Setup Manager, in the Maintenance subject area, set the plant parameters for a maintenance organization. For more details, refer to the Guidelines to Set Up Maintenance Plant Parameters topic in this guide.
5. In the Functional Setup Manager, in the Maintenance subject area, define any organizational relationships for a maintenance organization. For more details, refer to the Set Up Maintenance Organization Relationships topic in this guide.
6. In the Product Information Management work area, reference the maintenance organization in each inventory item that's used to create a maintainable asset. For more details, refer to the How You Setup Items in Product Information Management topic in this guide.

Note: It's important to understand the different settings for Serial Number Uniqueness at the organization and item level. The available options determine if serialized assets can have the same serial numbers for the same or different items, both within and across organizations

How can I define the default maintenance organization?

Define the default maintenance organization using the Manage Administrator Profile Values task in the Setup and Maintenance work area. This profile option provides defaulting when you navigate to the Maintenance Management landing page. If not set, then no organization will be defaulted and no work order results will be displayed on the page. Select ORA_RCS_DEFAULT_MNT_ORG on the Manage Administrator Profile Values page.

Also, it's recommended to define the same profile at the User level so that maintenance users have an organization context set when rendering the Maintenance Management Landing page as well as any direct navigation to maintenance pages that have an organization context.

Overview of Maintenance Management Functional Area

The Maintenance Management functional area is a part of the Manufacturing and Supply Chain Materials Management offering in the Setup and Maintenance work area. It contains setup tasks you perform for your maintenance-enabled organizations.

This table describes the key setup tasks and whether the tasks are required or optional. Each of these tasks is further described later in the guide.

Task	Required or Optional	Description
Manage Plant Parameters	Required	Configure plant parameters that are relevant to each maintenance organization. If maintenance programs are created in an organization, ensure you set up the forecast and work order horizons.
Manage Maintenance Lookups	Optional	Create and maintain lookups that are used in the asset definition and work management. These include: • Work Order Type: values are predefined and can't be edited, nor can new types be user-defined. • Work Order Subtype: values are predefined, but you can create user-defined subtype values.
Manage Maintenance Work Areas	Required	Create and maintain work areas to represent specific regions where maintenance activities are executed. Work areas are created in the context of a maintenance organization.
Manage Maintenance Work Centers	Required	Create and maintain work centers to represent specific location where maintenance work is performed and is comprised of resources having similar capabilities. Work centers are created in the context of a work area.
Manage Maintenance Resources	Optional	Create and maintain resources to model the labor or equipment used in a maintenance work center and operation and to track usages during maintenance execution. Resources are created in the context of a maintenance organization. They're then further defined for each work center, detailing their quantity, availability, and shifts.
Manage Maintenance Descriptive Flexfields	Optional	This setup task isn't currently being used from the list of tasks in Maintenance Management. Instead, use the Search option from the Tasks drop-down list to search for the generic setup task Manage Descriptive Flexfields. For more details, refer to the topic How You Configure and Extend Applications. **Note:** For Work Order Header and Asset, you must search by name.
Manage Asset Maintenance Parameters	Optional	Use these tabs on the Mange Asset Maintenance Parameters page in the Setup and Maintenance work area to set up parameters related to maintenance implementation: • **Work Order Defaults**: Supplier warranty uses the parameters in this tab to control the defaulting logic of when a work order is created. • **Additional Parameters**: These options are used by maintenance programs, supplier warranty, fault analysis, managing customer assets and the My Maintenance Work pages.
Manage Condition Event Codes	Optional	Setup used to define condition codes for a maintenance program.
Manage Maintenance Organization Relationships	Optional	Setup used to support for the manual creation of maintenance work orders for assets that are operating across maintenance organizations.

Task	Required or Optional	Description
Manage Manufacturing and Maintenance Work Order Statuses	Optional	Setup used to create user-defined work order status values.
Manage Asset Group Rules	Optional	Setup used to define asset group rules, asset groups and associate assets to groups.

Guidelines to Set Up Maintenance Plant Parameters

You can set the plant parameters to define the functionality of a maintenance organization.

The following sections discuss the parameters and their acceptable values in detail:

- Plant Details Parameters
- Materials Parameters
- Work Definition Parameters
- Maintenance Program Parameters

Plant Details Parameters

The following table discusses the parameter for the maintenance organization:

Parameters	Description
Manufacturing Calendar	Refers to the schedule or calendar to be used in the maintenance organization.
Use HCM workforce scheduling	This option isn't used by Maintenance but may be enabled if your organization is enabled for Manufacturing. You can optionally enable a maintenance-only organization for advanced scheduling and assignment in the Maintenance Program tab as noted later.

Material Parameters

The following table discusses the parameters for the material in the maintenance organization:

Parameters	Description
Default Supply Subinventory	For maintenance work definitions: Specifies the default supply subinventory for the maintenance work definition operation item if there is no supply subinventory defined for the maintenance work center or item master. For maintenance work orders:

Parameters	Description
	Specifies the supply subinventory to be used when backflush components that don't have a default defined at the maintenance work order operation item or the inventory item level.
Default Completion Subinventory	For maintenance work orders: Specifies the completion subinventory to be used for storing the completed product if a default isn't defined at the maintenance work order level.
Default Supply Locator	For maintenance work definitions: Specifies the default supply locator for the maintenance work definition operation item if there is no supply locator defined for the maintenance work center or item master. For maintenance work orders: Specifies the supply locator to be used when backflush components that don't have a default defined at the maintenance work order operation item or the inventory item level.
Default Completion Locator	For maintenance work orders: Specifies the completion locator to be used for storing the completed product if a default isn't defined at the maintenance work order level.

Work Definition Parameters

The following table discusses the parameters for the maintenance work definition in the maintenance organization:

Parameters	Description
Starting Operation Sequence	Specifies the default sequence number for the first operation in a maintenance work definition and maintenance work order. The value must be a positive integer.
Operation Sequence Increment	Specifies the incremental value by which the sequence of the operation is to be increased in the maintenance work definition and maintenance work order. The value must be a positive integer.
Phantom Operation Inheritance	Specifies whether the phantom components and resources are inherited at the same operation that the phantom is assigned in the parent item maintenance work definition. The valid values are: • Material Only: If selected, when creating the maintenance work order, all of the phantom components are inherited at the same operation that the phantom is assigned in the parent item maintenance work definition. • Material and Resources: If selected, when creating the maintenance work order, all of the phantom components and resources are inherited at the same operation that the phantom is assigned in the parent item maintenance work definition. The default value is Material Only.

Parameters	Description
Work Order Prefix	Specifies the prefix to use when automatically generating the work order names when creating the maintenance work orders. You can enter a maximum length of 30 characters.
Work Order Starting Number	Specifies the initial number to pass in to the document sequence which is created when a record is saved. The value must be a positive integer greater than zero. The default value is 1000. This field becomes read only after the maintenance work order document sequence for the maintenance organization is created.
Default Overcompletion Tolerance Percentage	Specifies the percentage of assemblies that you can complete over the quantity specified on the maintenance work order. The value must be between 1 and 100. The default value is blank.
Default Transaction Mode	This parameter is used to default a radial button display option on the material or resource transaction pages that are accessed from the dispatch list for an operation step. The defined value will specify if the materials or resources are defaulted from the maintenance work order operation or not. The valid values are: • All: If selected, all the components and resources that are associated with the maintenance work order operation are defaulted and you can transact against them. Optionally, you can create additional transactions. • (Manually) Entered: If selected, the components and resources that are associated with the maintenance work order operation aren't defaulted and you're required to manually enter the specific component or the resource to transact. The default value is All. For the Material Transaction page, if set to All, then materials of supply type PUSH will be displayed when manual reporting of material usage is required. If set to (Manually) Entered, then the PUSH type materials will not be displayed. However, in the page you can always override the default transaction mode by clicking the radial button options to select All or Manually Entered to refresh the list of materials. Additionally, this parameter is only applicable for Material Transaction pages prior to the uptake of the opt-in feature that enables material issues and returns using an asset hierarchy. If enabled, the radial buttons are no longer included on the page, as the page will always default All supply type PUSH materials. For the Resource Transaction page, if set to All, then resources of charge type MANUAL will be displayed when manual reporting of resource usage is required. If set to (Manually) Entered, then the MANUAL type resources will not be displayed. However, in the page you can always override the default transaction mode by clicking the radial button options to select ALL or Manually Entered to refresh the list of resources.
Default Transaction Quantity	Specifies whether the transaction quantity is to be defaulted as that of the required quantity during the material or resource transactions in a maintenance work order. However, you can make changes to the default quantity. The valid values are: • None: If selected, the transaction quantity isn't defaulted as that of the required quantity during the material or resource transactions in a maintenance work order.

Parameters	Description
	• Material: If selected, the transaction quantity is defaulted as that of the required quantity during the material transactions in a work order. • Resources: If selected, the maintenance transaction quantity is defaulted as that of the required quantity during the resource transactions in a maintenance work order. • Both: If selected, the transaction quantity is defaulted as that of the required quantity during the material and resource transactions in a maintenance work order. The default value is Both.
Allow Quantity Changes During Backflush	Specifies whether you can change the transaction quantity or not. The valid values are: • None: If selected, during backflush, you can't modify the transaction quantity of the pull components required in an operation and can't report the consumption of the ad hoc material. During automatic charging, you can't modify the charge quantity of the automatic resources required in an operation and can't report the usage of the ad hoc resources. • Material: If selected, during backflush, you can modify the transaction quantity of the pull components required in an operation and can report the consumption of the ad hoc material. During automatic charging, you can't modify the charge quantity of the automatic resources required in an operation and can't report the usage of the ad hoc resources. • Resources: If selected, during backflush, you can't modify the transaction quantity of the pull components required in an operation and can't report the consumption of the ad hoc material. During automatic charging, you can modify the charge quantity of the automatic resources required in an operation and can report the usage of the ad hoc resources. • Both: If selected, during backflush, you can modify the transaction quantity of the pull components required at an operation and can report the consumption of the ad hoc material. During automatic charging, you can modify the charge quantity of the automatic resources required at an operation and can report usage of ad hoc resources. The default value is None.
Default Work Order Traveler Template	Specifies the name of the template to be used for printing the maintenance work order traveler or the labels for the maintenance organization. You may use your own BI publisher templates by specifying the file path and file name of your templates in this parameter. If the parameter is blank, the default template defined in the BI publisher report definition settings is used for all the maintenance organizations. maximum string length of 400 characters.
Default Label Template	Specifies the name of the template to be used for printing the maintenance work order traveler or the labels for the maintenance organization. You may use your own BI publisher templates by specifying the file path and file name of your templates in this parameter. If the parameter is blank, the default template defined in the BI publisher report definition settings is used for all the maintenance organizations. You can enter a maximum string length of 400 characters.
Include component yield in material requirements	Indicates whether the component yield is factored into the maintenance work order material requirements and the component quantities during the material transactions. You deselect this parameter to avoid rounding the decimal quantities. The rounding can inflate transaction quantities causing inaccurate representation of requirements.

Parameters	Description
Automatically associate serial numbers during work order import	Indicates whether the serial numbers aMre to be automatically generated and associated when importing a maintenance work order.

Maintenance Program Parameters

These parameters will only be available for a maintenance-enabled organization. They must be defined to generate a preventive maintenance program forecast and to create preventive maintenance work orders.

The following table discusses the parameters for a maintenance program in the maintenance organization:

Parameters	Description
Forecast Horizon in Days	The number of days into the future that the preventive maintenance forecast will be created for a maintenance program. By default, this value is set to 30 days. It's recommended to set this value for each organization based on a few factors. You must determine how far into the future will your maintenance planners want to view a forecast, typically using the Gantt chart. This evaluation is guided by reviewing the different types of forecast methods, intervals and expected future due dates. For example, if you have maintenance programs with intervals greater than 30 days, such as every 3 months, you can increase the horizon value to 90 days to include them. Else, future forecasted due dates won't appear in the future until the forecast horizon value is reached.
Generate Work Orders Horizon in Days	The number of days into the future that preventive maintenance work orders will be created, based on forecasted due dates in the preventive maintenance forecast. By default, this value is set to 7 days. It's recommended to set this value for each organization depending upon how far into the future you want to create, view, update and release the work orders. You must evaluate the types of forecast methods for the organization in order to determine a good value to define. For example, if you're using calendar patterns to forecast your programs, then you can set a work order horizon that will generate them far enough into the future to support scheduling, material planning, and coordinated release to technicians. If you have requirements that are due every week, you can set a value of 14, 21 or even 30 days. However, if you're using meters to forecast your programs, it's important to remember that they use a dynamic forecast. This means that as an assets utilization fluctuates over time, the forecast will accordingly adjust. The resulting due dates may generate as being due earlier or later, depending if the actual utilization is greater or less than the daily rate defined for the assets meter. Once a work order is created, the forecast will no longer adjust the due date, therefore any updates must be made during the scheduling of the work order. Therefore, it's important to understand that the work order horizon will have an impact on the dynamic forecasting of meter-based programs.
Inspection Plan Type	The type of inspection plan that can be defined for a work order. This option is no longer used in the new user experience, because only Asset Type plans are supported.
Enable advanced scheduling and work order assignments with Field Service	You can enable a maintenance-only organization for advanced scheduling and assignment using Fusion Field Service. Additional details are covered later in this chapter.
Default Subinventory for Material Review Board	Select the subinventory to which defected parts are allocated during material returns.

Parameters	Description
Default Locator for Material Review Board	Select the locator into which defected parts are allocated during material returns.

Note: Assets are created with an asset ID that's automatically derived by the application using a database sequence. This value does not support a prefix, nor can it be controlled by a customer. The asset number is set to the same value as the asset ID during creation if a user-defined asset number is not provided. Additionally, the asset number can be updated after asset creation.

Set Up Maintenance Organization Relationships

Maintenance organization relationships help maintenance managers to search, view, and edit assets on the Manage Assets and Asset Information Management pages. By default, you can only view assets that operate in maintenance-enabled organizations for which you have an access. Defining an organization relationship expands the search to include assets that operate in a non-maintenance organization, provided you have an access to those additional organizations.

Manage Maintenance Work Orders

Relationships aren't required to maintain an asset using work orders that operates in a maintenance-enable organization. However, relationships are required if you wish to maintain the asset in other maintenance organizations. Additionally, you must ensure that the Asset's base Item is defined for all organizations in which you will create work orders. Additional details and examples are included in the Manage Maintenance Work chapter of the Using Maintenance guide.

When you create work orders using the Manage Work Orders page, Asset Information Management page, Manage Forecasts page, Maintenance Work Orders REST API and File-based import, the value of the parameter, **Consider Organization Relationships When Creating Maintenance Work Orders** is considered:

If the parameter is set to Yes (default):

- For assets operating in a maintenance-enabled organization, work orders can be created:
  - For its operating organization without defining any relationships (default capability).
  - Only in those maintenance-enabled organizations where a reciprocal relationship is defined.
- For assets operating in a non-maintenance-organization, work orders can be created:
  - Only in those maintenance-enabled organizations where a supports or supports as primary relationship is defined.

If the parameter is set to No:

- For assets operating in a maintenance-enabled organization, work orders can be created:
  - For its operating organization without defining any relationships (default capability).
  - In any other maintenance-enabled organization under the same master organization.
- For assets operating in a non-maintenance-organization, work orders can be created:
  - In any other maintenance-enabled organization under the same master organization.

Note: If you intend for assets to routinely require maintenance across organizations, it is recommended to set the parameter, **Consider Organization Relationships When Creating Maintenance Work Orders Program** to a value of No. If you wish for only certain organizations to provide maintenance to each other, then you should define organization relationships and leave the parameter value set to Yes.

Maintenance Programs

Relationships aren't required to define a preventative Maintenance Program for assets that operate in the same maintenance-enabled organization as the program. Additionally, relationships are not required if you need to maintain assets from other organizations in the same program. Assets that operate in a maintenance-enabled organization will always be forecasted and have maintenance work orders created in their operating organization, regardless of which organization their preventative Maintenance Program is defined.

Assets that do not operate in a maintenance-enabled organization will be expected to be maintained in the program's organization by default. However, the system will consider relationships based on the value of the parameter Consider Organization Relationships When Creating Maintenance Work Orders:

If the parameter is set to Yes (default):

- For assets operating in a maintenance-enabled organization, work orders can be created:
  - For its operating organization without defining any relationships (default capability).
- For assets operating in a non-maintenance-organization, work orders can be created:
  - Only in those maintenance-enabled organizations where a supports or supports as primary relationship is defined. If a relationship is not defined, then it will use the program's organization.

If the parameter is set to No:

- For assets operating in a maintenance-enabled organization, work orders can be created:
  - For its operating organization without defining any relationships (default capability).
- For assets operating in a non-maintenance-organization, work orders can be created:
  - For assets being maintained across organizations in a maintenance program, you can define a supports as primary relationship if you wish for an asset to always be maintained in a specific maintenance organization. If not defined, then these assets can be forecasted and maintained within the program's contextual organization, without the need to define a relationship.

Note: If you intend for assets to routinely require maintenance across organizations, it is recommended to set the parameter, Consider Organization Relationships When Creating Maintenance Work Orders Program to a value of No. If you wish for only certain organizations to provide maintenance to each other, then you should define organization relationships and leave the parameter value set to Yes.

Define Relationships

The steps to set up the maintenance organization relationships are:

1. In the Setup and Maintenance work area, use the **Manage Maintenance Organization Relationships** task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Maintenance Management
   - Task: Manage Maintenance Organization Relationships

2. On the Manage Maintenance Organization Relationships page, search for the organization. Only maintenance organizations are listed in the results.
3. Select the organization. The Organization Relationship Details pane shows the organization relationships for the selected organization.
4. On the Organization Relationship Details pane, you can view, add, and remove the organization-to-organization relationships for the selected organization. For the contextual maintenance organization, you can either create a reciprocal relationship to another maintenance organization or a supporting relationship to an organization not set up as a maintenance organization.
5. You can optionally elevate a supporting relationship to a primary relationship between the contextual maintenance organization and an organization not enabled for maintenance.
    - When set as primary, a work order can be automatically be created in this organization when using a configured action in the Maintenance Work Order REST API.
    - An organization not enabled for maintenance can only have one primary maintenance organization defined.
    - However, a maintenance organization can be primary to one or organizations not enabled for maintenance.
6. For an asset operating in an organization not enabled for maintenance, a supports as primary relationship ensures that the asset will be forecasted and maintained using work orders only in this organization.
7. If you are creating reciprocal relationships between maintenance organizations, it is recommended that you setup relationships from the context of each of the maintenance organizations, ensuring that work orders can be created for either organization.

Additional Setups

- You must have inventory organization access for all organizations in which you will create maintenance work orders. This includes the contextual and related organizations.
- An asset's source inventory item must be enabled for each of the work order organizations in order to create a work order. For more details, refer to the How You Set Up Items in Product Information Management topic later in this guide.
- To create work orders across organizations in a maintenance program, you must ensure that the work definitions are duplicated across organizations and share a common work definition code. Else, there will be a mismatch and work orders won't be created.

Related Topics

- How do I update existing setup data?

How You Manage Lookups for Maintenance

Lookups in an application represent the set of codes and their meanings.

In addition to the common lookups, you can set up the lookups specific to Oracle Maintenance as needed. To see the standard lookups in the Setup and Maintenance work area, use the **Manage Standard Lookups** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Maintenance Management
- Task: Manage Standard Lookups

Lookup Name	Lookup Code	Description
Maintenance Program Subtype	ORA_MNT_MX_PROGRAM_SUB_TYPE	User defined lookup that can be optionally defined and updated for a Maintenance Program.
Warranty Coverages Type	ORA_CSE_WTY_COVERAGES_TYPE	User defined lookup that can be optionally defined and updated for a Warranty Coverage.
Warranty Coverages Status	ORA_CSE_WTY_COVERAGES_STATUS	Status of a Warranty Coverage. Values are Draft and Ready. This lookup isn't extendable, or customer defined.
Warranty Coverage Duration Unit Of Measure	ORA_CSE_WTY_COVERAGES_UOM	The unit of measures that are used when defining a time duration of a Warranty Coverage. Values are Day, Month and Year. This lookup isn't extendable, or customer defined.
Warranty Contracts Object	ORA_CSE_WTY_CONTRACTS_OBJECT	The object type for which Warranty Contracts can be created. The only value is an Asset. This lookup isn't extendable, or customer defined.
Warranty Contracts Status	ORA_CSE_WTY_CONTRACTS_STATUS	The status for a Warranty Contract. Values is Draft, Ready or Expired. This lookup isn't extendable, or customer defined.
Warranty Claim Object Type	ORA_CSE_WTY_CLAIM_OBJECT_TYPE	The object type for which Warranty Contracts can be created. The only value is an Work Order. This lookup isn't extendable, or customer defined.
Warranty Claims Type	ORA_CSE_WTY_CLAIMS_TYPE	User defined lookup that can be optionally defined and updated for a Warranty Claim.
Warranty Claims Status	ORA_CSE_WTY_CLAIMS_STATUS	The status for a Warranty Claim. The seeded values include Pending Review, Draft, On Hold, Canceled, Submitted, Rejected, and Resolved. Optionally you can define additional Status values. **Note:** Don't disable the lookup value of Pending Review. It is used as the default value when a new Claim is created using the scheduled process.
Warranty Claim Reimbursement Type	ORA_CSE_WTY_CLAIM_REIMB_TYPE	User defined lookup that can be optionally defined and updated for a Warranty Claim.
Warranty Entitlement Status	ORA_CSE_WTY_ENT_STATUS	This lookup isn't extendable, or customer defined.

For more information on lookups that are common to any Oracle application, refer to the Oracle Fusion Cloud SCM: Implementing Common Features for SCM guide.

In addition to the common lookups, you can view and set up the lookups specific to Oracle Maintenance as needed. To set up lookups for Maintenance in the Setup and Maintenance work area, use the **Manage Maintenance Lookups** task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Maintenance Management
- Task: Manage Maintenance Lookups

The Maintenance application uses the following lookups that can be populated as needed:

Lookup Name	Lookup Code	Description
Maintenance Work Order Type	ORA_MNT_WO_TYPE	Indicates if the work order performed against an asset is preventive or corrective. You can't add any additional lookup values.
Maintenance Work Order Subtype	ORA_MNT_WO_SUB_TYPE	Indicates the condition under which a work order must be performed against an asset. You can add additional lookup values as needed. **Note:** Ensure if you disable any of the seeded subtype values, especially if they are used across other maintenance or objects, such as being referenced in a work order. Additionally, the seeded value ORA_PLANNED is the default subtype for work orders created by a maintenance program. If you disable this lookup and the work order asset doesn't have a subtype defined, then the work order import process fails for the forecast line and doesn't create a work order.

Related Topics

- How do I update existing setup data?

Manage Global Engineering Definitions

Work definitions are defined at the maintenance organization level because they're based on organization specific work centers, material items, and resources. If you've definitions that are the same across some or all of your maintenance organizations, you can optionally create and manage them globally.

Work definitions can optionally reference a Standard operation, which can optionally be defined locally or globally as well.

Before You Start

Global work definitions and standard operations are only supported in the Redwood enabled Work Definitions page. See the *Enable and Setup Redwood Pages* for more information. After you have set up the Redwood page, do these:

1. Enable the master organization for maintenance and ensure that the users have access.
2. Ensure that the users have these:
    - Propagate Global Work Definitions Privileges:

        - WIS_PROPAGATE_GLOBAL_WORK_DEFINITIONS_PRIV: View and manage the list of child organizations for which the global definition will be replicated.
        - WIS_UNLINK_REFERENCED_WORK_DEFINITION
    - Propagate Global Standard Operation Privileges:
        - WIS_PROPAGATE_GLOBAL_STANDARD_OPERATIONS: View and manage the list of child organizations for which the global definition will be replicated.
        - WIS_UNLINK_REPLICATED_STANDARD_OPERATION
    - Inventory access for the master organization in order to define a maintenance work definition and replicate it across child organizations.
3. Ensure that the name of the work definition or standard operation in the global master organization doesn't exist in any child organizations, otherwise the replication will fail.
4. Set up data attributes in both the master and child organizations:
    - Work areas
    - Work centers
    - Resources
    - Items
    - Standard operations (global or by organization)

Global Work Definitions in Master Organization

You define the global work definitions in a maintenance-enabled master organization and then replicate it to the selected child maintenance-enabled organizations. This way you can source control them, at the same time, maintain revisions and new versions globally, instead of maintaining them for each local organization separately.

Definitions can be defined and edited in the global organization using the Redwood-enabled Work Definitions page, REST API or File-based import (FBDI). Replication to child organizations can only occur manually from the Redwood-enabled Work Definitions page and optionally during the creation of a new work definition using File-based import (FBDI). Else, any edits must be manually replicated in the Redwood-enabled Work Definitions page.

Global Work Definition to Child Organizations

Do this to copy a global work definition to child organizations:

1. On the Maintenance Work Definitions page that's set in the master maintenance organization, select **Assign Global Work Definition** from More Actions.
2. On the drawer that opens, assign a global maintenance work definition to a specific child organization or all the child organizations.

   The Propagate Global Maintenance Work Definitions scheduled process runs. You can monitor the process, review the output details, and take corrective action if any errors occur. After the job runs with no errors, the global maintenance work definition is automatically copied and replicated in the child maintenance organizations. Work definitions that are synchronized with the global master indicate Y under the Replicated column.

You can create a new version; the changes are replicated to the child organizations as a copy. However, if you make any additional changes an existing organization, you need to manually synchronize the changes.

Actions such as activation and deactivation of the work definition, or deletion of the work definition are propagated across the child organizations.

Replicated Work Definitions

Replicated work definitions are read-only, except for the following attributes:

- Allow out-of-sequence completion
- Allow return to inventory
- Completion sub inventory and locator
- Supply sub inventory and locator
- Supplier and supplier site for supplier operations

A replicated organization can't be removed from the list of child organizations; however, you can optionally choose to disconnect and manage the local copy. You can also manage the local copy if the work steps are fundamentally different.

> **CAUTION:** Care should be taken when disconnecting a replicated work definition, as this can't be reversed. Only users with the WIS_UNLINK_REFERENCED_WORK_DEFINITION privilege can disconnect them. To disconnect the association with the global work definition, clear the Replicated indicator in the child maintenance organization. After that, the work definition becomes independent and will no longer receive updates from the global work definition.

Global Standard Definitions

You define the global standard operations also in a maintenance-enabled master organization and then replicate it to the selected child maintenance-enabled organizations. This way you can source control them, at the same time, maintain revisions and new versions globally, instead of maintaining them for each local organization separately.

There are several key considerations:

- To replicate, you must have matching definitions of these in each child organization:
  - Work center code
  - Resource code
- A global standard operation can't be created in an item master org if electronic signatures are enabled for standard operations in the organization.
- A global standard operation can't be assigned to a child organization if electronic signatures are enabled for standard operations in the child organization.
- Assigning a global work definition using ADFdi and REST APIs is currently not supported.
- You can continue to create a standard operation directly in a child organization with no change in behavior.

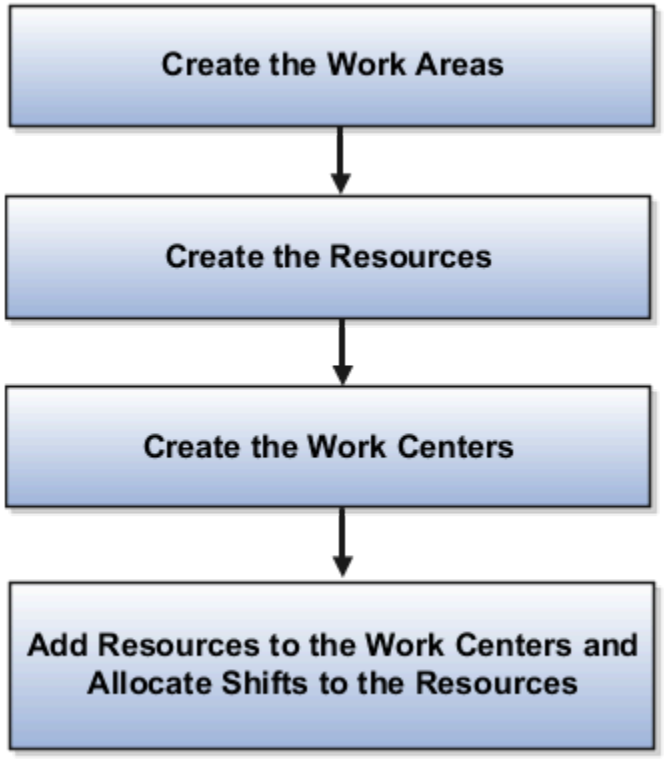
Related Topics

- 26B What's New: Manage Global Maintenance Work Definitions

Work Areas, Resources, and Work Centers

In a maintenance organization, the maintenance activities are carried out in the work centers within the work areas using the resources. So, the required work areas, resources, and work centers must be set up in a maintenance organization before the day to day maintenance activities can be commenced.

This figure illustrates the recommended order to perform the setup. First, create the work areas, then resources, and finally the work centers. Then, add the resources to the work centers and allocate shifts to the resources.



Work Areas

First, you must create the required work areas for the maintenance organization. A work area is a specific region allocated for performing the maintenance activities. Every maintenance organization must have at least one work area. However, you can create multiple work areas as per your requirement.

Resources

After creating the work areas, you must create the resources that you need for the maintenance organization. The labor and equipment that you need for performing the maintenance activities are accounted as the resources.

Work Centers

After creating the work areas and resources, you must create the work centers. The production unit consisting of people or equipment is referred as a work center. Add the resources to the work centers where you want to use the resources. You must then allocate shifts for the resources. You can also manage the work center calendars for the resources.

How You Manage Maintenance Work Areas

A work area is the specific region in a maintenance organization where the maintenance activities are executed. In other words, a work area identifies a physical, geographical, or logical grouping of work centers.

At least one work area must be defined for a maintenance organization. However, a maintenance organization can have one or more work areas defined within it. A work area consists of one or more work centers within it. Maintenance technicians can report material, resource, and operation transactions performed at work centers that belong to a specific work area.

The Manage Work Areas page serves as a starting point to create, edit, and delete the work areas. To access the Manage Work Areas page, based on your security privilege, you can do either of the following:

- In the Maintenance Management work area, in the Tasks pane, click the Manage Maintenance Work Areas link in the Maintenance Setup category.
- In the Setup and Maintenance work area, use the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Maintenance Management
    - Task: Manage Maintenance Work Area

Create, Edit, and Delete Work Areas

You create a work area by providing a unique name and code for the work area.

A work area is deactivated or reactivated by updating the Inactive On field. When a work area is deactivated, the work area isn't available for further use until it's reactivated.

You can delete or deactivate a work area if either of the following is true:

- The work area has no associated work center.
- The work area has no active work center associated with it.

Related Topics

- How do I update existing setup data?

How You Manage Maintenance Resources

The resources are the people, equipment, and tools allocated to a work center. Resources can be categorized into two types: Labor or Equipment. Labor resources are used define the job category required to schedule, optionally assign,

and complete an operation in a work order. The quantity and duration defined are used to derive the duration of an operation when scheduling work order. You can optionally define resource instances for each resource, which represent the specific person or tool asset available for scheduling and assignment.

The same or different resources can be defined in work centers within or across organizations. If you define resources for use in Global Engineering Definitions, ensure they have a common code value, or they can't be replicated.

The Resources page serves as a starting point to create, edit, and delete the resources. To access the Resources page, based on your security privilege, you can do either of the following:

- In the Maintenance Management work area, in the Tasks pane, click the Maintenance Resources link in the Maintenance Setup category.
- In the Setup and Maintenance work area, use the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Maintenance Management
    - Task: Manage Maintenance Resources

Create, Edit, and Delete Resources

You must create a resource with unique name and code. Additionally, you must define the resource type and usage UOM of the resource at the time of creation. If your organization is project-tracked, you can use the Default Expenditure Type field to specify the expenditure type that's defaulted onto the resource transactions when interfaced to costing. You can't change the usage UOM of a resource once the resource is associated with a work center. However, you can edit all other resource attributes at any time.

> **Note:** The usage UOM field indicates the unit of measure for the planned and actual usage of a resource. You can use the resource in a work definition and work order if the usage UOM belongs to the UOM class as defined in the profile SCM Common: Default Service Duration Class (RCS_DEFAULT_UOM_CLASS_CODE_FOR_SVC_DURATION). For any scheduled resource, it's recommended that this profile be set to a UOM class that represents units of measure for Time.

A resource is deactivated or reactivated by updating the Inactive On field. When a resource is deactivated, the resource isn't available for further use until it's reactivated. You can delete a resource only if the resource isn't assigned to any work center and the resource isn't associated with any active resource instance.

Related Topics

- How You Manage Maintenance Resource Instances
- How do I update existing setup data?

How You Manage Maintenance Resource Instances

A resource instance is granular representation of a resource, a person or tool asset, and is represented by a unique code and name. A resource instance may or may not be associated with a work center. A resource instance can be of labor type or equipment type based on the resource with which it's associated.

Labor Resource Instances

A labor resource instance is the name of a person working in the maintenance shop floor. You can associate specific person types to a labor resource instance. A person type in Oracle Maintenance must be an employee, a contingent worker, or a partner contact.

Here's how each person type is set up:

Person Type	How It's Set Up
Employee and Contingent Worker	Employees and contingent workers are defined in Oracle Fusion Cloud Human Capital Management and are automatically propagated by the auto-sync process to the Oracle Trading Community Model.
Partner Contact	A partner contact is set up in an Oracle Fusion Cloud Customer Relationship Management, which is automatically available in the Oracle Trading Community Model

Equipment Resource Instances

An equipment resource instance is the name of a machinery being used on the maintenance shop floor.

You can associate assets to your equipment resource instances. You must define assets in Maintenance with a location corresponding to your maintenance plant and a location type of Work Center.

If you intend to use the equipment qualification feature, then you must associate an asset number to the equipment resource instance. You can view the qualifications defined for the asset number in Maintenance Management using the View Asset qualifications button.

How You Manage Resource Instances

On the Resource Instances tab of the Edit Resource page, you can create, edit, and delete the resource instances.

You can access the Edit Resource page using either of the following steps:

- On the Maintenance Management work area, in the Tasks pane, click the Resources link. On the Resources page, click the resource name to open the Edit Resource page.
- In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Maintenance Management
    - Task: Manage Maintenance Resources or Manage Maintenance Resources Instances

  On the Manage Resources page, click the resource name to open the Edit Resource page.

Create a Labor Resource Instance

Here's how you create a labor resource instance:

1. On the Resources page, click the resource link for which you want to create a resource instance.
2. On the Edit Resource page, in the Resource Instances section, click the Add icon.

3. Now you have one of two options:
    - Select a person as the basis for the resource instance. The person is unique to the maintenance plant location in HCM.

      If you select a person, then, the identifier and name will automatically get populated from HCM. You can edit these values as required, but the identifier must remain unique. For most setups, you don't need to edit these values.
    - Manually define the resource instance. If you don't select a person, you must define a unique code as identifier, and a name for the resource instance.
4. (Optional) Select and assign a primary work center to the resource instance to identify the department or location that the resource instance primarily works in. This helps in quick assignment of the resource instance in work orders and work execution transactions.
5. Click Save and Close.

Note: You can define the same person as resource instance for one or many resources in an organization, so they can be skilled for one or many job categories. This is helpful for both manual assignment and when using advanced scheduling and assignment.

