## Contents

**Preface**

1 **Hello**
   - Overview of Supply Chain Orchestration
   - How Supply Chain Orchestration Works
   - Deviations in Orchestrating Supply

2 **Overview**
   - Overview of Managing Supply Lines
   - Analytics for Supply Lines
   - Supply Line Status

3 **Manage Supply Lines**
   - Overview of Managing Supply Lines
   - How Orchestration Processes Purchase Orders
   - How Orchestration Processes Work Orders
   - How Orchestration Processes Internal Material Transfers
   - Approve Replenishment Requisitions for Minimum and Maximum Requests
   - Manage Reservations in Back-to-Back Processing

4 **Manage Exceptions for Supply Requests**
   - Supply Request Exceptions
   - What happens if I don’t resolve supply request exceptions?
   - Can I change a supply request before I resubmit it?
   - What’s the difference between a supply chain exception and jeopardy?

5 **Manage Exceptions for Configured Items**
   - Manage Exceptions for Configured Items

6 **View Configured Items**
   - View Sales Configured Item
Oracle SCM Cloud
Using Supply Chain Orchestration

7 Create Supply Requests 31
Create Supply Request 31
How Does Orchestration Rank Supply Sources? 33
Scheduled Processes That Plan Supply for Orchestration 33

8 Manage Production Reports 35
Production Reports 35
Upload Production Reports 35
Preface
This preface introduces information sources that can help you use the application.

Using Oracle Applications

Using Applications Help
Use help icons 📚 to access help in the application. If you don’t see any help icons on your page, click your user image or name in the global header and select Show Help Icons. Not all pages have help icons. You can also access Oracle Applications Help.

Watch: This video tutorial shows you how to find help and use help features.
You can also read Using Applications Help.

Additional Resources
• Community: Use Oracle Cloud Customer Connect to get information from experts at Oracle, the partner community, and other users.

• Guides and Videos: Go to the Oracle Help Center to find guides and videos.

• Training: Take courses on Oracle Cloud from Oracle University.

Conventions
The following table explains the text conventions used in this guide.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates user interface elements, navigation paths, or values you enter or select.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates file, folder, and directory names, code examples, commands, and URLs.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than symbol separates elements in a navigation path.</td>
</tr>
</tbody>
</table>

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

Access to Oracle Support
Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit My Oracle Support or visit Accessible Oracle Support if you are hearing impaired.

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1 Hello

Overview of Supply Chain Orchestration

Use Oracle Fusion Supply Chain Orchestration to manage supply for your items, and to make sure fulfillment is consistent and efficient.
Manage supply from one, central location.

- Receive a supply request to meet demand from an Oracle application, such as Supply Planning, Order Management Cloud, Order Promising, or Inventory Management.
- Send a supply order to fulfill supply in an Oracle application during fulfillment, such as Inventory Management, Purchasing, Manufacturing, and Shipping.

For example, create supply in your warehouse through a predefined back-to-back flow. Supply Chain Orchestration combines demand details from Order Management with a supply recommendation from Order Promising.

- Create business rules that manage supply.
- Manage supply from one location.
- Use a 360 degree view to monitor creating supply.
- Manage supply for a variety of flows.

Manage supply for a variety of flows.

- Back-to-back flow, such as make, buy, or transfer
- Drop shipment from your supplier to your customer
- Internal material transfer
- Contract manufacturing
- Consigned inventory

Here are some ways you can use Supply Chain Orchestration to automate fulfillment for you. These flows come predefined to automatically process supply, but you can modify them to meet your requirements.
Manage Supply for Back-to-Back Flows

Automate your back-to-back flow. Back-to-back means orchestration processes the supply request one step after the other, consecutively, and directly.

Note.
- Your customer places a sales order through your order capture system.
- A predefined orchestration process that’s already optimized for back-to-back fulfillment reserves supply in your supplier’s factory, your factory, or your warehouse.
- The factory or warehouse supplies your fulfillment warehouse.
• Your fulfillment warehouse ships the sales order to your customer.

Here are the types of back-to-back flows you can fulfill.

• Make
• Buy
• Transfer

For details, see the Overview of Back-to-Back Fulfillment topic.
Manage Supply for Drop Ship Flows

Automate your drop ship flow. Instead of creating and keeping the item in your own inventory, your supplier or contract manufacturer creates, stores, and ships the sales order to your customer.

Note.

- Your customer places a sales order through your order capture system.
- A predefined orchestration process that’s optimized for drop ship fulfillment sends a purchase order for the item to your supplier, including instructions for shipping directly to your customer.
- Your supplier creates the item or picks it from inventory, then ships it to your customer.
Your supplier sends an invoice or advance shipment notice to you.

Manage Supply for Transfer Flows
Automate your transfer flow. Use a single flow to transfer material between two different organizations, between different sections in the same organization, or between companies.

Note.
You use a technology to bring demand into your flow.
  - File-based data import
Web service
- Inventory management, such as min-max planning
- Manage Item Quantity of a supply request from a back-to-back flow
- Supply planning
- Requisition line in Self-Service Procurement
- A predefined orchestration process that’s optimized for material transfer fulfillment uses a purchase order or a transfer order to orchestrate the transfer.

