Oracle Fusion Cloud SCM

Using Order Promising

24B

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1 Overview

What's New in Using Order Promising

Get a summary about content that's new or significantly revised in each update of Using Order Promising.

To get details about.

- New features in each update, see *Order Management in Oracle Cloud Release Readiness*.
- Known issues for each update, see *Oracle Supply Chain Management Cloud Functional Known Issues and Maintenance Packs (Doc ID 1563075.1)*.

Update 24B

Topic	Description
Consume Resources Only After Components Are Available	New. Set up Promising so it starts consuming resources only after your factory has all the components it needs to begin manufacturing.
Set up Geography for Promising	New. Set up geography so Promising can use it to source your supply.
Vary Type and Rate of Consumption for Components, Materials, and Resources	Revised. You can now use FBDI to import your data.

Update 24A

Topic	Description
Add Lead Time So You Can Pick and Pack	New. Use the Pick and Pack Lead Time attribute to add flexibility between the date when supply becomes available at your fulfillment organization and the time when you ship it.
Use Different Components, Materials, and Resources Depending on Start and End Dates	New. Align the start dates and end dates for each manufacturing component and resource in your bill of resources with the dates that your fulfillment flow uses.
Vary Type and Rate of Consumption for Components, Materials, and Resources	New. Meet demand for components and resources in your bill of resources even when the same operation has more than one instance of the same component or resource in your fulfillment flow.
Set Postprocessing Lead Times	Revised. See the new Add Postprocessing Days When You Modify Ship Dates subtopic.
Manage Order Promising Options	Revised. New details about Generate Replay Data Sets, including a handy demonstration.

Update 23D

Topic	Description
Allocate Supply in Source Promising	New. Use an allocation rule to manage real-time supply with source promising.

Topic	Description
Split Order Lines When Supply Meets a Threshold	Revised. Contains new guidelines.

Update 23C

Topic	Description
Use Source Promising in Your Back-to-Back Flows	New. Promise an item and track it at run time to keep your supply and demand data accurate during fulfillment.
Manage Promising Profiles	New. Consolidates all the promising profile content into a single topic.
Allocate Supply Through FBDI	New. Use file-based data import (FBDI) to manage the supply that you allocate according to quantity.
Manage Supply After the Promising Horizon Expires	New. Buy, make, or transfer supply even after the promising horizon expires.
Schedule Options on More Than One Level of an Assemble to Order Item	New. Get more detailed capable-to-promise calculations and more accurate promise dates for a complex assemble-to-order item.
Set Up Your Items in Product Information Management	New. Use the Product Information Management work area to do various set ups on your item that affect promising.
Temporarily Reserve Supply While Shopping or Quoting	Revised. See these new subtopics: • Delete Expired Demand • Temporarily Reserve Supply with Source Promising
Troubleshoot Setup Problems in Order Promising	Revised. See the new Extract Global Order Promising Replay Data subtopic.

Update 23B

Topic	Description
Split Order Lines When Supply Meets a Threshold	New. Split an order line and fulfill at least some of your customer's demand even if part of the quantity becomes available after the requested date.
Get Promising Dates in Real Time	Revised. Updated to clarify what you can and can't do.

Update 23A

Topic	Description
Create Alternative Fulfillment Scenarios to Reduce Cost	New. Set up Promising so you can select an alternative fulfillment scenario that has the lowest total cost to fulfill the item.
Use REST API to Adjust Allocation Percentages	New. Use REST API to adjust the percentage of supply that Global Order Promising assigns to an allocation node with a quantity that you specify in your import payload.
Use Work Definitions with Your Bill of Resources	New. A separate topic about how to use work definitions with your bill of resources. This content was previously in *Guidelines for Creating a Bill of Resources*.

Topic	Description
Database Promising	Revised. Has a lot of new information. Check it out!
Order Management Statuses	Revised. If the status of all the fulfillment lines in a sales order is Closed or Canceled, then you can't modify the Primary Salesperson attribute on order header.
See What Supply is Available and Allocated	Revised. Has new details about the Review Supply Allocation action.
Examine Availability Dates	Revised. Has some new details about how Promising uses time zones.
Manage Order Promising Options	Revised. Get new details about how to set and use these options.

Update 22D

Topic	Description
Include Resources for Configure Options	New. Check availability and schedule the resources that you need to fulfill a configure option and include them in your bill of resources.
Adjust Your Allocation Quantities	New. If you use a quantity to allocate supply in a fulfillment hierarchy in Global Order Promising, then you can use REST API to modify that quantity.
Allocate Supply Through REST API	New. Use the Quick Availability Check REST API to get details about the supply that's currently available in your supply chain.
Get Supply from a Node's Parent	Revised. Get new details about how to do this.
Get Promising Dates in Real Time	Revised. If you use source promising, then this feature will also consider supplies that have an availability date that occurs in the future.
Guidelines for Creating a Bill of Resources	Revised. Get details about how to use work definitions with your bill of resources.

Update 22C

Topic	Description
Allocate Supply in a Hierarchy	New section. Contains several new topics that describe how to allocate supply in a hierarchy.
Get Promising Dates in Real Time	New topic. Get accurate available-to-promise dates from across millions of possible fulfillment scenarios.
Include Over the Counter Transactions When You Promise	New topic. Set up Promising so it considers inventory reductions that result from an over the counter transaction.
Include Supplier Capacity When You Promise ATO Items	New topic. Use the capacity for the configuration model when you schedule an assemble-to-order item instead of the capacity for each specific configuration.
Use Lower Priority Supply to Fulfill Higher Priority Demand	New topic. Set up your allocation rule so you can consume supply from a lower priority node to fulfill demand for a higher-priority node.

Update 22B

Topic	Description
Use Alternative Resources and Substitute Components	New topic. Use alternative resources or substitute manufacturing components to reduce delay when promising your item. Use them in your bill of resources so you can provide earlier, more accurate promise dates.
Use Cutoff Times to Control Your Shipments	New topic. Use a cutoff time to change the scheduled ship date for sales orders that Promising has already scheduled but that you can't ship today for some reason.

Update 22A

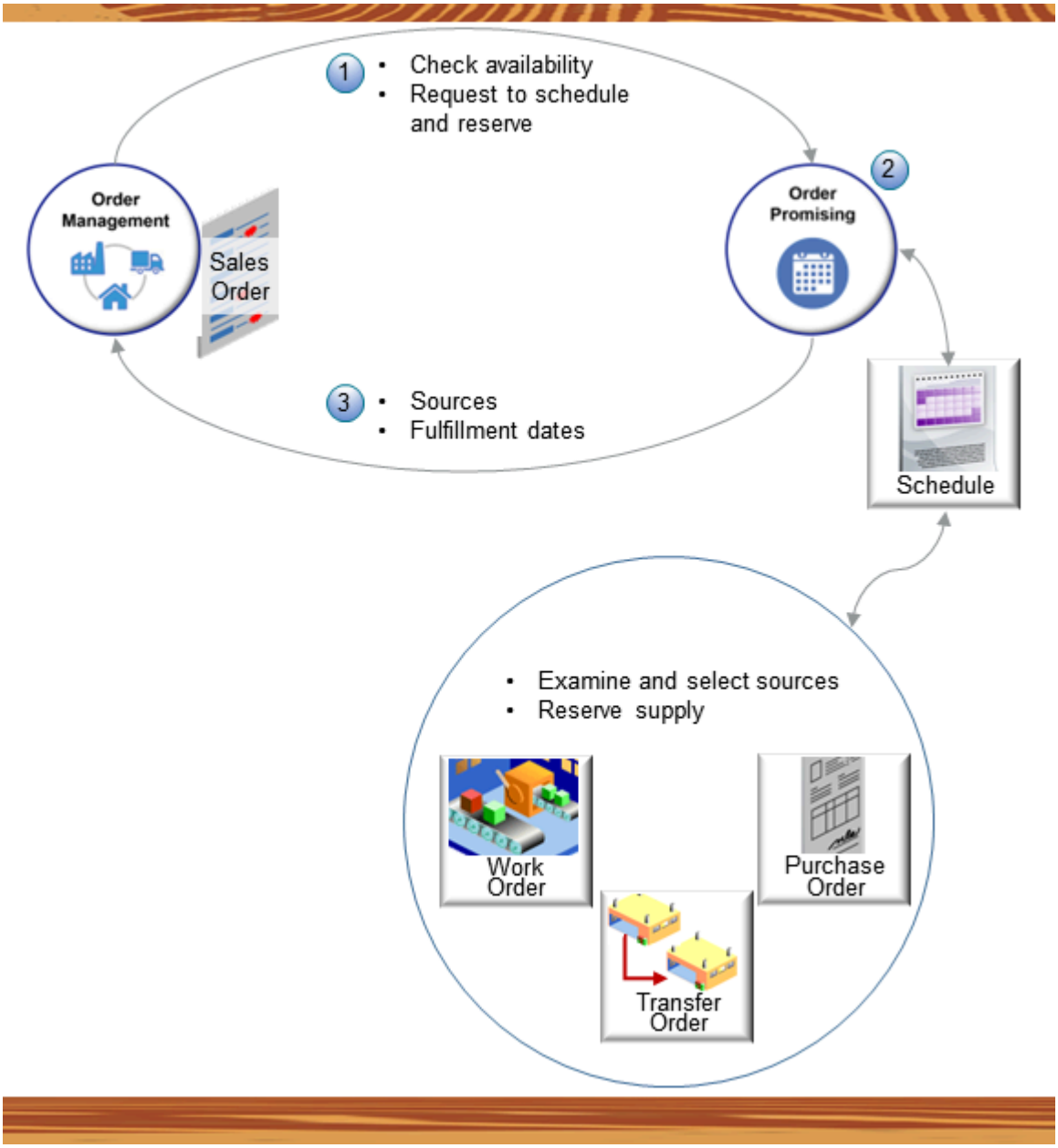
Topic	Description
Bills of Resources	New section. Automatically create a bill of resources to help fulfill a sales order when supply isn't already available in your supply chain.
Keep Availability in Global Order Promising and Inventory Management Synchronized	New. Keep the values that you see in Global Order Promising synchronized with Inventory Management.
Why Is My Inventory Different From What's Available?	New. Learn how you can fix it.
Overview of Global Order Promising	New. Find out what Global Order Promising is and why you would want to use it.
Split or Substitute Fulfillment Lines	Revised. Make sure you consider how lead time affects promising when you split or substitute a line.
Source Promising	Revised. Get details about whether you can use web services and REST API.
Set Up Your Promising Rules Source Your Supply Chain	Revised chapters. Get new details that will help you set up your rules.

Overview of Global Order Promising

Oracle Global Order Promising is an application that helps you fulfill sales orders by the requested date for items that you receive from your ordering application, such as Oracle Order Management.

Promising considers the supply that is or might be available in your entire supply chain, including suppliers, factories, distribution centers, and warehouses.

Assume you sell an item named the AS54888 Desktop Computer. You place a sales order in Order Management for the AS54888 with a requested delivery date of March 10.



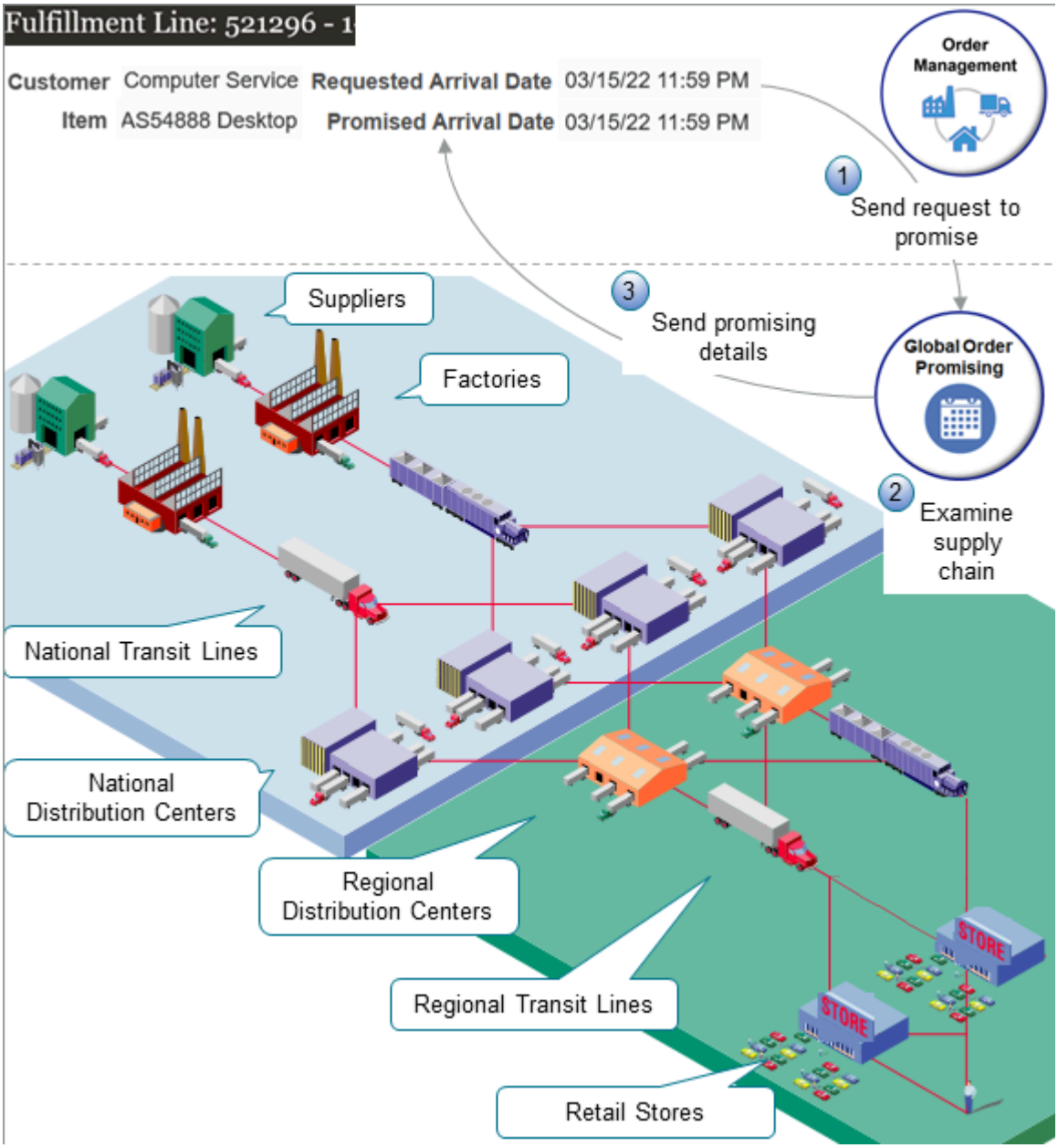
1. Order Management sends a request that includes these details to Promising. The request might be to check and see whether the item is available, or to schedule and reserve the item for fulfillment.
2. Promising uses its schedule to look at a variety of sources that can fulfill demand within the date that Order Management requested, depending on how you set it up. For example, it can try to get supply from:
    - Work orders that create supply for the item in manufacturing
    - Transfer orders that transfer supply between organizations when that supply already exists
    - Purchase orders that purchase supply for the item from a supplier
3. Promising sends supply details to Order Management, including the source that will supply the item, fulfillment dates, and so on.

Promising can do this in different ways, depending on how you set it up:

- Select from a variety of fulfillment locations.
- Use an available-to-promise rule that you create to consume on-hand supply that already exists in your supply chain, inventory that's in transit, or to get supply through a purchase order, transfer order, or through a planned order that Promising receives from Supply Planning.
- Use a capable-to-promise rule that you create to build supply that doesn't already exist in your supply chain. Capable-to-promise is the capacity to build inventory that isn't currently available in your supply chain.
- Substitute the ordered item with another item.
- If there isn't enough supply to fulfill the item from a single location, then Promising can split the order line according to location, time, substitution.

Make Your Supply Chain Flexible and Resilient

Consider this example of a supply chain.



Here's how it works.

1. Order Management sends a request to Promising to promise an item, such as the AS54888 Computer, according to the requested arrival date.
2. Promising uses the set ups that you make in the Global Order Promising work area to examine the supply chain and promise the item so it arrives at your customer's site by the requested arrival date.
3. Promising sends promising details to Order Management, such as the Promised Arrival Date.

Assume your supply chain has:

- Supplier A and Supplier B
- Factory A and Factory B
- National Distribution Center 1

- National Distribution Center 2
- National Distribution Center 3
- National Distribution Center 4
- Regional Distribution Center 1
- Regional Distribution Center 2
- Retail Store 1
- Retail Store 2
- Retail Store 3
- Retail Store 4
- Truck Transit
- Rail Transit

You can set up Promising so it considers a variety of alternatives in this chain. Here are just a few examples:

- Use Supplier A, Factory A, National Distribution Center 2, Regional Distribution Center 1, and Truck Transit only for high priority orders.
- Use Supplier B, Factory B, National Distribution Centers 1, 3 and 4, Regional Distribution Center 2, and Rail Transit only for low priority orders.
- Use Supplier B only if Supplier A can't fulfill the item.
- Use only Factory B to build the AS54888 item. Don't use Factory A to build it. If Factory B can't build it in time to meet the requested fulfillment date, the get it from Supplier A.
- Allocate 60% of your supply to your high priority customers, and 40% of it to lower priority customers.
- Use Factory A and Factory B in January, but use only Factory B in February.

Principles of Promising

Promising applies a set of principles to prioritize your sources of supply.

Principle 1: Meet Demand on Time

Promising's highest priority is to find sources that meet your customer's requested date. If it can't, then it fulfills to the next available date. You can use the Check Availability feature to reexamine the sourcing that Promising selects. You can also use it to test a variety of different what-if scenarios. For details, see *Check Availability*.

Principle 2: Consume Supply That Already Exists Before Creating New Supply

Promising uses whatever supply that's currently available first. If there isn't enough, then Promising uses capable-to-promise to consume materials, resources, or suppliers to make, buy, or transfer the goods it needs to meet demand.

You can use the ATP Time Fence feature to modify this behavior. If the requested date happens after the fence, then Promising consumes capable-to-promise supply and resources before it looks at supply that already exists. For details, see *Time Fence*.

Principle 3: Use the Source That Has the Lowest Cost

Promising can prioritize the location and transit mode that has the lowest cost while still meeting the requested date. If you use profitable-to-promise, then Promising also considers the cost of manufacturing components and resources.

You can specify whether to use profitable-to-promise on your available-to-promise rule. For details, see *Set Attributes on Your Supply Chain Search*.

Principle 4: Source According to the Location's Priority

If you source from more than one location, then you can set up Promising so it selects the location according to a priority that you set on your sourcing rule, such as customer, zone, category, item, or demand class. For details, see *Set Your Assignment Levels*.

Principle 5: Use a Similar Item to Substitute Your Item

Promising can substitute one ordered item for another. For example, if the item is the AS54888 desktop computer, then it can substitute the AS54888 for the AS6000 desktop computer. If another location has enough supply to meet demand, then Promising consumes supply from that location to fulfill the order and won't substitute, by default. You can also use the Order Management work area to control substitution. For details, see *Split or Substitute Fulfillment Lines*.

Principle 6: Split Order Lines to Prevent Delay

Promising can split an order line into two lines to meet the requested date. Promising splits the line across the primary item and a substitute item. If no split meets the date, then Promising can split across time, delivering part of the quantity on time or with minimal delay, and the rest later. You can also use the Order Management work area to control splitting. For details, see *Split or Substitute Fulfillment Lines*.

Principle 7: Use Supply Just In Time

Promising consumes supply on the latest possible date while still meeting demand. This principle preserves supply that's available earlier for sales orders that have an earlier requested date, including sales orders that have an earlier requested date but that you haven't created yet.

You can set up your available-to-promise rule to control which types of supply Promising considers. For example, if through experience you find that the expected receipt date isn't reliable for a category of items on your purchase orders, then you can exclude them, and rely only on supply that's on hand or in transit.

Examples

Assume today is March 5th, you receive an order for 1,000 desktop computers from your Computer Service and Rentals customer, with requested delivery date of March 10. Assume you source from two factories in your supply chain.

Supply	Quantity in Shanghai	Quantity in Hong Kong
Currently on hand	200	100
In transit that you expect to receive on March 6	200	100
On order from your contract manufacturer that you expect to receive on March 7	200	100
Planned units that you expect to build on March 8 but haven't released to production.	200	100
Daily Production capacity starting on March 9	200	500

You have enough supply to fulfill the order on time, but how do you select supply to meet your business objectives? You set up sourcing rules, available-to-promise rules, and assignment sets in Promising so it automates the choice for you.

Assume you set up Promising so it summarizes supply in this way:

Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	200	200	200	200	-	-
Shanghai, Capable to Promise	-	-	-	-	200	200
Hong Kong, Available to Promise	100	100	100	100	-	-
Hong Kong, Capable to Promise	-	-	-	-	500	500

If you don't limit the supply that Promising can consider, then it consumes the available-to-promise supply from the bold cells in Shanghai first, and then begins to consume the capable-to-promise supply to meet demand just in time.

Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	**200**	**200**	**200**	**200**	-	-
Shanghai, Capable to Promise	-	-	-	-	200	200
Hong Kong, Available to Promise	100	100	100	100	-	-
Hong Kong, Capable to Promise	-	-	-	-	500	500

If you set the time fence to 3 days, then Promising uses the bold capable-to-promise supply first, and then the bold available-to-promise supply. This approach keeps the 200 units of available-to-promise supply on March 5th in Shanghai available for other sales orders that have an earlier requested date.

Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	200	**200**	**200**	**200**	-	-
Shanghai, Capable to Promise	-	-	-	-	**200**	**200**
Hong Kong, Available to Promise	100	100	100	100	-	-
Hong Kong, Capable to Promise	-	-	-	-	500	500

If you enable the profitable-to-promise option, and if the transit cost to deliver your item from Hong Kong is less than it is from Shanghai, and if the item costs are the same, then Promising sources all the supply it needs from the bold capable-to-promise supply in Hong Kong.

Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	200	200	200	200	-	-
Shanghai, Capable to Promise	-	-	-	-	200	200
Hong Kong, Available to Promise	100	100	100	100	-	-
Hong Kong, Capable to Promise	-	-	-	-	**500**	**500**

What if your customer places the order with only a three-day lead time, March 8, instead of five days, March 10? If you enable splitting, then Promising uses all the bold supply that's available in Shanghai, and the rest from Hong Kong.

Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	**200**	**200**	**200**	**200**	-	-
Shanghai, Capable to Promise	-	-	-	-	200	200
Hong Kong, Available to Promise	100	100	**100**	**100**	-	-
Hong Kong, Capable to Promise	-	-	-	-	500	500

If you don't enable splitting, then Promising uses supply only from Shanghai, and schedules the order to arrive one day late, on March 9.

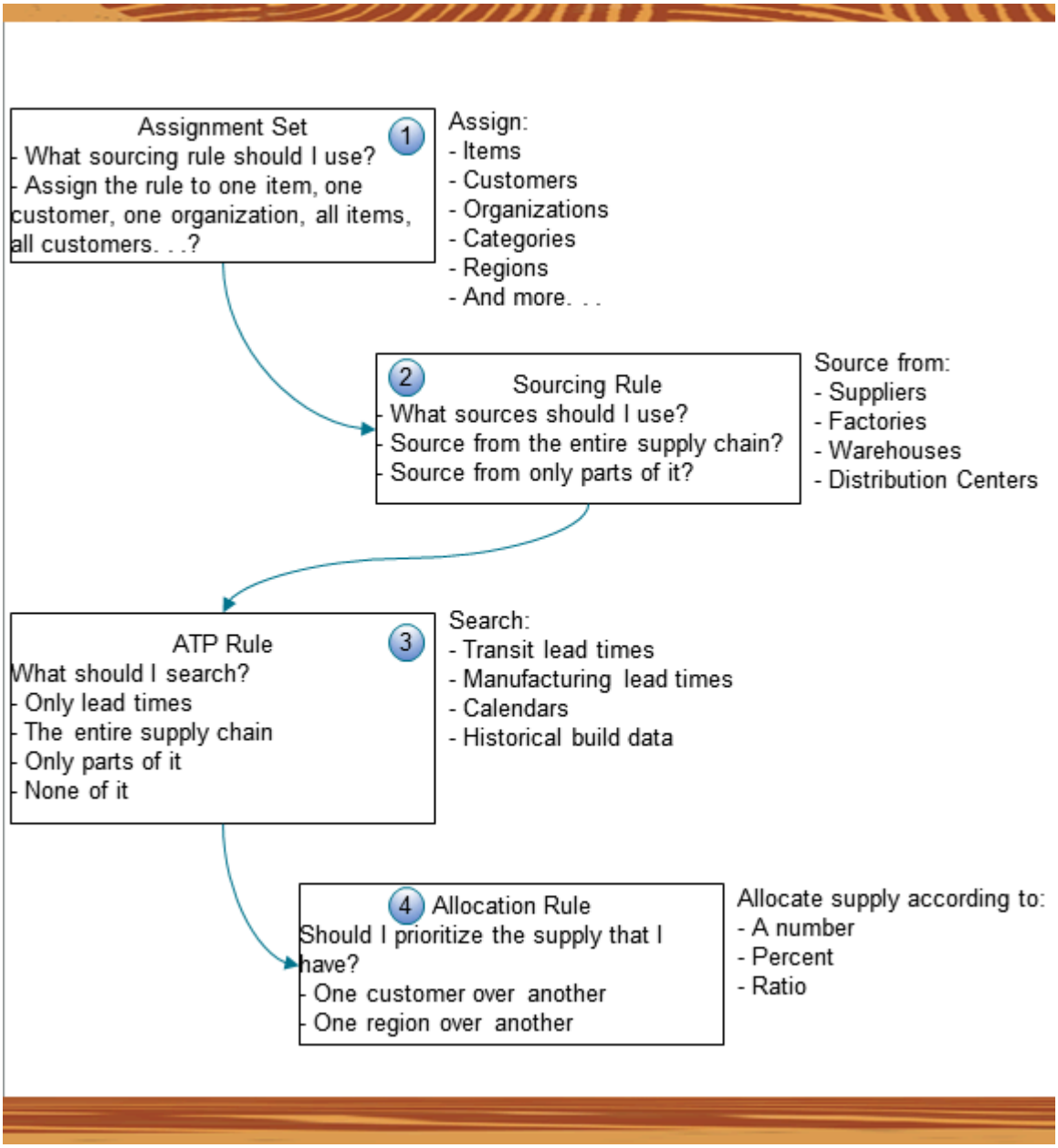
Promise	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
Shanghai, Available to Promise	**200**	**200**	**200**	**200**	-	-
Shanghai, Capable to Promise	-	-	-	-	**200**	200
Hong Kong, Available to Promise	100	100	100	100	-	-
Hong Kong, Capable to Promise	-	-	-	-	500	500

2 Set Up Your Promising Rules

Overview

Assignments and Rules

You can create assignment sets, sourcing rules, available-to-promise rules, and allocation rules to tell Promising how to promise a fulfillment line.



Note

1. You use an assignment set to answer:
   - What sourcing rule should I use?
   - Should I assign my sourcing rule to one item, one customer, one organization, all items, all customers?

     You can assign a sourcing rule to different levels of detail, such as to Items, Customers, Organizations, Categories, Regions, and many more levels.
2. You use a sourcing rule to answer:
   - What sources should I use? Should I source from the entire supply chain, or only parts of it?

     You can source from suppliers, factories, warehouses, and distribution centers.
3. You use an ATP Rule to answer:

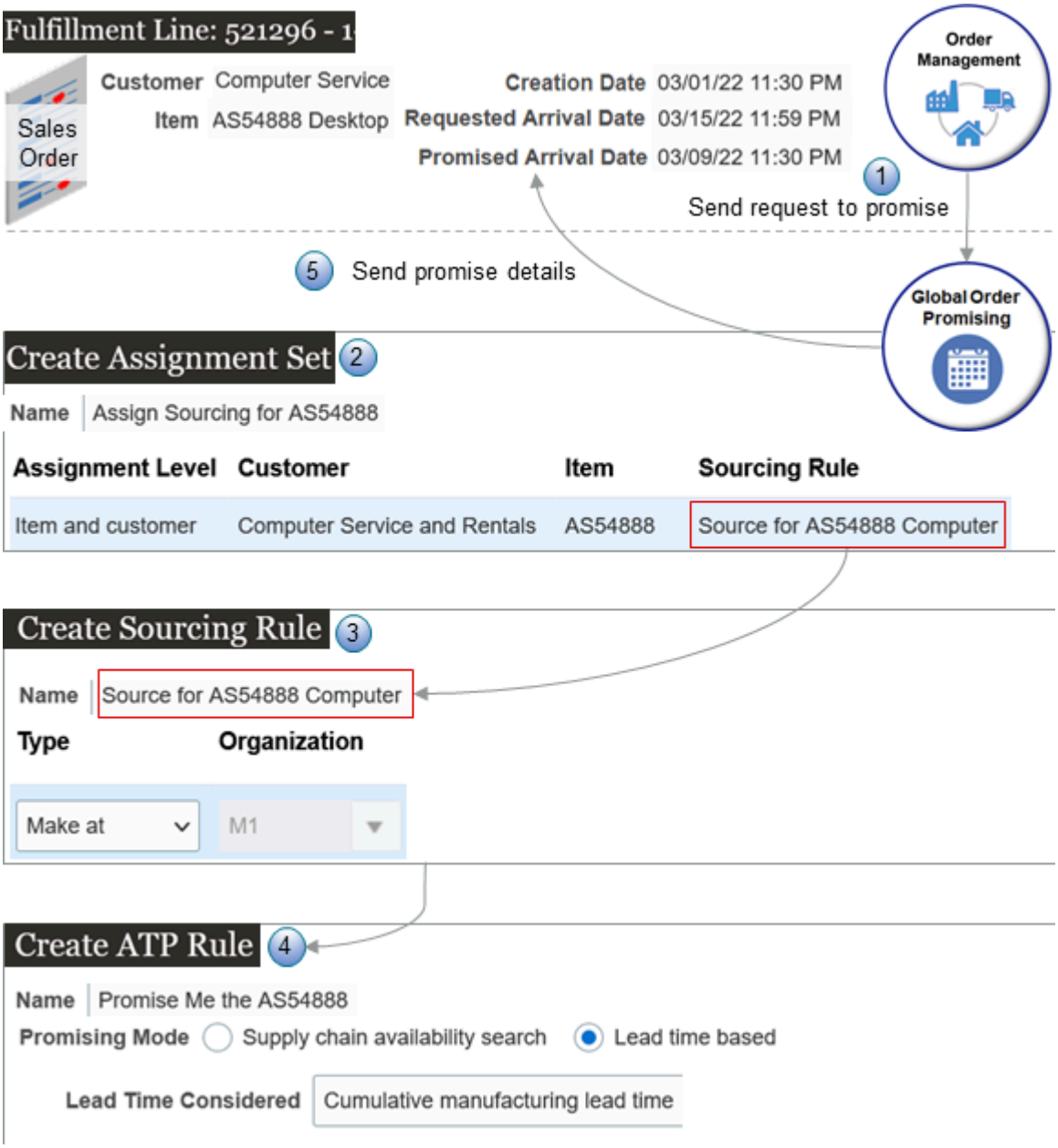
- What should I search?
- Only lead times, the entire supply chain, only parts of it, or none of it?

  You can search according to transit lead times, manufacturing lead times, calendars, historical build data, and more.

4. You use an allocation rule to answer:
   - Should I prioritize the supply that I have?
   - Should I prioritize one customer over another, one region over another, or in some other way?

You can allocate supply according to a number, percent, or ratio.

Consider an example. Assume you make the AS54888 at your M1 factory, and you sell it to your Computer Service and Rentals customer.



Here's how it works.

1. You create a sales order in the Order Management work area that has the AS54888 in the Item attribute, and Computer Service and Rentals in the Customer attribute. Order Management sends a request to Promising to promise the order.
2. Promising uses the assignment set that you create in the Global Order Promising work area to identify the sourcing rule it will use to source the item. For this example,
    - You set the assignment level to Item and Customer to focus the assignment.
    - You specify the customer and item on the set.
    - You specify the sourcing rule to use so Promising knows which source it must use to fulfill the item.

    Promising will use this assignment set only if the customer and item that you specify on the assignment set match the customer and item from the fulfillment line.
3. Promising uses the sourcing rule that you create to identify the source it must use to promise the item. In this example, you specify to make it in the M1 factory.
4. Promising uses the ATP rule that you create to determine when the item will be available to promise. Assume you specify to use lead time to determine availability. You know from historical data that it takes 5 days to build the item, and 3 days transit time to ship it.
5. Order Management sends the request to promise on 03/01/22 and today is 03/01/22. Promising calculates that it has 8 days to deliver the item to Computer Service and Rentals, so it sends a promised arrival date of 03/09/22 to Order Management. This means it will get there 6 days before the requested arrival date, and your customer will be happy.

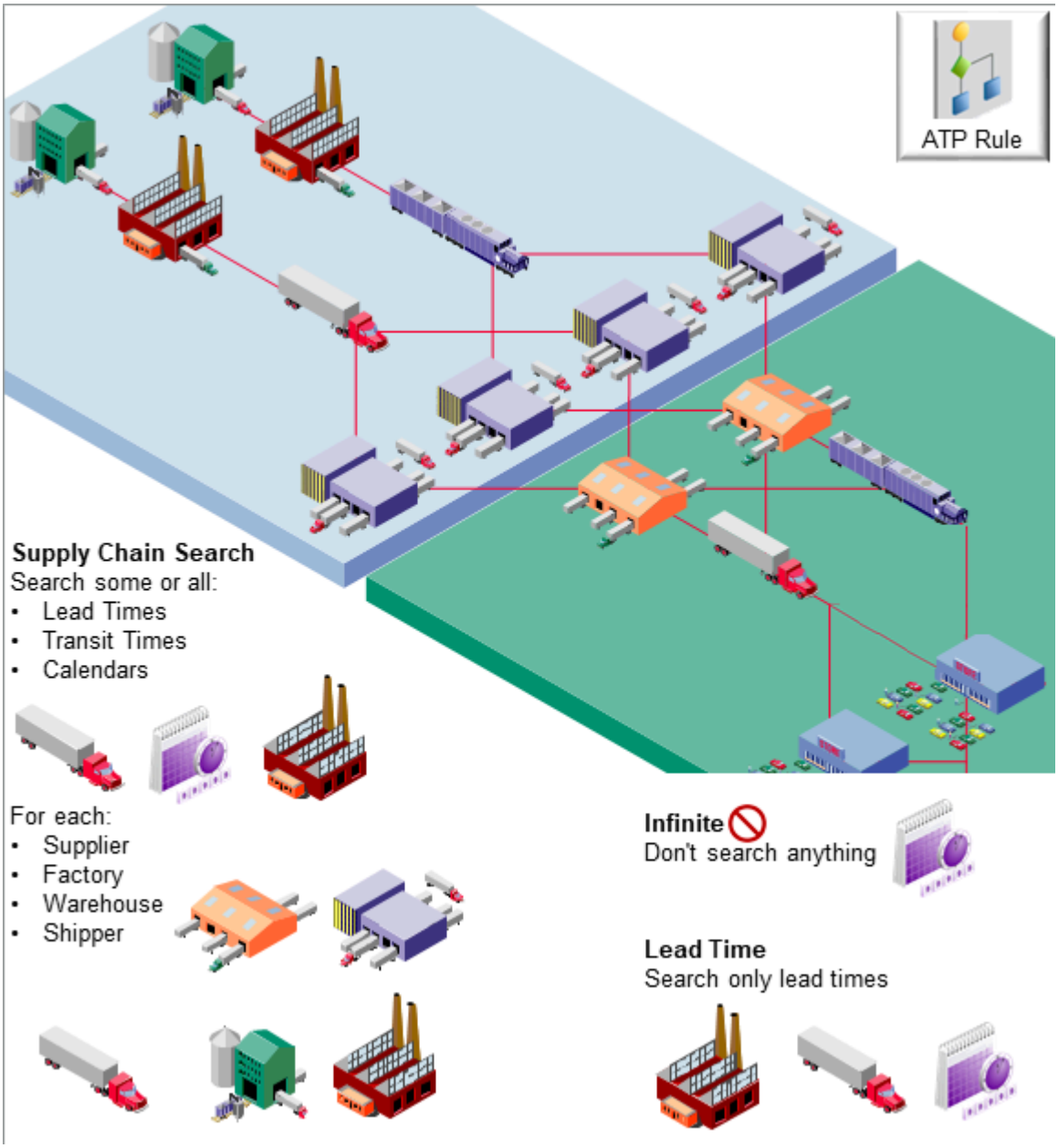
This is just one simple example of how you can set up promising. You can set up different types of rules and assign them in different ways to items and organizations so you can apply different promising logic for different items. You actually have a wide range of promising possibilities that you can set up.

Related Topics

- Promising Modes for ATP Rules
- Allocate Your Rules
- Source Your Supply Chain
- Assign Your Sourcing Rules

ATP Rules

An available-to-promise (ATP) rule is a condition that you specify to tell Promising what to search. It helps you to identify what supply is available in your supply chain that Promising can use to promise an item.



You can specify:

- Where to get supply, such as supply that's already on hand, from a supplier through a purchase order, or from a factory through a work order.
- What demand the rule can fulfill, such as to fulfill demand from a fulfillment line.

You assign your ATP rule to an item, item organization, organization, or category. You use the assignment to promise each item differently.

Related Topics

- Collect Data for Global Order Promising
- Create a Sourcing Rule
- Create an Assignment Set
- How You Collect Different Data Types for Supply Chain Planning

Promising Modes for ATP Rules

You can specify the promising mode of an available-to-promise (ATP) rule to determine the attributes that Global Order Promising examines when it promises your item.

Here are the modes that you can select when you use the Manage ATP Rules page to create an ATP rule.

Mode	Description	Use It When	Use it With
Infinite Availability	Don't examine anything. Assume supply for your item is infinitely availability.	For an item that has a low value, such as a screw.	• Calendars
Lead Time	Examine only lead times to determine how long it will take to fulfill the item, such as manufacturing time, transit time, and so on. Assume supply is available after the lead time expires.	Your lead times are dependable.	• Calendars • Lead times
Supply Chain Search	Examine some or all of your supply chain. Search for supply that's actually available. For example, examine separate lead times, calendars, and transit times for each supplier that supplies components for a complex configured item.	• A complex, critical item • When you need to closely examine and monitor your supply chain • When you need to match supply to demand, and optimize your supply chain	• Calendars • Lead times • Factories • Warehouses • Suppliers

Infinite Availability

A type of ATP rule that assumes supply is always available on the requested date. Use this mode when you know that supply is almost always available and for items that have a low value. Its the simplest type of ATP rule, but also the least powerful.

For example, you use small, commonly available screws to attach a casing to the AS54888 computer. The screws have a low value, you maintain 10s of thousands of them inventory, and you view them as being always available.

Here's what Promising does.

- Assumes the item is available, so it promises the item on the requested date regardless of actual availability.
- Uses calendars when it promises the item.
- If a request has a transit lead time, then promising includes that lead time when it promises the item.
- Doesn't examine supply and doesn't do a search to determine whether the item is available.
- Doesn't create any pegging.
- Doesn't consider any other attributes.

If the requested date is the:

- **Requested ship date**. Promising considers the calendar.
- **Requested arrival date**. Promising considers the calendar and transit lead times.

Lead Time

A type of ATP rule that uses the amount of time that you need to assemble the item and make it available. It assumes you build the item on demand and you know how long it takes.

Assume your item is the AS54888 computer, its a configured item, so you only build it when you receive an order for it. Through experience, you know it usually takes 5 days to finish the build, from assembling the parts onto the board, through final testing.

Here's what Promising does.

- Considers calendars and times.
- Adds the lead time to the requested date when it determines the promise date.
- Doesn't do a search to determine whether the item is available.
- Doesn't create any pegging.

You can specify different types of lead times.

- Total lead time
- Cumulative manufacturing lead time
- Cumulative total lead time
- Specify your own lead time

Supply Chain Search

A type of ATP rule that searches your supply chain to determine how long it will take to make your item available. Use this mode when you have specific requirements that you can't meet through the infinite availability mode or the lead time mode. It allows you to specify more complex promising.

You can specify a wide range of factors and attributes to consider when doing the search. You can consider lead times, calendars, capacities, transport modes, and other factors in your supply chain network. It is the most complex type of ATP rule and also the most powerful.

Assume you need an ATP rule for the 4 Door Sedan, which is a complex, configured item. You get the chassis from supplier x, the engine from supplier y, the, drive train from supplier z, and so on. You can specify separate lead times,

calendars, and transit times for each supplier. You then specify a lead time for your factory to assemble these parts into a product that you can ship to your customer.

Here's what Promising does.

- Performs a detailed availability search across your supply chain, depending on the options that you select when you create the rule.
- Considers the lead times, calendars, capacities, and transport lines across your supply chain.
- Creates pegging details.

You can specify a variety of attributes that you can't specify with the other modes.

- Whether to search components and resources for a configured item
- Whether to enable a profitable-to-promise search
- Whether to consider allocation constraints
- Which types of supply and demand to consider
- What lead time to use for the infinite availability fence
- How many days to consider for past-due demand and past-due supply

Related Topics

- Guidelines for Using Supply Chain Search
- Set Attributes on Your Supply Chain Search
- Guidelines for Using Lead Time Mode

Allocation Rule

An allocation rule is a condition that you create to specify how to allocate supply from different classes of demand. You can use it to set the allocation priority when promising your item.

Assume Computer Service and Rentals is your highest priority customer, and Big Computer Centers is your next highest priority customer. You can create an allocation rule that allocates 60 percent of your supply for Computer Service and Rentals and 40% to Big Computer Centers.

- If you don't create an allocation rule, then Promising promises the requests that it receives in the same sequence that it receives them. For example, if you receive a fulfillment line for Big Computer Centers on Monday, and then an order from Computer Service and Rentals on Tuesday, then Promising will consume all the supply it needs for Big Computer Centers. This means there might not be any supply left for Computer Service and Rentals. You can create an allocation rule to make sure there's enough supply for Computer Service and Rentals.
- You can use an allocation rule only when your ATP rule is in the supply search mode. You can't use it with a rule that's in lead time mode or infinite availability mode.
- The fulfillment line that contains the item must specify a demand class.
- The demand class that you specify in the allocation rule must apply to the item that Promising is fulfilling.
- You can create allocation rules for customers, geographical areas, and so on.

- To create an allocation rule, go to the Order Promising work area, then click **Tasks > Manage Planning Allocation Rules**.

Sourcing Rule

A sourcing rule is a condition that you create that specifies the source to use when promising an item. You might have different factories and distribution centers that supply the same item. You can use sourcing rules to determine which ones to consider.

For example, create a sourcing rule that says to buy from supplier x starting on January 1, and give it a rank of 1. Create another rule that says to buy from supplier y starting on January 1, and rank it 2. Promising will attempt to source from x before it sources from y.

Note

- You can use a sourcing rule only when your ATP rule is in the supply search mode. You can't use it with a rule that's in the lead time mode or the infinite availability mode.
- Your sourcing rules and assignment sets provide details about the supply chain to search.
- The supply chain search uses the locations that you specify in your sourcing rules to determine the best location to use to meet the requested date for the item.
- You assign a sourcing rule to an assignment set.
- To create a sourcing rule, go to the Order Promising work area, then click Tasks > Manage Sourcing Rules.

For an example, see *Set Up Promising Rules and Sourcing Rules for Order Management*.

Lead Time Mode

Guidelines for Using Lead Time Mode

Consider these points when you use lead time promising.

Promising uses a simple calculation to determine the promise date.

- Requested date from the sales plus the lead time that you specify on your ATP rule equals the promise date

Promising uses the value in the Requested Date on the fulfillment line to determine the promise date:

If the Requested Date Contains	Then Promising
Ship Date	1. Adds the lead time from your ATP rule to the requested date. 2. Adds the number of holidays from the calendar to the promise date. For example, if the calendar has one holiday between today and the requested date, then Promising adds one day to the promise date. Promising doesn't determine whether the item is available.

If the Requested Date Contains	Then Promising
Arrival Date	1. Calculates the requested ship date. To do this, it uses the default carrier, shipping mode, and service level that you use to ship the item during the ship-from date and the ship-to date. This is your transit time. It adds the transit time to the ship date. 2. To determine the promise date, it adds the lead time that you specify on your ATP rule to the requested ship date. 3. Adds the number of holidays from the calendar to the promise date.

Promising includes holidays from the calendar for ship date or arrival date. For example, if there's one holiday between today and the requested date, then Promising adds one day to the promise date.

Specify What Kind of Lead Time to Use

Set the Lead Time Considered attribute when you create your ATP rule.

Lead Time Considered	Description
Total	The time that you need to procure or manufacture the item. If you manufacture an assembly, the total lead time is the time that you need to manufacture the item from its manufacturing components on the primary route, assuming these components are infinitely available.
Cumulative Manufacturing	The total amount of time you need to manufacture the item, assuming the raw material and manufacturing components aren't available. Promising adds the manufacturing time from the primary route for the item to the times for each of the item's subassemblies.
Cumulative Total	The total amount of time that you need to assemble the item plus the largest, adjusted cumulative lead time from the item's manufacturing components. For example, if the time is 1 day for component x, and 2 days for y, then Promising uses y's lead time.
User Defined	Create your own! If you select this value, then you can enter your own lead time in the User-Defined Lead Time in Days attribute.

Set Postprocessing Lead Times

Postprocessing lead time is the time that your factory needs to do work after it finishes processing the item, such as doing quality control, preparing the item for shipping, and so on. You can specify this lead time.

1. Go to the Product Information Management work area, open your item for editing, click **Specifications > Planning**, then enter a value in the Postprocessing Days attribute.
2. Set the Make or Buy attribute on your item in the Product Information Management work area to Make, or create a local sourcing rule and set its Type attribute to Make At.
3. Set the mode on the ATP rule that you use to promise the item to Supply Chain Search, and enable the Search Components and Resources option on the rule.

Description

Postprocessing lead time affects the due date on each work order and the schedule date for an item that you manufacture.

Postprocessing lead time is different depending on what you're assembling.

What You're Assembling	Description
Item	The time between when you finish assembling the item and when its available in inventory.
Subassembly	The time between when you finish assembling the subassembly and when its available to use when assembling the item.

Here's how Promising applies a postprocessing lead time.

What You're Promising	Description
Item	Determines the production completion date, and then uses the postprocessing lead time to determine the scheduled ship date.
Item in a back-to-back flow	Determines the dock date, then sends it to Supply Chain Orchestration so Orchestration can create the work order.
Work order	Considers the supply that's available on the due date. The due date includes the postprocessing lead time.
On-hand supply	Doesn't apply a postprocessing lead time. It assumes supply is available as soon as Oracle Inventory Management receives it.
Planned order for an item that you manufacture	Assumes supply is available on the planned order's due date.

Example

Assume item x has these lead times:

- Fixed lead time is 1 day
- Variable lead time is 0.1 day
- Postprocessing lead time is 3 days

Assume:

- You manufacture the item in Organization 1.
- The order quantity is 10 units.
- The requested date is Day 10.
- The manufacturing components and resources that you need to build the item are available.

Here's how Promising calculates the dates:

What Promising Calculates	Equation
Production Duration	Fixed lead time plus the variable lead time, multiplied by the order quantity
Dock Date	Scheduled shipment date plus the postprocessing lead time
Production Start Date	Dock date minus the production duration

For example:

Calendar Constraints	Requested Date	Production Duration	Due Date	Dock Date	Production
None	Day 10	1+ (0.1 * 10) = 2 days	Day 10	Day7	Day5
Five work days a week. Saturday and Sunday are nonworking days.	Day 10	1+ (0.1 * 10) = 2 days	Day10 (Monday)	Day 5 (Wednesday)	Day3 (Monday)

Add Postprocessing Days When You Modify Ship Dates

You can automatically add postprocessing days to the supply's requested delivery date when you modify the sales order's scheduled ship date. You can use this feature to help you meet that ship date in your back-to-back 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)
2. Go to the Setup and Maintenance work area, select the Manufacturing and Supply Chain Materials Management offering, then enable the Add Postprocessing Days When You Modify Ship Dates in Your Back-to-Back Flows opt-in feature.
3. Go to the Order Management work area, then create and submit a sales order.
4. Revise the sales order, update the sales order's scheduled ship date, then submit the revision.

Here's what happens next:

1. Oracle Global Order Promising calculates the scheduled ship date and updates the sales order. Promising adds the postprocessing days to the scheduled ship date because the shipping warehouse will need them when the item arrives at the warehouse.
2. Oracle Order Management sends the update on the requested delivery date to Oracle Supply Chain Orchestration. The requested delivery date includes the postprocessing days.
3. Promising subtracts the postprocessing days from the scheduled ship date to calculate the recommended requested delivery date that it sends to Supply Chain Orchestration so Supply Chain Orchestration can make the supply available in the warehouse.

The warehouse manager can then do the postprocessing activities before shipping the item to the customer. For example, if the scheduled ship date is November 30, and if the postprocessing days is 5, then Promising will recommend November 25 as the requested delivery date.

4. Supply Chain Orchestration picks the requested delivery date from Global Order Promising's recommendation, then sends an update to your downstream application, such as Oracle Manufacturing.

Supply Chain Search Mode

Guidelines for Using Supply Chain Search

Supply chain search attempts to find the available-to-promise (ATP) result that most closely meets the fulfillment dates on the fulfillment line.

Here's what determine the search:

- Values from the fulfillment line, such as the ship-from warehouse and whether the line allows splits, or allows substitutions.
- Settings that you make for various attributes on your ATP rule
- The assignment set and the sourcing rules that it contains

Consider How Values on the Fulfillment Line Affect Promising Results

Values on the fulfillment line affect the alternatives that supply chain search can use when it promises your item. Assume the fulfillment line doesn't allow much variability. For example, it specifies the ship-from warehouse as Denver and it doesn't allow splits or substitutions. Promising will create alternatives that only ship from Denver, but it might consider different shipping methods, such as Second Day Air instead Ground to deliver the item on time.

Promising determines a default availability and also the best possible availability from each warehouse.

If the fulfillment line doesn't limit availability, then supply search considers transferring supply for the item from different warehouses or buying it from different suppliers.

Related Topics

- Past Due Demand and Supply
- Set Attributes on Your Supply Chain Search
- Assignments and Promising Rules
- Time Fence

Set Attributes on Your Supply Chain Search

See how to set attributes when you use supply chain search on your ATP rule.

Search Components and Resources

Use this option when you have a configured item. If you enable the Search Components and Resources option on your ATP rule, then supply chain search considers the components and resources that your factory needs to make the configured item. Inventory for an item that you make might not available, so Promising will look at the components and resources that you need to promise the order. It also considers calendars, lead times, and capacity when it searches your components and resources.

Assume your item is the AS54888 laptop computer, it includes the Keyboard component and the Monitor component, and you assemble these components onto the Chassis component. Promising will consider the supply that's available for the keyboard, monitor, and chassis.

Use this option only when:

- You build the item from components.
- You maintain inventory for the components.
- You already collected bill-of-material and routing details into the planning data repository from your fulfillment system. For details, see *Collect Data for Global Order Promising*.

Profitable to Promise

If you enable the Profitable to Promise option, and if Promising finds more than one way to fulfill the item on the same date, then it determines the cost for each alternative, and uses the one that has the lowest cost regardless of sourcing priority. Promising will ignore sourcing priorities and instead use the source that costs the least to promise your item, according to:

- Standard cost in your organization
- Standard cost from your supplier
- Cost to do an internal transfer between organizations
- Cost to ship the item from your supplier to your organization
- Cost to ship the item from the ship-from location to your customer site

If you make the item, then Promising also considers:

- Cost to consume the resource, according to each unit of the resource that you consume
- Cost of the components that you need to make the item

Assume you have this set up:

- The M1 warehouse and the M2 warehouse each have a quantity of 100.
- Your sourcing rule has a higher priority for M1.
- You enable the Profitable to Promise attribute on your ATP rule.

Assume the fulfillment line has:

- Requested Quantity: 60
- Requested Date: January 1

And the cost for each item is:

- $20 each in M1

- $10 each in M2

Supply chain search will ignore M1 and promise 60 units from M2.

Note

- Promising uses the lowest total fulfillment cost to determine the best way to fulfill the item.
- Promising gives priority to satisfying the requested delivery date. Promising doesn't delay fulfillment to lower cost.

Respect Allocation Constraints

If you enable the Respect Allocation Constraints option, then Promising will apply your allocation rule to the item. If you don't, then Promising ignores your allocation rules.

Truncate Order Fulfillment Quantity to Nearest Integer

If you enable the Truncate Order Fulfillment Quantity to Nearest Integer option, and if the fulfillment line allows splits, then Promising will truncate the value of the quantity from the line to the nearest integer.

Enable this option to make sure the split quantity is an in integer value, that the value is in the units of measure (UOM) from the line, and to make sure Promising doesn't split the quantity into a decimal value because:

- Fractional components for building the supply on time are available
- UOM conversion

Related Topics

- Guidelines for Using Supply Chain Search

Time Fence

Use a time fence to fine tune your supply chain search. You can set a time fence for infinite availability and for available-to-promise (ATP).

You can specify the number of days for the time fence, or you can select from one of these lead times to specify how long the time fence lasts:

- Total lead time
- Cumulative manufacturing lead time
- Cumulative total lead time

You can set different fences.