Create an Equipment Resource Instance

Here's how you create an equipment resource instance:

1. On the Manage Resources page, click the resource link for which you want to create a resource instance.
2. On the Edit Resource page, in the Resource Instances section, click the Add icon.
3. Now you have one of two options:
    - Select an asset as the basis for the equipment instance. The asset is unique to the maintenance organization. The person is unique to the maintenance plant location in HCM.

      If you select an asset, then the identifier, name, and work center will automatically populate from the asset record. You can edit these values as required, but the identifier must remain unique. For most setups, you don't need to edit these values.
    - Manually define the equipment instance. If you don't select an asset, you must define a unique code as identifier, and a name for the equipment instance.
4. (Optional) Select and assign a primary work center to the equipment instance to identify the department or location that the equipment instance is located. We recommend you do this step.
5. Click Save and Close.

Deactivate a Resource Instance

You can also deactivate or reactivate a resource instance by updating the Inactive On field. When an instance is deactivated, the instance isn't available for further use until it's reactivated.

Related Topics

- How You Manage Maintenance Resources
- How do I update existing setup data?

How You Manage Maintenance Work Centers

The work centers are specific production units that consist of people or equipment with similar capabilities. Each work center is associated with a valid work area and can be used for capacity requirement planning and detailed scheduling.

The Manage Work Centers page serves as a starting point to create, edit, and delete work centers. To access the Manage Work Centers page, based on your security privilege, you can do either of the following:

- In the Maintenance Management work area, in the Tasks pane, click the Manage Maintenance Work Centers link.
- In the Setup and Maintenance work area, use the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Maintenance Management
    - Task: Manage Maintenance Work Centers

Create, Edit, and Delete a Work Center

You create a work center by providing a unique name and code for the work center, and a valid work area to which the work center is associated.

A work center is deactivated or reactivated by updating the Inactive On field.

You can't delete a work center if:

- The work center has any resource associated with it.
- The work center is being referenced in a work definition operation.
- The work center is being referenced in a work order operation.

Add Resources to a Work Center and Allocate Resources to a Shift

After creating a work center, you can add resources to it and then allocate shift hours to each resource.

You can add a resource to a work center by selecting from or entering values for the following fields:

Field	Description
Resource	The unique identifier of the resource.
Inactive On	The date on which the resource becomes inactive.
Default Units Available	Number of resource units available in a work center.
Available 24 Hours	Indicator whether a resource is available 24 hours a day. A resource that isn't available 24 hours is available only during the shifts assigned to it.

Field	Description
Check Capable To Promise	Indicator whether the Global Order Promising engine considers the capacity of this resource during order promising.
Utilization	The percentage of the resource time available for the task.
Efficiency	The percentage of the time a resource takes to complete a task.

Utilization and Efficiency Percentages:

The utilization and efficiency percentages are by default set to 100%. When these percentages are set to less than 100%, they extend the scheduled duration of the resource during work order scheduling. For example, if 1 hour of work is required to be done using the resource R1 starting from 10 AM on a specific work order, and if its efficiency is 50%, and utilization is 50%, then the scheduler determines the end time for this resource as 2 PM, calculated as following:

1 / (0.5 * 0.5) = 4 hours

Resource Allocation:

A resource is available in shifts if the Available 24 Hours field isn't selected. When a shift-based resource is associated with a work center, default units of the resource are automatically assigned to all the shifts of the maintenance organization. You can update the availability of resource units across the shifts as required.

For example, consider that you have defined two 8-hour shifts for the work center WC1: Day shift and Night shift. You associate two units each of four resources R1, R2, R3, and R4 to the work center WC1. The following table shows the key scenarios and their implementations:

Scenario	Consideration	Solution
You want the resource R1 available for 24 hours a day.	You haven't associated the resource R1 to the work center WC1 yet.	Select the Available 24 Hours check box when associating the resource R1 to the work center WC1. Now, the two units of resource R1 are available 24 hours a day and you can't assign any shift for it.
You want two units of the resource R2 available for the Day shift only.	You have already associated the resource R2 to work center WC1 with Available 24 Hours check box deselected.	In Resource Availability region, in the Day shift column, enter 2 against the resource R2. Now, the two units of resource R2 are available for Day shift. For the Night shift, the resource R2 has zero or blank value.
You want one unit of the resource R3 available for Day shift and one unit of resource R3 available for Night shift.	You have already associated the resource R3 to work center WC1 with Available 24 Hours check box deselected.	In Resource Availability region, in the Day shift column, enter 1 against the resource R3 and in the Night shift column, enter 1 against the resource R3. Now, one unit of resource R3 is available for the Day shift and one unit of resource R3 is available for the Night shift.
You want all the units of resource R4 available for both the Day shift and Night shift.	You have already associated the resource R4 to work center WC1 with Available 24 Hours check box deselected.	In Resource Availability region, in the Day shift column, enter 2 against the resource R4 and in the Night shift column, enter 2 against the resource R4. Now, two units of resource R4 are

Scenario	Consideration	Solution
		available for both the Day shift and the Night shift.

View and Manage Resource Exceptions

You use the work center resource calendar to view and manage the exceptions related to the resources. In case of a conflict, the exceptions granted in the work center resource calendar override the exceptions granted in production calendar.

Related Topics

- How do I update existing setup data?

How You Manage Maintenance Work Order Statuses

If you're a maintenance manager, you can define and update work order statuses to support enterprise-specific business processes. To do so, use the Manage Work Order Statuses page. Here are two ways to find the page:

- In the Tasks pane of the Maintenance Management work area, click the Manage Work Order Statuses link.
- In the Setup and Maintenance work area, use this path:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Maintenance Management
    - Task: Manage Manufacturing and Maintenance Work Order Statuses

A work order status can be either predefined (system status) or user-defined. Here are the predefined statuses:

- Unreleased
- Released
- On Hold
- Completed
- Closed
- Canceled

Define a New Work Order Status

To define a new status, click the Add icon. You must provide a unique name and code for the status, and associate it to a system status. For example, you can define the new status **Awaiting Materials**, and associate it to the system status **On Hold**. This helps you sort, manage, and report work orders more effectively.

Use a name that the user can relate to the associated system status. You can add a prefix or a suffix of the system status. For example, you can use the name AWAITING_MATERIALS_ONHOLD to indicate that the new status is associated to the system status On Hold.

Edit a User-Defined Work Order Status

You can only update the **Name** and **Description** attributes for both system statuses and user-defined statuses. For a user-defined status, you can't update the **Code** and **System Status** attributes.

It's recommended to not update the name of the system status. However, if you want to, you should do it in a way that the user can understand and associate it to the original name of the system status.

Deactivate a User-Defined Work Order Status

To deactivate a user-defined status, update the Inactive On field. When deactivated, the status isn't available for further use until it's reactivated.

Delete a User-Defined Work Order Status

To delete a user-defined status, select the status and click the Delete icon. You can delete a work order status only if it's not associated with any active or closed work order.

How You Set Up Items in Product Information Management

Assets that are maintained require an inventory item that's asset tracked and serial controlled. These items are defined and managed in the Product Information Management work area, using the Manage Items task flow.

Here are the suggested setups:

Navigation	Attribute	Suggested Setup
Specifications Tab > Service > Asset	Enable Asset Tracking	Set to Full Lifecycle **Note:** If Enable Asset Tracking is set to Customer Asset Tracking, then can't set Create Maintenance Work Orders for the asset.
Specifications Tab > Service > Asset	Enable Asset Maintenance	Select the check box. You can only create maintenance work orders for an asset that's based on an item that has this check box selected. When assets are created based on an item that's set to Full Lifecycle and the Enable Asset Maintenance is selected, then these asset attributes are selected by default, but can be edited: • Allow maintenance programs • Allow work orders

Navigation	Attribute	Suggested Setup
		Note: If Enable Asset Tracking is set to Customer Asset Tracking, then you can't select this check box.
Specifications Tab > Service > Asset	Enable Genealogy Tracking	We recommend you select the check box.
Specifications Tab > Inventory > Material Control	Inventory Item	Select the check box.
Specifications Tab > Inventory > Serial	Generation	Set up serial number control to one of these values: • Predefined serial number. • Dynamic entry at inventory receipt • Entry at sales order, transfer order or work order issue
Specifications Tab > Inventory > Serial	Starting Prefix	Optionally you can define a starting prefix for the serial number.
Specifications Tab > Inventory > Serial	Starting Number	Optionally you can define a starting number for the serial number. If a prefix is also defined, then both of these values are concatenated together.
Manufacturing Tab > Item Structure	Structure Item Type	Set to Standard. This value is required to manage asset physical hierarchies.
Item > Associations Tab	Associated Organizations	You must define one or more organizations for an item. First, you must define a master organization. Then, you must define every child inventory organization in which you create and manage assets. This includes the organizations not only where the asset operates, but also those organizations that are enabled for maintenance and in which maintenance work orders are created to maintain the asset. Additionally, assets support cross-organization creation of work orders. Therefore, we recommend you to associate all related organizations where an asset may be maintained through a maintenance work order.
Item > Header Region	Manage Attachments Add icon	You can optionally upload images as attachments in the Item header region using

Navigation	Attribute	Suggested Setup
		the Add icon. While generically called Manage Attachments, this capability is intended to also support the upload one or many files of an image file type. After being uploaded, the images are previewed in the header details region. Additional images can be uploaded, existing images deleted, and so on, using the Attachments dialogue box. If you select an image in the list of files and click the Set as Primary button, then it's marked as the primary image. If an item has a primary image defined, then each new asset that's created will automatically inherit this image in the asset record.

How You Add Attachments on Maintenance Work Order Through Rest Service

Work order attachments may contain important information and relevant instructions that can be used to effectively assess the work required and assign the right resources. Use the Work Order Attachments REST API to manage attachments on a work order.

You retrieve all attachments or a single attachment, add or update attachments to a work order, and delete attachments. The Work Order Attachments REST API lets you set the GET, POST, and PATCH method along with your payload script.

Some tasks or business processes require that you store and maintain documents, images, or other files in the form of attachments for future reference. Attachments may exist in the form of large objects, text, an image, or a media file. There are three types of attachments supported, including text, URL, and files. A text attachment comprises unstructured written text, a URL attachment that comprises a web link to an external web page when clicked, and a file attachment that could comprise images or documents and media.

In general, Oracle REST APIs support working with all types of attachments.

You can store attachments in a column within the same database table. Provide the file contents in base64 format. Use this link: *https://www.base64encode.org* to ensure the file is in the correct format.

Here's the location of the attachments:`/fscmRestApi/resources/version/maintenanceWorkOrder/[WORKORDER-NUMBER]/child/Attachments`

Here is an example payload to add a text type work order attachment using POST:

```
{
 "DatatypeCode" : "TEXT",
 "CategoryName" : "MISC",
 "UploadedText" : "This is a sample text attachment",
 "Title" : "REST Attachment Text Test",
 "Description" : "Text Attachment"
}
```

Configure and Extend Applications

How You Configure and Extend Applications

By default, the application provides robust functionality, tailored to support most business requirements of an organization. However, you can still make changes to your application to best fit your specific business or personal needs. For Oracle Maintenance, you can use Flexfields and Application Composer to configure and extend the work order and asset objects.

To the Redwood pages you can add Business Rules, Guided Journeys, and the Visual Builder studio to configure and extend the pages.

Guided Journeys

You can enable these pages for Oracle Maintenance:

- Supplier Warranty
- Maintenance supervision
- My Maintenance Work

Go through these topics if you plan to set up Guided Journeys, Business Rules, and Visual Basic Studio:

- See the *Guided Journeys* topic to configure guided journeys that help users complete tasks, in line with your business processes.
- See the *Business Rules* topic to configure business rules for Redwood pages.
- See the *Extending Redwood Applications for HCM and SCM Using Visual Builder Studio* guide to use Visual Basic Studio to extend your Redwood pages.

Related Topics

- How You Set Up and Define Flexfields
- How You Configure and Extend Assets Using Application Composer

How You Set Up and Define Flexfields

A flexfield is a set of placeholder fields associated with business objects and placed on the application pages to contain additional data. You can use flexfields to modify the business objects and meet enterprise data management requirements without changing the data model or performing any database programming.

Flexfields help you capture different data on the same database table and provide a means to modify the applications features. For example, a maintenance user may require specific attributes for an asset or work order that aren't predefined. Using a flexfield for the order business object, you can create and configure the required attributes. These attributes are then visible in the Additional Information region on the application pages for each object.

Oracle Maintenance supports descriptive flexfields for assets, maintenance work setup, and maintenance work execution. Alternatively, you can use Application Composer to extend the asset object and the Edit Asset page.

Descriptive flexfields are shared for common business objects, work setup, and execution, and are used in both Oracle Manufacturing and Maintenance. Therefore, you must be careful during the modeling of the flexfields if your organization performs both types of activities. For more details about flexfields, refer to the Configuring and Extending Applications guide

> **Note:** For assets, you can define descriptive flexfields, Application Composer fields, or use both at the same time. However, it's generally recommended to use one or the other methods to extend the asset object. For more details about Application Composer, refer to the Implementing Manufacturing and Supply Chain Materials Management guide or the Configuring Applications Using Application Composer guide.

> **Note:** Flexfields are defined and managed independently for each object. Therefore, there isn't any implicit functionality that the data will automatically flow or orchestrate across objects during the definition, create, update, or delete of flexfield data in the user interface, through REST API, or using File-based data import.

Set Up Flexfields

Define descriptive flexfields in the Setup and Maintenance work area. Don't use the task under the Maintenance Management functional area. Instead, use the Search option from the Tasks drop-down list to search for the generic setup task Manage Descriptive Flexfields.

On the Manage Descriptive Flexfields page, search by name or code for the type of object to view existing or to add new flexfields. You can search using the common name asset or work order, or by the code abbreviations using a wildcard like WIS% to view a list of common results

Here are the supported flexfields by type.

Type	Object Name	Module	Flexfield Code
Asset	Asset	Assets	CSE_ASSETS
	Asset Group	N/A	Flexfields aren't enabled for an asset groups
Maintenance Setup	Work Area	Work Areas	WIS_WORK_AREAS
	Work Center	Work Centers	WIS_WORK_CENTERS
	Standard Operations	Standard Operations	WIS_STANDARD_OPERATIONS
	Standard Operation Resources	Standard Operations	WIS_STD_OPERATION_RESOURCES
	Labor Resource Instance	Resources	WIS_EQUIPMENT_RESOURCE_INSTANCES

Type	Object Name	Module	Flexfield Code
	Equipment Resource Instance	Resources	WIS_EQUIPMENT_RESOURCE_INSTANCES
	Work Definition Names	Work Definitions	WIS_WORK_DEFINITION_NAMES_B Note: At this time this object is seeded but not supported in the user interface, REST API or file-based import for data entry or update
	Work Definition Operations	Work Definitions	WIS_WD_OPERATIONS_B
	Work Definition Operation Materials	Work Definitions	WIS_WD_OPERATION_MATERIALS
	Work Definition Operation Resources	Work Definitions	WIS_WD_OPERATION_RESOURCES
	Work Definition Operation Outputs	Work Definitions	WIS_WD_OPERATION_OUTPUTS
	Maintenance Programs	NA	Flexfields aren't enabled for a program or its work requirements. You can enable the work definitions that are defined in a work requirement for flexfields. **Note:** The flexfield capability to default a segment value during object creation isn't supported for work orders created by a maintenance program forecast. This process uses the same import program as the maintenance work order file-based import and doesn't support this capability.
Maintenance Execution	Work Order Header	Work Orders	WIE_WORK_ORDERS
	Work Order Operation	Work Orders	WIE_WORK_ORDERS
	Work Order Operation Item	Work Orders	WIE_WO_OPERATION_MATERIALS
	Work Order Operation Resource	Work Orders	WIE_WO_OPERATION_RESOURCES
	Work Order Operation Output	Work Orders	WIE_WO_OPERATION_OUTPUTS

Type	Object Name	Module	Flexfield Code
	Work Order Operation Resource Instance	Work Orders	WIE_WO_OPERATION_RESOURCE_INSTANCES
	Work Order Operation Transactions	Work Order Operation Transactions	WIE_OPERATION_TRANSACTIONS
	Work Order Resource Transactions	Work Order Resource Transactions	WIE_RESOURCE_TRANSACTIONS
	Work Order Material Transactions	Inventory	• INV_LOT_ATTRIBUTES • INV_SERIAL_ATTRIBUTES

Define Flexfields

For each object, these are the number of fields by type that can be defined:

- Text: 30
- Number: 10
- Date: 5
- Date and time: 5

Here are the components and capabilities if descriptive flexfields:

Segments: A segment is an extensible data field that represents an attribute and captures a value corresponding to a predefined, single extension column in the database for each object. A segment appears globally or based on a context of other captured information.

Value Sets: A value set is a group of valid values that you assign to a flexfield segment to control the values that are stored for business object attributes. A user enters a value for an attribute of a business object while using the application. The flexfield validates the value against the set of valid values that you configured as a value set and assigned to the segment. For example, you can define a required format, such as a five-digit number, or a list of valid values, such as green, red, and blue.

Flexfield segments are usually validated, and typically each segment in a given flexfield uses a different value set. You can assign a single value set to more than one segment, and you can share value sets among different flexfield.

Contexts: Context-sensitive flexfield segments are available to an application based on a context value. A context can be optionally configured as part of the descriptive flexfield setup. The context appears as a single drop-down list field in the Additional Information section of an application page for an object. If configured, the context drop-down list will contain one or more values. Depending on the value selected, one or more context-sensitive flexfield segments is exposed to the user for entry.

BI-enabled: A flexfield can be registered in the database as enabled for Oracle Business Intelligence (BI) using the check box in the segment definition. When a segment instance is BI-enabled, it becomes available for use in Oracle Business Intelligence once a concurrent process is run to refresh the OTBI. When a flexfield is deployed, run the Import Oracle Fusion Data Extensions for Transactional Business Intelligence scheduled process while selecting the CRM parameter check box. This imports the flexfields into Oracle Transactional Business Intelligence (OTBI).

REST and File-Based Import: You can enter and edit descriptive flexfields using the application pages for an object, using a REST API or File-Based Data Import.

Related Topics

- How You Configure and Extend Assets Using Application Composer

How You Configure and Extend Applications Using Application Composer

Use Application Composer to extend and configure the install base asset and asset group objects by creating fields, objects, and relationships between objects. This includes the ability to directly manage the Edit Asset, Create Asset Group, and Edit Asset Group pages.

Here are some changes you can make to the Asset Group object using the Application Composer tool:

- Modify the Asset Group object by defining new configured fields.
- Modify the Create and Edit Asset Group user interface pages by exposing your newly created fields for the object.
- Implement functional and data-level security for configured objects.
- Write Groovy scripts using the expression builder, which appears in many places as you modify existing objects

Note: The Application Composer tool also supports the creation of your own objects and child objects related to the Asset Group object. These objects can't be exposed in the Create and Edit Asset Group pages. However, if created, they are automatically provisioned in the Asset Group REST API.

Here are the number of available extended attributes using application composer:

- Text: 100
- Number: 50
- Date and time: 10
- CLOB: 5

Note:

- By default, a configured object and its records are visible and editable only to users with the configured Objects Administration (ORA_CRM_EXTN_ROLE) role. This role should be given to any user who's using Application Composer. Additionally, the UI pages you create for configured objects aren't visible to additional users unless you provide access in Application Composer using the object's Security node. Use the Security node to specify not only which job roles can access the UIs, but the levels of access. Provision data security for configured object records and restrict users who have privileges to view, update, or delete records. You can give access to all users or only to members of access groups, to owners of records or to an owner and his management hierarchy, and to user-defined roles.
- It's generally expected that you will either use flexfields or Application Composer attributes to extend the Asset object. You can use both, but it's typically recommended to only use one method to extend this object. The Asset Group isn't enabled for flexfields.
- Application Composer attribute values for assets and asset groups are be defined and updated using the Edit Asset, Create Asset Group, and Edit Asset Group pages and their respective REST APIs. They're not supported for an asset or asset group through using the File-Based import.

For more details about Application Composer, refer to the Using Maintenance guide, the Implementing Manufacturing and Supply Chain Materials Management guide, or the Configuring Applications Using Application Composer guide.

Related Topics

- How You Set Up and Define Flexfields

How You Define Meter Templates

Meter Templates are used to instantiate unique asset and subscription meters for tracking utilization during their lifetime through the recording and update of meter readings. Each template is a reusable definition that models the type, direction and validation rules that are enforced during the recording, update or disabling of meter readings. Meter Templates can be created using a manage page, REST API or in the context of an individual Asset.

Item Applicability in Meter Templates

When you define or update a template, using the manage page or REST API, you can optionally associate applicable inventory items that will be referenced during asset creation. If you create a new template in the context of an Asset, then you will not be able to assign any applicable items.

When you create a new asset, either manually, via services, or upload, the application looks to see if there a meter applicability for the asset's item. If there is a match, then the application automatically creates an asset meter for the asset. Thus, you get a seamless process for the automatic creation of asset meters and supports the standardization of asset meters across similar types of assets that share a common item.

The meter applicability is defined for the item at the master organization level, using either an inventory or item organization. This is because items are uniquely created for the master and all its associated organizations. Therefore, defining the applicability at the master organization allows for any asset created in one of its associated organizations to be validated for the automatic creation of an asset meter.

After a meter applicability is defined, you can set an end date in order to disable it for an item. Additionally, you can create a new applicability for new items in future with a start date after the previous end date if required.

Note:

- Meter templates should be created before assets are created to get your meters automatically assigned during creation by using the item applicability functionality.
- Meter applicability isn't available when creating meter templates for assets using the UI. However, after it's created in the UI, you can update it via REST API to add the item applicability.

Related Topics

- How Asset Meters Get Automatically Associated

Enable and Set Up Redwood Pages

Redwood is Oracle's next-generation user experience. Redwood brings state-of-the-art, consumer-grade user experiences to the sophisticated enterprise scenarios that Oracle enables.

Many of the application pages and task flows have been re-created in Redwood to improve the user experience and, in some cases, to introduce enhanced capabilities, such as improved search.

Enable Redwood Pages

Most pages are enabled by using a profile option to turn them On or Off. Many, though not all, of the Redwood-related profile options are turned off by default. You can decide whether, and when, to enable those Redwood pages in your enterprise's implementation. At some point, each Redwood page is turned on by default.

We recommend you review this document, My Oracle Support: SCM Redwood Pages with Profile Options (Doc ID 3037517.1) for every new release. The table in the Profile Options for Redwood Pages section of this document identifies the profile options that control each Redwood page or task flow, and the release in which the Redwood page is enabled by default, if that release has been determined.

Note that not all Redwood pages are controlled by profile options. Some are controlled by opting into features in the Offerings or Setup and Maintenance work areas. But in most cases, if an existing application page is re-created in Redwood, that page is controlled by a profile option. Additional details may be found in the What's New guides for Maintenance for each release, as well as in additional sections in this guide if specific setup is required.

Redwood pages that include a search and results region may use the Oracle Search Cloud Service (OSCS). Therefore, in addition to enabling the profile and ensuring you have the right privileges, you must perform the initial ingest of the object data into its corresponding index. If this step isn't completed, the pages won't show any data.

When you navigate from a Redwood landing page to other Redwood pages that have an organization drop down or filter chip, the context organization is defaulted on the pages. If you directly navigate to the Redwood pages, your default maintenance organization is shown by default, if defined. You can optionally switch to a different maintenance organization as required. For additional details on how to set the site and user level default maintenance organization profile options, see the *How can I define the default maintenance organization* topic.

Redwood Pages in Maintenance that Require Additional Setup

Redwood Page or Feature	Link to the Topic
Asset Information Page	Manage your installed base assets using either the legacy Manage Assets page or the Redwood page Asset Information Management. See the *How You Use Smart Search to Search For and View Assets in the New Assets UI* topic to know more.
Maintenance Supervision	Manage your maintenance work orders using either the existing Manage Maintenance Work Orders page or the Redwood page, Maintenance Supervision. To enable Maintenance Supervision for supervisors, go through the *Manage Work Using Maintenance Supervision* section in this guide. Also, see the *Maintenance Supervision* chapter in the Using Maintenance guide to know how supervisors can use this workbench.

Redwood Page or Feature	Link to the Topic
My Maintenance Work	Report your maintenance work orders using either the existing Dispatch List page or the Redwood page, My Maintenance Work. To enable My Maintenance Work for technicians, go through the *Report Work Using My Maintenance Work* section in this guide. See the *My Maintenance Work* chapter of the Using Maintenance guide to know how technicians can use this workbench.
Maintenance Management and Maintenance Execution Landing Pages	To enable the Maintenance Management and Maintenance Execution landing pages, switch on their respective profile options. Additional setup actions and considerations are covered in the details below.
Manage Maintenance Work Definitions	To enable the Manage Maintenance Work Definitions page, switch on the ORA_MNT_WORK_DEFINITIONS_REDWOOD_ENABLED profile option, then follow the details below to enable the index.
Manage Maintenance Forecasts	To enable the Manage Forecasts page using smart search, enable the opt-in for the feature and then follow the details below to enable the index.
Warranty Claims	To enable the Claims page using smart search, enable the opt-in for the feature and then follow the details below to enable the index.
Maintenance Programs	To enable the Maintenance Programs page, including the Work Requirement, Program and Calendar pattern tabs, enable the opt-in for the feature and then follow the details below to enable the index.

Additionally, you may need to configure settings for these pages using the Asset Maintenance Parameters, as covered in the Set Up Maintenance topic.

Manage Oracle Search Indexes

Oracle Search indexes are used to manage data and provide search services across multiple pages and workbenches in maintenance using the Oracle Search Cloud Service (OSCS). During implementation and later through the enablement of new features, follow instructions in this guide, along with the release What's New documentation, to enable, use, and manage these indexes:

Object	Index name for initial ingestion	Index name for reingest
Installed Base Assets	fa-alm-asset	IB_ASSET_BULK_INGEST
Work Orders	fa-alm-work-order	MNT_WO_BULK_INGEST
Asset Work Orders	fa-alm-work-order-asset	MNT_WO_BULK_INGEST
Work Definition	fa-alm-work-definition	MNT_WD_BULK_INGEST
Maintenance Forecasts	fa-alm-maintenanceforecasts	MNT_FORECAST_BULK_INGEST
Supplier Warranty Claims	fa-alm-warranty-claim	CSE_CLAIM_BULK_INGEST
Work Requirements	fa-alm-work-requirement	MNT_WR_BULK_INGEST
Saved Searches	fa-hcm-savedsearch	Reingest isn't required.

First, you need to enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:

- Set the Enable/Disable Search Ext Framework (`ORA_FND_SEARCH_EXT_ENABLED`) profile option to Yes.
- Make sure that you have the Manage Scheduled Job Definition (`FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV`) privilege to run scheduled processes.
- Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes.
    - Job Name: ESS job to create index definition and perform initial ingest to OSCS.
    - Index Name to Reingest: `fa-alm-work-order`

Note: If you don't specify any index names when submitting the process, the process runs for all predefined indexes.

During the implementation of each object's pages or workbenches, you see instructions to submit the scheduled process to create the index definition and perform initial ingest to OSCS before using the feature. You can also submit the process if the index is already created, and you want to ingest it again. This process clears the index and reingests all the data:

- Scheduled process name: ESS job to create index definition and perform initial ingest to OSCS.
- Index Name: See the table above by object.

After the index is created, most of them need periodic reingestion because not all modes of data creation or update trigger the near real-time ingest of the index. Examples include File-based import of new and updated data. Therefore, update the index by running a separate scheduled process. This scheduled process doesn't clear the index, but only updates the existing index with the changes from these transactions. We recommend that you ingest these updates at least once a day, or as often as your business requires, to keep the index current.

- Scheduled process name: ESS job to run Bulk ingest to OSCS
- Program Name to Run Bulk Ingest: See the "Index name for reingest" column by object in the preceding table.
- Index Name to Reingest: See the table above by object.

Maintenance Management and Maintenance Execution Landing Pages

With the new Maintenance Management and Maintenance Execution landing pages, maintenance users have a comprehensive view of all maintenance management and execution activities, highlighting work orders that require immediate attention and enabling quick actions to navigate to additional maintenance activities.

Steps to Enable

To enable the Maintenance Management and Maintenance Execution landing pages, switch on their respective profile options. Here's how you do it:

1. Navigate to the Setup and Maintenance work area and perform a global search of Manage Administrator Profile Values.

2. On the Manage Administrator Profile Values page, search for and select the profile option code.
    a. Maintenance Execution Profile Options:
        - Enable Maintenance Execution Landing Page (ORA_MNT_EXECUTION_LANDING_PAGE_REDWOOD_ENABLED)
        - Set days used to calculate metrics for My Future Assignments and My Qualified Work (ORA_MNT_LANDING_PAGE_FUTURE_WO_METRICS_HORIZON)
3. Maintenance Management Profile Options:
    - Enable Maintenance Management Landing Page (ORA_MNT_MANAGEMENT_LANDING_PAGE_REDWOOD_ENABLED)
    - Set days used to calculate metrics for Future Work Orders (ORA_MNT_LANDING_PAGE_FUTURE_WO_METRICS_HORIZON)
4. In the Profile Values section, set the Site level to Yes or No. The default value of the Enable Maintenance Execution Landing Page profile option is **Yes**. The default of the Enable Maintenance Management Landing Page profile option is **No**.
    - Yes = Enables the feature
    - No = Disables the feature
5. Click **Save and Close**. Changes to the profile value affect users the next time they sign in.

If you enable the Maintenance Execution landing page, users can open the page from the new Maintenance Execution icon under the Supply Chain Execution group. To hide the icon and disable the feature, change the profile option to No.

If you enable the Redwood version of Maintenance Management landing page, the existing Maintenance Management landing page is replaced with the new page.

The following actions aren't available on the Redwood Maintenance Management landing page:

- **Production Calendar**
- **Work Center Resource Calendar**
- **Report Resource Transactions**: You can report resource transactions through the My Maintenance Work action. However, if you need to direct access this page, then consider reverting the profile value to No.
- **Issue and Return Materials from Inventory**: You can issue and return materials through the My Maintenance Work action. However, if you need to direction access to this page, then consider reverting the profile value to No.

To access these features, switch back to the existing Maintenance Management landing page by setting the ORA_MNT_MANAGEMENT_LANDING_PAGE_REDWOOD_ENABLED profile option to No.

Manage Maintenance Work Definitions

Create and manage maintenance processes in your organization more efficiently with the maintenance work definition using Redwood. A maintenance work definition includes operations, operation items, and resources required for a maintenance or repair process. The previous user experience focused on visualizing the data relationships within a work definition, displaying a limited view of the dataset, and utilizing mouse-driven navigation and techniques like drag and drop or expand and collapse. By enabling the Redwood page, you find a user experience that provides quick editing and better information density for work definitions with extensive operational data.

Steps to Enable

To enable the Manage Maintenance Work Definitions page, switch on the ORA_MNT_WORK_DEFINITIONS_REDWOOD_ENABLED profile option to see this Redwood page. Here's how you do it:

1. Navigate to the Setup and Maintenance work area and perform a global search of Manage Administrator Profile Values.
2. On the Manage Administrator Profile Values page, search for the ORA_MNT_WORK_DEFINITIONS_REDWOOD_ENABLED profile option.
3. Set the profile option to Yes at the site level.
4. Save the changes.

After you enable the profile option, you need to enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:

- Set the Enable/Disable Search Ext Framework (ORA_FND_SEARCH_EXT_ENABLED) profile option to Yes.
- Make sure that you have the Manage Scheduled Job Definition (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes
- Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes.
    - Job Name: ESS job to create index definition and perform initial ingest to OSCS.
    - Index Name to Reingest: fa-alm-work-definition

Note: If you don't specify any index names when submitting the process, the process runs for all predefined indexes.

After enablement and index ingestion, ensure that users have the existing dispatch list privileges:

- Manage Maintenance Work Definitions
    - MNT_MANAGE_MAINTENANCE_WORK_DEFINITIONS_PRIV
- View Maintenance Work Definitions
    - MNT_VIEW_MAINTENANCE_WORK_DEFINITIONS_PRIV

Manage Maintenance Forecasts

Manage maintenance forecasts in your organization more efficiently using Oracle's smart search and filters. Maintenance programs define and generate a preventive maintenance forecast for one or more affected assets in a maintenance-enabled organization. The forecast is then used as the basis for creating preventive maintenance work orders, thus reducing the workload for maintenance planners, and allowing them to focus on maintenance program auditing, optimization, and exception-based events. Enable the opt-in for the updated page to get an improved user experience.

Steps to Enable

To enable the Manage Forecasts page, enable the opt-in for the feature.

After you enable the opt in, you need to enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:

- Set the Enable/Disable Search Ext Framework (ORA_FND_SEARCH_EXT_ENABLED) profile option to Yes.
- Make sure that you have the Manage Scheduled Job Definition (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes.
- Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes.
    - Job Name: ESS job to create index definition and perform initial ingest to OSCS.
    - Index Name to Reingest: fa-alm-maintenanceforecasts

Note: If you don't specify any index names when submitting the process, the process runs for all predefined indexes.

After enablement and index ingestion, ensure that users have these privileges:

- Manage Maintenance Forecasts
    - MNT_MANAGE_MAINTENANCE_FORECASTS_PRIV
- View Maintenance Forecasts
    - MNT_VIEW_MAINTENANCE_FORECASTS_PRIV

Warranty Claims

Search for and manage supplier warranty claims in the new Warranty Claims page using Oracle's smart search and filters. This feature uses Oracle Search Extension Framework to provide a powerful index-based search engine combined with Oracle's next user experience so you can quickly and easily perform full-text searches for claims. If not enabled, the existing Warranty Claims page uses a non-smart search user experience. If you have large volumes of claims it's recommended to enable this feature.

Steps to Enable

To enable the Claims page using smart search, enable the opt-in for the feature.

After you enable the opt-in, enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:

- Set the Enable/Disable Search Ext Framework (ORA_FND_SEARCH_EXT_ENABLED) profile option to Yes.
- Ensure that you have the Manage Scheduled Job Definition (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes.
- Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes.
    - Job Name: ESS job to create index definition and perform initial ingest to OSCS.
    - Index Name to Reingest: fa-alm-warranty-claim

Note: If you don't specify any index names when submitting the process, the process runs for all predefined indexes.

After enablement and index ingestion, ensure that users have these privileges:

- Manage Supplier Warranty Claims
  - MNT_MANAGE_SUPPLIER_WARRANTY_CLAIMS_PRIV
- View Supplier Warranty Claims
  - MNT_VIEW_SUPPLIER_WARRANTY_CLAIMS_PRIV
- Use REST Service: Workers List of Values
  - PER_REST_SERVICE_ACCESS_WORKERS_LOV_PRIV

Manage Maintenance Programs

use Oracle's smart search and filters to manage maintenance programs in your organization. Maintenance programs define and generate a preventive maintenance forecast for one or more affected assets in a maintenance-enabled organization. Enable the opt-in, **Redwood: Manage Maintenance Programs**, for the updated page to get an improved user experience.

> **Note:** It's recommended that you enable the option in a Test environment before enabling it in your Production environment. After you opt in the feature, the work requirement status, Ready to Forecast, is enabled only on Redwood pages. If you switch back to the existing page, you can see the programs in Ready to Forecast status, but you can't change the status to Active. Therefore, it isn't recommended to switch back to the existing pages after you opt in on your Production environment.