For details, see the Overview of Internal Material Transfer topic.

Manage Exceptions and Manage Change

Manage Exceptions
Get status updates while Orchestration creates supply. For example, view errors, exceptions, and jeopardy for supply that’s at risk of not meeting fulfillment. If an exception occurs, then use predefined rules to reduce excess inventory and find another source for your supply.

Identify the cause of an exception. Access the supply document to get details, such as the manufacturing work order or purchase order. Resolve the supply risk, then resubmit the supply order. If you can’t resolve the risk, then you can cancel the supply.

Automate Change Management
Use change management to maintain a balance between quantity and fulfillment dates. Do it when a change occurs.

- The source, such as a supplier or manufacturer, changes something.
  - Changes the supply quantity.
  - Changes the supply completion date.

- The demand changes something.
  - Change the quantity of a sales order.
  - Change the requested date of a sales order.
  - Cancel a sales order, purchase order, transfer order, or work order.
  - Split a sales order, purchase order, or transfer order.

Related Topics
- Overview of Setting Up Supply Chain Orchestration

How Supply Chain Orchestration Works

Supply Chain Orchestration uses three types of back-to-back flows: make, buy, and transfer.

Here’s what Orchestration does.
- Creates and manages the supply order.
Sends a request depending on the type of flow.

- **Make**. Sends work order to Manufacturing in Inventory.
- **Buy**. Sends purchase order to Purchasing.
- **Transfer**. Sends transfer order to Inventory.

- Tracks updates and statuses and sends them to Order Management.
- Closes the supply order after Order Management ships the item to your customer.

Orchestration also supports available-to-promise (ATP), where inventory already exists in the warehouse ready for shipping.

Here's an example of how Orchestration fulfills an item in a make flow for a sales order.
1. Your user adds an item in the Order Management work area and submits it. Order Management sends a request to Supply Chain Orchestration. The request includes details about the item.

2. Order Management books the item, then sends the sales order to Global Order Promising, and Promising schedules it.

Promising considers a wide range factors to determine how to schedule supply so it meets the requested delivery date.

- Examines inventory, lead time, backlog, and other factors to determine availability for the item.
- Considers the type of request. For example, it might take longer to fulfill a make order that to fulfill a transfer order.
- Uses available-to-promise rules and sourcing rules to determine where to create supply.

Promising sends a recommendation to Supply Chain Orchestration to create the supply needed to fulfill the item. For this example, assume Promising determines the most efficient and cost-effective way to fulfill the item and meet delivery dates is to make it, so it sends a make request.

3. Supply Chain Orchestration sends a supply order to Materials Management in Inventory Management to create a work order.

4. Materials Management creates the work order and makes the item.

5. Planning monitors fulfillment. For example, assume you order a configured item. Planning monitors the components that the work order uses to fulfill the configure options, the item it creates, whether items are in stock or need replenishment, and so on.

6. Shipping ships the item to your customer.

Here are some important concepts.

<table>
<thead>
<tr>
<th>Entity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply order</td>
<td>Contains the supply order lines that Supply Chain Orchestration creates to fulfill one supply request.</td>
</tr>
<tr>
<td>Supply order line</td>
<td>Contains details about each supply request.</td>
</tr>
<tr>
<td>Tracking line for supply order</td>
<td>Tracking line that monitors the process that fulfills the supply request according to the supply type.</td>
</tr>
<tr>
<td>Details for transfer order</td>
<td>Contains details about the request to transfer supply. Captures details in the fulfillment document for the transfer order from Inventory. Applies when the supply type for the tracking line is Transfer.</td>
</tr>
<tr>
<td>Details for buy order</td>
<td>Contains details about the request to buy supply. Captures details in the fulfillment document for the purchase order from Purchasing. Applies when the supply type for the tracking line is Buy.</td>
</tr>
<tr>
<td>Details for make order</td>
<td>Contains details about the request to make supply. Captures details in the fulfillment document for the work order from Manufacturing. Applies when the supply type for the tracking line is Make.</td>
</tr>
</tbody>
</table>
Example Flows

How Global Order Promising Sends a Buy Request

Assume Promising analyzes the supply chain and determines the buy flow is the best way to fulfill the sales order, so it sends a buy request.

The flow is the same as the make flow but with a few differences.

1. Global Order Promising sends a buy request instead of a make request.
2. Supply Chain Orchestration sends a supply order to Purchasing to create a purchase order.
3. Purchasing creates the purchase order and sends it to the warehouse in Inventory Management.
4. Shipping ships the item to your customer. Supply Planning works just like it does for the make flow. It isn’t in the diagram for brevity. Orchestration also uses the buy flow for procure-to-pay, Min-Max, and outside processing (OSP).

Other Flows

Supply Chain Orchestration supports other flows.

- **Available-to-promise.** Assume you ship a configured item, the AS54888 Desktop Computer. Your customer receives it, realizes they ordered the wrong configuration, and sends it back unused and unopened. You add the item back into inventory, so it’s now available to fulfill demand for another order.