Infinite Fence	ATP Fence
Set this fence to specify how long to wait before considering your supply is infinite. If the requested date happens.	Set this fence to make sure Promising doesn't consider short term supply for a long term order. For example, if you receive a long term order before you receive a short term order, this time fence will prevent Promising from pegging existing supply for the long term order.

Infinite Fence	ATP Fence
• Before the time fence expires. Promising does a supply chain search. • After the time fence expires. Promising promises on the requested date, doesn't check availability, and doesn't consume actual supply. Assume you know supply is usually available for most items after 10 days. You don't want to use the infinite availability mode because you prefer to provide more accurate promising results for most orders. But sometimes you can't promise the order in under 10 days, so you set this fence to say "after 10 days, we'll just assume its available". For another example, you know supply is almost always available after your factory finishes building the item, so you set this fence to Cumulative Manufacturing Lead Time.	If the requested date happens: • Before the time fence expires. Promising looks for on-hand supply that already exists before it looks at supply that you have to build or procure. • After the time fence expires. Promising looks for supply that you have to build or procure before it looks at on-hand supply that already exists.

You can specify the number of days that the time fence lasts. Assume the requested date is January 1. If you set the time fence to 10, then Promising will assume the time fence is in effect from January 1 to January 11.

You can also select from one of these lead times to specify how long the time fence lasts:

- Total lead time
- Cumulative manufacturing lead time
- Cumulative total lead time

You use the ATP Rule Criteria area of the Manage ATP Rules page to set the time fence.

Related Topics

- Past Due Demand and Supply
- Guidelines for Using Supply Chain Search

Past Due Demand and Supply

You can use these attributes to control the past due demand and past due supply that Promising considers when it promises your item.

- Past-Due Demand Considered in Days
- Past-Due Supply Considered in Days

We have found that most implementations use a value between 10 and 90 and set both attributes to the same value.

Past Due Demand

Past due demand is demand that has a scheduled date that happens before today's date. Its already past the due date. For example, if today's date is January 15, and if the scheduled date is January 10, then the demand is already past its due date.

If you:

- Don't enter a value for this attribute, then Promising ignores all demand that has already past the due date.
- Enter a value in this attribute, then Promising will consider past due demand up to the days that you enter. For example, if you enter a value of 10, and if today's date is January 15, then Promising will consider all demand that has a scheduled date that happens after January 5, but won't consider any demand that has a scheduled date that happens before January 5.

Promising won't consider any past due demand that happens before the number of days that you specify.

Past Due Supply

Past due supply works just like past due demand, except that past due supply is usually in a purchase order where the expected date happens before today's date. For example, you expected Supplier A to provide 10 units of the AS54888 Computer by January 10, but today is January 15, so the supply is 5 days past due.

If you:

- Don't enter a value for this attribute, then Promising ignores all supply that has already past the expected date.
- Enter a value in this attribute, then Promising will consider past due supply up to the days that you enter. For example, if you enter a value of 10, and if today's date is January 15, then Promising will consider all supply that has an expected date that happens after January 5, but won't consider any demand that has an expected date that happens before January 5.

Allocate and Assign

Allocate Your Rules

Use these guidelines to help you get started.

If you don't create an allocation rule, the Promising promises the first request it receives regardless of priority. If it receives sales order x that has a low priority first, and then receives order y that has a higher priority, it promises order x first, and then order y. Order x might consume all your supply, leaving none for y. You can use an allocation rule that says to fulfill order y first.

Allocate Your Demand Classes

Use an allocation rule to prioritize one type of demand over another.

Consider an example.

- You can create an allocation rule that allocates 60% percent of your supply to the High Priority Customer demand class and 40% to the Low Priority Customer demand class.
- You have supply that's available in a quantity of 100 on January 1, with an additional quantity of 100 becoming available on January 10.

You have these fulfillment lines.

Fulfillment Line	Item	Requested Date	Requested Quantity	Demand Class	Result
x	AS54888	January 1	30	Low Priority Customer	Fulfillment is delayed by 9 days. Line 2 is higher priority and consumes a quantity of 30, leaving a quantity of 70 that's available to promise. 40% of 70 is only 28, so there isn't enough quantity to fulfill line 1 until January 10.
y	AS54888	January 1	30	High Priority Customer	There's no delay. 60% of 100 is 60, so there's enough quantity on January 1 to fulfill line 2.

Set the Specification Type

Use the Specification Type attribute to specify how to allocate demand.

Specification Type	Description
Number	Allocate a fixed quantity to the demand class.
Percentage	Allocate a percent of the total supply to the demand class.
Ratio	Use a ratio between demand classes to divide the supply, then allocate the divided supply to the demand classes.

Related Topics

- Set the Target
- Prioritize Your Allocation Rules

Set the Target

You can use the Allocation Targets area in your allocation rule to set the target for your rule. The behavior is different depending on the specification type that you set for the rule.

You can use the Manage Planning Allocation Rules page in the Order Promising work area to specify an allocation target for the number, percentage, or ratio.

Assume you create a High Priority demand class and a Low Priority demand class. Here's one way you can target them.

Specification Type	Description
Number	Allocate a fixed quantity to the demand class. For example, to allocate 500 units to the high priority demand class, set these values. • Set Specification Type to Number. • In the Allocation Targets area, click **Actions > Add Row**, then set Demand Class to High Priority, and set Allocation Target to 500. In this example, the Allocation Target is a number.
Percentage	Allocate a percent of the total supply to the demand class. For example, to allocate 20% of your supply to the low priority demand class, set these values. • Set Specification Type to Percentage. • In the Allocation Targets area, click **Actions > Add Row**, then set Demand Class to Low Priority, and set Allocation Target to 20. If the total supply that's currently available is 1,000 units, then Promising will promise up to 200 units for the low priority demand class. In this example, the Allocation Target is a percentage.
Ratio	Use a ratio between demand classes to divide supply, then allocate the divided supply to the demand classes. For example, to create a three to one ratio between the High Priority demand class and the Low Priority demand class, set these values. • Set Specification Type to Ratio.

Specification Type	Description
	• In the Allocation Targets area, click **Actions > Add Row**, then set Demand Class to High Priority, and set Allocation Target to 3. • In the Allocation Targets area, click **Actions > Add Row**, then set Demand Class to Low Priority, and set Allocation Target to 1. If the total supply that's currently available is 2,000 units, then Promising will promise up to 1,500 units for the High Priority demand class, and up to 500 units for the Low Priority demand class. In this example, the Allocation Target is a ratio.

Prioritize Your Allocation Rules

You can use the Allocation Assignment area in your allocation rule to assign the rule to a category, item, organization, item and organization, or category and organization.

If you create more than allocation one rule, and if more than one of them applies, then Promising uses a hierarchy to determine which one to apply, where Category and Organization has the highest priority, and Category has the lowest.

Assignment Basis	Priority
Item and Organization	1
Item	2
Category and Organization	3
Category	4
Organization	5

Assume you assign rule x to the item, and rule y to the category. Promising will use rule x because the item has a higher priority than the category.

Consider Shipping History

If you have an item that's in high demand, then you can use your historical shipments to allocate supply for future requests.

You can specify the date range for the historical shipments, and Promising will consider the orders that you already shipped when it allocates supply.

Summary of the Setup

1. Set the days on the model.
2. Create your rule.

Assume today is January 15, you're in the Vision Operations organization, and you need to create an allocation rule for high demand and low demand according to a percentage.

Set the Days on the Model

You need to do this only one time.

1. Go to the Global Order Promising work area, then click **Tasks > Maintain Supply Network Model**.
2. On the Maintain Supply Network Model page, search the Organization attribute for Vision Operations.
3. In the search results, set the value to determine how far back into history you want to go.

Attribute	Value
Past Due Sales Order Days	15 This value indicates the number of days before today that Promising will use to examine your shipment history. So, if today is January 15, then Promising will look at the history going back to but not before January 1.

4. Click **Save**.

Create Your Rule

Do this each time you need to create an allocation rule.

1. Click **Tasks > Manage Planning Allocation Rules**.
2. On the Manage Planning Allocation Rules page, click **Actions > Create**, then set the values.

Attribute	Value
Name	My Allocation Rule
Specification Type	Percentage

3. Click **Allocation Targets**, click **Actions > Add Row**, then set the values.

Attribute	Value
Start Date	January 1
End Date	January 15

4. In the Allocation Targets area, add the demand classes, then click **Save**.

Demand Class	Allocation Target
High Priority	80
Low Priority	20

5. Click **Date Range to Consider Shipping History**, click **Actions > Add Row**, set the values, then click **Save**.

Attribute	Value
Start Date	January 1
End Date	January 15

Note

- You set the start date so it happens on or after the start date that you set for your allocation targets.
- You can set any date range, but we recommend that you set it so it happens in the same time frame that the Past Due Sales Order Days attribute specifies.

Runtime Results

Assume today is January 15.

The on-hand supply for the item on January 1 is 200 units.

The shipping history for the item on January 15 is:

- Quantity shipped for High Priority is 60 units.
- Quantity shipped for Low Priority is 40 units.
- Supply on January 15 is 100 units (200 minus 100).

On January 15 you specify a date range of January 1 to January 30 to consider shipping history. Here's how Promising uses the shipping history to calculate the remaining allocation.

What Promising Calculates	Value
Total shipped sales orders up to January 15	100 units
Total supply that's available	100 units
Total supplies that are available during the date range in your shipping history	200 units (100 units shipped plus 100 units not shipped)
Supplies allocated to High Priority	160 units (80% of 200 units)
Supplies allocated to Low Priority	40 units (20% of 200 units)
Remaining allocation for High Priority as of January 15	100 units (160 allocated minus 60 shipped)
Remaining allocation for Low Priority as of January 15	0 units (40 allocated minus 40 shipped)

If you don't specify a date range to consider shipping history, then here's how Promising calculates the remaining allocation for High Priority and Low Priority on January 15.

What Promising Calculates	Value
Total supply that's available	100 units
Remaining allocation for High Priority	80 units (80% of the total supplies that are available on January 15).
Remaining allocation for Low Priority	20 units (20% of the total supplies that are available on January 15)

Related Topics

- See What Supply is Available and Allocated

Assign Your ATP Rules

If you create more than one ATP rule for an item, and if Promising determines that more than one of them apply when it promises your item, then Promising uses the one that has the most specific assignment.

Assignment	Priority According Specificity
Item and Organization	1
Item	2
Category	3
Organization	4

For example, if you assign rule x to the item and to the item's category, and you assign rule y to the item, then Promising uses rule y to promise the sales order because the item is more specific than the category.

Assume Promising determines that rules x and y both apply to your item, but you want it to use rule y. Here's how you can specify that.

1. Go to the Global Order Promising work area, then click **Tasks > Manage ATP Rules**.
2. On the Manage ATP Rules page, search for and open rule y for editing.
3. On the Edit ATP Rule page, click ATP Assignment Rule, set the value, then click **Save and Close**.

Attribute	Value
Assignment Basis	Item

4. On the Manage ATP Rules page, search for and open rule x for editing.

5. On the Edit ATP Rule page, click ATP Assignment Rule, set the value, then click **Save and Close**.

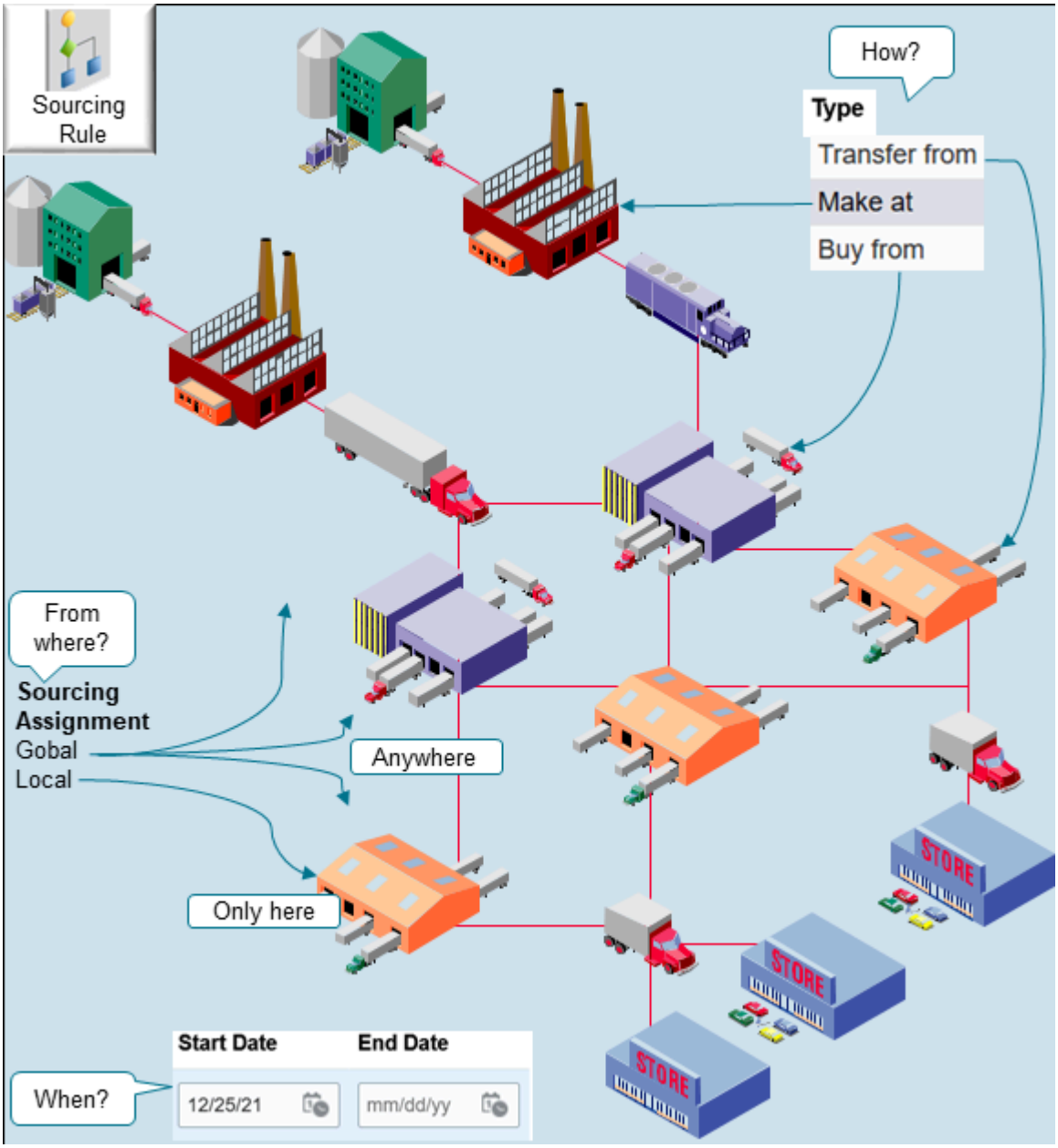
Attribute	Value
Assignment Basis	Organization

3 Source Your Supply Chain

Source Your Supply Chain

Source Your Supply Chain

A sourcing rule is a conditional statement that you create to specify how to source an item in your supply chain. Use it specify how, when, and where in your supply chain to get supply for your item.



Note

- Use your sourcing assignment to specify where to get supply, such as globally from anywhere in the supply chain, or locally from a single organization.
- Use the Source Type attribute to specify how to get supply for your item.

Source Type	Description
Buy	Source from a supplier, such as a drop shipment.
Make	Source from an organization that makes the item.
Transfer	Source through a transfer, typically as a transfer that ships the item to the final destination.

- Use the Start Date attribute and the End Date attribute to specify when to apply the sourcing rule. If you don't specify an End Date, then Promising will continue to use the rule until you do.
- You don't specify the exact item that you will source. Instead, you use an assignment set to specify the sourcing rule that you will use to source the item. An assignment set is a group of sourcing rules. You use it to assign each rule to an assignment level.
- Minimize the number of rules that you create. For example, create a global sourcing rule so it can fulfill most promising requests, then use only a few local sourcing rules to handle cases that the global rule can't fulfill. Your implementation requirements might be different.

Global Rule

A global sourcing rule is a rule that applies to every organization.

- It determines which organization you want to use to ship the item to your customer.
- Use it to buy or transfer, but not make.
- Use it when you don't explicitly specify the shipping organization on the sales order.
- Any organization can source an item in a global rule. The organization can buy supply from any supplier or transfer supply from any organization that you specify in the rule. For example, if you specify Superfly Supply as a buy from source in your rule, then any of your organizations can buy from Superfly Supply.
- If you have a source that applies to most of your organizations, then create a global sourcing rule for that source.

Local Rule

A local sourcing rule is a rule that applies to only one organization.

- Use it to buy, make, or transfer.
- Use it to tell Promising how to source supply from the organization that you identify in the global rule or on the sales order, or from an organization that you source through a transfer.
- You can specify which organization it applies to when you create the local rule.
- The sources that you specify in the rule apply only to the organization that you specify in the rule. Assume you create a local sourcing rule for Munich, and you add Superfly Supply as a buy from source in the rule. If you don't have any other sourcing rules that specify Superfly Supply as a supplier, then Munich can buy only from Superfly Supply.

Use global and local sourcing rules together. For example, assume there are 20 organizations in your company and 19 of them transfer supply from the Munich organization. You can create a global sourcing rule that specifies Munich as a transfer from organization, and then create a local sourcing rule that specifies where Munich can get its supply. Your implementation requirements might be different.

Dates

Use the effectivity dates in your sourcing rule to modify sourcing rules when the source changes, such as when you have a new supplier contract or when your factory shuts down.

You can add more than one range of start dates and end dates that don't overlap to your rule, and you can specify a different set of sources for each range.

Assume you have a sourcing rule that specifies Superfly Supply as the buy from source, but you decide to start buying from Superfly's competitor, Mr. T Supply instead of from Superfly on March 1. To make the change, you set the end date

for Superfly to February 28, then add a new effectivity date that starts on March 1 for Mr. T. Next, you add a buy-from source for the new effectivity date range and specify Mr. T as the supplier in the new date range.

Rank

You can rank each source in a sourcing rule to specify the priority that Promises uses when it sources the item. Promises uses the source that you rank the lowest first.

- If you need to source a specific quantity from a specific source, then you can you specify a from quantity, a less than quantity, or both, for one or more sources.
- The total in each rank must equal 100 percent.

Promising examines the sources to determine which one can fulfill the order by the requested date or with minimum delay. If the source with the highest rank:

- Has enough supply to fulfill the item, Promising uses that source for the entire requested quantity.
- Doesn't, Promising examines the calculated lead time, the requested ship date, and the lower ranked sources. It then determines the scheduled date according to which source can provide the supply the soonest.

Assume you have three sourcing rules.

Source	Rank	Allocation Percent
Make at the M2 factory	1	100
Transfer from the V1 organization	2	100
Buy from Superfly Supply	3	100

Note

- Promising sees if M2 can make the desired quantity.
- If not, Promising sees if V1 has enough quantity.
- If not, Promising sees if it can buy it from Superfly Supply.

Related Topics

- Assign Your Sourcing Rules

Create a Sourcing Rule

Learn how to create a sourcing rule.

1. Collect the reference data that you need to create your sourcing rule, such as organizations, items, and so on. Make sure the collected data is up to date on the server.

   For details, see *Collect Data for Global Order Promising*.
2. Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.

3. On the Manage Sourcing Rules page, click **Actions > Create**.
4. On the Create Sourcing Rule page, enter a name and description.
5. Set the Organization Assignment Type attribute to Global or Local.

   If you set it to Local, then set a value in the Organization attribute. Select the one organization that you will apply this sourcing rule to.
6. In the Sourcing Rule Effective Dates section, click **Actions > Add Row**, then set the dates when you want the sourcing rule to be in effect.
7. In the Sources section, click **Actions > Add Row**, then set the values.

Attribute	Value
Type	Choose one: o Transfer From o Make At o Buy From

8. Set other attribute values depending on the type that you selected. The page will help you. It will make some attributes available depending on the type.
9. Click **Save and Close**.

Related Topics

- How You Collect Different Data Types for Supply Chain Planning
- Support for Sourcing Rules and Bills of Distribution in Oracle Replenishment Planning

Create Sourcing Rules That Source According to Quantity and Supplier

You can source according to quantity and different suppliers.

Assume you need to create these sourcing rules for your AS54888 item:

- If the quantity is less than 100, then buy from Superfly Supplier.
- If the quantity is equal to or more than 100, then buy from your Mr. T supplier.

Try it.

1. Go to the Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
2. Create a new sourcing rule.

Attribute	Value
Name	Sources for AS54888
Organization Assignment Type	Local

Attribute	Value
Start Date	Select one.

3. In the Sources area, click **View > Columns > Manage Columns**, then move these columns into the Visible Columns list.
    - From Quantity
    - Less Than Quantity
    - Quantity Unit of Measure
4. In the Sources area, add two new sources.

Type	Supplier	Allocation Percent	Rank	From Quantity	Less Than Quantity	Quantity Unit of Measure
Buy From	Superfly	100	1	Leave empty	100	Each
Buy From	Mr. T.	100	1	100	Leave empty	Each

5. Click **Save**.

Six months later, you add a new supplier, Michelle's Supplies, and you now have these new requirements.

- If the quantity is less than 100, and if Superfly can supply the requested quantity, then buy from Superfly.
- If the quantity is equal to or more than 100, and less than 200, and if Mr. T can supply the requested quantity, then buy from Mr. T.
- If the quantity is equal to or more than 200, then buy from Michelle.
- If Superfly or Mr. T doesn't have enough supply, then buy from Michelle.

To implement these changes, edit the suppliers you already added, then add two new sources for Michelle. Here's what it looks like.

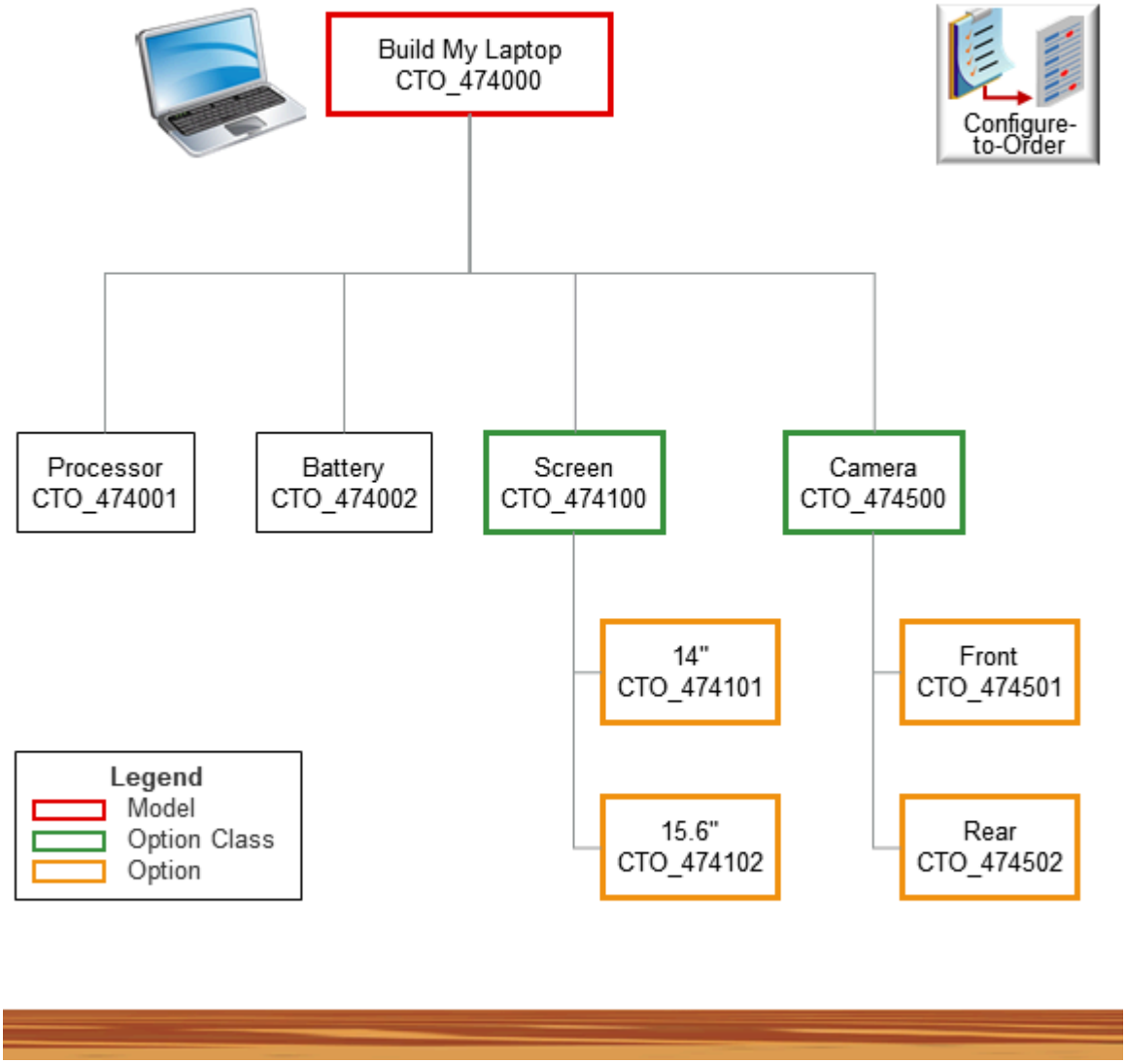
Type	Supplier	Allocation Percent	Rank	From Quantity	Less Than Quantity	Quantity Unit of Measure
Buy From	Superfly	100	1	1	100	Each
Buy From	Mr. T.	100	1	100	200	Each
Buy From	Michelle	100	1	200	Leave empty	Each
Buy From	Michelle	100	2	Leave empty	Leave empty	Leave empty

Exclude Options and Option Classes for Configured Items

If your item is a configured item, and if the item has options or option classes that you don't want to source, then use the Exclude for Options and Option Classes attribute in the Sources area.

Use it to specify the options and classes to exclude.

Assume you're in the Vision Operations organization, and you sell the CTO_474000, which is a configuration model for a laptop computer. Here's its bill of materials:



You build the CTO_474000 in Factory 1 or Factory 2, transfer it to Vision Operations, then ship it from Vision Operations to your customer. Factory 1 can't build the Rear camera option. It can build only the Front camera option.

Try it.

1. Go to the Order Promising work area, then click **Tasks > Manage Sourcing Rules**.

2. Create a new sourcing rule.

Attribute	Value
Name	Sources for CTO_474000
Organization Assignment Type	Local
Start Date	Select one.

3. In the Sources area, add two new rows.

Type	Organization	Exclude for Options and Option Classes
Transfer From	Factory 1	Rear CTO_474502
Transfer From	Factory 2	Leave empty

   Make sure you still have a source for the option or option class even if you exclude it. In this example, you don't exclude Factory 2, so you're good to go.
4. Click **Save**.
5. Assign this rule to the CTO_474000 item.

Here's what happens at run time. If a fulfillment line for the CTO_474000:

- Includes the Rear camera option, Promising doesn't consider Factory 1 as a source, but instead transfers the item from Factory 2 to Vision Operations.
- Doesn't include the Rear camera option, Promising considers the capacity to build the CTO_474000 in Factory 1 and Factory 2. Promising will transfer the item from Factory 1 or Factory 2 according to the sourcing rule's rank, and to the capacity and supply in the factories.

For more, see *Overview of Configure-to-Order*.

Lead Times and Configured Items

Promising uses the component that has the longest total lead time when it promises the configured item. It also applies this component's total lead time to the total lead time of each other component.

Assume the CTO_474000 computer has two child options, and Promising determines these total lead times for them:

Option	Total Lead Time
14" Screen	3 days processing lead time plus 2 days preprocessing lead time equals 5 total days lead time.
Front Camera	1 day processing lead time plus 1 day preprocessing lead time equals 2 days total lead time.

The screen has the longest total lead time of 5 days, so it sets the camera's total lead time to 5 days. If you modify your rules for the camera, and if the camera's total lead time:

- Is still less than 5 days, then Promising will continue to set the camera's total lead time to 5 days.

- Is now 6 days, then Promising will set the camera's total lead time to 6 days, and will also set the screen's total lead time to 6 days.

Bills of Distribution

A bill of distribution is a hierarchy that you specify when you have more than one organization that can source your item.

If you need three or more local sourcing rules to model a supply chain when your item flows through three or more organizations, then you can create one bill of distribution instead of creating a whole bunch of local sourcing rules.

For example, you could use one bill of distribution or three local sourcing rules to implement this flow:

- Organization M1 purchases the item from Superfly Supply.
- Organization M2 transfers the item from M1.
- Organization M3 transfers the item from M2.

Using one bill of distribution instead of several sourcing rules is up to you. It depends on your personal preference whether you prefer to manage one bill of distribution or more than one sourcing rule.

Try it.

1. Go to the Order Promising work area, click **Tasks > Manage Bills of Distribution**.
2. On the Manage Bills of Distribution page, click **Actions > Create**.
3. Set the attributes in the same way that you would set them for a sourcing rule. For details, *Sourcing Rule*.

Assign Your Sourcing Rules

Assign Your Sourcing Rules

Use an assignment set to assign your sourcing rules.

Your sourcing rule can specify how to source an order. For example:

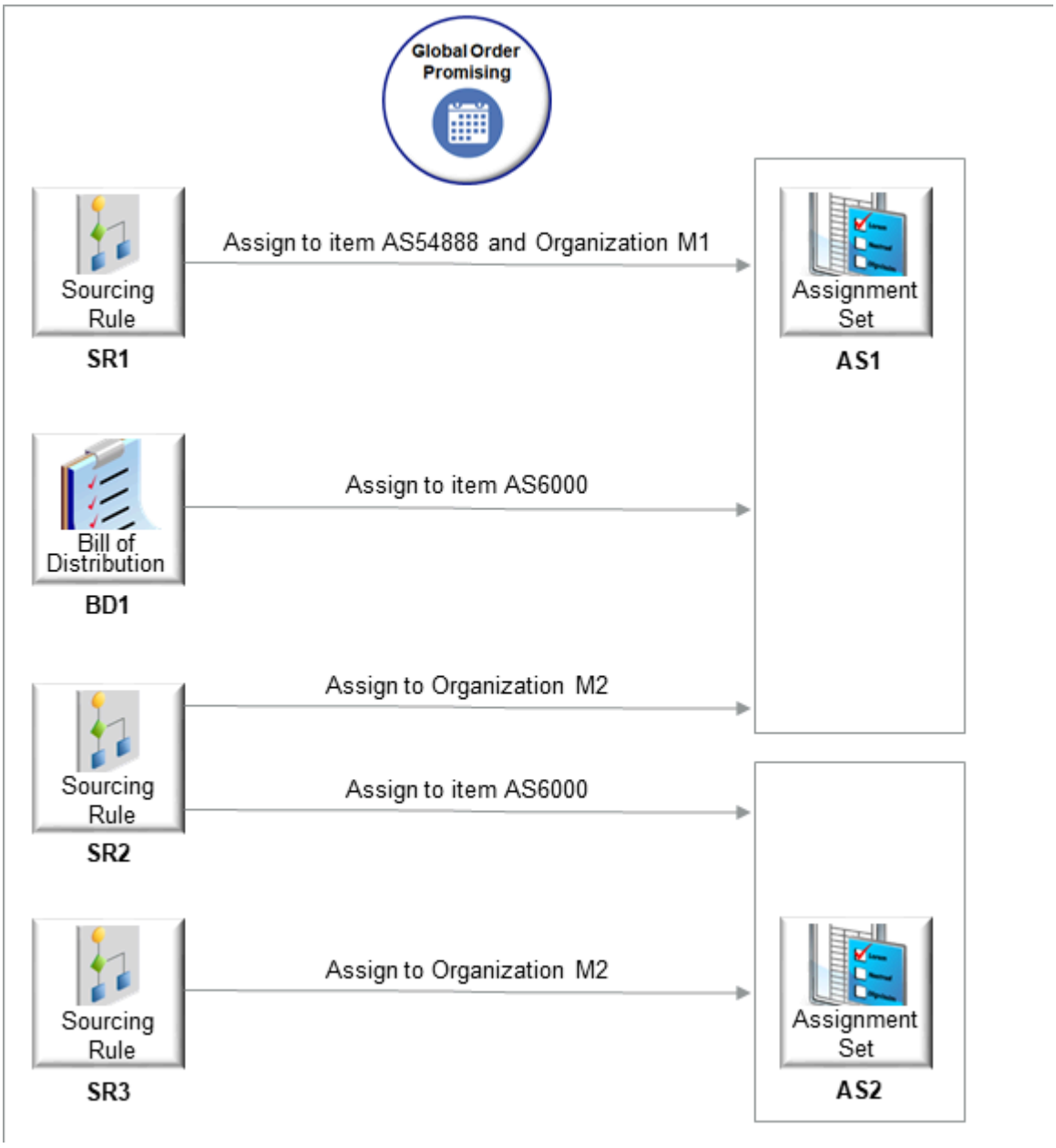
Type	Supplier	Allocation Percent	Rank
Buy From	Superfly	100	1
Buy From	Mr. T.	100	2

Note

- A sourcing rule doesn't specify what item you're sourcing, so you use an assignment set to identify the item. You use an assignment set to assign a group sourcing rules.
- You can assign each rule or bill to an assignment level, and to different attribute values. The rank specifies the level. For details, see *Consider Your Sourcing Hierarchy and Assignment Set Hierarchy*.

- You use an assignment level to specify the level of detail to use when assigning the item, such as item or organization.

Consider an example that has three sourcing rules and one bill of distribution.



This example assigns the sourcing rules and bill of distribution to two assignment sets.

- Assigns sourcing rule SR1 to assignment set AS1 at the item level and at the organization level for the AS54888 item in organization M1.
- Assigns the BD1 bill of distribution to assignment set AS1 at the item level for the AS6000 item.
- Assigns sourcing rule SR2 to assignment set AS1 at the organization level in the M2 organization.
- Assigns sourcing rule SR2 to assignment set AS2 at the item level for the AS6000 item.
- Assigns sourcing rule SR3 to assignment set AS2 at the organization level in the M2 organization.

If Promising uses assignment set:

- AS1, then it sources the AS6000 item according to the sourcing that you specify in the BD1 bill of distribution.
- AS2, then it sources the AS6000 item according to the sourcing that you specify in the SR2 sourcing rule.

Set Your Values

You set each value in the Sourcing Assignments area on the Edit Assignment Set page. For example, if you set the Assignment Level on the rule to Item and Customer, then you must also set the Item attribute and the Customer attribute in the Sourcing Assignments area.

Let's say you create a sourcing rule named Sources for AS54888. You want to use this rule only if the Item attribute on the fulfillment line contains AS54888 and the Customer attribute on the line contains Computer Service and Rentals. Here's what you're sourcing assignment should look like.

Assignment Level	Customer	Sourcing Type	Sourcing Rule
Item and Customer	Computer Service and Rentals	Sourcing Rule	Sources for AS54888

The Edit Assignment Set page makes it easy for you. For most levels, it displays the attributes that you need according to the value that you select in the Assignment Level attribute.

Specify Catalogs for Assignment Sets

A catalog is a group of categories that you can use to classify an item. Use it to organize your item into a hierarchy.

A catalog can have a flat or a one level structure of categories. You can also have a hierarchical structure of categories.

You must specify a catalog for each assignment set when you create the set. You associate the set with a catalog to:

- Use categories associated to that catalog in your assignment set.
- Link the sourcing assignments to the categories.

Use the Manage Assignment Sets task in the Global Order Promising work areas to create an assignment set and specify the catalog. Don't use assignment sets in the Demand Management work area.

If you don't specify a catalog, then the assignment set uses the Catalog for Sourcing Assignments (MSC_SRC_ASSIGNMENT_CATALOG) profile option as the catalog. To modify it, see *Manage Promising Profiles*.

A catalog is a collection of categories that you can use to classify your item. For example, you can assign the Floral Dress item to the Summer category in the Ladies Wear catalog. For details about catalogs and categories, including how to create a catalog and add categories and items to it, see *Assign Catalogs and Categories Using Item Rules*.

Set Your Assignment Levels

If you have more than one sourcing assignment, then Promising prioritizes them so it knows which one to apply first. Promising uses the most detailed assignment first. You can specify this behavior.

For example, the Item and Customer and Customer Site level is more detailed than the Item and Customer level. Why? Because:

- The Item and Customer and Customer Site level looks at 3 pieces of data. It says to use the assignment only if the fulfillment line has the item, customer, and customer site that you specify.
- The Item and Customer level looks at only 2 pieces of data. It says to use the assignment only if the fulfillment line has the item and the customer that you specify.

Assume you sell the AS54888 item to your Computer Service and Rentals customer, and they have 12 customer sites. 11 of the sites are local retail stores. The 12th site is their flagship store. Computer Service and Rentals wants you to fulfill the orders that you get from the flagship store before any of the other sites, so you create one sourcing rule for the flagship and another one for the other 11 sites.

Here's what you're sourcing assignment should look like.

Assignment Level	Customer	Customer Site	Sourcing Type	Sourcing Rule
Item and Customer	Computer Service and Rentals	-	Sourcing Rule	Sources for AS54888
Item and Customer and Customer Site	Computer Service and Rentals	Flagship	Sourcing Rule	Sources for AS54888 for Flagship Site

Assume you have two fulfillment lines.

Line	Item	Customer	Ship-to Address
1	AS54888	Computer Service and Rentals	Flagship
2	AS54888	Computer Service and Rentals	Empty

Here's what Promising does:

- Looks through all the sourcing assignments that you've created.
- Applies the most detailed one first.
- In this example, it applies the Item and Customer and Customer Site assignment to line 1 first because this assignment level is more detailed than Item and Customer.
- Assigns line 1 to the Sources for AS54888 for Flagship Site sourcing rule.
- Assigns line 2 to the Sources for AS54888 sourcing rule.

Related Topics

- Consider Your Sourcing Hierarchy and Assignment Set Hierarchy

Consider Your Sourcing Hierarchy and Assignment Set Hierarchy

You use the hierarchy in your assignment set to tell Global Order Promising how to identify the sourcing rule that it should use to source your item.

The sourcing hierarchy is a detailed-to-general hierarchy. Each level of the hierarchy includes an assignment level and rule type. You can use the sourcing hierarchy to identify the sourcing rule, bill of distribution, or set of the item's attribute values that Promising uses to find a source for a combination of the:

- Assignment set, and
- Date, and
- Organization, and
- Item

Note

- Promising associates the sourcing rules in your assignment set with one row in the sourcing hierarchy.
- The values in the sourcing assignment, such as the item, determine which of the rules, bills, and set of item attributes that Promising will use when it searches your supply chain.
- More than one rule, bill, or set of item attributes might apply, so more than one row might apply. To identify the source for your item, Promising uses the rule, bill, or set of item attributes from the most detailed row in the hierarchy.
- Use the sourcing hierarchy to determine where your organization gets the item on x date. If Promising returns results that are different than what you expect, then you can search the sourcing hierarchy to identify the sourcing rule that Promising used.

To view the hierarchy, go to the Global Order Promising work area, click **Tasks > Manage Assignment Sets**, then click **View Sourcing Hierarchy**. For details, see *Manage Promising Profiles*.

Assignment Level Hierarchy

- Your assignment levels create a hierarchy in the assignment set.
- Promising uses the hierarchy to determine which sourcing rule to use when it searches the supply chain for a source for your item.
- Promising uses the most specific sourcing rule in the hierarchy first.
- The MSP_DEFAULT_ASSIGNMENT_SET profile option specifies the assignment set that Promising uses, by default. For details, see *Manage Promising Profiles*.

Assume your factory receives all items that are in the Fasteners item category from Supplier A. To source this, you can create a sourcing rule and an assignment set that:

- Buys from Supplier A
- At the Category assignment level
- For the Fastener item category

Six months later, you need to source the 10 Millimeter Screw Fastener from supplier B. To source this, you can create another sourcing rule and an assignment set that:

- Buys from Supplier B
- At the Item assignment level
- For the 10 Millimeter Screw Fastener item

The Item assignment level is more detailed than the Category level, so Promising sources the 10 Millimeter Screw Fastener from Supplier B, but still sources all other fasteners that are in the Fasteners item category from Supplier A.

Assignment Levels for Global Sourcing Rules

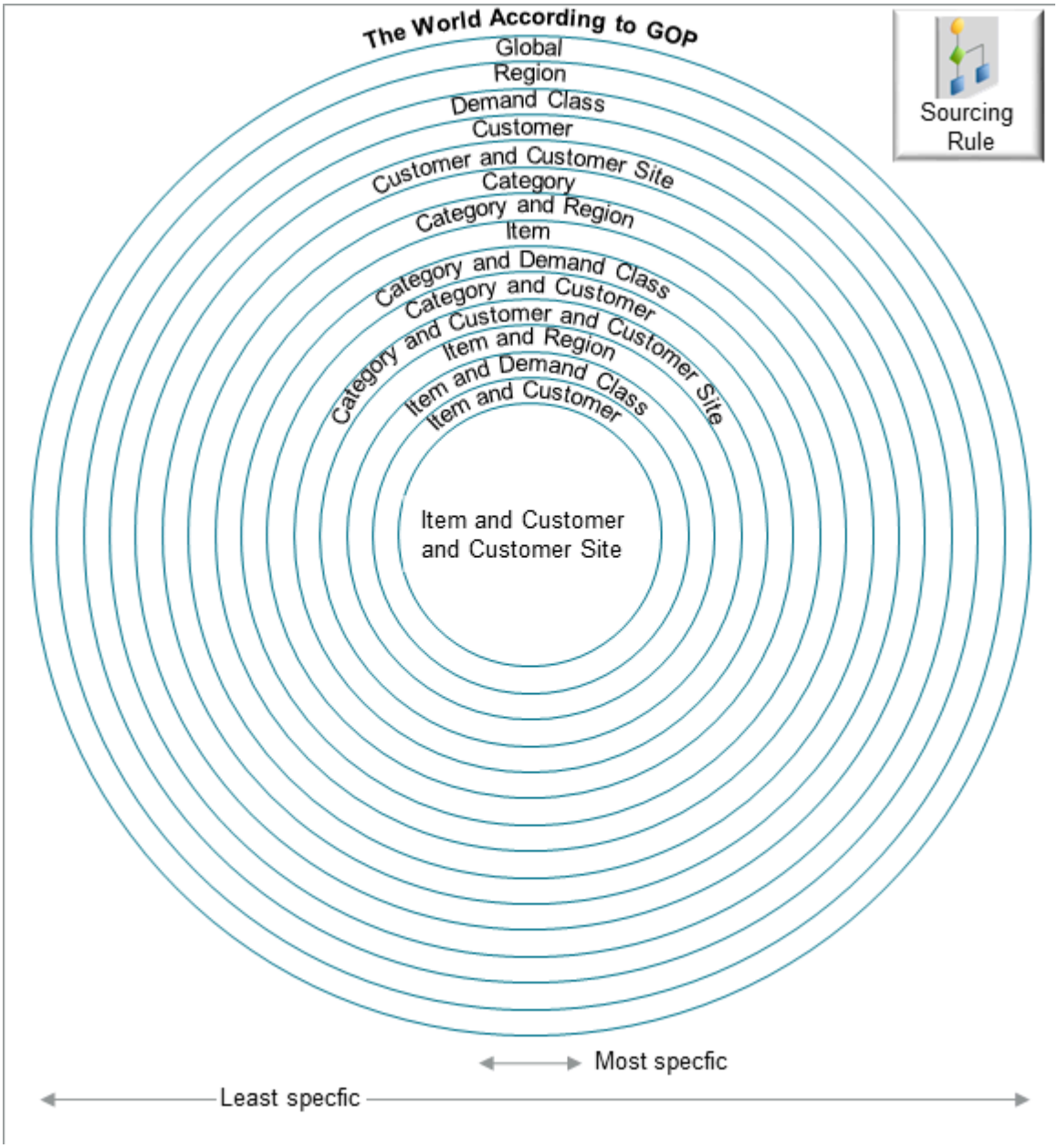
Here are the levels for your global sourcing rules, listed from the most specific in row 1, to the least specific in row 15.

Specificity	Assignment Level	Assign the Sourcing Rule When	Applies for All
1	Item and Customer and Customer Site	The fulfillment line has the item, the customer, and the customer site that you specify on the assignment.	• Organizations • Demand Classes • Categories • Regions
2	Item and Customer	The fulfillment line has the item and the customer that you specify on the sourcing assignment.	• Customer's sites • Organizations • Demand classes • Categories • Regions
3	Item and Demand Class	The fulfillment line has the item, and the sourcing rule's demand class matches the demand class that you specify on the assignment.	• Customers • Customer sites • Organizations • Categories • Regions
4	Item and Region	The fulfillment line has the item and the region that you specify on the assignment.	• Customers • Customer sites • Organizations • Demand Classes • Categories
5	Category and Customer and Customer Site	The fulfillment line has the customer and customer site that you specify on the assignment, and the Product Category on the fulfillment line matches the category that you specify on the assignment.	• Items • Organizations • Demand Classes • Regions
6	Category and Customer	The fulfillment line has the customer that you specify on the assignment, and the Product Category on the fulfillment line matches the category that you specify on the assignment.	• Items • Customer's sites • Organizations • Demand Classes • Regions
7	Category and Demand Class	The Product Category on the fulfillment line matches the category that you specify on the assignment, and the sourcing	• Items • Customers • Customer sites

Specificity	Assignment Level	Assign the Sourcing Rule When	Applies for All
		rule's demand class matches the demand class that you specify on the assignment.	• Organizations • Regions
8	Item	The fulfillment has the item that you specify on the assignment.	• Customers • Customer sites • Organizations • Demand Classes • Categories • Regions
9	Category and Region	The Product Category on the fulfillment line matches the category that you specify on the assignment, and the fulfillment line has the region that you specify on the assignment.	• Items • Customer • Customer sites • Organizations • Demand Classes
10	Category	The Product Category on the fulfillment line matches the category that you specify on the assignment.	• Items • Customers • Customer sites • Organizations • Demand Classes • Regions
11	Customer and Customer Site	The fulfillment line has the customer and the customer site that you specify on the assignment.	• Items • Organizations • Demand Classes • Categories • Regions
12	Customer	The fulfillment line has the customer that you specify on the assignment.	• Items • Customer sites • Organizations • Demand Classes • Categories • Regions
13	Demand Class	The sourcing rule's demand class matches the demand class that you specify on the assignment.	• Items • Customers • Customer sites • Organizations • Categories • Regions

Specificity	Assignment Level	Assign the Sourcing Rule When	Applies for All
14	Region	The fulfillment line has the region that you specify on the assignment.	• Items • Customers • Customer sites • Organizations • Demand Classes • Categories
15	Global	The fulfillment line, sourcing rule, or assignment doesn't have to have any specific value.	• Items • Customers • Customer sites • Organizations • Demand Classes • Categories • Regions

Here's another way to visualize it.



Assignment Levels for Local Sourcing Rules

Here are the levels for your local sourcing rules, listed from the most specific in row 1, to the least specific in row 15.

Specificity	Assignment Level	Assign the Sourcing Rule When	Applies for All
1	Item and Organization	The fulfillment line has the item that you specify on the assignment, and the Organization on the sourcing rule matches the Item Organization on the fulfillment line.	• Customers • Customer sites • Demand Classes • Categories

Specificity	Assignment Level	Assign the Sourcing Rule When	Applies for All
			• Regions
3	Category and Organization	The Organization on the sourcing rule matches the Item Organization on the fulfillment line, and the Product Category on the fulfillment line matches the category that you specify on the assignment.	• Items • Customers • Customer sites • Demand Classes • Regions
3	Organization	The fulfillment line has the organization that you specify on the assignment.	• Items • Customers • Customer sites • Demand Classes • Categories • Regions

Related Topics

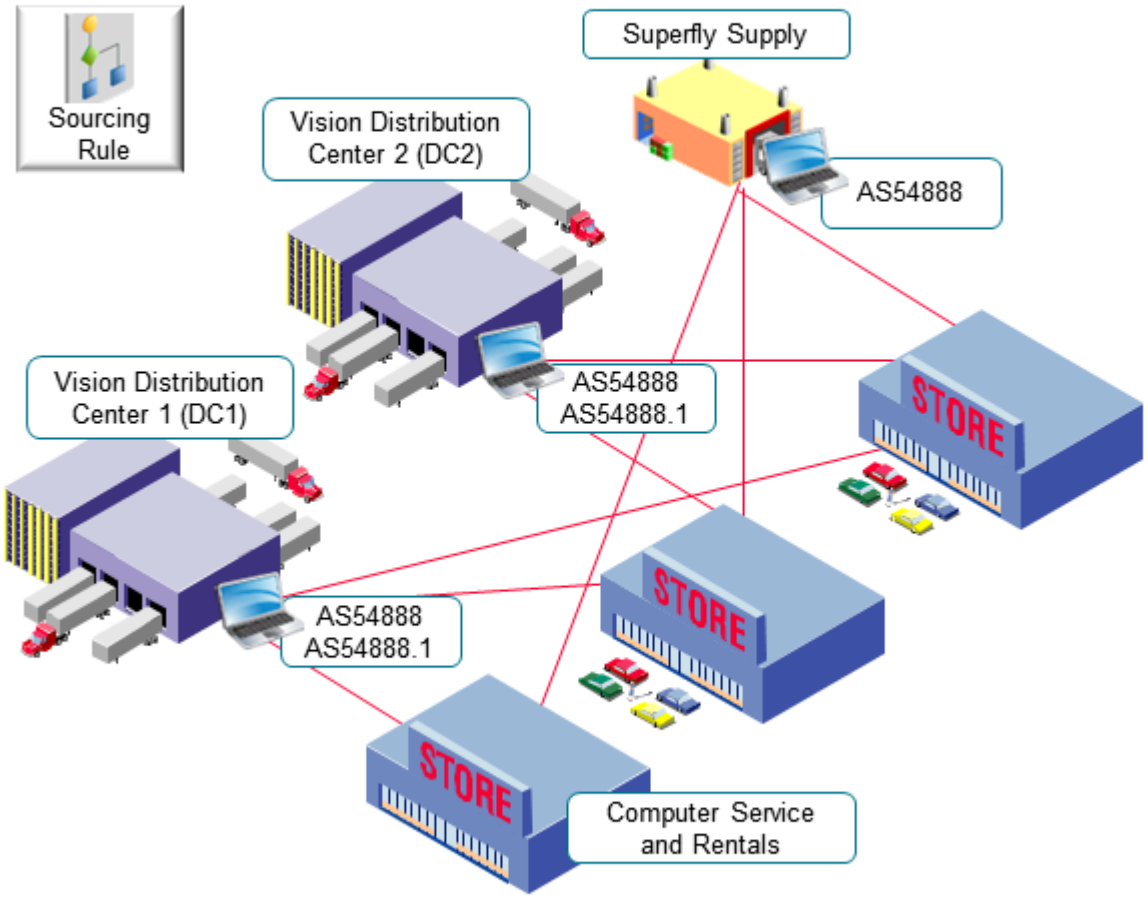
- Set Your Assignment Levels

Create an Assignment Set

Learn how to create an assignment set.

Assume you sell the AS54888 Computer. You're releasing a new version of it, AS54888.1 to all your customers, but you want to make sure your highest valued customer, Computer Service and Rentals, gets first dibs on it.

Here's your supply chain.



Note

- You are in the Vision Operations organization.
- You fulfill all computers that you have in the Computers category from:
-
  - Vision Distribution Center 1 (DC1)
  - Vision Distribution Center 2 (DC2)
  - Superfly Supply (S1)

You will create one sourcing rule to meet this need:

- You fulfill the AS54888.1 only from Distribution Center 1 and Distribution Center 2.

You will create a second sourcing rule to meet this need:

- You fulfill sales orders from Computer Service and Rentals that have the AS54888.1 only from Distribution Center 1.

You will create a third sourcing rule to meet this need:

- You fulfill all items that are in the Computers category from Distribution Center 1, Distribution Center 2, or Superfly.

So you need to implement this set up.

Sourcing Rule	Item Category	Item	Fulfillment Source
1	Computers	-	Vision Distribution Center 1 (DC1) Vision Distribution Center 2 (DC2) Superfly Supply (S1)
2	-	AS54888.1	Vision Distribution Center 1 (DC1) Vision Distribution Center 2 (DC2)
3	-	AS54888.1	Vision Distribution Center 1 (DC1)

Summary of the Setup

1. Create your sourcing rules.
2. Assign your sourcing rules.

Create Your Sourcing Rules

1. Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
2. Create your first sourcing rule.
    - On the Manage Sourcing Rules page, click **Actions > Create**.
    - On the Create Sourcing Rules page, set the values.

Attribute	Value
Name	Transfer Computers From D1, D2, and S1
Description	Sourcing rule to transfer supply for all items that are in the Computers category from our distribution centers and from Superfly Supply.

Attribute	Value
Organization Assignment Type	Global

- In the Sourcing Rule Effective Dates, click **Actions > Add Row**, then set the Start Date to today's date. You want this rule to last forever, so leave the End Date attribute empty.