Steps to Enable

After you enable the opt in, enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:

1. Set the Enable/Disable Search Ext Framework (ORA_FND_SEARCH_EXT_ENABLED) profile option to Yes.
2. Make sure that you have the Manage Scheduled Job Definition (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes.
3. Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes.
   - Job Name: ESS job to create index definition and perform initial ingest to OSCS.
   - Index Name to Reingest: fa-alm-work-requirement.

     > **Note:** If you don't specify any index names when submitting the process, the process runs for all predefined indexes.

Data Security Policy

With Redwood, you now have a Data Security Policy (DSP) applied to the Maintenance Program object. DSP governs access to data through the maintenance program REST APIs. Users can view and manage data in the Redwood pages using the program REST APIs based on their DSP privileges. DSP is applicable to integrations and custom pages that use the maintenance program REST APIs. Grant a data security policy (DSP) to your users so that they have all the required privileges to view the pages and search results. Data security features include:

- Data security policy: Defines the conditions based on which, data access is granted to a role.

- Role: Applies data security policies with conditions to users through role provisioning.

By default, users with the Maintenance Manager role has DSP that enforces access to each organization they can manage the maintenance programs for. This is consistent with the existing user experience in the current pages, where a user can only view and manage programs in organizations for which they have access. Any custom users that inherit this role will automatically get the DSP. There is also an additional DSP that can provide access to all maintenance organizations.

Maintenance users with custom roles need DSP to access the maintenance program REST APIs and associated Redwood pages. Without that, they won't get search results on page searches.

Here's how you manually add DSP for users to let them access **an assigned maintenance organization**:

- Login with a user who has security console access.
- Navigate to Tools, Security Console. On the vertical tabs, ensure the Roles tab is viewable.
- Search for a custom role and edit it.
- In the edit mode of a role, go to the Data Security Policy and give these details to add the grant:
  - **Policy Name**: Grant on Maintenance Program
  - **Description**: Grant on Maintenance Program
  - **Data Resource**: Maintenance Program
  - **Data Set**: Select By Instance Set
  - **Condition Name**: Access the maintenance program for table MNT_PROGRAMS_B for all the maintenance organizations in which they can operate.
  - **Actions**: Read; Update; Delete; Manage Maintenance Program

To let your users access **all the maintenance organizations**, follow these steps:

- Login with a user who has security console access.
- Navigate to Tools, Security Console. On the vertical tabs, ensure the Roles tab is viewable.
- Search for a custom role and edit it.
- In the edit mode of a role, go to the Data Security Policy and give these details to add the grant:
  - **Policy Name**: Grant on Maintenance Program by Org Access
  - **Description**: Maintenance Manager can manage Maintenance Programs for the Maintenance Organizations in which they operate
  - **Data Resource**: Maintenance Program
  - **Data Set**: Select By Instance Set
  - **Condition Name**: Access the maintenance program for table MNT_PROGRAMS_B for all the maintenance organizations in which they can operate.
  - **Actions**: Read; Update; Delete; Manage Maintenance Program

Privileges

After enablement and index ingestion, and assigned of DSP to your roles, ensure that users have these privileges:

- Manage Maintenance Programs
  - MNT_MANAGE_MAINTENANCE_PROGRAMS_PRIV
- View Maintenance Programs

- MNT_VIEW_MAINTENANCE_ PROGRAMS_PRIV

- Import Maintenance Programs
  - MNT_IMPORT_MAINTENANCE_PROGRAMS_PRIV

How You Configure and Use Smart Search For Assets

Oracle's smart search is utilized across multiple interfaces in asset and maintenance management to perform full-text searches of assets quickly and easily. You can search for assets across dozens of attributes, providing a rich search experience. The smart search is used by the Asset Information Management page, across other pages when searching and selecting using an asset list of value field, as well as in the asset search picker. The smart search supports both enterprise and customer assets based on your user privileges.

This feature uses Oracle Search Extension Framework to provide a powerful index-based search engine combined with Oracle's next user experience so you can quickly and easily perform full-text searches for assets across dozens of attributes.

Enable the Oracle Search Extension Framework

To use the asset smart search, perform these steps:

- Enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities:
  - Set the Enable/Disable Search Ext Framework (ORA_FND_SEARCH_EXT_ENABLED) profile option to Yes
  - Include your flexfields in your fa-alm-asset index definition:
    - Follow the Implementation Guide steps for Search Extension Framework to configure the index: fa-alm-asset.
  - Refresh your index with flexfield data
    - Make sure that you have the **Manage Scheduled Job Definition** (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes
    - Submit the **create index definition and perform initial ingest to OSCS** scheduled process to create index definition and perform initial ingest to OSCS process for creating indexes and ingesting predefined indexes
      - **Index Name to Reingest**: fa-alm-asset
      - If you don't specify any index names while submitting the process, the process run for all predefined indexes.
      - You can also submit the **create index definition and perform initial ingest to OSCS** scheduled process if the index is already created and you want to ingest all your data again. This process clears the index and fully reingest the data.
      - Included warranties for child assets are not updated in near-real time. If users need to search assets by included warranties for child assets, routinely run the **create index definition and perform initial ingest to OSCS process if the index** scehduled process to get included warranties of child assets into the index. This scheduled process does not need to be routinely run for the assets with the following warranties as they will be automatically updated in the index:
        - Extended Warranty for parent assets

        - Extended Warranty for child assets Included Warranty for top level asset
    - Make sure that you have the Manage Scheduled Job Definition (FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV) privilege to run scheduled processes
    - Submit the **create index definition and perform initial ingest to OSCS** scheduled process to create index definition and perform initial ingest to OSCS process for creating indexes and ingesting predefined indexes
        - **Index Name to Reingest**: fa-alm-asset
        - If you don't specify any index names while submitting the process, the process run for all predefined indexes
        - You can also submit the**create index definition and perform initial ingest to OSCS** scheduled process if the index is already created and you want to ingest all your data again. This process clears the index and fully reingest the data.
    - For additional details on implementing Oracle Search Extension Framework, see the section entitled Search Extension Framework in the Search chapter of the Implementing Applications guide.
- Routinely run the **run bulk ingest to OSCS** scheduled process to ingest asset updates from Manufacturing, Receiving, Inventory, Order Management, and FBDI. Create a scheduled process to ingest these updates at least once a day in order to keep your index up to date. You may want to schedule this process more frequently depending on your business needs. You can also run this job manually, as needed.
    - **Program Name to run Bulk Ingest**: IB_ASSET_BULK_INGEST
    - You can also manually submit the **run bulk ingest to OSCS** scheduled process if the index is already created and you want update your index before the next scheduled process.
    - The **run bulk ingest to OSCS** scheduled process doesn't clear out the index. It only updates the existing index with the changes from Manufacturing, Receiving, Inventory, Order Management, and FBDI.
    - For additional details on setting up scheduled processes, see the section entitled Submit Processes in the Scheduled Processes chapter of the Using Common Features guide.
- Ensure that you have the appropriate privileges.
    - Users who are assigned a configured job role that contains at least one of the these privileges can view or manage maintenance assets in the Asset Information Management page:
        - Manage Maintainable Assets (MNT_MANAGE_MAINTAINABLE_ASSETS_PRIV)
        - View Maintainable Assets (MNT_VIEW_MAINTAINABLE_ASSETS_PRIV)
    - Users who are assigned a configured job role that contains this privilege can export assets in the Asset Information Management page:
        - CSE_EXPORT_ASSET_DETAILS_PRIV
    - Users who are assigned a configured job role that additionally contains this privilege can export assets meters in the Asset Information Management page:
        - MNT_EXPORT_ASSET_METER_READING_DETAILS_PRIV
    - Users who are assigned a configured job role that contain the privileges described in the Implementation Guide content for Search Extension Framework will be able to define which attributes, including descriptive flexfield segments, are included in the fa-alm-asset index.

After you set up your index, and ensure you have the appropriate privileges, you can launch the Asset Information Management link under the Supply Chain Execution group. The existing Manage Assets page can still be accessed via the Tasks pane of the Maintenance Management work area. Additionally, other pages that use the asset smart search API will be enabled.

Manage Work Using Maintenance Supervision

Enable Maintenance Supervision

Maintenance Supervision is a workbench for supervisors that helps them create, edit, and schedule work orders. Supervisors can also schedule and assign resources to the work orders.

Settings Required to Enable the Maintenance Supervision Workbench

Setting	Details	Description
Profile Option	ORA_MNT_SUPERVISION_REDWOOD_ENABLED	Set the profile option to **Yes** to enable Maintenance Supervision as a task on the task menu of the Maintenance Management landing page.
Profile Option	ORA_MNT_LANDING_PAGE_FUTURE_WO_METRICS_HORIZON	This profile is used by the Redwood Maintenance Management landing and Maintenance Supervision pages for the Future scorecard metric. Enter the number of days to calculate metrics for future work orders. The default is 30 days.
Privileges	• Supervise Production`WIP_SUPERVISE_PRODUCTION_PRIV` • Maintenance Management Web Service`ORA_MNT_MAINTENANCE_SERVICE_DUTY` • View Maintenance Work Orders`MNT_VIEW_MAINTENANCE_WORK_ORDERS_PRIV`	Users need these privileges to use the workbench.
Access to Oracle Search Extension Framework	• Set the Enable/Disable Search Ext Framework `ORA_FND_SEARCH_EXT_ENABLED` profile option to **Yes**. • Ensure that you have the Manage Scheduled Job Definition `FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV` privilege to run scheduled processes. • Scheduled Process: o Job Name: **ESS job to create index definition and perform initial ingest to OSCS** o Index Name to Reingest: `fa-alm-work-order`	After you enable the profile option, enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities. Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes. If you don't specify any index names when submitting the process, it runs for all the predefined indexes.

Setting	Details	Description
Saved Search Index	• Create the Saved Search index definition and perform initial ingest to OSCS. This must be done to use saved searches on the Work Order tab. o Program Name: **ESS job to create index definition and perform initial ingest to OSCS** o Index Name to Reingest: `fa-hcm-savedsearch`	Ensure that you submit the scheduled process to create the work order index definition and perform initial ingest to OSCS before using this feature. You can also submit the process if the index is already created, and you want to ingest it again. This process clears the index and reingests the data.
Create Work Orders	You can create work orders using the Manage Maintenance Work Orders page, the Maintenance Supervision workbench in the Maintenance Management work area, through REST APIs, from maintenance programs, or File-Based Data Import (FBDI). Run this scheduled process to update the index with the latest transactions: • Program Name to Run Bulk Ingest: **ESS job to run Bulk ingest to OSCS** • Index Name to Reingest: `MNT_WO_BULK_INGEST`	Not all modes of work order creation trigger the near real-time ingest of the index. Therefore, you need to update the index by running a separate scheduled process. This scheduled process doesn't clear the index, but only updates the existing index with the changes from these transactions. We recommend that you ingest these updates at least once a day, or as often as your business requires, to keep the index current.
Access to Maintenance Organizations	Ensure that users have security access to all the maintenance organizations that they need to report maintenance.	
Enable Opt-ins (Optional)	Enable these opt-ins only after you set the profile option to switch from the Maintenance Dispatch List to the My Maintenance Work page: • **Allow repair of one or more assets for an item** • **Allow completion of an asset to an inventory location**	• If you enable the **Allow repair of one or more assets for an item** opt-in, you can select an item as the context of the work order instead of a single asset. After a work order header is created, you can navigate to the Assets tab to define one or more assets to be repaired. After release, you can execute each work order by asset using the My Maintenance Work page. • If you enable the **Allow completion of an asset to an inventory location** opt-in, for an asset or item-based work order, you can issue and return an asset to a completion sub-inventory location. This location can be for serviceable or rejection (MRB) asset tracking.

Enable Guide Journeys on Maintenance Supervision

Settings	Details	Description
Privileges	• Manage Guided Journeys PER_MANAGE_GUIDED_JOURNEYS_PRIV • Use REST Service - Guided Journeys Read Only PER_REST_SERVICE_ACCESS_GUIDED_JOURNEYS_RO_PRIV	Users need these privileges to use configure Guided Journeys on the workbench.

Settings	Details	Description
	• Use REST Service - Guided Journey Responses PER_REST_SERVICE_ACCESS_GUIDED_JOURNEY_RESPONSES_PRIV	

Maintenance Supervision for Supervisors

Supervisors can access Maintenance Supervision from the task menu of the Maintenance Management landing page.

Pages on the Maintenance Supervision Workbench

Pages	Use
Work Order	Search, view, edit, and create maintenance work orders.
Scheduling	Manage work orders and resources using a Gantt chart.
Assignments	Create and manage resource assignments to work order operations.

This workbench, though similar to Manage Maintenance Work Orders page, comes with an enhanced user experience and useful KPIs that help supervisors effectively manage their maintenance teams.

See the *Key Capabilities* topic that compares the functionality of Maintenance Supervision and the existing Manage Maintenance Work Orders page. It's recommended that you analyze your business processes carefully and then implement the workbench.

Enable Work Orders Scheduling and Resources Assignment

Work Orders are automatically scheduled after creation using the unconstrained scheduling engine. After creation, you can then manually adjust work order start dates based on your available capacity. If you use assignments, then you must search and assign resource instances at the individual operation resource level on each work order. These are time-consuming process that aren't scalable for large organizations or volumes of work orders.

You can optionally use these capabilities for work orders scheduling and assignment:

- Oracle Production Scheduling application.
- Schedule maintenance work orders using a scheduled process.
- Assign users to maintenance work orders using a scheduled process.
- Advanced scheduling and assignment using Fusion Field Service.

Schedule Work Orders Using Oracle Production Scheduling

You can get the license and implement Oracle Production Scheduling for your users.

The application provides the ability to create a schedule name, define parameters and schedule options, and gather your work orders for a near-term horizon in days. Your users can then solve, analyze, and adjust the schedule results. When ready, they can release the schedule back to maintenance to update the work order dates. This can help smooth your maintenance schedule in the near-term horizon, avoiding peaks and valleys, and helping you absorb unplanned maintenance while producing a rough-cut schedule. Otherwise, you will need to use manual rescheduling to smooth the demand during peak periods. See the *Using Production Scheduling* guide to know how to use the application.

See the *Oracle Production Scheduling Implementation* guide to learn how to set up this application. If you don't use Oracle Production scheduling, you can still manually adjust your work order schedule.

Schedule Work Orders Using a Scheduled Process

Use the **Schedule and Assign Resources to Maintenance Work Orders** process to create a new or update an existing work order schedule using Production Scheduling. To enable this capability, you must set the **Use Production Scheduler to Schedule and Assign Work Orders** asset maintenance parameter to **Yes**. After you enable the parameter, select these options on the process page:

Field	Description
Organization	Select an organization where your users can schedule work orders.
Work Order Scheduling	• Schedule work orders: Use Production Scheduling (default). If selected, you must define the remaining options below. • Don't schedule work orders: This option denotes that you don't want to schedule work orders using Production Scheduling. If selected, the remaining options are disabled and aren't applicable.
Schedule Name	Optional. Select an existing schedule from Oracle Production Scheduling. If left blank, a new schedule name is automatically created.
Horizon in Days	This relates to the number of days into the future to consider work orders. The value defaults from the asset maintenance parameter, but you can edit the value before submission.
Item Catalog	Required to control which work orders are considered by evaluating the work order asset's source item and item catalog setup.
Asset Item Category	Required to control which work orders are considered by evaluating the work order asset's source item and item category setup.
Material Item Category	Required to control which work orders are considered by evaluating the work order asset's source item and item category setup.

Assign Users to Work Orders Using a Scheduled Process

After you're done with your near-term work order schedule, or after a new or updated schedule is generated, you can consider assigning resources automatically. Set the Work Order Scheduling parameter to the **Don't schedule work orders** option to turn on this feature.

When creating new assignments, the application evaluates each work order in the schedule window, identifies resources that don't have assignments, and finds available resources. Resources must have a resource instance defined for the resource and must not already be assigned during the same day and time. Additionally, they must not exceed the daily scheduled percentage asset maintenance parameter, which is defaulted to 80%.

It's important to note that this assignment capability doesn't consider a user's work schedule or unavailable time, nor skills beyond resource definition, but does provide a basic automatic assignment capability.

On the process page, set these values for the fields:

Field	Description
Organization	Select your organization where you wish to schedule work orders.

Field	Description
Resource Assignment	Select an one of these options: • **Null or blank**: No assignment action is taken. • **Create new assignments**: Select this to consider all work orders in the schedule window for assignment (default). It's recommended to use this option if there are either no existing assignments or if you want to only address ad hoc or preventative maintenance work orders that have been added to an existing schedule period. • **Don't create new assignments**: Use this option if you don't want to consider assignments during the schedule of work orders. • **Refresh existing assignments**: Use this option to delete and recreate assignments across all work orders in the schedule window for assignment. This option is helpful if you have updated a schedule, either manually or programmatically, and want to refresh all assignments during the period. • **Remove existing assignments**: Use this option to delete all the assignments during the schedule of work orders. You may find this helpful to remove all the assignments over a schedule period, then schedule and create new assignments.
Work Centers	You can select only a single work center to perform assignment actions.

Advanced Scheduling and Assignment Using Fusion Field Service

If you require a constrained work order scheduling process, based on person-level availability, use advanced scheduling for an organization. Advanced scheduling leverages Fusion Field Service to assign and schedule work orders based on actual resource availability in the near-term scheduling window, up to 30 days into the future. Only work orders in organizations enabled for advanced Scheduling can utilize this solution.

> **Note:** Advanced scheduling is only currently available for maintenance organizations, not supporting organizations that allow for both maintenance and manufacturing.

After a work order is created, and initial scheduled by the unconstrained engine, you can release and schedule them for assignment over an upcoming time horizon for an organization. The application schedules each person down to the operation resource level, updating the operation and work order dates. You can view the results in the Maintenance Supervision and My Maintenance Technician pages.

> **Note:** If you've already licensed Field Service, then you can only use this new capability for scheduling and assigning to work orders in different organizations that those being used by Field Service. The setup tasks covered in this section are simplified for the maintenance-only organizations using advanced scheduling only.

Setting up Field Service

You must license Fusion Field Service by enabling the offering, as detailed in the *Getting Started with Oracle Fusion Field Service in Fusion Applications* guide.

After it's enabled, you must provision one or more administrative users with these privileges:

- Field Service Administrator (ORA_FFS_FIELD_SERVICE_APPLICATION_ADMINISTRATOR_JOB): Individual responsible for the duty of configuring the Oracle Fusion Field Service application.
- Field Service Manager (ORA_FFS_FIELD_SERVICE_MANAGER_JOB): Individual responsible for the duty of managing Oracle Fusion Field Service workers.

After the application is provisioned and administrative users have access, you must follow these steps to further configure and use advanced scheduling.

Subject	User	Task
Enable opt-in for maintenance	Field Service Administrator	Use the Fusion Setup and Administration (FSA) task, within the Field Service offering, to enable the Support of Maintenance Resources opt in. To access the page, go to the Navigator Menu > My Enterprise > Offering Setup. Alternatively, you can configure directly in the Fusion Field Service application. After it's enabled, maintenance users who have the Dispatch Technician privilege are automatically synchronized as a maintenance resource in Field Service. **Note:** If you have already licensed and implemented Field Service, existing resources in those organizations are managed as Field Technician resources.
Organization	Field Service Administrator	By default, company organization is automatically provisioned, and all users are assigned to it. Optionally you can create child organizations for calendar defaulting. As of this uptake, this setup can only be accomplished directly the Fusion Field Service application. To view and manage Organizations, go to the Field Service application, navigate to the Configuration page, then in the Users, Security, Integrations section, you can see the Organizations option.
Resource Type	Field Service Administrator	There's a predefined type of maintenance resource. There's no need to create any additional types.
Time Slots	Field Service Administrator	A time slot is a fixed time interval specified in the activity management to perform activities. You must define time slots before defining activity types. Time slot of an activity type denotes its starting time. Time slots assigned to a bucket in the capacity management defines the time frame to assign quota and calculate capacity. Time slots are managed in the Fusion Field Service application, under the Resources, Activities, and Inventories section in the Configuration menu.

Subject	User	Task
Activity Type	Field Service Administrator	Define at least one activity type to create and manage unavailable time. Examples are lunch, meetings, appointments, training, etc. Use the Fusion Setup and Maintenance (FSM) task, within the Field Service offering, to manage activity types. To access the page, go to the Navigator Menu > My Enterprise > Setup and Maintenance. Alternatively, you can configure directly in the Fusion Field Service application. Activity Types must be defined with only these options: • Label • Name • Default duration (Ex: 60 mins) • Active checkbox = Yes • Pick a color • Don't select any other checkbox option. Additionally, when defining the calendars, define one or more activity types for lunch periods. This activity will use a time slots and service windows.
Shifts and Schedules	Field Service Administrator	Define resource calendars in the Scheduling and Dispatch setup option. When defining shifts, you can select the appropriate lunch time activity as well. Use the Fusion Setup and Maintenance (FSM) task, within the Field Service offering, to manage shifts and schedules. To access the page, go to the Navigator Menu > My Enterprise > Setup and Maintenance. Alternatively, you can configure directly in the Fusion Field Service application. **Note:** You can optionally set the default calendar for each organization.
Field Resources	Field Service Manager	Search and confirm all maintenance users who have the Dispatch Technician privilege were automatically synchronized as maintenance resources. Use the Fusion Setup and Maintenance (FSM) task, within the Field Service offering, to manage field resources.

Subject	User	Task
		To access the page, go to the Navigator Menu > My Enterprise > Setup and Maintenance. Alternatively, you can configure directly in the Fusion Field Service application. For each user, use this page to view their calendar that defaults from their organization. To change their calendar and assign a new shift, click on today or day in the future, select their new schedule, start date, and recurrence options. **Note:** Don't edit a user and change their resource Type from maintenance resource.

Additional details for set up and configuration are covered in the field service documentation:

- *Administering Oracle Fusion Field Service*
- *Using Core Application*
- *Using Capacity Service*

Managing User Schedules in Field Service

When maintenance users are synchronized, you must configure their individual calendars and shifts. By default, they receive a common calendar based on the default company organization. If you change their organization within Field Service, then their default calendar changes accordingly.

The Field Resources Redwood page, accessible from the Field Service offering, helps you:

- Display all types of field resources, except those of type Users/Dispatcher/Admin.
- Configure regular working schedule and shifts for resources.
- Configure nonworking time for resources.

Note: Maintenance customers should filter the list by resource type, selecting maintenance resource.

You can filter information that's shown on the screen either by entering term into the Search field at the top of the screen or you can select from the set of filters available, such as by:

- Status
- Resource Type
- User Type
- Organization
- Org Unit or Bucket

You can also display or hide columns by clicking the **Columns** button in the top-right corner above the table.

For each user, there's an Edit and Calendar icon. For maintenance resources, since they're synced from the resource definition in maintenance, there's no need to click the Edit icon and edit their record. Don't change their resource type.

If you click on the View Resource Calendar icon, you're navigated to the user's calendar, showing the month grid with working, on-call, and nonworking time. On this page, you can see:

- The regular working time marked with blue circle and the start time for the shift.
- The on-call time marked with the reddish-brown circle and the start time for shift.
- The regular nonworking time shown as a bar of blue color which represents all-day event.
- The on-call nonworking time shown as a bar of beige/tan color which represents all-day event.

Additionally, you can perform these tasks:

- View details about a user's schedule for a day
- Add a work cchedule to a calendar
- Add a shift to a calendar
- Add configured working time to a calendar
- Add nonworking time to a calendar

For days in the past, click the hyperlinked time value for any day, to view a read-only drawer with on the right side of the screen with details about their schedule.

For today or any date into the future, you can view and modify their schedule. Click the hyperlinked time value starting on the day in which you want for a change to begin. This shows a drawer with on the right side of the screen in edit mode. Here you can edit their schedule:

- Shift Type: For maintenance resources, you only manage their regular shifts. On-call shifts are not currently supported for this resource type.
- Schedule: Manage their assigned work schedules and shifts, as well as configured and nonworking time.
    - Work schedule: Select a predefined work schedule and shift.
    - Configured working time: Specify the time range of the working hours directly without using predefined shift.
    - Nonworking time: Specify that the mobile field worker doesn't work at the specific day due to illness or vacation.
- Start Date: Defaults to the date selected in the calendar. You can choose a different date if needed, but you can't set it to a past date. Changes begin on this date forward until the end date.
- End Date: Defaults to the date selected in the calendar. You can choose a different date if needed, but you can't set it to a past date.
- Recurrence Type: Select how often the new working time should repeat (daily, weekly, or yearly). Depending on the selected frequency, specify the number of days or the day of the week for the recurrence.
    - For most Maintenance users, you'll select Repeats Weekly.
    - Select which days of the week they work, such a Monday-Friday.
    - This selection applies going forward from this date into the future.
- Comment: Enter any comments for the change in timings.

If you select the option for configured working time, then you can also provide:

- Start Time: Enter the time when the resource's work is to begin.
- End Time: Enter the time when the resource's day ends.

If you select the option for nonworking time, you can provide the predefined reason from the list, in addition to using the comment field.

Use the Update action to apply your changes and close the drawer. This refreshes the user's calendar and the latest schedule is displayed. Use Cancel on the drawer to disregard any changes.

Setting Up Maintenance

After you provision and set up the Fusion Field Service application by following the instructions outlined earlier, you must ensure your users are correctly defined in Maintenance.

Firstly, ensure that all existing technicians to be scheduled and assigned are:

- Defined as resource instances in a resource in their work center.
- Have a default organization using the profile.
- Have the Maintenance Technician Dispatch List privilege (MNT_MANAGE_DISPATCH_LIST_PRIV). This is the same privilege that's needed to access to the My Maintenance Work page.
- Optionally consider these privileges:
    - The Unassign from Me button or action is only enabled if technicians have the Allow Operation Unassignment privilege (MNT_ALLOW_OP_SELF_UNASSIGN).
    - Users can clock out without additional privilege, but the Clock Out with Details action is only enabled if they have the Allow Clock Out with Details privilege (MNT_ALLOW_OP_DETAIL_CLOCKOUT)

For each rechnician, ensure that each user has a party record. To do so, run the Maintain Party and Location Current Record Information scheduled process. Pass these parameters:

- Party and Location
- Employee

Additional details are covered in the *Understanding Scheduled Processes* guide.

Then, for each supervisor or maintenance manager, review these additional privileges for advanced scheduling:

- To run the Request Maintenance Work Orders Advanced Scheduling and Assignments scheduled process, you must have privilege MNT_SCHEDULE_WO_USING_FFS_SCHEDULER..
- To view and manage unavailable time for user in the Maintenance Supervision page, you have access using permission groups and not individual privileges:
    - In this uptake, you must manually provision access by using an existing custom role, or by creating a new customer role, and then granting users these permission groups.
        - oraCxFieldService_read_TimeView_OraResource
        - oraCxFieldService_read_ActivityType_OraResource
        - oraCxFieldService_create_activity_oraResource
        - oraCxFieldService_cancel_Activity_OraResource
        - oraCxFieldService_read_Resource_OraResource
    - Once provisioned you must run these scheduled processes:
        - Import User and Role Application Security Data
        - Retrieve Latest LDAP Changes
- Optionally consider these privileges:
    - MNT_ALLOW_OTHERS_OP_CLOCKOUT: Allows supervisors to perform operation clock out activities on behalf of technicians.

- MNT_ALLOW_OP_DETAIL_COMPLETE_FOR_OTHERS: Allows supervisors to perform detailed operation completion activities on behalf of technicians.

Note: After the permissions groups have been applied to a user, if they are not working correctly, you may need to edit the field service roles and enable permissions for each one individually.

Finally, enable each maintenance organization for advanced scheduling and assignment in the organization's plant parameters. This ensures that each user is automatically synchronized as a maintenance resource. AfWhenter a user is visible as maintenance resource, an administrator and manager in Fusion Field Service can ensure that they have the correct schedule and shifts.

Note: If you're currently using assignments for technicians, you can transition to advanced scheduling by cancelling all future assignments. Advanced scheduling utilizes time block scheduling and not just resource instance association.

Related Topics

- Schedule and Assign Resources to Maintenance Work Orders

Enable Maintenance Advisor

Enable the AI agent, Maintenance Advisor that helps your users get targeted responses when they seek guidance on a task. Create a knowledge base, add a guided journey on a page, and embed the advisor into the guided journey using Visual Builder Studio on a transactional page. Through a chat experience, users can type in their question and get targeted responses, sourced from the documents uploaded in the knowledge base.

Ensure that you have these privileges and have set these profile options to **Y** to enable the advisor for your users:

User Privileges for Maintenance Advisor

Privilege Code and Name	Use
HRC_MANAGE_AI_AGENT_PRIV	Lets you access the Configure HCM Agents Admin page and manage intelligent agents, tools, and documents.
HRC_ACCESS_AI_AGENT_CHAT_PRIV	Lets you access chats with agent enabled Guided Journeys.
HRC_MANAGE_AI_AGENT_PRIV: Manage Intelligent Agent	Lets you create a guided journey for Maintenance Advisor.

Profile Options for Maintenance Advisor

Profile Option Code	Profile Option Name
ORA_HCM_VBCS_PWA_ENABLED	Enables the VBCS Progressive Web Application User Interface
ORA_PER_GUIDED_JOURNEYS_SETUP_REDWOOD_ENABLED	Agent Task Type Enabled for Guided Journeys
ORA_PER_AGENT_TASK_TYPE_GUIDED_JOURNEYS_ENABLED	Redwood Guided Journey Setup Page Enabled

Create a Guided Journey

1. Navigate to My Client Groups and click **Show More**.
2. Search for **Guided Journey** and open the page.
3. Click **Create** at the top to make a new guided journey.
4. Enter a name for a guided journey, and click **Create Draft**.
5. Under Tasks, click **Add**.
6. Enter a task name and select Agent for **Task Type**.
7. For **Configuration**, select the agent you created in previous steps.
8. Click **Save**.
9. Click **Activate** on the top right to activate your guided journey.

   Keep the guided journey code handy because you'll need it when you embed the guided journey into a transactional page.

Connect the guided journey to transactional pages. As an example, let's see how to enable the advisor on the Preview Work Order page of My Maintenance Work for maintenance technicians and the Edit Work Order page of Maintenance Supervision for maintenance supervisors.

Enable Advisor for Technicians and Supervisors

Do this to enable the Maintenance Advisor on the Preview Work Order page for technicians:

1. On the My Maintenance Work page, click **Preview Work** under the Actions menu on a work order row.
2. On the Preview Work page, access Visual Builder Studio by doing this:
   a. Click **Settings and Actions** in the top right.
   b. Select **Edit Page in Visual Builder Studio**.
3. On Visual Builder Studio, create or select an existing project.
4. Click the **Work Order Container** context switcher.
5. In the filter, search and select **Work Order Preview**.
6. On the Work Order Preview pane, enter the Guided Journey code in the **journeyCode** field and click **Publish**.
7. Grant your users the **Access Intelligent Agent Chat** (HRC_ACCESS_AI_AGENT_CHAT_PRIV) privilege to allow them to access the AI agent.

   The advisor shows up as a page-level guided journey on the Preview Work Order page for technicians.

Do this to enable the Maintenance Advisor on the Edit Work Order page for supervisors:

1. On the Maintenance Supervision page, go to the Edit Work Order page.
2. Open **Visual Builder Studio**.
3. On the Work Order Preview pane, enter the Guided Journey code in the **journeyCode** field and click **Publish**.
4. Grant your users the **Access Intelligent Agent Chat** (HRC_ACCESS_AI_AGENT_CHAT_PRIV) privilege to allow them to access the AI agent.

   The advisor shows up as a page-level guided journey on the Edit Work Order page for supervisors.

Enable OTBI Analysis As Scorecard Metrics

Create and display an OTBI analysis as a scorecard metric on Maintenance Supervision.

These are the settings you need to complete to enable an OTBI analysis:

Settings	Details	Description
Profile Option	ORA_MNT_SUPERVISION_REDWOOD_ENABLED	Set the profile option to Yes to enable Maintenance Supervision as a task on the task menu of the Maintenance Management landing page.
Privileges	• View Service Manager Dashboard SVC_VIEW_SERVICE_MANAGER_DASHBOARD_PRIV • View Service Representative Dashboard SVC_VIEW_SERVICE_REPRESENTATIVE_DASHBOARD_PRIV • Edit Maintenance Supervision Page Layout MNT_EDIT_MAINTENANCE_SUPERVISION_PAGE_LAYOUT_PRIV	Users need these privileges to manage the metrics on the Maintenance Supervision workbench. **Note:** Assign these two privileges to users who define and view these metrics in the page. If a user is only viewing the metrics as a consumer, then assign them only the View Service Representative Dashboard privilege.

After your settings are ready, do this:

- Create an analysis in OTBI and save it to the Custom folder directly or create a new subfolder under Custom and save your analysis there. Other folders you see are for seeded OTBI; you can't use them.
- Limit the data set returned by the analysis. For example, if you create an analysis from the work order data, you can add a filter such as Scheduled Start Date. This filter uses an advanced SQL filter to limit the data set to work orders in the last 90 days. The syntax in this example is `"Work Order", "Scheduled Start Date" < = Current_date - 90.`
- After you have saved your analysis, enable it as a scorecard metric:
  - Create a Configuration to visualize the analysis on the page. To access the Visualization Configurations page, edit the URL of your environment, appending: `fscmUI/redwood/cx-analytics/application/container/dvconfig.`
  - Click **Add** to create a new configuration.
  - Select OTBI Analysis for Type and search for your saved analysis by name.
  - Pick your visualization type and other configuration details. You can add a metric card or a visualization such as a bar chart.
  - Set it to active and click the **Create** action.
  - Navigate to the landing page and click the **Edit Page Layout** button.
  - Search for the metric analytic and add it to the scoreboard.
  - Add analytic charts to the panel area.

Report Work Using My Maintenance Work

Enable the My Maintenance Work Page

Oracle Fusion Cloud Maintenance lets you execute work orders in the Maintenance Dispatch List and My Maintenance Work pages.

In general, work orders can only be executed after they are created, edited, and released for work execution. Both the Maintenance Dispatch List and My Maintenance Work pages provide slightly different capabilities. Analyze your business processes carefully before choosing the page you plan to use for work order reporting and completion. Additional details, including a comparison of functionality, is covered in the Execute My Maintenance Work chapter of the Using Maintenance guide.

The My Maintenance Work page can be enabled for all maintenance organizations, thereby turning off the Maintenance Dispatch list. Or you can enable it for only selected organizations, while retaining access to the Dispatch list for the remaining maintenance organizations.

Here is a comparison of different user experiences and enablement options:

Review Maintenance Dispatch List	My Maintenance Work	Dependencies	User Experience
Enabled	Neither the Redwood page profile, nor the Opt-in for selected organizations, is enabled.	None	The Review Maintenance Dispatch List task is accessible from the existing Maintenance Management landing page for the context organization.
Enabled	Neither the Redwood page profile, nor the Opt-in for selected organizations, is enabled.	Redwood landing page for Maintenance Management is enabled via profile.	The Dispatch List task (updated name) is accessible from the Redwood Maintenance Management landing page for the context organization.
Disabled by setting the My Maintenance Work profile.	Page is enabled by the profile for all organizations. Do not set the Opt-in for selected organizations.	None.	The Review Maintenance Dispatch List task is not accessible from the existing Maintenance Management landing page for the context organization. The My Maintenance Work task is accessible from the Supply Chain execution area and from the existing Maintenance Management landing page.