- **Transfer.** Create a transfer order to do an internal material transfer from one warehouse to another warehouse, then ship it. If Global Order Promising determines that the exact configured item is available in another warehouse,
then it might recommend to transfer supply to the shipping warehouse, or ship it directly from the warehouse that contains the item. Supply Chain Orchestration creates the supply request documents and sends them to Inventory Management.

- **Drop.** Drop ship item AS54888, Sentinel Desktop, directly from your contract manufacturer to your customer. The flows goes from Order Management directly to Purchasing.

### A More Detailed View

Orchestration orchestrates and manages the flow between systems that request supply and systems that fulfill the supply request.

Orchestration can receive a supply request from an Oracle Cloud Application, such as Planning, Order Promising, Order Management, or Inventory. It can fulfill supply in a fulfillment application, such as Purchasing, Manufacturing, Shipping, or Receiving.

Here’s an example flow where Supply Chain Orchestration receives a sales order from Order Management. Orchestration does some or all steps, depending on what its processing.

1. **Receive a request to create supply.**

<table>
<thead>
<tr>
<th>Application That Sends Request</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Planning</td>
<td>Receive a request for a planned order. The request might be for a make, buy, or transfer order, or for an inventory organization that you set up as a contract manufacturing organization.</td>
</tr>
<tr>
<td>Order Management, Order Promising, or Oracle Transactional Business Intelligence</td>
<td>Receive a recommendation from Order Promising. Receive demand data from Order Management after it schedules a back-to-back sales order. Supply Chain Orchestration matches the data it receives from Order Promising and Order Management, treats it as one set of data, then uses it to start a make, buy, or transfer flow.</td>
</tr>
<tr>
<td>Inventory Management</td>
<td>Receive an internal transfer request for minimum or maximum replenishment.</td>
</tr>
<tr>
<td>File-Based Data Import</td>
<td>You use a spreadsheet to upload orders or requests for internal material transfers into Supply Chain Orchestration.</td>
</tr>
</tbody>
</table>

2. **Supply Chain Orchestration prepares to fulfill the request.**

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transform Attributes</td>
<td>Attributes in the supply request might not match attributes in the fulfillment system. So a transformation rule transforms them. For example, a rule might transform the attribute that identifies the supplier in Supply Planning to the attribute that identifies the supplier in Procurement. The rule might transform the attribute name, data type, and so on.</td>
</tr>
<tr>
<td>Create Supply Order</td>
<td>Supply Chain Orchestration create the supply order now so it can set default values in the order and so the orchestration process can process it.</td>
</tr>
<tr>
<td>Set Default Values</td>
<td>Run a rule that sets default values.</td>
</tr>
</tbody>
</table>
Assign and Call Orchestration Process

Run a rule that assigns and calls the orchestration process. Supply Chain Orchestration comes predefined with different orchestration processes. Each process creates supply differently depending on flow. For example, one process optimizes the back-to-back flow, while another optimizes flow for contract manufacturing.

Assume this example requests to make the item, so it calls the orchestration process that optimizes the make flow.

3. Run the orchestration process.

An orchestration process is a sequence of steps that automate fulfillment across fulfillment systems.

The flow in this example is a make flow that uses back-to-back fulfillment. Here’s a summary of what the orchestration process that optimizes the make flow does.

- Send a request to Procurement to create a purchase order.
- Send a request to Inventory Management to reserve demand for the purchase order.
- Send supply that the purchase order created to the warehouse.

Each orchestration process does quite a few fulfillment tasks. For example.

- Plan the entire schedule, including the start and end date for each process step.
- Make adjustments if supply or demand changes during fulfillment so it can meet the requested delivery date.
- Track the status for each step across fulfillment systems.

For details, see the Orchestration Processes topic.

External Interface

The orchestration process uses the external interface to run tasks that involve an application that resides outside of Supply Chain Orchestration, such as Procurement or Inventory Management. Here’s a summary of what orchestration does through the external interface.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrate</td>
<td>The integration accepts notifications, processes them, and manages exceptions.</td>
</tr>
<tr>
<td></td>
<td>- Creates a payload that’s specific for the fulfillment system, then calls it.</td>
</tr>
<tr>
<td></td>
<td>- The fulfillment system notifies Supply Chain Orchestration of changes that occur, such as a purchase order status or quantity decrease.</td>
</tr>
<tr>
<td>Do fulfillment tasks</td>
<td>- Identify the service or fulfillment system that will fulfill the request.</td>
</tr>
<tr>
<td></td>
<td>- Use a connector to transform the data.</td>
</tr>
<tr>
<td></td>
<td>- Send the supply request to the fulfillment system.</td>
</tr>
<tr>
<td>Communicate status</td>
<td>- Send request to get the supply request status or to update the fulfillment document.</td>
</tr>
<tr>
<td></td>
<td>- The fulfillment system creates, updates, or cancels the document according to the request.</td>
</tr>
<tr>
<td></td>
<td>- Record status responses that Orchestration receives from each fulfillment system.</td>
</tr>
</tbody>
</table>
### Back-to-back Fulfillment

Supply Chain Orchestration creates the supply request only after Order Promising schedules the sales order. Use it for an item that your fulfillment systems choose not to stock. It allows you to expand your item offering when you don’t stock the item.