  If you ever need to stop using this rule, you can always come back and set the end date.
- In the Sources area, use **Actions > Add Row** 3 times to add these rows.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	100	1
Transfer From	D2	100	1
Buy From	S1	100	1

3. Create your second sourcing rule.
   - Repeat step 2, but with these values.

Attribute	Value
Name	Transfer Computers from D1 and D2
Description	Sourcing rule to transfer supply for the AS54888.1 item from our distribution centers.
Organization Assignment Type	Global

   - Add these sources.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	60	1
Transfer From	D2	40	1

4. Create your third sourcing rule.
   - Repeat step 2, but with these values.

Attribute	Value
Name	Transfer Computers from D1
Description	Sourcing rule to transfer supply for the AS54888.1 item from our D1 distribution center.
Organization Assignment Type	Global

- Add this source.

Type	Organization	Allocation Percent	Rank
Transfer From	D1	100	1

5. Click **Save and Close**.

Assign Your Sourcing Rules

Now you create a set of assignments to assign your sourcing rules. Your set will have three assignments.

1. Click **Tasks > Manage Assignment Sets**.
2. On the Manage Assignment Sets page, click **Actions > Create**.
3. On the Create Assignment Set page, set the values.

Attribute	Value
Name	Assign My Computers
Description	Assign the sourcing rules that we're using to source all of our computers.
Catalog	GOP_Catalog For details about catalogs and categories, see *How Catalogs Work Together*.

4. Click **Actions > Add Row**, then assign your first sourcing rule.

Attribute	Value
Assignment Level	Category
Category	Computers
Sourcing Rule or Bill of Distribution	Transfer Computers From D1, D2, and S1

5. Click **Actions > Add Row**, then assign your second sourcing rule.

Attribute	Value
Assignment Level	Item
Item	AS54888.1
Sourcing Rule or Bill of Distribution	Transfer Computers from D1 and D2

6. Click **Actions > Add Row**, then assign your third sourcing rule.

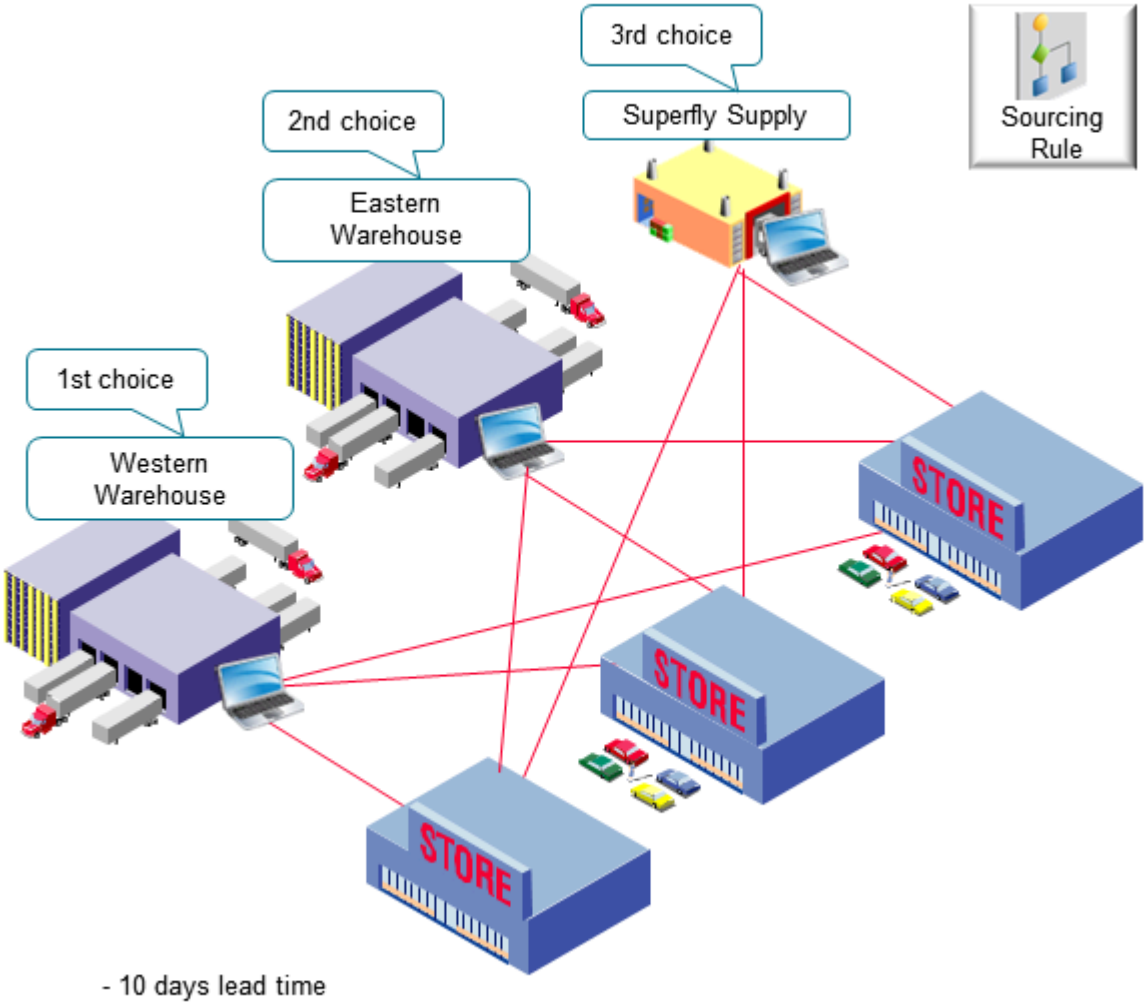
Attribute	Value
Assignment Level	Item and Customer
Item and Customer	Computer Service and Rentals
Item	AS54888.1
Sourcing Rule or Bill of Distribution	Transfer Computers from D1

7. Click **Save and Close**.

Another Example of Creating an Assignment Set

Create an assignment set that Promising can use when your first choice for supply can't fulfill the demand.

Consider this supply chain.



Assume:

- You're in the Vision Operations organization.
- You sell the AS54888 Computer item, and its in the Vision Pro category of computers.
- The Western Warehouse and the Eastern Warehouse are each an organization in Vision Corporation.
- You want to ship from Western first.
- If Western can't fulfill demand in time to meet the requested delivery date, then ship from Eastern.
- If Eastern can't fulfill demand in time to meet the requested delivery date, then use Superfly Supply to fulfill demand. Superfly is your 3rd party supplier. You use the acronym SFS to identify the Superfly organization.
- You need 10 days lead time to fulfill the item.

Summary of the Setup

1. Create your sourcing rules.
2. Assign your sourcing rules.
3. Create your ATP rules.

Create Your Sourcing Rules

1. Create your first sourcing rule.
   - Go to the Global Order Promising work area, then click **Tasks > Manage Sourcing Rules**.
   - Create a new sourcing rule.

Attribute	Value
Name	Sourcing Rule for Vision Pro Computers
Description	We use this sourcing rule to source all items in a category from our Western Warehouse. If Western can't fulfill the item in time, then it sources from Eastern Warehouse.
Organization Assignment Type	Global

   - Set the start date to today's date. Don't enter an end date.
   - Add your sources.

Type	Organization	Allocation Percent	Rank
Transfer From	Western Warehouse	100	1
Transfer From	Eastern Warehouse	100	2

2. Create your second sourcing rule.

Attribute	Value
Name	Sourcing Rule for a Vision Pro Item
Description	We use this sourcing rule to source an item from our Western Warehouse. If Western can't fulfill the item in time, then it sources from Eastern Warehouse.
Organization Assignment Type	Global

   - Set the start date to today's date. Don't enter an end date.
   - Add your sources.

Type	Organization	Allocation Percent	Rank
Transfer From	Western Warehouse	100	1
Transfer From	Eastern Warehouse	100	2

3. Create your third sourcing rule.

Attribute	Value
Name	Sourcing Rule for Superfly Supply
Description	We use this sourcing rule to source an item from our Superfly Supply supplier.
Organization Assignment Type	Local
Organization	SFS

   - Set the start date to today's date. Don't enter an end date.
   - Add your source.

Type	Organization	Allocation Percent	Rank
Buy From	Superfly Supply	100	1

Assign Your Sourcing Rules

1. Click **Tasks > Manage Assignment Sets**.
2. On the Manage Assignment Sets page, click **Actions > Create**.
3. On the Create Assignment Set page, set the values.

Attribute	Value
Name	Assign My Vision Pro Computers
Description	Assign the sourcing rules that we're using to source all of our computers in the Vision Pro category.
Catalog	GOP_Catalog

4. Click **Actions > Add Row**, then assign your first sourcing rule.

Attribute	Value
Assignment Level	Category
Category	Vision Pro
Sourcing Rule or Bill of Distribution	Sourcing Rule for Vision Pro Computers

5. Click **Actions > Add Row**, then assign your second sourcing rule.

Attribute	Value
Assignment Level	Item
Item	AS54888
Sourcing Rule or Bill of Distribution	Sourcing Rule for a Vision Pro Item

6. Click **Actions > Add Row**, then assign your third sourcing rule.

Attribute	Value
Assignment Level	Organization
Organization	SFS
Sourcing Type	Sourcing Rule
Sourcing Rule or Bill of Distribution	Sourcing Rule for Superfly Supply

7. Click **Save and Close**.

Create Your ATP Rules

1. Click **Tasks > Manage ATP Rules**.
2. Create your first ATP rule.

   Click **Actions > Create**, then set the values.

Attribute	Value
Name	ATP Rule for the AS54888
Description	ATP rule that we're using to promise the AS54888 item.
Promising Mode	Lead-Time Based
Lead Time Considered	User-Defined Lead Time
User-Defined Lead Time in Days	10
Assignment Basis	Item
Assigned-to Item	AS54888

3. Create your second ATP rule.

   Click **Actions > Create**, then set the values.

Attribute	Value
Name	ATP Rule for the Vision Pro Category
Description	ATP rule that we're using to promise items that are in the Vision Pro category.
Promising Mode	Lead-Time Based
Lead Time Considered	User-Defined Lead Time
User-Defined Lead Time in Days	10
Assignment Basis	Category
Assigned-to Item Category	Vision Pro

Use Spreadsheets to Edit Assignment Sets

Have a lot of assignment sets and want to simplify editing them? You can use a spreadsheet to do that.

1. Go to the Order Promising work area, click **Tasks > Manage Assignments Sets**, then search for you assignment set.
2. In the search results, click the **row** that has your set, then click **Edit in Spreadsheet**.
3. Download the file, then use a spreadsheet editor, such as Microsoft Excel, to edit your set.

Related Topics

- Guidelines for Using Desktop Integrated Excel Workbooks

Update Your Data

Update Data for Your Rules

If you change any of your promising rules, then you must update your data.

If you change any assignment set, sourcing rule, ATP rule, or profile option, then you must run these scheduled processes:

- Collect Planning Data
- Collection Job Set

Select different parameters and entities when you run them, depending on what you changed.

For details, see *Collect Data for Global Order Promising*.

Example 1

Assume:

- You keep inventory in the Denver warehouse and in the Seattle warehouse.
- You remove one rule from an assignment set then add another one to it.
- You create a global sourcing rule that transfers supply from Denver.
- You don't have a sourcing rule for Seattle.
- You have one ATP rule:
  - Assignment level is Item
  - Mode is Supply Chain Availability
- Supply is currently available in Denver but not in Seattle.
- You set the MSP_GOP_HORIZON_DAYS profile option to 30 days. For details, see *Manage Promising Profiles*.
- You set the Warehouse attribute on the order line to Denver or Seattle, or leave it empty.

Here's what happens at run time for various scenarios.

Scenario	ATP Rule	Assignment	Warehouse	Catalog Availability	Estimate Order Availability	Scheduling
1	Yes	Yes	Denver	In Stock	On Time	Scheduled
2	Yes	Yes	Seattle	Out of Stock	Delay of 29 Days	Scheduled
3	Yes	Yes	Empty	In Stock	On Time	Scheduled
4	Yes	No	Denver	No Data Was Retrieved	On Time	Scheduled
5	Yes	No	Seattle	No Data Was Retrieved	Delay of 29 Days	Scheduled
6	Yes	No	Empty	No Data Was Retrieved	No Data Was Retrieved	You might see an error: `Order promising didn't schedule the fulfillment line. The sourcing rule or assignment is missing for the item, customer, and organization.`

Scenario	ATP Rule	Assignment	Warehouse	Catalog Availability	Estimate Order Availability	Scheduling
						`Create a sourcing rule or assignment for the item, customer, and organization.`
7	No	Yes	Denver	No Data Was Retrieved	No Data Was Retrieved	You might see an error: `The item passed to order promising was not found in any organization. Verify the item definition.`
8	No	Yes	Seattle	No Data Was Retrieved	No Data Was Retrieved	Same as above
9	No	Yes	Empty	No Data Was Retrieved	No Data Was Retrieved	Same as above
10	No	No	Denver	No Data Was Retrieved	No Data Was Retrieved	Same as above
11	No	No	Seattle	No Data Was Retrieved	No Data Was Retrieved	Same as above
12	No	No	Empty	No Data Was Retrieved	No Data Was Retrieved	Same as above

Note

- The ATP Rule column indicates whether you created an ATP rule that Promising can use given the order line details that Order Management sends.
- The Assignment column indicates whether you created an assignment set that Promising can use given the order line details that Order Management sends.
- The Warehouse column indicates whether you set the Warehouse attribute on the order line to Denver, Seattle, or didn't set any value.
- The text in the Catalog Availability, Estimate Order Availability, and Scheduling columns is the status that the sales order displays.

Catalog Availability

Scenarios	Description
1 and 3	Catalog Availability examines your ATP rules and looks at supply for any global rule that matches the criteria from the order line. Denver is the only global sourcing rule that applies. You didn't set the Warehouse on the order line for scenario 3, so Promising applies the same global rule, Denver, and sets the status to **`In Stock`**.
2	If you specify the Warehouse on the order line, then Promising must use it, but Seattle doesn't have any supply, so the status is **`Out of Stock`**.
4 through 12	The status is **`No Data Was Retrieved`** because you didn't create an ATP rule and an assignment set. You need an ATP rule and an assignment set to determine Catalog Availability.

For details, see *How Catalogs Work Together*.

Estimate Order Availability

Scenarios	Description
1 and 3	Similar to Catalog Availability, Estimate Order Availability examines your ATP rules and looks at supply for any global rule that matches the criteria. Denver is the only one that applies. You didn't set the Warehouse on the order line for scenario 3, so Promising applies the same rule, and sets the status to **`On Time`**.
2 and 5	You specify the Warehouse as Seattle, so Promising must use Seattle, Seattle doesn't have any supply, so Promising gets the value from the MSP_GOP_HORIZON_DAYS profile option and uses it to set the status to **`Delay of 29 Days`** (30 minus today).
4	You didn't set the Warehouse on the order line, so Promising applies the Denver global rule, and sets the status to **`On Time`**.
6 through 12	The status is **`No Data Was Retrieved`** because you didn't create an ATP rule and an assignment rule, or least an ATP rule and specify the warehouse on the order line. To get the estimate, you need an ATP rule and an assignment rule, or least an ATP rule and specify the warehouse.

Scheduling

Scenarios	Description
1 through 5	Promising was able to schedule the line, so it sets the status to **`Scheduled`**.
6 through 12	Scheduling displays an error because you didn't create an ATP rule and an assignment set, or least an ATP rule and specify the warehouse on the order line. To schedule, Promising needs an ATP rule and an assignment set, or least an ATP rule and the warehouse.

Example 2

Assume the scenarios are the same as example 1 but with these differences:

- You create a global sourcing rule that transfers supply from Seattle.
- You don't have a sourcing rule for Denver.

Here's what happens at run time.

Scenario	ATP Rule	Assignment	Warehouse	Catalog Availability	Estimate Order Availability	Scheduling
1	Yes	Yes	Denver	Out of Stock	On Time	Scheduled
2	Yes	Yes	Seattle	Out of Stock	Delay of 29 Days	Scheduled
3	Yes	Yes	Empty	Out of Stock	Delay of 29 Days	Scheduled

Catalog Availability

Scenarios	Description
1 through 3	Catalog Availability examines your ATP rules and looks at supply for any global rule that matches the criteria from the order line. Seattle is the only global sourcing rule that applies, but Seattle doesn't have any supply, and you don't have a sourcing rule for Denver, so the status is **`Out of Stock`**.

Estimate Order Availability

Scenarios	Description
1	You set the Warehouse on the order line to Denver, so Promising must use Denver. Denver has supply, so Promising sets the status to **`On Time`**.
2	You set the Warehouse on the order line to Seattle, so Promising must use Seattle. Seattle doesn't have any supply, so Promising sets the status to **`On Time`**.
3	You left the Warehouse empty, so Promising examines the only sourcing rule it has, which is for Seattle. Seattle doesn't have any supply, so Promising gets the value from the MSP_GOP_HORIZON_DAYS profile option and uses it to set the status to **`Delay of 29 Days`** (30 minus today).

Scheduling

Scenarios	Description
1 through 3	Promising was able to schedule the line, so it sets the status to **Scheduled**.

Example 3

Assume the scenarios are same as in example 1 but with these differences:

- You have two global sourcing rules. One transfers supply from Denver and the other one from Seattle.
- The assignment level for Denver is Global.
- The assignment level for Seattle is Item, and the item is the AS54888 Computer.

The run time results are the same as they are for example 2.

Example 4

Assume the scenarios are same as in example 1 but with these differences:

- You have one sourcing rule for Denver and another one for Seattle.
- You have ATP rule x for Denver:
  - Assignment level is Organization
  - Mode is Supply Chain Search
- You have ATP rule y for Seattle:
  - Assignment level is Organization
  - Mode is Infinite Availability
- You have two global sourcing rules. One transfers supply from Denver and the other one from Seattle.
- The assignment level for Denver is Global.
- The assignment level for Seattle is Item, and the item is the AS54888 Computer.
- You have two global rules and you assigned them, so Promising examines the assignment set to identify the rules it will use.

Here's what happens at run time for various scenarios.

Scenario	ATP Rule	Assignment	Warehouse	Catalog Availability	Estimate Order Availability	Scheduling
1	Yes	Yes	Denver	In Stock	On Time	Scheduled
2	Yes	Yes	Seattle	In Stock	On Time	Scheduled
3	Yes	Yes	Empty	In Stock	Delay of 29 Days	Scheduled

Catalog Availability

Scenarios	Description
1	You specify the Warehouse as Denver, so Promising must use Denver. Denver has supply, so Promising sets the status to **`On Time`**.
2 and 3	Catalog Availability examines your ATP rules and looks at supply for any global rule that matches the criteria from the order line. Seattle is the only global sourcing rule that applies whether or not you specify Seattle as the warehouse on the order line. Seattle doesn't have any supply, but Seattle's mode is Infinite Availability. Promising always assumes supply is available in this mode, so it sends the status to **`In Stock`** even though Seattle doesn't have any supply.

Estimate Order Availability

Scenarios	Description
1	You specify the Warehouse as Denver, so Promising must use Denver. Denver has supply, so Promising sets the status to **`On Time`**.
2	You specify the Warehouse as Seattle, so Promising must use Seattle. The mode on the ATP rule for Seattle is Infinite Availability, so Promising assumes supply is always available, and sets the status to **`On Time`**.
3	You didn't specify a Warehouse on the order line, so Promising looks at all the ATP rules that apply. The assignment level for Denver is Global, and the level for Seattle is Item. Item is more specific than Global, so Promising uses Seattle's ATP rule. Seattle doesn't have any supply, so Promising gets the value from the MSP_GOP_HORIZON_DAYS profile option and uses it to set the status to **`Delay of 29 Days`** (30 minus today).

Scheduling

Scenarios	Description
1 through 3	Promising was able to schedule the line, so it sets the status to **`Scheduled`**.

Related Topics

- Collection Job Set
- Collect Planning Data for Order Management

Bills of Resources

Overview

Overview of Using Bills of Resources with Promising

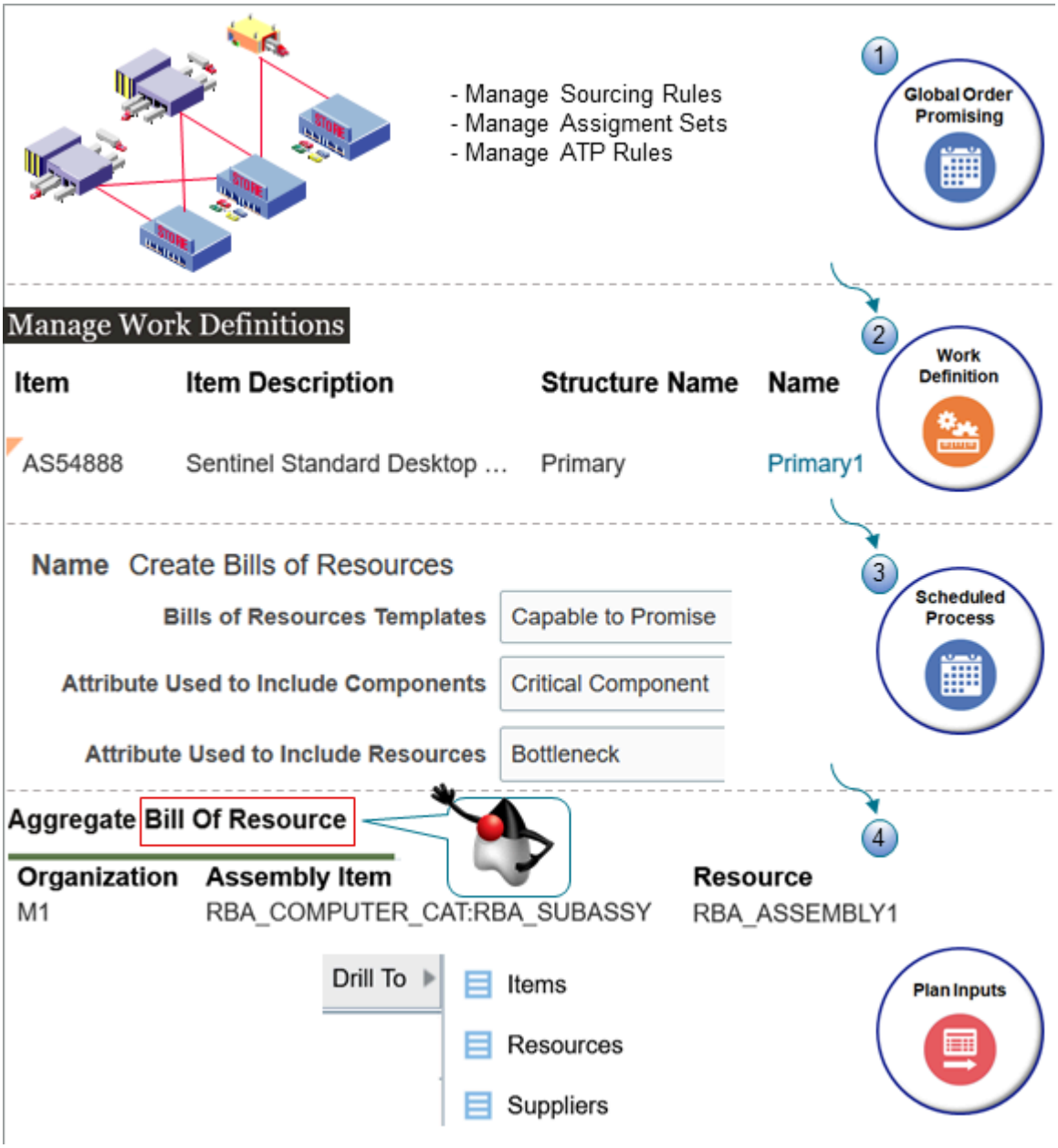
A bill of resources includes the critical manufacturing components, subassemblies, and resources that you need to promise an item for an interorganization transfer, manufacturing work order, or purchase order from a supplier. You can use it to help fulfill a sales order when supply isn't already available in your supply chain.

Use a bill of resources to make your implementation more efficient.

- You can set up a scheduled process that automatically creates a bill of resources from your work definitions in Manufacturing and sourcing rules from Promising.
- You can also manually create one and upload it through file-based data import.
- You specify what items and resources are critical, then the process uses those details to look at only the critical path in your supply chain that you need to deliver the item on time.

Use a bill of resources only with database promising. Don't use it with source promising. For details, see *Database Promising* and *Source Promising*.

Here's a summary of your set up.



Note

1. You use the Global Order Promising work area to model your supply chain, such as creating a sourcing rule that tells Promising which warehouses, factories and suppliers to source supply for your item, transit times to consider for shipping, and so on.
2. You use the Work Definition work area to specify the work that your factory needs to do to create the item, such as the assemblies, subassemblies, and manufacturing components that you need to create the item, what manufacturing components you need for each assembly, what items are critical and which ones aren't, and so on.
3. You use the Scheduled Process work area to run the *Create Bills of Resources* scheduled process. You tell the process to look at only manufacturing components that are critical and resources that are bottlenecks.

4. The scheduled process saves your bill of resources in a simulation set. You use the Aggregate Bill of Resource tab in the Plan Inputs work area to view the bill of resources that the schedule process creates. You can drill into the items, resources, and suppliers that are part of the bill of resources.

   Promising uses an input simulation set that you specify to determine how it will promise your sales order when it consumes critical resources and manufacturing components. Promising stores the results of the schedule process in an output simulation set. You can use these output sets to create different bills of resources and store each bill in a different set. You can then compare sets and select the one that works best for you.

BORs & BOMs

A resource is the labor or machines that you use to do an operation that's necessary to create the item. A bill of resources (BOR) is a list of resources. A bill of materials (BOM) is a list of the physical parts that you need to build the item.

A bill of resources can also include data that you would normally have in a bill of materials, such an item or subassembly. You can use a bill of resources to plan capacity so you can prioritize and schedule work in your factory. Here's an example of some of the attributes on a bill of resources.

Assembly Item	Component Item	Resource	Lead Time Offset in Days	Usage Quantity
Deluxe Big Stove	-	Labor for Stove	3 Days	8
Deluxe Big Stove	Deluxe Big Stove	-	3 Days	2
Oven	-	Labor for Oven	4 Days	8
Oven	Safety Glass	-	4 Days	4

A bill of resources is similar to a bill of materials because they each use a hierarchy where the top level represents the finished item. Here's an example hierarchy of a bill of resources.

```
Deluxe Big Stove
 Burner Top
 Burner Knobs
 Labor for Stove
 Warming Tray
 Temperature Control
 Pull Handle

 Oven
 Bluetooth Control
 Safety Glass
 Labor for Oven
 Oven Assembly Machine
 Oven Type
 Gas
 Electric
 Window
```

Note

- This hierarchy represents a configuration model.
- The Deluxe Big Stove is the top-level item.
- The burner top and the burner knobs are manufacturing components that you use when you assemble the stove. Burner Top is a child of the Big Stove, and Burner Knobs is a grandchild of the Big Stove.
- Labor for Stove is a resource. The labor that you need to assemble the stove.

- Labor for Oven is a resource. The the labor that you need to assemble the oven.
- Oven Assembly Machine is a resource. The machine that the Labor for Oven resource uses to assemble the oven.

For details, see *Automatically Generate Bills of Resources*.

Guidelines for Creating a Bill of Resources

Use these guidelines to help make sure your bill of resources meet your needs.

Set Up Promising

- You must have an ATP rule for your item. The rule must use the Supply Chain Search mode and you must enable the Search Components and Resources option on the rule.
- If you use transit times, then you must specify them.
- You must have a local, Make At sourcing rule for your item and assign it to an assignment set.

Mark Your Items and Resources as Critical

There are different ways to do this:

- Use the Critical Component attribute in the Items area when you create a simulation set in the Plan Inputs work area. Use it to make assemblies, subassemblies, and items critical in your manufacturing organization.
- Enable the Bottleneck option in the Resources area in the simulation set to make a resource critical. As an alternative, enable the Capable to Promise option when you create the resource in Manufacturing.
- Use the Critical Component attribute when you import through REST API or file-based data import. Specify the name of the simulation set and import the item that you need to mark critical.
- Use REST API when you have to make a large number of items critical. If you only have to update a few records, then you can use the Plan Inputs work area to create a simulation set instead of using REST API.

You can't use the Product Information Management work area to specify that your item is critical.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Consider When Your Items Are in Effect

Promising will determine when each item is in effect, and promise the item according to the Effective Start Date and Effective End Date. Make sure you set these dates on your work definitions so they work as you expect them to.

Assume Denver is D1, Los Angeles is M1, and the CM153 is a chip on the AS301 motherboard. You have an agreement with your supplier in Taiwan to start using the new CM154 chip by 6/01/2022.

You plan to use the CM153 from 12/01/2021 to 5/31/2022, and the CM154 from 6/01/2022 to 11/30/2022. The schedule process will examine the work definition to get these dates, and Promising will use them to determine availability.

Item in D1	Manufacturing Component in M1	Component Type	Lead Time Offset	Usage	Effective Start Date	Effective End Date
AS301	CM153	Item	5 Days	2	12/01/2021	5/31/2022
AS301	CM154	Item	6 Days	2	6/01/2022	11/30/2022

Consider Your Calendars

If you specify lead times for the item in the v work area, such as Processing Days, then the bill of resources will consider transit times and processing times. The bill of resources might need to consider more than one calendar to get an accurate lead time, but all of these calendars might not be available. A bill of resources might skip critical points in the supply chain.

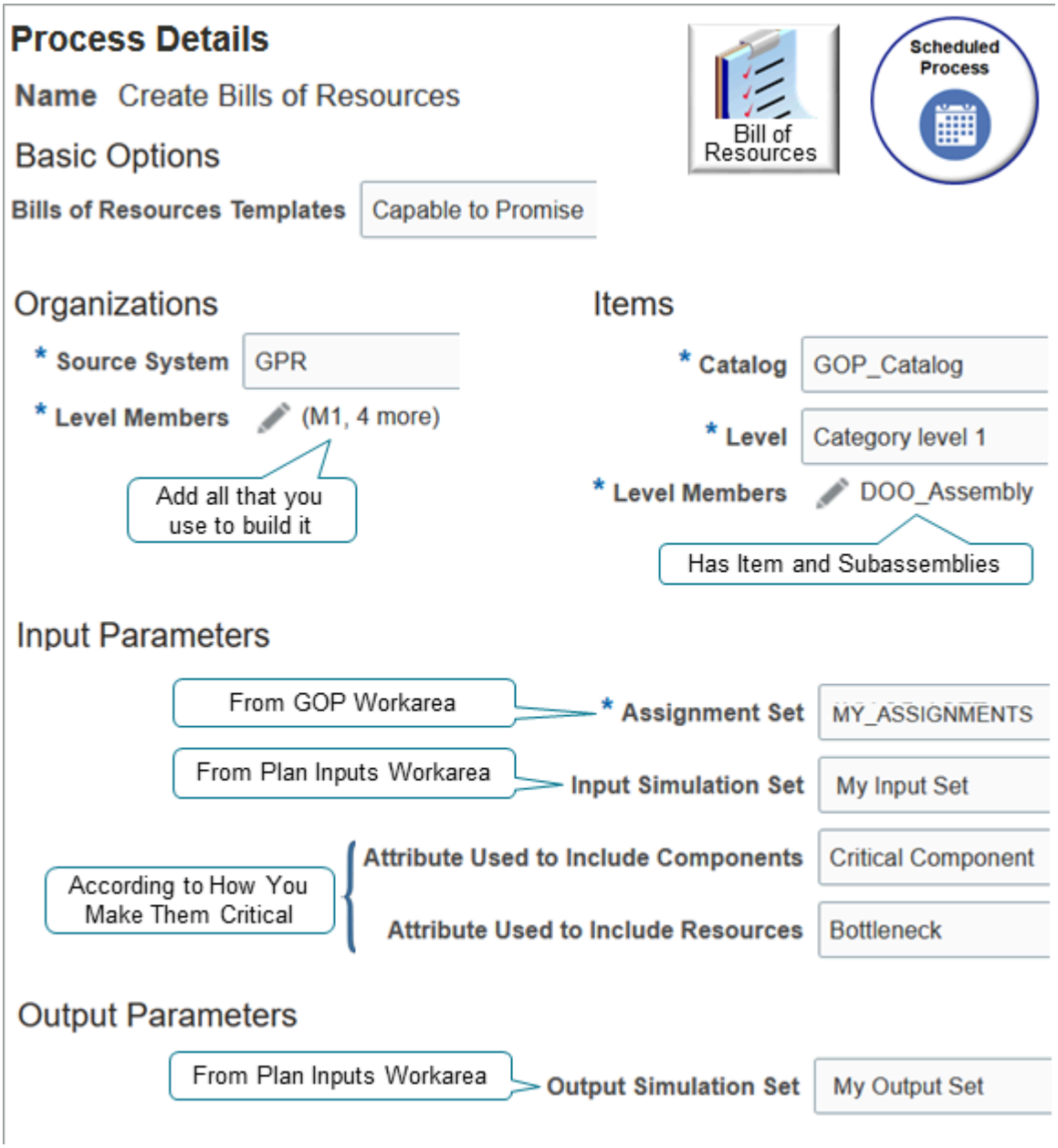
Assume the bill of resources for the AS54888 Laptop Computer at the Denver distribution center includes the Motherboard component from the Los Angeles factory. Los Angeles gets the chips it needs for the motherboard from Taiwan. Each of these locations has its own calendar, and its own shipping, receiving, and transit times. The Lead Time Offset for the Motherboard is 45 days:

- 40 days are for the transit time from Taiwan to Los Angeles.
- 1 day is for the processing time that Los Angeles needs to assemble the motherboard into the laptop.
- 4 days are for the transfer time from Los Angeles to Denver.

Promising will examine the bill of resources but not be aware of the 40, 1 and 4 day split of the lead time. So Promising only considers Denver's calendar when it applies the 45 day lead time.

Run the Scheduled Process

You use the *Create Bills of Resources* scheduled process.



Set the parameters.

Parameter	Value
Bill of Resources Template	You typically set this attribute to Capable to Promise. If you're migrating your work definitions, then set it to Unfiltered Capable to Promise. Don't set it to Item Level for Aggregate Planning. That value is for another application.
Plan	Leave this parameter empty.

Parameter	Value
Source System	Select the system that contains the organizations that contribute to making the item available in your supply chain.
Level Members in the Organizations area	Select all the organizations that contribute to making the item available. Assume you build the item in your M1 Warehouse and M2 Warehouse, and that these warehouses transfer in a subassembly for the item from your M3 Factory, M4 Factory, and S1 Supplier. You would select: • M1 Warehouse • M2 Warehouse • M3 Factory • M4 Factory • S1 Supplier The value that you set in the Source System parameter determines the members you can select.
Catalog	Select the same catalog that you use on your assignment set, such as GOP_Catalog.
Level	Category Level 1 The scheduled process comes predefined to use Category Level 1 for GOP_Catalog. In most situations, you use GOP_Catalog and Category Level 1. For details about catalogs and categories, see *How Catalogs Work Together*.
Level Members in the Items area	Select the categories of items that you want to use in the bill of resources. For example, if you select DOO_Assembly, then the bill of resources will have items that are in the DOO_Assembly category. Make sure the item and all the subassemblies that you use to build the item are in the category that you select. If they aren't, then you need to add them to the category before you can run the scheduled process.
Assignment Set	Select the assignment set that has the sourcing rules that you use to promise. You use the Global Order Promising work area to create the set. The scheduled process will use these rules as input to the bill of resources that it creates.
Input Simulation Set	Select the simulation set that you created in the Plan Inputs work area specifically for this run of this scheduled process. You can use different input simulation sets to create different bills of resources, examine how each one performs, then select the one that works best for you.
Attribute Used to Include Components	If you set the Bill of Resources Template parameter to: • Capable to Promise, then you must set Attribute Used to Include Components to Critical Components. You must use this value so Promising knows how to identify the critical path in your supply chain. • Unfiltered Capable to Promise, then you can't set the Attribute Used to Include Components to Critical Components parameter or the Attribute Used to Include Resources parameter because the scheduled process assumes all items and resources are critical.

Parameter	Value
Attribute Used to Include Resources	You must make each resource a critical resource, If you make them critical by: • Enabling the Bottleneck option on the simulation set, then set this parameter to Bottleneck • Enabling the Capable to Promise option on the resource in Manufacturing, then set this parameter to Capable to Promise Indicator
Bill of Resources Structure	You must use Within Organization.
Planning Product Level	You must use Item.
Output Simulation Set	Select the simulation set that you created in the Plan Inputs work area specifically for this run of this scheduled process. Select a set that's different from the set that you specify in the Input Simulation Set parameter. You can use different output simulation sets to create different bills of resources, examine how each one performs, then select the one that works best for you.

Note

- You must collect your work definitions, item structures, resources, and transit times before you run the Create Bills of Resources scheduled process. If you update any of this data, such as adding a new organization, then you must collect data again. For details, see *Collect Data for Global Order Promising*.
- The scheduled process only looks at primary work definitions.
- You must set up your sourcing rules, ATP rules, and assignment set before you run the scheduled process.
- You must create your simulation sets before you run the scheduled process.
- Sign in with the privileges that you need to run scheduled processes. You can't run the process without them.
- A bill of resources treats a phantom item in the same way that it treats an item that isn't a phantom.

Set the Frequency on the scheduled process so it runs whenever the data that the process looks at changes. You must run it every time you add or change:

- The Item or the item's manufacturing components in the Product Information Management work area
- Work definitions for the items or resources in the Work Definition work area
- Critical markings on the items, manufacturing components, or resources
- Sourcing rules, ATP rules, or assignment sets in the Global Order Promising work area

If you use the Unfiltered Capable to Promise template, then the Create Bills of Resources scheduled process will consider:

- Components in each work definition and the item's structure, and that have the required setups in Promising, such as sourcing rules and available-to-promise rules.
- Each resource that has its Check Capable to Promise option enabled in Oracle Manufacturing.
- Only the work definitions, structures, and resources that you collect.

Privileges

Make sure you have them.

- Schedule Fulfillment Line (MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV)
- Edit Bills of Resources (MSC_EDIT_BILLS_OF_RESOURCES_PRIV)
- View Bills of Resources (MSC_VIEW_BILLS_OF_RESOURCES_PRIV)

Create a Bill of Resources

Use this detailed example to learn how to automatically create a bill of resources.

Assume you need a bill of resources for the AS66311 item. For details about this item, including its hierarchy, see Example of Creating a Bill of Resources.

Summary of the Setup

1. Set up the item and the work definition.
2. Create the simulation sets.
3. Set up promising and planning.
4. Collect data.
5. Create the bill of resources.

Set Up the Item and the Work Definition

1. Go to the Product Information Management work area and set the attributes for items in the M1 organization.

   Search for and open each item, click **Specifications > Planning**, then set the values.

Item	Make or Buy	Processing Lead Time	Postprocessing Lead Time
AS66311	Make	2 Days	AS66311
CM66311	Buy	0 Days	CM66311
CSB113	Buy	0 Days	CSB113
SB66311	Make	3 Days	SB66311
SubComp1	Buy	0 Days	SubComp1
SubComp2	Buy	0 Days	SubComp2

   To set the lead times, set the values in the Lead Times area.
2. Go to the Work Definition work area, click **Tasks > Manage Work Definitions**, then create a work definition in the M1 organization.

Assembly ID	Quantity	Component	Usage Quantity	Effective From Date	Effective To Date
AS66311	1	SB66311	2	1/1/2022	12/31/2022

Assembly ID	Quantity	Component	Usage Quantity	Effective From Date	Effective To Date
SB66311	1	SubComp2	4	1/1/2022	12/31/2022

3. Make your critical items. For details, see Guidelines for Creating a Bill of Resources.

Item	Critical Component
AS66311	Yes
CM66311	No
CSB113	No
SB66311	Yes
SubComp1	No
SubComp2	Yes

Create the Simulation Sets

1. Go to the Plan Inputs work area.
2. In the search results, click **View > Manage Columns**, move the Critical Components attribute to the Visible columns window, then click **OK**.
3. Add the first item to your simulation set.
    - Search for the value.

Attribute	Value
Item	AS66311

    - In the search results, click the **row** that has your item, then click **Actions > Add to Simulation Set**.
    - In the dialog that displays, click the **down arrow**, click **Create Simulation Set**, then set the value.
    -

Attribute	Value
Simulation Set	Items for Vision Pad

    - Click **Save and Close > Save and Close**.
    - In the search results, in the row that has your item, notice the value. If you didn't set this value in the work definition, then set it now.

Attribute	Value
Critical Component	Yes

4. Add the next item.

- Search for the value.

Attribute	Value
Item	CM66311

- In the search results, click the **row** that has your item, then click **Actions > Add to Simulation Set**.
- In the dialog that displays, add the item to the Items for Vision Pad simulation set, then click **Save and Close**.

5. Repeat step 4 for these items.
   - CSB113
   - SB66311
   - SubComp1
   - SubComp2

   Make sure the Critical Component attribute contains Yes only for AS66311, SB66311, and SubComp2.
6. Add a resource to your simulation set.
   - On the Plan Inputs page, click **Open**.
   - In the dialog that displays, search for the value, then click **OK**.

Attribute	Value
Name	Resources

   - In the search results, click the **row** that has you resource, then click **Actions > Add to Simulation Set**.
   - In the dialog that displays, set the value, then click **Save and Close**.

Attribute	Value
Simulation Set	Resources for Vision Pad

7. Repeat step 5 for these resources.
   - AS66311 Assembly Machine
   - Labor for SB66311

   Make these resources critical. Set the value for each resource.

Attribute	Value
Bottleneck	Yes

8. Create an output simulation set.

Attribute	Value
Simulation Set	Output for Vision Pad

Set Up Promising and Planning

1. Go to the Global Order Promising work area.
2. Click **Tasks > Order Promising Options**, then set the value.

Attribute	Value
Simulation Set	Items for Vision Pad

3. Click **Tasks > Manage ATP Rules**, then create a new rule.

Attribute	Value
Name	ATP Rule for Vision Pad

4. Click **ATP Rule Assignment**, then assign the items.
    - AS66311
    - SB66311
    - CSB113
    - SubComp2

    Use the Item and Organization assignment basis, and assign them to the M1 organization.
5. Click **Tasks > Manage Sourcing Rules**, then create a separate sourcing rule for each item.

Item	Sourcing Rule
AS66311	Make At
SB66311	Make At
SubComp2	Buy From

Collect Data

Collect routings and item structures from your work definitions. The *Create Bills of Resources* scheduled process uses this data as input.

- Go to the Plan Inputs work area, click **Tasks > Collect Planning Data**, then collect these entities:
    - Items
    - Item Structures
    - Work Definitions

For details, see *Collect Data for Global Order Promising* and *Collect Planning Data for Your Configuration Model*.

Create the Bill of Resources

1. Sign in with the privileges that you need to run scheduled processes.
2. Go to the Scheduled Processes work area, then run the Create Bills of Resources scheduled process.

Parameter	Value
Bill of Resources Template	Capable to Promise
Source System	GOP
Level Members in the Organizations area	Select all the organizations that contribute to making the item available.
Catalog	Select the same catalog that you use on your assignment set, such as GOP_Catalog. For details about catalogs and categories, see *How Catalogs Work Together*.
Level	Category Level 1
Level Members in the Items area	DOO_Assembly
Assignment Set	Select the set that has the sourcing rules that you use to promise the item.
Input Simulation Set	Items for Vision Pad It's the simulation set that you created earlier in this topic.
Attribute Used to Include Components	Critical Components
Attribute Used to Include Resources	Bottleneck
Output Simulation Set	Output for Vision Pad The scheduled process uses this set as input to Promising. You must select an output simulation set that's different from the input simulation set.

3. Click **Advanced > Schedule**.
4. Enable the Using a Schedule option, then set the values.

Parameter	Value
Frequency	Daily
Days Between Runs	1
End Date	Set a date far into the future, such as several years into the future. This way, you will automatically create your bills of resources without having to constantly redo this process.

The process will run one time each day. It works for most implementations. The frequency you need might be different.

5. Click **Submit**.
6. In the search results, click **Refresh**, and make sure the status says Succeeded.

You can also examine the log file. For example:

```
ESS job ID: 90395
Template ID: 1
Source System: 300100110961352
Assignment Set ID: 100000012019057
Input Simulation Set ID: -23453
Include Components: 0
Include Resources: 1
Output Simulation Set ID: 300100546173131
Initializing BOR Generation
Selected Orgs: GOP:M1 (ID:42638)
Selected Categories: DOO_Assembly (ID:10989)

Processing Org Id:42638-Category Id:10989
Total Assemblies in the Org Id:42638-Cat Id:10989 - 0

BOR Generation Complete
```

Make sure you see `BOR Generation Complete`.

7. Examine the bill of resources.
    - Go to the Plan Inputs work area, then click **Open**.
    - In the dialog that displays, search for Aggregate Bill of Resource, then click **OK**.

    Notice that you're now on the Aggregate Bill Of Resource tab of the Plan Inputs page.
8. In the search area, search for the values.

Attribute	Value
Organization	M1
Component Item	SB66311
Assembly Item	AS66311
Resource	AS66311 Assembly Machine

9. In the search results, verify that you can see the bill of resources. For example:

Assembly Item	Resource	Lead Time Offset in Days	Usage Quantity
SB66311	AS66311 Assembly Machine	3 Days	2 (hours)
SubComp2	AS66311 Assembly Machine	4 Days	4 (hours)

Here's what the scheduled process does:

1. Searches the manufacturing components and resources that you need to make the AS66311 in the M1 organization.
2. Finds that SB66311 and AS66311 Assembly Machine are each in the M1 organization, then creates them as manufacturing components of the assembly item.
3. Looks to see whether the manufacturing components and resources in the SB66311 subassembly are in the work definition.

4. Finds the Labor for SB66311 resource and the SubComp2 manufacturing component in the M1 organization, and sees that they are critical, so it creates a separate bill of resources for the SB66311.

Assume the Requested Date is January 29, a Friday, and that the manufacturing calendar uses a 5 day, Monday through Friday work week. Here's how Promising determines availability.

1. Searches for AS66311 on the Requested Date, January 29.
2. Searches for SB66311 on the Requested Date minus 3 days, which is January 26, a Tuesday.
3. If the SB66311 isn't available, then it searches for SubComp2 on Requested Date minus 7 days. 7 days is the AS66311 lead time of 3 days plus the SB66311 lead time of 4 days. This is January 20, a Wednesday.
4. If the SubComp2 manufacturing component isn't available, then it searches for the Labor for SB66311 resource on the Requested Date minus 7. This is also January 20, a Wednesday.
5. Searches for AS66311 Assembly Machine on the Requested Date minus 3 days, which is January 26, a Tuesday.

Promising uses this sequence to determine when the manufacturing component or resource must be available to meet demand for the requested item according to the promised date:

- If the item isn't available, then the SB66311 manufacturing component and the AS66311 Assembly Machine resource in the bill of resources must be available 3 days before the promise date, which is January 26.
- If SB66311 isn't available, then its manufacturing components and resources must be available 4 more days before the promised date, which is 7 days earlier than the Requested Date, January 20.
- It continues this sequence until it finishes planning the item.

Consider Your Lead Times

Consider how your lead times affect promising.

The *Create Bills of Resources* scheduled process populates the Lead Time Offset attribute for each item.

If you set the sourcing rule for your item to Make At, then the Lead Time Offset will include the time it takes to process and post process the item. If you specify that the item is critical, and if the item resides in more than one level below the manufactured item, then your lead time offset will account for the lead times of the intermediate items, even if they aren't critical.

Assume your lead times will include Taiwan, Los Angeles, and Denver.

1. Taiwan transfers the critical CM153 chip to Los Angeles.
2. Los Angeles uses the CM153 that it gets from Taiwan to assemble the noncritical AS301 motherboard.
3. Los Angeles assembles the AS301 motherboard into the AS54888 computer, which is the final assembled item.

The lead time will include:

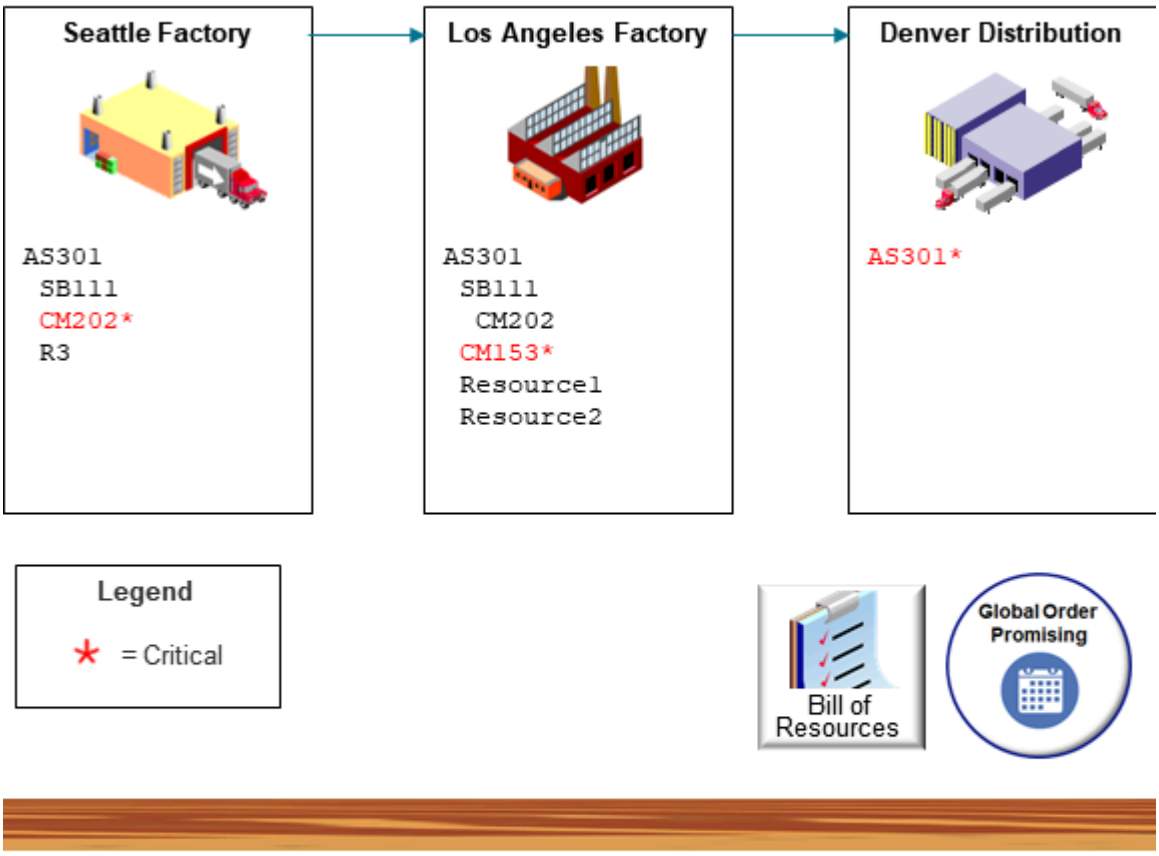
- Processing lead time and postprocessing lead time that Taiwan needs to make the CM153 chip, plus:
- Transfer lead time to get the CM153 chip from Taiwan to Los Angeles according to the default shipping method that you set up between Taiwan and Los Angeles, plus:
- Processing and postprocessing lead time that Los Angeles needs to install the CM153 chip onto the AS301 motherboard, plus:
- Processing and postprocessing lead time that Los Angeles needs to install the AS301 motherboard into the AS54888 computer, plus:
- Transfer lead time to get the AS54888 from Los Angeles to Denver.

In summary, the lead time is different depending on what you're doing.

What You're Doing	How Long it Takes
Assemble an item in the same organization where you make it	1. The parent item's processing lead time 2. Plus the parent item's postprocessing lead time
Assemble the item and its subassemblies at the same organization	1. The processing lead time 2. Plus the postprocessing lead time
Transfer an item from an upstream organization to a downstream organization	1. The destination's postprocessing lead time plus its transit lead time 2. Plus the parent item's processing lead time plus its postprocessing lead time.
Transfer the assembly and subassemblies from an upstream organization to a downstream organization	1. The destination's postprocessing lead time plus its transit lead time 2. Plus the item's processing lead time plus its postprocessing lead time.

Detailed Lead Time Example

Consider this flow.



Note

- The assembled AS301 item is critical in the Denver Distribution Center.
- Subassembly SB111 in the Los Angeles Factory isn't critical.
- The CM202 item in the Seattle Factory is critical, and it is two levels below the AS301.
- The CM153 item in Los Angeles is critical, and it is one level below the AS301.
- You have done all the required Promising setups, such as sourcing rules, assignment sets, ATP rules, and so on.

Here are your transit times between facilities.

From	To	Transit Time
Los Angeles	Denver	2
Seattle	Los Angeles	3

Here are your lead times.

Item	Organization	Critical	Processing Lead Time	Postprocessing Lead Time
AS301	Denver	Yes	2 days	4 days
AS301	Los Angeles	No	2 days	3 days
SB111	Los Angeles	No	1 day	1 day
SB111	Seattle	No	1 day	1 day

Here are the lead times that the scheduled process creates in your bill of resources.

Assembly	Assembly Organization	Component	Component Organization	Lead Time
AS301	Denver	CM202	Seattle	17 days
AS301	Denver	CM153	Los Angeles	11 days

Here's the calculation for the CM202's 17 day lead time.

Lead Time Calculation for the CM202	Running Total
1 day processing plus 1 day postprocessing for the SB111 in Seattle equals 2 days	2
3 days transit time to get from Seattle to Los Angeles	2 + 3 = 5
1 day postprocessing for the SB111 in Los Angeles	5 + 1 = 6
2 days processing plus 3 days postprocessing for the AS301 in Los Angeles equals 5 more days	6 + 5 = 11
2 day transit time to get from Los Angeles to Denver	11 + 2 = 13
4 days postprocessing for the AS301 in Denver	13 + 4 = 17

Here's the calculation for the CM153's 11 day lead time.