Review Maintenance Dispatch List	My Maintenance Work	Dependencies	User Experience
Disabled by setting the My Maintenance Work profile.	Page is enabled by the profile for all organizations. Do not set the Opt-in for selected organizations.	Redwood landing page for Maintenance Management is enabled via profile.	The Dispatch List task is not accessible from the Redwood Maintenance Management landing page. The My Maintenance Work task is accessible from the Supply Chain execution area and from the Redwood Maintenance Management landing page.
Page is still enabled after Opt-in, but not accessible.	Page is enabled by the Opt-in only for selected organizations. Do not set the My Maintenance Work profile.	Redwood landing page for Maintenance Management is not enabled via profile. Individual organizations must be enabled for the technician workbench. Note: This is the not the recommended approach when to enable the My Maintenance Work page by individual organizations. You must enable the Redwood Landing page as well via profile, as described below.	The Review Maintenance Dispatch List task is not accessible from the existing Maintenance Management landing page for the context organization. The My Maintenance Work task is accessible from the Supply Chain execution area and from the existing Maintenance Management landing page.
Page is still enabled after Opt-in, but only for certain organizations.	Page is enabled by the Opt-in only for selected organizations. Do not set the My Maintenance Work profile.	Redwood landing page for Maintenance Management is enabled via profile. Individual organizations must be enabled for the technician workbench.	The My Maintenance Work task is accessible from the Supply Chain execution area. Clicking from here from navigation you to the My Maintenance Work page. The My Maintenance Work page is accessible from the Supply Chain execution area and from the Redwood Maintenance Management landing page. Based on the contextual organizations, the My Maintenance Work page or the Dispatch Page will be rendered. This allows your existing

Review Maintenance Dispatch List	My Maintenance Work	Dependencies	User Experience
			organizations to be managed in either page.

Here are some important tips and considerations:

- Care should be taken when deciding how you enable the My Maintenance Work page. If you choose an organization-by-organization approach, then as you can't switch methods to all organizations later. You need to continue to enable new organizations one at the time. Additionally, you must not attempt to manage work orders in an organization using both workbenches. If an organization is enabled for the My Maintenance Work page, then you must report work only using this page.
  - It's generally recommended to enable the My Maintenance Work page organization-by-organization, because it provides the best user experience. Additionally, future capabilities will require the My Maintenance Work page be enabled for a single organization context.
- There are additional opt-ins listed below that require the My Maintenance Work page to be enabled only by profile for all organizations, not organization-by-organization using the Opt-in. These additional Opt-ins are:
  - Allow repair of one or more assets for an item
  - Allow completion of an asset to an inventory location
- Existing work orders that aren't completed, which are in Unreleased, Released or On-hold statuses must be systematically enabled for use in the My Maintenance Workbench by running a scheduled process. Else, you may encounter issues viewing, editing, and completing the work orders. Additional details are covered below.
- It's recommended to always enable new functionality in a test instance, verifying new profile values and opt-in functionality prior to setting them in your production instance. Additionally:
  - If you create item-based work orders in a test instance, then you can only revert the opt-ins if you do a refresh of the test instance from the production system.
  - If you create item-based work orders in a production instance, then you will not be able to revert the opt-in for the repair of one or more assets for an item.
  - If the opt-in can’t be reverted, then you must not update the profile option to switch from the My Maintenance Work page to the previous Dispatch List page, nor enable the Opt-in for enabling the My Maintenance Work page by organization.
  - Enabling the profile option or Opt-in disables the Issue and Return Materials from the Inventory task flow. However, Issue and Return functionality is available on My Maintenance Work page for each work order as part of the reporting.

Here are the settings required to enable the My Maintenance Work page:

Settings	Details	Description
Profile option	`ORA_MNT_DISPATCH_LIST_REDWOOD_ENABLED` Or use the Opt-in below.	Set to Yes to enable the My Maintenance Work page for all organizations.
Opt-in	Opt-in “*Redwood: Enable My Maintenance Work by Organization*”.	Enables the My Maintenance Work page only for selected organizations.

	Or use the profile listed above.	
Inventory Organization settings	Field entitled "*Allow maintenance technicians to access work orders in this organization*" is only visible if the Opt-in above is enabled.	Set the field to Yes (checkbox enabled) for each applicable organization if the Opt-in above is enabled.
Redwood Landing Page	**ORA_MNT_EXECUTION_LANDING_PAGE_REDWOOD_ENABLED**	You can optionally enable this page if you set the profile. You must enable this page if the Opt-in above is enabled.
Privileges	Review Maintenance Dispatch List **MNT_REVIEW_MAINTENANCE_DISPATCH_LIST_PRIV**	Users need this privilege to use the My Maintenance Work page.
Access to Maintenance Organizations	Ensure that users have security access to all the maintenance organizations that they need to report maintenance.	
Access to Oracle Search Extension Framework	• Set the Enable/Disable Search Ext Framework **ORA_FND_SEARCH_EXT_ENABLED** profile option to Yes. • Ensure that you have the Manage Scheduled Job Definition **FND_MANAGE_SCHEDULED_JOB_DEFINITION_PRIV** privilege to run scheduled processes. • Scheduled Process: o Job Name: ESS job to create index definition and perform initial ingest to OSCS o Index Name to Reingest: **fa-alm-work-order-asset**	After you enable the profile option, enable the Oracle Search Extension Framework to create indexes, ingest predefined indexes, and manage search capabilities. Submit the scheduled process to create the index definition and perform initial ingest to the OSCS process for creating indexes and ingesting predefined indexes. If you don't specify any index names when submitting the process, it runs for all the predefined indexes.
Enable current work orders for the workbench	Existing work orders that are in Unreleased, Released or On-hold status, must be enabled for use in the My Maintenance Workbench by running the scheduled process listed below: • Scheduled Process: o Job Name: Process Pending and in-Error Genealogy and Installed Base Transactions o Resubmit Option: Data Upgrade to My Maintenance Work Execution If this process is not run, you may encounter issues viewing, editing, and completing the work orders. You should not attempt to manage	Submit the scheduled process to enable open work orders in the My Maintenance Work page. Additionally, if work orders are moved from Completed to Released status, you will need to run the process again.

	work orders in an organization using both workbenches. If an organization is enabled for the My Maintenance Work page, then you must report work only using this page.	
Work Order Updates	You can create and update work orders using the Manage Maintenance Work Orders page, the Maintenance Supervision workbench in the Maintenance Management work area, through REST APIs, from maintenance programs, or File-Based Data Import (FBDI). Run this scheduled process to update the index with the latest transactions: • Program Name to Run Bulk Ingest: ESS job to run Bulk ingest to OSCS • Index Name to Reingest: **MNT_WO_BULK_INGEST**	Not all modes of work order creation trigger the near real-time ingest of the index. Therefore, you need to update the index by running a separate scheduled process. This scheduled process doesn't clear the index, but only updates the existing index with the changes from these transactions. We recommend that you ingest these updates at least once a day, or as often as your business requires, to keep the index current.
Enable Opt-ins (Optional)	You can optionally enable these opt-ins only after you set the profile option to switch for the My Maintenance Work page or you have enabled the opt-in for the page by organization: • Allow repair of one or more assets for an item • Allow completion of an asset to an inventory location	• If you enable the Allow repair of one or more assets for an item opt-in, you can select an item as the context of the work order instead of a single asset. After a work order header is created, you can navigate to the Assets tab to define one or more assets to be repaired. After release, you can execute each work order by asset using the My Maintenance Work page. • If you enable the Allow completion of an asset to an inventory location opt-in, for an asset or item-based work order, you can issue and return an asset to a completion sub-inventory location. This location can be for serviceable or rejection (MRB) asset tracking.

Implement Knowledge Management in My Maintenance Work

You can leverage Knowledge Management's knowledge repository in My Maintenance Work, as part of the maintenance work order execution process.

Oracle Knowledge Management is a comprehensive solution designed to help organizations manage, create, and distribute knowledge content effectively. It provides a centralized repository for storing and accessing knowledge articles, documents, and other informational content. It enables organizations to deliver accurate and consistent information across various channels, including customer support, self-service portals, and internal teams.

You can refer to the following Knowledge Management links to understand implementing Knowledge Management in My Maintenance Work:

- Read the *Enable Knowledge with Redwood User Interface Feature* documentation.
- Read *Implementing Knowledge Management with the Redwood User Experience.*

- Watch the *Enabling Fusion Knowledge with the Redwood User Experience* video.
- Watch the *Basics of Fusion Knowledge Management Users* video.

Classic Vs. Redwood

Knowledge uses two sets of UIs: Classic and Redwood. The Classic UI doesn't require enabling, but the Redwood UI requires enabling. Refer to the following document for the process to enable the Redwood UI: *Enable Knowledge Management in Redwood User Experience*.

Manage Content Types

Content types define the structure of articles in your knowledge base. A content type definition serves as an authoring template for articles that serve a specific purpose.

Within Knowledge Management, you can create articles for several departments. Knowledge Management and Oracle Maintenance Cloud work with the Internal Help Desk department. This means that your articles must be created using content types associated with the Internal Help Desk department. Note that you will have to create at least one content type to use Knowledge in Oracle Fusion Maintenance Cloud.

Refer to the following document on creating content types: *Create Additional Custom Content Types.*

Manage Roles

Knowledge Manager is a predefined job role that gives a user the ability to administer and analyze knowledge use for the Asset Lifecycle Management application. Most organizations have at least one user with this role.

Additionally, you may want to create at least one custom role that contains a set of duty roles and privileges to let the user create and update knowledge in your custom content types. Note that a user with the Knowledge Manager role does not need this custom role. The custom role is meant to create a more focused authoring role that does not have all of the additional access that Knowledge Manager gives a user.

Add the following function security policies:

- Access Knowledge Home in Service with Redwood User Interface.
- Knowledge Authoring with Redwood User Interface (if using Redwood Knowledge).

Add the following data security policies:

- Knowledge Department Internal Help Desk.
- Data Resource: Knowledge Departments.
- Data Set: Select by instance set.
- Condition Name: Access to the Internal Help Desk department.
- Actions: Access Content with Department.
- Knowledge Content Type: YOUR_CUSTOM_CONTENTTYPE.
- Data Resource: Knowledge Content Types.
- Data Set: Select by key.
- Primary Key Value: YOUR_CUSTOM_CONTENTTYPE.
- Actions: Select all actions that you want a user with this role to be able to perform with your custom content type.

Add these duty roles into Role Hierarchies:

- **ORA_ZCA_ACCESS_GROUPS_ENABLEMENT_DUTY**
- **ORA_CSO_KNOWLEDGE_AUTHORING_DUTY**

Run the `Import User and Role Application Security Data` process job.

Refer to the documentation on *Predefined Knowledge Roles* and watch the *Basics of Fusion Knowledge Management Users* for more information on the topic.

Define Locales

You can associate locales with your authors. Locales help you differentiate knowledge content by language, country, or region. This differentiation helps you make Knowledge available to users who speak varied languages and are located in different countries or regions.

Log in as Knowledge Manager. You should see the following tasks under the **Knowledge** tab if you have Redwood Knowledge enabled:

- Authoring Classic
- Authoring (Redwood only)
- Knowledge Task (Redwood only)
- Knowledge User
- My Knowledge Classic

Select **Knowledge User** and search for your user. Highlight and add all the locales that you want to add for the user.

Refer to the following documents for more information on the topic:

- *Enable Locales*
- *Assign Locales to Users*

Manage Categories

Create categories to help segregate hardware and software service requests. You can then create further categories, and hierarchical categories within each category. Please refer to the following documents for more information on the topic:

- *Overview of Categories*
- *Set Up Products, Categories and Knowledge Articles*

Secure Knowledge

In security model terms, a user group is like a privilege, which you define in a data security policy (DSP) within a role. You add users to user groups by assigning them to roles that contain user group data security policies. We recommend that you create new roles when you set up user groups.

Refer to the *How do I implement user groups in Knowledge?* document for more information on the topic.

You can next assign user groups to knowledge articles. A user has to be part of at least one of the user groups associated with an article to be able to see it. Articles with the `Everyone` user group are available to everyone.

Enable Knowledge Management in Maintenance

Knowledge Management enabling is controlled by Visual Builder Studio (VBCS). A user with appropriate privileges needs to enable the following pages in Visual Builder Studio:

- Work Assignments Review
- Work Order Container

Enable the AI Assist Capability in My Maintenance Work

The AI Assist capability is optional and is available only for the English language. You need to enable the option for use in the work order notes.

To enable the **AI Assist** button for notes on the Report Work or the Complete Work Order page:

1. Switch to the **Notes & Attachments** tab.
2. Click the **Settings and Actions** menu for the page. You can click your user image or name in the global header to open the **Settings and Actions** menu.
3. Select **Edit Page in Visual Builder Studio**.

> **Note:** To view the **Edit Page in Visual Builder** option in the **Settings and Actions** menu, the user must have a role that includes the View Administration Link privilege (`FND_VIEW_ADMIN_LINK_PRIV`).

4. Set the **enableAIAssist** attribute to `true` and **Publish** the change.

Results:

The **AI Assist** button should now appear for new notes that you add.

Enable the Generate Repair Suggestion Capability in My Maintenance Work

The Generate Repair Suggestion capability is optional, only enabled for the English language. You need to enable the capability for the Preview Work Order page.

To enable the **Generate Repair Suggestion** button on the Preview Work Order page:

1. Switch to the Preview Work Order page.
2. Click the **Settings and Actions** menu for the page. You can click your user image or name in the global header to open the **Settings and Actions** menu.
3. Select **Edit Page in Visual Builder Studio**.
4. Click the **Work Order Container** context switcher.
5. In the filter, search and select **Work Order Preview**.
6. In the Work Order Preview pane, set the **ShowRepairSuggestionButton** attribute to **true** and **Publish** the change.

The **Generate Repair Suggestion** button should now appear as a page-level button on the Preview Work Order page.

By default, repair suggestion notes are saved with a Repair Suggestion (`ORA_MNT_WO_REPAIR_SUGGESTION`) note type. You can change this note type to a custom note type. Do not change the default note type to any other seeded note type unless it is `ORA_MNT_WO_REPAIR_SUGGESTION`.

To create a custom note type:

1. Under **Setup and Maintenance**, click **Tasks, Search** and enter **Manage Extended Lookup Codes** in the Search field.
2. Find and select **Maintenance Work Order Sources** in the list of Lookup Types.
3. In the Maintenance Work Order Sources: Extended Lookup Codes section, click **Add**.
4. Enter the details for your new custom note. When entering value for **Additional Information**, select the Source Note Types **Context Value.**
5. Click **Save.**

The new custom note type is now available for use on any maintenance note.

To change the default note type used for repair suggestion notes:

1. Switch to the Preview Work Order page.
2. Click the **Settings and Actions** menu for the page. You can click your user image or name in the global header to open the **Settings and Actions** menu.
3. Select **Edit Page in Visual Builder Studio**.
4. Click the **Work Order Container** context switcher.
5. In the filter, search and select **Work Order Preview**.
6. In the Work Order Preview pane, set the **RepairSuggestionNoteType** attribute to the extended lookup code for your custom note type and **Publish** the change.

Any new repair suggestions that are saved as notes will now have the new custom note type.

How You Define Quality Inspection Plans

An inspection plan contains inspection elements that represent the specific data that you want to collect and report on for a maintenance work order. It also contains information about when and how often you collect that data. For a work order, ah-hoc inspection plans can be defined based on an asset's item, operation code, operation sequence, or both along with the dispatch status of the work order. Inspections will then be defined mandatory or optional.

> **Note:** To define and collect data for a quality inspection plan, you must have an Oracle Fusion Cloud Product Management subscription.

Define Inspection Characteristics

Use inspection characteristics to specify the range of acceptable values or specification limits for items and not items.

You use inspection characteristics to:

- Create inspection plans.
- Conduct ad-hoc inspections, where you can directly add the characteristics to result collections.
- Collect data

During inspections, you evaluate assets against inspection characteristics. The samples or serials that are within the conformance limits are accepted and the rest may be rejected and could either be scrapped or require additional repair.

You can define item-based and inspection characteristics and inspection characteristics not based on an item:

- **Item-Based Inspection Characteristics:** you can link item-based inspection characteristics with attribute values in an item class. This enables you to verify if an item meets the required product specifications. The item-based inspection characteristics generally have a range of acceptable values or specification limits, as well as target or optimal values.

  These are typically used for manufacturing but may be used for maintenance.
- **Inspection Characteristics Not Based on Items:** you can define inspection characteristics that aren't mapped to item attribute values. These inspection characteristics (not based on items) can be of these types: Number, Character, or Date. You must specify a target value for all of the types, and where applicable, a range or list of valid values as well as a unit of measure.

Note: If an inspection characteristic not based on an item is of the Character type, you can choose not to specify a value set. This enables you to enter free-form text for that characteristic during an inspection. Any result entered for such a characteristic added directly to an inspection or as part of an inspection plan is accepted without an evaluation against specifications and is recorded for data collection purposes.

Create an Inspection Plan

After defining the inspection characteristics, you can create an inspection plan to capture them. New plans are created from the Overview landing page of the Quality Management work area. Click the + icon and select Inspection Plan to create a new plan.

Here are some suggested setups when you create a new plan:

- The plan name should be descriptive, as users search for and select the plan when entering the inspection results.
- The plan type must be Process Asset to be used for collection in the My Maintenance Work page. Work In Progress (WIP) plans are not supported for reporting in execution.
- The organization is generally a maintenance organization where maintenance work orders are created for an asset. These work orders can be generated manually or through a preventative maintenance program. You must have data access to each organization in which a plan is going to be defined.
- Set the Details attribute as Item and the value of attribute should be an Asset Item. This means that the inspection plan isn't set up against any specific asset, but an item. This is a required setup for the plan.
- Inspection Plan Optional check box is used to set the inspection as mandatory or optional during work order completion. If the check box is selected, then the inspection is optional during operation completion. If the check box is deselected, then the inspection is mandatory during work order completion.
- Characteristics should then be added to the plan. These are the quality attributes that you collect in the plan for the work order. Each characteristic is then ordered by a sequence number.
- Inspection criteria can be configured once characteristics have been saved to the plan. The criteria should be either set for Operation Sequence or Operation Code (recommended). This will help provide a match, along with item, for any work order created for a matching asset. The dispatch status should always be Ready.
- Finally, the inspection plan status must be set to Approved.

Note: Inspection plans applicable to a specific operation, whether mandatory or optional, are only validated for reporting during work order completion. Currently, individual operation completion isn't contingent on mandatory inspection plan reporting.

Enter The Results of an Inspection Plan

After a plan is defined and set to the approved status, any new work orders created for the matching asset item, operation sequence, or operation code enables the inspection plan for the work order. They can be viewed by a technician in the Report Work page or each work order and accessed from the My Maintenance Work page. Additional details are covered in the Using Maintenance guide.

Trigger Business Events

To create a new work order based off the results of an inspection plan, set up an inspection plan action rule that raises an inspection business event. Oracle Fusion Cloud Integration is the recommended way to listen to the business event and subscribe with some custom logic to call the Maintenance Work Order REST API and create a new maintenance work order. It's important to note that this suggested approach doesn't involve Application Composer, which isn't supported for the Quality Inspection objects.

Related Topics

- How You Manage Inspections for Maintenance Work Orders

Purge Batch Data from Maintenance Import Interfaces

During the upload and import of data, these processes can end in a warning or error status due to issues with the data. When this occurs, the data can't be further processed from the interface tables. The Asset Administrator role can be used to run a purge process to delete the data from the interface tables from all or just a specific import process. The scheduled process can be run on demand or setup on a schedule as required by your business processes.

There are two processes that can be run:

Scheduled Process Name	Description
Purge Maintenance Records from Interface	This purge program is recommended to be used by Maintenance customers to purge records from interface tables for installed base assets, maintenance work orders, maintenance work definitions, and product genealogy. This includes interface data created by file-based upload and REST API.
Purge Records from Interface	This purge program is recommended to be used by Manufacturing customers to purge records from interface tables for work orders, work definitions, work order operation transactions, work order material transactions and work order resource transactions. This includes interface data created by file-based upload and REST API. **Note:** This program will purge interface records for both Oracle Maintenance and Oracle Manufacturing transactions in these tables as the transactions are common across work methods.

Note: Ensure that the purge processes aren't run at the same time as the Create Forecast and Create work Order processes for maintenance programs. The maintenance programs processes use the same interface tables as the purge processes, and the purge processes will interfere with the maintenance program processes.

How You Manage Work Order Costs

Oracle Maintenance enables you to record, transfer, distribute, and account for the total cost of each maintenance work order in Oracle Cost Accounting. The cost includes the resources and materials, including transacted operation items and received purchased items, used to complete each operation of a work order. To post these costs, and view work order cost history, there's a series of scheduled processes that must be set up and run periodically.

Scheduled Processes for Costing

This table lists the processes to be run in order to transfer, distribute, and account for maintenance work order costs. These processes must be run in the same sequence. They can be either scheduled or manually run.

Process	Run By	Navigation
Transfer Transactions from Maintenance to Costing	Manufacturing Supervisor	Tasks panel of Maintenance Management > Transfer Transactions from Maintenance to Costing
Transfer Transactions from Inventory to Costing	Cost Accountant	Scheduled Processes work area > Schedule New Process > Transfer Transactions from Inventory to Costing
Create Cost Accounting Distributions	Cost Accountant	Cost Accounting Work area > Create Cost Accounting Distributions
Create Accounting to create Accounting in SLA	Cost Accountant	Cost Accounting Work area > Create Accounting

These processes consider maintenance work order in any status other than the Unreleased status. This means that the work order is in any of these statuses.

- Released
- On Hold
- Canceled
- Completed
- Closed

When these processes complete, you can review the material and resource costs incurred for a maintenance work order on the Maintenance Work Order Costs page. You can review the cost details and their distributions, separately.

- **Details:** View the summary of cost details including the total cost, material costs, and the resource costs. You can further drill down and view detailed information about the material and resource costs incurred for each operation and work center in that work order.

- **Distributions:** View the summary of costs distribution. Distributions provide accounting information for all the transactions reported against the maintenance work order that's being analyzed. The summary page shows the processing status of the transactions like Not Processed, Partially Costed, and so on.

How You Manage Deep Links for Oracle Maintenance

Use deep links to open pages without navigating through the menu structure. When you add deep links to a business intelligence report or a company website, users can simply click those links to go directly to the application pages they need to use, without any additional clicks or navigation. You can find all of the available deep links in the Deep Links work area. Some deep links, such as those assigned the None action, are ready to use as is. Other deep links, such as those assigned the View action, require you to edit the link details before you can use them.

Using Deep Links for Maintenance

This table lists the objects that help you use deep links.

Object	Description
Enterprise Asset (ORA_MNT_ASSET,EDIT)	Opens a specific enterprise asset on the Edit Asset page by passing the Asset ID and Asset Number. Example URL: `https://<environment_name>fndSetup/faces/deeplink?objType=ORA_MNT_ASSET&action=EDIT&objKey=assetId=300100214195372;assetNumber=ALM_ENT_ASSET_1` This link should be used for enterprise asset navigation from an OTBI analysis and for all assets if navigating from Application Composer enabled or configured page. If you only have the View Asset privilege, then you will be presented the Edit Asset page in View mode.
Customer Asset (ORA_CSE_ASSET,EDIT)	Opens a specific customer asset on the Edit Asset page by passing the Asset ID and Asset Number in a Customer Asset OTBI analysis only. Example URL: `https://<environment_name>fndSetup/faces/deeplink?objType=ORA_CSE_ASSET&action=EDIT&objKey=assetId=300100214195372;assetNumber=ALM_CUSTOMER_ASSET_1` If you only have the View Asset privilege, then you will be presented the Edit Asset page in View mode.
Work Order (ORA_MNT_WORK_ORDER, EDIT)	Opens a specific work order on the Edit Work Order page by passing the Work Order ID. Example URL: `https://<environment_name>fndSetup/faces/deeplink?objType=ORA_WORK_ORDER&action=EDIT&objKey=workOrderId=300100216276341`
Work Order (ORA_MNT_WORK_ORDER, VIEW)	Opens a specific work order on the View Work Order page by passing the Work Order ID. Example URL:

Object	Description
	`https://<environment_name>fndSetup/faces/deeplink?objType=ORA_WORK_ORDER&action=VIEW&objKey=workOrderId=300100216276341`

For information about deep links, refer to the Implementing Common Features for SCM guide, and more information about deep links in OTBI, refer to the Reports and Analytics chapter of the Using Maintenance guide.

Integration of Work Order Picking Requests With Your Warehouse Management System

Services and core application enhancements made to the Oracle Fusion Cloud Maintenance support the integrations of work order picking requests to an external execution system or Oracle Fusion Cloud Warehouse Management(WMS).

After implementation, you can reserve, pick, move, and issue goods from a warehouse using an external warehouse management system or Oracle WMS to a supply subinventory or directly to a work order, based on the material picking requests generated in Oracle Fusion Cloud Maintenance.

See the Oracle Warehouse Management documentation for detail information.

How You Override the Plant Production Calendar with One or More Date-Effective Work Center Calendars

Enable a new region for Work Center Calendar by selecting the Override Schedule check box in the Manage Maintenance Work Center task. The new Work Center Calendar region allows you to plan ahead your resources based on the associated Work Center resources availability, calendars association, and calendar effective dates.

A segment of maintenance, deals with the staggered production stages and seasonal demand changes, requiring more flexibility than a single production calendar for the entire maintenance plant. Rather than modelling these variations as work center resource exceptions and shift exceptions, the team prefers a streamlined production calendar that reflects their daily capacity, availability, and shift schedule.

You can override the plant-level calendar at the work center level by associating a different calendar for a specific date range effectivity. All resources belonging to the work center inherit their capacity and operating times from this override calendar to facilitate manufacturing and maintenance of more accurate work order planning and scheduling. You can associate multiple calendars to the work center for different date effectivity ranges to model variations in production capacity and working or non-working times.

Here are some examples that illustrate scenarios that leverage work center calendars:

- Staggered Production Operations: The packaging operation can't start simultaneously with the prior processing operation and thus needs a different shift schedule for each work center.
    - Operation 20: Processing work center - shift details: 6:00 AM - 2:00 PM, Monday - Friday
    - Operation 30: Packaging work center - shift details: 7:30 AM - 3:30 PM, Monday - Friday

- Seasonal Demand: The number of available units of resources and working hours are scaled up to meet holiday demand for 2 months then revert back to the original schedule for the remainder of the year.
    - Processing work center - standard calendar - shift times: 8:00 AM - 4:00 PM, Monday - Friday, 1/1/23 to 10/31/23.
    - Processing work center - holiday calendar - shift times: 7:00 AM - 6:00 PM, Monday - Saturday, 11/1/23 to 12/31/23.

Multiple work center calendars within a plant improve plant operations flexible planning and scheduling based on the resource capacity and availability that more accurately reflect rolling schedule needs, seasonal demand, and the real-life production environment.

How You Manage Country of Origin on Item and Item Categories in Work Execution

You can choose to exempt tracking country of origin for some of the items and item categories.

In certain scenarios, you may not want to track the country of origin (COO) for items. For example, a company has a warehouse and manufacturing plant setup as separate organizations in Oracle Fusion Cloud Inventory Management. The warehouse requires tracking the COO for all goods in the warehouse, but the manufacturing plant only needs to track the COO for the finished goods they produce. In this scenario, both organizations are enabled for COO tracking. When the warehouse ships its components used in producing finished goods to the manufacturing plant using an internal material transfer, the COO striping from the warehouse is carried over to the manufacturing plant. However, because these goods are used only as components of the finished goods, the manufacturing plant doesn't need to enforce COO for these items. To improve efficiency, the manufacturing plant can disable the COO tracking for these component items while maintaining COO tracking for the finished goods.

Here's how you exempt COO tracking:

1. In the Setup and Maintenance work area, go to the **Configure Inventory Attribute Exceptions** task in the Inventory Attribute Exception business object.
2. On the Configure Inventory Attribute Exceptions task page, create new attributes exceptions based on items or item categories.
3. Click **Save**.

   You won't be able to select a country of origin for the selected items and categories.

Use a SOAP Service to Upload Attachments in Oracle Maintenance Cloud

Overview of Using A SOAP Service to Upload Attachments in Oracle Maintenance

Use the ERP Object Attachment SOAP service to perform the automatic, mass upload of attachments for maintenance assets, maintenance programs, maintenance work orders, maintenance work order operations, maintenance work order operation materials, maintenance work order operation resources, and maintenance work definition operations. You can specify the input parameters for the payload of this service to upload attachments.

By using a service-based approach for uploading attachments, the initial data load from an external source system or ongoing updates can be streamlined into Oracle Maintenance.

To get started, refer to the information provided in the Oracle Fusion Cloud Financials SOAP Web Services for Financials guide.

- Chapter: Business Object Services
- Section: ERP Object Attachment Service

Here's a table with request payload information.

Note: Refer to the other topics in this section for the attachment rows and payload details about each business object.

Element name	Type	Description
entityName	String	Valid business entity names are: • ASSET: For Asset • MAINTENANCE_PROGRAM: For Maintenance Program • WORK_ORDER: For Work Order Header • WORK_ORDER_OPERATION: For Work Order Operation • WORK_ORDER_OPERATION_MATERIAL: For Work Order Operation Material • WORK_ORDER_OPERATION_RESOURCE: For Work Order Operation Resource • WORK_DEFINITION: For Work Definition Header • WORK_DEFINITION_OPERATION: For Work Definition Operation

Element name	Type	Description
categoryName	String	Document Category Name associated with the business entity.
allowDuplicate	String	Whether duplicate is allowed. Valid values are: Yes, No.
attachmentRows		List of elements, each containing the details of the attachment to upload. The details include the user keys, attachment type, and title. The user keys are used to identify the unique row in the appropriate business object entity.

How You Upload Attachments of Assets and Maintenance Programs Using a SOAP Service

This topic provides specifics for uptaking the ERP Object Attachment SOAP service for your assets and maintenance programs.

attachmentRows Attributes for Asset

Here's a table with attachmentRows Attributes for Asset information.

Attribute Name	Type	Description
UserKeyA	String	Asset Number.
UserKeyB	String	Keep this key with value #NULL.
UserKeyC	String	Keep this key with value #NULL.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123.

Attribute Name	Type	Description
		File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Asset

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>ASSET</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>FL Caterpillar</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>?</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>?</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment1</erp:Title>
<!--Optional:-->
<erp:Content>Hello World1</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

attachmentRows Attributes for Maintenance Program

Here's a table with attachmentRows Attributes for Maintenance Program information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Program Code.
UserKeyC	String	Keep this key with value #NULL.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.

Attribute Name	Type	Description
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Maintenance Program Operation

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>MAINTENANCE_PROGRAM</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MNTALM</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>BDC</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>?</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

How You Upload Attachments of Work Orders, Work Order Operations, Work Order Operation Materials, and Work Order Operation Resources Using a SOAP Service

This topic provides specifics for uptaking the ERP Object Attachment SOAP service for maintenance work orders, maintenance work order operations, maintenance work order operation materials, maintenance work order operation resources.

attachmentRows Attributes for Work Order Header

Here's a table with attachmentRows Attributes for Work Order Header information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Work Order Number.
UserKeyC	String	Keep this key with value #NULL.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Order Header

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_ORDER</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
```

```
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MNTALM</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM1167</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>?</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

attachmentRows Attributes for Work Order Operation

Here's a table with attachmentRows Attributes for Work Order Operation information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Work Order Number.
UserKeyC	String	Operation Sequence Number.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Order Operation

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_ORDER_OPERATION</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MNTALM</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM1167</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>10</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

attachmentRows Attributes for Work Order Operation Material

Here's a table with attachmentRows Attributes for Work Order Operation Material information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Work Order Number.
UserKeyC	String	Operation Sequence Number.
UserKeyD	String	Material Sequence Number.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different.

Attribute Name	Type	Description
		URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Order Operation Material

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_ORDER_OPERATION_MATERIAL</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MNTALM</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM1167</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>10</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>10</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

attachmentRows Attributes for Work Order Operation Resource

Here's a table with attachmentRows Attributes for Work Order Operation Resource information.

Attribute Name	Type	Description
UserKeyA	String	Organization Code.
UserKeyB	String	Work Order Number.
UserKeyC	String	Operation Sequence Number.
UserKeyD	String	Material Sequence Number.

Attribute Name	Type	Description
UserKeyE	String	Resource Sequence Number.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Order Operation Resource

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_ORDER_OPERATION_RESOURCE</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MNTALM</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM1167</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>10</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>10</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>BVM_Attachment</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

How You Upload Attachments of Work Definitions and Work Definition Operations Using a SOAP Service

This topic provides specifics for uptaking the ERP Object Attachment SOAP service for maintenance work definitions and maintenance work definition operations.

attachmentRows Attributes for Work Definition Header

Here's a table with attachmentRows Attributes for Work Definition Header information.

Attribute Name	Type	Description
UserKeyA	String	Work Method Code.
UserKeyB	String	Organization Code.
UserKeyC	String	Work Definition Internal Name.
UserKeyD	String	Keep this key with value #NULL.
UserKeyE	String	Keep this key with value #NULL.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Definition Header

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_DEFINITION</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
```

```
<!--Optional:-->
<erp:UserKeyA>MAINTENANCE</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>ReplaceSwitch</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>?</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>?</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>Att01</erp:Title>
<!--Optional:-->
<erp:Content>Hello MNT Folks, Howdy?</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

attachmentRows Attributes for Work Definition Operation

Here's a table with attachmentRows Attributes for Work Definition Operation information.

Attribute Name	Type	Description
UserKeyA	String	Work Method Code.
UserKeyB	String	Organization Code.
UserKeyC	String	Work Definition Internal Name.
UserKeyD	String	Version Number.
UserKeyE	String	Operation Sequence Number.
AttachmentType	String	Valid values are: FILE, TEXT, URL.
Title	String	The title of the attachment.
Content	String	The following is an example. Your content may be different. URL: https://www.google.com Text: Use Lathe L123. File: Encode the source data to a Base64 string (Base64 encoding).