Supply Chain Orchestration maintains a firm link between the demand document, such as a sales order, and the supply document, such as the purchase order, transfer order, or work order, in back-to-back flow. A firm link makes sure the supply chain can’t allocate supply incorrectly or divert it to fulfill some other demand. Use back-to-back when fulfillment must occur on time and you must meet high customer satisfaction.

Use the Product Information Management work area to enable the item for back-to-back fulfillment.

Use the Order Promising work area to set up the sourcing rules that determine your options for creating supply.

Use back-to-back when you must view demand, supply, and exceptions in the flow.

### Contract Manufacturing

Assume you contract out manufacturing to a contract. You create your own manufacturing work order, and the contract manufacturer uses a matching purchase order.

- The purchase order serves as an agreement between you and the manufacturer.
- The work order tracks the progress of the contract manufacturer in creating supply.
- Supply Chain Orchestration links the work order and purchase order documents to make sure the document parameters and the progress are synchronized.
- Supply Chain Orchestration provides visibility into the processes that your contract manufacturer uses. It also uses automated exception management to balance supply and demand, and to avoid excess supply or short supply.

### Outside Processing

You outsource one or more manufacturing operations in the work order to a partner. For example, assume you’re an Original Equipment Manufacturer (OEM). You do some of your own manufacturing operations but also outsource other operations to a Manufacturing Partners (MP). You pay the partner for the work they do, which might include various value-added services.

For example, Supply Chain Orchestration receives a supply request from Oracle Manufacturing Cloud, then.

- Starts the purchase request to process the outside item.
• Sends purchase requisition or purchase order details to Manufacturing, such as Purchase Order Number, Purchase Order Line Number, and Supplier.
• Starts the shipment request for a partially finished assembly.
• Receives shipment confirmation from Shipping.

Sends shipment details to Manufacturing.

Supply Chain Orchestration also monitors the outside processing operations, and automatically processes change orders.

The Outside Processing column on the Supply Lines Overview page indicates which supply orders include outsourced manufacturing operations.

**Deviations in Orchestrating Supply**

Supply Chain Orchestration tracks transactions during the supply lifecycle of each buy, transfer, and make flow. Use it to view the supply request and supply status, including exceptions.

A deviation is a supply line that deviates from the promised delivery date or deviates from the promised item quantity.

Change or delay might cause a deviation. Here are some example changes.

• Someone cancels the purchase order, work order, or transfer order.
• Quality assurance rejects an item because of a quality problem.
• A supplier can’t meet the requested quantity or scheduled date.
• Someone reassigns a reserved supply.

Use change management to manage change that occurs in the supply.

• Create and manage alternate supply sources that meet demand.
• Split an existing supply tracking line into more than one tracking line. Create a parallel flow in the orchestration process for each split line.

Assume you receive a tracking line for a buy request that includes 100 items.

• Orchestration sends a buy request for a quantity of 100 to your procurement system.
• Procurement creates a requisition and a purchase order that includes three schedules. One schedule with a quantity of 50, another 30, and another 20.
• Procurement sends the purchase order to orchestration.
• Orchestration tracks each schedule independently, so it splits the tracking line that contains a quantity of 100 into three tracking lines. One with a quantity of 50, another 30, and another 20. It uses a separate orchestration process instance to track each schedule.
• You use the Supply Overview work area to manage the supply tracking lines.
• You can also manage exceptions for each tracking line.
2 Overview

Overview of Managing Supply Lines

Use the Overview page in the Supply Orchestration work area to view supply lines that orchestration is processing, including current status. Here are some important concepts.

<table>
<thead>
<tr>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply line</td>
<td>Identifies the supply type, source, item, quantity, destination, date, status, and other details. For example, line 1.1 in supply order 300100081515548 is a buy line that includes a quantity of 50 for item AS54888 shipping from Los Angeles to Denver with a requested delivery date of 12/7/19 11:59 PM. It has 0 errors, 0 exceptions, 0 jeopardies and its status is In Production. Orchestration uses the supply line to track and manage the supply order.</td>
</tr>
<tr>
<td>Supply tracking line</td>
<td>Orchestration uses the tracking line to track fulfillment for the supply order. It tracks. • The supply source, including the organization that supplies the item, subinventory and location where the item resides, and so on. • The supply request, such as organization that made the request, subinventory, and location. • Supply dates • Status Orchestration creates at least one tracking line for each supply order. It might create more for a supply order depending on change that occurs during fulfillment. The top part of the Overview page on the Supply Lines Overview tab displays tracking lines.</td>
</tr>
<tr>
<td>Exception</td>
<td>Change in supply that affects quantity or supply date. For example, a reduction in quantity, date change, or canceled supply.</td>
</tr>
<tr>
<td>Jeopardy</td>
<td>Jeopardy occurs when supply is delayed beyond its promised date.</td>
</tr>
</tbody>
</table>

To access the page, in the Navigator, click Supply Orchestration, then click Supply Lines Overview.
Analytics for Supply Lines

Use charts on the Supply Lines Overview page to visualize details about supply lines.