Lead Time Calculation for the CM153	Running Total
2 days processing plus 3 days postprocessing for the AS301	5
2 days transit time to get from Los Angeles to Denver	5 + 2 = 7
4 days postprocessing for the AS301	7 + 4 = 11

Use Work Definitions with Your Bill of Resources

You can use a discrete work definition or a process work definition with your bill of resources.

Use Discrete Work Definitions with Your Bill of Resources

If you currently use capable-to-promise in your Global Order Promising set ups, then you must migrate your discrete work definitions, and then set the Bills of Resources Templates parameter to Unfiltered Capable to Promise when you run the scheduled process. Here's what the process does:

- Migrates the primary work definition and item structure into a bill of resources.
- Considers all items and resources in every organization and at every level that you specify in the work definition as critical.
- Considers processing lead times and post processing lead times.
- Includes all items and resources across all organizations your bill of resources.

You don't need to create an input simulation set. Instead, you can use the same set that you use as the default assignment set in the Global Order Promising work area. If you need a different set of sourcing rules, then you can specify a different input assignment.

Use Process Work Definitions with Your Bill of Resources

You can use a process work definition with a bill of resources to promise an item in a flow that does or doesn't use back-to-back fulfillment.

Promising looks at whether the manufacturing component or resource is critical when it calculates component requirements, resource requirements, and the lead time that you need to assemble the item.

Here's what you need to do.

1. Create and collect the process work definition. For background, see *Overview of Work Definitions*.
2. Create a Make At sourcing rule that sources the assembly item and the subassemblies that you need to build the primary item that the process work definition builds.
3. Assign your sourcing rule in an assignment set. For more, see *Assignments and Promising Rules*.
4. Run the *Create Bills of Resources* scheduled process.

Parameters	Value
Bills of Resources Templates	Select one of: o Capable to Promise o Unfiltered Capable to Promise

Parameters	Value
Assignment Set	Select the set that you used to assign your sourcing rule.
Input Simulation Set	If you use the Capable to Promise template, then you must select an input simulation set. Select the set that has the manufacturing components and resources that you marked as critical for the item.

Promise Sales Orders With or Without Back-to-Back Fulfillment

Here's how Promising will promise the item.

1. Promising promises demand from the fulfillment line that has the primary item. Promising will use the bill of resources to determine the manufacturing components, resources, lead times, and other details that you need to assemble the item. Promising will calculate the availability of and consume the supply for the required manufacturing components and resources.
2. If no supply exists for the primary item, then Promising uses the assignment that has your Make At sourcing rule to recommend that you create new supply through manufacturing. Promising consumes resources and manufacturing components according to the bill of resources.
3. If you're using a back-to-back flow:
    - Promising sends only the first-level supply recommendation for the primary item to Supply Chain Orchestration.
    - Supply Chain Orchestration creates a new work order for the primary item.
4. Collections successfully finishes, then Promising considers the supply for the primary item and for any coproducts or byproducts.
5. Promising calculates the resources and manufacturing components that the work order needs to assemble the primary item.
6. Promising considers reservations on the fulfillment line for the primary item's work order, treats the reservation as hard pegged supply, and pegs it to demand from the primary item's sales order.
7. If you modify values on the sales order, such as the quantity or date, then Promising uses your modified values when it promises the primary item.

Coproducts and Byproducts

Promising will use the coproduct supply or the byproduct supply that the work order creates for a process work definition. Promising considers the quantity for these supplies as available-to-promise and will use that quantity to promise demand for the coproduct or byproduct.

Note that a coproduct or a byproduct are each an example of a nonprimary item.

- The bill of resources doesn't include a nonprimary item in the process work definition.
- If the item in the process work definition is a nonprimary item, then Promising won't promise through a Make At sourcing rule in a capable-to-promise flow.

What You Can't Do

- You can't use an item that isn't critical. Promising only considers items and resources that are critical in your bill of resources, and the lead time that you need to assemble the primary item in the process work definition. The bill of resources doesn't include nonprimary items in the process work definition, such as a coproduct or byproduct.

- Promising doesn't promise or recommend supply for a nonprimary item in a back-to-back flow, such as a coproduct or byproduct in the process work definition. Promising doesn't consider requirements or availability for a coproduct or byproduct when it promises a primary item in the bill of resources. Promising considers only the requirements that you need to assemble the primary item when it creates a recommendation for the work order. The process work order automatically creates the coproduct or byproduct during the runtime transaction.
- Promising won't create new capable-to-promise supply for a nonprimary item in the process work definition, such as a coproduct or byproduct.

What If I Don't Use a Bill of Resources

We recommend that you use a bill of resources, but if you can't for some reason, here's what you need to do in a flow that does or doesn't use back-to-back fulfillment.

1. Create a Make At sourcing rule that sources the assembly item and the subassemblies that you need to build the primary item that the process work definition builds.
2. Assign your sourcing rule in an assignment set.

Promising uses the same logic that it uses when you do use a bill of resources except for these differences:

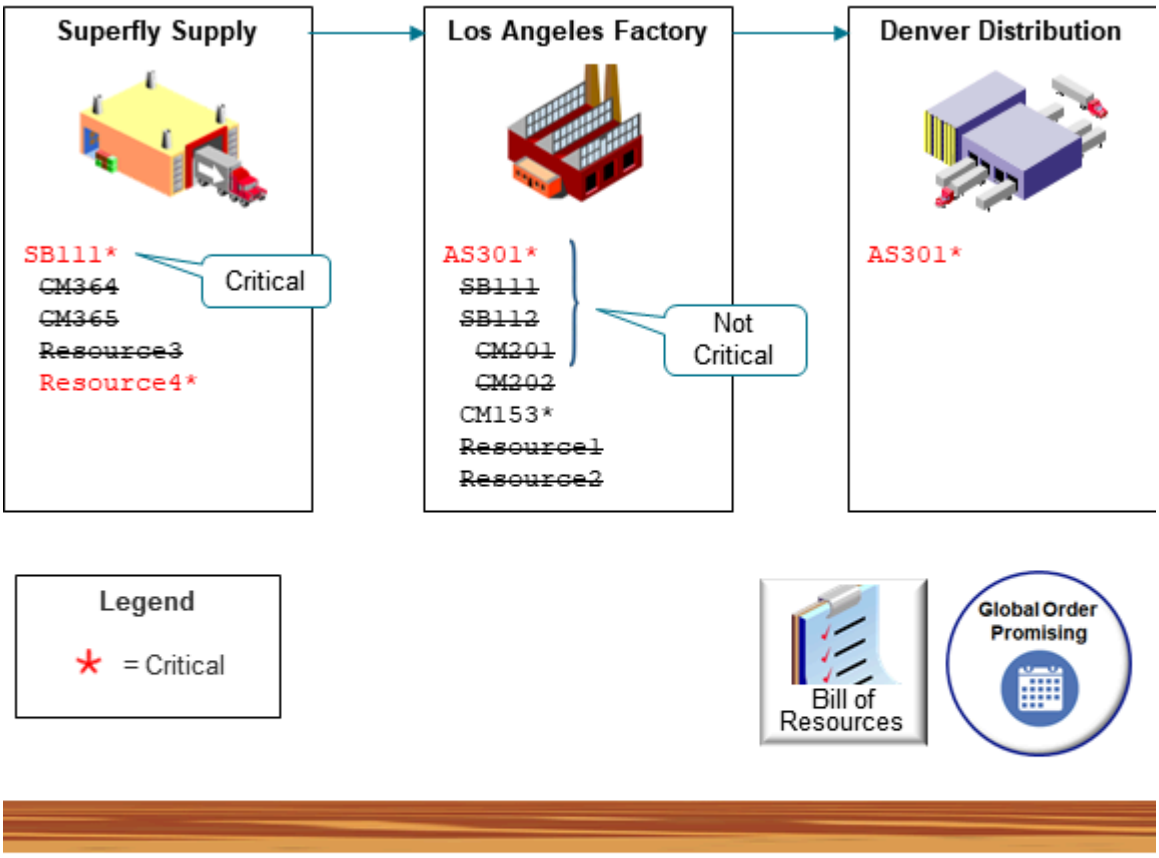
- Promising uses your fixed lead time and variable lead time to promise demand from the fulfillment line for the primary item.
- If you're in a back-to-back flow, then Promising doesn't consume resources and manufacturing components according to the bill of resources, but instead just sends a supply recommendation to Supply Chain Orchestration.

Create Bills of Resources When You Build in More Than One Organization

Your bill of resources can include an item that you build in more than one organization.

Assume you stock and ship the SB111 item from the Denver distribution center but you build it at the Los Angeles factory, and you have several critical Items and resources in Los Angeles. You can create a bill of resources for the SB111 in Denver and it will include manufacturing components and resources from Los Angeles. It won't consider any sourcing rules that transfer supply because the *Create Bills of Resources* scheduled process already used these transfer rules to create the bill of resources.

If you mark the SB111 and its manufacturing components as critical on the work definition, and if the supply chain is on the primary path, then you can create a bill of resources even if you don't assign the SB111 to a Make At sourcing rule, and even if you don't enable the Search Components and Resources options on the ATP rule. The bill of resources takes precedence over the Search Components and Resources attribute. Promising will search for availability according to the manufacturing components in the bill of resources.



Note

- Your supplier creates the SB111 subassembly.
- You transfer the SB111 to your Los Angeles factory, then use it to create the AS301 assembled item in Los Angeles.
- You transfer the AS301 from Los Angeles to the Denver distribution center.
- You ship it from Denver to your customer.
- The asterisk means critical.
- Strikethrough means you still need the item or resource, but the scheduled process doesn't consider it because its already part of the critical item. For example, in Los Angeles, the AS301 is critical. SB111, SB112, CM201, and CM202 are a part of the AS301, but they aren't critical. This is a good example where using a bill of resources is

more efficient and saves you a lot of time. It isn't necessary to consider the items that aren't critical when you create a bill of resources.

Here are your sourcing rules.

Organization	Item	Local Sourcing Rule
Denver	AS301	Transfer from Los Angeles
Los Angeles	AS301	Make at Los Angeles
Los Angeles	SB111	Transfer from Superfly Supply
Superfly Supply	SB111	Make at Superfly Supply

Here are your lead times.

Critical Assembly	Organization	Lead Time
AS301	Los Angeles	4 days
SB111	Superfly Supply	2 days

Here are your transit times.

Source	Destination	Transit Time
Superfly Supply	Los Angeles	1 day
Los Angeles	Denver	1 day

Assume you set up all your sourcing rules, assignment sets, transit times, and so on. The scheduled process will create this bill of resources:

Assembly	Assembled Quantity	Organization	Component	Usage Quantity	Lead Time	Resource	Resource Quantity
SB111	1	Superfly Supply	-	-	2 days	R4	0.30 hours
AS301	1	Los Angeles	CM153	1 unit	4 days	-	-
-	1	Superfly Supply	SB111	1 unit	4 to make plus 1 to transfer	-	-

The lead time for the AS301 is:

- 2 days to make the SB111.
- 1 day to transfer it from Superfly Supply to Los Angeles.
- 4 days to make the CM153.

Import Your Bill of Resources Through REST API or File-Based Data Import

You can create more than one bill of resources, in one organization, for an item that you build.

Assume you need more than one bill of resources for an item that has only a few manufacturing components and resources, and they're all critical. Here's the item hierarchy.

```
M1
 AS66311
 CM66311
 CSB113
 Labor for AS66311
 AS66311 Assembly Machine
 SB66311
 SubComp1
 SubComp2
 Labor for SB66311
```

where

- M1 is an abbreviation for Seattle Manufacturing
- AS66311 is the Vision Pad DX Mobile Computer

Assume that the AS66311 and SB66311 are each critical, and that the lead time you typically need to do processing plus postprocessing for them are:

- 3 days for AS66311
- 4 days for SB66311

The import will use:

- Only the attributes that it needs to automatically create the bill of resources, such as Capable to Promise Indicator and Bottleneck. The scheduled process will read these attributes from the settings that you make in the simulation set and in the Plan Inputs work area.
- The details from the rules that you specify on the Manage ATP Rules task. The scheduled process will consider the rule that has the highest priority when it creates the bill of resources.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Components and Materials

Use Different Components, Materials, and Resources Depending on Start and End Dates

Align the start dates and end dates for each manufacturing component and resource in your bill of resources with the dates that your fulfillment flow uses.

You can use more than one instance of the same component or resource in the same operation.

The way that you manufacture an item might evolve over time depending on the season, varying material properties, new regulations, design improvements, expected downtime, or other planned changes. You can manage these

production changes in a single bill of resources. Promising will apply the lead time for each operation, then select the components, materials, and resources that are available and that are currently in effect according to their start dates and end dates.

Use this feature to help manage more than one instance of the same component or resource during different time intervals.

Try It

1. Make sure you have these privileges.
    - MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV
    - MSC_EDIT_BILLS_OF_RESOURCES_PRIV
    - MSC_VIEW_BILLS_OF_RESOURCES_PRIV
2. Go to the Setup and Maintenance work area, then select the Supply Chain Planning offering.
3. Specify the start date and end date for each component and each resource in your work definition.
4. Collect data. See *Collect Data for Global Order Promising*.
5. Run the Create Bills of Resources scheduled process. This scheduled process will add the dates that you specified for each component from your work definitions into the bill of resources. Promising can then use this data to determine what components and resources are available according to their start dates and end dates, and will schedule sales orders so these components and resources can meet the order's demand dates. See *Create a Bill of Resources*.

Guidelines

- You can assign more than one instance of the same component to the same operation or to different operations. Use different date ranges for each of these assignments.
- You can set up more than one instance of each resource. Specify a different usage and different dates for each instance.
- The scheduled process will process each primary resource, each alternative resource, and each substitute component. The scheduled process sets the effective dates for each alternate or substitute to the primary's dates.
- If the scheduled process encounters more than one work definition for a component or resource that has the same effective dates, the same usage, and the same basis, then it will combine them into a single work definition.
- If an operation has more than one instance of the same component, then the scheduled process will use the Find Number attribute in the item's structure to uniquely identify each instance. For details about the find number, see *View Structure Details—Classic*.
- If the work definition's end date already happened, then the scheduled process won't include that work definition in your bill of resources.
- If the end date for a component or resource already happened, then the scheduled process won't include that component or resource in your bill of resources.

Introduction to the Examples

Assume your work definition has this hierarchy:

```
M1
 AS301
 CM201
 CM202
 R3
 SB111
```

```
CM364
CM365
R4
```

where

- M1 identifies the manufacturing facility.
- The AS301 is an assembly that you will build in the M1 manufacturing facility.
- CM201 and CM202 are each components that you need to complete the AS301 assembly.
- R3 is the resource that you use to assemble the AS301.
- SB111 is a subassembly in the AS301.
- CM364 and CM365 are each components that you need to complete the SB111 subassembly.
- R4 is a resource that you need to assemble the SB111.

Here's the nomenclature that this example uses:

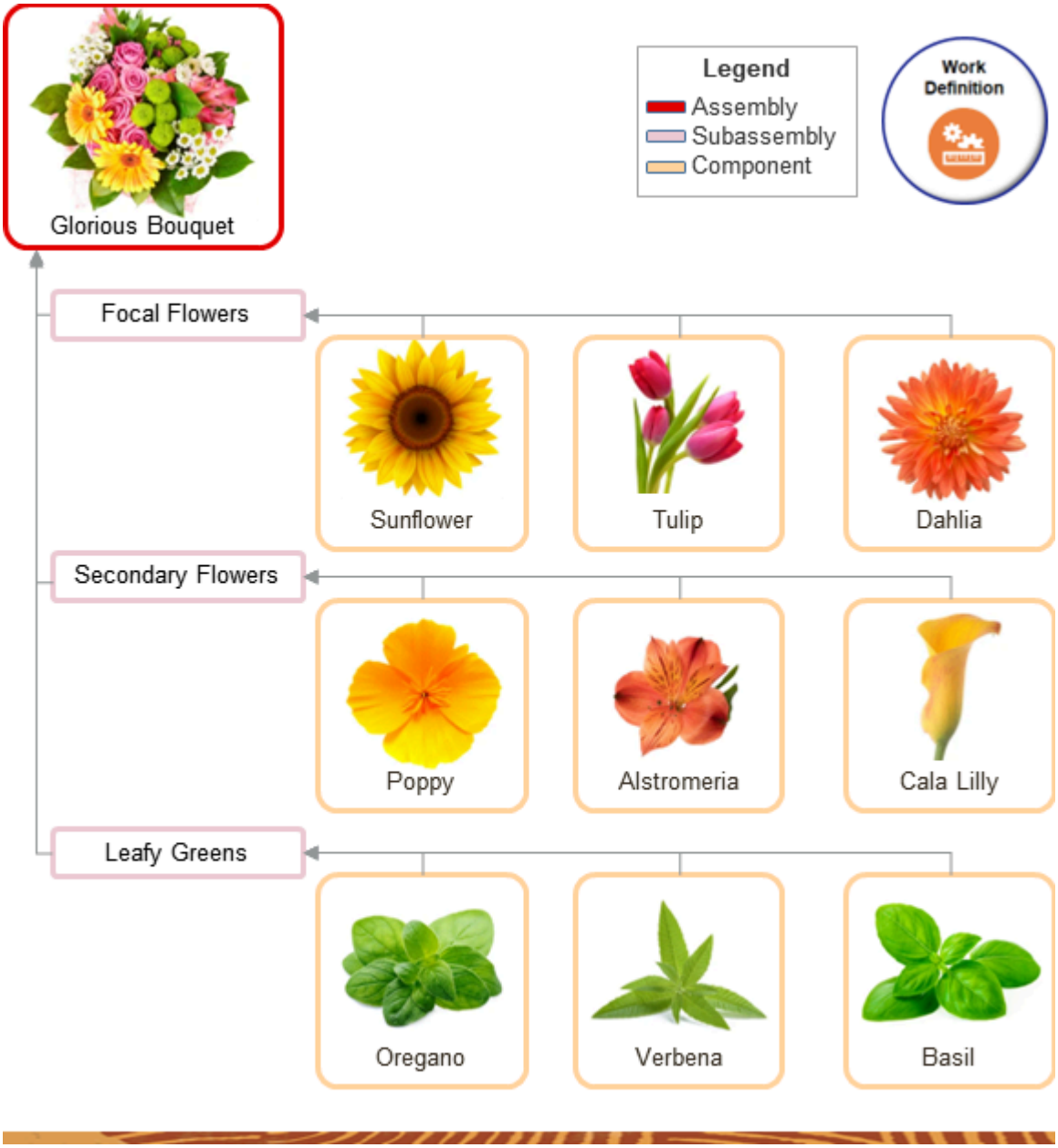
- AS means assembly.
- SB means subassembly.
- CM means component.
- R means resource.

Same Component, Different Levels, Dates, and Basis

In some business scenarios, you might need to have a lot of flexibility in your work definition.

Assume you sell an item named Glorious Bouquet, which is a bouquet of flowers. Your customers have very discerning tastes about what flowers they want to see in various parts of the bouquet, at different times of the year. Some types of flowers are always available and your customers always want them, regardless of season, so you consider them to be fixed. However, other flowers come and go with the season, so you view them as variable.

Assume your work definition has this hierarchy:



where

- Glorious Bouquet is your top level assembly.
- Focal Flowers, Secondary Flowers, and Leafy Greens are subassemblies.
- Sunflower, Tulip, Dahlia, California Poppy, Alstroemeria, Cala Lilly, Oregano, Verbena, and Basil are components.

For brevity, we'll focus on Secondary Flowers and California Poppy. Here's how we identify them:

Item	Description
Glorious Bouquet	AS301. Top level assembly.

Item	Description
Secondary Flowers	SA1. A subassembly that contains components.
California Poppy	C1. A component.

Assume your work definition contains more than one instance of the same critical component at different levels in the work definition, and the component's basis is different depending on the effective date. The scheduled process will link each instance to the parent item. If the component's basis is:

- **Fixed**. The scheduled process will roll up the dates for each instance to the parent.
- **Variable**. If the dates between the subassembly and the component match, or if the component's dates are within the subassembly's dates, then the bill of resources will include that component. If not, then it won't include that component. This logic applies when you have a subassembly that isn't critical and it contains a component that is critical.

You need to prepare for the upcoming Summer and Fall bouquet selling season, which runs July 21 through December 1. You need to promise differently depending on some seasonal variation in supply, so you create this work definition:

Row	Description	Assembly	Subassembly or Component	Effective Date	Quantity	Basis	Find Number
1	Glorious Bouquet	AS301	SA2	July 21	1	Fixed	1
2	Secondary Flowers	-	SA2	July 21 through September 30	5	Variable	2
3	Secondary Flowers	-	**SA2**	**July 21 through November 1**	**6**	**Variable**	-
4	Secondary Flowers	-	SA2	November 2	10	Variable	-
5	California Poppy	SA2	C1	July 21 through December 1	1	Fixed	1
6	California Poppy	-	C1	August 1 through October 1	2	Fixed	2
7	California Poppy	-	**C1**	**July 21 through November 1**	**2**	Variable	-

Note that if there's no end date, then the Effective Date column in the table includes only the start date.

You create more than one instance of the Secondary Flowers subassembly in the Glorious Bouquet assembly to account for seasonal variations:

- **Row 1**. Contains Glorious Bouquet, your top level assembly. The dates run for the full duration of the selling season, July 21 through September 30.
- **Row 2**. Contains Secondary Flowers with July 21 through September 30 and a quantity of 5 to cover the early part of the selling season.
- **Row 3**. Contains Secondary Flowers with July 21 through November 1 and a quantity of 6 to pick up an increase in the supply that's typically available later in the season.

- **Row 4**. Vast batches of secondary flowers become available during the Fall harvest at the end of October, you know you'll have a surplus inventory of secondary flowers, so you create this instance of Secondary Flowers with a much larger quantity of 10, and you put it into effect on November 2.
- **Row 5**. The California Poppy is your trademark secondary flower, you always include at least one of them, so you add it as fixed, with a quantity of 1, July 21 through December 1. This covers most of the selling season.
- **Row 6**. You add the poppy with a quantity of 2, August 1 through October 1.
- **Row 7**. More poppies are available between August and November than they are July through December, so you increase the number of poppies that you include in your bouquet August through November.

Note

- The work definition specifies the Find Number attribute for Secondary Flowers and California Poppy.
- Assume all components and resources are critical except for SA2, Secondary Flowers.
- We're using "rows" here only to help describe the example. There's no such row in your actual work definition.

If the California Poppy has a variable basis, and if that poppy's date range:

- Matches or falls within Secondary Flowers' date range. The scheduled process will roll up that poppy's date range.
- Doesn't match or fall within Secondary Flowers' date range. The bill of resources won't include that poppy.

Assume you run the Create Bills of Resources scheduled process on July 20. The scheduled process will create this bill of resources:

Assembly	Component	Effective Date	Quantity	Basis	Find Number
Glorious Bouquet, AS301	California Poppy, C1	July 30 through December 1	1	Fixed	1
-	California Poppy, C1	August 1 through October 1	2	Fixed	2
-	California Poppy, C1	July 21 through November 1	12	Variable	-

The bill of resources will include the C1 from these rows of the work definition:

- Row 5 because its basis is fixed. The bill of resources will include all fixed components. It will also include the exact quantity for each fixed component from the work definition. It doesn't adjust the quantity because the quantity is also fixed, not variable.
- Row 6 because its basis is fixed.
- Row 7 because the date range for the C1 poppy in row 7 is July 21 through November 1, and that date range matches the range for the SA2 Secondary Flowers that's in row 3.

Here's the math that the scheduled process applies to get a quantity of 12 poppies:

- Row 3 in the work definition has a quantity of 6, which means the Glorious Bouquet needs 6 Secondary Flowers subassemblies.
- Row 7 for the C1 California Poppy has a quantity of 2, so each Secondary Flowers subassembly on row 3 needs a quantity of 2 C1 California Poppy components.

- 2 California Poppy components multiplied by 6 Secondary Flowers subassemblies equals 12 poppies. That quantity also happens to be enough poppies to line each side of the yellow brick road.

Same Components, Different Uses

Assume you have the same components but you apply them for different uses, and all components and resources are critical.

You run the Create Bills of Resources scheduled process on January 1, and it creates this bill of resources:

Assembly	Component or Resource	Operation Sequence	Quantity	Effective Date
AS301	SB111	10	1	Jan 1
-	CM201	10	1	Jan 1
-	**CM202**	**20**	**2**	**Jan 1 through May 31**
-	**CM202**	**30**	**4**	**Jun 1**
-	R3	10	0.5	Jan 1
SB111	CM364	10	1	Jan 1
-	CM365	10	1	Jan 1
-	R4	10	0.5	Jan 1

Note

- If there's no end date, then the Effective Date column in the table includes only the start date.
- The operation sequence specifies the sequence that we use to build the assembly. For example, we do operation 10 first, and then operation 20, and then operation 30.

For brevity, let's see how promising works only for the CM202. The bill of resources will use the CM202 for different operations, in different quantities, depending on the CM202' date ranges. If demand for the CM202 happens:

- January 1 through May 31, Promising will consume a quantity of 2.
- On or after June 1, Promising will consume a quantity of 4.

Same Components or Resources, Overlapping Dates

Now let's assume your work definition has a slightly different hierarchy:

```
M1
 AS301
 CM201
 CM202
 R3
 R4
 SB111
 CM201
 CM365
 R4
```

Assume you have these values.

Assembly	Component or Resource	Operation Sequence	Quantity	Basis	Effective Date
AS301	CM202	10	1	Variable	January 1
-	CM201	10	1	Variable	January 1
-	R4	10	0.5	Variable	January 1
-	SB111	20	1	Variable	January 1
-	R3	20	0.5	Variable	January 1
SB111	CM201	10	1	Variable	February 1 through May 31
-	CM365	10	1	Variable	February 1 through May 31
-	R4	10	0.5	Variable	February 1 through May 31

Assume:

- All components and resources are critical except for SB111 and R3.
- The AS301 and SB111 both use the same CM201 component and the same R4 resource.
- The CM201 goes into effect on January 1 with no end date, and the R4's date range is February 1 through May 31, so the dates for CM201 and R4 overlap each other.

Assume you run the Create Bills of Resources scheduled process on January 1, and it creates this bill of resources:

Assembly	Component or Resource	Quantity	Effective Date
AS301	CM202	1	January 1
-	CM201	1	January 1
-	CM201	1	February 1 through May 31
-	R4	0.5	January 1
-	CM365	1	February 1 through May 31
-	R4	0.5	February 1 through May 31

The scheduled process will roll up child SB111's components, resources, and dates to the parent AS301 in the bill of resources.

If demand for the CM202 component happens:

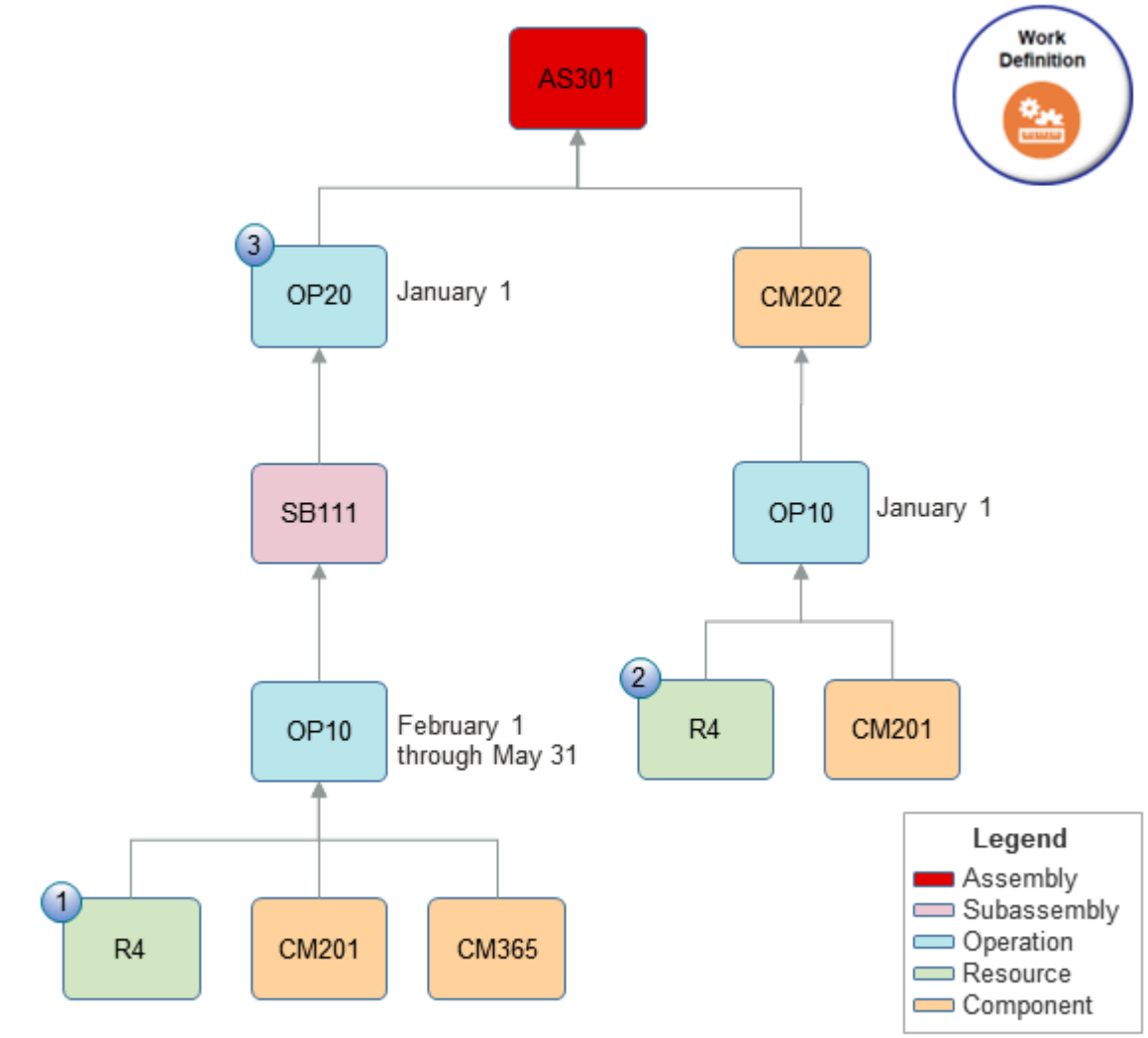
- February 1 through May 31, Promising will consume a quantity of 2
- January 1 through January 31, or on or after June 1, Promising will consume a quantity of 1

If demand for the R4 resource happens:

- February 1 through May 31, Promising will consume a quantity of 1 hour
- January 1 through January 31, or on or after June 1, Promising will consume a quantity of 0.5 hours

Note that you set the item's basis to Fixed or Variable.

This example will you give you a work definition with this hierarchy after you finish collecting data:



Note

1. The R4 resource will do the OP10 operation to build the SB111 subassembly. It will use the CM201 and CM365 components. This OP10 can start as early as February 1 but must end no later than May 31.

2. The R4 resource will do the OP10 operation and will use the CM201 component to assemble the CM202 component. This OP10 can start anytime on or after January 1.
3. The R4 resource will do the OP20 operation to build the final AS301 assembly. It will use the SB111 subassembly and the CM202 component. This OP20 can start anytime on or after January 1.

Vary Type and Rate of Consumption for Components, Materials, and Resources

Meet fixed and variable demand for each component and resource in your bill of resources even when the same operation has more than one instance of the same component or resource in your fulfillment flow.

Some resources need a fixed setup time and also a cycle time for each operation so the resource an create the order line's quantity. A manufacturing operation might also consume more of the material or component's quantity to provide test samples, allow for scrap during calibration or setup, or to support other, one time activities.

To meet the demand from this fixed and variable consumption, you can specify more than one consumption rate for resource capacity, components, and materials in your bill of resources.

Use this feature when:

- You need to have more than one instance of the same component or resource but you put them into effect on different dates and with different rates of consumption.
- You have critical components or resources in a subassembly that isn't critical, and the dates and rates of consumption for those components or resources are different from the subassembly's dates and consumption.

Try It

- Do the same set up that you do in the *Use Different Components, Materials, and Resources Depending on Start and End Dates* topic, except now you can use more than one instance of each component or resource, where each instance can have different effective dates, quantities, basis type, and so on.

  Global Order Promising will use the bill of resources to determine the quantity that it needs to meet demand for each component and resource.
- Specify the Basis Type attribute for each component or resource in the work definition.

Set Basis Type To	And The Required Usage Will
Fixed	Remain constant, regardless of the order line's quantity.
Variable	Vary, depending on the order line's quantity.

Guidelines

Consider this behavior when you use this feature:

- If your bill of resources has more than one instance of a component or resource, and if those instances have different date ranges and basis types, then Promising will consider the basis type when it determines the quantities that it needs to fulfill the component or resource according to that component or resource's start and end dates.
- If Promising must split the order line to meet the requested date, then it will consume the fixed quantity for each split.

- If the Create Bills of Resources scheduled process encounters more than one work definition for a component or resource, and if that component or resource has the same effective dates, quantity, and basis type, then the scheduled process will combine them into a single bill of resources.
- If a parent subassembly has a child subassembly that isn't critical, and if the child contains a critical component, then the scheduled process will link the child to the parent, then set the quantity in the bill of materials differently depending on the component's basis type:

Basis Type	Description
Fixed	Roll up the child's quantity to the parent.
Variable	Multiply the component's quantity with the child subassembly's quantity, then roll up the result to the parent.

For background, see *Overview of Using Bills of Resources with Promising*.

Set the Find Number Attribute

You can use the Find Number attribute on the item's structure to uniquely distinguish between more than one instance of a component. For background, see *View Structure Details—Classic*.

Introduction to the Examples

Assume your item has this hierarchy:

```
M1
 AS301
 CM201
 CM202
 R3
 SB111
 CM364
 CM365
 R4
```

Same Component, Different Quantity or Basis

Assume you have this work definition:

Row	Assembly	Component or Resource	Operation Sequence	Quantity	Basis	Effective Dates
1	AS301	SB111	10	1	Variable	January 1
2	-	CM201	10	1	Variable	January 1
3	-	**CM202**	**20**	**2**	**Fixed**	**May 1 through August 31**
4	-	**CM202**	**30**	**1**	**Variable**	**January 1**
5	-	**CM202**	**40**	**4**	**Fixed**	**January 1**
6	-	R3	10	0.5	Variable	January 1

Row	Assembly	Component or Resource	Operation Sequence	Quantity	Basis	Effective Dates
7	SB111	CM364	10	1	Variable	January 1
8	-	CM365	10	1	Variable	January 1
9	-	R4	10	0.5	Variable	January 1

Note

- Assume all components and resources are critical.
- There's more than one instance of the CM202 component, and each instance has different operations, quantities, and bases.
- For brevity, if there's no end date, then the Effective Dates column in the table includes only the start date.
- We're using “rows” here only to help describe the example. There's no such row in your actual work definition or bill of resources.

Assume you run the Create Bills of Resources scheduled process on January 1. It will create this bill of resources:

Row	Assembly	Component or Resource	Quantity	Basis	Effective Dates
1	AS301	SB111	1	Variable	January 1
2	-	CM201	1	Variable	January 1
3	-	**CM202**	**2**	**Fixed**	**May 1 through August 31**
4	-	**CM202**	**1**	**Variable**	**January 1**
5	-	**CM202**	**4**	**Fixed**	**January 1**
6	-	R3	0.5	Variable	January 1
7	SB111	CM364	1	Variable	January 1
8	-	CM365	1	Variable	January 1
9	-	R4	0.5	Variable	January 1

For brevity, let's focus on how Promising promises the CM202. If CM202's demand date happens on May 1 through August 31, then Promising will consume a total quantity of 7:

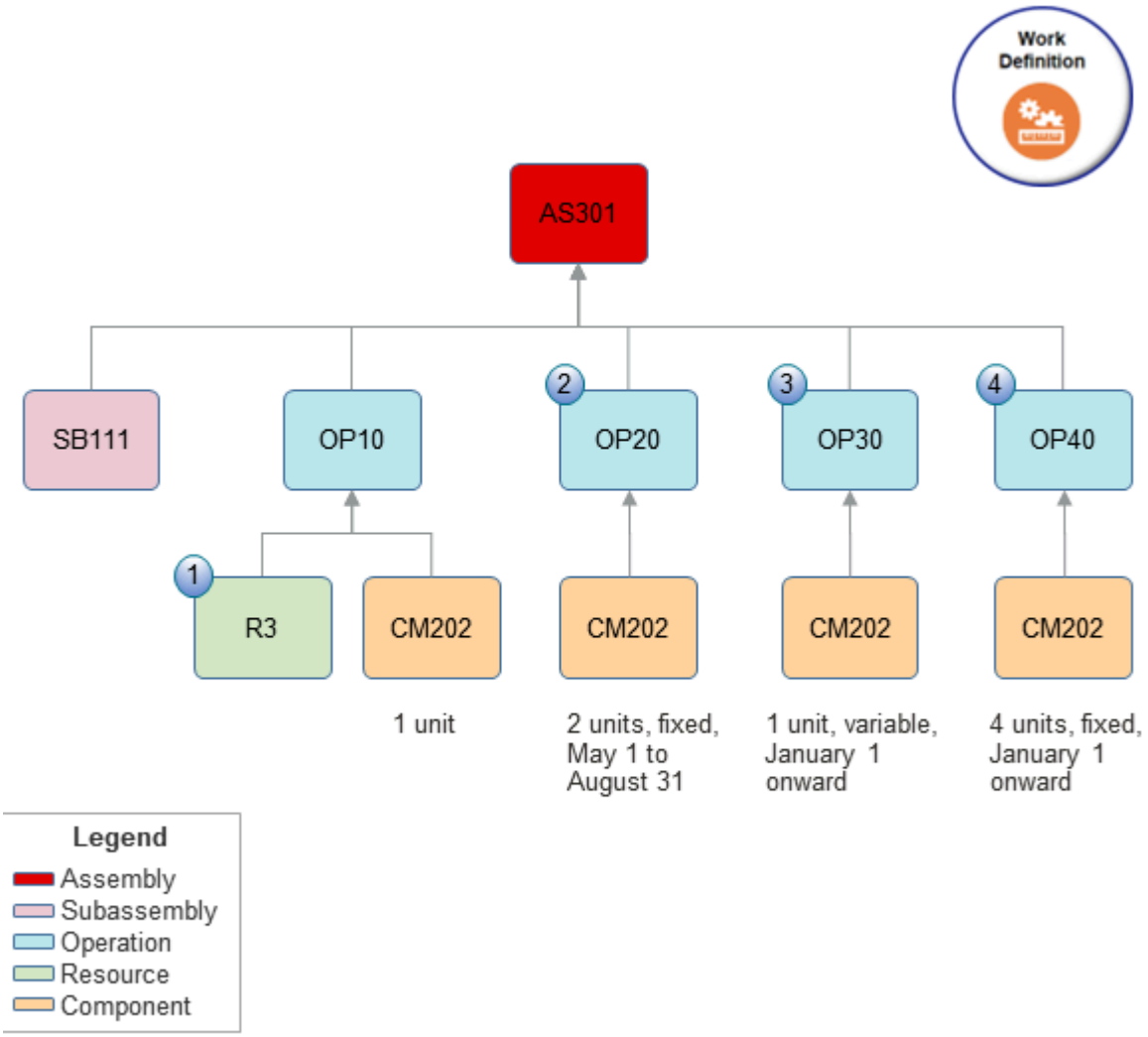
- Quantity of 2 from row 3, plus
- Quantity of 1 from row 4, plus
- Quantity of 4 from row 5

Assume CM202's demand date happens January 1 through April 30, or after August 31, which is outside of row 3's effective dates. Promising will ignore row 3 and will consume a total quantity of 5:

- Quantity of 1 from row 4, plus

- Quantity of 4 from row 5

This example will you give you a work definition with this hierarchy after you finish collecting data:



Note

1. The R3 resource will do the OP10 operation to build a quantity of 1 SB111 subassembly, and a quantity of 1 CM202 component.
2. If demand happens from May 1 to August 31, then the OP20 operation will add a quantity of 2 CM202 components to the AS301 assembly.
3. If demand happens on or after January 1, then the OP30 operation will add a quantity of 1 CM202 component to the AS301 assembly.
4. If demand happens on or after January 1, then the OP40 operation will add a quantity of 4 CM202 components to the AS301 assembly.

This sequence builds the AS301 assembly. Promising will use a similar sequence to specify promising for the SB111.

Note that an operation doesn't have to have a resource that does a physical action. A resource could be a tool or machine, the operation could be a curing or cool down process, and so on. For example, your final assembly is a ceramic pot, the resource is a wood-fired kiln, and the operation is the 24 hour cool down process for the kiln.

Same Resource, Different Quantity or Basis

Assume you create this work definition.

Row	Assembly	Component or Resource	Operation Sequence	Quantity	Basis	Effective Dates
1	AS301	SB111	10	1	Variable	January 1
2	-	CM201	10	1	Variable	January 1
3	-	CM202	30	1	Variable	January 1
4	-	R3	10	0.5	Variable	January 1
5	SB111	CM364	10	1	Variable	January 1
6	-	CM365	10	1	Variable	January 1
7	-	**R4**	10	0.5	Fixed	January 1
8	-	R4	10	.75	Variable	January 1

The work definition has more than one instance of the R4 resource. Each instance has the same operation but different quantities and bases.

Assume you run the Create Bills of Resources scheduled process on January 1. It will create this bill of resources:

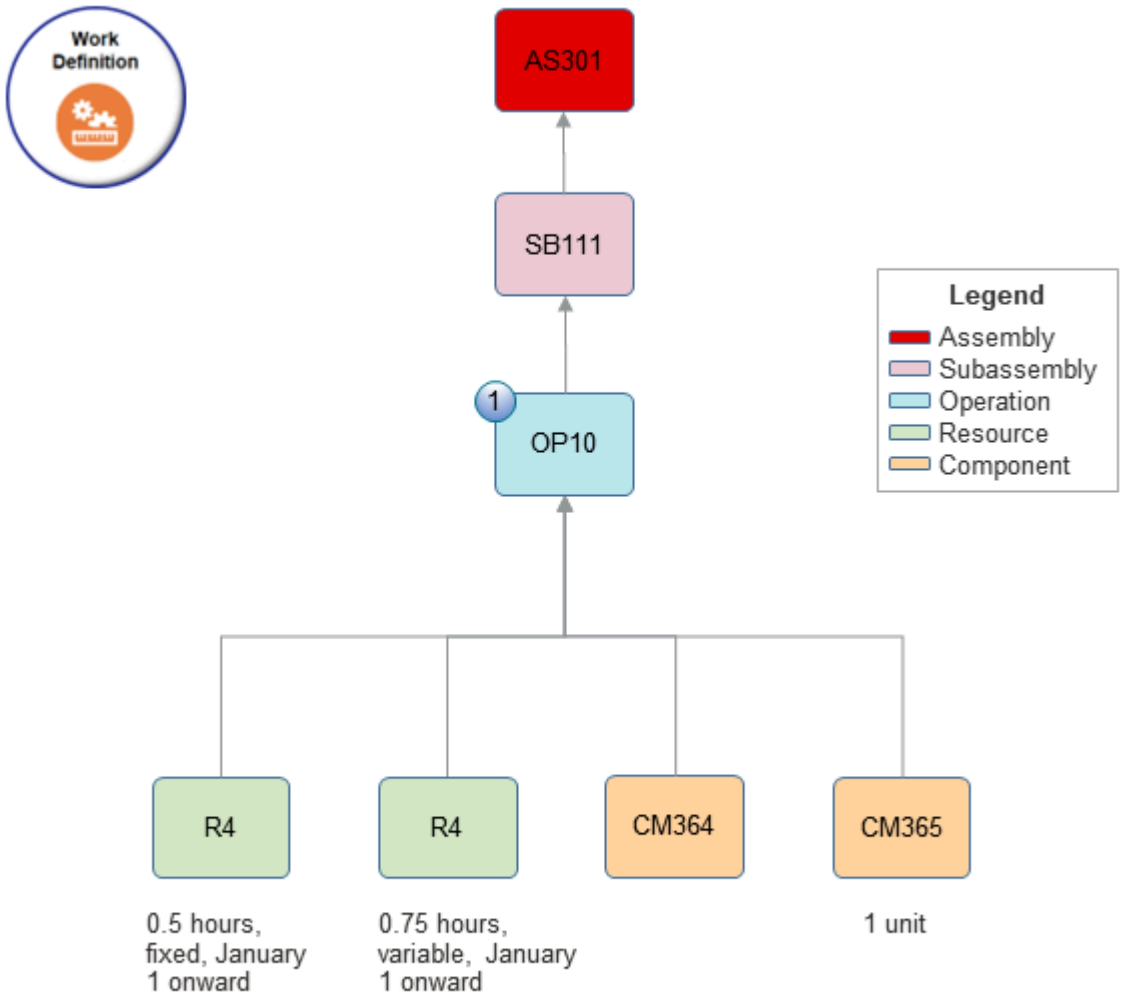
Row	Assembly	Component or Resource	Quantity	Basis	Effective Dates
1	AS301	SB111	1	Variable	January 1
2	-	CM201	1	Variable	January 1
3	-	CM202	1	Variable	January 1
4	-	R3	0.5	Variable	January 1
5	SB111	CM364	1	Variable	January 1
6	-	CM365	1	Variable	January 1
7	-	**R4**	**0.5**	**Fixed**	**January 1**
8	-	**R4**	**0.75**	**Variable**	**January 1**

For brevity, let's focus on how Promising promises the R4. Both instances of the R4 go into effect on January 1 with no end date, so Promising will always consume a total quantity of 1.25:

- Quantity of 0.5 from row 7, plus

- Quantity of 0.75 from row 8

This example will you give you a work definition with this hierarchy after you finish collecting data:

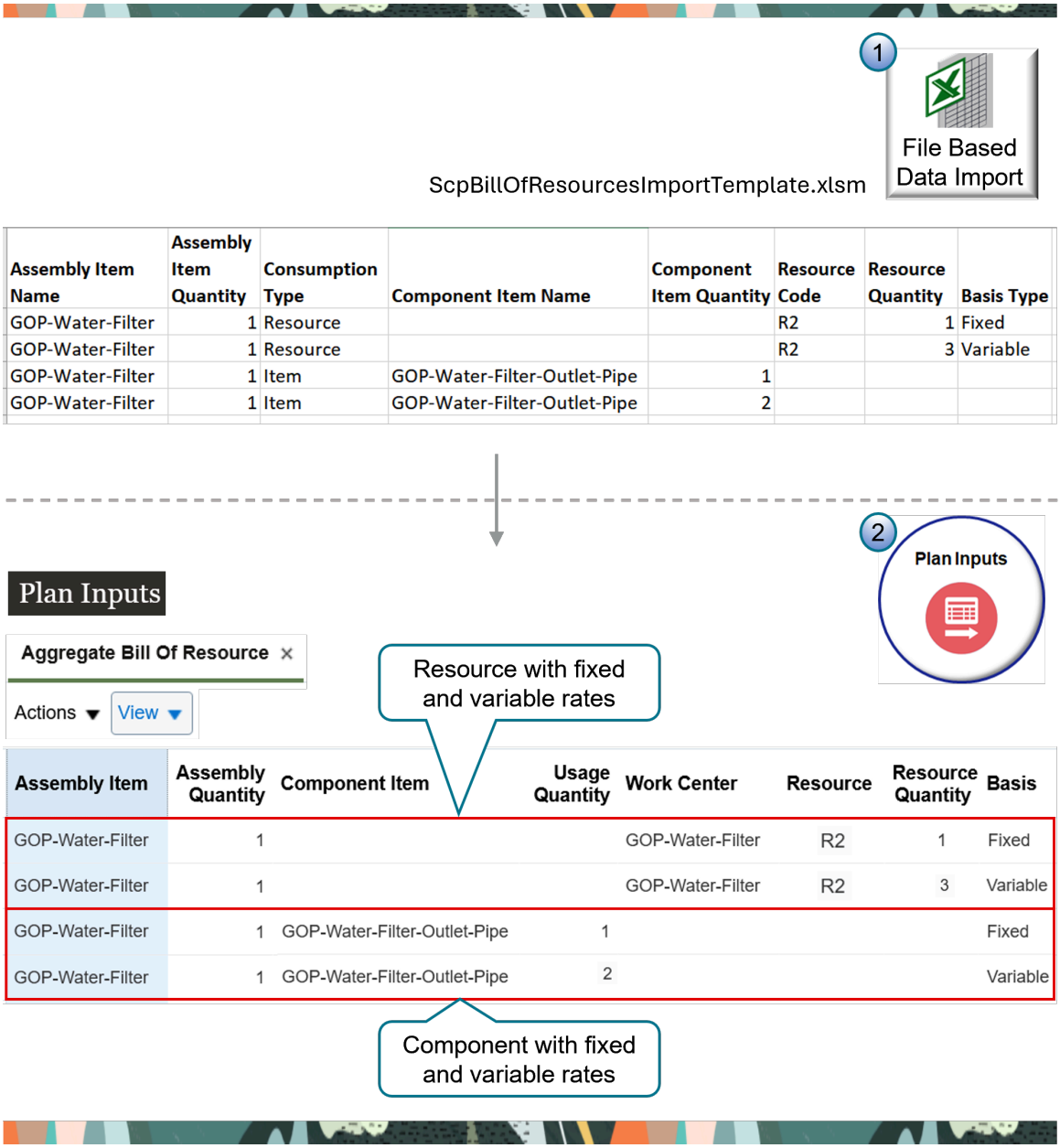


Note

1.
   - R4 will take 0.5 hours to complete the OP10 operation.
   - R4 will take 0.75 hours to complete the OP10 operation.

Import Your Data

You can collect values from a work definition in Oracle Manufacturing and use them to specify the types and rates of consumption for each manufacturing operation. You can also import them through file-based data import (FBDI) instead.



Assembly Item Name	Assembly Item Quantity	Consumption Type	Component Item Name	Component Item Quantity	Resource Code	Resource Quantity	Basis Type
GOP-Water-Filter	1	Resource			R2	1	Fixed
GOP-Water-Filter	1	Resource			R2	3	Variable
GOP-Water-Filter	1	Item	GOP-Water-Filter-Outlet-Pipe	1			
GOP-Water-Filter	1	Item	GOP-Water-Filter-Outlet-Pipe	2			

Assembly Item	Assembly Quantity	Component Item	Usage Quantity	Work Center	Resource	Resource Quantity	Basis
GOP-Water-Filter	1			GOP-Water-Filter	R2	1	Fixed
GOP-Water-Filter	1			GOP-Water-Filter	R2	3	Variable
GOP-Water-Filter	1	GOP-Water-Filter-Outlet-Pipe	1				Fixed
GOP-Water-Filter	1	GOP-Water-Filter-Outlet-Pipe	2				Variable

Note

1. Use the Supply Chain Planning Bill of Resources FBDI (ScpBillOfResourcesImportTemplate.xlsm) template to import your bill of resources.
    - Use the Basis Type column to indicate whether the resource's quantity or the component's quantity is fixed or variable. You can include more than one row that has the same component or resource, and you can set the basis differently on each row.
    - You can use FBDI to import your data regardless of whether or not you use Oracle Manufacturing.
2. Use the Plan Inputs work area to view your uploaded data.

Try It

Assume you need to import the GOP-Water-Filter assembly item.

1. Use FBDI to upload your data.
2. Go to the Plan Inputs work area.
3. Click **Open**, select Aggregate Bill of Resources, then click **OK**.
4. Search for the value.

Attribute	Value
Assembly Item	GOP-Water-Filter

5. Verify that the search results includes your imported data.

Overlapping Dates

You can specify the dates when each component and resource is in effect, but you can’t overlap these dates in FBDI.

Assume you have a work definition that includes assembly AS301, subassembly SB111, component CM201, and resource R4, and you use CM201 and R4 in AS301 and in SB111.

CM201 and R4 go into effect for the:

- AS301 on January 1 with no end date
- SB111 on February 1 through May 31

You can't import this data because CM201 and R4 are in effect for the AS301 at the same time that they're in effect for the SB111.

Access Requirements

Make sure you have these privileges:

- Perform Order Orchestration and Planning Data Load (MSP_PERFORM_ORDER_ORCHESTRATION_AND_PLANNING_DATA_LOAD_PRIV)
- Monitor Order Promising Work Area (MSC_MONITOR_ORDER_PROMISING_WORK_AREA_PRIV)
- View Bills of Resources (MSC_VIEW_BILLS_OF_RESOURCES_PRIV)
- Schedule Fulfillment Line (MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV)

Consume Resources Only After Components Are Available

Set up Promising so it starts consuming resources only after your factory has all the components it needs to begin manufacturing. The component's availability will determine the manufacturing start date, resulting in a more realistic promise date.

A manufacturing resource might need to have materials and components on hand in inventory before it starts operations. To prevent unplanned idle time, you can choose to delay the resource's consumption date until after the components and materials are available.The component's availability will determine the manufacturing start date, resulting in a more realistic promise date.

Use this feature when you need promising results that consider your components' availability first, and then your resources' availability, instead of considering component and resource availability at the same time.