Sample Payload for Work Definition Operation

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://
xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">
<soapenv:Header/>
<soapenv:Body>
<typ:uploadAttachment>
<typ:entityName>WORK_DEFINITION_OPERATION</typ:entityName>
<typ:categoryName>MISC</typ:categoryName>
<typ:allowDuplicate>Yes</typ:allowDuplicate>
<!--Zero or more repetitions:-->
<typ:attachmentRows>
<!--Optional:-->
<erp:UserKeyA>MAINTENANCE</erp:UserKeyA>
<!--Optional:-->
<erp:UserKeyB>MNTALM</erp:UserKeyB>
<!--Optional:-->
<erp:UserKeyC>ReplaceSwitch</erp:UserKeyC>
<!--Optional:-->
<erp:UserKeyD>1</erp:UserKeyD>
<!--Optional:-->
<erp:UserKeyE>10</erp:UserKeyE>
<!--Optional:-->
<erp:AttachmentType>TEXT</erp:AttachmentType>
<!--Optional:-->
<erp:Title>Att001</erp:Title>
<!--Optional:-->
<erp:Content>Hello World</erp:Content>
</typ:attachmentRows>
</typ:uploadAttachment>
</soapenv:Body>
</soapenv:Envelope>
```

Set Up Electronic Signatures and Electronic Records for Maintenance Exception Closure

You must enable the ability to capture the Electronic Signatures and Electronic Records for maintenance exception closure.

Steps for setting up maintenance exception closure:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Configure Electronic Signature Preferences
2. Select Change Feature Selection.
3. On the Edit Features: Facilities page, select the Enable check box for Capture electronic records and Electronic signatures for SCM Transactions, if not selected already. Then, click Done.
4. Select the organization. You can also add an organization using the Add icon. Then, for the Maintenance Exception Closure transaction, select the Signature Enabled check box.
5. Click Save and Close.

Steps for setting up the business process rule:

1. In the Setup and Maintenance work area, go to the following:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Facilities
- Task: Manage Task Configurations for Supply Chain Management

2. Search for ExceptionClosureApprovalHumanTask and click the task.
3. Select the Assignees tab. On the tab, click Maintenance Exception and then select Go to Rule.
4. Select the ExceptionClosureApprovalSingleRule.
5. Click the Add icon and then expand the newly added row.
6. Search for ExceptionClosureApprovalHumanTaskPayloadType and select the task.
7. Select organizationCode.
8. Enter the organization code. Then, click Add Approver and select Resource.
9. Enter MNT_QA in the Users field.
10. Select Rule and Click Validate.
11. Click Save and then click CommitTask.

Note: For more information about implementing E-Signatures and generating E-Records, refer to the Implementing E-Signatures and E-Records chapter of the Oracle SCM Cloud Implementing Manufacturing and Supply Chain Materials Management guide.

Set Up Connected Assets and Equipment

Enterprises and manufacturing plants often use smart equipment and assets that can generate and receive operational data and alerts. Operational data can include events related to production updates, such as details on quantities produced, quality inspection results, operational parameters, and alerts related to machine errors or asset failures.

Operational data can also include commands related to set points and program information to be configured on the equipment. You can define set points in a work definition operation, which are used by the equipment to execute the operation for an item corresponding to the work definition.

You can use the data from smart equipment and assets to automate tasks in Manufacturing and Maintenance, such as automatically updating production quantities, performing quality inspections, collecting process parameters, and generating exceptions and maintenance work orders for faults and errors.

Before you start

You need to provision and configure the **SCM Core Service- Smart Operations** service on your instance before you can capture and evaluate events from connected assets in Maintenance and connected equipment in Manufacturing.

To enable this service, you need to log a Service Request (SR). For Manufacturing, use the following SR details:

- Select Product Module - Oracle Fusion Manufacturing Cloud Service.
- Select Category - Work Execution.
- Select Subcategory - Manage Work Orders.
- Select Component: Installation Issue (INSTALL).
- Copy and paste this text into description area of the SR: Enable the SCM Core Service-Smart Operations.

For Maintenance, use the following SR details:

- Select Product Module: Oracle Maintenance Cloud Service.
- Select Category: Maintenance Work Orders.
- Select Subcategory: Maintenance Work Orders.
- Select Component: Installation Issue (INSTALL).
- Select Severity: 3-Minimal Loss of Service.
- Copy and paste this text into description area of the SR: Enable the SCM Core Service-Smart Operations.

Note: You only need to create one SR, using either category, if you are using both Manufacturing and Maintenance.

Once the **SCM Core Service- Smart Operations** service is enabled on your Oracle Public Cloud region instance, follow the implementation steps described in the following sections.

Note: Your IIoT environment or external system should be available and configured. You should have connected your assets and machines, and created the required attributes to identify and generate data.

About Operational Events

Smart equipment and assets can generate events related to production updates, such as details on quantities produced, quality inspection results, and operational parameters. Operational events can also include alerts, anomalies, and failure predictions related to machine errors or asset failures.

Smart Operations currently support the following standard event types:

- **Operation Execution Start:** Indicates the start of a work order operation at a workstation. This event type has the following data attributes:
  - `WORK_ORDER_NUMBER`: Required string.
  - `OPERATION_SEQUENCE`: Required number.
  - `EXECUTION_RUN_NUMBER`: Optional number.
- **Multiple Operations Start:** Indicates the start of multiple work order operations at a workstation. This event type has the following data attributes:
  - `WORK_ORDER_OPERATIONS`: BLOB value that includes the work order number (`WORK_ORDER_NUMBER`) and operation sequence (`OPERATION_SEQUENCE`) details for multiple work order operations.
- **Operation Execution Stop:** Indicates the stopping of work order operation execution at a workstation. This event type has no data attributes.

- **Quantity Report:** Reports production quantities, such as completed and rejected quantities, for a work order operation at a workstation. Also reports inspection results that includes values for the inspection characteristics. This event type has the following data attributes:
  - `SERIAL_NUMBER`: Optional string.
  - `QUANTITY_REPORT_TYPE`: Required string. Allowed values are `COMPLETE`, `REJECT`, and `INSPECT`.
  - `QUANTITY`: Required number.
  - `FLOW_SCHEDULE_NUMBER`: Optional string for flow schedules in flow manufacturing.
  - `INSPECTION_CHARACTERISTICS`: BLOB value that supports multiple inspection characteristics with their values (`value`), inspection comments (`comments`), and `attachments`, as applicable. Required only if the `QUANTITY_REPORT_TYPE` is `INSPECT`.

    The characteristics should use the inspection characteristic names. For example:

```
{
 "entityCode": "RT39578219-2712",
 "eventTypeCode": "CA_QUANTITY_REPORT",
 "eventTime": "2024-06-04T13:21:14Z",
 "data": {
 "QUANTITY": 1,
 "SERIAL_NUMBER": "SR001",
 "QUANTITY_REPORT_TYPE": "INSPECT",
 "INSPECTION_CHARACTERISTICS": {
 "temperature": {
 "value": 23,
 "comments": "In Range",
 "attachments": [
 {
 "fileName": "TemperatureReading.jpg",
 "mimeType": "image/jpeg",
 "content": "placeholder for image content"
 }
 ]
 },
 "pressure": {
 "value": 3500,
 "comments": "Not in Range",
 "attachments": [
 {
 "fileName": "PressureReading.jpg",
 "mimeType": "image/jpeg",
 "content": "placeholder for image content"
 }
 ]
 }

 }
}
```

    The locale for the characteristic name should also be included in the header. The default is English (`en`).

    Optional attributes should be included only if they contain data.
  - `OPERATION_COMPLETE`: Optional string. Allowed values are `True` and `False`. Marks a process operation as complete, or the last discrete operation as undercomplete.
  - `PRODUCT_ITEM_DETAILS`: BLOB value that identifies details for a controlled item in the last operation of a discrete work order. Depending on the item, details can include secondary quantity (`SECONDARY_QUANTITY`), license plate number (`LICENSE_PLATE_NUMBER`) in case the completion subinventory is LPN-enabled, serial number (`SERIAL_NUMBER`) under serial details (`SERIAL_DETAILS`), and lot details (`LOT_DETAILS`), such as Lot

number (LOT_NUMBER), parent lot number (PARENT_LOT_NUMBER), lot quantity (LOT_QUANTITY), expiration date (LOT_EXPIRATION_DATE), and grade (GRADE).
    - WORK_ORDER_NUMBER: Optional string that identifies the work order number when executing simultaneous operations.
    - OPERATION_SEQUENCE: Optional number that identifies the operation sequence when executing simultaneous operations.
- **Product Report:** Reports outputs that are configured for the manual completion type. The report can include the following outputs:
    - Primary product (Process work orders)
    - Co-products and by-products (Process and Discrete work orders, where applicable)
    - Ad hoc outputs (treated as by-products)

  This event type has the following data attributes:
    - PRODUCT_ITEM_NUMBER: Required string.
    - QUANTITY: Required number.
    - SECONDARY_QUANTITY: Optional number.
    - SERIAL_DETAILS: BLOB value that identifies the serial details for a serial-controlled product. One serial number (SERIAL_NUMBER) is allowed per event.
    - LOT_DETAILS: BLOB value that identifies the lot details for a lot-controlled product based on the item and inventory setup. Lot number (LOT_NUMBER), parent lot number (PARENT_LOT_NUMBER), lot quantity (LOT_QUANTITY), expiration date (LOT_EXPIRATION_DATE), and grade (GRADE) can be provided.
    - LICENSE_PLATE_NUMBER: Optional string. Identifies the LPN if the completion subinventory is LPN-enabled.
- **Asset Fault:** Indicates a fault generated by a connected equipment or asset. Faults are associated with fault codes and can be of types diagnostic and failure. This event type has the following data attributes:
    - FAULT_CODE: Optional string.
    - FAULT_TYPE: Optional string. Allowed values are: FAILURE and DIAGNOSTIC.
- **Asset Status:** Indicates the status of the connected equipment or asset, such as idle, in-use, or down. This event type has the following data attribute:
    - STATUS: Required string. Allowed values are: IN_USE, IDLE, and DOWN.
- **Operational Parameters:** Includes connected equipment attributes to be collected in the context of the operation being performed. These can also be used to detect anomalous behavior. Operational parameters are measurable variables, conditions, or metrics that control and influence the production process's performance, quality, and efficiency. Operational parameters can include process parameters, such as temperature, pressure, or speed, and environmental parameters, such as humidity and sterility, that directly impact product attributes.
    - Parameter Codes: Optional strings. Should be one of the defined operational parameters and at least one should be present.

  > **Note:** See *Create and Use Process Operational Parameters in Work Definitions* in the Using Manufacturing guide for more information on creating operational parameters.

- **Meter Readings:** Includes the usage or operational status of connected equipment or an asset, such as the odometer reading for a vehicle or the hours of operation for a machine. You can use the meter readings to track asset utilization and trigger alerts or maintenance work orders when certain threshold conditions are met for proactive, meter-based preventive maintenance.
    - METER_READINGS: BLOB value that supports multiple "`key: value`" pairs. The keys should use the meter code.

> **Note:** See *How You Create Meters for an Asset* in the Using Maintenance guide for more information on creating asset meters.

- **Failure Prediction:** Reports a predicted failure for a monitored entity, such as a machine or an asset. This event type has the following data attributes:
  - `NAME`: Required string. Identifies the prediction type. It's recommended to use `"machine_failure"` for failure predictions on machines.
  - `DESCRIPTION`: Required string. Identifies the prediction detection used for the entity.
  - `PROBABILITY`: Required number. Provides the probability of the failure prediction.
  - `PREDICTION_WINDOW_IN_HOURS`: Required number. Provides the time window within which the failure is predicted.
  - `PREDICTION_WINDOW`: Required object with two timestamps. Provides the start and end times of the predicted time window.
  - `CONFIDENCE_INTERVAL`: Optional object with lower and upper confidence levels as provided by the prediction algorithm.
  - `PREDICTED_OPERATIONAL_PARAMS`: Required object with operational parameters predicted at the end of the time window.
  - `PREDICTION_CONTEXT`: Optional object, provides additional context information, which supports multiple `"key:value"` pairs.
- **Anomaly:** Reports detected anomalies of a monitored entity, such as a machine or an asset. This event type has the following data attributes:
  - `ANOMALY_NAME`: Required string. Identifies the anomaly detection used for the entity.
  - `DURATION`: Required number. Provides the duration of the detected anomaly, in seconds, at the time of reporting.
  - `SEVERITY`: Required string. Recommended values are `LOW`, `MEDIUM`, or `HIGH`.
  - `ANOMALY_CONTEXT`: Optional object, provides additional context information, which supports multiple `"key:value"` pairs.

All event types additionally contain the following metadata about the event and the connected equipment or asset that generates the event:

- `entityCode`: Required string. The code for the connected entity, such as the asset number.
- `eventTypeCode`: Required string. The code for the event type, as described in the Fusion application. Possible values are `CA_OPERATION_EXECUTION_START`, `CA_OPERATION_EXECUTION_STOP`, `CA_QUANTITY_REPORT`, `CA_FAULT`, `CA_STATUS`, `CA_OPERATIONAL_PARAMETERS`, `CA_METERS`, `CA_FAILURE_PREDICTION`, and `CA_ANOMALY` corresponding to the standard event types.
- `eventTime`: Required string (date-time). Time when the event occurred in ISO 8601 format.

> **Note:** See *Create Operational Events* in the REST API for Oracle Supply Chain Management Cloud guide for sample payload examples.

Your IIoT environment or external system should have been configured to map the relevant equipment or asset attributes to the event payload attributes specification. This includes the following:

- Direct mapping for attributes that are fetched directly from the connected asset or machine:
  - `FAULT_CODE` (String)
  - `WORK_ORDER_NUMBER` (String)
  - `OPERATION_SEQUENCE` (Number)

    - EXECUTION_RUN_NUMBER (Number)
    - SERIAL_NUMBER (String)
    - QUANTITY (Number)
    - FLOW_SCHEDULE_NUMBER (String)
    - INSPECTION_CHARACTERISTICS(Multiple data types): The various inspection characteristics and their respective data types.
    - Parameter Codes (Number/String): The various operational parameter codes.
    - METER_READINGS (Number): The various meter codes.

- Derived mapping for attributes that are transformed into Oracle-specified event attributes, including the supported List of Values (LoV).

  The STATUS LoV supports the following: IN_USE, IDLE, and DOWN. The QUANTITY_REPORT_TYPE LoV supports COMPLETE, REJECT, and INSPECT.

- Additional optional mappings if required.

  For example, you may need to map fault types to fault codes. Say, fault type FAILURE maps to fault codes E01 and E03, and fault type DIAGNOSTIC maps to fault codes E02 and E04.

Related Topics

- Use REST APIs for Operational Events
- Use MQTT for Operational Events and Commands

About Operational Commands

Operational commands can send set points and program information to be configured on the equipment, or request for asset meter readings.

Smart Operations currently support the following standard command types:

Set Operational Parameters: Lets you send set points and any program information, such as the program file name, to the equipment before starting the operation or during the operation for better control. The parameters include one or more of the predefined operational parameters.

> **Note:** See *Create and Use Process Operational Parameters in Work Definitions* in the Using Manufacturing guide for more information on creating operational parameters.

Request Meters: Lets you request an asset meter reading on demand. The meters include one or more of the predefined meters.

> **Note:** See *How You Create Meters for an Asset* in the Using Maintenance guide for more information on creating asset meters.

To transmit commands to your IIoT environment or external system, you must use Message Queuing Telemetry Transport (MQTT) integration. The command data publishes to the MQTT topic using the following syntax, which contains metadata about the command and the connected equipment or asset that should receive the command:

`command/<assetNumber>/<commandTypeCode>`

Here:

- `command`: Required string. Default syntax on the topic to illustrate that the commands are being published.
- `assetNumber`: Required string. The asset number for the equipment that should receive the command.
- `commandTypeCode`: Required string. The code for the command type, as described in the Fusion application. Possible values are `CA_SET_OPERATIONAL_PARAMETERS` or `CA_REQUEST_METERS` corresponding to the standard command type.
- `data`: Required string. The data that needs to be transmitted to the connected equipment or asset. Here's a sample payload:

```
{
 "data": {
 "parameters" : {
 "NZ_PRESSURE": 100,
 "TEMP_AMB": 30
 }
 }
}
```

Your IIoT environment or external system requires the following to receive the commands:

- Should be subscribed to the publicly reachable MQTT broker for the topic syntax:

  `command/<assetNumber>/<commandTypeCode>.`

  The MQTT broker integration should be added under **Smart Operations Configurations** in Work Execution.
- Should have been configured to map the relevant equipment or asset attributes to the incoming command payload attributes specification. This includes the following:
  - Direct mapping for attributes that can be written back to or requested from the connected asset or machine:

    `Parameter Codes (Number/String): Various operational parameter codes`

    `Meter Codes (String): Various meter codes`
  - Additional optional mappings if required.

    For example, if your application configures the `Temperature` attribute in Fahrenheit, but one of your plants expects it in Celsius, you may need to convert the Unit of Measure (UoM) before writing back onto the connected asset or machine attributes.

Related Topics

- Use MQTT for Operational Events and Commands

Enable Permission Groups

You must enable permission groups to work with connected assets and equipment.

You can enable permission groups for the predefined job role. Alternatively, if you are using your own custom job role for data ingestion, you can enable permission groups and add the appropriate duty role for operational data ingestion to the role hierarchy.

Use the following steps to enable permission groups for the predefined job role:

1. Click **Roles** in the security console.

   To access the security console, click **Navigator > Tools > Security Console**.
2. Search for the `ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB` role.
3. Select the **Edit Role** option from the search result section.
4. Click **Enable Permission Groups** to enable permission groups for the role. Confirm your choice.
5. Click the **Summary** step and click **Save and Close**. You can also navigate to the Summary step by clicking **Next** until you reach the final step.

Use the following steps to use a custom job role:

1. Click **Roles** in the security console.

   To access the security console, click **Navigator > Tools > Security Console**.
2. Search for the `ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB` role.
3. Select the **Copy Role** option from the search result section.
4. Select **Copy top role and inherited roles** in the Copy Options dialog and click **Copy Role**.
5. Optionally edit the name and code for the custom role.
6. Click **Enable Permission Groups** to enable permission groups for the role. Confirm your choice.
7. Click the **Role Hierarchy** step. You can also click **Next** until you reach the Role Hierarchy step.
8. Click the **Roles and Permission Groups** tab and click **Add Role**.
9. Search and add the duty role `ORA_DR_SCM_SMO_INGEST_OPERATIONAL_DATA_DUTY`.
10. Click the **Summary** step and click **Save and Close**. You can also navigate to the Summary step by clicking **Next** until you reach the final step.

Note:

- You should enable permission groups for any predefined or custom roles that you may be using with connected assets and equipment.
- When searching for the duty role (`ORA_DR_SCM_SMO_INGEST_OPERATIONAL_DATA_DUTY`) to add, search by **Roles and Permission Groups** in the Security Console.

To ensure that the changes to the roles have been readily synced, you may need to run the **Import User and Role Application Security Data** and **Retrieve Latest LDAP Changes** scheduled processes:

- See *Schedule the Import User and Role Application Security Data Process* for more help.
- See *Retrieve Latest LDAP Changes* for more help.

Use REST APIs for Operational Events

REST APIs enable creation of events related to the health of connected assets for maintenance, or events corresponding to the operational progress of production activity performed by an equipment resource in a manufacturing plant.

You should have configured the authentication mechanism to post events from your external system or IIoT environment to Smart Operations, as follows:

- The IIoT environment or external system should use OAuth Integration for authentication and authorization to be able to post data for Smart Operations.
- The IIoT environment or external system should have the provision to capture Oracle Client ID, Secret (masked), Scope, Oracle AUTH Token URL, and Oracle Fusion Cloud Endpoint URL.

- The IIoT environment or external system should be able to invoke the Oracle AUTH Token URL with client ID, secret, and scope to retrieve the bearer token.
- The IIoT environment or external system should be able to POST events to the Oracle Fusion Cloud Endpoint URL using the retrieved bearer token.

> **Note:** See *Create Operational Events* in the REST API for Oracle Supply Chain Management Cloud guide for sample payload examples.

Create an Identity Domain Application and Configure Authorization

Generate a client ID and client secret that can be used to configure OAuth integration in your IIoT environment or external system. You can create one or more identity domain applications for each integration.

1. Sign in to your Oracle Identity Cloud Service console as an administrator.
2. From the navigation menu, select **Identity & Security**.
3. Under **Identity**, click **Domains** and select the identity domain.
4. Click **Integrated applications**.
5. On the Integrated applications page, click **Add application.**
6. In the Add application dialog, select **Confidential Application** and click **Launch workflow.**
7. Provide a name for the application. For example, **SMART_OPERATIONS_HTTP_CLIENT**.
8. On the **Configure OAuth** step, select **Configure this application as a client now** under Client configuration.
9. Under Authorization, select **Client credentials**.
10. Under **Token issuance policy** select **Add resources**.
11. Under Resources, click **Add scope**.
12. Search for the scope **spectra-scm-core**.
13. Under Select scope, select `Urn:opc:resource:fusion:{namespace}:scm-core/api/scm-core/operational-data` and click **Add**.

    Here `{namespace}` is your instance namespace.
14. Click **Next**, then **Finish**.
15. Click **Activate** to activate the application.

    You can get the client ID and client secret under the General Information section.

Assign Job Role to the Client ID

Associate the Smart Operations Service Agent job role (`ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB`) or the custom job role with the confidential application Client ID. This ensures that the Client ID generated for OAuth integration in the IIoT environment or external system is authorized to post events to Smart Operations.

1. In the **Security Console**, switch to the **Application Extensions** tab.
2. Under Custom OAuth Client Applications, click your application name.
3. On the application page, click the **Roles** tab.
4. Click **Add** to add the job role.
5. In the Add Role dialog, search for ORA_SCM_SMO_SMART_OPERATIONS_SERVICE_AGENT_JOB.
6. Select and add the **Smart Operations Service Agent** role.

Verify Event Payload Transmission

Invoke the Oracle AUTH Token URL with client ID, secret, and scope to retrieve the bearer token. Post events to the Oracle Fusion Cloud Endpoint URL using the bearer token.

Note: Your external system or IIoT environment should be able to get a SUCCESS response on event POST. If the response is not received, the system should be able to retry to POST the event. Additionally, your external system or IIoT environment should be able to capture the logs of both successful and failed POST events.

What to Do Next

Smart Operations let users create operational rules for asset faults, asset statuses, and operational parameter events. These operational rules evaluate the incoming events and execute automated workflow actions if the rule conditions are met. To create operational rules using Smart Operations, refer to the user guides for Manufacturing and Maintenance:

- *Use Operational Rules for Connected Equipment*
- *Use Operational Rules to Automatically Create Maintenance Work Orders*

Smart Operations maintain a record of operational data and events, such as operation execution start or stop, quantity report events, asset status events, operational parameters, and meter readings. You can view the accepted and rejected operational event records and also view operational events that failed to process. You can also look at operational commands issued to set operational parameter values on the equipment. Use the **Operational Data** task or action in the Work Execution work area to look at operational events and commands.

Use MQTT for Operational Events and Commands

Use an MQTT broker for Smart Operations to be able to subscribe to events published by your external system or IIoT environment. You can also use the broker to publish commands related to set points and program information to be configured on the equipment.

To use the MQTT PUB-SUB mechanism, you need the following:

- You should have an MQTT broker that is publicly reachable. The broker should support MQTT v5 along with capabilities such as shared subscription and QoS = 2.
- Add your broker integration details under **Smart Operations Configurations**.
- Smart Operations support basic authentication with one-way SSL for integration with MQTT brokers. You can use certificates issued by a Certificate Authority (CA). Self signed certificates are not allowed.
- Your IIoT environment or external system should be able to publish events to the publicly reachable broker using the following topic:

  ```
  operational-data/v1/events
  ```

Create the MQTT Broker Integration

You need to specify the connection details for the MQTT broker to subscribe to events and to publish commands to connected equipment and assets.

To configure the MQTT broker:

1. In the Work Execution work area, click the **Smart Operations Configurations** action or task under Manufacturing Setup.
2. Switch to the **Integrations** tab.
3. Click **Create Integration** to create an integration.

   You can only have one broker configured at a time. If you need to update the broker settings, you can edit the integration, or delete and create a new one.

4. Under Details, provide a **Name**, **Code**, and **Description** for the integration. The integration type is MQTT by default.
5. Add the connectivity information:
    - **Broker Host**: The host name for the MQTT broker.
    - **Port**: The port used to connect to the broker host. For example: 8883.
    - **Authentication Type**: Basic authentication is used by default.
    - **User Name** and **Password**: The credentials used to connect to the broker.
6. Click **Create**.
7. To use a certificate issued by a Certificate Authority (CA), click **Add** under Certificates.
8. Paste the certificate content including any certificate chain in the designated area and click **Add**.
9. To verify the connectivity for an integration, click the **Actions** menu for the integration and select **Connectivity Status**.

Verify Event and Command Transmission

For MQTT subscribe, publish the equipment and asset events to the publicly reachable MQTT broker using the topic:

```
operational-data/v1/events
```

For MQTT publish, subscribe to the publicly reachable MQTT broker for the topic syntax:

```
command/<assetNumber>/<commandTypeCode>
```

Use one of the following formats:

- `#`: To subscribe to all the published commands.
- `command/#`: To subscribe to all commands across all assets and equipment.
- `command/#/CA_SET_OPERATIONAL_PARAMETERS`: To subscribe to specific `SET_OPERATIONAL_PARAMETERS` commands across all assets and equipment.
- `command/<assetNumber>/#`: To subscribe a particular asset or equipment to all commands.
- `command/<assetNumber>/CA_SET_OPERATIONAL_PARAMETERS`: To subscribe a particular asset or equipment to specific `SET_OPERATIONAL_PARAMETERS` commands.

What to Do Next

Smart Operations let users create operational rules for asset faults, asset statuses, and operational parameter events. These operational rules evaluate the incoming events and execute automated workflow actions if the rule conditions are met. To create operational rules using Smart Operations, refer to the user guides for Manufacturing and Maintenance:

- *Use Operational Rules for Connected Equipment*
- *Use Operational Rules to Automatically Create Maintenance Work Orders*

Smart Operations maintain a record of operational data and events, such as operation execution start or stop, quantity report events, asset status events, operational parameters, and meter readings. You can view the accepted and rejected operational event records and also view operational events that failed to process. You can also view the accepted and in-error operational commands. Use the **Operational Data** task or action in the Work Execution work area to look at operational events and commands.

Set Up Operational Rules for Connected Assets

Use the **Operational Rules** task in the Maintenance Management work area to create rules that can automatically generate maintenance work orders based on condition events.

After you create an operational rule, you can make it applicable to all the connected assets, specific asset items, or asset item categories. You can restrict the rule applicability to certain locations or operating organizations.

Asset fault events need to be ingested using condition codes of Maintenance. To automatically create work orders, we strongly recommend that you create the corresponding condition codes in Oracle Maintenance for all fault codes sent by the connected asset. The following types of condition codes are supported:

- **Diagnostic Code:** Used for less severe conditions, which are handled by the maintenance engineer. The diagnostic code should be defined in the related Maintenance work definition that covers the necessary work. The diagnostic code is referenced in the work order that is created.
- **Failure Code:** Used for more severe conditions that require immediate maintenance action and may result in the asset being down or not available for manufacturing operations. The work order contains the received fault codes in a Failure Capture Set. If configured, a production quality exception can also be created.

Operational Rules

Operational parameter events need to be ingested using operational parameters defined in Smart Operations. Operational parameters values such as pressure, temperature, and vibration are sent from connected equipment. Operational parameters need to be configured before they can be used in operational rules. Use the Operational Parameter task in Maintenance Management to create or modify operational parameters.

To set up operational rules:

1. Navigate to the Maintenance Management work area.
2. Click the **Tasks** icon and select **Operational Rules** under Maintenance Setup.
   The Operational Rules page shows a list of existing rules. You can create, edit, and delete rules from this page.
3. Click **Create Operational Rule** to create a new rule.
   The New Operational Rule page appears.
4. Under Details, enter a **Name**, **Code**, and **Description** for the operational rule.
5. Optionally enter an **Inactive Date**.
   The operational rule becomes inactive after this date is reached.

6. Add one or more Evaluation Criteria for the operational rule.
    a. Click **Add** under Evaluation Criteria.
    b. Select an **Event Type**.

       You can use the **Asset Fault** or **Operational Parameter** event type for Maintenance.
    c. In the New Conditions dialog, enter a **Rule Name** and **Description**.

       The **Rule Name** is the name for the set of rules or conditions that you add to the evaluation criteria. You can also choose if the evaluation criteria is **Active**.

       The Rules section can contain one or more rule groups. Each rule group in turn can contain multiple rule conditions. The Rules section has operators at the rules and conditions levels, which determine if **Any** or **All** of the condition lines must be met.
    d. Add one or more condition lines for a rule group.

       A condition line defines the rule conditions using an **Attribute**, **Operator**, and **Value**.

       In case of Asset Fault events, you can use any combination of **Fault Code** and **Fault Type** attributes for asset faults. Fault codes and Fault types are sent by connected equipment. Examples of operators include **Equals** and **Not Equals**. For example: `Fault Code equals 700.`

       In case of Operational Parameter events, you can use any Operational Parameter defined in Smart Operations. Examples of operator are equals, not equals, greater than. For example: `Temperature greater than 70.`
    e. If you have multiple condition lines, select **Any** or **All** under **Operator** for the rule group.

       The Operator setting determines if **Any** or **All** of the condition lines must be met.
    f. Optionally add more rule groups and conditions.

       If you have multiple rule groups, select **Any** or **All** under **Operator** for the Rules page. The **Operator** setting determines if **Any** or **All** of the rules must be met.
    g. Click **Save** to save your evaluation criteria.
    h. Optionally add more evaluation criteria.

       The Evaluation Parameters section appears if you have used multiple evaluation criteria. Evaluation parameters define if any or all evaluation criteria need to be satisfied for the operational rule to trigger.
7. Select an **Outcome** for the operational rule.

   The **Outcome** defines the actions that are executed if the evaluation is successful. You can use one of the following for Maintenance:
    - Create maintenance work order.
    - Create maintenance work order and production exception.

   For both of these entries, you can configure work order to happen on the first occurrence, or if an issue persists for a longer time.

   Example 1: If Maintenance Work Orders should be created on any occurrence of the conditions being met, the delay evaluation field should be left unselected (this is the default).

   Example 2: For certain connected assets, faults or operational parameter violations can occur sporadically. This is typically related to noise or temporary situations (e.g. during startup sequence of an asset). If this situation does not persist it is considered harmless and there is no need to create a Maintenance work order. To cover such situation Evaluation Parameters can be specified. In the given example, only events that occur longer than 10 minutes will create a work order, which is specified as the delay interval. Total duration specifies the interval during which such events are considered to belong together. If new occurrences happen after the total duration it is a considered a new situation (such as a new startup sequence) and will not be considered related to the initial occurrence.

8. Optional: Customize work order descriptions. Description templates can contain references to operational parameters as well as context parameters. Context parameters can be:
    - RULE_NAME: rule name of the evaluated rule
    - RULE_CODE: rule code of the evaluated rule
    - ASSET_NUMBER: asset number of the asset which sent the event
    - FAULT_CODE: fault code received from the asset

    Here's an example string you can write for a new work order description that has a context parameter: asset number, and two operational parameters: actual pressure and actual temperature:

    ```
    Temperature and Pressure are above threshold for ${ASSET_NUMBER}. Actual temperature was ${Temperature},
    actual pressure was ${Pressure}.
    ```

9. Optional: Specify condition codes explicitly for a certain outcome. These explicit condition codes are used when the work order is created and are used to identify maintenance programs using these condition codes.

    For example, the condition code used for the Maintenance work order creation is a preconfigured condition code: FC1.

10. Optional: Configure work orders to be created with a failure event set which indicates if the asset is down.
11. Optional: Automatically request meter readings when work orders are created.

21 Supply Chain Collaboration

Supply Chain Collaboration Introduction

Overview of Supply Chain Collaboration

Oracle Supply Chain Collaboration is a collaboration platform that manages cross-company planning and execution processes for Oracle Fusion Cloud Supply Chain & Manufacturing. You use Supply Chain Collaboration with Oracle SCM Cloud Services to get timely updates from your key suppliers and contract manufacturers on important supply chain decisions.

Supply Chain Collaboration supports the following processes:

- Supply collaboration to collaborate on order forecasts with tier 1 and tier 2 suppliers. The supply chain planners publish order forecasts to suppliers. The suppliers can view and analyze the order forecasts and commit to supply the requested item quantities over the planning horizon. The collaboration planners can review and adjust the supplier's commits if necessary. The commits flow to Oracle Planning Central or Oracle Supply Planning, where they're used as supplier capacity.
- Contract manufacturing collaboration to share supplier's (contract manufacturer's) production progress. The suppliers can also view previously submitted updates for their projects. Once uploaded, production reports are automatically submitted to Oracle Fusion Cloud Manufacturing, and the completion status and materials usage status of the contract manufacturing work order is updated.
- Vendor-managed inventory (VMI) enables the supplier to manage items that are located at the buyer's location. You can share on-hand quantities with the supplier, establish minimum and maximum inventory thresholds, and alert the supplier to items requiring replenishment. Suppliers can initiate the replenishment process, which can then be automated by the enterprise using Oracle Fusion Cloud Procurement.
- Business to Business (B2B) message monitoring to see the number of failed or undelivered messages. You can monitor messages for all processes, including order-to-cash and source-to-settle. The administrators can investigate the details and reprocess the failed messages when appropriate.

Supply Collaboration

Overview of Supply Collaboration

You can use the Supply Chain Collaboration work area to view open collaboration tasks and monitor order forecast commit status. You can also view exceptions that potentially need attention.

In the Oracle Supplier Portal Overview work area, suppliers can participate in supply collaboration by reviewing and responding to order forecasts.

Use supply collaboration to:

- Publish supply plans from Oracle Planning Central or Oracle Supply Planning, which can be analyzed and shared with suppliers as order forecasts. You can collaborate on supply plans published from Planning Central

or Supply Planning using organizations and items defined within the Oracle Fusion product data model or items and organizations defined in Supply Planning imported from an external source system.

> **Note:** A supply plan that's partly defined in an Oracle application and partly in an external system isn't supported.

For more information on collecting planning data from others and external source systems, see the Using Supply Planning guide.

- Allow suppliers to view and analyze the order forecasts and commit by using Supplier Portal, Business to Business (B2B) messaging, or web services.
- Allow Supply Chain Collaboration Planners to review all published forecasts and commits by using the Manage Order Forecasts and Commits page.
- Manage exceptions by using the Supply Chain Collaboration work area. The exceptions may be due to:
    - Past due commits, where the supplier hasn't committed by the agreed commit due date established in the Service Level Agreement (SLA).
    - Forecast changes, where the current cycle forecast quantity has changed from the previous cycle.
    - Commit mismatches, where the committed quantity is less than the forecast quantity for a given date.
- Manage a trading partner network by using the Manage Supply Collaboration Network page.

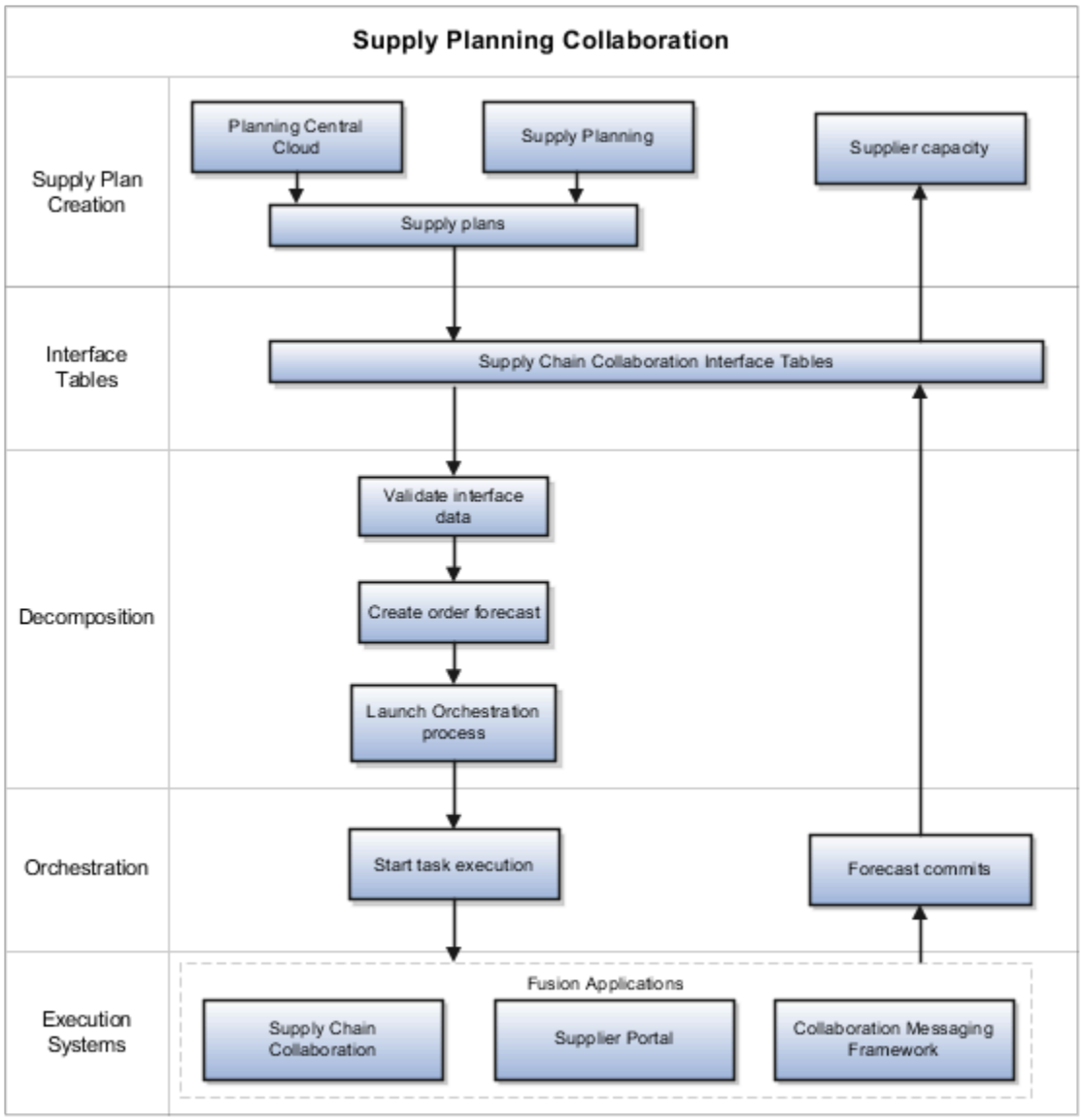
Related Topics

- Supply Collaboration User Roles

Supply Collaboration Components

The supply collaboration process provides you with a seamless flow of information by bringing together supply planning, order forecasts, and supplier commits.

This figure provides an overview of the supply collaboration components:



Based on the process and actions performed, the supply collaboration components are:

- Decomposition
- Orchestration
- Execution systems

The following table describes the supply collaboration components, the internal processes, and the corresponding actions.

Supply Collaboration Components	Internal Process	Actions
Supply plan creation applications	Supply plans are created in Oracle Supply Planning or Oracle Planning Central. The Publish Order Forecast scheduled process filters the supply plan data by: • Supply plan • Organization for supply planning • Planner, which is the Supply Demand Planner ID • Category • Item, which is the enterprise item ID • Supplier • Supplier site	• Record the supply plans in the Supply Planning tables • Record the supply plan data in the Supply Chain Collaboration interface tables after the scheduled process is run
Interface Tables	The data is ready for collaboration.	Store supply forecast and commit data in the Supply Chain Collaboration interface tables
Decomposition	The Supply Collaboration Decomposition scheduled process: • Reads the payloads from the interface tables • Evaluates forecast exceptions • Creates or updates an order forecast, used by Supply Chain Collaboration to publish to suppliers • Assigns and launches the orchestration process Order forecast quantities are sent and stored in daily time buckets. However, they're displayed in weekly, monthly, or period aggregations.	• Create order forecasts • Update order forecast mid-cycle • Launch orchestration process
Orchestration	Orchestrates supply by: • Assigning an orchestration process and starting orchestration • Running the determined business process • Grouping Business to Business (B2B) messages by supplier site per plan	• Publish forecasts to Oracle Supplier Portal and Supply Chain Collaboration • Send B2B messages
Execution systems	Suppliers use the Supplier Portal to process commits for the order forecasts received from Supply Chain Collaboration. Collaboration planners use the Supply Chain Collaboration to process commits on behalf of suppliers.	• Supplier provides commits • Contract Manufacturer reviews order forecasts for their upstream suppliers • Collaboration planner reviews order forecasts and provides commits

The entities that are created and managed during collaboration are:

- Supply plans: Contain the supply orders created for a supply request, which are published to Supply Chain Collaboration. These plans are created in Supply Planning or Planning Central.
- Collaboration plans: Contain the order forecasts based on the supply plans that are eligible for collaboration for a specified collaboration period. These plans are created in Supply Chain Collaboration.
- Order forecasts: Contain the forecast and commit quantities by the suggested date that's used to create the time bucket.

Supply Collaboration Flow

The supply collaboration process flow includes the following steps:

1. A Supply Chain Planner uses Oracle Fusion applications, such as Oracle Supply Planning or Oracle Planning Central to create supply plans. The supply plans can use organizations and items defined within the Oracle Fusion product data model or imported from an external source system.
2. The Supply Chain Planner decides which supply plan data to send to Oracle Supply Chain Collaboration. The data can be filtered by attributes such as suppliers, items, and so on.
3. Supply Chain Collaboration receives the supply plans and stores the supply plans in interface tables.
4. Supply Chain Collaboration decomposition process decomposes the supply plans and creates order forecasts.
5. The orchestration process publishes the order forecasts to the suppliers through Oracle Supplier Portal, B2B Messaging using Oracle Fusion Collaboration Messaging, or web services.
6. The Supply Chain Collaboration Planners and the Supplier Demand Planners can view the open collaboration tasks.
7. The Supply Chain Collaboration Planners and the Supplier Demand Planners can view the exceptions that potentially need attention arising due to various reasons, such as past due commits, forecast changes, and forecast commit mismatches.
8. The Supplier Demand Planners can review each time bucket request and commit to supply the requested item quantity in Supplier Portal. The Supply Chain Collaboration Planners can search and view all the published order forecasts and commits on the Manage Order Forecasts and Commits page. The Supply Chain Collaboration Planners can also update order commits on behalf of a supplier.
9. The orchestration process triggers decomposition of the order commits from suppliers and stores the order commits in interface tables.
10. The Supply Chain Planners can pull supplier commits back into Supply Planning or Planning Central Cloud Service as supplier capacity.

Related Topics

- Supply Collaboration User Roles
- Publish Order Forecast
- Receive Supplier Commits

Supply Collaboration User Roles

Here are the supply collaboration user roles:

User Role	Description
Supply Chain Planner	• Manages supply plans in Oracle Planning Central or Oracle Supply Planning • Releases order forecasts to suppliers requesting order commits
Supply Chain Collaboration Planner	• Reviews order forecasts and supplier commits • Reviews and manages exceptions around supply planning commits • Updates commits on behalf of a supplier
Supplier Demand Planner	• Reviews order forecasts • Provides commits to order forecasts using supplier portal, collaboration messaging, or direct web services
Supply Chain Application Administrator	• Manages supply collaboration network • Manages collaboration plans • Manages collaboration planners • Defines aggregation schedules • Enables and reviews Business to Business (B2B) messages
Supply Chain Integration Specialist	• Uses the Export Collaboration Order Forecasts scheduled process

Contract Manufacturing Collaboration

Overview of Contract Manufacturing Collaboration

Contract manufacturing collaboration enables suppliers and the original equipment manufacturers to manage production reports and manufacturing transactions.

Related Topics

- Contract Manufacturing Collaboration User Roles

Contract Manufacturing Collaboration with Suppliers

The contract manufacturing collaboration process enables suppliers (contract manufacturers) to manage production reports.

In the Oracle Supplier Portal Overview work area, the supplier can:

- Navigate to the collaboration area and upload production reports to update manufacturing progress. The transactions uploaded by the supplier are automatically submitted to manufacturing so that the completion status and materials usage status of the contract manufacturing work order can be updated.

- Search and view completed production reports for their assigned purchase orders.

Contract Manufacturing Collaboration with Original Equipment Manufacturers

The contract manufacturing collaboration process enables the original equipment manufacturers (OEM) to track contract manufacturer's manufacturing progress.

OEM can navigate from Oracle Supply Chain Collaboration, the Supply Chain Collaboration work area or Oracle Supply Chain Orchestration, the Supply Lines Overview work area to:

- Search for and view the supplier-provided updates for the in-progress contract manufacturing purchase orders.
- Resubmit a report to manufacturing if the automatic submission fails.

Contract Manufacturing Collaboration Flow

The contract manufacturing collaboration process flow includes the following steps:

1. The Supply Chain Operations Manager can view the contract manufacturing production reports submitted by suppliers (contract manufacturers) in Oracle Fusion Supply Chain Collaboration, the Supply Chain Collaboration work area or in Oracle Fusion Supply Chain Orchestration, the Supply Lines Overview work area.
2. The Supply Chain Operations Manager can view the supply orders that are in jeopardy and navigate to the manufacturing application to view the details of the supply order.
3. The Supply Chain Operations Manager can contact the supplier for more information about the supply order in jeopardy.
4. The Supplier Inventory Manager can navigate to the Manage Production Reports page to upload production reports to update manufacturing progress in Oracle Fusion Cloud Manufacturing.
5. The Supply Chain Operations Manager can view the updated production report by using Supply Chain Collaboration or Supply Chain Orchestration.

Related Topics

- Contract Manufacturing Collaboration User Roles

Contract Manufacturing Collaboration User Roles

The following table describes the contract manufacturing collaboration user roles:

User Role	Description
Supplier Inventory Manager	This role is assigned to suppliers (contract manufacturers) to: • Access Oracle Supplier Portal • View summary reports

User Role	Description
	• Navigate to the collaboration area and provide manufacturing or production report updates
Supply Chain Operations Manager	This role is assigned to original equipment manufacturers (OEM) to: • View supplier-provided updates for the in-progress contract manufacturing purchase orders

Vendor-Managed Inventory

Overview of Vendor-Managed Inventory

Vendor-managed inventory (VMI) is a supply chain management strategy in which a supplier manages items that are located at the buyer's location. You can use the Oracle Supply Chain Collaboration work area to view vendor-managed inventory tasks.

In Supply Chain Collaboration work area, enterprise users such as a vendor-managed inventory analyst can view VMI replenishment item status and supplier-initiated replenishment requests. Supply chain application administrators can manage the VMI network and VMI analysts.

In the Oracle Supplier Portal work area, suppliers can monitor on-hand quantities and replenishment status for the items they manage. If enabled, suppliers can also initiate the replenishment process by creating replenishment requests and adjust minimum and maximum inventory thresholds.

You can use the vendor-managed inventory features to:

- Allow suppliers to view and analyze on-hand quantities by using Supplier Portal or Vendor-Managed Inventory Items REST service.
- Share enterprise determined minimum and maximum inventory thresholds or even allow the supplier to manage these thresholds using Supplier Portal or Vendor-Managed Inventory Items REST service.
- Allow suppliers to initiate the replenishment process by submitting replenishment requests using Supplier Portal or Vendor-Managed Inventory Replenishment Requests REST service.
- Provide visibility to the entire replenishment life cycle for items managed by the supplier using Supplier Portal.
- Allow a VMI analyst to monitor the replenishment status of all replenishment items and supplier-initiated replenishment requests using the Manage Inventory page or web services.
- Allow a supply chain application administrator to manage VMI relationships by using the Manage VMI Network page or Vendor-Managed Inventory Relationships REST service.
- Allow a supply chain application administrator to manage VMI analysts by using the Manage VMI Analyst page or Vendor-Managed Inventory Analysts REST service.

Vendor-Managed Inventory Components

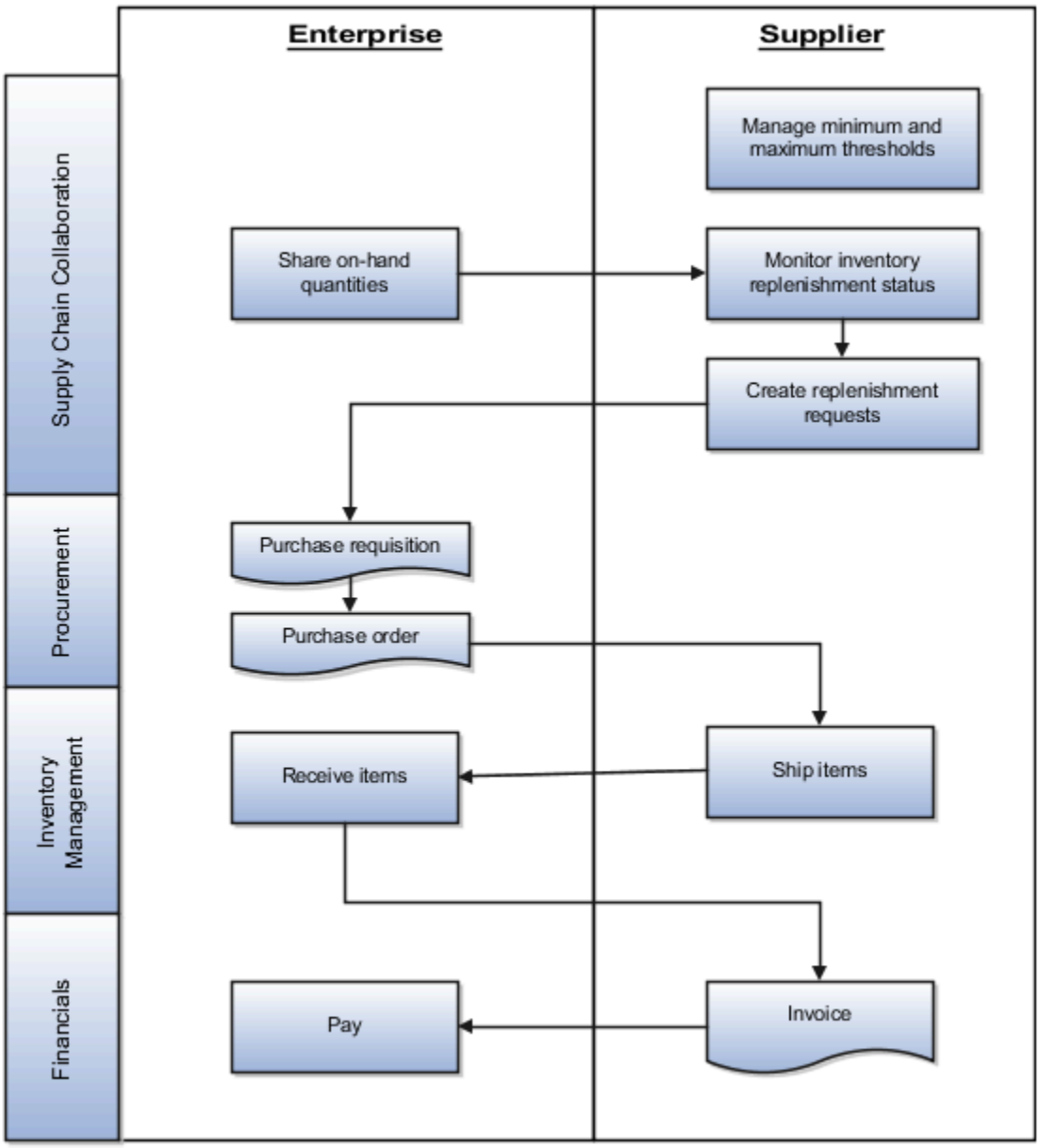
Vendor-managed inventory (VMI) provides visibility into the entire replenishment process. VMI enables the supplier or the enterprise user to own inventory planning and replenishment creation activities.

Based on the process and actions performed, VMI tasks are performed in the following product work areas:

- Oracle Fusion Cloud Supply Chain Collaboration
- Oracle Fusion Cloud Procurement
- Oracle Fusion Cloud Inventory Management
- Oracle Fusion Cloud Financials

VMI When Supplier Owns Inventory Planning and Replenishment

This figure provides an overview of VMI when a supplier owns inventory planning and replenishment:



Note: The process illustrates the supplier as the min-max quantity source. However, this process also supports the enterprise as the min-max quantity source. Min-max quantities can be manually updated or automatically calculated using the Calculate Min-Max Planning Policy Parameters scheduled process. For more information, see the Oracle Supply Chain Management Using Inventory Management guide.

Work Areas	VMI Process	Actions
Supplier Portal	Supplier updates the item's minimum and maximum quantities	Suppliers provide minimum and maximum thresholds
Inventory Management	Enterprise maintains on-hand quantities in Inventory Management	Share on-hand quantities with suppliers and VMI analysts
Supplier Portal	Calculate replenishment status using on-hand quantities and minimum and maximum thresholds	Suppliers create replenishment requests
Supply Chain Collaboration	Replenishment request is transformed into an externally managed purchase requisition using the Purchase Request web service	NA
Procurement	Based on a blanket purchase agreement, a purchase order is generated from the requisition, either automatically or manually	Create and approve the purchase order If the requisition is not automatically converted into a purchase order. You can search for requisitions requiring manual processing, using the Process Requisitions and View Requisition Lines tasks. Enterprise users can find the number of the generated purchase requisition using the Manage Replenishment Requests page in the Supply Chain Collaboration work area.
Supplier Portal	Purchase order awaits shipment	Supplier creates an advanced shipment notice (ASN) Supplier ships the product
Inventory Management	Enterprise receives the shipment and delivers the items	Create a receipt notice
Supplier Portal	Supplier creates an invoice or enterprise can generate the invoice on behalf of the supplier	Supplier creates an invoice
Financials	Enterprise pays supplier	Enterprise creates a payment notice

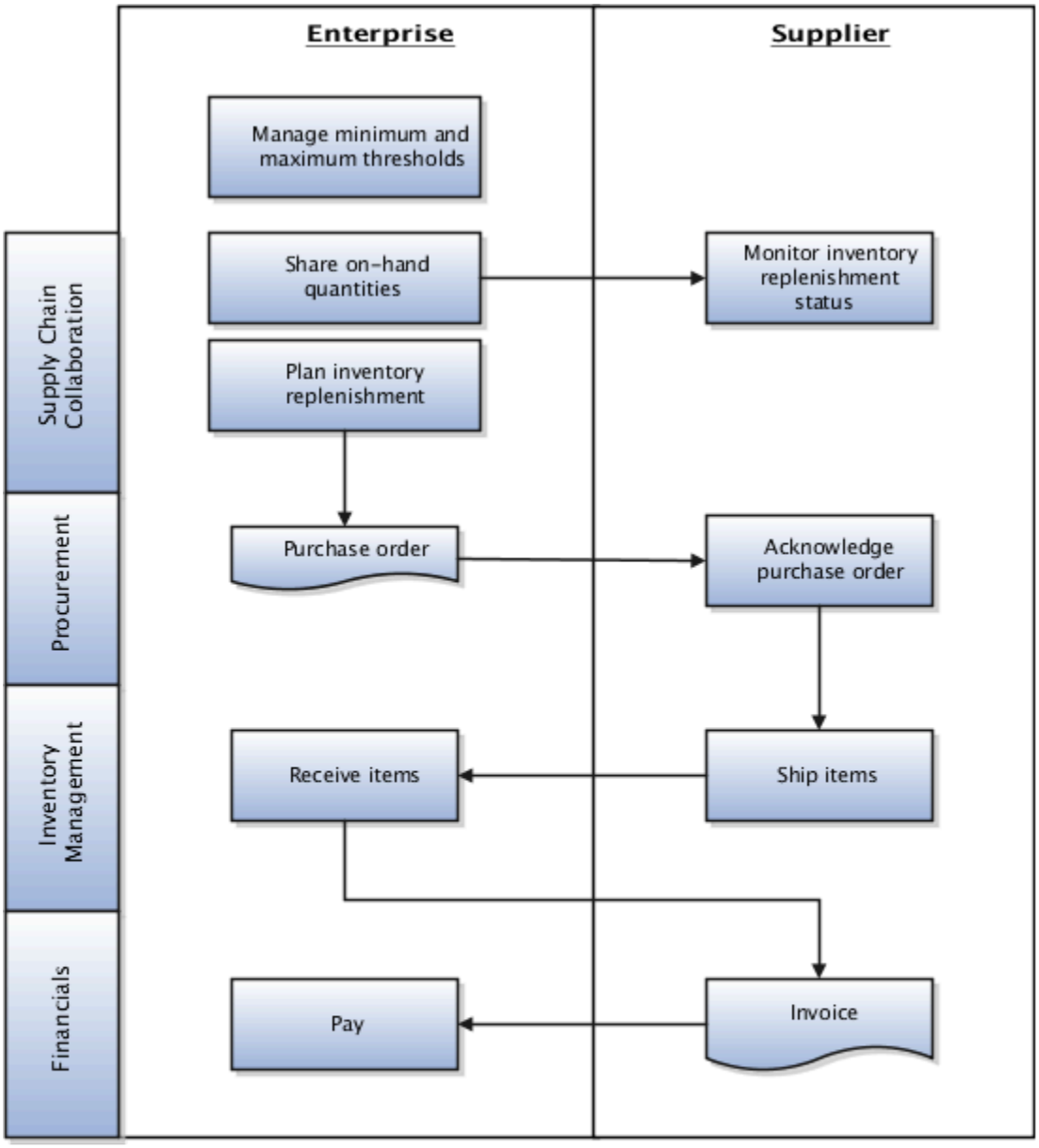
Supplier Inventory Planning Owner Flow

The VMI process flow when a supplier owns inventory planning and replenishment includes the following steps:

1. Depending on who the min-max quantity source is for an item, the enterprise user or the supplier sets the minimum and maximum quantities for the item. If enterprise and VMI relationship scope is organization, min-max quantities are set on the item record. If enterprise and VMI relationship scope is subinventory, min-max quantities are set at the item subinventory. If supplier, min-max quantities are set on the Manage Inventory page in the Supplier Portal work area or using the Vendor-Managed Inventory Items REST service.
2. The supplier monitors the replenishment status of items and decides which items need replenishment. If the on-hand quantity is less than the minimum quantity, the supplier creates a replenishment request.
3. The supplier submits replenishment request, which is then transformed into an externally managed purchase requisition by Supply Chain Collaboration using the Purchase Request web service.
4. Based on a blanket purchase agreement, a purchase order is generated from the requisition either automatically or manually by the buyer. The purchase order is then approved and ready for the supplier to fulfill. For more information on purchase agreements and purchase orders, see the Oracle Procurement Cloud Using Procurement guide.
5. The supplier inventory manager is now able to fulfill the purchase order. They can view the open purchase order quantity in the Purchase Order Quantity column on the Manage Inventory page. They can also navigate to the open purchase orders using the Manage Orders page.
6. The supplier inventory manager is now able to ship the product. The supplier optionally creates an advanced shipment notice (ASN) using **Create ASN** on the Manage Inventory page. Once an ASN is created the quantity shipped now appears as In-Transit Quantity on the Manage Inventory page.
7. The inventory management user receives and delivers the item to its deliver-to location. The supplier inventory manager can view the items awaiting to be delivered using the Received Quantity column on the Manage Inventory page. Once an item has been delivered it will be included in the on-hand quantity.
8. The supplier inventory manager may create an invoice, or an invoice will be automatically generated by the enterprise on behalf of the supplier. The supplier inventory manager can view the invoices associated to a specific replenishment item by using **Review Item Transactions** on the Manage Inventory page.
9. The enterprise processes the invoice and generates a payment. The supplier inventory manager can view the payments associated with a specific replenishment item using **Review Item Transactions** on the Manage Inventory page.

VMI When Enterprise Owns Inventory Planning and Replenishment

This figure provides an overview of VMI when the enterprise owns inventory planning and replenishment:



The following table describes the product work areas, VMI processes, and the corresponding actions.

Work Areas	VMI Process	Actions
Item Record	Enterprise maintains minimum and maximum thresholds on the item or item subinventory	Share minimum and maximum thresholds with suppliers and VMI analysts

Work Areas	VMI Process	Actions
Item Subinventory Record	record. Min-max quantities can be manually updated or calculated using the Calculate Min-Max Planning Policy Parameters scheduled process. To learn more see the Using Inventory Management guide.	
Inventory Management	Enterprise maintains on-hand quantities in Inventory Management	Share on-hand quantities with suppliers and VMI analysts
Supplier Portal	Calculate replenishment status using on-hand quantities and minimum and maximum thresholds.	Suppliers monitor replenishment status
Inventory Management	Enterprise performs inventory replenishment.	Enterprise runs min-max planning report or manually creates purchase orders. For more information, see the Using Inventory Management guide
Supplier Portal	Purchase order awaits shipment	Supplier creates an advanced shipment notice (ASN) Supplier ships a product
Inventory Management	Enterprise receives shipment and delivers items.	Create a receipt notice
Supplier Portal	Supplier creates invoice or enterprise can generate the invoice on behalf of the supplier.	Supplier creates an invoice
Financials	Enterprise pays supplier	Enterprise creates a payment notice

Enterprise Inventory Planning Owner Flow

The VMI process flow when the enterprise owns inventory planning and replenishment includes the following steps:

1. The enterprise user sets the minimum and maximum quantities. If the VMI relationship scope is organization, min-max quantities are set on the item record. If the VMI relationship scope is subinventory, min-max quantities are set on the item subinventory.
2. The enterprise user can also automatically calculate min-max quantities using the Calculate Min-Max Planning Policy Parameters scheduled process. The enterprise user monitors the replenishment status of the item and decides which item needs replenishment. To replenish items, the enterprise user creates purchase orders manually or generates purchase orders automatically by running the min-max planning report. For more information about min-max planning report, see the Using Inventory Management guide
3. Optionally, the generated purchase order can require supplier acknowledgment. The supplier is allowed to make changes to the suggested replenishment at that time. The supplier can view the requiring acknowledgment quantity in the Pending Acknowledgment column on the Manage Inventory page. They can also navigate to the purchase orders using the Manage Orders page.
4. Once acknowledged, the supplier inventory manager is now able to fulfill the purchase order. They can view the open purchase order quantity listed in the Purchase Order Quantity column on the Manage Inventory page. They can also navigate to the open purchase orders using the Manage Orders page.

5. The supplier inventory manager is now able to ship the product. The supplier can optionally create an advanced shipment notice (ASN) using **Create ASN** on the Manage Inventory page. Once the ASN is created, the quantity shipped now appears as In-Transit Quantity on the Manage Inventory page.
6. The inventory management user receives and delivers the item to its deliver-to location. The supplier inventory manager can view the items awaiting to be delivered using the Received Quantity column on the Manage Inventory page. Once an item is delivered it will be included in the on-hand quantity.
7. The supplier inventory manager may create an invoice, or an invoice will be automatically generated by the enterprise on behalf of the supplier. The supplier inventory manager can view the invoices associated to a specific replenishment item using **Review Item Transactions** on the Manage Inventory page.
8. The enterprise processes the invoice and generates a payment. The supplier inventory manager can view the payments associated to a specific replenishment item using **Review Item Transactions** on the Manage Inventory page.

Vendor-Managed Inventory User Roles

The following table describes the vendor-managed inventory (VMI) user roles:

User Role	Description
Vendor-Managed Inventory Analyst	An enterprise user who can perform the following tasks using Oracle Supply Chain Collaboration work area and REST services: • Monitor replenishment status using the Manage Inventory page and infolets • View on-hand quantities for replenishment items • View min-max inventory thresholds • Review replenishment item transactions • Monitor replenishment requests using the Manage Replenishment Requests page and the Replenishment Requests infolet • Monitor the replenishment life cycle by viewing replenishment item transactions and the Replenishment Life Cycle infolet
Supply Chain Application Administrator	An enterprise user who can perform the following tasks: • Manage VMI network relationships • Manage VMI analysts • Manage network and enterprise user data security using REST services
Supplier Inventory Manager	A supplier user who can perform the following tasks using Oracle Supplier Portal work area and REST services: • Monitor replenishment status using the Manage Inventory page • View on-hand quantities for replenishment items • View and provide minimum and maximum inventory thresholds • Create replenishment requests • Monitor the replenishment life cycle by viewing replenishment item transactions

B2B Messaging

Overview of B2B Messages

Business to Business (B2B) messages exchange information among trading partners about key transactions in the supply collaboration and order-to-cash. Oracle Supply Chain Collaboration uses Oracle Collaboration Messaging to better manage B2B communications with large numbers of suppliers.

For a supplier to exchange B2B messages, you must first enable the business processes in Collaboration Messaging and then using these steps you can configure the B2B messaging set up for a supplier site:

1. In the Supply Chain Collaboration work area, select **Manage Supply Collaboration Network** from the task menu.
2. Search for and select a supplier site.
3. From the **Actions** menu click **Edit Collaboration Configuration**.

   The Edit Supplier Collaboration Configuration page is displayed, with the supplier information displayed at the top of the page and the Trading Partner Assignment and Document Setup tabs. You use the Trading Partner Assignment tab to set up the trading partners that your supplier will exchange B2B messages with and the Document Setup tab to define the documents exchanged with each trading partner.

For more information about setting supplier up for B2B messaging, see *Oracle Fusion Configuring and Managing B2B Messaging* guide.

Using the Supply Chain Collaboration work area, the collaboration planner can:

- View a count of the failed and undelivered messages.
- View details of the failed and undelivered messages.
- Contact the B2B administrator to investigate the failed and undelivered messages and reprocess them.

Supply Chain Collaboration Setup

How You Set up Supply Chain Collaboration

You can define the configuration settings for Oracle Fusion Supply Chain Collaboration in the Setup and Maintenance work area.

The following table describes the tasks to set up Supply Chain Collaboration:

Setup Tasks	Description
Manage supply chain collaboration settings	You can manage the settings for Supply Chain Collaboration

Setup Tasks	Description
Manage supply chain collaboration messages	You can create your own messages, but it is recommended to use the predefined messages and edit the messages
Manage supply chain collaboration lookups	You can edit only the names of those predefined lookups for which extensibility is enabled

Related Topics

- How You Manage Supply Chain Collaboration Settings
- How You Manage Supply Chain Collaboration Messages
- View Supply Chain Collaboration Lookups

Enable Supply Chain Collaboration

In the Offerings work area, enable the Supply Chain Collaboration feature:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Supply Chain Collaboration
- Opt In Task: Click **Enable** to make Supply Chain Collaboration available to suppliers.

Related Topics

- Configure Offerings

Enable Supply Collaboration

In the Offerings work area, enable the Supply Collaboration feature:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Supply Chain Collaboration
- Feature: Supply Collaboration
- Opt In Task: Click **Enable** to make the Supply Collaboration feature available in Oracle Fusion Supply Chain Collaboration.

Related Topics

- Configure Offerings

Enable Vendor-Managed Inventory

In the Offerings work area, enable the Vendor-Managed Inventory feature:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Supply Chain Collaboration
- Feature: Vendor-Managed Inventory
- Opt In Task: Click **Enable** to make the Vendor-Managed Inventory feature available in Oracle Fusion Supply Chain Collaboration.

Related Topics

- Configure Offerings

Manage Supply Chain Collaboration Settings

How You Manage Supply Chain Collaboration Settings

In Oracle Fusion Supply Chain Collaboration, you can set multiple attributes for supply collaboration and vendor-managed inventory.

- Supply collaboration settings allow you to adjust data access and collaboration boundary settings.
- Vendor-managed inventory settings allow you to adjust data access and replenishment settings, such as requisition requester.

Collaboration Settings