Deviations by Supply Type

The Deviations by Supply Type sunburst chart on the Supply Lines Overview page includes deviations for supply tracking lines that the Overview area displays. Use it to examine lines that deviate from planned fulfillment because they’re in jeopardy, or an exception or error occurred.

Get details about.

- Supply order type, such as make, buy, or transfer.
- Deviation type, such as jeopardy, exception, or error.

Double-click the chart to get details about the deviation.

The chart includes two rings. Click Detach to display the chart with a third ring on a separate page. The third ring displays more detail.

<table>
<thead>
<tr>
<th>Deviation</th>
<th>The Third Ring Displays Tracking Lines That Are In State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeopardy</td>
<td>High jeopardy</td>
</tr>
<tr>
<td>Exception</td>
<td>Supply Date Pushed Out or Quantity Reduced</td>
</tr>
<tr>
<td>Error</td>
<td>Undefined</td>
</tr>
</tbody>
</table>

Current State Analytics

<table>
<thead>
<tr>
<th>Chart</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deviations by Type</td>
<td>Deviations in supply orders that are open.</td>
</tr>
<tr>
<td>On Track by Supply Type</td>
<td>Compares the types of supply orders that are on schedule according fulfillment dates.</td>
</tr>
<tr>
<td>Status by Supply Type</td>
<td>Get a quick status summary for your buy, make, and transfer orders.</td>
</tr>
</tbody>
</table>

For example, if the total in the Buy column is 600, and the Started status in the Buy column consumes a quantity of 580, it might indicate there’s a problem in the factory getting the purchase orders started for some reason.
Supply Line Status

Orchestration updates the status on each supply line after each change in the fulfillment process.

<table>
<thead>
<tr>
<th>Supply Line Status</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>The requested supply quantity is on time.</td>
</tr>
<tr>
<td>Jeopardy</td>
<td>The requested supply quantity is available only after the requested date.</td>
</tr>
<tr>
<td>Exception</td>
<td>The available supply doesn’t meet the requested quantity, the requested date, or both.</td>
</tr>
<tr>
<td>Error</td>
<td>An error occurred.</td>
</tr>
</tbody>
</table>

For example, Oracle Procurement Cloud didn’t create the purchase order because a web service is down or a charge account is missing.

Fix the error.

- Resubmit the supply line.
- If data is missing, isn't valid, and you can’t correct it, then mark the supply line as Inactive.
3 Manage Supply Lines

Overview of Managing Supply Lines

Use the Manage Supply Lines page to get details about supply lines. For example, get details about the Buy supply lines for a back-to-back sales order.

Access the Manage Supply Lines page from the Overview page of the Supply Orchestration work area.

- Click Tasks > Manage Supply Lines, or . . .
- Click a link in Current State area.

On the Manage Supply Lines page, in the Supply Order Number column, click a link to get details about the supply lines in a sales order. Use the Supply Order Details page that displays to examine supply line details for the sales order.

How Orchestration Processes Purchase Orders

A buy flow creates a purchase order, which is a document that starts a purchase process.

Here's how it works.

1. Supply Chain Orchestration receives a supply request from Order Management Cloud, Planning, or Inventory.
2. The decomposition layer processes the request.
3. Orchestration creates a supply order.
4. The task layer creates a request to create the purchase order.
5. The external interface sends the supply request to Oracle Procurement Cloud.
6. Procurement creates the purchase order.
7. The Purchasing task layer tracks the purchase order.
8. The Overview page in the Supply Orchestration work area displays any exceptions that occur.

Orchestration can manage change that occurs during a back-to-back buy flow.

- Create, update, or cancel a purchase order in Oracle Procurement Cloud according to a request from Order Management, Planning, or Inventory.
- Record and respond to business events in Procurement that occur because of changes to supply. Orchestration might respond with a create or cancel. It might also respond with a request to split the purchase order, split purchase order lines, or split the schedule for a purchase order line.

How Orchestration Processes Work Orders

A make flow creates a work order. A work order is a set of instructions that your manufacturer uses to create the item that your supply order requests.

Here's how it works.

1. Supply Chain Orchestration receives a supply request from Order Management Cloud, Inventory Min-Max, or Planning.
2. The decomposition layer processes the request.
3. Orchestration creates a supply order.
4. The task layer creates a request to create the work order.
5. The external interface sends the supply request to Oracle Manufacturing Cloud.
6. Manufacturing creates the work order.
7. The Manufacturing task layer tracks the work order.
8. The Overview page in the Supply Orchestration work area displays any exceptions that occur.

**Back-to-Back**

Orchestration can create a work order to support a back-to-back flow for a sales order in Order Management Cloud. It creates and reserves the work order for a single sales order. Contract manufacturing affects work order usage.