Lead Time

The component that has the longest lead time in your bill of resources helps to determine manufacturing's start date. Here's how Promising uses lead time with this feature:

- Uses the postprocessing lead time to help calculate the lead time offset.
- Makes sure the start date for each resource happens on or after the component's start date.
- Makes sure the lead time for each resource results in a manufacturing end date that meets the sales order's due date.

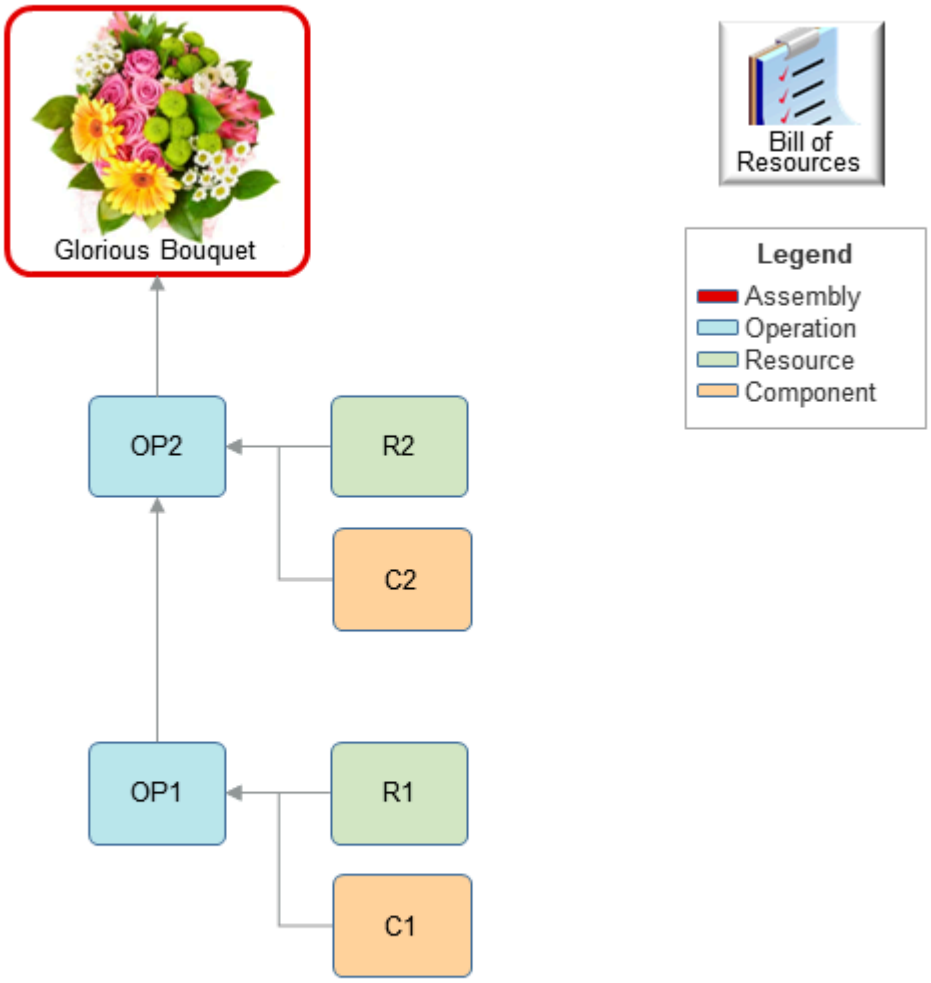
Creating the bill of resources doesn't include the processing lead time for a critical resource's parent assembly when it calculates the lead time offset. This helps to make sure each resource's end date aligns with manufacturing's end date.

For background details, see:

- *Set Postprocessing Lead Times*
- *Set Up Your Items in Product Information Management*
- *Overview of Using Bills of Resources with Promising*

Examples

Assume your bill of resources has this hierarchy:



Assume:

- The Create Bills of Resources scheduled process uses this hierarchy. Promising considers only the resources and components. It doesn't consider the operations.
- Today's date is April 1.
- The lead time for C1 is 10 days, and it's also 10 days for C2.
- R1 consumes 2 hours to create 1 unit.
- R2 consumes 3 hours to create 1 unit.

Specify Lead Time for Components, No Lead Time for Resources, and Don't Constrain Availability

Assume:

- April 15 is the requested date for sales order SO1.
- Postprocessing lead time is 0.
- Resource lead times are 0 in the bill of resources.

Promising will use data from the bill of resources and SO1's quantity to calculate the component quantities and resource quantities that manufacturing needs to build the Glorious Bouquet. Assume you need a quantity of 10 bouquets.

Promising uses the bill of resources to determine the quantities that manufacturing will need to build 10 bouquets for sales order SO1 according to the lead times:

Components and Resources	Lead Time Days in Bill of Resources	Quantity Manufacturing Will Need
C1	10	10
C2	12	20
R1	0	50 hours
R2	0	20 hours

Consider this availability:

	April														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C1	0	9	2	2	8	5	7	10	8	5	6	8	13	5	7
C2	10	5	5	4	4	4	4	5	6	8	14	6	7	10	5
R1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
R2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

where

- Green is component consumption.
- Blue is resource consumption.
- Available quantities are cumulative, counting in reverse. For example, a quantity of 20 is available on April 3 for C2 (5 on April 3, plus 5 on April 2, plus 10 on April 1).

Here's how Promising determines those consumption dates:

1. Sets the requested date to April 15.
2. Sets manufacturing's end date to April 15, which is the due date minus the bouquet's postprocessing lead time.
3. Determines manufacturing's start date. Promising starts at April 15 and works backward to find the earliest manufacturing start date that it can use and still meet the lead time requirements for the components and resources:
    - Identifies the component or resource that has the largest lead time. C2 has the largest lead time, which is 12 days.

- Sets manufacturing's start date to April 3 (April 15 minus C2's 12 day lead time).
- Makes sure components are available on April 3. Manufacturing needs a quantity of 10 for C1 and a quantity of 20 for C2. In this example, a cumulative quantity of 11 is available for C1 on April 3, and a quantity of 20 is available for C2, so we're good to go.
- Makes sure resources are available from April 3 through April 15. Manufacturing needs 50 hours of R1, and 20 hours of R2. Resource lead times are zero, and the end date to consume resources is April 15. R1 has 130 hours available on April 15, and R2 has 39 hours available, so there's enough cumulative resource hours available on April 15 to meet demand.
- If Promising found that manufacturing didn't have the quantity it needed for each component and resource, then it would use the next day as manufacturing's end date, and try again.

4. Finalizes the result:

Attribute	Day
Manufacturing Start Date	April 3
Manufacturing End Date	April 15
C1 and C2 Start Date	April 3
R1 Start Date	April 11
R2 Start Date	April 9
R1 End Date and R2 End Date	April 15
Scheduled Ship Date	April 15 (on time)

Specify Lead Time for Components and Resources, and Don't Constrain Availability

Assume:

- April 15 is the requested date for sales order SO2.
- Postprocessing lead time is 0.

Promising will use data from the bill of resources and SO2's quantity to calculate the component quantities and resource quantities that manufacturing will need to build the bouquet. Assume you need a quantity of 10 bouquets.

Here are the quantities that Promising calculates manufacturing will need to build 10 bouquets for sales order SO2 according to the lead times:

Components and Resources	Lead Time Days in Bill of Resources	Quantity Manufacturing Will Need
C1	10	10
C2	12	20
R1	13	50 hours
R2	9	20 hours

Consider this availability:

	April																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C1	0	9	2	2	8	5	7	10	8	5	6	8	13	5	7	5	7	5	4	7
C2	10	5	5	4	4	4	4	5	6	8	14	6	7	10	5	10	5	10	6	5
R1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
R2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Here's how Promising determines those consumption dates:

1. Sets the requested date to April 15.
2. Sets manufacturing's end date to April 15, which is the due date minus the bouquet's postprocessing lead time.
3. Determines manufacturing's start date. Promising starts at April 15 and works backward to find the earliest manufacturing start date that it can use to meet the lead time requirements for the components and resources:
    - Identifies the component or resource that has the largest lead time. R1 has the largest lead time, which is 13 days.
    - Sets manufacturing's start date to April 2 (April 15 minus R1's 13 day lead time).
    - Makes sure components and resources are available on April 2. Manufacturing needs a quantity of 10 for C1. However, C1 only has a cumulative quantity of 9 on April 2, so Promising moves on to the next day and tries again.
    - In the next iteration, Promising sets manufacturing's end date to April 18 and R1's end date to April 5 (April 18 minus R1's 13 day lead time). R1 has enough capacity to meet the required 50 hours of demand, and Promising calculates R1's start date as April 1. However, C1 has 0 quantity and C2 only has a quantity of 10 on April 1, so Promising discards the results and moves on to the next day.
    - Promising iterates through this process until it finds a date that meets manufacturing's demand for components and resources. For each iteration, it applies the lead times and checks availability for each component and resource to see whether it can meet demand for manufacturing's end date and start date.
4. After a few more iterations, Promising:
    - Sets manufacturing's end date to April 20.
    - Sets R1's end date to April 7 (April 20 minus R1's 13 day lead time), and R1's start date to April 3.
    - Sets R2's end date to April 11 (April 20 minus R2's 9 day lead time).
    - Confirms that C1 and C2 both have enough quantity on April 3 to start production, so it finalizes the result:

Attribute	Day
Manufacturing Start Date	April 3
Manufacturing End Date	April 20
C1 Start Date and C2 Start Date	April 3
R1 Start Date	April 3
R1 End Date	April 7
R2 Start Date	April 5
R2 End Date	April 11

Attribute	Day
Scheduled Ship Date	April 20 (5 day delay)

Specify Lead Time for Components and Resources, and Constrain Availability

Assume:

- April 10 is the requested date for sales order SO3.
- Postprocessing lead time is 0.

Here are the quantities that Promising calculates manufacturing will need to build 10 bouquets for sales order SO3 according to the lead times:

Components and Resources	Lead Time Days in Bill of Resources	Quantity Manufacturing Will Need
C1	5	10
C2	2	20
R1	5	50 hours
R2	3	20 hours

Consider this availability:

	April																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C1	0	5	0	0	0	1	2	4	8	5	6	8	13	5	7	6	8	13	5	7
C2	2	5	2	4	1	1	1	0	6	8	4	6	7	10	5	4	6	7	10	5
R1	0	0	0	5	2	1	2	10	15	7	8	10	5	2	10	8	5	13	10	10
R2	1	2	4	5	2	1	3	3	6	5	8	1	0	3	3	8	1	0	3	3

1. Sets the requested date to April 10.
2. Sets manufacturing's end date to April 10, which is the due date minus the bouquet's postprocessing lead time.
3. Determines manufacturing's start date. Promising starts at April 10 and works backward to find the earliest manufacturing start date that it can use to meet the lead time requirements for the components and resources:
    - Identifies the component or resource that has the largest lead time. R1 has the largest lead time, which is 5 days.
    - Sets manufacturing's start date to April 5 (April 10 minus R1's 5 day lead time).
    - Makes sure components and resources are available on April 5. Manufacturing needs 50 hours of R1, and 20 hours of R2. However, R1 only has a cumulative quantity of 7 hours on April 5, and R2 only has a cumulative quantity of 14 hours on April 5, so Promising moves on to the next day and tries again.
    - Iterates through this process. Eventually, Promising sets manufacturing's end date to April 16, which results in manufacturing's start date of April 11, and an R1 start date of April 4. Resources are available on April 4 but components aren't. Manufacturing needs a quantity of 10 for C1 and 20 for C2. However, C1 only has a cumulative quantity of 5 on April 4, and C2 only has a quantity of 12, so Promising continues to iterate the process.

- After a few more iterations, Promising sets manufacturing's end date to April 20, which results in manufacturing's start date of April 15, and an R1 start date of April 9. C2's start date on April 9 has enough quantity to meet demand. All the components and resources that manufacturing needs are available, this iteration meets the lead time requirements, so Promising finalizes the result:

Attribute	Day
Manufacturing Start Date	April 9
Manufacturing End Date	April 20
C1 and C2 Start Date	April 9
R1 Start Date	April 9
R1 End Date	April 15
R2 Start Date	April 11
R2 End Date	April 17
Scheduled Ship Date	April 20 (10 day delay)

Guidelines

- To use this feature, go to the Order Promising work area, click Tasks > Order Promising Options, then add a check mark to the Consider Resources After Components Are Available option.
- Manufacturing can begin building the assembly item on or after the date that Promising sees availability for all components.
- Promising applies the same logic with alternate resources or substitute components. Promising will use the primary, alternate, or substitute to make sure it promises the sales order on time or with minimum delay.
- If you need slightly faster performance and less accurate promising results, such as when you use a bill of resources with critical components and resources that skip levels of the hierarchy, then don't use this feature. You can continue to promise according to the default behavior.

Bill of Resources

- Promising marks each subassembly, component, and resource that the factory needs to build the final item in your bill of resources. This makes sure Promising considers each of these subassemblies, components, and resources.
- If you use file-based data import (FBDI) to import your bill of resources, then Promising uses the lead times that you specify in the import file.
- You don't have to rerun the Create Bills of Resources scheduled process each time you enable or disable this feature.
- The Create Bills of Resources scheduled process uses your postprocessing lead time. In a future release, you will be able to create an equation that uses a different lead time, such as fixed lead time, plus quantity, multiplied by variable lead time.

Make a Subassembly Critical

If your bill of resources includes more than one organization, and if it has a subassembly that isn't critical and that belongs to an upstream organization, then your components or resources might have longer lead times, and that might lead to a later promise date.

Assume a resource is available in the manufacturing organization, the component for that resource comes from your upstream organization, and that component has a long transit time. This could result in a component's lead time in the bill of resources that's longer than the resource's lead time. Promising might move the promise date to a later date until it meets the component's lead time requirements. To avoid this scenario, make the subassembly item as critical in the upstream organization, then rerun the Create Bills of Resources scheduled process.

Access Requirements

Make sure you have these privileges:

- Schedule Fulfillment Line (MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV)
- Edit Bills of Resources (MSC_EDIT_BILLS_OF_RESOURCES_PRIV)
- View Bills of Resources (MSC_VIEW_BILLS_OF_RESOURCES_PRIV)

Use Alternative Resources and Substitute Components

Use alternative resources or substitute manufacturing components to reduce delay when promising your item. Use them in your bill of resources so you can provide earlier, more accurate promise dates.

Your factory might have more than one resource that can do the same job or more than one manufacturing component that it can use to build an item. If the primary resource or the manufacturing component isn't available, then Promising can use an alternative resource or a substitute manufacturing component. You specify them in the item's primary work definition, and Promising will use them to schedule a make-to-order request.

- Promising attempts to use the primary resource to meet demand, on time or with minimum delay.
- Promising uses a bill of resources when it calculates a make flow for each capable-to-promise request. It can use check availability to see if an alternative is available, then use the alternative to schedule production.
- If the primary resource can't meet demand, then Promising uses the alternative resource to fulfill whatever demand that the primary can't meet.
- Promising assumes the primary resource is critical because its part of the setup for your bill of resources, so Promising assumes that all the alternative resources for the primary are also critical when it creates your bill of resources.
- Each of these points also applies to a substitute manufacturing component.

Requirements

- You must add each alternative resource to the item's primary work definition. You can use the Manage Work Definitions task in the Work Definition work area to do this. Learn more about work definitions. For details, see *Overview of Work Definitions* and *Create Work Definitions for Configured Items*.
- You can specify only one primary resource for each operation.
- You can specify one or more alternative resources for each primary.

- If you specify more than one alternative, then Promising uses the sequence that you specify in the Alternate Resource Priority attribute on the bill of resources to determine which one to use. Assume you specify these values on your bill of resources.

Alternate Resource	Alternate Resource Priority
x	1
y	2
z	3

  Promising will use x first, then y, then z.
- Make sure each alternative resource is part of the same operation and is in the same organization as the primary. Data collection validates this requirement when you collect data.
- Each of these points also applies to a substitute manufacturing component.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand **Supply Chain Planning > Simulation Sets > Bill of Resources > Alternate Resources**. Also, see *Guidelines for Using Alternate Resources and Substitute Components for Planned Orders*.

Example for Alternative Resources

Assume you have two alternative resources.

Assembly	Operation Sequence Number	Resource	Resource Type
ASM-1	Operation 10	R1	Primary
-	-	R2	Alternative 1
-	-	R3	Alternative 2

Here's what your data will look like in Planning.

Organization	Assembly	Work Area	Work Center	Resource	Operation Sequence Number	Resource Sequence Number	Alternative Number
M1	ASM-1	WA-1	WC-1	R1	10	10	0
M1	ASM-1	WA-1	WC-1	R2	10	10	1
M1	ASM-1	WA-1	WC-1	R3	10	10	2

Here's what data will look like in your bill of resources.

Organization	Assembly	Work Area	Work Center	Primary Resource	Alternative Resource	Alternative Resource Priority
M1	ASM-1	WA-1	WC-1	R1	-	-
M1	ASM-1	WA-1	WC-1	R1	R2	1
M1	ASM-1	WA-1	WC-1	R1	R3	2

Example for Substitute Manufacturing Components

Assume you have two substitute manufacturing components.

Assembly	Operation Sequence Number	Component	Component Type	Substitution Priority
ASM-1	Operation 10	CMP-1	Primary	-
-	-	CMP-1-Sub-1	Substitute 1	1
-	-	CMP-1-Sub-2	Substitute 2	2

Here's what your data will look like in Planning.

Organization	Assembly	Operation Sequence Number	Component	Component Substitute	Substitute Usage Quantity	Rank	Substitution Start Date
M1	ASM-1	10	CMP-1	-	-	-	-
M1	ASM-1	10	-	CMP-1-Sub-1	1	1	Date-A
M1	ASM-1	10	-	CMP-1-Sub-2	1	2	Date-A

Here's what data will look like in your bill of resources.

Organization	Assembly	Component	Component Substitute	Usage Quantity	Substitute Component Quantity	Substitute Component Priority	Start Date
M1	ASM-1	CMP-1	-	1	-	-	Date-A
M1	ASM-1	-	CMP-1-Sub-1	-	1	1	Date-A
M1	ASM-1	-	CMP-1-Sub-2	-	1	2	Date-A

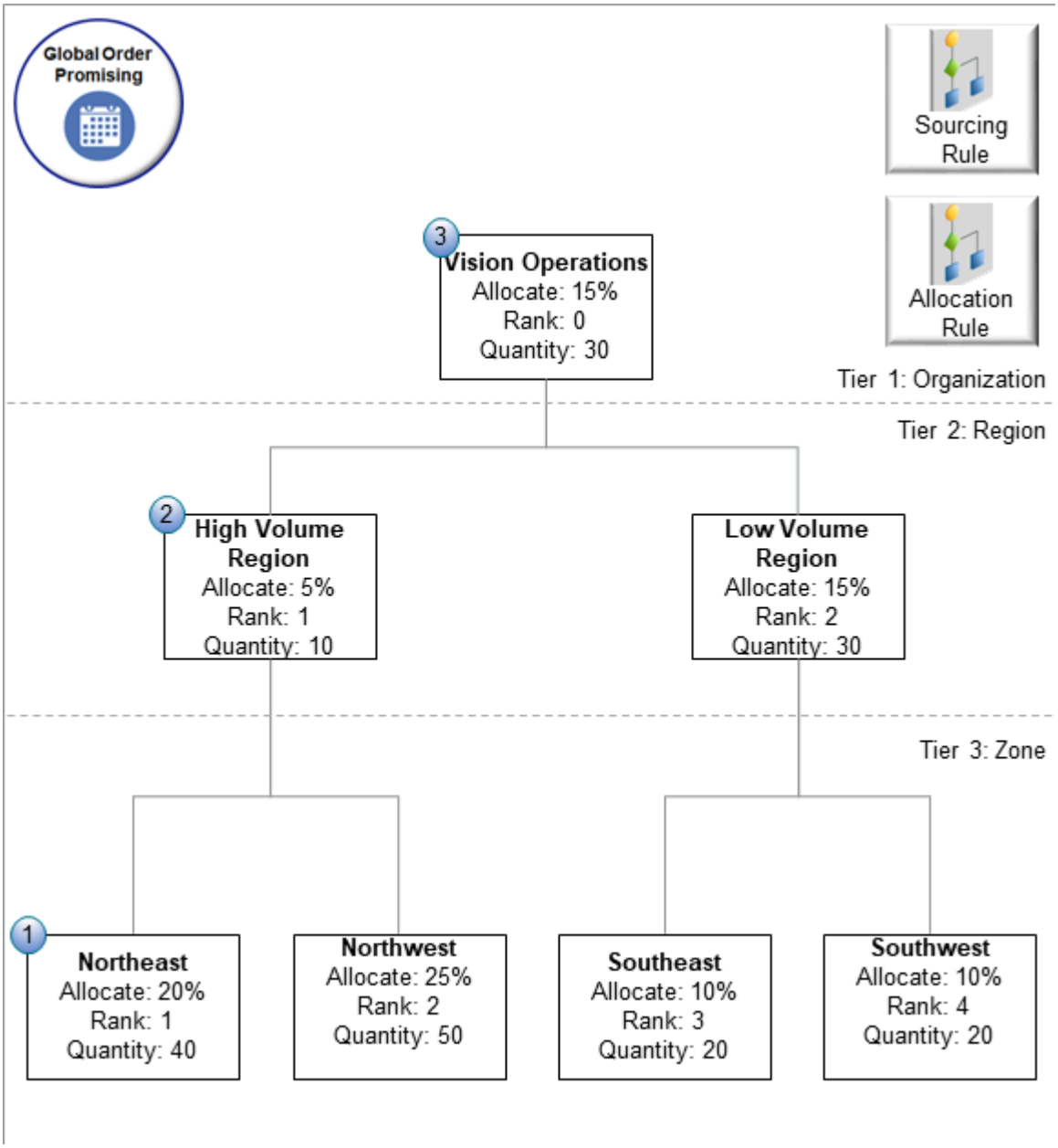
Configured Items

Create Bills of Resources for Configured Items

Order Management sends details about configured items to Promising, including the configured item, the option classes, and the optional components that the user selects in each option class.

- You must assign each configured item, option class, and optional component to an ATP rule.
- Promising considers each configured item, option class, and optional component as critical.
- The bill of resources includes the configured item and the required components that are part of the item that you mark as Critical. It also includes resources in the model's work definition when you enable the Bottleneck option on the simulation set or enable the Capable to Promise option on the resource in Manufacturing.
- The bill of resources doesn't include optional components, child configured items, or child option classes.

Assume you create a work definition for a stove.



Note

- The configured item is named ATO_STOVE_MODEL.
- It includes an operation step named OP 30.
- The step includes two option classes.
  - BJ-FUEL_STD-OC Fuel Type OC
  - BJ-BURNER_LAYOUT_OC Burner
- The step also includes the BJ-R3 resource.
- This example includes the resource directly below the configured item.
- If you include the resource directly below the configured item, and if you enable the CTP Enabled or Bottleneck option to mark the resource as critical, then the bill of resources will include the resource.

Assume the configured item on the sales order has this structure.

```
Configured Item z
 Option Class x
 Optional component x.1
 Optional component x.2

 Option Class y
 Optional component y.1
 Optional component y.2

 Resource 2
```

Here's part of the bill of resources you would create.

Item	Component	Type	Lead Time Offset	Usage
Model z	Resource 2	Resource	-	-

Determine the Usage and Lead Time Offset

The bill of resources only includes a parent when at least one of its optional components or resources is required and is critical, but promising must determine availability according to the optional component that the user selects. Here's how Promising determines the lead time offset.

What Promising Needs to Promise	What Promising Does
Item	Examines the lead time for the configured item, including the processing time and postprocessing time. If the option class includes a required, critical item, then it also examines the processing lead time for the option class. Usage measures how much of a component that you use up to make the assembled item. Promising determines the usage for each required component the same way it determines this value for a make item from the work definition.
Resource	If you add the resource directly under the configured item, then Promising uses the item's lead time to calculate the lead time offset, and uses the work definition to calculate the usage.

Promise a Configured Item That Has a Child Item

Assume your configured item includes a child configured item. Here are the order lines. Assume the Requested Date for each line is December 21, 2022.

Order Line	Item	Type	Quantity
1	Deluxe Stove	Configured Item	10
2	Oven	Optional component	10
3	OC01	Option Class	10
4	Option11	Optional component	10
5	ATO02	Configured Item	10

Here's the hierarchy.

```
Deluxe Stove
 Burner Top (optional component)
 Burner Knobs (required component)
 Labor for Stove (required resource)
 Warming Tray (option class)
 Temperature Control (optional component)
 Pull Handle (required component)

 Oven
 Bluetooth Control (optional component)
 Safety Glass (required component)
 Labor for Oven(required resource)
 Oven Type (option class)
 Gas (optional component)
 Electric (optional component)
 Window (required component)
 Machine to Assemble Oven (required resource)
```

The bill of resources includes resources depending on what you mark as critical in the work definition.

What You Mark as Critical	What the Bill of Resources Includes
Burner Knobs	Resources for the Burner Top optional component.
Pull Handle	Resources for the Warming Tray option class.
Labor for Oven	Resources for the Oven child model.
You don't mark anything as critical in the Oven Type option class.	There won't be a bill of resources for the Oven Type.

Assume the processing lead time for the Deluxe Stove is 2 days. Here's what your bill of resources will look like.

Item	Component	Type	Lead Time Offset	Usage
Burner Top	Burner Knobs	Item	2 Days	-

Item	Component	Type	Lead Time Offset	Usage
Warming Tray	Pull Handle	Item	2 Days	-
Oven	Resource02	Item	3 Days	-

Here's how Promising uses the bill of resources that you just created.

- Determines whether the Deluxe Stove has a resource or a required component that you have marked as critical. This example doesn't, so it goes to the next step.
- Determines whether to include the option class in the bill of resources. If you mark a required component as critical, and if that component is in the class, then it includes the class.
- You marked the required component Burner Knobs as critical, Burner Knobs is in the Option01 class, so Promising determines availability for the Option01 class.

Assume Promising determines that the Burner Top is available on December 24 and the Burner Knobs are available on December 21. Promising calculates the scheduled date as:

```
Scheduled Date equals December 26 (December 24 plus the configured item's 2 day lead time).
```

For background details, see *Overview of Configure-to-Order*.

Include Resources for Configure Options

You can check availability and schedule the resources that you need to fulfill a configure option and include them in your bill of resources. The bill of resources will also include more detail, such as the usage quantity, operation sequence number, and the resource's quantity.

Use this feature to determine the scheduled date for different configurations of an assemble-to-order configured item. Use it in your capable-to-promise flow.

Promising can determine what resources are available according to the configure options that your user selects. This improves the accuracy of your promising results.

Use this feature when:

- The options that your user selects affects the resources that are available.
- You use different resources to build different configurations, and the options that your user selects affects the resources that you use to make them.

Example 1: Include Resources When Your Options Are in a Class

Assume you set up a hierarchy in your configuration model.

Hierarchy	Operation	Operation Is Option Dependent	Resource
Class A	10	Yes	R1
Option 1	-	-	-
Option 2	-	-	-
Class B	20	No	R2
Option 3	-	-	-

Hierarchy	Operation	Operation Is Option Dependent	Resource
Option 4	-	-	-

Assume your item has:

- Operation 10. The operation is option dependent, it consumes the R1 resource, and you apply it to option class A.
- Operation 20. The operation isn't option dependent, it consumes the R2 resource, and you apply it to option class B.

At run time, the user selects option 1 in class A, and option 3 in class B.

Hierarchy	Operation	Operation Is Option Dependent	Resource
Class A	10	Yes	R1
Option 1	-	-	-
Option 2	-	-	-
Class B	20	No	R2
Option 3	-	-	-
Option 4	-	-	-

Note

- If the user selects option 1 or option 2 in class A, then Promising will consume supply from R1.
- Promising will always consume supply from R2 because R2 isn't option dependent.
- Your bill of resources will include the R1 resource.

Example 2: Include Resources When Your Options Aren't in a Class

Assume you set up a configuration model where you have options but they're not in a class.

Hierarchy	Operation	Operation Is Option Dependent	Resource
Option 1	10	Y	R1
Option 2	20	Y	R2
Option 3	30	Y	R3
Option 4	40	Y	R4

At run time, the user selects option 1 and option 3.

Hierarchy	Operation	Operation Is Option Dependent	Resource
Option 1	**10**	**Y**	**R1**
Option 2	20	Y	R2
Option 3	**30**	**Y**	**R3**
Option 4	40	Y	R4

The bill of resources will contain details about the option dependent choices for each resource, R1, R2, R3, and R4.

Promising will consume supply only for the options that the user selects. So it will consume supply for R1 and R3.

Note

- If a resource is critical, and if you attach a resource to an operation that depends on an option, then the bill of resources will represent the resource as option dependent.
- Your bill of resources will automatically include resources that are option dependent.
- The bill of resources will mark resources that are critical as option dependent.
- The bill of resources doesn't consider effective dates.
- Promising only creates data for resources that are option dependent where the Option Class or the Option is immediately below the top level of the hierarchy in your configuration model.
- You can't modify option dependent data directly in the bill of resources.

To see how all this shows up in your bill of resources, go to the Aggregate Bill Of Resource tab, then examine these attributes.

- Resource
- Option Dependent
- Component Item

For details about the Aggregate Bill Of Resource tab, see *Overview of Using Bills of Resources with Promising*.

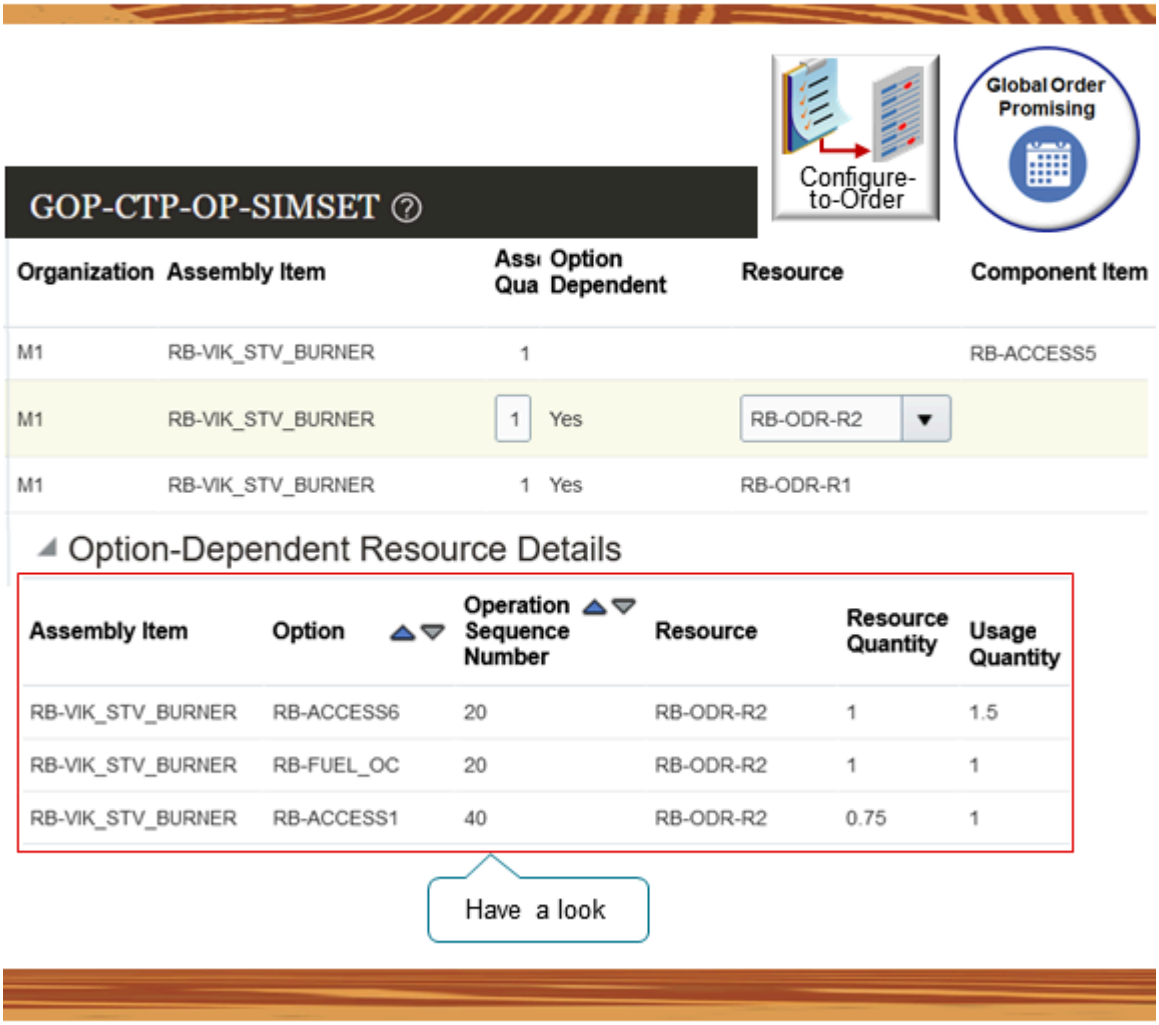
For details about what option dependent means, see *Guidelines for Creating Work Definitions for Configured Items*.

Want to Try It?

Step	Description	Learn How
1	Identify the critical manufacturing components and resources.	*Overview of Using Bills of Resources with Promising*
2	Create an ATP rule, set the Promising Mode attribute on the rule to Supply Chain Availability Search, and enable the Search Components and Resources option on the rule.	*Promising Modes for ATP Rules*
3	Create a sourcing rule and set its Type attribute to Make At.	*Source Your Supply Chain*
4	Enable the Option Dependent option on the work order.	*Guidelines for Creating Work Definitions for Configured Items*

Step	Description	Learn How
5	Collect the Items, Resources, Item Structure, and Work Definition entities.	*Collect Data for Global Order Promising*
6	Run the *Create Bills of Resources* scheduled process. Set the Bills of Resources Templates parameter to Capable to Promise when you run it.	*Overview of Using Bills of Resources with Promising*
7	Go to the Order Promising Options page, then select the simulation set that you want Promising to consider. For details, see *Manage Order Promising Options*.	-

Examine the output in the simulation set. For example:



Schedule Options on More Than One Level of an Assemble to Order Item

Get more detailed capable-to-promise calculations and more accurate promise dates for a complex assemble-to-order item.

If your item has subassemblies at more than one level, then each subassembly might have different optional components and alternative configurations. You can now include the resource requirements in a bill of resources for the options that your customer selects at each level when you schedule shipment or delivery.

Use this feature to improve the quality of your promising results. Promising will apply resource constraints, such as calendars, availability, and so on when it promises an assemble-to-order item. It applies the constraint according to the configure option that your customer selects for each option dependent resource at run time.

Try It

1. Set up your assemble-to-order item.
    - See *Overview of Configure-to-Order*.
    - Specify resources, including which ones are option dependent. See *Guidelines for Creating Work Definitions for Configured Items* and *Create Work Definitions for Configured Items*.
    - Set up promising for your configured item. See these topics:
        - *Include Resources for Configure Options*
        - *Exclude Options and Option Classes for Configured Items*
        - *Include Supplier Capacity When You Promise ATO Items*
        - The Search Components and Resources subtopic in *Set Attributes on Your Supply Chain Search*
2. Set up the bill of resources for your configured item. See *Create Bills of Resources for Configured Items*.

Example 1: Use Option Dependent Operations for All Optional Items

Assume you set up your assemble-to-order (ATO) model so it has this hierarchy.

My Model	Operation	Resource
Option Class A Option 1 Option 2	OP10 OP20	R1 R2
Option Class B Option 3 Option 4	OP30 OP40	R3 R4

Note

- The model has class A and class B.
- Class A contains options 1 and 2, and class B contains options 3 and 4.
- You set the Option Dependent attribute to Y for each operation. For details, see *Guidelines for Creating Work Definitions for Configured Items*.
- The OP10 operation and the R1 resource fulfills option 1.
- The OP20 operation and the R2 resource fulfills option 2.
- The OP30 operation and the R3 resource fulfills option 3.
- The OP40 operation and the R4 resource fulfills option 4.

Now examine your bill of resources:

1. Go to the Plan Inputs work area.
2. On the Plan Inputs page, click **Open**.
3. In the dialog that displays, click the **row** that has Aggregate Bill of Resources, then click **OK**.
4. Search for your bill of resources, then examine the values.

Here's what your bill of resources will contain.

Assembly Item	Resource	Usage Quantity	Option Dependent
My Model	R1	1 hour	Yes
My Model	R2	1 hour	Yes
My Model	R3	1 hour	Yes
My Model	R4	1 hour	Yes

These are design time values, not run time values.

The Option Dependent Resource Details section of you bill of resources will contain a similar set of design time values. It includes all the options that the model contains, not the runtime values.

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 1	OP10	My Model > Option Class A > Option 1	1
My Model	R2	Option 2	OP20	My Model > Option Class A > Option 2	1
My Model	R3	Option 3	OP30	My Model > Option Class B > Option 3	1
My Model	R4	Option 4	OP40	My Model > Option Class B > Option 4	1

Note that the Usage Quantity's unit of measure is hours, such as 1 hour.

Assume you select options 1 and 3 in the sales order at run time.

My Model	Operation	Resource
Option Class A Option 1	OP10	R1
Option Class B Option 3	OP30	R3

Promising will use the OP10 operation and the R1 resource to fulfill option 1, and the OP13 operation and the R3 resource to fulfill option 3.

The Aggregate Bill of Resources table in the Plan Inputs work area only displays design time values. You can use the Review Supply Availability action to examine run time values that have the actual consumption for your sales order. For details, read *See What Supply is Available and Allocated*. As an alternative, submit your sales order, then use the Check Availability page. For details see *Check Availability*.

Example 2: Use the Same Resource to Fulfill All Operations

Assume your model uses the same resource to fulfill all of the option dependent operations in the model.

My Model	Operation	Resource	Resource's Usage Quantity
Option Class A Option 1 Option 2	OP10 OP20	R1 R1	1 hour 2 hours
Option Class B Option 3 Option 4	OP30 OP40	R1 R1	3 hours 4 hours

The R1 resource consumes:

- 1 hour to fulfill option 1.
- 2 hours to fulfill option 2.
- 3 hours to fulfill option 3.
- 4 hours to fulfill option 4.

Your bill of resources will contain all of the potential resources, but Promising will consume only the R1 resource.

Assembly Item	Resource	Usage Quantity	Option Dependent
My Model	R1	10	Yes

Note that 4 hours is a design time value, not a run time value. 4 hours is the sum of all possible usage quantities for the model.

The Option Dependent Resource Details section of you bill of resources will contain a similar set of design time values. It includes all the options that the model might contain, not the runtime values.

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 1	OP10	My Model > Option Class A > Option 1	1
My Model	R1	Option 2	OP20	My Model > Option Class A > Option 2	2
My Model	R1	Option 3	OP30	My Model > Option Class B > Option 3	3

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 4	OP40	My Model > Option Class A > Option 4	4

Assume you select options 1 and 3 in the sales order at run time.

My Model	Operation	Resource
Option Class A Option 1	OP10	R1
Option Class B Option 3	OP30	R1

Promising will consume 4 hours of R1's time. 1 hour for the OP10 operation plus 3 hours for the OP30 operation. Here's the actual runtime usage for this example.

Assembly Item	Resource	Usage Quantity	Option Dependent
My Model	R1	4 hours	Yes

You selected options 1 and 3, so the actual run time operations and consumption are:

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 1	OP10	My Model > Option Class A > Option 1	1
My Model	R1	Option 3	OP30	My Model > Option Class B > Option 3	3

Example 3: Use the Same Resource to Fulfill All Operations, Including Required Operations

Assume you add a required OP25 operation to Option Class B in your model, and you also add another required OP45 operation to the entire model. You will use the same resource to fulfill all of the option dependent operations, and also the required operations too.

My Model	Operation	Resource	Resource's Usage Quantity
Option Class A Option 1 Option 2	OP10 OP20	R1 R1	1 hour 2 hours

My Model	Operation	Resource	Resource's Usage Quantity
Option Class B Required Option 3 Option 4	OP25 OP30 OP40	R1 R1 R1	3 hours 4 hours 5 hours
Required	OP45	R1	6 hours

Your bill of resources will contain all of the potential resources, but Promising will consume only the R1 resource.

Assembly Item	Resource	Usage Quantity	Option Dependent
My Model	R1	21 hours	Yes

21 hours is a design time value. It is the total usage quantity for of all of the model's operations.

The Option Dependent Resource Details section of you bill of resources will contain these design time values.

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 1	OP10	My Model > Option Class A > Option 1	1
My Model	R1	Option 2	OP20	My Model > Option Class A > Option 2	2
My Model	R1	-	OP25		3
My Model	R1	Option 3	OP30	My Model > Option Class B > Option 3	4
My Model	R1	Option 4	OP40	My Model > Option Class A > Option 4	5
My Model	R1	-	OP45	-	6

Operations OP25 and OP45 are required, so their Option attributes and Option Lineage attributes don't have a value.

Assume you select options 1 and 3 in the sales order at run time.

My Model	Operation	Resource
Option Class A Option 1	OP10	R1
Option Class B Option 3	OP30	R1

My Model	Operation	Resource

Promising will consume resources for the options.

Assembly Item	Resource	Usage Quantity	Option Dependent
My Model	R1	5 hours	Yes

It will consume 5 hours for the options:

- 1 hour for OP10 to fulfill Option 1
- 4 hours for OP30 to fulfill Option 3

You selected options 1 and 3, so the actual run time operations and consumption are:

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
My Model	R1	Option 1	OP10	My Model > Option Class A > Option 1	1
My Model	R1	Option 3	OP30	My Model > Option Class B > Option 3	4

Promising will consume 9 hours of R1's time for the required components regardless of the options that you select in the sales order. It will also consume 5 hours for the options, for a total of 14 hours.

Example 4: Add a Child Model

Assume you add a child model to My Model.

My Model	Operation	Resource	Resource's Usage Quantity
Option Class A Option 1 Option 2	 OP10 OP20	 R1 R2	 0.5 hours 2 hours
Option Class B Option 3 Option 4	 OP30 OP40	 R3 R4	 2 hours 2.5 hours
Child Model Option Class C Option 5	 OP50 OP60	 R3 R5	 3 hours 1 hour

My Model	Operation	Resource	Resource's Usage Quantity
Option 6			

Assume you also changed the usage quantity for some of the other resources.

- Option 1 from 1 hour to 0.5 hours.
- Option 3 from 3 hours to 2 hours.
- Option 4 from 4 hours to 2.5 hours.

Your bill of resources will have these assembly items at design time.

Assembly Item	Resource	Usage Quantity	Option Dependent
Model	R1	0.5	Yes
Model	R2	1	Yes
Model	R3	2	Yes
Model	R4	2.5	Yes
Child Model	R3	3	Yes
Child Model	R5	1	Yes

These are design time values. They include all of the possible resources that the model might consume.

- Option 1 consumes 0.5 hours of R1 and Option 3 consumes 2 hours of R1, for a total of 2.5 hours.
- Option 5 consumes 1 hour of R3.

The Option Dependent Resource Details section of you bill of resources will contain these design time values.

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
Model	R1	Option 1	OP10	Model > Option Class A > Option 1	.5
Model	R2	Option 2	OP20	Model > Option Class A > Option 2	1
Model	R3	Option 3	OP30	Model > Option Class B > Option 3	2
Model	R4	Option 4	OP40	Model > Option Class B > Option 4	2.5
Child Model	R3	Option 5	Op50	Child Model > Option Class C > Option 5	3
Child Model	R5	Option 6	Op60	Child Model > Option Class C > Option 6	1

Next, assume you select options 1, 3, and 5 in the sales order at run time.

My Model	Operation	Resource
Option Class A Option 1	OP10	R1
Option Class B Option 3	OP30	R1
Child Model Option Class C Option 5	OP50	R3

You will consume these resources.

Assembly Item	Resource	Option	Operation Sequence Number	Option Lineage	Usage Quantity
Model	R1	Option 1	OP10	Model > Option Class A > Option 1	.5
Model	R3	Option 3	OP30	Model > Option Class B > Option 3	2
Child Model	R3	Option 5	Op50	Child Model > Option Class C > Option 5	3

File-Based Data Import

If you use File-Based Data Import to import your bill of resources, then make sure each value in the Operation Sequence Number attribute is unique for each option dependent operation.

- Use the value in the Operation Sequence Number attribute only for the bill of material's component that you're using to fulfill one option dependent operation.
- You can't use the same number with an operation that isn't option dependent. Use some other operation sequence number for operations that aren't option dependent.

Assume you use an option dependent operation for every optional item in your model, and you set up your assemble-to-order (ATO) model so it has this hierarchy.

My Model	Operation	Resource
Option Class A Option 1 Option 2	OP10 OP20	R1 R2

My Model	Operation	Resource
Option Class B Option 3 Option 4	OP30 OP40	R3 R4

You can use these values in the ScpBillOfResourcesImportTemplate.xlsm FBDI template that you use to import your bill of resources.

Assembly Item Name	Operation Sequence Number	Option
Option Class A	OP10	Option 1
Option Class A	OP20	Option 2
Option Class B	OP30	Option 3
Option Class B	OP40	Option 4
Model	OP1	Option Class A
Model	OP1	Option Class B

In this example, each value in the Operation Sequence Number is unique for each inventory item.

For details about the template, go to *File-Based Data Import (FBDI) for Oracle SCM*, then search for Supply Chain Planning Bill of Resources.

Related Topics

- Promising Modes for ATP Rules
- Use Alternative Resources and Substitute Components

4 Administer Promising

Do Various Tasks

Collect Data for Global Order Promising

You must collect setup details, supply data, and demand data into the planning repository.

Collect Data

You must collect data so Promising can use the latest setup, supply, and demand details in your supply chain and accurately promise your item. Here are some examples of when you need to collect.

- You create or modify an assignment set, sourcing rule, ATP rule, or profile option.
- The reference data that your sourcing rules use change, such as organizations, items, regions, and so on.
- You create or modify work definitions, item structures, resources, organizations, or transit times that affect a bill of resources.
- You create or modify a work definition and item structure for a configured item.
- Your bill of materials or routing details change.
- Before you do various actions, such as the Aggregate Batch Scheduling Metrics action, Promising Supply Availability action, and so on.
- You ship or cancel a sales order.

This topic provides a high level summary of collecting, but there's lots more to know. For details, see *Overview of Data Collections for Supply Chain Planning*.

Try it.

1. Go to the Plan Inputs work area.
2. Click **Tasks > Collect Planning Data**, then collect the entities that you need. Here are some examples of the entities that you might need to collect. They'll be different depending on that changes that you've made.
    - Items
    - Item Structures
    - Work Definitions
    - Organizations
    - Resources
    - Shipping Methods
    - Suppliers

Refresh and Restart the Server

1. Go to the Scheduled Processes work area, then click **Submit New Request**.
2. In the dialog that displays, search for Refresh and Start the Order Promising Server, then click **OK**.

3. Select the entities you must refresh, then click **Submit**.

You can schedule more than one instance of the Refresh and Start the Order Promising Server scheduled process. For example, you can set up three instances:

- One runs at 12 AM every day, and it updates the Current Date.
- One runs at 8 AM and 2 PM every day, and it updates only data that you have for on hand inventory.
- One runs at 8 AM on Sunday, and it updates all data.

You can use the Stop the Order Promising Server scheduled process to stop the server for troubleshooting purposes.

Related Topics

- How the Order Orchestration and Order Promising Processes Use the Collected Planning Data

Set Up Your Items in Product Information Management

Use the Product Information Management work area to do various set ups that affect promising on your item.

Each navigation path in this topic describes how to get to the attribute. For example, go to the Product Information Management work area, click **Tasks > Manage Items**, search for and open your item for editing, then navigate to **Specifications > Item Organization > Planning > Lead Time**.

Lead Times

Attribute in Product Information Management	See This Topic for Details
Specifications > Item Organization > Planning > Lead Time • Processing Days • Postprocessing Days	*Consider Your Lead Times* *Guidelines for Using Lead Time Mode*
Specifications > Item Organization > Planning > General Planning • Make or Buy Specifications > Item Organization > Planning > Lead Time • Postprocessing Days • Fixed • Variable	*Set Postprocessing Lead Times*
Specifications > Item Organization > Planning > Lead Time • Preprocessing Days • Processing Days • Postprocessing Days	*Split or Substitute Fulfillment Lines*

Attribute in Product Information Management	See This Topic for Details
• Variable • Fixed • Cumulative Total • Cumulative Manufacturing	
Specifications > Item Organization > Planning > Lead Time • Cumulative Total • Cumulative Manufacturing	*Promising Modes for ATP Rules* *Time Fence*

Database Promising

Attribute in Product Information Management	See This Topic for Details
Specifications > Item Organization > Planning > MPS MRP Planning • Create Supply • Create Supply After Specifications > Item Organization > Planning > Lead Time • Postprocessing Days	*Database Promising*

Bill of Resources

Attribute in Product Information Management	See This Topic for Details
Specifications > Item Organization > Planning > General Planning • Make or Buy Specifications > Item Organization > Planning > Lead Time • Processing Days • Postprocessing Days	*Guidelines for Creating a Bill of Resources* *Create a Bill of Resources*

Order Management

Attribute in Product Information Management	See This Topic for Details
Specifications > Item Organization > Sales and Order Management > Order Management • Check ATP	*Get Promising Dates in Real Time* *Collect Source System Data*
Specifications > Item Organization > Sales and Order Management > Order Management • Back-to-Back Enabled	*How Promising Promises a Back-to-Back Sales Order* *Use Supply Chain Orchestration in Your Back-to-Back Flows* *Set Up Promising to Support Your Back-to-Back Flow* *Guidelines for Reducing Inventory* *Guidelines for Reserving Inventory* *Don't Use Order Promising to Schedule Fulfillment*
Specifications > Item Organization > Sales and Order Management > Order Management • Shippable	*Collect Source System Data* *Set Up Dual Units of Measure* *Troubleshoot Your Supply Chain Orchestration Flows*

Configured Items

Attribute in Product Information Management	See This Topic for Details
Specifications > Item Organization > Manufacturing > Item Structure • Base Model • Autocreated Configuration • Pick Components	*Create Bills of Resources for Configured Items* *Include Resources for Configure Options* *Include Supplier Capacity When You Promise ATO Items* *Database Promising* *Overview of Configure-to-Order* *Item Structure Specifications*

Set up Geography for Promising

Set up geography so Promising can use it to source your supply.

Geography includes regions, zones, and lanes. You set up geography so Promising can use it in a variety of different ways.

Assume you need to allocate supply according to the hierarchy described in Get Supply from a Node's Parent.

1. Go to the Set up and maintenance work area, then click **Tasks > Search**.
2. Search for and open the Manage Shipping Zones task.
3. On the Manage Zone Types page, click **Actions > Create**.
4. On the Create Zone Type page, enter the value.

Attribute	Value
Zone Type	Northwest

5. Select Bounded by Country, then set the value.

Attribute	Value
Country	United States

6. In the Select Geography area, to the right of the State attribute, add a check mark to the Zone Creation Allowed option, then click **Save and Close**.
7. On the Manage Zone Types page, click **Next**.
8. On the Manage Zones for Zone Type page, click **Actions > Create**.
9. On the Create Zone page, click **Actions > Add**.
10. In the Add Geography dialog, set the values, then click **Save and Close**.

Attribute	Value
Geography Type	State
Geography Name	CA

Import Planned Orders

You can import supply recommendations from one or more supply plans. It's helpful to do this when your supply chain has long lead times.

- You can import from Planning Central or Supply Planning.
- If you use database promising, then you can use the Order Promising Options page to add a plan name.
- Promising promises sales orders according to the supply that's currently available and to the supply that will become available at some point in the future, such as through make, buy, or transfer.
- Promising assumes that the imported supply is available-to-promise supply and that it's available on the plan's due date.
- You can import planned supply even when Planning Central or Supply Planning sent the plan to the execution system but the execution system hasn't yet created supply.

Assume you must import a plan named My Plan.

1. Go to the Planning Central work area or the Supply Planning work area.
2. Run the plan.
3. Make sure the plan doesn't have any exceptions.
4. Save the plan.

   If you modify the plan in Planning Central or Supply Planning at some later time, then you must redo this procedure.

Here's what Promising does:

- Reads planned orders from your plan
- Identifies the demand for each planned order
- Consumes supply for the demand

Assume Promising creates supply for a buy planned order and consumes supplier capacity according to the due date on the planned order. Promising also considers calendars and supplier lead times when it creates this supply.

If you update supply at run time, then Promising uses:

- Work orders for planned make orders
- Transfer orders for planned transfer orders
- Purchase orders or purchase requisitions for planned buy orders

If you import more than one plan, then make sure the plans don't import the same item. If you import the same item in more than one plan, then Promising aggregates supply across all plans for the item, and might count the same supply more than one time.

Get Promising Dates in Real Time

Get accurate available-to-promise dates from across millions of possible fulfillment scenarios.

Use this feature to get the supply that's currently on hand or in transit from Inventory Management, Manufacturing, and Shipping without having to collect data. This reduces the amount of data processing that Promising must do and reduces the time Promising needs to collect supply data. Promising can then optimize fulfillment for your item from millions of different possible scenarios according to where the item does or could reside in your supply chain at any given moment.

Use this feature when your supply is fragmented across warehouses and distribution centers.

- Get supply updates in real time, updated every second.
- Schedule sales orders for thousands or even millions of items across hundreds of organizations.
- Remove the latency that happens when you have to collect supply and demand data for your items, then synchronize that data with your transaction system.
- Improve promising accuracy. You can consider supply that's on hand and in transit, in real time, across your item's supply chain.