Here are the collaboration settings you can manage during implementation:

- Specify dates in the past open for current order forecast and commit collaboration.
- Specify whether to create aggregated time buckets for weeks or periods that do not contain values.
- Specify whether the Publish Order Forecast process has to be run manually after a data is published from Oracle Fusion Cloud Supply Chain Planning to Oracle Supply Chain Collaboration. If set to No, the Publish Order Forecast schedule process is run automatically after a data publish.
- Specify whether to exclude the relationship candidates with zero quantity order forecasts during decomposition process.
- Specify whether to show enterprise user names in Oracle Fusion Cloud Supplier Portal to control the display of the following attributes:
    - The Commit Date, Committed By, Commit Source, Buyer, Supply Plan Publisher, Supplier On-hand Published By, and On-hand Published By attributes, on the Manage Order Forecasts and Commits page.
    - The Buyer attribute, on the Manage Inventory and Manage Replenishment Requests search results pages.
- Specify a default forecast horizon for use when collaboration relationships are being modified for the supply collaboration network.
- Specify a default commit horizon for use when collaboration relationships are being modified for the supply collaboration network.

Overview of Supply Chain Collaboration Data Access

Trading partner collaboration data is commercially sensitive and should be handled carefully. Trading partners wouldn't want the data to be available to unauthorized personnel or shared with competitors. Oracle Fusion Supply Chain Collaboration provides a security framework that enables enterprise collaboration planners and vendor-managed inventory analysts to access only the data that's assigned to them.

Both supply collaboration and vendor-managed inventory allow you to enable or disable enterprise data security.

For example, you have users with the following security context:

Name	Security Context	Context Value
User 1	Full Access	NA
User 2	Supplier	S1
User 3	Supplier	S2
User 4	not configured, but has access to Supply Chain Collaboration	NA

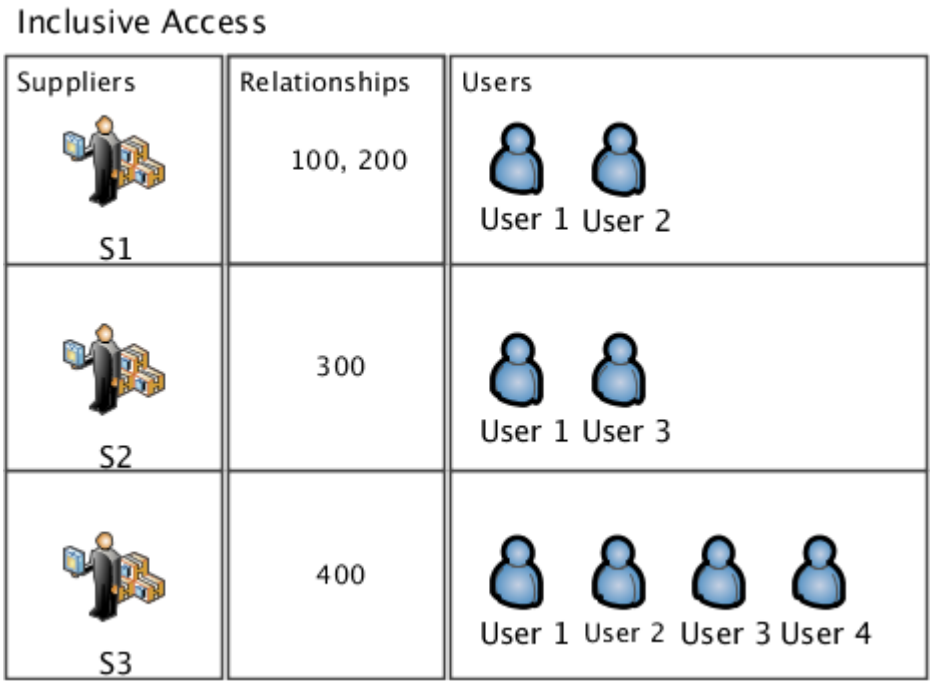
And, you have the following relationships:

Number	Supplier	Organization
100	S1	O1
200	S1	O2
300	S2	O1
400	S3	O3

You can enable data security and specify the default access mode being inclusive or exclusive:

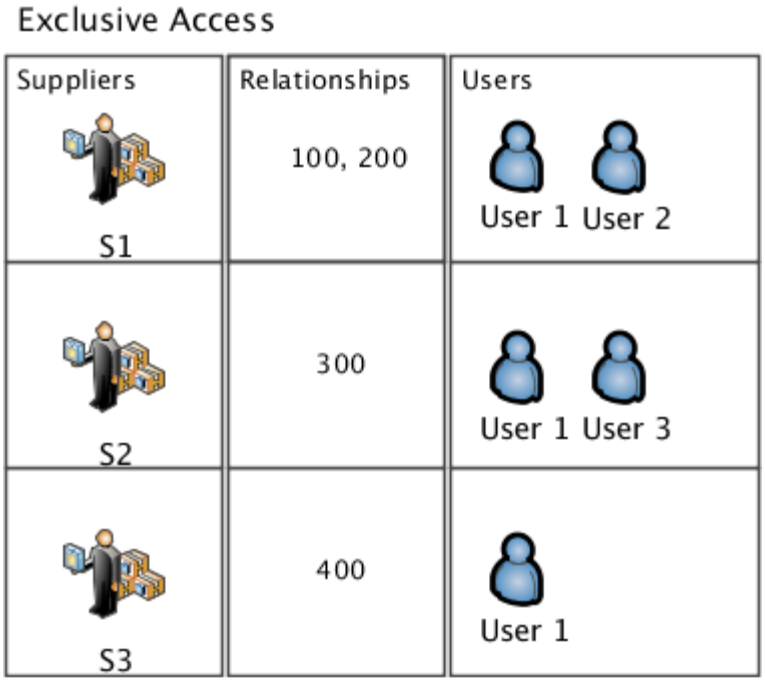
- Inclusive: If the data access is inclusive, the users have access to all suppliers explicitly granted to them and the suppliers that don't have at least one other user assigned. You use the inclusive access mode if most of the relationships are accessible to all users and only a few relationships are confidential.

  This figure illustrates the users with inclusive data access.

  - User 1, as a full access user, has access to order forecast data for all relationships
  - User 2 has access to order forecast data for relationships 100, 200, and 400
  - User 3 has access to order forecast data for relationships 300 and 400
  - User 4, who's not configured as a collaboration planner, has access to order forecast data for relationship 400
- Exclusive: If the data access is exclusive, the users have access only to the suppliers explicitly granted to them. The exclusive access mode is restrictive. You use the exclusive access mode if all the relationships are confidential and you need to explicitly grant access to a few relationships to the user.

This figure illustrates the configuration of users with exclusive data access.



- User 1, as a full access user, has access to order forecast data for all relationships
- User 2 has access to order forecast data for relationships 100 and 200
- User 3 has access to order forecast data for relationship 300
- User 4, who's not configured as a collaboration planner, doesn't have access to any order forecast data

Implementation Considerations

When securing enterprise users, it's recommended to select one hierarchy for each user. When adding the organization security context, you grant the user access to all suppliers shipping items to the ship-to organization. Conversely, when adding the supplier security context, you grant the user access to all suppliers shipping items from the ship-from supplier. If you want to use more than one hierarchy, it's recommended to use the drill to feature to verify the list of relationships the user has access to.

Data access controls the transaction data for both supply collaboration and vendor-managed inventory. It doesn't control access to administration and setup data, such as managing supply collaboration networks and managing vendor-managed inventory networks.

Collaboration Planning Data Access

In Oracle Fusion Supply Chain Collaboration, collaboration planning data access provides the ability to restrict enterprise collaboration planner's access to only the collaboration order forecasts that are assigned to them.

You can do the following:

- Secure order forecast data by suppliers, supplier sites, and organizations.

- Assign suppliers, supplier sites, or organizations to collaboration planners.
- Limit the data displayed on Supply Collaboration infolets.
- Limit the collaboration order forecasts returned on the Manage Order Forecast Commits page.

Data access controls only the order forecast data. The administration data, such as collaboration relationships will be visible to users with the Supply Chain Application Administrator role.

Configure Collaboration Planning Data Access

To configure the data access in Oracle Fusion Supply Chain Collaboration:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Collaboration Planning tab, the Data Access Security section, set the **Enable data access security** option to one of the following values:
    - **No** to disable access to manage collaboration planners, search for relationships by collaboration planner, or restrict access to enterprise users by using supplier or supplier site. This is the default value.
    - **Yes** to enable access to manage collaboration planners, create and edit collaboration planners, search for relationships by collaboration planner, and restrict access to enterprise users by using supplier or supplier site.
3. If the **Enable data access security** option is set to **Yes**, set **Allow full access if no data access is assigned** to one of the following values:
    - **No** (exclusive) to enable collaboration planners access to supplier sites explicitly granted to them. This is the default value.
    - **Yes** (inclusive) to enable collaboration planners access to all supplier sites explicitly granted to them and to supplier sites that don't have at least one other active collaboration planner assigned.
4. Click **Save and Close**.

Vendor-Managed Inventory Data Access

In Oracle Fusion Supply Chain Collaboration, vendor-managed inventory (VMI) data access provides the ability to restrict enterprise VMI analyst's access to only the VMI replenishment data that's assigned to them.

You can do the following:

- Secure VMI data by suppliers and organizations.
- Assign suppliers or organizations to VMI analysts.
- Limit the data displayed on VMI infolets.
- Limit the replenishment items displayed on the Manage Inventory page.
- Limit the replenishment requests displayed on the Manage Replenishment Requests page.

VMI data access controls only the VMI data. The administration data, such as VMI relationships is visible to users with the Supply Chain Application Administrator role.

Configure Vendor-Managed Inventory Data Access

To configure the vendor-managed inventory (VMI) data access in Oracle Fusion Supply Chain Collaboration:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Vendor-Managed Inventory tab, the Data Access Security section, set the **Enable data access security** option to one of the following values:
    - **No** to disable access to manage VMI analysts and search for replenishment items and replenishment requests by VMI analysts. This is the default value.
    - **Yes** to enable the Supply Chain Application Administrator or Vendor-Managed Inventory Application Administrator to create VMI analysts to set the default access behavior for relationships that don't have an analyst resolved to it.
3. If the **Enable data access security** option is set to **Yes**, set **Allow full access if no VMI analysts are assigned** to one of the following values:
    - **No** (exclusive) to enable relationships that have VMI analysts assigned to access replenishment items and replenishment requests for the relationships. This is the default value. This access isn't applicable to VMI analysts with full access.
    - **Yes** (inclusive) to enable all VMI analysts access to replenishment items and replenishment requests for all the relationships.
4. Click **Save and Close**.

Configure Vendor-Managed Inventory Replenishment Settings

You need a default requisition requester who will be listed as the requisition requester on the generated purchase requisition.

You can add a requisition requester when configuring a vendor-managed inventory (VMI) relationship, which will override the default requisition requester. If you don't define a default requisition requester, the replenishment request can't create a purchase requisition and will result in a failed status.

To configure the vendor-managed inventory replenishment settings in Oracle Fusion Supply Chain Collaboration:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Vendor-Managed Inventory tab, the Replenishment Settings section, select the requisition requester in the **Default Requisition Requester** field.

3. Click **Save and Close**.

Collaboration Boundaries

By default, in Oracle Fusion Supply Chain Collaboration, collaboration planners and suppliers cannot update order forecast quantities and make commitments for time buckets whose start date is in the past.

You can set the collaboration boundaries to enable this behavior so that:

1. Collaboration planners and contract manufacturers can edit order forecasts and commit on behalf of suppliers for past dates
2. Suppliers can provide commitments for past dates

Note: Oracle Fusion Supply Planning does not accept supplier commits in the past buckets.

Set Collaboration Boundaries

To set the collaboration boundaries in Oracle Fusion Supply Chain Collaboration:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Collaboration Planning tab, the Collaboration Boundaries section, set **Dates in the past open for current order forecast and commit collaboration** option to one of the following values:
    - **Days** to select the number of days in the past until when you can update the order forecasts and commits. The default value for number of days is zero.
    - **Current Week** to update the order forecasts and commits for the days in the past for the current week.
    - **Current Period** to update the order forecasts and commits for the days in the past for the current period.
3. Click **Save and Close**.

Create Aggregated Time Buckets Without Order Forecast Values at Week or Period Level

By default, order forecasts are stored and displayed only in time buckets where a forecast value exists. You can enable the creation of empty time buckets for weeks or periods that don't contain order forecast values using the Manage Supply Chain Collaboration Settings page.

When you view order forecasts on the Edit Order Forecast Details page, you can see time buckets for each collaboration relationship. These time buckets start with the first available order forecast and continue to the end of the commit horizon.

Note: Aggregate time buckets for order forecasts will only be created for collaboration relationships for which you have defined a commit horizon.

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Collaboration Planning tab, the Collaboration Settings section, select **Yes** for **Create aggregated time buckets for weeks or periods that don't contain values**. The default value is **No**.
3. Click **Save and Close**.

Note: You can specify a default forecast horizon and a default commit horizon of a maximum of 999 days. However, a user can override these defaults when defining a relationship in the Manage Supply Collaboration Network task.

Related Topics

- Edit Order Forecasts and Commits

Enable Collaboration Using External Source Systems

You can enable collaboration using external source systems and define the item catalog to use for external items on the Manage Supply Chain Collaboration Settings page.

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, Collaboration Planning tab > Source Systems section, select **Yes** for **Enable collaboration using external source systems**. The default value is **No**.
3. Select an item catalog to resolve the item categories for external items.
4. Click **Save and Close**.

Set Default Order Forecasts and Commits Values to Download

You can set the default order forecasts and commits values to download and optionally lock the parameters on the Manage Supply Chain Collaboration Settings page.

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:

- Offering: Manufacturing and Supply Chain Materials Management
- Functional Area: Supply Chain Collaboration
- Task: Manage Supply Chain Collaboration Settings

2. On the Manage Supply Chain Collaboration Settings page, on the Collaboration Planning tab, the Forecast Download Defaults section, set the default values for layout, measures, horizon, commit quantities, and aggregation level.

   Note: The commit quantities override the current commit quantities.

3. Optionally, click the lock icon to hide the attribute selection from the collaboration planner.
4. Click **Save and Close**.

Set Default Number Format for Values in Uploaded or Downloaded Files

You can view the quantity values, such as order forecasts, commitments, replenishment requests, on-hands, minimum quantity, or maximum quantity in the number format and delimiter specified when uploading or downloading spreadsheets for vendor-managed inventory and supply collaboration business processes.

You can set the default number format and delimiter on the Manage Supply Chain Collaboration Settings page.

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Settings task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Collaboration
   - Task: Manage Supply Chain Collaboration Settings
2. On the Manage Supply Chain Collaboration Settings page, on the Collaboration Planning tab or the Vendor-Managed Inventory tab, the File Settings section, set the default values for number format and delimiter. The options include:
   - Number format: Valid values are -1234.567 or User preference. If number format is set to User preference, the number format is determined by the individual user's preferred format, which is set in the Set Preferences work area, the General Preferences > Regional task.
   - Delimiter: Valid values are User preference, Comma, Tab, Semicolon, or Pipe. If delimiter is set to User preference, the delimiter is determined by the individual user's number format: If the number format uses a comma as the decimal separator, then the delimiter is a semicolon. If the number format uses a period as the decimal separator, then the delimiter is a comma.
3. Click **Save and Close**.

Manage Preferences

Use the General Preferences section in the Set Preferences work area to set your preferences.

1. Click **Navigator** > **Set Preferences**.
2. In the Preferences work area, use the **General Preferences** > **Regional** task.

3. You can set these preferences:
    - Select the territory and date format.

      Note: For each territory, not all date formats are supported.

    - Select the number format to be used for quantity values when uploading or downloading spreadsheets. The number formats include the delimiter that will be used.
4. Click **Save and Close**.

Manage Supply Chain Collaboration Messages

How You Manage Supply Chain Collaboration Messages

Oracle Fusion Supply Chain Collaboration provides a set of predefined messages. You can create additional Supply Chain Collaboration messages or edit the existing messages in the Setup and Maintenance work area.

Related Topics

- Create New Supply Chain Collaboration Messages
- Edit Supply Chain Collaboration Messages

Create New Supply Chain Collaboration Messages

To create a new message:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Messages task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration
    - Task: Manage Supply Chain Collaboration Messages
2. On the Manage Supply Chain Collaboration Messages page, click **Actions** > **New**.
3. On the Create Message page, enter the message details.
4. Click **Save and Close**.

Edit Supply Chain Collaboration Messages

To view and edit the predefined messages:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Messages task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Supply Chain Collaboration

- Task: Manage Supply Chain Collaboration Messages

2. On the Manage Supply Chain Collaboration Messages page, select **Supply Chain Collaboration** in the **Application** field, and click **Search**. The available messages appear.
3. Select a message row and click **Actions** > **Edit**.
4. On the Message Properties page, edit the **Short Text** attribute for the message.

   Note: You must not edit any existing message values.

5. Click **Save and Close**.

Manage Supply Chain Collaboration Lookups

View Supply Chain Collaboration Lookups

Oracle Fusion Supply Chain Collaboration provides a set of predefined lookups. Additional setup isn't required for Supply Chain Collaboration lookups.

To view the predefined lookups:

1. In the Setup and Maintenance work area, use the Manage Supply Chain Collaboration Lookups task:
   - Offering: Manufacturing and Supply Chain Materials Management
   - Functional Area: Supply Chain Collaboration
   - Task: Manage Supply Chain Collaboration Lookups
2. On the Manage Supply Chain Collaboration Lookups page, search for the available lookups.

   Note: You must not edit any existing lookup values. If required, you can edit the **Meaning** attribute for a lookup.

Predefined Lookups in Supply Chain Collaboration

The following table lists the predefined lookups available for Oracle Fusion Supply Chain Collaboration:

Lookup Name	Usage	Lookup Value	Description
ORA_VCS_AGGREG_LEVEL	• This is a list of bucket forecast aggregation levels that are displayed in the pivot table • System lookup • No extension possible	ORA_VCS_WEEK_DAY ORA_VCS_PERIOD_DAY ORA_VCS_PERIOD_WEEK	• Aggregation of data by a week and a day in the pivot table • Aggregation of data for a defined period and a day in the pivot table • Aggregation of data for a defined period and a week in the pivot table

Lookup Name	Usage	Lookup Value	Description
ORA_VCS_COLLAB_TYPE_CODE	• This is a list of collaboration type codes that are allowed • System lookup • No extension possible	ORA_VCS_SUPPLY_PLAN	Collaboration on supply forecast with external partners
ORA_VCS_PLAN_BUCKET_TYPE	• This is a list of bucket types that are allowed • System lookup • No extension possible	ORA_VCS_DAILY ORA_VCS_WEEKLY ORA_VCS_MONTHLY	• Daily bucket • Weekly bucket • Monthly bucket
ORA_VCS_PLAN_EDIT_OPTIONS	• This is a list of options that are available to perform a mass update to a forecast document • System lookup • No extension possible	ORA_VCS_CURRENT_FORECAST_VAL ORA_VCS_PREVIOUS_COMMIT_VAL ORA_VCS_INPUT_VAL	• Populate the committed quantity for all selected records with the forecast value • Populate the committed quantity for all selected records with the previous committed value • Populate the committed quantity for all selected records with the value provided
ORA_VCS_PLAN_WATCHLIST	• This is the collaboration plan watch list category • System lookup • No extension possible	ORA_VCS_PLAN_ENT_USER_SAVED	Collaboration plan search saved by a user
ORA_VCS_PROCESS_STATUS	• This is a list of statuses of the forecast commitment process • System lookup • No extension possible	SUCCESS FAILURE PARTIAL SUCCESS IN_PROCESS	• Status if all records are processed successfully • Status if no records are processed successfully • Status if some records are processed successfully • Status if some records are currently being processed
ORA_VCS_PUBLISHER_ORDER_CODE	• This is a list of publisher order codes that are allowed • System lookup • No extension possible	ORA_VCS_SUPPLY_FORECAST ORA_VCS_SUPPLY_COMMIT	• Forecast to supplier • Commitment from supplier
ORA_VCS_WEEKDAY	• This is a list of allowed weekdays in the correct order • System lookup • No extension possible	ORA_VCS_WEEKDAY_SUNDAY ORA_VCS_WEEKDAY_MONDAY ORA_VCS_WEEKDAY_TUESDAY ORA_VCS_WEEKDAY_WEDNESDAY ORA_VCS_WEEKDAY_THURSDAY	• This is Sunday • This is Monday • This is Tuesday • This is Wednesday • This is Thursday • This is Friday

Lookup Name	Usage	Lookup Value	Description
		ORA_VCS_WEEKDAY_FRIDAY ORA_VCS_WEEKDAY_SATURDAY	• This is Saturday

22 E-Signatures and E-Records

Overview of Oracle Electronic Signatures and Electronic Records

You can use Oracle E-Signatures and E-Records to securely capture, store, retrieve, and print e-records and e-signatures.

Critical transactions governed by the US Food and Drug Administration's (FDA) good manufacturing practices requirements have inbuilt validations that necessitate the use of e-signatures and e-records. In E-Signatures and E-Records, the validations are available for critical supply chain management business events for Oracle Manufacturing, Oracle Inventory Management, and Oracle Quality Inspection Management.

Using E-Signatures and E-Records, you can search for, view, and download e-records that contain information about transactions and their e-signature history. You can also specify the supply chain management transaction types for which e-signatures are required, and set up the approval process flows that must be followed.

E-Signatures and E-Records Process Flow

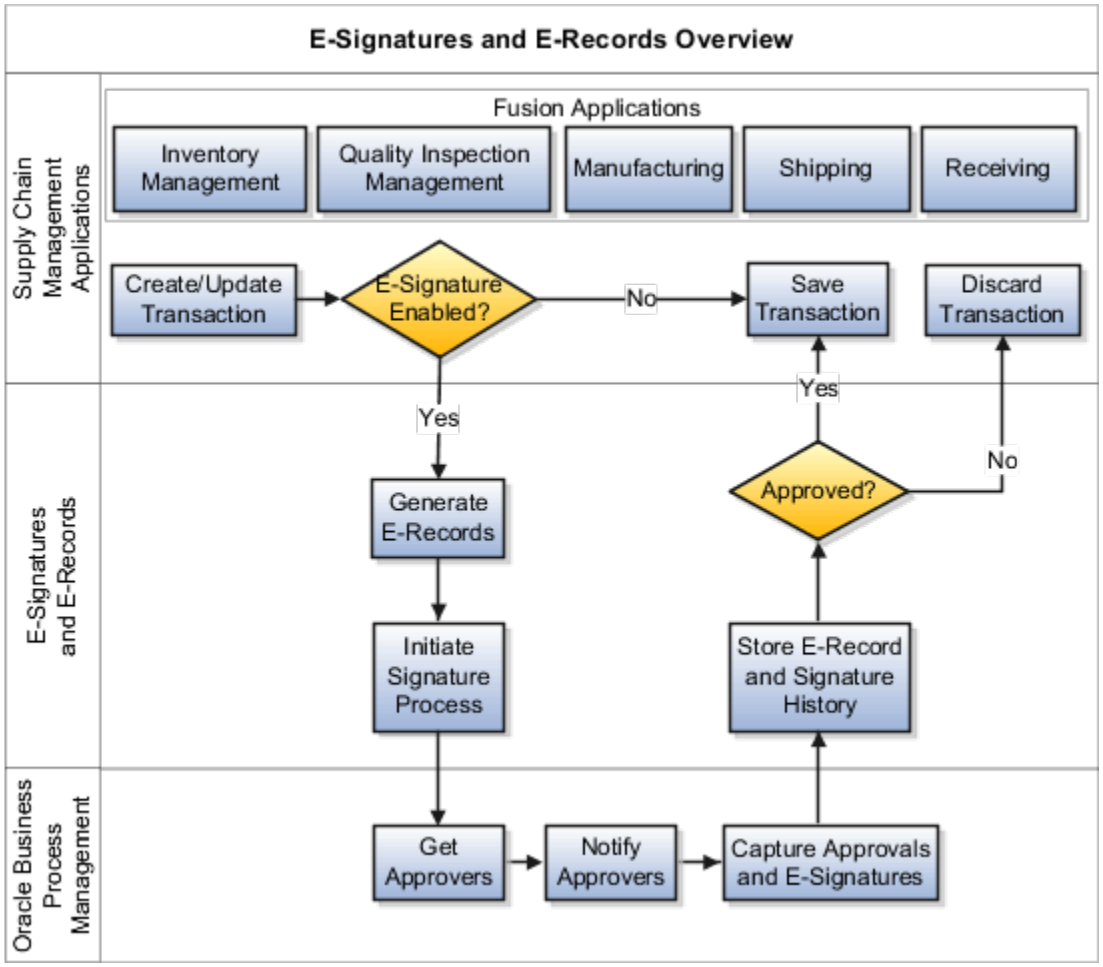
E-Signatures and E-Records facilitates secure transactions for business events in Manufacturing, Inventory Management, and Quality Inspection Management.

The e-signatures and e-records approval processes can be of the following types:

- Inline approval process: In this process, approvals must be obtained before a transaction is saved. You can't save a transaction if the record is rejected.
- Deferred approval process: In this process, transactions are saved in Pending Approval status before initiating the e-signature process. The transaction is updated to Approved status after the approvals are obtained.

How the Inline E-Signature Approval Process Works

Here's the inline approval process workflow. It provides an overview of the inline e-signatures and e-records process, including its integration with the applications requesting approvals using e-signatures.



These steps provide an overview of the inline e-signatures and e-records process:

1. A user initiates the approval process for a transaction from one of the integrated supply chain management applications.
2. The E-Signatures and E-Records process is used to determine if an e-signature is required.
3. If an e-signature is required, the Oracle BPM approval task flow is invoked with a task payload.
4. The E-Signature page opens and displays the e-record details and status.
5. If the user is also an initiator, the user enters the e-signature details and approves the e-record.
6. A notification is sent to other approvers through Oracle notifications.
7. Other approvers view the Pending Notifications in Oracle Fusion Cloud Applications, and click the notification to open and approve the E-Signature page.
8. On the E-Signature page, the other approvers read the e-record, enter their user ID and password, and approve it. Approvers can refresh the E-Signature page to update the e-record status displayed on the page.
9. On receiving the approval from E-Signatures and E-Records, the user changes the transaction status, and commits the transaction.

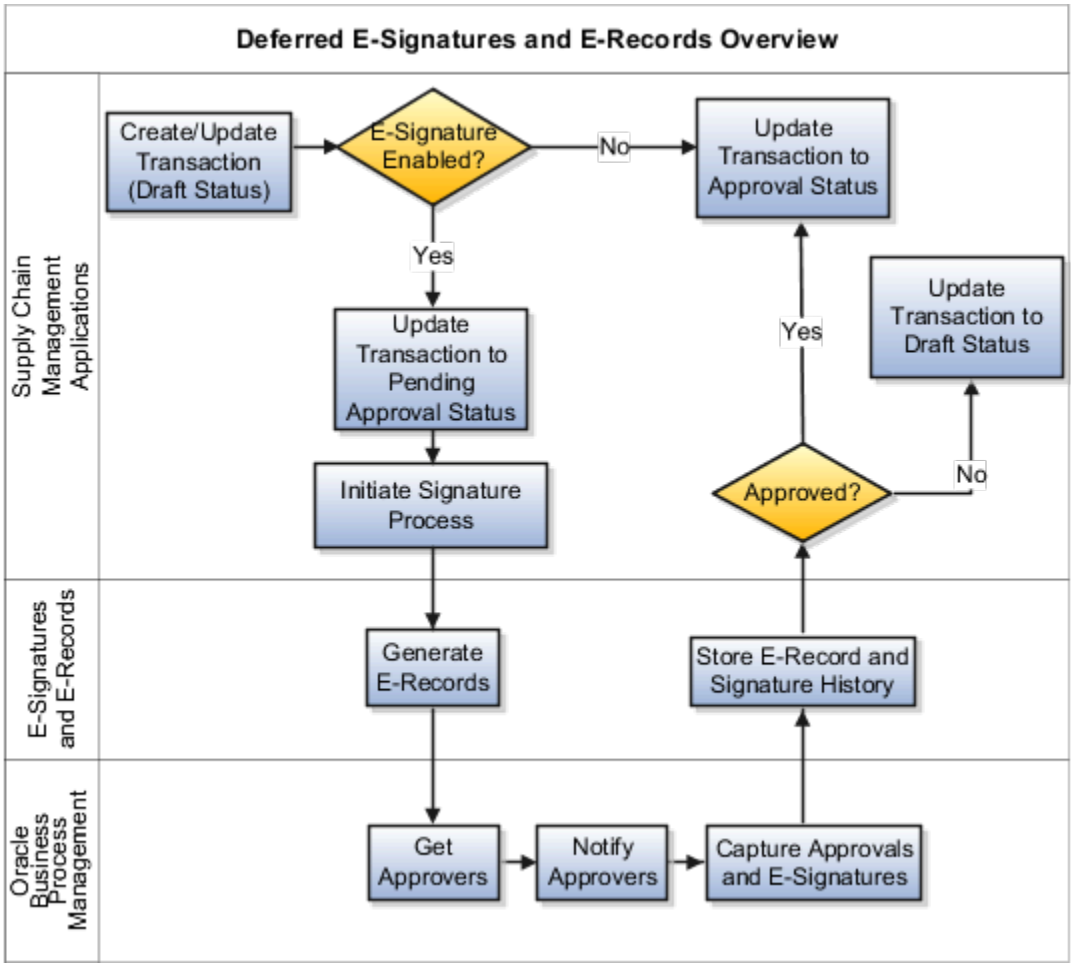
Transactions That Support Inline Approval

- Inventory Lot Update
- Inventory Serial Update
- Manufacturing Standard Operation Management

- Miscellaneous Transaction
- Orderless Transaction
- Put Away
- Quality Inspection Disposition
- Receipt
- Receiving Transaction Correction
- Ship Confirm
- Work Order Material Transaction
- Work Order Operation Transaction
- Work Order Output Transaction

How the Deferred E-Signature Approval Process Works

Here's the deferred approval process workflow. It provides an overview of the deferred e-signatures and e-records process, including its integration with the applications requesting approvals using e-signatures.



These steps provide an overview of the deferred e-signatures and e-records process:

1. A user initiates the approval process for a transaction from one of the integrated supply chain management applications.

2. The E-Signatures and E-Records API is called to determine if an e-signature is required.
3. If an e-signature is required, the Oracle BPM approval task flow is invoked with a task payload and the transaction is set to Pending Approval status.
4. Notifications are sent to all approvers through Oracle notifications.
5. The approvers view the Pending Notifications in Fusion Applications, and click the notification to view the approval page.
6. On the approval page, the approvers read the e-record, enter their user ID and password, and approve it or reject it.
7. When all required approvals are obtained the transaction is set to Approved status. If the record is rejected, the transaction is set to Draft status.

Electronic Signatures and Electronic Records Setup

Use the Oracle Fusion Cloud E-Signatures and E-Records setup tasks to specify the supply chain management transactions types for which e-signature approvals are required. You can also specify the users with approval permissions, and set up the approval process flows to be followed.

Enable the Electronic Records and Electronic Signatures Feature

The e-signatures and e-records feature is disabled by default. When enabled, the e-signature approval process is initiated and approvers are required to authenticate transactions.

You can enable E-signatures and E-records using the **Manufacturing and Supply Chain Materials Management** or the **Product Management** offering.

To enable the e-signatures and e-records feature using the **Manufacturing and Supply Chain Materials Management** offering:

1. In the **Setup and Maintenance** work area, right-click the **Facilities** functional area, and select **Change Feature Selection**. The **Edit Features: Facilities** page opens.
2. For the **Capture Electronic Records and Electronic Signatures for SCM Transactions** feature, select the check box in the **Enable** column.

To enable the e-signatures and e-records feature using the **Product Management** offering:

1. In the **Setup and Maintenance** work area, right-click the **Item Organizations** functional area, and select **Change Feature Selection**. The **Edit Features: Item Organizations** page opens.
2. For the **Capture Electronic Records and Electronic Signatures for SCM Transactions** feature, select the check box in the **Enable** column.

Set Up Electronic Records and Electronic Signatures

Before beginning setup, for each of your inventory organizations, determine the transactions that require e-signatures, and the business events that initiate the e-signature process. You must also identify the list of approvers and any rules that you would like to set up for the workflow.

You can set up e-signatures and e-records using the **Manufacturing and Supply Chain Materials Management** or the **Product Management** offering.

To set up e-signatures and e-records using the **Manufacturing and Supply Chain Materials Management** offering:

1. In the **Setup and Maintenance** work area, select the **Manufacturing and Supply Chain Materials Management** offering
2. Click **Setup**, and select the **Facilities** functional area. The tasks to set up e-signatures and e-records display.

To set up e-signatures and e-records using the **Product Management** offering:

1. In the **Setup and Maintenance** work area, select the **Product Management** offering
2. Click **Setup**, and select the **Item Organizations** functional area. The tasks to set up e-signatures and e-records display.

Note: Select **All Tasks** in the **Show** field to view all the tasks available for a functional area.

The following table lists the tasks available to set up e-signatures and e-records.

Setup Task	Description
Configure Electronic Signature Preferences	You can specify the supply chain management transactions for which to use e-signatures and e-records.
Manage Task Configurations for Supply Chain Management	You can specify the workflow to be followed to approve a supply chain management transaction.
Manage Approval Groups	You can specify the approvers for a supply chain management transaction workflow.

Reauthenticate E-Signature Users Using Oracle Access Manager

You can now simplify and streamline the identity management and user reauthentication experience by configuring Oracle Access Management to use an external authentication system for e-signatures and e-records.

You can use your existing login credentials for e-signature using an external authentication system instead of the Oracle WebLogic identity provider. Using Oracle Access Management as the identity provider for external authentication, you can synchronize the Oracle e-signature process with your existing application logins based on single sign-on credentials. Note that there is no extra configuration required if you do not use an external authentication system.

Once the opt-in expires, you will see the reauthentication page using Oracle Access Management instead of Business Process Management reauthentication popup.

Refer to the documentation on how to configure and manage Identity Federation with Oracle Access Management: *https://docs.oracle.com/en/middleware/idm/access-manager/12.2.1.3/aiaag/introducing-identity-federation-oracle-access-management.html*

Why am I not able to view text in my preferred language on the authentication page in Oracle Access Manager?

Your administrator should configure Oracle Access Manager using the Oracle Web Logic Server Toolkit (WLST) command for you to be able to view content in your preferred language.

Configure E-Signature Preferences

To start configuring e-signatures for your inventory organizations, you must first determine the transactions that require e-signatures and the business events that will initiate the e-signature process.

To configure e-signature preferences:

1. In the **Setup and Maintenance** work area:
    - Select the **Manufacturing and Supply Chain Materials Management** offering, click **Setup**, and select the **Facilities** functional area.
    - Select the **Product Management** offering, click **Setup**, and select the **Item Organizations** functional area.
2. Click **Configure Electronic Signature Preferences**.
3. The **Configure E-Signatures Preferences** page opens. It displays the supply chain management transactions that support the use of e-signatures. You can select the inventory organization for which to view the transactions.
4. Select the check box in the **Signature Enabled** column for the transactions for which to activate e-signatures.

Note: You can't disable e-signatures for work definitions if one or more work definitions exist in pending approval status.

Enable Audit for E-Signatures and E-Records

When you enable an attribute for audit, any changes made to it are tracked and saved. This makes it possible to trace all changes and provide complete information to auditors on demand.

You can enable the Electronic Signature Preferences business object for audit. The associated attribute, Signature Enabled, is by default selected for audit. Any changes made to the e-signature preferences in an application instance are tracked and recorded.

To enable audit, you must have the Application Administrator job role. To view audit reports, you must have the Internal Auditor job role.

You can enable or disable audit of the Electronic Signature Preferences business object as follows:

1. In the Navigator, click **Setup and Maintenance**.
2. On the Setup and Maintenance page, click the **Manufacturing and Supply Chain Materials Management** offering, and then click **Setup**.
3. On the Setup: Manufacturing and Supply Chain Materials Management page, click the **Applications Extensions** functional area, and then click the **Manage Audit Policies** task.

   > **Note:** If you're unable to view the Manage Audit Policies task, select **All Tasks** from the **Show** drop-down list on the Setup: Manufacturing and Supply Chain Materials Management page.

4. On the Manage Audit Policies page, click the **Configure Business Object Attributes** button for Oracle Fusion Cloud Applications.
5. On the Configure Business Objects Attributes page, select **E-Signatures and E-Records** in the **Product** field. It shows the business objects that are available for auditing.
6. In the Objects region, select the **Electronic Signature Preferences** business object. The associated attributes, by default selected for audit, are displayed in the Audited Attributes region.
7. In the Audited Attributes region, click the **Create** icon or select **Actions** > **Create** from the menu to add additional attributes for audit.
8. In the **Select and Add Audit Attributes** dialog box, search for and select the attribute to add for the audit and click **OK**. The selected attribute displays in the Audited Attributes region on the Configure Business Objects Attributes page.

Related Topics

- Overview of Oracle SCM Cloud Common Configuration

Set Up E-Signature Task Configurations

The Manage Task Configurations for Supply Chain Management setup task provides you access to the BPM Worklist page in Oracle Business Process Management Studio.

Using the BPM Worklist page, you can define the approval process flow to be followed for a transaction type. For example, you can specify approvers in a sequence or in parallel. When an approval process flow constitutes multiple approvers in parallel, a predefined voting policy applies. Based on it, a process flow requires 100% consent from all approvers for its approval; dissent by 1% of approvers leads to rejection. You can't modify this voting policy.

You can use the BPM Worklist page to set up e-signature task configurations.

To set up e-signature task configuration:

1. In the **Setup and Maintenance** work area:
   - Select the **Manufacturing and Supply Chain Materials Management** offering, click **Setup**, and select the **Facilities** functional area.
   - Select the **Product Management** offering, click **Setup**, and select the **Item Organizations** functional area.
2. Click **Manage Task Configurations for Supply Chain Management**. The **BPM Worklist** window opens and displays the **Task Configuration** tab.
3. Select the task you want to configure and edit as required. For information about how to configure tasks, see the Configuring Human Tasks topic.

Related Topics

- Configuring Human Tasks

Define Approval Rules

You can define approval rules for Oracle Fusion Cloud E-Signatures and E-Records.

To define approval rules for a transaction:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Manufacturing and Supply Chain Materials Management
    -
    - Select the Product Management offering, search for, and then click **Manage Task Configurations for Supply Chain Management**.
2. The BPM Worklist page opens and displays the Task Configuration tab from where you can create or edit a rule.
3. Search for and select the task applicable to your transaction and click **Edit**.

Transaction	Task
Maintenance Exception Closure	ExceptionsClosure
Manufacturing Work Definition Management	WorkDefinitionApproval
Manufacturing Standard Operation Management	StandardOperationApproval
Miscellaneous Transaction	MtlManagementEresInlineTask
Orderless Transaction	OrderlessTransactionApproval
Production Exception Closure	ExceptionsClosure
Put Away	MtlManagementEresInlineTask
Quality Inspection Disposition	QaResultsEresHumanTask
Work Order Output Transaction	WorkOrderOutputTransaction

Transaction	Task
Receipt	MtlManagementEresInlineTask
Receiving Transaction Correction	MtlManagementEresInlineTask
Ship Confirm	MtlManagementEresInlineTask
Work Order Material Transaction	WorkOrderMaterialTransactionApproval
Work Order Operation Transaction	WorkOrderOperationTransactionApproval
Manufacturing Work Order Approval	WorkOrderDeferredApproval
Maintenance Work Order Approval	WorkOrderDeferredApproval

4. Click the **Assignees** tab and then click the **Go to Rule** icon for the participant type you want.
5. Select a condition attribute and then any payload that you want to use.

You can use one or more of the attributes in the task payload to define rules to get approvers for the transactions as show in the following example

Attribute	Description
Organization Code	The code of the inventory organization where the transaction is created.

Product Code	An attribute, the internal code of the product:
	
	`INV: Inventory`
	`WSH: Shipping`
	`RCV: Receiving`

Transaction Type	The inventory transaction type. The values for the different inventory transaction types are: • SHIP_CONFIRM: Ship Confirm • RECEIPT: Receipt • PUTAWAY: Put Away • CORRECT: Receiving Transaction Correction • MISC_TXN: Miscellaneous Receipt, Miscellaneous Issue, Account Alias Receipt, and Account Alias Issue Transaction MISC_TXN is applicable for all the transactions initiated from the Create Miscellaneous Transaction page. You can't configure an approval rule specific to a particular miscellaneous transaction type such as Account Alias Issue Transaction. After you configure an approval rule for miscellaneous transactions,

Attribute	Description
	the configuration applies to all the transaction types that you create on the Create Miscellaneous Transaction page.
Work Order Number	The manufacturing work order number where the work order transaction is created.
Inspection Type	The Inspection Type. Valid values are: • INVENTORY • RECEIVING • RESOURCE • WORK_IN_PROGRESS

Set Up Approval Groups

The Manage Approval Groups setup task provides you access to the BPM Worklist page in Oracle Business Process Management Studio.

You can use the BPM Worklist page to set up e-signature approvers and approval groups. You must define approval rules to set up the workflow process. The approvers are sent workflow notifications using Oracle notifications. Approvers can enter comments when accepting or rejecting a transaction, and must enter their password to complete the e-signature verification process.

To set up e-signature task configuration:

1. In the **Setup and Maintenance** work area:
    - Select the **Manufacturing and Supply Chain Materials Management** offering, click **Setup**, and select the **Facilities** functional area.
    - Select the **Product Management** offering, click **Setup**, and select the **Item Organizations** functional area.
2. Click **Manage Approval Groups**. The **BPM Worklist** window opens and displays the **Approval Groups** tab.
3. Select the approver group you want to configure and edit as required.

Related Topics

- Configuring Human Tasks

23 Product Recall Management

Overview of Product Recall Management

Oracle Product Recall Management solution lets you efficiently manage product recalls.

Prerequisites