<table>
<thead>
<tr>
<th>Contract Manufacturing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Uses the work order to track production in the contract manufacturer’s facility.</td>
</tr>
<tr>
<td>No</td>
<td>Uses the work order to fulfill the sales order in the manufacturer’s own facility.</td>
</tr>
</tbody>
</table>

**Change and Cancel**

Change might include a change in dates or quantity.

- Orchestration might create more than one tracking line to manage demand change that occurs during a back-to-back flow or with contract manufacturing.
- If a rejection occurs, then Orchestration doesn’t modify the original tracking line, but it does create a new tracking line for the rejected quantity.
- If an exception occurs, you can manually place a work order on hold while you resolve the exception.

**How Orchestration Processes Internal Material Transfers**

Supply Chain Orchestration can manage an internal material transfer that occurs within a single organization or between two different organizations.

Here’s how it works.

1. Orchestration receives a supply request.
2. The decomposition layer processes the request.
3. Orchestration creates a supply order.
4. The task layer sends a request to Inventory to create a transfer order.
5. Business rules determine how to process the transfer request.

A document execution rule determines whether to use a purchase order or transfer order for the transfer request depending on the condition.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Supply Type</th>
<th>Execution Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>A buy and sell relationship exists between the source organization and destination organization</td>
<td>Buy</td>
<td>Purchase order</td>
</tr>
<tr>
<td>Condition</td>
<td>Supply Type</td>
<td>Execution Document</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>The source organization and the destination organization are separate legal entities</td>
<td>Buy</td>
<td>Purchase order</td>
</tr>
<tr>
<td>All other conditions</td>
<td>Transfer</td>
<td>Transfer order</td>
</tr>
</tbody>
</table>

6. Orchestration creates a purchase order or transfer order.
7. Fulfillment ships inventory to the destination organization.
8. The Supply Orchestration work area displays details for the purchase order or transfer order.

Orchestration also manages change that occurs if fulfillment updates cancels the order. Examples of change include rescheduling the order, changing the shipping method, changing the requested date, and so on.

**Approve Replenishment Requisitions for Minimum and Maximum Requests**

You can submit a replenishment requisition to approval for a minimum and maximum request that your purchasing application created.

- Inventory sends the supply request to Supply Chain Orchestration.
- Orchestration sources supply details from your purchasing application.
- Orchestration verifies whether the purchasing application already approved the requisition or if it requires approval. If the requisition isn’t approved, then the purchasing application doesn’t create the purchase order.

You don’t need to do anything in the Supply Orchestration work area.

**Manage Reservations in Back-to-Back Processing**

Use a reservation to allocate material for the demand that a fulfillment line in Order Management Cloud needs.

- You must reserve supply in a back-to-back flow for an inventory task that includes creating and managing a material reservation.
- Create one reservation to supply material for one demand.
- Create a reservation for a back-to-back, buy, make, transfer, or on hand supply order.
- You can’t create a reservation for partial fulfillment.
- Changing a reservation in Oracle Logistics Cloud might cause an exception. The Supply Orchestration work area displays them.
4 Manage Exceptions for Supply Requests

Supply Request Exceptions

Use the Manage Supply Request Exceptions page to view supply requests that failed. Examine the Exception Message column to get details about each set of supply request lines.

- Supply Chain Orchestration doesn’t create a supply order for a request that’s in exception.
- If the problem that causes the exception occurs because.
  - Your set up in Orchestration isn’t correct. Fix the set up, then resubmit the request.
  - Data in the request is missing or isn’t correct. Cancel the request, fix the data in the application that sends the request, then resend the request.

You can also use the Manage Supply Request Exceptions page to view the number of times you resubmit each request.

What happens if I don't resolve supply request exceptions?

They continue to display on the Manage Supply Exceptions page. Orchestration doesn’t create a supply orders for exceptions.

To improve performance and reduce maintenance, resolve exceptions as soon as you can.

Can I change a supply request before I resubmit it?

You can’t change a request from the Manage Supply Exceptions page. Use the exception message to view the cause of the error, then correct it in your Orchestration set up or in the application that sent the request. Next, refresh the Manage Supply Exceptions page, select the updated record, and resubmit it.

What's the difference between a supply chain exception and jeopardy?

An exception is a change in supply or demand that affects quantity or fulfillment dates.

Jeopardy is a deviation where planning has determined supply might be delayed beyond the promised fulfillment date, but the deviation hasn’t yet occurred.
5 Manage Exceptions for Configured Items

Manage Exceptions for Configured Items

Use the Manage Configured Item Exceptions page to manage exceptions that occur when orchestration creates a configured item at run time.

<table>
<thead>
<tr>
<th>Situation</th>
<th>What Orchestration Does</th>
<th>What You Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orchestration creates a configured item but a problem occurs when it adds details for downstream processing.</td>
<td>Creates an exception and continues to process the sales order.</td>
<td>Use the logs to fix the problem. Orchestration uses entities in the configuration model to create each configured item. Entities include subinventories, locators, item transaction defaults, inventory consumption rules, units of measure, and so on. Orchestration logs errors that occur.</td>
</tr>
</tbody>
</table>

| Orchestration can't create the configured item. | Creates an error, sends the error to Order Management, and stops processing the sales order. | Fix your set up, then resubmit the supply request. The set up for the configured item in the Product Information Management work area probably isn’t correct. |

1. In the Navigator, click Supply Orchestration.
2. On the Overview page, click Actions > Manage Configured Item Exceptions.