Use this feature when you need to create new supply through capable-to-promise rules, when inventory isn't available, when you don't want to procure or build new supply to fulfill customer demand, and you want Promising to only consider supply that's on hand or in transit.

How it Works

Promising uses your global and local sourcing rules to determine supply sources, and it does it in two phases to promise each new sales order.

Assume you have two organizations. The Sales organization is upstream of the Manufacturing organization in your supply chain. Here's what Promising does:

- Nets demand and supply against each other in Sales to determine what supply is available in Sales.
- Examines your supply chain network from Sales to Manufacturing, adds unmet demand to the demand that currently exists in Manufacturing, then nets demand against whatever supply currently exists in Manufacturing. If Sales has more supply than it needs to meet its own demand, then Promising moves on to the second phase,
- Calculates the supply that's available for Sales before it calculates it for Manufacturing.
- Promises the new sales order according to the supply that's available, lead times, calendars, and so on.

Assume you sell the AS54888 desktop item, and you keep supply for it in Sales and in Manufacturing. The supply for Sales and Manufacturing is:

- 10 units on day 1
- 50 units on day 5
- 100 units on Day 10
- 100 units on day 12

So, Sales and Manufacturing each have a total supply of 260 units.

Sales	Day							
Supply and Demand	1	2	5	6	7	10	12	13
Supply	10		50			100	100	
Cumulative Supply	10		60			160	260	
Demand		20		300	40			50
Total Demand	360							
Unmet Demand	100							

1

2

Propogate unmet demand

3

5

Manufacturing	Day							
Supply and Demand	1	2	5	6	7	10	12	13
Supply	10		50			100	100	
Cumulative Supply	10		60			160	260	
Demand		20			50			
Total Demand	70							
Unmet Demand	100							
Net Supply							90	

Transfer supply to where you need it

4

What the Numbers Mean

1. You receive new demand of 50 units on day 13 for the item in Sales.
2. Assume Promising already promised some supply to fulfill previous sales orders for 20 units, 300 units, and 40 units, for a total demand quantity of 360 units. So, the total quantity of unmet demand in Sales is 100 units (360 minus 260).
3. Promising propagates the unmet demand to Manufacturing, according to how you set up your sourcing rules. For this example, assume it propagates all of 100 from Sales to Manufacturing.
4. The incoming supply for Manufacturing is 260 units, with demand in Manufacturing of 70 units. The total demand including unmet demand that Promising propagates from Sales to Manufacturing is 170 units. So, the net supply that Promising can use to promise new sales orders on day 12 in Manufacturing is 90 units (260 minus 170).
5. Promising transfers the supply quantity that it needs to promise the item from Manufacturing to Sales.

Guidelines for Collecting

- You must collect your setups.
- If you need to check availability or schedule a capable-to-promise or profitable-to-promise request, then you must collect data even if you use this feature.
- If you use source promising, then you don't need to collect the Items, On-Hand, Transfer Orders, Sales Orders, or Reservations entities.
- You can collect any other entities that you need to promise orders when you don't use this feature, such as Customers, Calendars, Regions, Organizations, and so on.

You must collect the Catalogs entity. Promising uses it to source supply and with available-to-promise rules that assign according to category.

Source Promising

If you use source promising in a flow that isn't a back-to-back flow, then this feature will also consider supplies that have an availability date that occurs in the future, such as supply that you might get through a purchase order, transfer order, or work order where supply doesn't exist until you actually purchase it, transfer it, or build it. This helps you to provide your customers with accurate availability dates for items where you don’t currently have any stock. Do this instead of putting the item on backorder. For background details, see *Source Promising*.

Notes

- Promising will consume all the supply that's currently available in your supply chain for the item.
- You must use source promising with any sourcing or available-to-promise rules that you plan to use with this feature.
- This feature does consider any inventory reservations that exist for supply.
- This feature doesn't consider the available-to-promise fence. It does consider the infinite fence when it nets the backlog for future sales orders. It considers the order quantity regardless of whether you use the infinite fence to promise the order. For details, see *Time Fence*.
- If you use source promising, and if your flow isn't a back-to-back flow, then Promising doesn't source supply for your make rules or buy rules.

Limitations

You can use this feature only for sales orders that you get from Oracle Order Management. You can't use it with any other ordering system.

Set it Up

1. Make sure you have the privileges that you need to administer Oracle Global Order Promising.
2. Enable the MSP_ENABLE_GOP_WITH_NEW_ARCH profile.. See *Manage Promising Profiles*.

3. Set up your item.
    - Go to the Product Information Management work area.
    - Click **Tasks > Manage Items**.
    - Search for, then open your item for editing.
    - Click **Specifications > Sales and Order Management**, then set the value.

Attribute	Value
Check ATP	Source Based Promising

Use Categories to Simplify Your Setup

Assign each of your sourcing rules and available-to-promise rules to a category and reduce the amount of setup you need to do.

You can use a category to group items according to your sourcing requirements, supply and demand requirements, or any other business need. For example, group items that don't have a lot of demand and that you store in regional and national distribution centers, that you fulfill from the regional level first and then from the national level, and that have an infinite fence of 100 days.

Here is a generic procedure that you can do when you want to use a category with this feature:

1. Create your category inside the catalog and include your items in each category.
    - Control the catalog at the master level.
    - Don't includes hierarchies of categories in the catalog.
    - Make sure that the Allow Multiple Item Category Assignments option doesn't contain a check mark.
    - Add your items to the categories.
    - Add items only to levels that are lower in the categories.
    - Assign the catalog to the Planning functional area.
    - Make sure you don't have more than one assignment for each item category. For details about catalogs and categories, including how to create a catalog and add categories and items to it, see *How Catalogs Work Together*.
2. Collect the catalog and the category.
3. Go to the Planning Central work area, click **Tasks > Manage Planning Profile Options**, set the values, then click **Search**.

Attribute	Value
Profile Option Code	MSC_SRC_ASSIGNMENT_CATALOG
Category	Global Order Promising

4. In the Profile Values area, set the Profile Value attribute to your catalog.
5. Set up your available-to-promise rules and sourcing rules and assign them to your categories.

Guidelines for Assignment Levels

Here are the levels that you can and can't use.

Rule	Support
Global Sourcing Rule	You can use these levels: • Global • Region • Demand Class • Customer and Customer Site • Category • Category and Region • Category and Demand Class • Category and Customer • Category and Customer Site You can't use these levels: • Item • Item and Region • Item and Demand Class • Item and Customer • Item and Customer Site
Local Sourcing Rule	You can use these levels: • Organization • Category and Organization You can't use the Item and Organization level.
ATP Rule	You can use these levels: • Organization • Category You can't use these levels: • Item • Item and Organization

For details, see *Set Your Assignment Levels*.

Set Up Calendars for Carriers

Set up a calendar for your carrier so that the lead time for a planned order considers the carrier's work days and nonwork days.

Consider a scenario.

- You create a calendar for your Federal Express carrier that's open only on Wednesday, you set the requested date to Friday on the order line, resulting in a promise date that happens after the requested date.
- You have a faster method named Overnight Delivery. The carrier schedule for Overnight Delivery is Monday through Friday, so Promising sets the method to Overnight Delivery, but you expected the order line to default to 2 Day Air.

If you don't provide the shipping method on the order line, then Promising promises the order within the requested date or with the minimum delay. The request type on the line affects promising:

If Request Type Is	Then Promising Promises According to The Requested
Ship On	Ship Date Promising uses the default shipping method because the shipping method doesn't affect on time delivery.
Arrive On	Arrival Date If the default shipping method can't deliver on time or with minimal delay, then Promising uses the fastest shipping method.

If you're importing the order, then the PromisingType attribute specifies the type, and it contains Ship or Arrival.

If you prefer to use 2 Day Air by default, then you must revise 2 Day Air's calendar so it can ship on more days than only Wednesday.

Detailed Example

Assume you set up Promising so it considers the lead time that it needs to process a supply request for a transfer item. It includes weekends as work days. You transfer supply through your Federal Express carrier, but Federal Express doesn't work on weekends. You can assign a calendar that doesn't have weekends, and promising won't include weekends when it calculates the lead time.

1. Go to the Setup and Maintenance work area, then go to the task.
    - Offering: Manufacturing and Supply Chain Materials Management
    - Functional Area: Shipping
    - Task: Manage Transportation Schedules
2. Click **Actions > Create**, then set the values. For example:

Trading Partner Type	Carrier
Trading Partner	Federal Express
Schedule Usage	Carrier

Trading Partner Type	Carrier
Schedule Name	My Schedule
Carrier	Fedex

For details, see *Transportation Schedules*.

Manage Promising Profiles

Use promising profiles to manage various ways that Global Order Promising promises your item.

Manage Planning Profile Options

1. Go to the Setup and Maintenance work area, then go to the task.
    - Offering: Supply Chain Planning
    - Functional area: Supply Chain Planning Configuration
    - Task: Manage Planning Profile Options
2. On the Manage Planning Profile Options page, search for the value.

Profile Display Name	Description
Catalog for Sourcing Assignments	In the search results, set the Profile Value to the catalog you want to use. For details, see *Specify Catalogs for Assignment Sets*.

For details, see *Manage Planning Profile Options*.

More

You can also set a profile option in *Get Promising Dates in Real Time*.

Manage Administrator Profile Values

Try it.

1. Go to the Setup and Maintenance work area, then click **Tasks > Search**.
2. Search for and open the Manage Administrator Profile Values task.
3. On the Manage Administrator Profile Values page, search for the value.

Profile Option Code	Description
MSP_GOP_HORIZON_DAYS	Specify the promising horizon. The promising horizon is the number of days that Promising considers when it promises your item, such as the number of days to look at in your calendar or in the lead time, the availability for the item's supply, resources, supplier capacity, and so on. - Comes predefined to use 960 days. If you don't enter a value, then Promising will use 960.

Profile Option Code	Description
	○ If you enter a value, then enter a value that's equal to or less than 960. Promising will only use values that are equal to or less than 960. See: ○ *See How Promising Estimates Availability* ○ *Update Data for Your Rules*
MSP_DEFAULT_ASSIGNMENT_SET	See: ○ *Consider Your Sourcing Hierarchy and Assignment Set Hierarchy* ○ *See How Promising Estimates Availability* ○ *Consider Your Sourcing Hierarchy and Assignment Set Hierarchy*

Manage Supply After the Promising Horizon Expires

Buy, make, or transfer supply even after the promising horizon expires.

Try it.

1. Go to the Order Promising work area.
2. Click **Tasks > Order Promising Options**, then set the Supply at End of Horizon attribute to one of these values.

Value	Description
Assume Supply is Infinitely Available	Use this value when: ○ You don't have enough supply to meet demand. ○ The requested date on the order line happens after the promising horizon. ○ You can no longer find a way to buy, make, or transfer more supply. If Promising can't find supply for your item, then it will continue to schedule order lines even after the horizon expires.
Assume no Supply is Available	If Promising can't find supply before the horizon expires, then it assumes no supply is available and returns an error. If you have set up a substitution for your item, and if the requested date happens after the horizon expires, then Promising will use that substitute item when: ○ · You haven't set up an infinite time fence that expires before the horizon expires. ○ · Promising can't schedule the order.

Assume Supply is Infinitely Available

If you set the Supply at End of Horizon attribute to Assume Supply is Infinitely Available, then:

- Promising will apply this behavior globally for all items.
- Promising will apply your ATP time fence for sales orders that it can fulfill before the horizon expires.
- If the requested date happens after your infinite time fence expires, and if no supply is available, then Promising will set the scheduled date to the requested date. It will do this whether you set the Request Type to Ship or to Arrive On.
- If you haven't set up a sourcing rule for the item, then Promising won't consume any of the existing ATP supply and will instead assume that ATP supply is infinitely available and schedule the order.
- If you don't split the order line when supply meets a threshold, then Promising won't consume the supply that's available. Instead, Promising will provide a buy, make, or transfer recommendation for the entire demand.

Assume the requested date happens before the infinite time fence expires. If the requested date happens:

- Before the ATP time fence expires. Promising will use the available-to-promise supply first, and then capable-to-promise supply.
- After the ATP time fence expires. Promising will use capable-to-promise supply first, and then available-to-promise supply.

Assume the requested date happens after the infinite time fence expires. Promising will use the available-to-promise supply according to the ATP time fence and your sourcing rule. It will also assume:

Value	Description
Source	**Promising Assumes**
Buy from supplier	The supplier has infinite capacity.
Make at organization	The organization has infinite resources and manufacturing components.
Transfer from upstream organization	The upstream organization has infinite supply.

Promising won't actually consume any supply. It will only provide supply recommendations.

For details:

- *Split Order Lines When Supply Meets a Threshold*.
- *Time Fence*.
- About the horizon, see *Manage Promising Profiles*.
- About capable-to-promise, see the Principles of Promising subtopic in *Overview of Global Order Promising*, *Guidelines for Creating a Bill of Resources*, and *Use Work Definitions with Your Bill of Resources*.

Scenarios

Consider how the setting that you make on the Supply at End of Horizon attribute works in different scenarios.

Scenario	Assume Supply is Infinitely Available	Assume no Supply is Available
1. Requested Date < ITF < Horizon	Promising finds supply on a date between the requested date and the ITF.	Same result as when you use Assume Supply is Infinitely Available.
2. Requested Date < Horizon < ITF, and there's sufficient supply within the horizon.	Promising schedules supply between the requested date and the end of the horizon.	Same result.
3. Requested Date < Horizon < ITF, and there isn't sufficient supply within the horizon.	Promising schedules infinite supply at the end of the horizon.	Scheduling fails.
4. ITF < Requested Date < Horizon	Promising schedules infinite supply, and sets the scheduled date to the requested date.	Same result.
5. Horizon < Requested Date < ITF	Same as above.	Scheduling fails.
6. ITF < Horizon < Requested Date	Same as above.	Same result.
7. Horizon < ITF < Requested Date	Same as above.	Scheduling fails.
8. Horizon < Requested Date, you haven't set up an ITF, and there isn't sufficient supply within the horizon.	Same as above.	Scheduling fails.
9. Requested Date < Horizon, you haven't set up an ITF, and there isn't sufficient supply within the horizon.	Promising schedules infinite supply, and sets the scheduled date to the end of the horizon.	Scheduling fails.
10. ITF = Horizon	Same as above.	Same result.
11. Requested Date < ATF < ITF < Horizon, and part of the supply is available.	Promising consumes part of the supply, and sets the scheduled date to the ITF.	Same result.
12. ATF < Requested Date < ITF < Horizon, and part of the supply is available.	Promising schedules infinite supply, and sets the scheduled date to the ITF.	Same result.
13. ITF < ATF < Requested Date < Horizon	Promising schedules infinite supply, and sets the scheduled date to the requested date.	Same result.

Note

- Assume that scheduling succeeds in all scenarios where you use Assume Supply is Infinitely Available.
- Assume that the ITF (infinite time fence) supply is infinitely available in every scenario.

For brevity, we use a short hand description for each scenario. For example, Requested Date < ITF < Horizon means:

- The requested date happens before the ITF expires.
- The ITF happens before the promising horizon expires.

Manage Supply

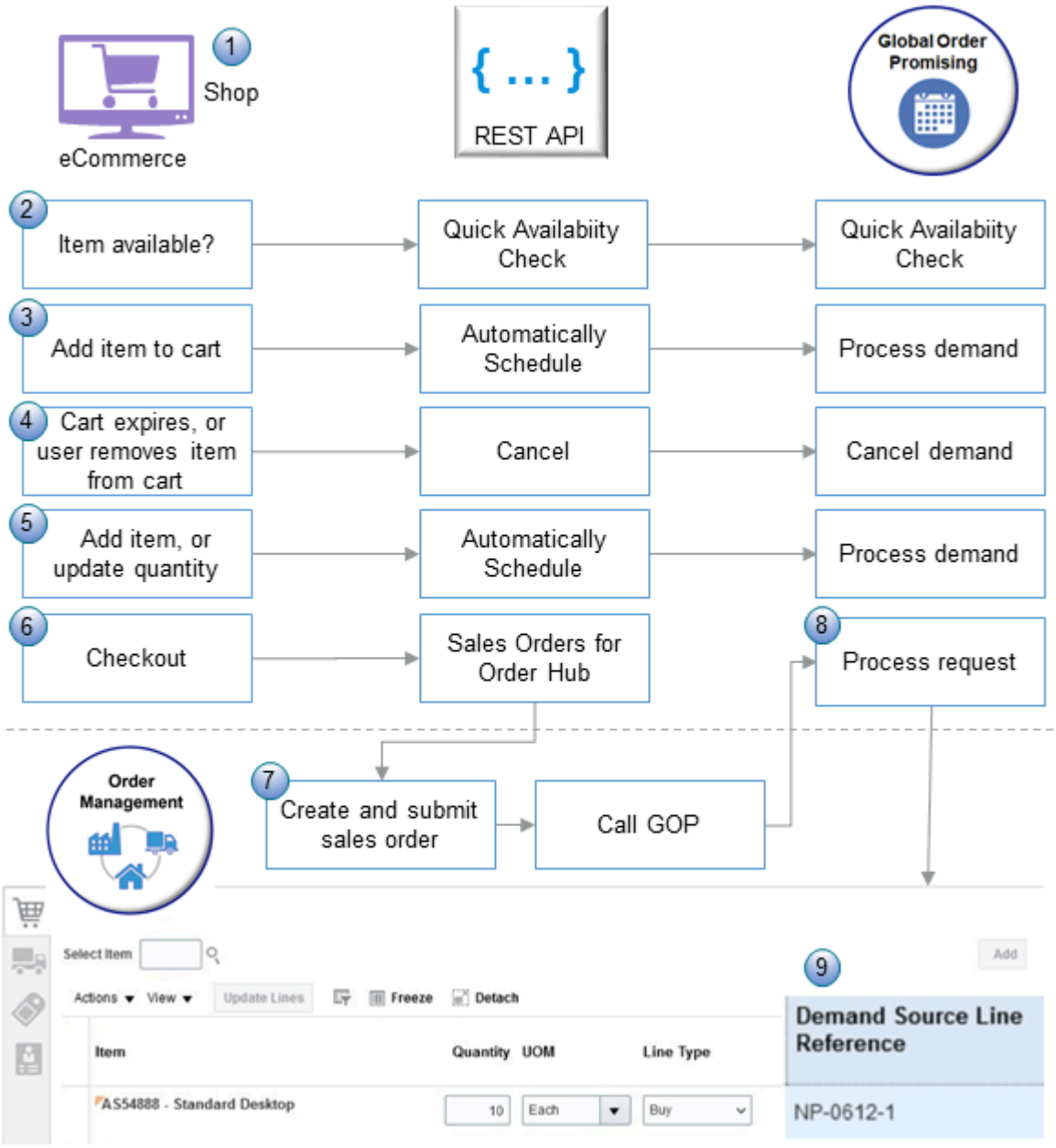
Temporarily Reserve Supply While Shopping or Quoting

Integrate your eCommerce application or web store with Oracle Global Order Promising and Oracle Order Management so you can efficiently manage supply.

Manage a source order in your shopping cart, such as add items, update quantities, cancel, check out, and so on, and efficiently integrate that source order into a sales order in Oracle Applications.

An online shopper or salesperson might need to see whether an item is available, get an approval for credit, set up a service, or arrange delivery before submitting a source order. Your eCommerce application might do these steps in a few minutes, but an online quote might need several days. You can temporarily reserve supply for an item in your eCommerce shopping cart or online quote to make sure it remains available until you can schedule the order. If the shopper abandons their cart or if the quote expires, then you can cancel the reservation and make that supply available for other orders.

How it Works



Assume you use a shopping cart in an eCommerce application named Vision Systems that isn't part of Oracle Applications to capture your source orders.

1. A user in your eCommerce application shops for an item.

2. You use the Quick Availability Check REST API to call Global Order Promising.
    - Promising gets details about the supply that's currently available for the item in your supply chain.
    - If supply is available, then Promising reserves supply for the item and uses NP-0612-1 as the Demand Source Line Reference.
    - Promising communicates the results to your eCommerce application. You can use the results in your application to show whether the item is available or not.

      As an option, you can set up allocation rules and Promising will use them when it checks availability. For details, see *Allocate Supply Through REST API*.
3. The user adds the item to the shopping cart in your eCommerce application. You use the Automatically Schedule REST API to call Global Order Promising. For details, go to *REST API for Oracle Supply Chain Management Cloud*, expand **Order Management > Global Order Promises**, then click **Automatically Schedule**.
4. If the cart expires or if the user removes the item from the cart, then you use the Cancel operation of the REST API to cancel the sales order.
5. If the user changes the item's quantity in the cart or adds another item to the cart, then you use the Automatically Schedule REST API to call Global Order Promising, and Promising processes demand and reserves the supply that it needs to meet the request.
6. The user finishes shopping and checks out.
    - You use the Sales Orders for Order Hub REST API to send a request to Oracle Order Management to create a sales order for source order 12345 in the Vision Systems source system. It has one order line, line 1.
    - You set the Demand Source Line Reference attribute on the source order in your import payload to a value that's meaningful to Vision Systems. For this example, assume you set the attribute to NP-0612-1.
7. Order Management automatically submits the request to order fulfillment. It sets the fulfillment line attribute to 1-1 for order line 1, then sends a request to Promising to schedule line 1 for order 12345.

   You can also use an orchestration process to orchestrate the sales order before you submit it just like you would any other sales order in Order Management. For example, do a credit check, orchestrate payment, reprice the item, and so on.
8. Promising swaps the supply that it already reserved for NP-0612-1 to fulfillment line 1-1. Promising reserves supply for each line in the cart, schedules the order, and sends the scheduling details back to Order Management.
9. The Order Lines section of the Order Management work area displays NP-0612-1 in the Demand Source Line Reference attribute on fulfillment line 1-1. You can use it to track fulfillment for your cart. You can use the Order Management work area to manage the order line just like you would any other line in Oracle Order Management.

Requirements

- You must opt into the Temporarily Reserve Supply While Shopping or Quoting feature.
- You must use the DemandSourceLineReference attribute in the SalesOrdersforOrderHub REST API resource, or the Demand Source Line Reference attribute in file-based data import (FBDI). For details, see *Use FBDI and REST API to Import Large Volumes of Sales Orders*.
- You must specify an expiration date for your shopping cart in your eCommerce application. If the cart expires, then your application must send a request to Global Order Promising to cancel the sales order and release supply.

You can use this feature with:

- Your own eCommerce application or with Oracle Order Management.

- Database promising. For details, see *Database Promising*.
- Allocations that include more than one level. For details, see *Get Supply from a Node's Parent*.
- Shipment sets.
- Back-to-Back flows.
- Standard items and assemble-to-order items.
- Order line splits and item substitutions. Your eCommerce application must accept the original line and the split lines or the substitute items that Promising recommends.

Guidelines

- Your eCommerce application can use a web service to call Promising to do various actions. For example, reserve supply when you add an item or update a quantity, or release supply when you cancel an order line in your shopping cart.
- You can revise a sales order or use a processing constraint regardless of whether you use this feature.
- You can use the Demand Source Line Reference attribute in an order management extension, processing constraint, Oracle Transactional Business Intelligence (OTBI), or Oracle Business Intelligence Cloud Connector (BICC).
- You can't update the Demand Source Line Reference attribute in the Order Management work area.

Manage Change

A change that happens between the time that you add an item in your shopping cart and when Promising schedules the order line might affect your promising results.

- Assume you place an order for 10 Bluetooth speakers in your web store, and Promising reserves 10 of them.
- You import the source order into Order Management, Order Management creates a sales order, then submits it to fulfillment.
- You revise the sales order in Order Management, change the quantity to 15, then submit it again.
- Promising has reserved a quantity of only 10, so Promising might or might not be able to schedule the additional quantity of 5.

Try It

Assume you need to test your integration for the AS54888 Desktop Computer.

1. Opt into the feature.
    - Go to the Setup and Maintenance work area, select the Supply Chain Planning offering, then click **Change Feature Opt In**.
    - In the row that has Global Order Promising in the Name column, click the **pencil**.
    - Enable the Temporarily Reserve Supply While Shopping or Quoting feature, then click **Done**.
2. Collect items, customers, organizations, calendars, supplies, demands and so on. We recommend that you do it on a schedule. For details, see *Collect Data for Global Order Promising*.
3. Set the promising options.
    - Go to the Global Order Promising work area, then click Tasks > Order Promising Options page. For details, see *Manage Order Promising Options*.
    - Set the values on the Order Promising Options page.

Attribute	Value
Type of Demand System	Enter any alphanumeric text that you want to use to identify your eCommerce application. This value must match the CallingModule attribute that you use in the REST payloads that you use to call Global Order Promising. For example, enter CART or enter ECOMM.
Past Due Cart Expiration in Days	Enter a number, such as 30. The default value is 60 days before the start of the promising horizon. If you don't enter a number, then Promising will use 60. Promising will delete a demand that exceeds the value that you enter and make the supply that it had reserved for the item in the cart available to other sales orders. Assume you set Past Due Cart Expiration in Days to 20. The user adds a quantity of 10 for the AS54888 item on March 1, and Promising reserves supply. If the user doesn't submit the sales order before March 21, then Promising will delete the demand and make supply for the quantity of 10 available to other sales orders. If you need to delete demand for a one time, specific reason, then go to the Scheduled Processes work area and run the Delete Expired Demand scheduled process. It uses the same parameter, except the value that you enter specifies the number of days before the current system date. Assume you want to delete demand for all carts that haven't seen any action in over 10 days. Set this parameter to 10 to delete that demand. We recommend that you don't set up this process to run a schedule because it might conflict with your set up on the Order Promising Options page.

4. Set up the REST API payload that you use to create, update, or cancel each of your supply requests. Use these attributes in the payload.

Attribute	Value
Calling Module	You must use the same value that you entered in the Type of Demand System attribute on the Order Promising Options page, such as CART or ECOMM.
Calling Instance	You must enter the same value that you use in the Instance Name attribute on the Manage Planning Source Systems page. For details, see *Manage Planning Source Systems for Data Collections*.
Fulfillment Line Identifier	Use the value that identifies the line on your shopping cart. You can use any alphanumeric value. For example, ABCD123456789.

Attribute	Value

5. Use the Sales Orders for Order Hub REST API to create the sales order in Order Management after the user checks out of the shopping cart. Use this attribute in the payload.

Attribute	Value
Demand Source Line Reference	You must use the same value that you used in the Fulfillment Line Identifier attribute.

6. Test your set up.
    - Set up some test data that you can use to test the flow. For example, you will need some supply data for the AS54888.
    - Search for the AS54888 item in your eCommerce application, then verify that your application includes the correct data in the response that Promising sends for your REST API call. You can use a 3rd party trace program to verify that your REST API calls contain the data that you expect to see.
    - Add the AS54888 to the shopping cart, then verify that the Automatically Schedule REST API calls Global Order Promising.
    - Check out of the shopping cart, verify that the Sales Order for Order Hub REST API successfully sends a request to Oracle Order Management to create the sales order, and that Order Management created it.
    - Go to the Order Management work area, then search for and open the sales order. Verify that the Order Lines section of the Order Management work area displays NP-0612-1 in the Demand Source Line Reference attribute on fulfillment line 1-1. The Demand Source Line Reference indicates that Promising already interacted with your eCommerce application to promise the ordered quantity even before you created the order line in Order Management.
    - Test other flows in your integration. For example, see what happens when you remove an item from the cart, change the quantity, let the cart expire, and so on.

Delete Expired Demand

Use the Delete Expired Demand scheduled process to release the supply that Global Order Promising reserved for orders in your eCommerce or quoting application when your customer has abandoned their order.

We recommend that you set up the shopping cart in your eCommerce or quoting application so it automatically times out when your customer abandons it, and then use the Cancel Sales Order REST API to send this information to Global Order Promising so Promising can release the supply that it reserved for the cart and make it available to other demand. As an alternative, you can use the Delete Expired Demand scheduled process to release this supply.

Try it.

- Go to the Scheduled Processes work area, then run the Delete Expired Demand scheduled process. Use these parameters to filter the data that the scheduled process will look at.

Parameter	Description
Past Due Cart Expiration in Days	Enter the number of days before the current date that you want to start deleting abandoned demand. If you don't enter a value, then the scheduled process will use a value of 60 days, by default.

This scheduled process doesn't take any action on interactive warning validations.

For important details, see *Delete Expired Demand* and *Guidelines for Using Scheduled Processes in Order Management*.

Example

Assume today is May 1, you want to release abandoned supply on the last day of each month, and you want to do it indefinitely. Here are your settings.

Parameter	Value
Past Due Cart Expiration in Days	30
Run	Using a Schedule
Frequency	Monthly
Repeat	By Date
Date	Last Day of Month
Start Date	5/01/23
End Date	5/01/39

Temporarily Reserve Supply with Source Promising

You can also temporarily reserve supply while shopping or quoting when you use *Source Promising*.

- You must opt into the Temporarily Reserve Supply While Shopping or Quoting feature. If you've already opted in, then you don't have to opt in again.
- You must use the DemandSourceLineReference attribute in the SalesOrdersforOrderHub REST API, or the Demand Source Line Reference attribute in file-based data import (FBDI). For details, see *Use FBDI and REST API to Import Large Volumes of Sales Orders*.
- You must specify an expiration date for your shopping cart in your eCommerce application. If the cart expires, then your application must send a request to Global Order Promising to cancel the sales order and release supply.
- You can't use this feature with assemble-to-order or pick-to-order configured items or with kits. To do this, use *Database Promising* instead.

Include Over the Counter Transactions When You Promise

Set up Promising so it considers inventory reductions that result from an over the counter transaction. You fulfill the transaction from inventory without picking or shipping.

Promising can automatically adjust the supply that's available according to your over the counter sales. For example, you might have an over the counter sale at a retail outlet or wholesaler where your sales personnel picks the item

directly from the inventory that's on hand at the outlet or warehouse, does it while the customer waits at the counter, and then closes the order to finish the transaction.

Use this feature to make sure Promising promises your sales order according to transactions that happen in real time, as they happen.

Here's you need to do:

- Set the Allow Inventory Transaction to Yes in your business rule. For details, see *Setup Options for Reducing Inventory*.
- Set the Process Inventory Transactions Immediately parameter to Yes. This setting instructs Order Management to send the order line to inventory as soon as it closes the sales order. Inventory Management will immediately reduce inventory and keep it accurate and up to date. It also allows Promising to get a real time picture of the inventory that's actually currently available. Don't set it to No because Promising might over promise supply. For details, see:
  - *Reduce Inventory When a Sales Order Doesn't Require Picking or Shipping*
  - *Reduce Inventory Without Picking or Shipping*
  - *Manage Order Management Parameters*.

You can verify that your fulfillment line is part of an over the counter sales order.

1. Go to the Order Management work area and search for your sales order.
2. Click **Tasks > Manage Fulfillment Lines**.
3. Search for, then open your line.
4. On the Fulfillment Line page, in the Shipping area, verify that the Sent to Inventory attribute contains a check mark. If you don't see the attribute, it probably means you didn't enable the Process Inventory Transactions Immediately parameter. For details, see *Manage Order Management Parameters*.

Include Supplier Capacity When You Promise ATO Items

Use the capacity for the configuration model when you schedule an assemble-to-order item instead of the capacity for each configured item. This way, you're scheduling the resources that all configurations use when you create a variation of the same model.

It usually isn't possible to determine your supplier’s production capacity for each configured item. However, a supplier typically uses the same capacity to create a variety of configurations, so Promising can examine and consume capacity according to the production calendar from your approved supplier list (ASL), and this provides more accurate results. It’s also easier to maintain details about supplier capacity for each model than it is for every possible configuration of that model.

You can realize these benefits.

- Improve your promising accuracy. You can track the supplier's capacity while you promise for a variety of different configurations.
- Reduce the amount of set up you need to do. You can apply the supplier's capacity for the parent to all the parent's children instead of having to apply the capacity separately to each child.
- Have a more flexible supply chain. Use a lead time offset on your calendar, and set a different offset for each configuration.

Notes

- If you need to adjust an availability date for a configured item, then you can still use that item's lead time and calendar from the approved supplier list even if you use the High Volume Order Promising feature.
- You can use the Supply Availability REST API to get details about your supplier's capacity when you fulfill the configured item. For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then search for Supply Availability.
- Promising automatically includes supplier capacity when it promises each ATO item.
- Each configured item consumes supply from the parent model's supplier capacity.
- You can use file-based data import to import your supplier's capacity, lead time, and calendar.

Set the Supplier Lead Time and the Calendar

- If you specify the supplier lead time and the calendar in the approved supplier list for the configured item, then Promising uses those values when it calculates the lead time offset. If you don't do this, then Promising uses the calendar and lead time that you set in the approved supplier list for the ATO model.
- If you don't specify the supplier lead time and the calendar in the approved supplier list or in the ATO model, then Promising uses the item's Processing Lead Time attribute and assumes that all times and dates are available in the calendar.

Example

Assume you set up an ATO model named AS54888 Desktop Computer so it has a supplier capacity of 100 units on each day.

-	Day 1	Day 2	Day 3	Day 4	Day 5
Supplier Capacity for AS54888	100	100	100	100	100
Consumed	10 (for the AS54888 Big Display)	-	60 (for the AS54888 Small Display)	-	-
Net	90	-	40	-	-
Cumulative	90	190	230	330	430

Note

- Promising uses the requested dates, lead time offsets, and calendars that you set up to determine these demands.
- Promising will consume supplier capacity only from the 100 units for the AS54888.
- The sales orders are for different configurations of the same model, so Promising consumes the 10 units for the big display and the 60 units for the small display from the AS54888's 100 units.

Split Order Lines When Supply Meets a Threshold

You can split an order line and fulfill at least some of your customer's demand even if part of the quantity becomes available after the requested date.

Use this feature when:

- Your planned supply might change significantly from the first time you initially promise a sales order to the time when it approaches fulfilment.
- It's acceptable to split or reschedule an order line so that you can meet at least some of the demand through a substitution, by using a different supply source, or by fulfilling demand on different dates.

How it works:

- Use an ATP rule to specify the minimum quantity of the item that must be available before splitting the line, and Global Order Promising will split the line, then deliver part of the quantity instead of waiting until all of it's available. Promising will do this even if supply becomes available after the requested date.
- Promising promises the first part of the split on the date when the minimum quantity becomes available.
- If the minimum quantity isn't available by the customer's request date, then Promising will delay the line until you can ship the minimum quantity.
- Promising promises the remaining quantity when supply becomes available.
- If you don't provide a minimum quantity, then Promising splits the line according to the supply that it can schedule on time, and schedules the remaining quantity when supply becomes available.
- If Promising finds that the remaining quantity isn't available on any future date, then it won't split the line.

Realize these benefits:

- Fulfill items in a more timely way when you schedule or reschedule an order line.
- Use splits and substitutions when you reschedule the sales order. Improve your organization's flexibility in adapting to changing conditions in your supply chain.
- Fulfill at least some of the demand to reduce delayed quantities and improve the quality of your promising results.
- Streamline your end-to-end flow. Integrate split lines seamlessly across Global Order Promising, Order Management, and Oracle Backlog Management.

Use this feature to promise with your:

- Calendars and transit times
- Shipment date or arrival date
- Internal material transfer
- File-based data import
- Assemble-to-order configured item
- Database promising or source promising

Guidelines

- You can split according to a substitution, an organization, or the date.

- If Promising splits the order line according to date, then it will only split the original order line, it will split the original order line only one time, and it won't split a line that's already split.
- Consider whether rescheduling the sales order might delay fulfilment because of a supply constraint.
- You can't use the Manage Order Promising Demands page to split a line that's already split.
- If you use REST API to check availability or if you automatically schedule the line, and if you specify a value in the minSplitQuantity attribute in your REST API payload, then Promising will use the value in minSplitQuantity instead of the value in the Minimum Quantity for Splitting attribute from your ATP rule.
- Make sure you have the MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV privilege.

Order Management

- You must enable the Allow Partial Shipments of Lines option on the order line when you create the sales order in Order Management.
- If you want to split the line, then you must set the Allow Inventory Transaction attribute to No on the order line in Order Management.
- If you split an order line, and if the fulfillment tolerance on the line isn't zero in Order Management, and if Oracle Shipping already shipped the split line, then Shipping won't consider the cumulative quantity that it already shipped across all of the order line's fulfillment lines. Instead, Shipping will consider only the quantity on the split line that it's currently shipping.
- You can enable the Allow Splits option and the Allow Substitution option in the Order Promising work area but the Order Management work area won't indicate this change when you schedule or reschedule the line.
- If Order Management receives a rescheduling request from Promising, and if the data in that request doesn't reflect the data that's currently in the execution system, then Order Management will reject the request. To avoid this problem, make sure you collect the order before you reschedule it in the Order Promising work area.
- If set up your own orchestration process in Order Management, and if you reschedule when the process is on a wait step, then Order Management will reject the request to split the line.

Limitations

You can't use this feature with:

- Pick-to-order kits or configured items.
- Drop shipments.
- Shipment sets.
- An infinite time fence that you set up in an ATP rule for an item that's in a back-to-back flow.

Try It

Enable Splits and Substitution

1. Go to the Manage Order Promising Demands page, then search for a demand. For details, see *Overview of Managing Demand*.
2. In the search results, click **Actions > Edit**.
3. In the dialog that displays, set these attributes to Yes:
    - Allow Splits
    - Allow Substitutions

Here's another way. Enable splits and substitution on the fulfillment line:

1. Go to the Check Availability page. For details, see *Check Availability*.

2. In the Fulfillment Lines area, set these attributes to Yes:
    - Allow Splits
    - Allow Substitutions

Administer and Test

1. Create an ATP rule. Set the values when you create the rule. For details, see *ATP Rules*.

Attribute	Value
Promising Mode	Supply Chain Availability Search You must use this mode.
Split Order When Supply Becomes Available	Contains a check mark.
Minimum Quantity for Splitting	Enter a numeric value. This number represents the quantity in the item's primary UOM.

2. Test your work. Go to the Order Management work area, create a sales order, set the value, then click Submit.

Attribute	Value
Allow Partial Shipments of Lines	Yes For details, see *Specify Shipping Details for Sales Orders*.

Examples

Let's have a look at some examples so we can see how this works.

Assume you set the infinite time fence on your ATP rule to a distant date that happens sometime in the future.

You create a sales order with these values then submit it:

Attribute	Value
Item	AS54888 Desktop Computer
Quantity	150
Allow Partial Shipments of Lines	Yes

Here's the state of your current supply for the AS54888.

Supply	Day 0	Day 5	Day 10	ITF Date
Total	100	30	50	-
Consumed	-	-	-	-
Cumulative	100	130	180	-

Note

- Day 0 is the requested arrival date from the order line.
- Day 5 is 5 days after Day 0, and Day 10 is 10 days after Day 0.
- ITF Date represents the date that your Infinite Time Fence (ITF) sets.
- The supply row contains values for the quantity that's currently available.
- The 100 value in the Supply row on Day 0 is the supply that's available on the requested arrival date for the AS54888.
- The 30 value in the Supply row of Day 5 us that we expect more supply will become available on Day 5, for example, from a work order.
- The 130 value in the Cumulative row of Day 5 is the total supply that's available on Day 5 for the AS54888. It's the sum of the values from the Supply row for Days 0 up through Day 5.

Don't Set a Minimum Quantity

What happens if you don't set a value for the Set a Minimum Quantity attribute?

Promising will split the order line because it can meet the first part of the split on the requested date:

Split Lines	Expected Arrival Date	Available Quantity
Line 1-1	Day 0	100
Line 1-2	Day 10	50

Recall that the order line requested a quantity of 150, so promising will:

- Consume the quantity of 100 that's available on day 0 and ship it on time on line 1-1.
- Consume the remaining quantity of 50 when it becomes available on day 10 and ship it on day 10 on line 1-2.

Note that the original line is 1. Order Management uses the *x*-*y* format to represent a split line, where *x* is the original line, and *y* is a split of *x*. For example, 1-3 identifies the third split line from the original line 1.

Set the Minimum Quantity to 120

What happens if you set the minimum quantity to 120?

Promising will split the order line because it can meet the first portion of the split on the requested date.

Split Lines	Expected Arrival Date	Available Quantity
Line 1-1	Day 5	130

Split Lines	Expected Arrival Date	Available Quantity
Line 1-2	Day 10	20

Promising will:

- Consume the minimum quantity of 120 on day 5 and ship it on day 5 on line 1-1.
- Consume the remaining quantity of 30 when it becomes available on day 10 and ship it on day 10 on line 1-2.

Requested Quantity Exceeds the Supply That's Available

In the examples we've looked at so far, the requested quantity of 150 didn't exceed the supply that's available, which is 180. Now let's assume it does. Assume the requested quantity is 250.

Split Lines	Expected Arrival Date	Available Quantity
Line 1-1	Day 5	130
Line 1-2	Infinite Time Fence	20

Promising will:

- Consume the minimum quantity of 120 that becomes available on day 5, and ship it on day 5 on line 1-1.
- Consume the remaining quantity of 30 when it becomes available according to the infinite time fence, and ship it on that date on line 1-2.

Use the Manage Order Promising Demands Page

You can use the Manage Order Promising Demands page in the Global Order Promising work area to split an order line into more than one line so you can ship from different organizations or on different days when you reschedule a sales order.

Split but Don't Substitute

Promising's reschedule behavior is similar to the behavior that Promising uses when it initially schedules a line. If you allow splits but don't substitute the item when you reschedule, then Promising applies the same flow that's described in Requested Quantity Exceeds the Supply That's Available. The important difference is that rescheduling uses the current supply and demand that's actually available when you reschedule. Promising can split the order line according to date or according to the supplies that are available in different organizations for the same item.

Split and Substitute

Promising's reschedule behavior is the same as the behavior described in the Substitutions subtopic.

Substitutions

Note

- Promising prioritizes scheduling so it can fulfill your sales order on time or with minimum delay.
- Order Management only considers substitutes that you specify at the validation organization's item level.

- If the item has a coverage in Order Management, and if you want to substitute the item, then you must make sure that the substitute item's Enable Coverage Contract attribute equals Yes in the Product Information Management work area. If it doesn't, Order Management will reject your request.
- If an order line is in a shipment set and you need to substitute it, you can remove the order line from the shipment set, and then substitute the item.
- You can't use a single request to split an order line and substitute an item on the original line at the same time in Order Management. Instead, send one request to Order Management that substitutes the item on the original line, then send another request that splits the line.
- You can't substitute an assemble-to-order configuration model.

Assume:

- You have an item named AS54888 Desktop Computer, and you set up a substitute rule that can substitute the AS54888 for another item named AS6000 Big Desktop Computer in organization M1.
- You enable the Allow Substitution option and the Allow Splits option in the Order Promising work area.
- You place a sales order with a Requested Arrival Date of day 10 and a Requested Quantity of 10 for the AS54888.
- You have a quantity of 8 available in on-hand supply for the AS54888, and you expect a quantity of 10 will be available for the AS6000 on day 10.

Promising will split the line into lines 1-1 and 1-2, ship 8 of the AS54888s on line 1-1 on the requested date, and ship 2 of the AS6000s when they become available according to the infinite time fence on day 10.

Here's a summary.

Order at Org M1	Requested Arrival Date	Item	Expected Arrival Date	Order Line Quantity
Order Line's Header	Day 10	AS54888	-	-
Original Order Line	Day 10	AS54888	Day 10	8
Split Order Line	Day 10	AS6000	Day 10	2

Note

- Promising can recommend a split from more than one substitute item and can ship it from more than one organization.
- You can't substitute a shipment set, assemble-to-order item, pick-to-order item, or pick-to-order kit.

For more, see *Split or Substitute Fulfillment Lines*.

Behavior with the ATP Time Fence

Requested Date Happens Before the ATP Time Fence Expires

If some of the on-hand supply for the item is available before the time fence expires, and if you expect more supply after the time fence expires, then Promising will split the order line into lines 1-1 and 1-2, then use the on hand supply to promise 1-1 on the requested date.

Behavior depends on whether you have a sourcing rule:

Have a Sourcing Rule?	Description
Yes	Promising will use the sourcing rule to promise the remaining quantity on a future date.
No	Promising will use the supply that you expect will be available after the time fence expires.

Requested Date Happens After the ATP Time Fence Expires

Behavior depends on whether you have a sourcing rule:

Have a Sourcing Rule?	Description
Yes	Promising will use the sourcing rule to promise the remaining quantity by the requested date.
No	Promising will use your existing ATP supply.

Use Cutoff Times to Control Your Shipments

Use a cutoff time to change the scheduled ship date for sales orders that Promising has already scheduled but that you can't ship today for some reason.

For example, if the ship date and time happens after the time that your carrier can pick up the item, then Promising will move the ship date to the next day that's available according to the shipment calendar in your shipping organization, the carrier, and your customer's location.

Here are some examples where this feature is particularly useful:

- You submit sales orders 24 hours a day, seven days a week.
- You promise same day shipping.

Assume you submit a sales order at 6 PM on Monday, but your carrier's last pick up for the day happens at 5 PM. You can use the cutoff to tell Promising to move the shipment date to Tuesday.

Here's what Promising does.

- Applies the cutoff for various scheduling flows, including the first time it schedules an order, when you check availability, when you manually reschedule a sales order, during automatic scheduling, and so on.
- Considers a variety of setups to determine whether to apply the cutoff, such as lead time offsets, calendars, and so on.
- Applies the cutoff only during the final step in fulfillment, such as when shipping an item to your customer. It doesn't apply the cutoff when it transfers supply between internal organizations unless you set up the receiving organization as a customer.
- Compares the cutoff time to the time when Promising received the sales order. Promising uses this approach only if it uses the system date to determine the ship date.
- If the Scheduled Ship Date happens now or in the past, then Promising applies your cutoff, but if it happens in the future, then Promising doesn't apply any cutoffs.

Note

- To set a cutoff, Go to the Plan Inputs work area, click **Tasks > Maintain Supply Network Model**, search for your item, click Interlocation Shipping Networks, then set the Order Shipment Cutoff Time attribute. To set it for a carrier, click **Carrier** instead of Interlocation Shipping Networks.
- You can use the cutoff with a shipment date or a shipment set. You can also use it when you set the Request Type to Ship On or to Arrive On.
- You can't use a cutoff with a drop shipment.

You can use the Cutoff Time attribute in file-based data import to import a cutoff date. The import will replace any current cutoffs that you have created.

File	Worksheet
ScpOrganizationImportTemplate.xlsm	Organization
ScpCarrierImportTemplate.xlsm	Carrier
ScpInterLocationShipMethodsImportTempl	InterLocationShipMethods

For details, go to *File-Based Data Import (FBDI) for Oracle SCM*. Locate the Supply Chain Planning chapter, then click these links:

- Supply Chain Planning Carriers
- Supply Chain Planning Interlocation Shipping Methods
- Supply Chain Planning Organizations

Time Zone

Promising applies the cutoff according to the local time zone where your shipping organization resides. It uses this time when it promises the sales order. For example, if you set the cutoff to 5 PM, and if the organization's local time when Promising promises the order is:

- 4 PM, then Promising keeps the current ship date.
- 6 PM, then Promising moves the ship date to the next day that's available.

Priority

If you specify more than one cutoff time, then Promising uses a hierarchy to prioritize which one to use, where 1 is the highest and 3 is the lowest:

1. Use the cutoff time that you specify for the source, destination, and carrier.
2. Use the cutoff time that you specify for the carrier.
3. Use the cutoff time that you specify for the organization.

Example

Assume you set up three different cutoff times. A dash means you didn't specify a value.

Example Setup	Organization	Carrier	Shipping Method	Destination	Cutoff Time
A	Factory 1	-	2 Day Air	Region 1	17:00
B	-	Quick Shipping	-	-	18:00
C	Factory 1	-	-	-	19:00
D	Factory 2	-	3 Day Truck	Region 1	-

Assume:

- The local time at your shipping organization is Monday, 17:30 when Promising promises the sales order.
- The schedules at your shipping organization, the carrier, and destination all work on Tuesday.

Here's how Promising applies your cutoffs for three different sales orders.

Sales Order	Attribute Values On the Sales Order	Cutoff Time That Promising Applies	Original Scheduled Ship Date	New Scheduled Ship Date
76845	**Factory 1** **2 Day Air** **Region 1**	17:00	Monday	Tuesday, 23:59
37608	Factory 2 **Quick Shipping** 2 Day Air Region 1	18:00	Monday	Monday, 23:59
11564	**Factory 1** 3 Day Truck Region 1	19:00	Monday	Monday, 23:59

Bold text indicates the values that Promising uses.

Assume:

- Sales order 76845 is in the Factory 1 organization, the sales order specifies to use 2 Day Air, and the customer on the order is in Region 1, so Promising uses example setup A. Promising promised at 17:30 on Monday, which happens after A's 17:00 cutoff, so Promising moves the Scheduled Ship Date to the last minute on Tuesday, which is 23:59.
- In general, Promising sets the time stamp to 23:59 in the local time of the shipping organization. It does this so it can consistently compare the current system time to the cutoff time in instances where the ship date is today.
- Sales order 37608 is just like 76845 except 37608 is in the Factory 2 organization and it specifies the carrier. However, you don't have a setup that matches Factory 2, 2 Day Air, and Region 1, so Promising moves down to

priority 2 and uses the setup that matches the carrier, which is example B. The cutoff for Example B is 18:00, the current system time is 17:30, so Promising changes the scheduled ship date to 23:59 on Tuesday.

- Sales order 11564 is just like 76845 except 11564 specifies to use 3 Day Truck. However, you don't have a setup that matches Factory 1, 3 Day Truck, and Region 1, so Promising moves down to priority 3 and uses the setup that matches the organization, which is example C. The cutoff for Example C is 19:00, which happens after 17:30, so Promising doesn't apply the cutoff and doesn't change the scheduled ship date.

Note that the shipping method is a combination of the carrier, service level, and transportation mode.

Setup

Assume you need to set up the cutoff time to 5:00 PM for each ground shipment that you ship through your Quick Shipping carrier.

Here's your setup:

1. Examine the behavior without using a cutoff time.
    - Go to the Order Management work area, query for your sales order, then click **Actions > Switch to Fulfillment View**.
    - On the Order page, click **Fulfillment Lines**, then click **Check Availability**.
    - On the Check Availability page, notice the values.

Attribute	Value
Expected Ship Date	02/21/22
Days of Delay	0
Availability Status	Empty

    - In the Availability Options area, click **Actions > Availability Details**.
    - On the Availability Details, Current Option page, in the Availability Details area, click **Actions > Pegging Properties**.
    - In the Pegging Properties dialog, notice the values.

Attribute	Value
Carrier	Quick Shipping
Mode of Transport	Air
Service Level	2 Day Air

    - Click **Done > Done > Done**. You should be back on the Order page.

2. Create a cutoff time.
    - Open another internet browser and sign into Promising.
    - Go to the Plan Inputs work area, then click **Tasks > Maintain Supply Network Model**.
    - On the Maintain Supply Network Model page, click **Interlocation Shipping Networks**, then do a search.

Attribute	Value
Carrier	Quick Shipping
Mode of Transport	Air

3. In the search results, set the value, then click **Save**.

Attribute	Value
Order Shipment Cutoff Time	15:00 Use the *hh:mm* format. where - *hh* is the hours on a 24 hour clock. - *mm* is the minutes after the hour. You must use a 24 hour clock. For example, you can't use 5:00 to indicate 5:00 PM. Use 17:00 instead.

4. Examine the revised behavior.
    - Go back to the browser that you used to open the sales order.
    - On the Order page, click **Check Availability**. Promising recalculates the dates, and uses your new cutoff.
    - On the Check Availability page, notice that the Expected Ship Date is now the next day and that there is 1 day of delay.

Attribute	Value
Expected Ship Date	02/22/22
Days of Delay	1
Availability Status	Delayed

Add Lead Time So You Can Pick and Pack

Use the Pick and Pack Lead Time attribute to add flexibility between the date when supply becomes available at your fulfillment organization and the time when you ship it.

You can add lead time to your scheduled shipment date and scheduled delivery date. Use the lead time to do various activities, such as label and package your item, or prepare the shipment.