You must have either the Oracle Fusion Cloud Inventory Management or Oracle Fusion Cloud Purchasing to use Product Recall Management.

Enable Product Recall Management

In the Offerings work area, enable the Product Recall Management feature.

Do the following:

- Offering: Manufacturing and Supply Chain Materials Management
- Click Change Feature Opt-in
- Opt In Task: Click Enable for Product Recall Management

Set Up Recall Parameters

You must define recall parameters to manage the recall notices.

This table lists the parameters and their details:

Parameter	Details
Item Master Organization	Specify item master organization under the Global tab and save the record. The application automatically derives the item number defined in this item master organization based on the part details captured in the recall notice. It also derives the purchasing category for the item based on this item master organization.
Bypass Count and Disposal Tasks	Enable the Bypass Count and Disposal Tasks attribute under the Global tab if you want to mark the recall containment tasks as completed by directly entering a reason code, without having to do the recall counts and disposition transactions. **Note:** If you aren't using Oracle Fusion Cloud Inventory Management, then it is mandatory to enable this attribute to use Recall Management.

Parameter	Details
Auto close in-transit tasks after sending notifications	Enable Auto close in-transit tasks after sending notifications attribute under the Global tab in the Recall Parameters page, only if: • You don't want to do a self-attestation on the recall tasks for inbound shipments by reporting the containment action code against each task. • You want your requesters to be notified automatically for non-inventory orders when the recalled items have inbound shipments. **Note:** This parameter will be visible only if Bypass Count and Disposal Tasks attribute is enabled.
Task Grouping	Configure a default task group for all your inventory organizations under Task Groups tab. You can also define exceptions for specific inventory organizations with different task groups that will override the default task group for a given organization. You can set the task group with any of the following values: • Inventory Organization • Location • Sub inventory This task group configuration determines the level at which the recall tasks must be created irrespective of whether the tasks are generated by the Locate Recalled Parts job or the tasks are manually created. For example, if you configure the task group as inventory organization, then: • recalled parts traced in different subinventories or locations of an inventory organization are grouped together • a common containment task gets assigned for each inventory organization where the affected goods could potentially reside • a notification for the containment task is sent to the user responsible for each inventory organization Similarly, if you configure the task group as subinventory, then • recalled parts traced in different stock locators of that subinventory are grouped together • a common containment task is assigned for each subinventory where the affected goods could potentially reside • a notification for the containment task is sent to the user responsible for each subinventory
Time Fence	Configure a default time fence in recall parameters, that allows you to: • Set a transaction history time frame for tracking recalled parts. **Note:** The time fence defined here will be considered only when the distribution start date is not captured in the recall notice. • Define a time fence for automatically withdrawing recall notices in Pending Review status. Define a time fence for automatically closing the recall notices in Pending Closure status. A recall notice goes to Pending Closure status when all the tasks pertaining to the recall notice are marked as completed.
Containment Task Owners Mapping	Configure mappings between inventory organizations, departments (cost centers) or subinventories to one or more employees so recall containment tasks generated in the bypass count and disposal tasks workflow automatically derive task owners and send notifications to the appropriate coordinators using AI workflow agent. This mapping can also be uploaded using VBCS excel template by downloading the template available under this section in Recall Parameters.

Parameter	Details
	This feature is controlled by the Define Coordinators Mapping for Recall Tasks and Notify Task Owners profile option: • By default, the profile option is enabled, allowing you to define containment task owner mappings and send notifications at task creation. • You may disable this option to continue using BPM-based notification rules instead of mapping-based notifications defined on the Recall Parameters page. **Note:** • Do not create mapping records that duplicate an active inventory organization + cost center/ subinventory + task owner combination. Identical active combinations are not allowed. • A mapping record must use either cost center or subinventory; both cannot be populated on the same row. • The existing mapping must be deactivated and a new mapping must be added if the co-ordinator changes for an existing location entity. • Existing BPM worklist rules and notifications remain in effect and may be sent in addition to mapping-based notifications, where applicable. • Notifications generated from this mapping are delivered via email only and do not appear as workflow notifications under the Bell icon in the application. • Notifications based on this mapping are currently supported only for tasks with Received material status. Notifications for tasks with In-transit material status still continue to follow the BPM rules.
Participating Inventory Organizations	You can control which inventory organizations participate in Product Recall Management. Instead of applying recall processes across all organizations, you can designate all or only selected inventory organizations, enabling phased rollouts and more targeted containment actions. From the Recall Parameters page, simply choose the participating organizations using a streamlined selection list, giving you greater flexibility and precision in managing recalls. Once configured, all recall validations, track and trace activities, task generation, and containment notifications are limited to the designated inventory organizations. Only transactions, stock checks, and subinventory associations within participating organizations are evaluated throughout the recall lifecycle. When you're ready to extend Recall Management to additional organizations, you can select All Inventory Organizations. This overrides any previously selected organizations and brings the entire enterprise into scope for recall management operations.
Recall Sub-inventory	Define this parameter for an inventory organization under recall Subinventories tab.

Parameter	Details
	Note: While defining this parameter, the project inventory-enabled organizations aren't listed. You must define a recall subinventory for an inventory organization, as once the recalled parts are located and counted, they're moved to the recall subinventory for quarantine. If the subinventory is locator controlled, then you must also specify the default recall stock locator. The recall subinventory must be a non-reservable and quantity tracked subinventory. This set up is required only if the Bypass Count and Disposal Tasks attribute under the Global tab of Recall Parameters isn't enabled.

To set up a recall parameter:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Product Management
    - Functional Area: Product Recall Management
    - Task: Manage Recall parameters
2. Specify the recall parameters.

Set up AI Agent Template to Send Notifications for the Recall Tasks

You can upload supplier recall letters in PDF format directly from the user interface and let the AI agent automatically curate them into recall notices.

To set up the AI agent template to send FYI notifications for the recall tasks generated in the Bypass count and disposal tasks workflow based on the containment task owner mapping defined in Recall Parameters, do the following:

1. Make sure you have the below mentioned duty role under Role Hierarchy > Roles and Permission Groups tab for the configured job role that is used to configure the AI agent.
    - ORA_DR_FAI_GENERATIVE_AI_AGENT_SCM_ADMINISTRATOR_DUTY

    Note: Do the following to provision this duty role:
    - Go to Home > Setup and Maintenance > Tasks > Search > Manage Administrator Profile Values, then set the profile Enable Security Console external application integration (ORA_ASE_SAS_INTEGRATION_ENABLED) to Y at the site level.
    - Enable the permission groups for the configured job role.
2. Make sure you have the following duty roles under Role Hierarchy > Roles and Privileges tab for the configured job role that is used to configure the AI agent:
    - ORA_RCS_SCM_AI_AGENT_MANAGEMENT_DUTY
    - ORA_RCS_SCM_AI_AGENT_ MANAGEMENT_DUTY_HCM

3. Navigate from Home Page > Tools > AI Agent Studio, set the Family to SCM, the Product to Product Recall Management, search for Recall Tasks Notification Agent, then click Copy Template on Recall Tasks Notification Agent.
4. Enter the number 1 for the suffix, then click Continue. We recommend that you use the suffix to indicate versions, such as 1, 2, 3.
5. Click . . . > Edit:
6. Use the predefined values on the Details tab or modify them to meet your needs.
7. Click Security and assign the configured job role or seeded role which would be used to create a recall notice by uploading the recall letter.

   Note: Do the following steps to assign this job role under Security tab in the AI Agent configuration:
   - Enable the permission groups for this configured job role or seeded role.
   - Make sure you have the ORA_DR_FAI_GENERATIVE_AI_AGENT_RUNTIME_DUTY duty role provisioned under Role Hierarchy > Roles and Permission Groups tab for this configured job role.

8. Click Publish.
9. Click Agent Teams, search for and open Recall Tasks Notification Agent1, then verify the status is published.
10. Nagate from Home > Setup and Maintenance > Tasks > Search > Manage Profile Options, then define a profile option as follows:
    - Profile Option Code should be RECALL_TASKS_NOTIFICATION_AGENT
    - Profile Display Name: It is an user-defined name
    - Application: Supply Chain for Healthcare
    - Module: Recall Management
    - Start Date: Current date
    - Enable this profile at site level
11. Navigate from Home > Setup and Maintenance > Tasks > Search > Manage Administrator Profile Values, then search for the above defined profile and set the value with agent team code. For example, RECALL_TASKS_NOTIFICATION_AGENT_1.

Set Up Product Recall Lookups

To set up the product recall lookups, use the following lookup types:

- Recall classification: It's an extensible lookup type used to categorize a recall notice based on the impact severity of the product recall on consumers. It is seeded with the following lookup codes as per The U.S. Food and Drug Administration regulatory body.
  - Class I
  - Class II
  - Class III

  You can extend this lookup type with more lookup codes as per your business requirement.
- Containment action code: It's a user defined lookup type to define the reason codes to be used while completing the containment tasks. Add lookup codes as per your business needs.

> **Note:** This containment action code look up is required only if the **Bypass Count and Disposal Tasks** attribute under the Global tab of Recall Parameters is enabled.

- Recall Notice Withdrawal Reason: It's a user defined lookup type to define the reason codes to be used while withdrawing the recall lines or recall notices. Add lookup codes as per your business needs.

To define product recall lookups, do the following:

1. In the Setup and Maintenance work area, go to the following:
    - Offering: Product Management
    - Functional Area: Product Recall Management
    - Task: Manage Product Recall Lookups
2. Search for the lookup type meanings.
3. Define the lookup codes.

Set Up AI Agent to Create Recall Notices from Supplier Letters

You can upload supplier recall letters directly from the user interface and let the AI agent automatically curate them into recall notices.

To receive emails with any error messages that gets generated while trying to process the recall notices:

1. Navigate to **Home Page > Tools > AI Agent Studio**.
2. Search for Recall Letters Curation Assistant and select **Customize**.
3. Select the node Define Email Address of Recall Manager and provide the email id under Variables section.

You must be assigned a configured job role that contains these privileges to perform these steps.

Privilege Name and Code	Navigation
SCM Intelligent Agent Management Duty ORA_RCS_SCM_AI_AGENT_MANAGEMENT_DUTY	Roles and Privileges
SCM Intelligent Agent Management Duty ORA_RCS_SCM_AI_AGENT_MANAGEMENT_DUTY_HCM	Roles and Privileges
Fai Genai Agent SCM Administrator Duty ORA_DR_FAI_GENERATIVE_AI_AGENT_SCM_ADMINISTRATOR_DUTY	Roles and Privileges **Note:** You must enable the permission groups for the configured job role.

Note: You don't need to copy the template or assign any security to this agent or define any profile option. Also, if you've configured a profile option with the AI agent code in any update before 26D, then you must remove it.

You must be assigned a configured job role that contains these privileges to upload a recall letter.

Privilege Name and Code	Navigation
Manage Product Recall Notices ENQ_MANAGE_PRODUCT_RECALL_NOTICES	Function Security Policy
Import Product Recall Notices ENQ_IMPORT_PRODUCT_RECALL_NOTICES	Function Security Policy
Access FSCM Integration Rest Service FUN_FSCM_REST_SERVICE_ACCESS_INTEGRATION_PRIV	Function Security Policy
Recall Notices Workflow ORA_SCH_RECALL_NOTICES_WORKFLOW_DUTY	Roles and Privileges

Email Recall Letter

You can email supplier recall letter attachments directly to a registered mailbox for automatic processing. The Recall Letters Capture Assistant uses AI to extract recall information from the attachment and automatically creates a recall notice, eliminating the need for a recall manager to manually upload the letter.

After the Recall Letters Capture Assistant is configured with a registered email account, users can simply send a supplier recall letter attachment to the designated email address. The assistant processes the attachment, calls the Recall Letters Curation Assistant to extract recall details, and creates a recall notice.

The sender receives a confirmation email, and recall managers can access the created recall notice and the original attachment from the landing page.

To set up the AI agent to create recall notices from supplier letters communicated through email:

1. In AI Studio, navigate to **Tools > AI Studio > Credentials**.
2. On the Email Accounts tab, register the email account and specify the email address and folder that will receive supplier recall letters.

   Ensure that the selected folder is dedicated to the Recall Letters Capture Assistant and isn't used by any other assistant.
3. When prompted, provide the Client ID, Client Secret, Tenant ID, polling interval, and description.
4. Navigate to Workflows, search for Recall Letters Capture Assistant, and open the predefined assistant by selecting the View (eye) icon.
5. Select Customize and navigate to **Settings > Triggers**.

6. Select the registered email account, and publish the assistant.

Note:

- The Manage Communication Responses process runs according to the polling interval configured for the email credentials to process recall letters.
- The emails sent to the registered email account shouldn't be manually marked as read.

To receive emails with any error messages that gets generated while trying to process the recall notices:

1. Navigate to **Home Page > Tools > AI Agent Studio**.
2. Search for Recall Letters Curation Assistant and select **Customize**.
3. Select the node Define Email Address of Recall Manager and provide the email id under Variables section.

Note: This set up is required only if the recall manager user is different from the user who forwarded the recall letter via email.

You must be assigned a configured job role that contains these privileges to perform these steps.

Privilege Name and Code	Navigation
Manage Product Recall Notices ENQ_MANAGE_PRODUCT_RECALL_NOTICES	Function Security Policy
Import Product Recall Notices ENQ_IMPORT_PRODUCT_RECALL_NOTICES	Function Security Policy
Access FSCM Integration Rest Service FUN_FSCM_REST_SERVICE_ACCESS_INTEGRATION_PRIV	Function Security Policy
SCM Intelligent Agent Management Duty ORA_RCS_SCM_AI_AGENT_MANAGEMENT_DUTY	Roles and Privileges
SCM Intelligent Agent Management Duty ORA_RCS_SCM_AI_AGENT_MANAGEMENT_DUTY_HCM	Roles and Privileges
Recall Notices Workflow ORA_SCH_RECALL_NOTICES_WORKFLOW_DUTY	Roles and Privileges

Privilege Name and Code	Navigation
Fai Genai Agent SCM Administrator Duty ORA_DR_FAI_GENERATIVE_AI_AGENT_SCM_ADMINISTRATOR_DUTY	Roles and Privileges **Note:** You must enable the permission groups for the configured job role.

Note: The user who communicates the recall letter via email to the registered mail box doesn't require any specific roles to be assigned.

Configure Business Rules for Notifications

You can configure business rules to send FYI notifications to the users when recall notices are ingested into the Product Recall Management application in Pending Acceptance status.

By default, a rule exists in the application that sends notifications to the users who has the Product Recall Manager job role. But you can configure the business rules to send this notification to different users as well or to the users who has a custom role assigned to manage the product recalls.

To configure the business rules:

1. In the Set up and Maintenance work area, use the Manage Task Configuration for Supply Chain Management task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Task Configuration for Supply Chain Management
    - Search for the RecallNoticesCaptureFYI human task
2. Configure business rules using these attributes:
    - Device classification by recalling firm
    - Classification by regulatory authority

You can also configure business rules to send FYI notifications to the users to manage the containment tasks generated for the recall notices captured in your organization.

There are two workflows to manage the containment tasks for which you can configure business rules for notifications:

- Count and disposal tasks workflow
- Bypass count and disposal tasks workflow

In the Count and Disposal tasks workflow, to perform recall count, quarantine the affected goods, and perform disposition transactions, you must configure business rules to send FYI notifications to other stakeholders informing them about the containment tasks to be completed.

By default, a rule exists in the application that sends notifications to the requesters of the recalled parts that are identified in the expense locations. But you can also configure rules to notify users based on different criteria such as

cost center or inventory organization. For perpetual and par locations, business rules must be configured to send the notifications.

To configure the business rules:

1. In the Setup and Maintenance work area, in the Manage Task Configurations for Supply Chain Management task, search for the ProductRecallTraceabilityFyi human task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Task Configuration for Supply Chain Management
    - Search for the ProductRecallTraceabilityFyi human task
2. Configure business rules using these attributes:
    - recallTaskCode with attribute values: ORA_COUNT, ORA_DELIVER, ORA_INSTRUCTIONS, ORA_DISPOSAL, and ORA_DEBIT_MEMO.
    - inventoryOrganizationCode
    - deliverToLocationCode
    - deliverToLocationName
    - subinventory
    - productTraceStatusCode with attribute values: ORA_PAR, ORA_IN_STOCK, ORA_EXPENSE, and ORA_INBOUND
    - requesterName
    - purchasingCategory

In the Bypass count and disposal tasks workflow, that is, when you have enabled the Bypass Count and Disposal Tasks attribute in Recall Parameters to complete the recall containment tasks by directly entering a reason code, without having to do the recall counts and disposition transactions, you must configure business rules to send FYI notifications to other stakeholders informing them about the containment tasks to be completed.

To configure the business rules:

1. In the Set up and Maintenance work area, use the Manage Task Configuration for Supply Chain Management task:
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Facilities
    - Task: Manage Task Configuration for Supply Chain Management
    - Search for the ProductRecallBypassTasksFYI human task

2. Define the FYI notification rules using these attributes under the RecallBypassTaskHistory folder:
    - Material Status
    - purchasingCategory
    - Inventory Organization
    - Location
    - Cost Centre
    - Subinventory
    - Subinventory DFF Attributes
    - Recall Header and Line DFF Attributes

You can optionally configure the approval groups and use those groups in a business rule to send notifications to a group of stakeholders.

Enable Oracle Content Curation Service

You can automatically get recall notices ingested into your pod that have been published by the U.S. Food and Drug Administration (FDA) by subscribing to the Oracle content curation service.

To enable the Oracle Content Curation Service, do the following:

1. Identify or create a MS Outlook client email address or Google email address to receive the recall notices from the Oracle Content Curation Service. If it's necessary to create the client email, you will need to work with your IT team to get this email account configured. Based on the FDA recall data research. the email client is estimated to receive around 8 emails a day.
2. Only if you are using the MS Outlook client email address, for the ESS job to ingest the recall email from the curation service, you must ensure that the Azure Graph API is setup, so that the email is accessible. Your IT team (Azure Administration) will have to perform this setup. Microsoft Setup Details can be found here: https://learn.microsoft.com/en-us/graph/outlook-mail-concept-overview.
3. Define the list of API permissions required for MS Outlook client email configuration as mentioned below:
    a. In the Azure Portal, open App Registration for your application.
    b. Navigate to API Permissions.
    c. Click Add a permission → choose Microsoft Graph → Application Permissions.
    d. In the search box, type Mail and add the following permissions:
        - Mail.Read
        - Mail.ReadBasic
        - Mail.ReadBasic.All
    e. Again, click Add a permission → Microsoft Graph → Application Permissions.
    f. Search for User and add:
        - User.ReadBasic
        - User.Read
        - User.ReadBasic.All
    g. If User.Read appears under Delegated permissions, remove it.
    h. Click Grant admin consent for all added permissions.
4. Only if you are using the Google email address, for the ESS job to ingest the recall email from the curation service, you must ensure that the Google client is set up, so that the email is accessible. Your IT team (Google

Email Client Administration) will have to perform the following setups to get the Client ID, Client Secret, and Refresh token that are required to be configured during email registration:

a. Create Authorization Credentials
   - Navigate to the *Google Cloud Console* to create authorization credentials.
b. Create a new Google Cloud project
   - For more information about setting up a Google Cloud Project, see *Google Sign-In for Websites.*
c. Configure the OAuth Consent page:
   - Once the project is created, navigate to APIs & Services > OAuth Consent page
   - Set up the consent page
d. Provide App Information
   - Enter the App Name and User Support Email Address in the OAuth Consent page
   - Click Next
   - Select the audience as External and click Next
e. Provide Contact Information & Agree to Terms
   - Provide the required contact information
   - Click Next
   - Agree to the Terms and Conditions
   - Click Create
f. Add Authorized Domains
   - Navigate to the Branding section
   - Add necessary authorized domains (e.g., google.com, gmail.com)
   - Click Save
g. Add Test Users
   - Navigate to the Audience section
   - Add Test Users
h. Enable Gmail API
   - Navigate to APIs & Services > "Enabled APIs & services"
   - Click + ENABLE APIS AND SERVICES
   - Search for Gmail API and enable it
i. Add Gmail API Scopes
   - Return to APIs & Services > "OAuth Consent Screen" -> "Data Access
   - Click ADD OR REMOVE SCOPES
   - Search for Gmail APISelect the required scopes (for example, Read Emails) or select all
   - Click Update to add the scopes to the project
   - Click Save
j. Create OAuth Client ID
   - Navigate to APIs & Services > Credentials
   - Click + CREATE CREDENTIALS
   - Select OAuth Client ID
   - Choose Web application as the Application Type
   - Provide a name for the Web Client
   - Enter *https://developers.google.com/oauthplayground* as the Authorized Redirect URL
   - Click Create
   - A popup will display the Client ID and Client Secret. Note down these details.
k. Navigate to OAuth Playground:

- Navigate to *Google OAuth 2.0 Playground*
- Authorize Gmail API in Playground. Under Select & authorize APIs, enter https://mail.google.com

l. Configure OAuth Playground with Your Credentials:
- Click the gear icon in the top right corner
- Check the box Use your own OAuth credentials
- Enter the "OAuth Client ID" and "OAuth Client Secret" obtained in Step 10
- Click Authorize APIs
- Give your consent using your Google Account

m. Exchange Authorization Code for Tokens
- The playground will generate an Authorization Code
- Click Exchange authorization code for tokens to generate a Refresh Token and Access Token

5. Complete the registration to receive email communication about recalls from the Oracle Content Curation Service and to get these recall notices automatically ingested into your recall management application. Do the following:
   a. In the Setup and Maintenance work area, go to the following:
      - Offering: Manufacturing and Supply Chain Materials Management
      - Functional Area: Product Recall Management

      > **Note:** Click Change Feature Opt-in, and enable the Opt In Task: Capture Recall Notices from the U.S. Food and Drug Administration Curated and Communicated by Oracle. Navigate back to the Product Recall Management functional area.

      - Task: Manage Registration to Receive Recall Alerts
   b. Accept the third-party service terms of use.
   c. Enter the Client ID, Tenant ID, Client Secret that you receive from your IT team. The MS client /Google client details are used to retrieve the emails, parse the content, and import the recall notices into the Oracle Cloud application.
   d. Enter the MS Outlook email address/ Google email address to which the recall alerts will be sent.
   e. Click Validate and Save.

   > **Note:** This email address must be unique per pod. An email address used in the Development or Stage pod must not be used in the Production pod. Therefore, whenever a Production-to-Test clone is performed, ensure that this configuration is updated in the Test pod by defining a new client ID, tenant ID, refresh token, client secret, and email address.

6. Define a value for the Start Date for Oracle Curated Recall Ingestion profile option so that only curated recalls with a reported date greater than the start date are ingested and validated for item matching. Recalls with a reported date less than or equal to the start date will be ingested in Withdrawn status for historical reference only and will not be validated for item matching or processed downstream.

   In the Setup and Maintenance work area, do the following:
   - Search for the **Manage Administrator Profile Values** task
   - Search for the **Start Date for Oracle Curated Recall Ingestion.** profile display name
   - Set the start date at the site level in YYYY-MM-DD format

7. Schedule the Ingest Oracle Curated Recall Notices job by navigating to Tools > Scheduled Processes.

   This job fetches the email communication sent by the Oracle content curation service and received in the email address registered in the Manage Registration to Receive Recall Alerts task. Subsequently the email content is parsed to ingest the recall notices.

Set Up National Recall Alert Center Integration

Use this integration to receive recall notices from the National Recall Alert Center (NRAC) into Oracle Recall Management.

The **National Recall Alert Center (NRAC)** provides real-time recall notifications for pharmaceuticals, medical devices, supplies, and food products. Its platform integrates with healthcare systems to support end-to-end recall lifecycle management—from detection and notification to resolution and compliance tracking.Operating continuously (24/7/365), NRAC ensures timely delivery of recall alerts, with a strong focus on high-risk (Class I) recalls. Its services are widely adopted across U.S. hospitals and healthcare institutions.

You can:

- Automatically receive recall notices from NRAC
- Keep recall data up to date in real time
- Eliminate manual data entry and reduce errors
- Track recall lifecycle for compliance and auditing

How the Integration Works

1. NRAC sends recall data using the /providerRecallNotices API
2. Oracle Recall Management validates the request
3. The application creates recall notices
4. Recall history is stored for tracking and compliance

Supported Recall Data

Recall Types

- FDA Mandatory Recall
- FDA Voluntary Recall

Classifications

- Class I
- Class II
- Class III

Risk Levels

- Low
- Moderate
- High
- Unclassified

Data Elements

- Recall details (header information)
- Contacts
- Attachments
- Product lines
- Lots and serial numbers

Before you start ensure that:

- You have an active NRAC account
- You have access to Oracle Recall Management
- You can create users and assign roles

Set Up the Integration

1. Create an Integration User
   - Create a dedicated Oracle user for NRAC integration.
   - Use a separate user to maintain security and traceability.
2. Assign Required Role
   - Assign the **Manage Recall Notices as Provider** privilege to the configured job role and then assign it to the integration user.
3. Configure Provider in NRAC
   - Register your organization and integration user in the NRAC system.
4. Set Up Authentication

   You can use:
   - JWT-based authentication (recommended)
   - Basic authentication

   To enable JWT authentication:

   a. Provide Oracle user credentials to NRAC
   b. NRAC generates a JWT and shares a public certificate
   c. Upload the certificate in the Oracle Security Console
   d. Enable token-based authentication

Note: This step is typically performed by a system administrator.

Receive Recall Notices

After setup:

- NRAC sends recall notices automatically

- The application creates records
- All supported data elements are processed

Related APIs

- POST /providerRecallNotices – Create or update recalls
- GET /providerRecallNotices – Retrieve recalls
- Batch APIs – Process multiple records

Example Setup Tasks

Setup tasks example:

Task	Description
Create user	Set up integration user in Oracle
Assign role	Grant Recall Content Provider role
Configure NRAC	Register provider in NRAC
Set up authentication	Configure JWT or basic authentication
Schedule jobs	Schedule Ingest Oracle Curated Recall Notices job

Tips and Considerations

- Use JWT authentication for better security
- Keep integration user credentials secure
- Monitor recall processing for errors
- Schedule recall ingestion job

Automatically Derive Item Identifiers in Recall Notice

The representation of the recalled part identifiers varies from one source to another while communicating the recall. So, it is important to capture those part identifiers and enrich them to get the manufacturer part number, supplier part number or master item number defined in Oracle applications.

The item identifiers defined in Oracle application is further used to trace the materials, generate the containment tasks and complete the disposition process.

Examples of the representation of part identifiers are:

- Part Number
- Device Identifier
- GTIN
- Model
- Brand
- Part Description

To enrich these part identifiers and fetch the Oracle item identifiers in the recall notices that are either captured from Oracle content curation service or created manually, do the following configurations:

1. Enable the opt-in for the feature Search Items Using the New User Interface.
    - In the Setup and Maintenance work area, select the offering: Product Management.
    - Select the drop down against the functional area: Items.
    - Enable the feature Search Items Using the New User Interface.
2. Define item relationships with GTIN, if applicable.
3. Use predefined Healthcare GUDID Primary Extensible Flexfield attributes to define the item identifiers like device identifier, model, brand, and so on in Product Hub application, if applicable. For more information, see: https://docs.oracle.com/en/cloud/saas/readiness/scm/24a/plm24a/24A-plm-wn-f30449.htm and configure the Healthcare Extensible Flexfield attributes
4. Configure item indexes for the below attributes in Product Hub application:
    - GTIN
    - Primary DI Number
    - Device Version
    - Brand Name
    - Item Description
    - Manufacturer Part Number
    - Supplier Item

    For more information, see the Configure Index section at: *https://docs.oracle.com/pls/topic/lookup?ctx=saas-readiness&id=plm24b-f32005*
5. Define the item class security for the user or role who manages the recall notices:
    a. In the Setup and Maintenance work area, go to the following:
        - Offering: Manufacturing and Supply Chain Management

- Functional Area: Items
- Task: Manage Item Classes

b. Select Item class and click the Edit icon.
c. Click on the Security tab.
d. Click the Add row action to associate the role group or user with the item master organization.
e. Click the Select and Add action to add view privileges that include View Item Basic, View Item Attribute and ORA_HC_EFF_VIEW_PRIV.
f. Save the record.

6. Schedule the ESS job to create index definition and perform initial ingest to OSCS job with parameter value as fa-prc-pa for the Index Name to Reingest parameter name.
7. Schedule the ESS job to create index definition and perform initial ingest to OSCS job with parameter value as fa-prc-po for the "Index Name to Reingest parameter name.

Resolve Duplicate Notices

To identify duplicate recall notices captured from different sources, you must run this job: ESS job to create index definition and perform initial ingest to OSCS.

Note: This is a one-time execution and does not require recurring scheduling.

To run this ESS job, do the following:

1. Navigate to the Scheduled Processes Page.
2. Search for the job: ESS job to create index definition and perform initial ingest to OSCS.
3. Enter the value: fa-fscm-recall for the Index Name to Reingest paramaeter.

Reset Serial Number Restrictions to Quarantine Recalled Items

Manage product recall during subinventory transfer or movement request transfers for the count and disposal tasks workflow.

When you perform a subinventory transfer or movement request transfer for serial-controlled items from quantity tracked to non-quantity tracked subinventories or for any movement request issues or miscellaneous issues for serial-controlled items subjected to product recall, you must:

- Set the **Receipt of Issued Serial Numbers Restricted** profile option to **No** to receive the serial numbers back into the Recall subinventory using the **Recall Receipt** transaction that occurs during recall count.
- After the receipt is processed, you can set the **Receipt of Issued Serial Numbers Restricted** profile option to **Yes** to stop the receipt of issued serial numbers for an item.

Roles and Privileges

The following table details the privileges and functions available for different roles.

Role	Privilege	Functions
Product Recall Manager	Manage Product Recall Notices	• Access the Recall Management landing page • Create recall notices • Create expansion recall • Accept recall notices • Publish recall notices • View recall notices • Download recall notices template and upload recall notices using VBCS excel plug in • Create notice from recall letter • Monitor AI curated recalls • Manually withdraw the recall notice line or header when recalled parts couldn't be located
Product Recall Manager	Locate Recalled Parts	Take Locate action on recall notices
Product Recall Manager	View Product Recall Notices	View recall notices.
Product Recall Manager	Identify Duplicate Recall Notices	Review and resolve duplicate recall notices
Product Recall Manager	Recall Management Console Inquiry	• Access the Recall Management landing page • View containment tasks notification content • Resend notifications
Product Recall Manager	Manage Recall Task Status	• Manually close the deliver and instruction tasks • Manually withdraw or close the disposal task
Product Recall Manager	Create Bypass Tasks for Recall	Create containment tasks for the recall notices in the Bypass count and disposal tasks workflow

Role	Privilege	Functions
Product Recall Manager	Complete Bypass Tasks for Recall	Complete containment tasks created against the recall notices in the Bypass count and disposal tasks workflow
Product Recall Manager	View Recall Trace Details and Tasks	View containment tasks for the recall notices in the Bypass count and disposal tasks workflow
Product Recall Manager	Manage Inbound Trace Resolution Status	Manage inbound trace resolution status for recall notices in the Count and disposal tasks workflow
Product Recall Manager	Manage Scheduled Job Definition	Submit scheduled processes wherever required while managing the recall notices
Product Recall Manager	View Inventory Organizations List of Values by Web Service	Access the item organizations list of values to create the containment tasks and to review the trace details
Product Recall Manager	View Inventory Organization Parameters List of Values by Web Service	Access the item organizations parameters list of values to create the containment tasks and to review the trace details
Product Recall Manager	View Subinventory and Locator List of Values by Web Service	Access the subinventory list of values to create the containment tasks and to review the trace details
Product Recall Manager	Get Enterprise Structures Using REST Service	Access the cost center list of values to create the containment tasks and to review the trace details
Supply Chain Application Administrator	Manage Product Recall Parameters	Configure recall parameters
Supply Chain Application Administrator	View Product Recall Parameters	View recall parameters

You can create custom roles that can be made up of various privileges.

For example, if you want to provide a user with a role that allows read-only access to review the recall task progress and trace details for the recalled parts but not create or update a recall notice or task, then:

1. Create a custom role with these privileges:
    - Recall Management Console Inquiry
    - View Recall Trace Details and Tasks
    - View Inventory Organizations List of Values by Web Service
    - View Inventory Organization Parameters List of Values by Web Service
    - View Subinventory and Locator List of Values by Web Service
    - Get Enterprise Structures Using REST Service
2. Assign that custom role to the user.