The search results displays the current exceptions.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Model</td>
<td>Name of the configuration model item.</td>
</tr>
<tr>
<td>Item</td>
<td>Name of the configured item that contains the problem.</td>
</tr>
<tr>
<td>Organization</td>
<td>Organization that you associated with the configured item.</td>
</tr>
<tr>
<td>Resubmit Count</td>
<td>Number of times you resubmitted the configured item.</td>
</tr>
</tbody>
</table>

Choose one or more rows, then click.

- **Actions > Resubmit**: Resubmit the configured item for processing. Make sure you fix the problem that causes the exception, then resubmit.
- **Actions > Ignore Exception**: Remove exceptions from the list. The problem that caused the exception remains but doesn’t display in the list.
Here are the exception types you can search on.

- Consumption Rules
- Item Attachments
- Item Categories
- Item Locators
- Item Inventories
- Item Subinventories
- Item Transaction Defaults
- Related Items
- Units of Measure Interclass
- Units of Measure Intraclass
6 View Configured Items

View Sales Configured Item

Examine the values of a configured item without opening the sales order or work order.

The user, such as an Order Entry Specialist, sets configure options for a configured item in the sales order. The work order includes the configured item, required components, configure options, substitutions, and transactional item attributes.

You use the Product Information Management work area to set up a configured item. You can’t use it to view how the user sets configuration options because the work area doesn’t store the bill of materials for the configured item. Fulfillment uses values that the user sets at run time to create the bill of materials. You can use the View Configured Item Structure page to examine the configured item the user set up without accessing the sales order.

Use the Item attribute in the Search area to search for the configured item, then use the Item Structure Details area to drill down to the configured item and configure options.

ConfiguredItemService Web Service

Use the ConfiguredItemService web service to get the item structure.

- For details, see the SOAP Web Services for Oracle Supply Chain Management Cloud book
- You must make sure the required components and configure options for each configured item are the same across organizations.
Chapter 7
Create Supply Requests

Create Supply Request

Use the Create Supply Request page to create an urgent request to transfer an item.

For example, to replenish stock for an item outside of your regular planning cycle.

Assume you need a quantity of 100 to meet demand for the AS54888 item. You find that the quantity won’t meet demand, so you create a supply request.

1. Find your item.
   - In the Inventory Management work area, click Tasks > Manage Item Quantities.
   - On the Manage Item Quantities page, search for the AS54888 item.
   - In the search results, in the Item column, expand Item AS54888, then notice values in the quantity area.

<table>
<thead>
<tr>
<th>Item</th>
<th>On Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization V1</td>
<td>50</td>
</tr>
<tr>
<td>Organization M1</td>
<td>25</td>
</tr>
</tbody>
</table>

These are example values. The values in your tree will be different.

   - Click Actions > Request Transfer Order.
     Notice that the Create Supply Request page displays the destination organization and a reference number for the supply request.
     As an alternative, start in the Supply Orchestration work area.
     - Click the Create Supply Request tab at the top of the work area.
     - On the Create Supply Request page, click Change Organization.
     - In the Select Organization dialog, select the destination organization, then click OK.

2. Add details for the supply request.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>AS54888</td>
</tr>
<tr>
<td>Requested Quantity</td>
<td>100</td>
</tr>
<tr>
<td>UOM</td>
<td>Each</td>
</tr>
<tr>
<td>Requested Delivery Date</td>
<td>Choose today’s date.</td>
</tr>
</tbody>
</table>
If you accessed the Create Supply Request page from the Supply Orchestration work area, then click Add Row before you set the details.

3. Click Select Supply Source.

- The Select Supply Source page displays the source organizations that can fulfill the item according to the quantity and requested delivery date you entered.
- The page ranks source organizations according to the distance to the destination organization or the value of the Option Ranks attribute in Global Order Promising.
- You can also access the Select Supply Source page from the Enter Requisition Lines page in Self Service Procurement (SSP).
- If an error displays when you click Select Supply Source, then make sure your user role can access Order Promising.

Go to the Security Console, create a role, then assign it to a user. Use these values when you create the role.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Category</td>
<td>SCM - Job Roles</td>
</tr>
<tr>
<td>Function Security Policy Name</td>
<td>View Planning Supply Availability</td>
</tr>
<tr>
<td>Function Security Policy Code</td>
<td>MSP_VIEW_PLANNING_SUPPLY_AVAILABILITY_PRIV</td>
</tr>
<tr>
<td>User Login</td>
<td>Choose the inventory role, procurement role, or user that needs access.</td>
</tr>
</tbody>
</table>

For details about how to create a role, see the Securing Oracle SCM Cloud book on My Oracle Support.