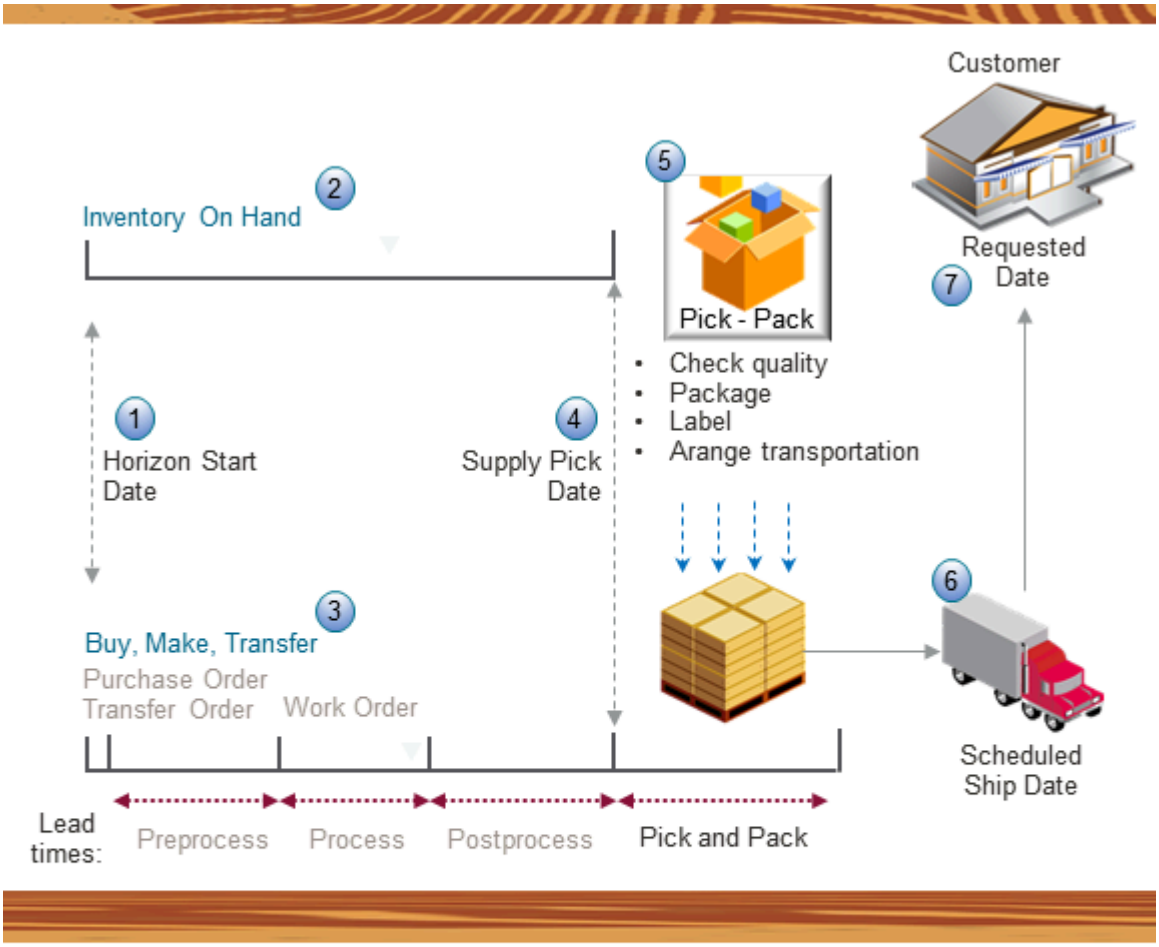
Oracle Global Order Promising typically schedules order lines to ship on the day that supply becomes available at the fulfillment location. It delays fulfillment only if it receives an availability check or a scheduling request on the same day that it must ship and after the value in the network model's Order Shipment Cutoff Time attribute.

You might need more time to package and label the item, arrange for transportation, or do quality checks before you ship. You can add extra pick and pack lead time for these activities and you can adjust that time according to the fulfillment organization, carrier, and destination. The lead time that you specify will offset the promised shipment and delivery date for each order line.

Use this feature to realize these benefits:

- Include the time that you need to package and label your shipment, and to prepare for transportation in your promising calculations.
- Offset lead times before you ship and at different levels of your network to meet your specific requirements.
- Add pick and pack lead time to your available-to-promise, buy, make, or transfer supply.

Here's a summary of how it works.



Note

1. Start the promising horizon. The promising horizon is the number of days that Promising considers when it promises your item, such as the number of days to look at in your calendar or in the lead time, the availability for the item's supply, resources, supplier capacity, and so on. For more about the horizon, see *Manage Promising Profiles*.
2. If you're using supply that's already on hand in inventory, then Promising sets the Supply Pick Date to the date when it finds that supply is available in inventory and ready to pick.
3. If you're using a buy or transfer flow, then Promising applies your preprocessing lead time, processing lead time, and postprocessing lead time to determine the Supply Pick Date. If you're using a make flow, then Promising applies your processing and postprocessing lead times. Either way, Promising uses your organization's calendar to help determine the Supply Pick Date.
4. The Supply Pick Date indicates the earliest date that supply is available to pick.

5. Promising uses the value that you set in Pick and Pack Lead Time attribute to determine how much time to add so you can pick and pack the item. You can use this time for a variety of reasons according to your specific requirements, such as to do a quality assurance process, package and label the item, arrange for special transportation, and so on.
6. Promising calculates the scheduled ship date as the Supply Pick Date plus the pick and pack lead time. Promising also considers the transit time needed to ship the item between the Scheduled Ship Date and the Scheduled Arrival Date in the usual way.
7. You ship the item to your customer so it arrives by the Requested Date on the sales order.

Note that you can't view the Supply Pick Date on the sales order. Instead, use the Check Availability page to view it.

Try It

1. Make sure you have these privileges.
    - Schedule Fulfillment Line (MSP_SCHEDULE_ORCHESTRATION_ORDER_FULFILLMENT_LINE_PRIV)
    - Edit Supply Network Model (MSC_EDIT_SUPPLY_NETWORK_MODEL_PRIV)
    - View Supply Network Model (MSC_VIEW_SUPPLY_NETWORK_MODEL_PRIV)
2. Go to the Plan Inputs work area, then click **Tasks > Maintain Supply Network Model**.
3. On the Maintain Supply Network Model page, click **Interlocation Shipping Networks**.
4. Search for and open your network.
5. Enter a whole number in the Pick and Pack Lead Time attribute.
6. Click **Save**.

Guidelines

- Use a whole number in the Pick and Pack Lead Time attribute. The number represents days. For example, if you set it to 2, then you'll have 2 days to pick and pack.
- If the value in the network model's Order Shipment Cutoff Time attribute applies at run time, then Promising will apply the value that you set in the Pick and Pack Lead Time attribute over and above the shift that happens because of that cutoff time.
- If you do a lot of planning during fulfillment, you might find that the Pick and Pack Lead Time attribute is most useful in your make to stock flow. For details, see *Make to Stock Flow*.
- If you promise according to the horizon's end date or the infinite time fence, then Promising will consider the last open date that's available on the calendar as the Supply Pick Date, and will offset the Scheduled Ship Date after this end date. For background, see *Manage Supply After the Promising Horizon Expires*.

You can set a value in the Pick and Pack Lead Time attribute on the Interlocation Shipping Networks tab, the Carriers tab, and the Organization tab. If you set it on more than one of these tabs, then Promising uses this priority to determine which value to apply:

1. Ship-from organization, plus the shipping method (carrier plus the service level plus the transportation mode), plus the destination.
2. The carrier.
3. The organization.

You can also use these file-based data import templates to import the Pick and Pack Lead Time attribute:

- ScpInterLocaitonShipMethodsImportTemplate.xlsm
- ScpCarrierImportTemplate.xlsm
- ScpOrganizationImportTemplate.xlsm

You can use this feature with:

- Different types of supply, such as on hand, transfer orders, purchase orders, or work orders
- In your back-to-back flow
- Assemble-to-order configured items

You can't use this feature with:

- A drop shipment
- Demand for a work order component that comes from your bill of resources

Supply Pick Date

Promising uses the Supply Pick Date on the sales order to indicate when supply is available. Promising uses it to calculate the Scheduled Ship Date:

- Scheduled Ship Date equals Supply Pick Date plus Pick and Pack Lead Time

If Supply Is	Then Supply Pick Date Is
Currently in inventory	Date when you can pick supply from inventory.
Buy, make, or transfer	Date when supply becomes available after postprocessing lead time. For background, see *Set Postprocessing Lead Times*.

Promising calculates the Scheduled Ship Date in the shipping organization's local time zone.

Current Date	Requested Date	Supply Type	Pick and Pack Lead Time	Supply Pick Date	Scheduled Ship Date
Day 0	Day 30	In inventory	2	Day 28	Day 30
Day 0	Day 30	Buy, make, or transfer	2	Day 28	Day 30
Day 0	Day 0	In inventory	2	Day 0	Day 2

For example, assume:

- Today is day 0.
- The requested date is 30 days from today.
- Supply is currently available in inventory.
- You set the Pack and Lead Time attribute to 2.

Promising will set the Supply Pick Date attribute to 28 days from today, and the Scheduled Ship Date attribute to 30 days from today.

Supply's Currently Available in Inventory

If the supply needed to meet demand is currently available in inventory, and:

Is There Enough Time Between Current Date and Requested Date for Pick and Pack?	Promising Will
Yes	Calculate the Supply Pick Date attribute on the sales order so it meets the requested date.
No	Move the scheduled ship date to a later date so there's enough time to pick and pack.

Consider some examples:

Current Date	Requested Date	Pick and Pack Lead Time in Days	Supply Pick Date on Sales Order	Scheduled Ship Date
March 31	April 10	5	April 5	April 10
April 8	April 10	5	April 8	April 13
April 10	April 10	5	April 10	April 15

Assume:

- Today is March 31.
- The Requested Date is April 10.
- The Pick and Pack Lead Time is 5 days.

There's enough time between today and the Requested Date to accommodate the Pick and Pack Lead Time, so Promising sets the Supply Pick Date to April 5 and the Scheduled Ship Date to April 10.

Capable-to-Promise

Assume you're using a capable-to-promise flow, and you have these dates:

Current Date	Quantity	Requested Date	Processing Lead Time	Postprocessing Lead Time	Pick and Pack Lead Time
May 22	50 units	May 31	5 days	1 day	2 days

To meet this demand, Promising will recommend that your flow creates some buy, make, or transfer supply. For this example, assume it recommends this schedule:

Status	May 22	May 23	May 24	May 25	May 26	May 27	May 28	May 29	May 30	May 31
Start work order	-	Today	-	-	-	-	-	-	-	-
Production complete	-	-	-	-	-	Today	-	-	-	-

Status	May 22	May 23	May 24	May 25	May 26	May 27	May 28	May 29	May 30	May 31
Pick Date	-	-	-	-	-	-	Today		-	-
Pick n Pack	-	-	-	-	-	-	-	Today	Today	
Scheduled Ship Date	-	-	-	-	-	-	-	-	-	Today

Here's what Promising does:

- Allows 5 days processing to finish production for the work order, so production for the work order starts on May 23 and ends on May 27.
- Sets the Pick Date immediately after postprocessing is done, which is May 28.
- Allows 2 days, May 29 to May 30, for pick and pack.
- Sets the Scheduled Ship Date to May 31.

For background, see *Guidelines for Using Lead Time Mode*.

Shipment Cutoff Time

If the current time happens after the cutoff time, then Promising will add one day to the Scheduled Ship Date.

Consider these examples:

Current Date	Current Time	Cutoff Time	Requested Date	Shift to Next Open Day?	Due Date for Buy, Make, or Transfer Order	Supply Pick Date on Sales Order	Pick and Pack Lead Time in Days	Scheduled Ship Date
Day 0	7 PM	5 PM	Day 0	Yes	Day 0	Day 1	2	Day 3
Day 0	7 PM	5 PM	Day 10	No	Day 10	Day 10	2	Day 12
Day 0	4 PM	5 PM	Day 15	No	Day 10	Day 13	2	Day 15
Day 0	3 PM	5 PM	Day 0	No	Day 0	Day 0	2	Day 2

For example, assume you set the Pick and Pack Lead Time attribute to 2, and:

- Today is day 0.
- The current time is 7 PM, the cutoff time is 5 PM, so Promising will move the scheduled ship date to the next open day. For background, see *Use Cutoff Times to Control Your Shipments*.
- The requested date is today.

Promising will set the:

- Supply Pick Date attribute on the sales order to day 1.
- Scheduled Ship Date attribute on the sales order to day 3, which is the Supply Pick Date plus the Pick and Pack Lead Time.

Allocate Supply in a Hierarchy

Allocate Supply in a Hierarchy

Improve the way you distribute supply for an item that's in high demand and you have only a limited amount of supply to distribute.

- Improve how you allocate supply across your supply chain for items that are in high demand and that you sell in large quantities. For example, when you sell millions of items that involve hundreds of organizations.
- Reallocate supply at run time between nodes in your hierarchy so you can Increase your fill rates.
- Track the sales orders that you ship to get a more accurate, real time picture of the supply that's currently available for your promotional campaign or seasonal event throughout the duration of the campaign or event.

Use this feature to distribute items that are in high demand more fairly across your supply chain.

- Create a hierarchy of nodes that represents your supply chain. For example, a node might be a retail outlet, a parts depot, distribution center, factory, and so on.
- Create up to three levels in your hierarchy. For example, each level might represent different parts of your business, such as geography, customer priority, sales channel, and so on.
- Allocate supply in the hierarchy. For example, allocate supply in your High Volume Region first, then to your North East channel in the High Volume Region.
- Determine what supply is available through allocations that you make for a limited, specific time frame, such as a promotional campaign. You can track sales orders that Order Management has shipped from the beginning of the campaign to the current date, then reduce allocated supply at the start of the campaign.

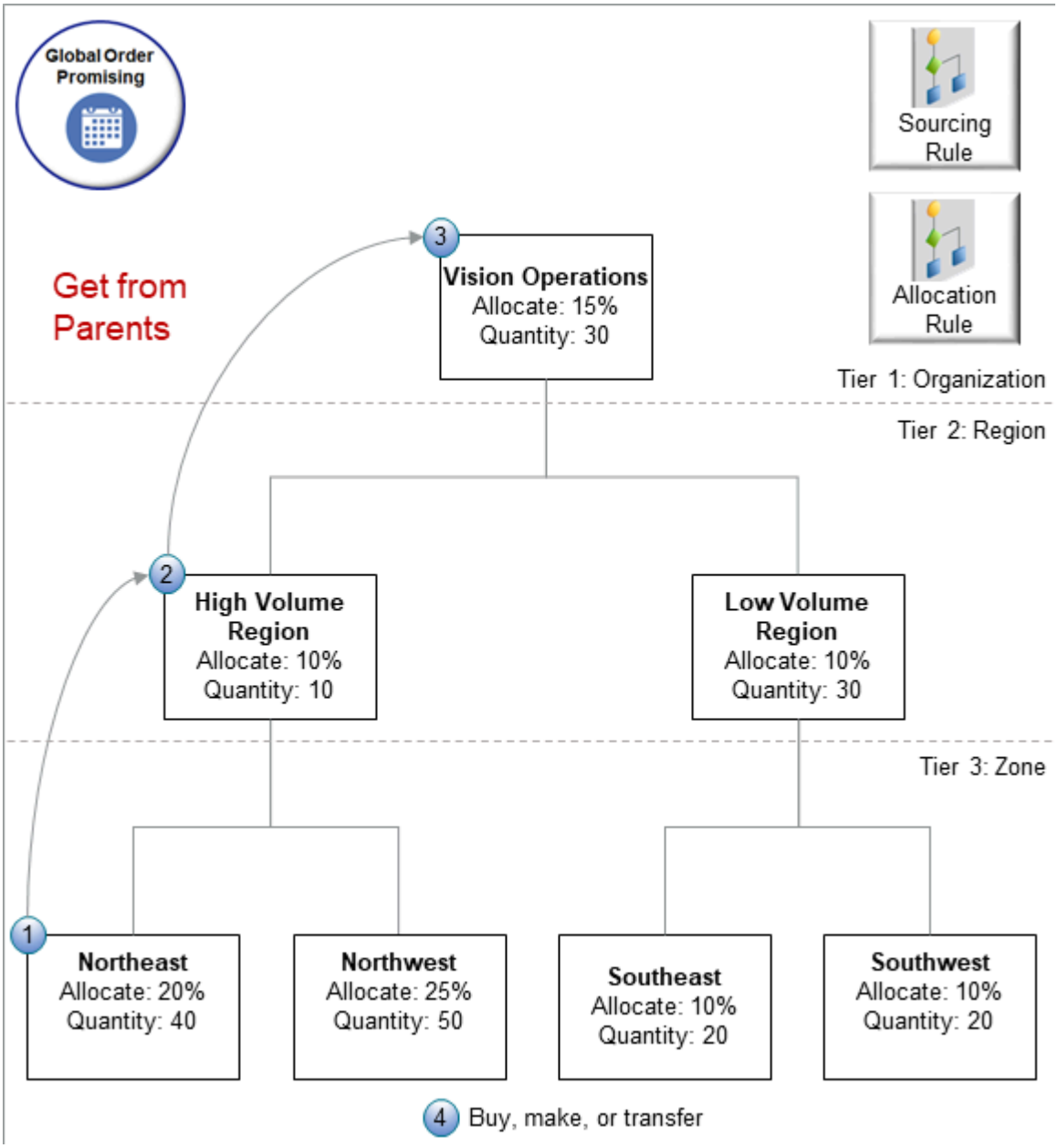
Use the hierarchy to balance how you allocate supply across your network.

- Get supply that you allocate to the parent and share it with a child.
- Reassign supply from one lower priority node to another lower priority node.
- Specify how much to allocate according to a percentage on each level.
- Specify a percentage of supply that's available to meet demand in each node.
- Protect some quantity so it remains available for your lower priority node.

Get Supply from a Node's Parent

Set up a hierarchy that gets supply from a node's parent and distributes it to other nodes.

Assume you have this hierarchy, and you will get supply for the sales order from all three levels of the hierarchy.



Here's the sequence that Promising will use to allocate supply. It's the same one that's in *Use Lower Priority Supply to Fulfill Higher Priority Demand* but with a few important differences:

Step	Description	Remaining Balance
1	You create a Sales Order in the Northeast node for the AS54888 computer with a quantity of 100, and Order Management populates the three attributes that you reference in your allocation hierarchy to All, High Volume, and Northeast. Promising consumes all 40 units of the supply that's available to allocate in the Northeast node, which is in the lowest level, first.	220 minus 40 equals 180.

Step	Description	Remaining Balance
2	Promising consumes the 10 units of supply that's available to allocate in Northeast's parent, High Volume Region.	180 minus 10 equals 170.
3	Promising still needs 170 units, so it consumes the 30 units that are available in High Volume's parent, Vision Operations.	170 minus 30 equals 140.
4	Promising still needs 140 more units to fulfill the 220 units on the fulfillment line, so it uses your ATP rules and sourcing rules to make, buy, or transfer the remaining 140 units.	140 minus 140 equals 0.

Summary of the Setup

1. Enable the features.
2. Specify the hierarchy.
3. Import your data.
4. Create an extensible flexfield.
5. Create value sets.
6. Create an allocation rule.
7. Test your setup.

This topic uses example values. You might need different values, depending on your business requirements.

Enable the Features

1. Go to the Setup and Maintenance work area, then select the **Supply Chain Planning** offering.
2. Click **Change Feature Opt In**.
3. On the Opt In page, In the Supply Chain Planning row, click the **pencil**.
4. Enable the Attribute-Based Planning feature, then click **Done**.

If you don't do these steps, you won't be able to see the Manage Supply Allocation Rules page that you use later in this procedure.

Specify the Hierarchy

1. Go to the Plan Inputs work area, then click **Tasks > Manage Planning Attributes**.
2. On the Define Planning Attribute Mapping tab, use the Create action three times to create these attributes.

Attribute Name	Planning Attribute Type	Data Type
GOPCustGrp	Netting and Allocation Attribute	Character
GOPAll	Netting and Allocation Attribute	Character
GOPCustParentGrp	Netting and Allocation Attribute	Character

   Leave the Oracle Fusion Value Set attribute empty.
3. Click **Set Allocation Attributes**. Make sure you enabled the features earlier in this procedure. If you didn't, you won't see the Set Allocation Attributes tab.
4. Set the values.

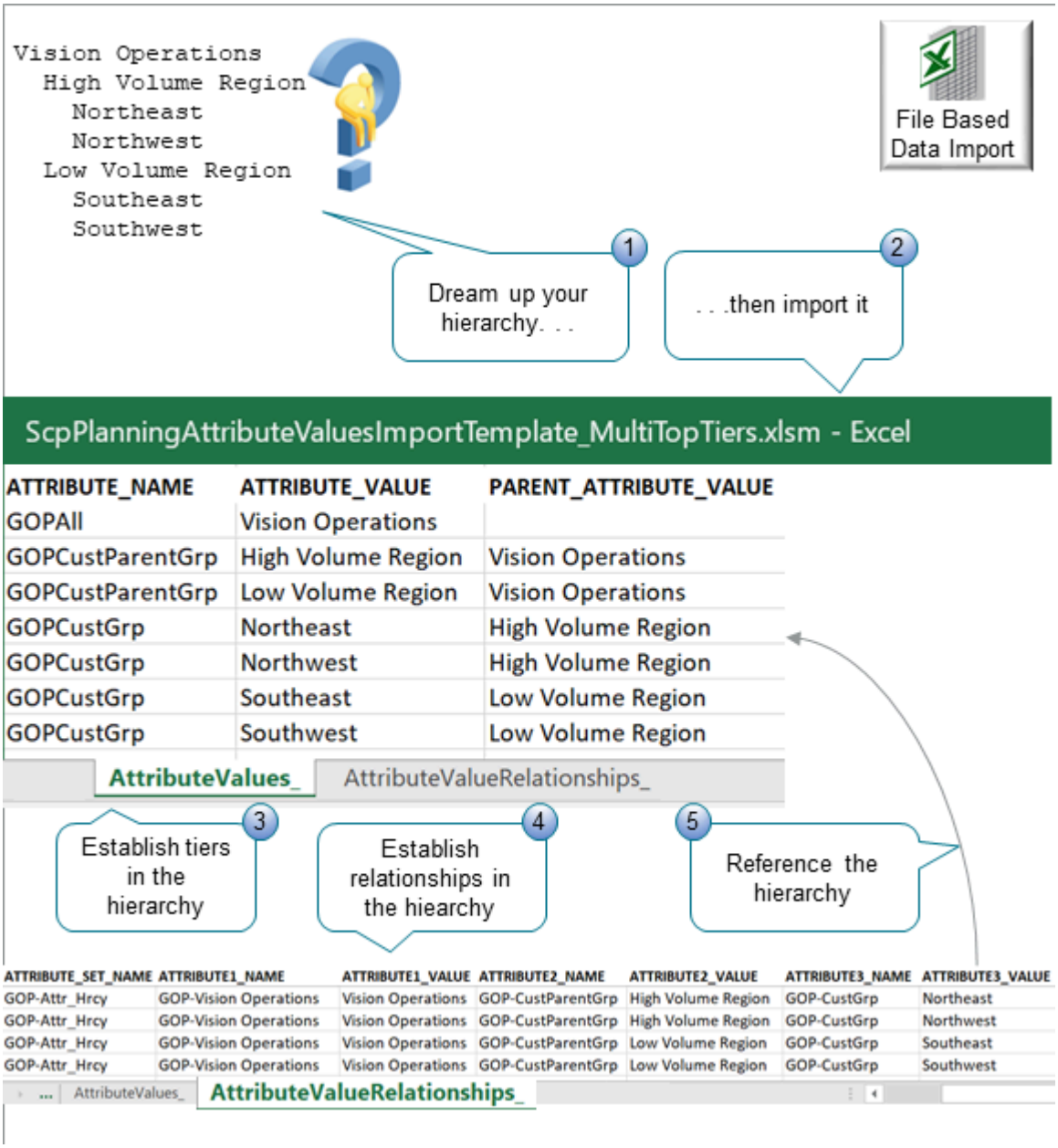
Attribute	Value
Allocation Tier 1	GOPAll
Allocation Tier 2	GOPCustParentGrp
Allocation Tier 3	GOPCustGrp

5. Click **Save and Close**.

   Promising automatically creates an attribute set named BM_Attr_Hrcy. You must use this value when you import. We'll show you how next.

Import Your Data

You must use file-based data import to create your hierarchy. You can't use the promising or planning work areas to do this.



What the Numbers Mean

1. Think about how the hierarchy that you'll need to prioritize and fulfill demand.
2. Use file-based data import to import your thoughts into Oracle Applications.
3. Use the AttributeValues tab to establish tiers in the hierarchy.
4. Use the AttributeValueRelationships tab to establish relationships for each node in the hierarchy.
5. Reference the hierarchy that you create on the AttributeValues tab.

Assume you need to create this hierarchy.

```
Vision Operations
 High Volume Region
 Northeast
 Northwest
 Low Volume Region
```

```
Southeast
Southwest
```

The text might be hard to read in the illustration, so here is the same data from the AttributeValues tab:

SR_INSTANCE_CODE	ATTRIBUTE_NAME	ATTRIBUTE_VALUE	PARENT_ATTRIBUTE_VALUE
GOP	GOPAll	Vision Operations	-
GOP	GOPCustParentGrp	High Volume Region	Vision Operations
GOP	GOPCustParentGrp	Low Volume Region	Vision Operations
GOP	GOPCustGrp	Northeast	High Volume Region
GOP	GOPCustGrp	Northwest	High Volume Region
GOP	GOPCustGrp	Southeast	Low Volume Region
GOP	GOPCustGrp	Southwest	Low Volume Region

Note these requirements for the AttributeValues tab. You must include:

- A separate row for each node in the top tier of your hierarchy, a separate row each node in the middle tier, and a separate row for each node in the bottom tier. Each row establishes the relationships between all nodes in the hierarchy.
- To specify a top level node, include the value GOPAll in the ATTRIBUTE_NAME column, and include the name of the top level node in the ATTRIBUTE_VALUE column, such as Vision Operations. GOPAll establishes the top tier. All the rows that have GOPAll will be part of your top tier.
- To specify a node in the middle tier of your hierarchy, include the value GOPCustParentGrp in ATTRIBUTE_NAME, include the name of the node in ATTRIBUTE_VALUE, such as High Volume Region, and include the name of this row's parent in PARENT_ATTRIBUTE_VALUE, such as Vision Operations. GOPCustParentGrp establishes the middle tier. All the rows that have GOPCustParentGrp will be part of your middle tier.
- To specify a node in the bottom tier of your hierarchy, include the value GOPCustGrp in ATTRIBUTE_NAME, include the name of the node in ATTRIBUTE_VALUE, such as Northeast, and include the name of this row's parent in PARENT_ATTRIBUTE_VALUE, such as High Volume Region. GOPCustGrp establishes the bottom tier. All the rows that have GOPCustGrp will be part of your bottom tier.

GOP, GOPAll, GOPCustParentGrp, GOPCustGrp are all example values. You don't have to use them. You can use whatever values you need to represent your supply chain.

Moving on, here is the data from the AttributeValueRelationships tab.

ATTRIBUTE_SET_NAME	ATTRIBUTE1_NAME	ATTRIBUTE1_VALUE	ATTRIBUTE2_NAME	ATTRIBUTE2_VALUE	ATTRIBUTE3_NAME	ATTRIBUTE3_VALUE
BM_Attr_Hrcy	GOP-Vision Operations	Vision Operations	GOP-CustParentGrp	High Volume Region	GOP-CustGrp	Northeast
BM_Attr_Hrcy	GOP-Vision Operations	Vision Operations	GOP-CustParentGrp	High Volume Region	GOP-CustGrp	Northwest

ATTRIBUTE_SET_NAME	ATTRIBUTE1_NAME	ATTRIBUTE1_VALUE	ATTRIBUTE2_NAME	ATTRIBUTE2_VALUE	ATTRIBUTE3_NAME	ATTRIBUTE3_VALUE
BM_Attr_Hrcy	GOP-Vision Operations	Vision Operations	GOP-CustParentGrp	Low Volume Region	GOP-CustGrp	Southeast
BM_Attr_Hrcy	GOP-Vision Operations	Vision Operations	GOP-CustParentGrp	Low Volume Region	GOP-CustGrp	Southwest

Note these requirements for the AttributeValueRelationships tab. You must include:

- The value BM_Attr_Hrcy in the ATTRIBUTE_SET_NAME column, and you must include this value in each row that has data. BM_Attr_Hrcy means Backlog Management Attribute Hierarchy. Don't worry. We aren't using Backlog Management. We're using this value because we share this logic with other Oracle Applications, such as Oracle Backlog Management.
- A separate row for each node in the bottom tier of your hierarchy. Each row establishes a relationship between the bottom node, that node's parent, and the bottom node's grandparent.
- The name of the bottom node's grandparent in ATTRIBUTE1_VALUE, and preface it with the text GOP-. For example, GOP-Vision Operations.
- The name of the top node in ATTRIBUTE1_VALUE, such as Vision Operations.
- The value GOP-CustParentGrp in ATTRIBUTE2_NAME, and you must include this value in each row that has data.
- The name of the bottom node's parent in ATTRIBUTE2_VALUE. For example, in the row that has Northeast in ATTRIBUTE3_VALUE, include the value High Volume Region in ATTRIBUTE2_VALUE.
- The value GOP-CustGrp in ATTRIBUTE3_NAME, and you must include this value in each row that has data.
- The name of a node that resides in the bottom tier in ATTRIBUTE3_VALUE, such as Northeast.

Try it.

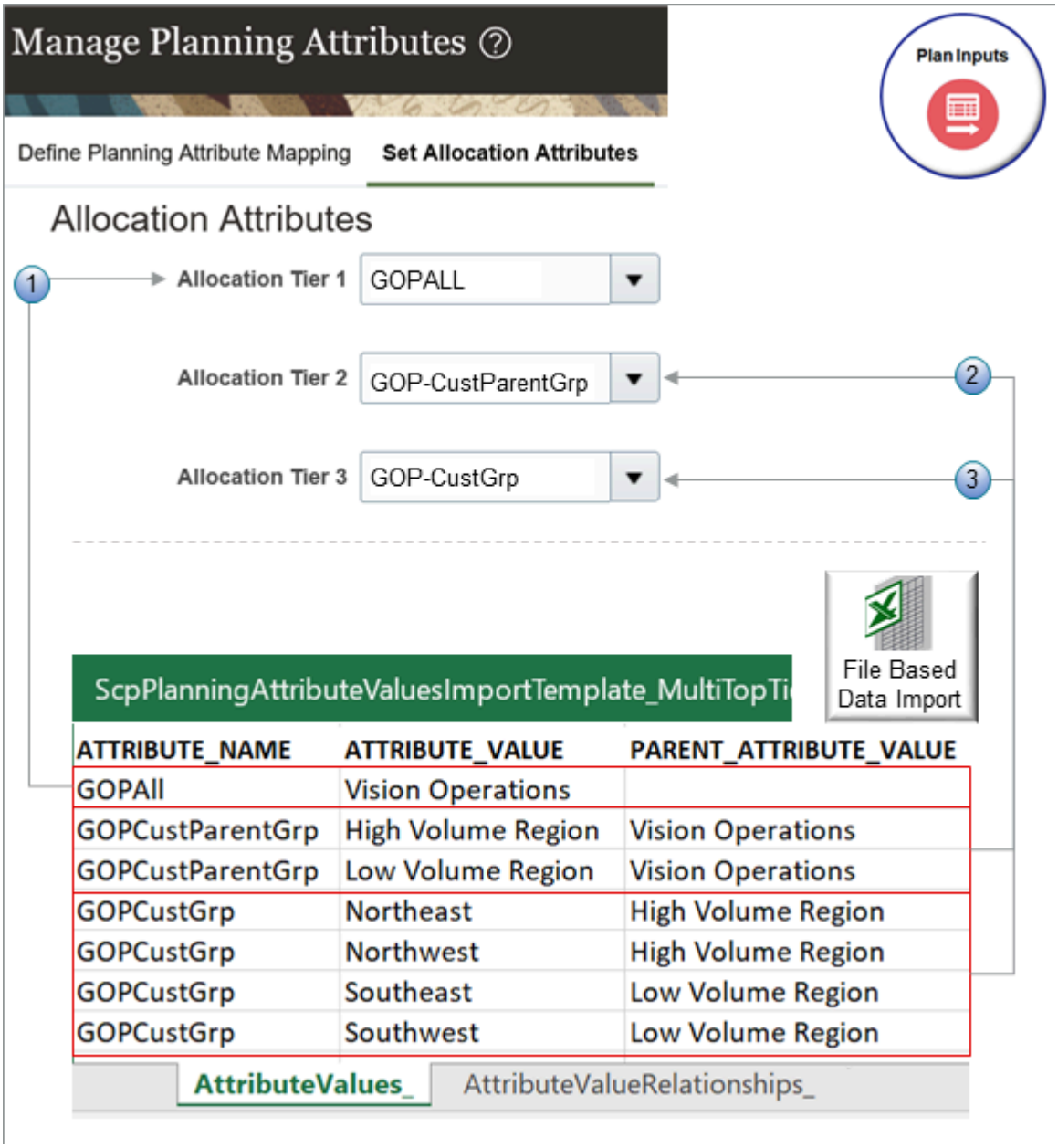
1. Download a copy of ScpPlanningAttributeValuesImportTemplate_MultiTopTiers.xlsm from the Supply Chain Planning chapter of *File-Based Data Import (FBDI) for Oracle SCM*.
   To get an xls file that already has the data for this example, go to My Oracle Support, search for Technical Reference for Oracle Global Order Promising (Doc ID 2896893.1), then download the Example FBDI of an Allocation Hierarchy attachment.
2. Add your data to the template, then click **Generate CSV Files**. The template will create three CSV files and save them, typically to the hard drive on the computer that you're using. Make a note of where the template saves them.
3. Go to the Scheduled Processes work area, the search for the *Load Interface File for Import* scheduled process.
4. In the Process Details dialog, set the parameters, then click **Submit**.

Parameter	Value
Import Process	Load Planning Data from Flat Files
Data File	Browse to the location that you noted earlier, then select AttributeValues.csv. Don't attempt to import AttributeValueRelationships.csv before you import AttributeValues.csv. If you do, the scheduled process will fail.

5. Wait for the process to successfully finish.
6. Repeat these steps, except import the AttributeValueRelationships.csv file.

Where Are My Values in the Plan Inputs Work Area?

Notice the relationship that you just created between your import and the Manage Planning Attributes page that you used earlier in this procedure.



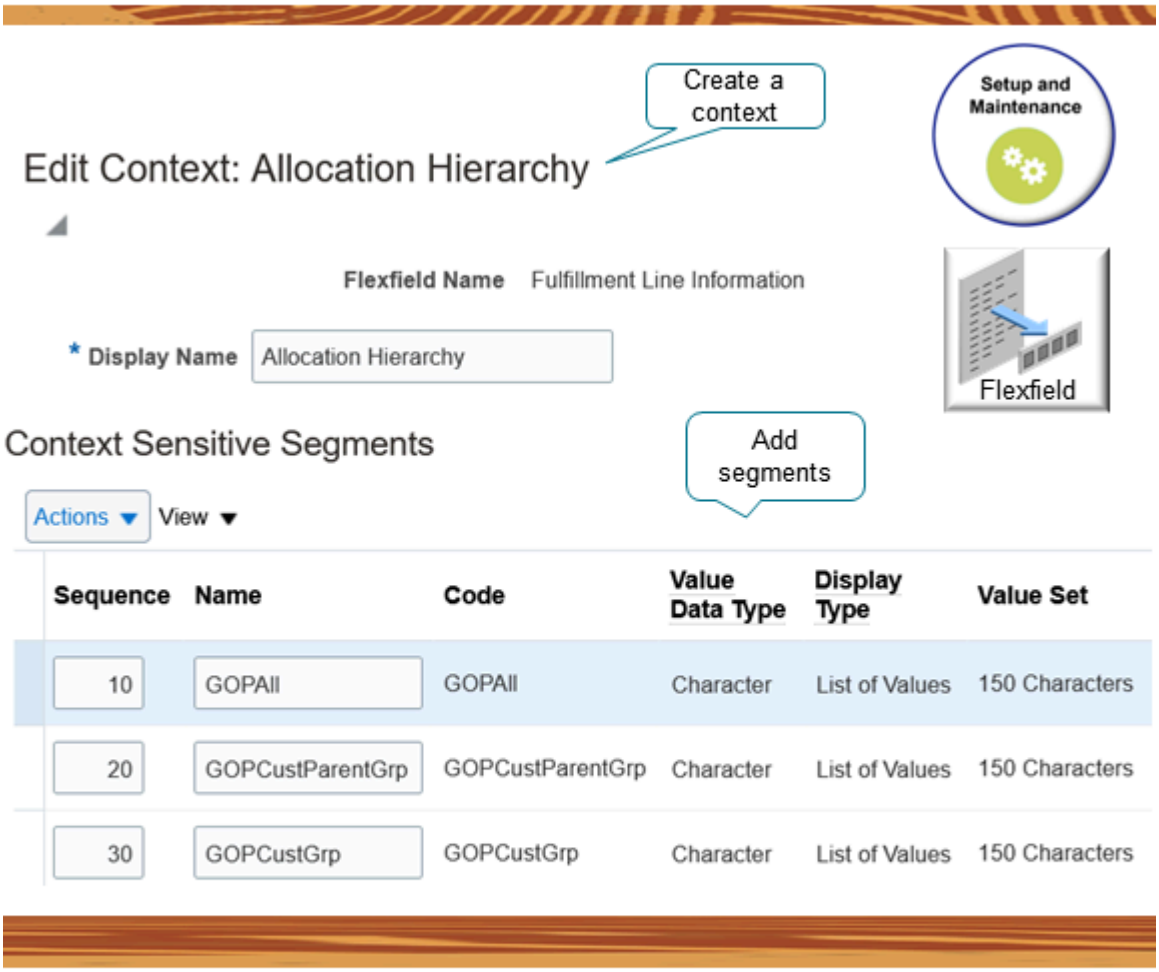
What the Numbers Mean

1. GOPALL is your top tier, Tier 1. You included only Vision Operations in the GOPALL tier on the AttributeValues worksheet in your import, so Tier 1 will include only this one node.
2. GOP-CustParentGrp is your middle tier, Tier 2. You included the High Volume Region node and the Low Volume Region node in the GOPCustParentGrp tier on the AttributeValues worksheet, so Tier 2 will include these two nodes.

3. GOPCustGrp is your bottom tier, Tier 3. You included the Northeast, Northwest, Southeast, and Southwest nodes in the GOPCustGrp tier on the AttributeValues worksheet, so Tier 3 will include all four of these nodes.

Create an Extensible Flexfield

1. Add a context that has three segments to the predefined Fulfillment Line Information extensible flexfield.



Use these values.

Sequence	Name	Code	Value Data Type	Display Type	Value Set
10	GOPAll	GOPAll	Character	List of Values	150 Characters

Sequence	Name	Code	Value Data Type	Display Type	Value Set
20	GOPCustParentGrp	GOPCustParentGrp	Character	List of Values	150 Characters
30	GOPCustGrp	GOPCustGrp	Character	List of Values	150 Characters

You will view this flexfield in the Order Management work area to see how Promising allocates supply on the order line.

The context name that you use must match the context code that you specify on the Manage Contexts page. For details about this page and how to setup and deploy flexfields, see *Overview of Using Extensible Flexfields in Order Management*.

2. Deploy your flexfield.
3. Go to the Plan Inputs work area, then click **Tasks > Manage Planning Attributes**.
4. On the Manage Planning Attributes page, search for the value.

Attribute	Value
Attribute Name	Vision Operations This is the name of the hierarchy that you imported. It is the value of the GOP-Vision Operations attribute from your import template.

5. In the Define Planning Attribute Mapping area, map the first segment.
   - Click **Create**, then set the values.

Attribute	Value
Collection Entity from Source	Sales Orders
Entity Additional Details	Fulfillment Line Information
Source Attribute Reference	Supply Hierarchy This is the name of the context that you created earlier in this procedure.
Source Attribute Name	GOPAll This is the name of the segment that you created earlier in this procedure.

   - Click **Save**.

.

6. Map the next segment. Repeat the above step. Use the same value except for:

Attribute	Value
Source Attribute Name	GOPCustParentGrp

7. Map the next segment. Repeat the above step. Use the same value except for:

Attribute	Value
Source Attribute Name	GOPCustGrp

Create Value Sets

1. Go to the Setup and Maintenance work area, click **Search > Tasks**, search for, then open the Manage Value Sets task.
2. Create a set.
   - On the Manage Value Sets page, click **Actions > Create**.
   - On the Create Value Set page set the values.

Attribute	Value
Value Set Code	GOPAll
Description	Value set for the top GOPAll tier in my allocation hierarchy.
Module	Planning Common
Validation Type	Table
Value Data Type	Character
From Clause	msc_attribute_values
Value Column Name	attribute_value
Description Column Name	attribute_description
WHERE Clause	`attribute_number=3 and plan_id=-1`

   - Click **Save and Close.**
3. Create a value set for the middle tier. Repeat the above step. Use all the same values except for these differences.

Attribute	Value
Value Set Code	GOPCUSTPARENTGRP
Description	Value set for the middle GOPCUSTPARENTGRP tier in my allocation hierarchy.

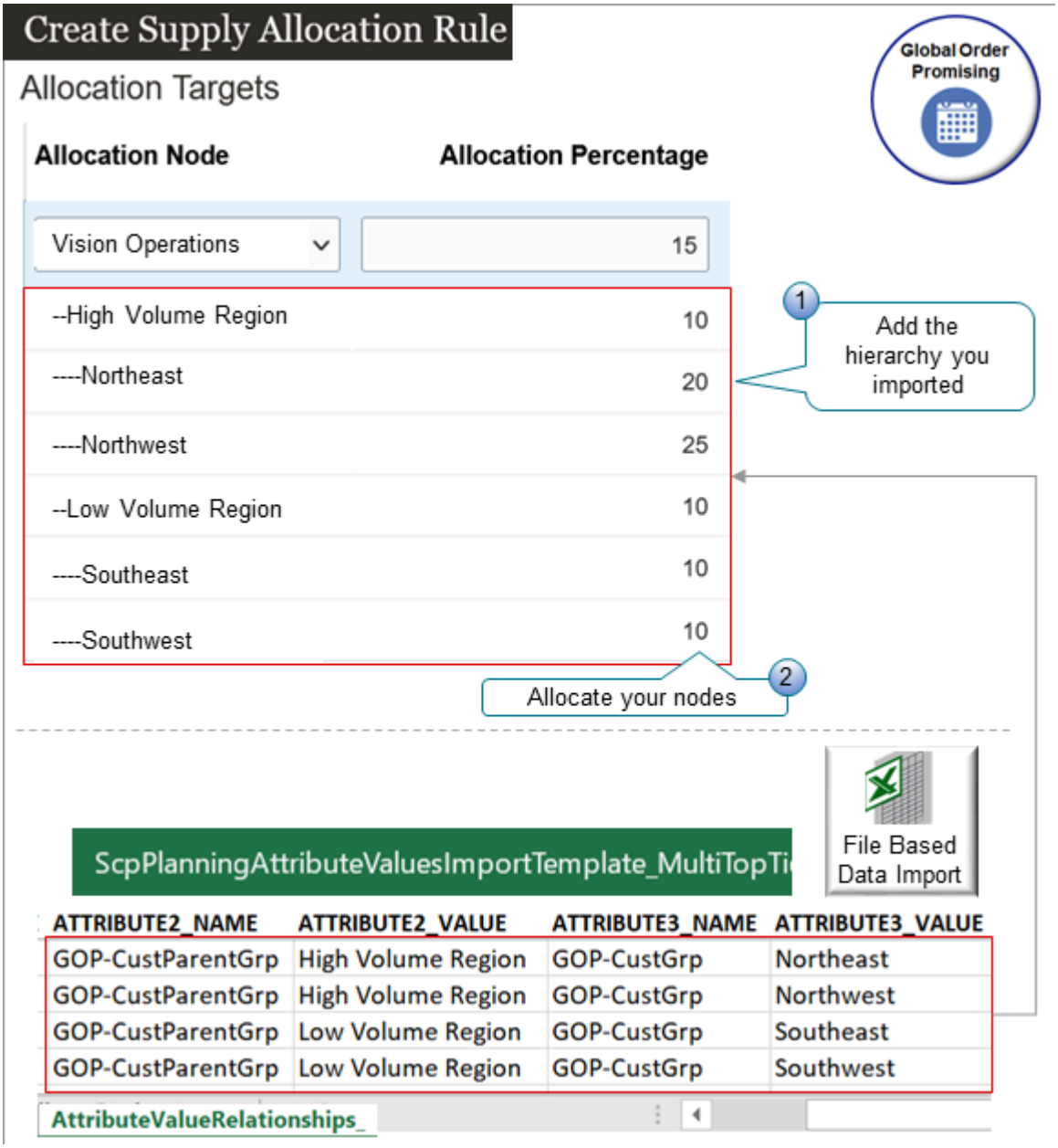
Attribute	Value
WHERE Clause	`attribute_dest_value_id in (select distinct attribute2_val_id from fusion.msc_attr_val_relationships where attribute1_val_id = (select distinct attribute_dest_value_id from fusion.msc_attribute_values where attribute_value=:{SEGMENT.XXSCF_GOPALL_AT} and attribute_number = 3)) and plan_id=-1`

4. Create a value set for the bottom tier. Repeat the above step. Use all the same values except for these differences.

Attribute	Value
Value Set Code	GOPCUSTGRP
Description	Value set for the bottom GOPCUSTGRP tier in my allocation hierarchy.
WHERE Clause	`attribute_dest_value_id in (select distinct attribute3_val_id from fusion.msc_attr_val_relationships where (attribute2_val_id in (select attribute_dest_value_id from fusion.msc_attribute_values where attribute_value=:{SEGMENT.XXSCF_GOPCUSTPARENTGRP_AT})) and attribute1_val_id in (select distinct attribute1_val_id from fusion.msc_attr_val_relationships where attribute1_val_id = (select distinct attribute_dest_value_id from fusion.msc_attribute_values where attribute_value=:{SEGMENT.XXSCF_GOPALL_AT}))) and plan_id=-1`

Create an Allocation Rule

You will add the nodes that you imported as a hierarchy, and then allocate each one of them.



Try it.

1. Go to the Order Promising work area.
2. Click **Tasks > Manage Supply Allocation Rules**.
3. On the Manage Supply Allocation Rules page, search for the value.

Attribute	Value
Name	Supply for Vision Operations
Specification Type	Percentage

4. Click **Actions > Edit**.

5. On the Allocation Targets tab, click **Actions > Add Row**, then set the values.

Attribute	Value
Start Date	Choose a Sunday.
End Date	Choose a Sunday.

Each allocation rule works on a weekly basis that starts and ends on Sunday.

6. In the Allocation Targets area, click **Actions > Add Row** to add each node.

Allocation Node	Allocation Percentage
Vision Operations	15
High Volume Region	10
Northeast	20
Northwest	25
Low Volume Region	10
Southeast	10
Southwest	10

Note

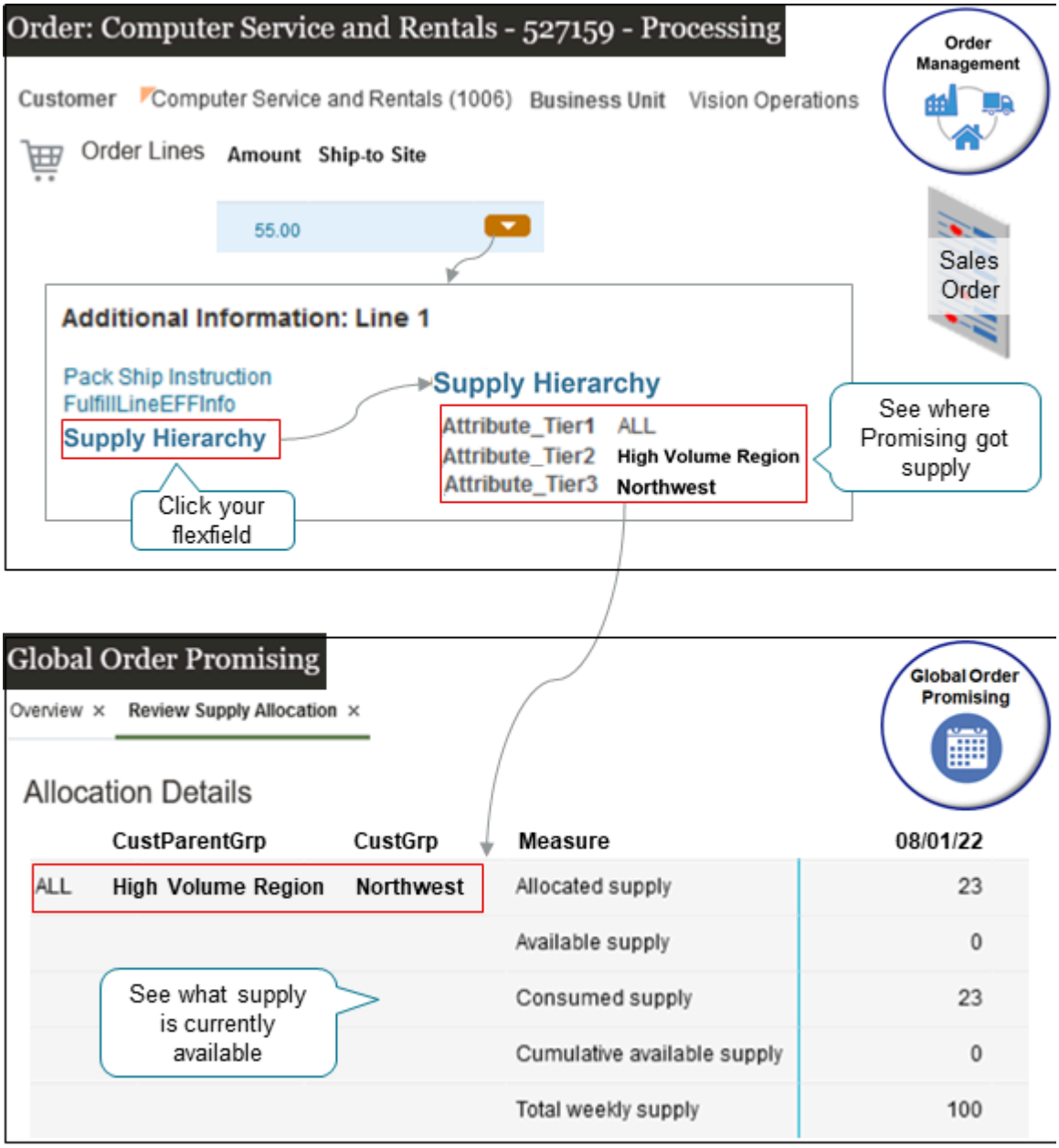
- Set the Node Rank attribute to zero.
- Set the Stealing Protection Percentage attribute to zero.
- Don't set any values in the Date Range to Consider Shipping History area or in the Allocation Targets area.
- Notice that the page automatically prefaces each node with a series of hyphens. This isn't part of the node's name, but it does help you to visualize the hierarchy.

7. Click **Allocation Assignment**, then set the values.

Attribute	Value
Assignment Basis	Item
Assigned to Item	AS54888

Test Your Setup

For the final part of the set up, you create a sales order and verify that Promising correctly allocated supply.



You will:

- Use the Order Management work area to create a sales order. You submit the order, then examine the extensible flexfield that you set up to see how Promising allocated supply for the order line.
- Use the Global Order Promising work area to get details about the current supply, such as what supply has Promising allocated in the Northwest node, what supply is available, what supply has Promising consumed to meet demand, and so on.

1. Examine your allocations.
    - Go to the Global Order Promising work area, and then click **Open**.
    - In the dialog that displays, click the **row** that says Review Supply Allocation in the Name attribute.
    - On the Review Supply Allocation page, set the values, then click **Apply**.

Attribute	Value
Organization	Vision Operations
Item	AS54888
Allocation Nodes	Select them: - All - High Volume Region - Low Volume Region - Northwest - Northeast - Southwest - Southeast

- Examine the values in the Allocation Details area. Notice that Promising will allocate quantities for each node according your setups.

2. Create a sales order.
   - Go to the Order Management work area, then create a sales order.

Attribute	Value
Customer	Computer Service and Rentals
Business Unit	Vision Operations

   - Add an order line and set these attributes.