4. Select a source organization, then click OK.

Notice that the Create Supply Request page displays values according to your request, such as destination type, destination subinventory, source organization, supply type, destination location, source subinventory, and shipping method.

If necessary, you can modify some of these details.

- In the Supply Details column, click Additional Information.
- In the Supply Details dialog, modify details, then click OK.

5. Click OK > Submit.

- Inventory Management sends a request to Supply Chain Orchestration to create a supply order.
- Orchestration validates the request. If validation:

  - Succeeds. Orchestration creates a supply order, then sends supply transfer details to Inventory Management. Inventory Management creates the transfer order and displays the reference number for the supply request and line number. You can use the reference number to search for the supply order in the Inventory Management work area.
  - Fails. Inventory Management doesn’t create the transfer order, but instead displays an error message.
How Does Orchestration Rank Supply Sources?

Orchestration ranks supply sources for an unplanned item according to their distance from the destination organization. If the distance isn’t available, then orchestration uses a lower rank to indicate the source organization. Orchestration ranks sources for a planned item according to the option ranks that Order Promising provides.

Scheduled Processes That Plan Supply for Orchestration

Get details about scheduled process you can use with Supply Orchestration.

<table>
<thead>
<tr>
<th>Supply Type</th>
<th>Process Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOS_.DosOrchB2BTransferProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchB2BMakeProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchB2BATPProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchP2PContractMfgProcessComposite</td>
<td></td>
</tr>
<tr>
<td>Simple Buy</td>
<td>DOS_.DosOrchSimpleBuyCreateProcessComposite</td>
<td>Fulfill buy requests from Planning.</td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleBuyUpdateProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleBuyCancelProcessComposite</td>
<td></td>
</tr>
<tr>
<td>Simple Make</td>
<td>DOS_.DosOrchSimpleMakeCreateProcessComposite</td>
<td>Fulfill make requests from Planning.</td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleMakeUpdateProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleMakeCancelProcessComposite</td>
<td></td>
</tr>
<tr>
<td>Supply Type</td>
<td>Process Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Simple Transfer</td>
<td>DOS_.DosOrchSimpleTransferCreateProcessComposite</td>
<td>Fulfill transfer requests from Planning and Minimum Maximum planning.</td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleTransferUpdateProcessComposite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOS_.DosOrchSimpleTransferCancelProcessComposite</td>
<td></td>
</tr>
</tbody>
</table>
8 Manage Production Reports

Production Reports

Use the Manage Production Reports page to get reports for contract manufacturing. Your contract manufacturer uploads production report data to Supply Orchestration, orchestration processes it, then sends updated and new transactions to manufacturers. Different users have different access.

<table>
<thead>
<tr>
<th>User</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier or contract manufacturer</td>
<td>Access reports from the Supplier Portal work area.</td>
</tr>
<tr>
<td></td>
<td>Use the Manage Production Reports page to upload reports.</td>
</tr>
<tr>
<td></td>
<td>The page restricts reports according to supplier. The supplier can only view production reports for their own purchase orders.</td>
</tr>
<tr>
<td>Supply chain manager</td>
<td>View all reports that Supply Orchestration is tracking.</td>
</tr>
<tr>
<td></td>
<td>Access reports in one of two ways depending on the application you use to access them.</td>
</tr>
<tr>
<td></td>
<td>• Manage Production Reports page of the Supply Orchestration work area. Resubmit or upload production reports.</td>
</tr>
<tr>
<td></td>
<td>• Original Equipment Manufacturers (OEM). Sign in with the Supply Chain Manager role, then go to the Overview page of the Supply Chain Collaboration work area. Use the supplier production reports infolet. Double-click it to go to the Manage Production Reports page.</td>
</tr>
</tbody>
</table>

Take action.

- **Upload.** If you’re a supplier, upload your production report to create records in the manufacturing application. If you encounter a data validation error, correct the data and upload again.

- **Resubmit.** If you’re a supply chain manager, and if the manufacturing application couldn’t update production data because of a system failure, then resubmit the report.

To view report details on the Manage Production Reports page, click the link in the Production Report column, then use the tabs.

- **Completion.** Examine transaction completion details.

- **Materials.** Examine material details that your manufacturer or contract manufacturer used to do the transaction. If the contract manufacturer provides all material, then the tab doesn’t display any data.

Use links in the Details column in each tab to view lot numbers and serial numbers that production used for completion or material transaction.
Upload Production Reports

Upload a file that contains your production data and submit it.

1. Use the upload file template to gather production data. Use the template to make sure data is complete and accurate.
   
   If necessary, send the file to your supplier so they can fill it out. Alternatively, provide your supplier with sign in access to orchestration so they can upload it directly.

2. Use the Manage Production Reports page to upload the file.

Supply Orchestration validates the uploaded data, then uses it to create production reports. Orchestration sends the reports to the manufacturing application, and manufacturing uses it to update their work orders.

If Orchestration can’t create a report, then it cancels the upload and doesn’t send any data to manufacturing. You must correct the data that caused the error, and upload again.

If a system failure occurs when sending data to manufacturing, then resubmit the production report.