Attribute	Value
Item	AS5488

   - Click **Submit**.
   - On the order line, click the **down arrow**, then click **View Additional Information**.
   - In the dialog that displays, click GOP Attributes.
   - Notice that the dialog displays details about your allocation hierarchy that Promising has applied to the line, such as the parent entity and the node that Promising is using to promise the item at each tier, such as High Priority Region and Northwest.
   - Click **Actions > Switch to Fulfillment View**.
   - On the Fulfillment Lines tab, click **Schedule**.
3. Examine the revised allocation.
   - Repeat step 1.
   - In the Allocation Details area, notice how Promising consumed supply according to your allocation set up. It consumed all the supply for the Northwest node first. It then consumed supply from the Northwest

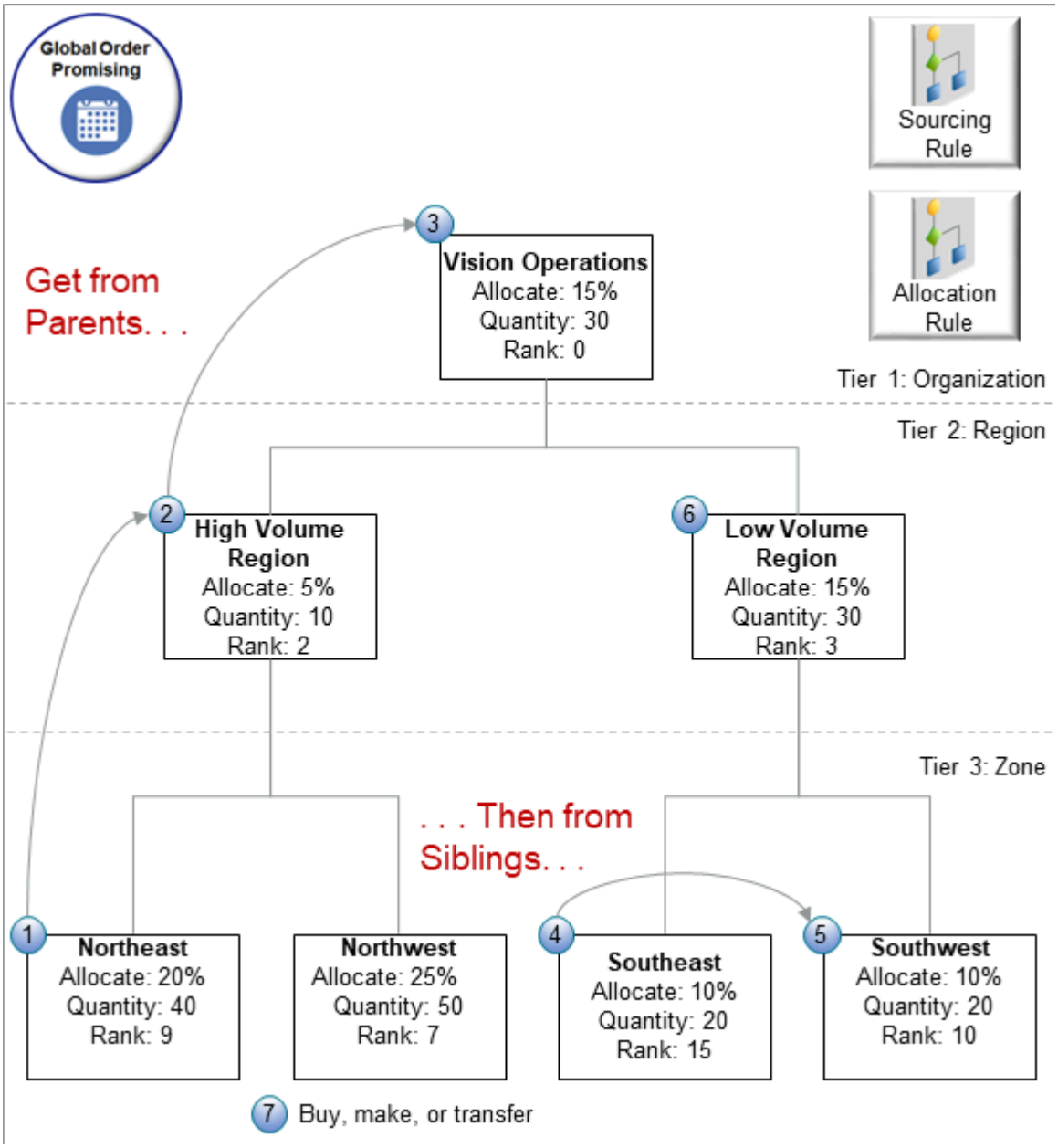
Region in the middle tier, and finally then the Vision Operations node in the top tier. It consumed supply from Northwest's parent and then Northwest's grandparent until it had all the supply it needed to meet demand.

You can also use the Supply Allocation Availability REST API to get allocation data. For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then search for Supply Allocation Availability.

Get Supply from a Node's Parents, and Then Its Siblings

You can rank your nodes so if a node's parents can't fulfill demand, then Promising gets supply from the node's siblings.

Assume you create a sales order and add an order that has the AS54888 computer with a quantity of 220.

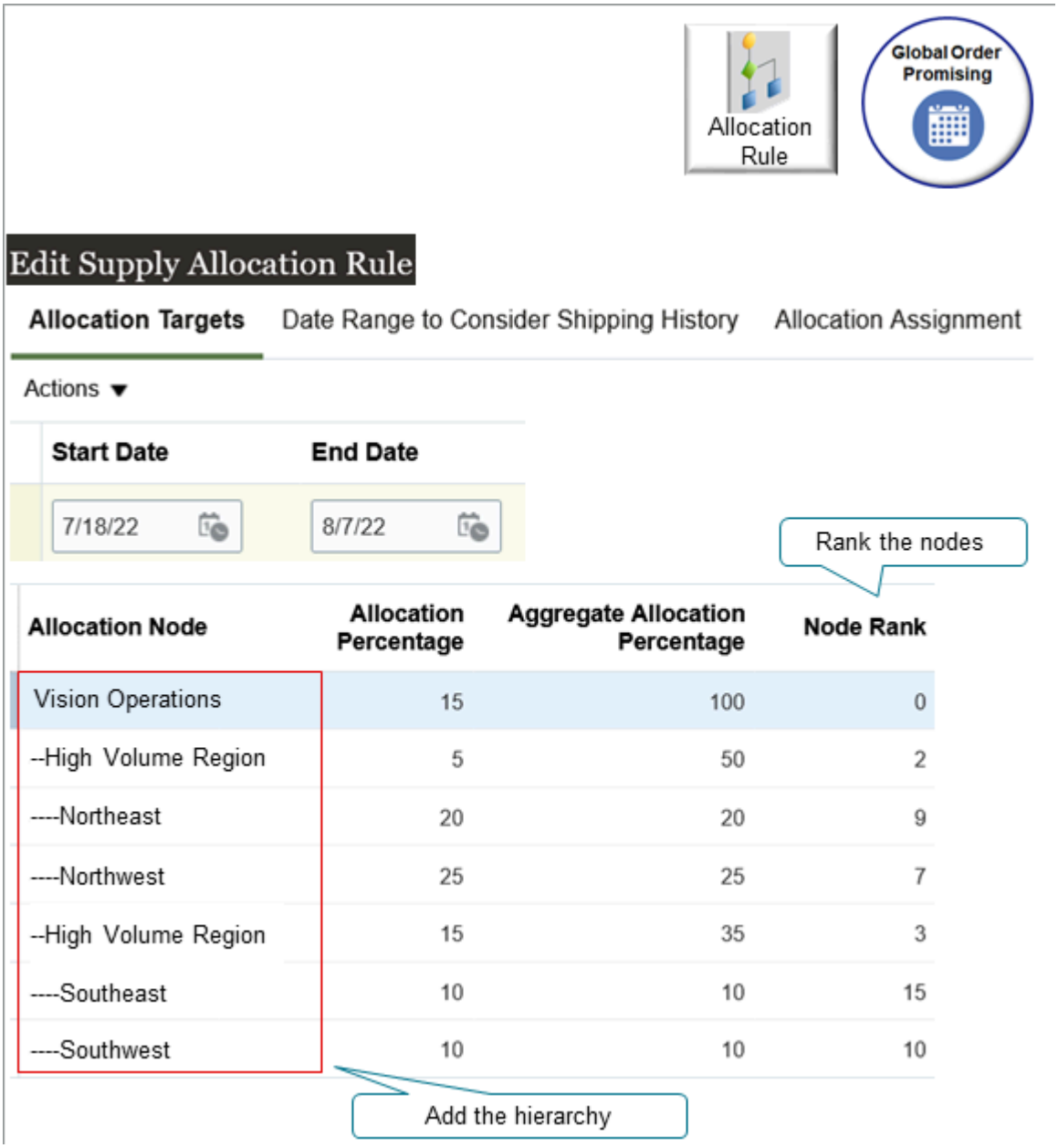


Here's what Promising does.

Step	Description	Remaining Balance
1	Consume all 40 units from Northeast.	220 minus 40 equals 180.
2	Consume 10 units from High Volume.	180 minus 10 equals 170.
3	Consume 30 from Vision Operations.	170 minus 30 equals 140.
4	Consume 20 units from Southeast because its on the same tier as the Northeast node, and Southeast has the lowest rank of 15 on the zone tier.	140 minus 20 equals 120.

Step	Description	Remaining Balance
5	Consume 20 units from Southwest because its on the same tier as the Northeast node, and Southwest has the next lowest rank of 10 in the zone tier. Promising doesn't consume supply from Northwest because Northwest's rank is 7, which is lower than Northeast's rank of 9.	120 minus 20 equals 100.
6	Apply the same ranking logic on the next level up, the region tier. In this example, Promising consumes 30 units from Low Volume because its rank is 3, which is lower than High Volume's rank of 2.	100 minus 30 equals 70.
7	Promising still needs 70 units, so it uses your ATP rules and sourcing rules to buy, make, or transfer them.	70 minus 70 equals 0.

To set this up, do the same work that you do in *Get Supply from a Node's Parent*, except you add a rank for each node.



For example:

Node	Allocation Percentage	Rank
Vision Operations	15	0
High Volume Region	10	2
Low Volume Region	15	9
Northeast	20	7
Northwest	25	3

Node	Allocation Percentage	Rank
Southeast	10	15
Southwest	10	10

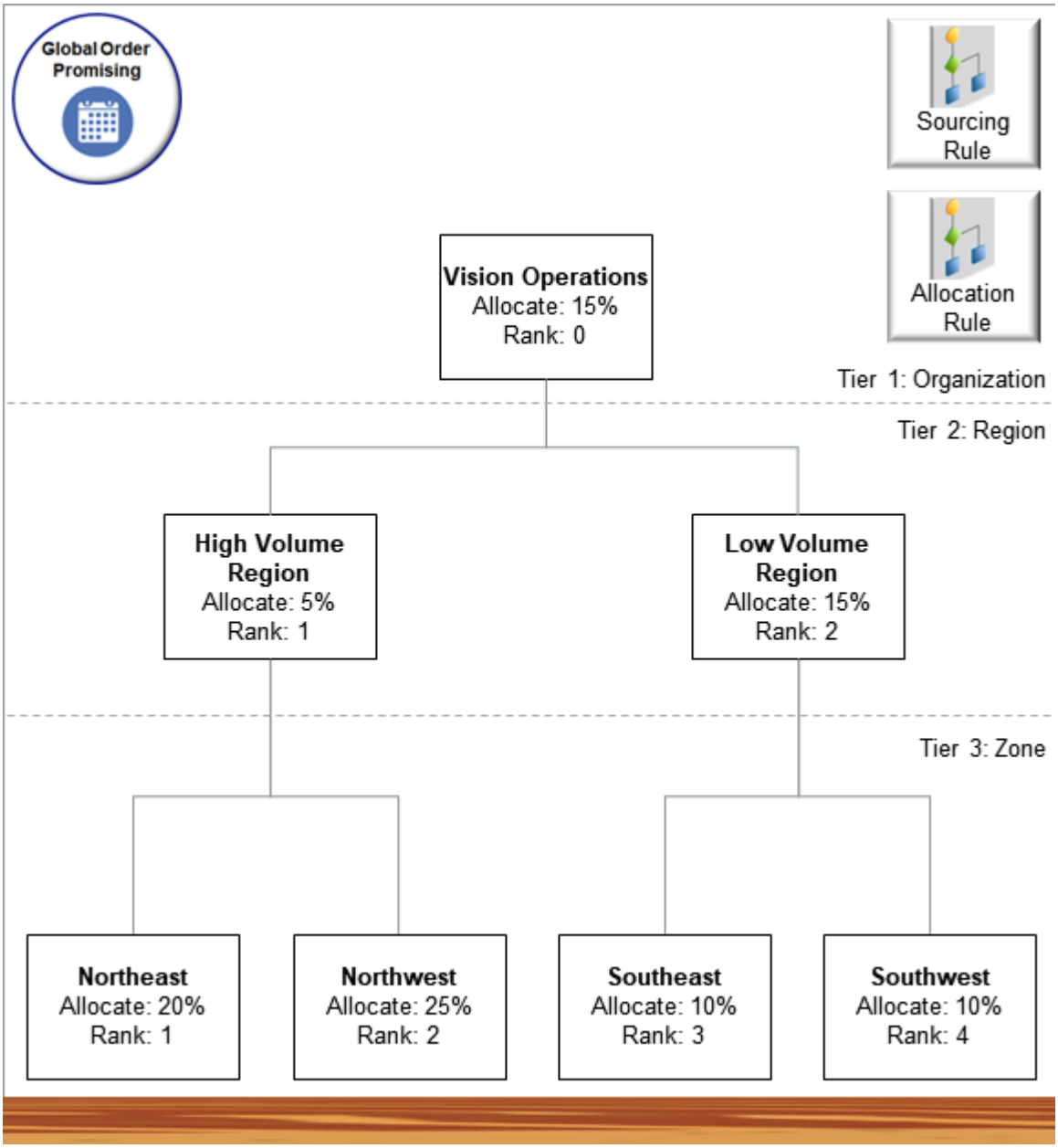
Note that the rank doesn't have to be sequential. You can skip numbers. For example, this example doesn't have any nodes ranked at 8, 11, 12, 13, or 14. Promising will still use the ranking that you provide, where the lowest rank has the highest priority and the highest rank has the lowest priority. For example, Northwest's rank of 7 has a higher priority than Northeast's rank of 9.

Use Lower Priority Supply to Fulfill Higher Priority Demand

Set up your allocation rule so you can consume supply from a lower priority node to fulfill demand for a higher priority node.

If you have a node in your allocation hierarchy that's a lower priority than other nodes, and if you consume the supply that you have allocated to a higher priority node, then you can consume supply from the lower priority node instead delaying fulfillment for the higher priority node.

Assume you set up sourcing rules and allocation rules to create this hierarchy.



Note

- Vision Operations is the top parent of all the nodes. It contains two child nodes, High Volume and Low Volume.
- The High Volume node contains two child nodes, Northeast and Northwest.
- The Low Volume node contains two child nodes, Southeast and Southwest.

To set this up, do the same work that you do in *Get Supply from a Node's Parent*, except you add a rank for each node.

Node	Allocation Percentage	Rank
Vision Operations	15%	0

Node	Allocation Percentage	Rank
High Volume	5%	1
Low Volume	15%	2
Northeast	20%	1
Northwest	25%	2
Southeast	10%	3
Southwest	10%	4

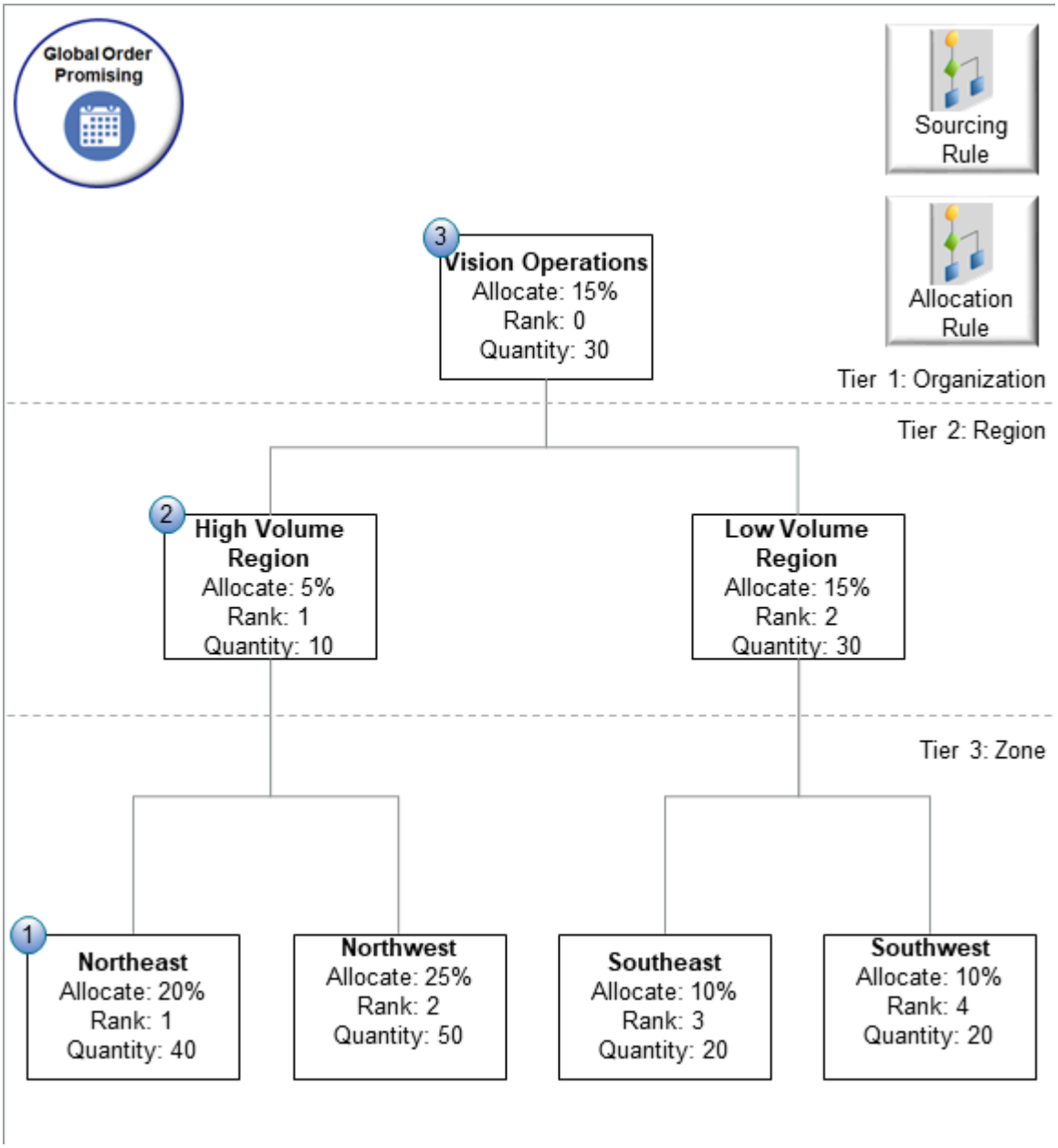
Set the Stealing Protection Percentage to zero for each node.

Don't Get Supply from Low Demand Nodes

Assume you have a total supply of 200 units.

- You set the Business Unit attribute on the order header to Vision Operations.
- You create an order line on that sales order and you set the Quantity on the line to 220.

Here's the sequence that Promising will use to allocate supply.



Promising will:

1. Consume 40 units from the Northeast node for the week that starts on the Requested Date and from earlier weeks.
2. Consume the quantity that's available to allocate from Northeast's immediate parent, which is 10 units from the High Volume node.
3. Consume the quantity that's available to allocate from Northeast's grandparent, which is 30 units from the Vision Operations node.
4. If Promising consumes all the allocation that's available in Northeast's parent hierarchy but still hasn't meet the order line's demand, then it uses transfer, buy, and make flows to search for other sources of supply.
5. If Promising still needs more supply even after it searches through transfer, buy, and make flows, then it delays fulfillment for the sales order.

Here are the details.

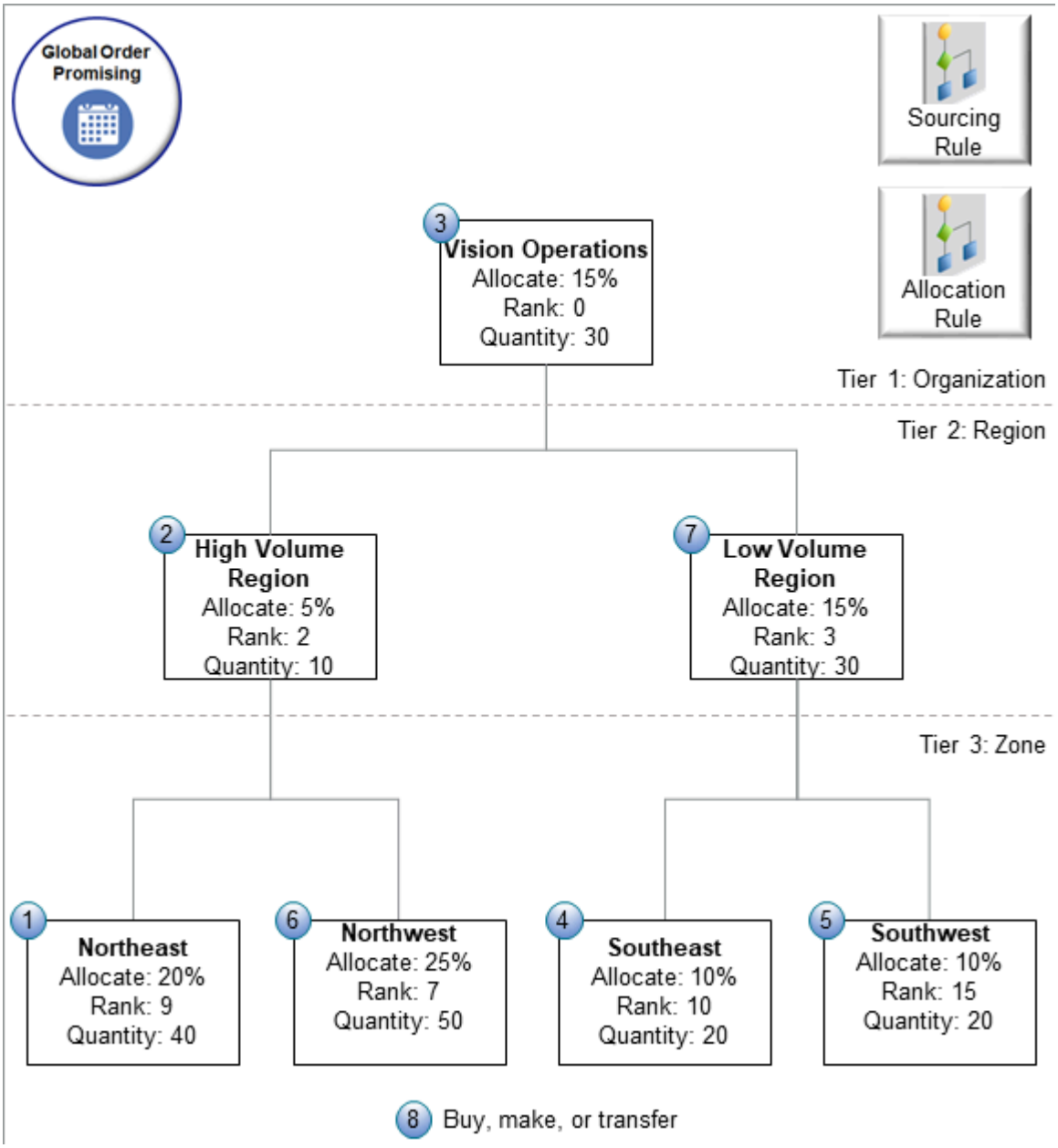
Node	Rank	Allocation Percentage	Quantity That's Available to Allocate
Vision Operations	0	15%	30 (15% of 200)
High Volume	1	5%	10 (5% of 200)
Low Volume	2	15%	30 (15% of 200)
Northeast	1	20%	40 (20% of 200)
Northwest	2	25%	50 (25% of 200)
Southeast	3	10%	20 (10% of 200)
Southwest	4	10%	20 (10% of 200)

Note

- Promising aggregates the total supply over an allocation week.
- Promising allocates weekly supply to each node according to a percentage.

Get Supply from Low Demand Nodes

Continuing our example, assume you prefer to get supply from low demand nodes instead of from the parent nodes.



Here's the sequence that Promising will use to allocate supply.

Step	Description	Remaining Balance
1	Consume 40 units from the Northeast node.	220 minus 40 equals 180.
2	Consume the supply that's available to allocate from Northeast's immediate parent, High Volume, which is 10 units.	180 minus 10 equals 170.
3	Consume the supply that's available to allocate from Northeast's grandparent, Vision Operations, which is 30 units.	170 minus 30 equals 140.

Step	Description	Remaining Balance
	If Promising consumes all the allocation that's available in Northeast's parent hierarchy but still hasn't meet the order line's demand, then proceed to the next step and get supply from a lower ranked node.	
4	Get supply from the node that has the lowest rank in the entire hierarchy, which is the Southwest Node at rank 15. Get the entire quantity that isn't protected, which is 20 units. If you had set protection for this node, say at 60%, then Promising would protect 12 units (60% of 20 is 12), and Promising would get only 8 units from this node (20 minus 12 equals 8).	140 minus 20 120.
5	If getting Southwest's supply doesn't satisfy Northwest's demand, then get it from the node that has the next lowest rank, which is Southeast at rank 10. Get the entire quantity that isn't protected, which is 20 units.	120 minus 20 equals 100.
6	If getting Southeast's supply doesn't satisfy demand, then get it from the next lowest rank, which is Northwest at rank 7. Northwest has a quantity of 50 that's available to allocate.	100 minus 50 equals 50.
7	If getting Northwest's supply doesn't satisfy demand, then get it from the next lowest rank, which is the Low Volume Region at rank 7. Northwest has a quantity of 50 that's available to allocate.	50 minus 30 equals 20.
8	You have traversed the entire supply hierarchy but still haven't fulfilled the order line, so Promising will use your sourcing rules and ATP rules to buy, make, or transfer the remaining 20 units that it needs to fulfill the order line.	20 minus 20 equals 0.

To set this up, do the same work that you do in *Get Supply from a Node's Parent*, except you add a rank for each node.

Node	Allocation Percentage	Rank
Vision Operations	15	0
High Volume Region	5	2
Low Volume Region	15	3
Northeast	20	9
Northwest	25	7
Southeast	10	10
Southwest	10	15

Guidelines for Allocating Supply in a Hierarchy

Use these guidelines to help you set up your hierarchy.

- You can include up to three levels in your hierarchy.
- You can assign nodes from one, two, or three levels for each sales order.
- You must assign at least one node from each level in the hierarchy to your sales order.
- Promising allocates supply for each week, and you can set up your allocation rule so its in effect starting on Monday and ending on Sunday.
- If you create an allocation rule but don't create a sourcing rule for an item, and if you don't assign any node to the sales order and add the item to the order, then Promising can't get any supply for the item. Promising will instead use the Infinite Availability attribute on your ATP rule or the end of the horizon to determine where to get supply.
- Promising considers allocation only according to a percentage, so make sure you set the Specification Type attribute to Percentage on the Manage Supply Allocation Rules page. You can also set this value in file-based data import or REST API.
- If you use REST API to import your allocations as quantities, then Promising uses them after it makes adjustments. For example, if the total allocation is greater than the total supply, then Promising reduces each allocation.
- Make sure the sum of your allocation percentages equals 100% across your hierarchy.
- You must collect sales orders each time you modify an allocation rule, such as modifying an allocation percentage, rank, shipment history, dates, and so on.
- If you're fulfilling a configured item, you can allocate supply only for the entire configured item. You can't allocate supply for a component in a configured item or for a resource.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Set the Rank

- Promising consumes allocated supply starting with the node that has the lowest rank in the hierarchy.
- A rank with a numeric value has a higher priority. For example, if you create ranks 1, 2, and 4, then 2 has a higher priority than 4, and 1 has a higher priority than 2.
- A higher priority node can get supply from a lower priority node, but a lower priority node can't get supply from a higher priority node.
- A node that has the same rank can't get supply from another node that has the same rank. For example, if you rank node *x* as 4, and you rank node *y* as 4, then *x* can't get supply from *y*, and *y* can't get supply from *x*.
- If you don't specify a rank on a node, then Promising considers it as the lowest priority. All other nodes on the same level can take supply from this nonranked node, but the nonranked can't take supply from any other node anywhere in the hierarchy.
- Promising treats a rank of zero the same way it treats a nonranked node, plus a zero node can't get supply from another zero node.

Reserve Supply on a Node

As an option, you can use the Stealing Protection Percentage attribute to reserve supply for a node.

Assume you set Stealing Protection Percentage on the Northwest node to 20 because you want to keep 20% of Northwest's supply in reserve for sales orders that you create in the Northwest. 20 units are available to allocate in Northwest, so 4 units are in reserve:

- 20% of 20 allocated units equals 4 reserved units

Promising will get only 16 units from Northwest:

- 20 allocated units minus 4 reserved units equals 16 units

This helps to make sure that you distribute supply equitably across nodes.

If you want to reserve all the supply in a node, then set Stealing Protection Percentage to 100 for that node.

Specify the Shipment History

Promising can consider your shipping history when it calculates allocation. This is most useful when you have a promotional event or marketing campaign.

- Go to the Order Promising work area, click **Tasks > Manage Supply Allocation Rules**, click **Date Range to Consider Shipping History**, then create the date range. Promising will consider shipped orders that happen during this range.
- To control the number of days to consider shipping history instead of a range, go to the Maintain Supply Network Model page, then set the value in the Past Due Sales Order Days attribute in the Organization area.
- Make sure the interval that you specify when you collect shipped sales orders matches the duration of your campaign.
- Make sure you use and maintain the same allocation percentages for all of your allocations during the entire duration of the campaign.

Allocate Supply Through REST API

Use the Quick Availability Check REST API to get details about the supply that's currently available in your supply chain.

- Quick Availability Check doesn't calculate an availability date for a quantity that Oracle Order Management requests, but instead provides the quantity that's currently available to order today or on some future day. You can use these details to actively market items that have abundant stock, provide a notification for items that are low on stock, and ignore items that are currently out of stock.
- You can use Quick Availability Check with an allocation hierarchy. You can include up to three levels of allocation nodes in your REST API import payload, and Quick Availability Check will return the allocated supply for each node in the hierarchy. The results can include supply that's available to a node that's lower in the hierarchy and also from that node's parents. It can also include supply that you reallocate from a sibling node that has a lower priority.
- Promising applies an allocation rule to distribute the quantity that's currently available, and to distribute it across your allocation hierarchy according to an allocation attribute. Order Management can include the allocation attribute with the request that it sends to Promising so that you can offer higher levels of availability

to some nodes over other nodes according to region, channel, loyalty status, and so on. It also helps to make sure once you place an order, that the item that's on allocation will still be available to your customer.

- Quick Availability Check will return results for any requested date regardless of whether its a working day or a holiday.

For details about Quick Availability Check, including example payloads, go to *REST API for Oracle Supply Chain Management Cloud*, expand **Order Management > Global Order Promising**, then click **Quick Availability Check**.

Requirements

- You must enable the High Volume Order Promising feature and the Multilevel Allocation in Order Promising feature. For details, see *Get Supply from a Node's Parent*.
- Make sure your REST API import payload includes details about all the nodes that you want it to consider when it allocates supply. For example, if you have three levels in your hierarchy, then your import payload must include nodes from each level. If you don't provide these details, then Promising returns results that don't consider allocated supply.

Attributes

Use these attributes in your Quick Availability Check request payload:

- Item
- Date
- Organization
- AllocationNodeFirstLevel
- AllocationNodeSecondLevel
- AllocationNodeThirdLevel

The REST API response includes these attributes.

Attribute	Quantity
Shelf Quantity	ATP supply that's available for the item on the requested date and that isn't allocated. Its still on the shelf.
Available Quantity	Supply that's available for the item from the lowest level node on the requested date. It includes the quantity that you already allocated for this node, and the quantity that Promising can get from the node's parents and siblings.
Allocated Weekly Quantity	Same as Available Quantity, except measured for an entire week instead of for only the requested date, and it doesn't include the quantity that Promising can get from the node's parents and siblings.
Total Allocated Weekly Quantity	Same as Allocated Weekly Quantity, except it does include the quantity that Promising can get from the node's parents and siblings.

Example Payload

Assume you want to use Quick Availability Check to create the hierarchy described in *Get Supply from a Node's Parent*. Here's your input payload.

```
{
```

```
 "CallingModule": "GOP",
 "CallingInstance": "GOP",
 "RequestCreationDateTime": "2022-08-26",
 "ItemDetailList": [
 {
 "ItemIdentifier": "AS54888",
 "OrgInfoList": [
 {
 "OrgIdentifier": "M2"
 }
 ],
 "RequestedDateTime": "2022-08-26",
 "AllocationNodeList": [
 {
 "AllocationNodeFirstLevel": "Vision Operations",
 "AllocationNodeSecondLevel": "High Volume Region",
 "AllocationNodeThirdLevel": "Northeast"
 "AllocationNodeThirdLevel": "Northwest"
 },
 {
 "AllocationNodeFirstLevel": "Vision Operations",
 "AllocationNodeSecondLevel": "Low Volume Region",
 "AllocationNodeThirdLevel": "Southeast"
 "AllocationNodeThirdLevel": "Southwest"
 },
 {
 "AllocationNodeFirstLevel": "ALL"

 }
 ]
 }
 ]
}
```

Here's the REST response you might receive, depending on the quantities that are available.

```
{
 "QuickAvailabilityCheckOutput": {
 "PromisingSystem": "HVGOP",
 "PromisingInstance": "GOP",
 "PromiseDateTime": "2022-08-26T00:00:00.000+0000",
 "ItemAvailabilityList": [
 {
 "ItemIdentifier": "RI-HV-ANALOG-MS2",
 "RequestedDateTime": "2022-08-26T00:00:00.000+0000",
 "ItemAvailabilityAtOrgList": [
 {
 "ShelfQuantity": 100,
 "AvailableQuantity": 56,
 "WeeklyAllocatedNodeQuantity": 12,
 "WeeklyAllocatedTotalQuantity": 56,
 "OrgInfoList": [
 {
 "OrgIdentifier": "M2"
 }
 ],
 "AllocationNode": {
 "AllocationNodeFirstLevel": "Vision Operations",
 "AllocationNodeSecondLevel": "High Volume Region",
 "AllocationNodeThirdLevel": "Northeast"
 "AllocationNodeThirdLevel": "Northwest"
 }
 },
 {
 "ShelfQuantity": 100,
 "AvailableQuantity": 33,
```

```
"WeeklyAllocatedNodeQuantity": 23,
"WeeklyAllocatedTotalQuantity": 33,
"OrgInfoList": [
{
"OrgIdentifier": "M2"
}
],
"AllocationNode": {
"AllocationNodeFirstLevel": "Vision Operations",
"AllocationNodeSecondLevel": "Low Volume Region",
"AllocationNodeThirdLevel": "Southeast"
"AllocationNodeThirdLevel": "Southwest"
}
},
{
"ShelfQuantity": 100,
"AvailableQuantity": 10,
"WeeklyAllocatedNodeQuantity": 10,
"WeeklyAllocatedTotalQuantity": 10,
"OrgInfoList": [
{
"OrgIdentifier": "M2"
}
],
"AllocationNode": {
"AllocationNodeFirstLevel": "Vision Operations"
}
}
]
}
]
}
}
```


Example 1, Check Availability, End of the Week

Consider an example:

- The week starts on day 9 and ends on day 15.
- You allocate according to a percentage.
- The top level node has 30%, the next level node has 20%, and the lowest level has 50%.
- The on hand supply is 70 units.
- Shelf Quantity isn't allocated. It is the total ATP supply that's available for the item on the requested date.
- You receive a purchase order for 30 units on day 13.
- You use Quick Availability Check on day 13 for the Northwest node.

Here are the results.

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Top Level	30	100	50	-	50
Middle Level	20	-	-	-	-
Bottom Level	50	-	50	50	-

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Total	100	100	100	50	50

Quick Availability Check returns the quantity that's available on the requested date for Northwest, including:

- Quantity that it gets from the High Volume Region node and the Vision Operations node
- Quantity that you allocated for Northwest for the week

Note that the Shelf Quantity doesn't consider the allocation, so it includes total ATP supply that's available for the item on the requested date.

The Available Quantity for Northwest on the requested date is 100. It includes the supply that's available to meet new sales orders from Northwest's parent, grandparent, and siblings.

Example 2, Check Availability, Beginning of the Week

Assume the same conditions from example 1 but you use Quick Availability Check on day 11 instead of day 13.

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Top Level	30	70	**35**	-	50
Middle Level	20	-	-	-	-
Bottom Level	50	-	**35**	50	-
Total	100	70	100	50	50

The Available Quantity for Northwest is the same as it was for example 1, except the purchase order of 30 units on day 13 hasn't happened yet, so there's only a quantity of 35 available for Northwest because 35 is 50% of 70.

Example 3, Check Availability, End of Week, When You Already Promised a Sales Order

Assume the same conditions from example 1 but with these differences:

- You receive a purchase order for a quantity of 30 on day 13.
- You already have a sales order that's scheduled for a quantity of 50 on day 11 for Northwest.

Here's what your supply will look like.

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Top Level	30	100	50	-	50
Middle Level	20	-	-	-	-

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Bottom Level	50	-	50	50	-
Total	100	100	100	50	50
Sales Order Already Scheduled	-	-	**-50**	-	-
Adjusted Total	100	100	**50**	50	100

The Available Quantity for Northwest is the same as it was for example 1, except we subtract the quantity of 50 that Promising allocated for the sales order that it already scheduled.

Example 4, Check Availability, Beginning of Week, When You Already Promised a Sales Order

Assume the same conditions from example 3 but you use Quick Availability Check on day 11 instead of day 13.

Here's what your supply will look like.

Level	Allocated Weekly Supply	Shelf Quantity	Available Quantity for Northwest	Weekly Allocated Quantity for Northwest	Total Weekly Allocated Quantity for Northwest
Top Level	30	70	35	-	50
Middle Level	20	-	-	-	-
Bottom Level	50	-	35	50	50
Total	100	70	70	50	100
Sales Order Already Scheduled	-	-	**-50**	-	-
Adjusted Total	100	70	**20**	50	100

The Available Quantity for Northwest is the same as it was for example 3, except the purchase order of 30 units on day 13 hasn't happened yet, so there's only a quantity of 20 available for Northwest.

Allocate Supply Through FBDI

Use file-based data import (FBDI) to manage the supply that you allocate according to quantity.

Use FBDI to efficiently upload your allocation quantities in weekly buckets. If you allocate according to quantity, then you can use FBDI to reduce the time and effort that you need to maintain that allocation.

Try it.

1. Use the Order Promising work area or FBDI to create a rule that allocates according to quantity. Specify the allocation nodes, the rank for each node, stealing protection percentage, and so on. Do this before you upload your allocation quantities. For details, see *Get Supply from a Node's Parent*.
2. Go to *File-Based Data Import (FBDI) for Oracle SCM*, expand **Supply Chain Planning > Supply Chain Planning Planning Allocation Rules**, then download the ScpPlanningAllocationRulesImportTemplate.xlsm file.
3. Use the SupplyAllocationQuantities worksheet in the file that you just downloaded to specify the allocation quantities for your weekly bucket.
4. Upload the FBDI worksheet that you just edited.

Use REST API to Adjust Allocation Percentages

Use REST API to adjust the percentage of supply that Global Order Promising assigns to an allocation node with a quantity that you specify in your import payload. Use this feature to help meet a short term fulfillment requirement.

Use REST API to set the supply that's available for one or more allocation nodes to a specific quantity during a promotion, marketing campaign, holiday, or some other time when you don't want to apply the regular percentage allocation. Promising will adjust the quantity on each of the remaining nodes in your allocation hierarchy to maintain the total amount of supply that promising already allocated for the week.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Guidelines

- Consider the total weekly supply that's available for the item across all nodes in your allocation hierarchy when you adjust the supply for a node.
- To examine the results of your adjustment, go to the Order Promising work area, then view the Manual Allocation attribute on the Review Supply Allocation page.
- You can adjust allocation only for nodes that you have set up to allocate according to a percentage.
- You can't update your allocation rule or add nodes to your allocation hierarchy anytime during the promotion.

Examples

Assume you use REST API to adjust quantities for the AS54888 Desktop Computer and the total supply for the item is 1,000 units for the week.

Example 1

Your imported quantities don't exceed the total supply that's available for the week.

Allocation Node	Percentage Allocation	Quantity That You Allocate Through a Rule	Quantity That You Update Through REST API	Allocated Supply for the Week
N1	25	250	300	300
N2	25	250	200	200

Allocation Node	Percentage Allocation	Quantity That You Allocate Through a Rule	Quantity That You Update Through REST API	Allocated Supply for the Week
N3	25	250	100	100
N4	25	250	400	400

Promising will use the values that you import through REST API.

Example 2

Your imported quantities exceed the total supply that's available for the week.

Allocation Node	Percentage Allocation	Quantity That You Allocate Through a Rule	Quantity That You Update Through REST API	Allocated Supply for the Week	Math
N1	15	150	500	395	500 minus (700 multiplied by 0.15)
N2	30	300	400	190	400 minus (700 multiplied by 0.30)
N3	20	200	300	160	300 minus (700 multiplied by 0.20)
N4	35	350	500	255	500 minus (700 multiplied by 0.35)

Note

- Your imported quantities exceed the total supply that's available by 700 units.
- Promising decreases your imported quantity for each node according to the node's percentage allocation. Promising uses this equation to determine the supply to allocate for each node.

  ```
  Your imported quantity minus (the total supply that's available multiplied by the node's percentage allocation)
  ```

Here's the math for N1.

```
500 imported quantity minus (700 total supply multiplied by N1's 0.15 percentage allocation)
```

- The allocated supply for the week remains at 1,000 units after Promising adjusts your imported values.

Example 3

Your imported quantities decrease the quantity for some nodes and increase it for other nodes.

Allocation Node	Percentage Allocation	Quantity That You Allocate Through a Rule	Quantity That You Update Through REST API	Allocated Supply for the Week	Math
N1	25	250	400	400	-
N2	20	200	-	166.666	200 minus 33% of 100

Allocation Node	Percentage Allocation	Quantity That You Allocate Through a Rule	Quantity That You Update Through REST API	Allocated Supply for the Week	Math
N3	15	150	100	100	-
N4	40	400	-	333.333	400 minus 66% of 100

Note

- Your imported quantities exceed the total supply that's available by 100 units.
- Promising uses the quantity that you import for each node.
- Promising decreases the quantity for each node that your import doesn't adjust. It adjusts the quantity according to the node's percentage allocation. Promising uses this equation to determine the allocated supply for the node.

  ```
  Node's rule quantity minus the node's proportion of the excess
  ```

Here's the math for N2.

- Determine the node's percentage among nodes that you don't adjust through REST API. In this example, you don't adjust node 2 or node 4.
- Node 2's rule allocation is 200, and node 4's is 400.
- So, node 2 represents 33% of the rule allocations and node 4 represents 66% of the rule allocations.
- Promising needs to proportion the 100 excess across nodes 2 and 4.
- 33% of 100 equals 33. So Promising subtracts 33 from N2's rule quantity of 200, resulting in an allocated supply of 166.666 for N2:

  ```
  N2's rule quantity of 200 minus (33% of the 100 excess)
  ```

Promising might round the decimal quantities according to your setups.

Example Payload

Use the AllocUserDef attribute in the backlogManagementPlans REST API.

```
URL: https://(FADomain,FSCMServices)/backlogManagementPlans/-1/child/allocations
Input Header:
{"BmRunId": -1,
"AllocationDate": "<date>",
"Level1AttributeName": "All",
"Level2AttributeName": "CustParentGrp",
"Level3AttributeName": "CustGrp",
"Level1AttributeValName": "ALL",
"Level2AttributeValName": "North",
"Level3AttributeValName": "NorthEast",
"InventoryItemName": "Item A",
"OrganizationName": "Denver Manufacturing",
"OrganizationCode": "M2"
"AllocUserDef": 10
}
```

For example, this payload sets the allocation percentage to 10 for the NorthEast node in the Denver Manufacturing organization.

For details about this REST API, see *Backlog Management Plans*.

Adjust Your Allocation Quantities

If you use a quantity to allocate supply in a fulfillment hierarchy in Global Order Promising, then you can use REST API to modify that quantity. Promising will use your new quantity when it checks availability and schedules your sales order.

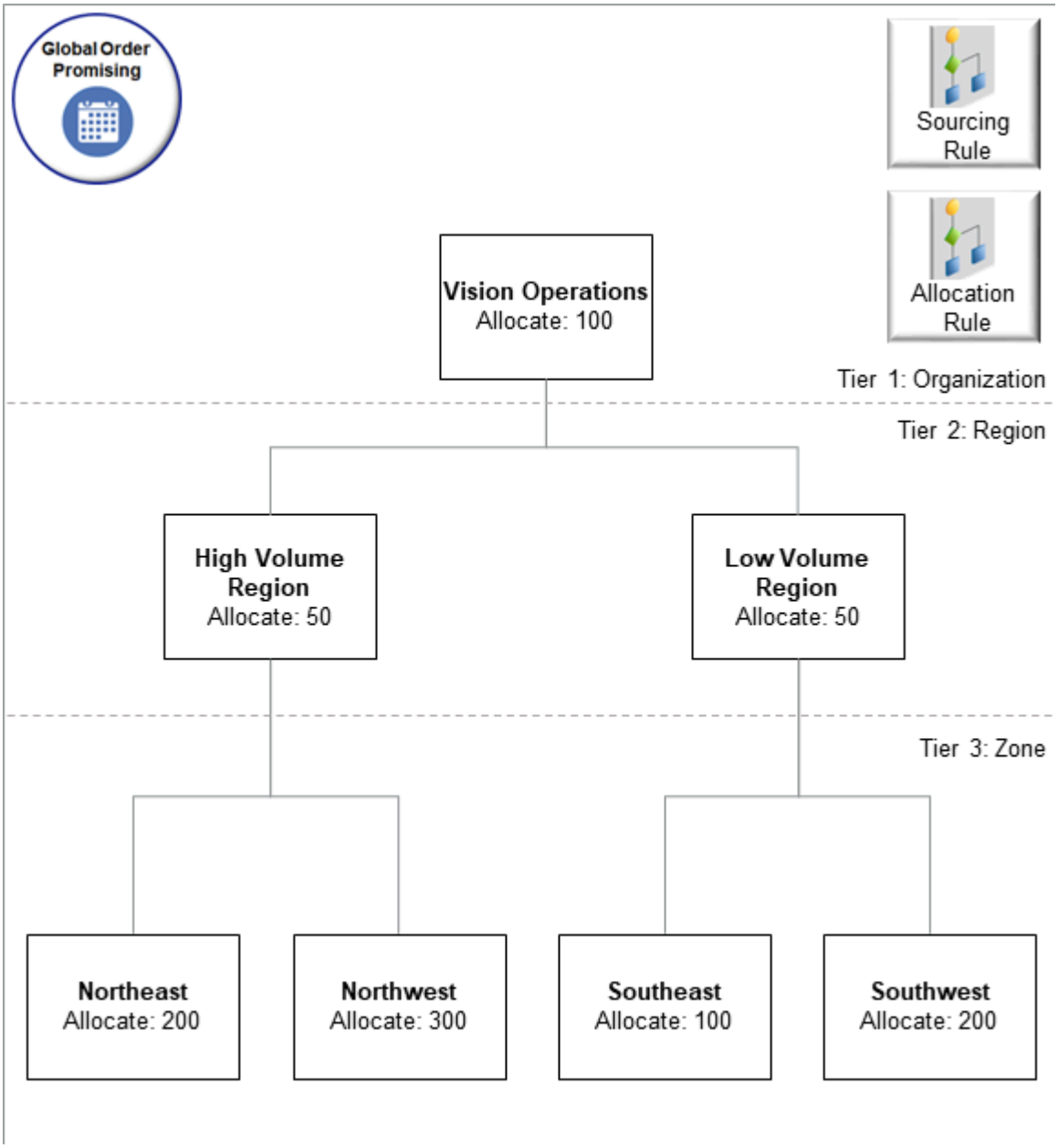
This feature allows you to use quantity to respond quickly to changes in demand or supply. Use it when:

- You have an item that's in high demand but you have limited supply.
- You need to distribute supply according to quantity across different hierarchical channels.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Example 1: Actual Supply Is Less than the Supply You Import

Assume you use REST API to import this hierarchy.



You import a quantity allocation on each node.

Node	Quantity Allocated
Vision Operations	100
High Volume Region	50
Low Volume Region	50
Northeast	200
Northwest	300

Node	Quantity Allocated
Southeast	100
Southwest	200
Total	1,000

At run time, assume the supply that's actually available in your supply chain is less than the supply that you imported through REST API:

- A quantity of 500 is available in your supply chain.
- You import an allocated quantity of 1,000 in REST API.
- So, you're short by a quantity of 500.

Here's the equation that Promising will use to proportionally allocate quantity across your hierarchy:

```
Quantity you allocated on the node minus the percentage that this allocation represents in the entire
 hierarchy
```

Here's how Promising will allocate supply.

Node	Quantity You Imported	Percent Your Allocation Represents in the Hierarchy	Math to Calculate The Node's Portion	Portion to Allocate
Vision Operations	100	100/1000 = 10%	10% of 500	50
High Volume Region	50	50/1000 = 5%	5% of 500	25
Low Volume Region	50	50/1000 = 5%	5% of 500	25
Northeast	200	200/1000 = 20%	20% of 500	100
Northwest	300	300/1000 = 30%	30% of 500	150
Southeast	100	100/1000 = 10%	10% of 500	50
Southwest	200	200/1000 = 20%	20% of 500	100

Example 2: Actual Supply Is More Than the Supply You Import

Assume you set up the same hierarchy that you set up in example 1, except now the supply that's actually available in your supply chain is more than the supply that you import through REST API.

- You set the quantity to allocate on the top node.
- A quantity of 1,500 is available in your supply chain.
- You import a quantity of 1,000 in REST API.
- So, you have an excess quantity of 500.
- If you have an excess, then Promising allocates then entire excess on the top node, and it ignores the quantity that you import and the percent that your allocation represents in the hierarchy.

Here's how Promising will allocate supply.

Node	Math to Calculate The Node's Portion	Portion to Allocate
Vision Operations	+ 500	500
Vision Manufacturing	-	-
Low Volume Region	-	-
Northeast	-	-
Northwest	-	-
Southeast	-	-
Southwest	-	-

Example 3: You Have More Than One Top Node

Assume you have the same scenario that we looked at in example 2, except that you import a hierarchy that has two top nodes, one for Vision Operations and another for Vision Manufacturing. You set the amount to allocate on each of these top nodes to 100.

- A quantity of 1,500 is available in your supply chain.
- You import a quantity of 1,000 through REST API.
- You have two top nodes in your hierarchy.
- Promising will distribute the excess across the two top nodes according to the allocation that you imported for them.

Here's how Promising will allocate supply.

Node	Quantity You Imported	Percent Your Allocation Represents Across the Top Nodes	Math to Calculate The Node's Portion	Portion to Allocate
Vision Operations	100	100/200 = 50%	50% of 500	250
Vision Manufacturing	100	100/200 = 50%	50% of 500	250
High Volume Region	-	-	-	-
Low Volume Region	-	-	-	-
Northeast	-	-	-	-
Northwest	-	-	-	-
Southeast	-	-	-	-
Southwest	-	-	-	-

Guidelines

- Consider whether you want sibling nodes to share supply. If so, consider which siblings have higher priority.
- You can't use the Manage Supply Allocation Rule page to upload or edit your quantities.

Campaigns and Promotions

You might find this feature useful if you have a campaign or promotion that has a finite duration. Use it to specify how to allocate your supply quantities, and then track that quantity while you fulfill sales orders during the campaign.

Consider these guidelines:

- Promising can use allocated quantities when it considers shipment history for a campaign that has a finite duration.
- The allocated quantity for each node must remain the same for the entire duration of the campaign.
- The total supply that you have at the start of campaign must remain the same for the entire duration of the campaign. You can't add any new supply each week.
- You must not change the allocation values or the hierarchy for the entire duration of the campaign.

Try It

Use the Allocations REST API in Oracle Backlog Management. BM is an abbreviation for Backlog Management. For example:

```
https://server/backlogManagementPlans/{BmRunId}/child/allocations
{"BmRunId": -1,
"AllocationDate": "2022-08-26",
"Level1AttributeName": "GOPAll",
"Level2AttributeName": "GOPCustParentGrp",
"Level3AttributeName": "GOPCustGrp",
"Level1AttributeValName": "Vision Operations",
"Level2AttributeValName": "Northeast",
"Level3AttributeValName": "Northwest",
"InventoryItemName": "AS54888",
"OrganizationName": "Denver Manufacturing",
"AllocUserDef": 10
}
```

Allocate Supply in Source Promising

Create an allocation rule to manage real-time supply when you use source promising.

- Preserve a fixed amount or a percent of supply for each customer, organization, region, demand class, or attribute according to your criteria.
- Use the rule to prevent earlier orders from consuming all the supply that's available.
- Specify a date range for shipments that you want Promising to include when it consumes the allocation. For example, to support a seasonal event, sales promotion, or other campaign.
- Use this feature to help manage supply when you have thousands or even millions of item and organization combinations.

Try it:

1. Set the Check ATP attribute to Source Based Promising. See *Set Up Your Items in Product Information Management*.
2. Enable the Respect Allocation Constraints attribute in your ATP rule. See *Set Attributes on Your Supply Chain Search*.
3. Set up the allocation node that you want to use with this feature. See *Allocate Supply in a Hierarchy*.

4. Set up the allocation rule that you want to use to allocate the item that you're promising with this feature. See *Allocation Rule*.
5. Go to the Order Management work area, open your sales order, then use the Check Availability action to review supply allocations and availability results. For details, see *Schedule Fulfillment Lines Manually*.

Guidelines

- You don't need to collect data for items, supply, or demand.
- You can't use some of the pages in the Global Order Promising work area when you use this feature, such as the Review Supply Allocation page or the Review Supply Availability page. Instead, use the Check Availability action in the Order Management work area. See *Order Management Analytics*.

Make sure you have these privileges:

- Manage Allocation Attributes (MSC_MANAGE_ALLOCATION_ATTRIBUTES_PRIV)
- Manage Planning Allocation Rule (MSP_MANAGE_PLANNING_ALLOCATION_RULE_PRIV)
- View Supply Allocation Report (MSP_VIEW_SUPPLY_ALLOCATION_REPORT_PRIV)
- View Planning Allocation Rule (MSP_VIEW_PLANNING_ALLOCATION_RULE_PRIV)
- Manage Projects (MSC_MANAGE_PROJECTS_PRIV)

For more, see *Source Promising* and *Database Promising*.

Use the Order Promising Work Area

Overview of the Order Promising Work Area

Use the Global Order Promising work area to find the best source of supply for your sales orders and optimize fulfillment.

- Go to the Global Order Promising work area, set the Page Layout to Order Promising Summary, then examine data on the Overview tab.
- Use metrics to identify areas to improve.
- Track the performance of your order schedules.
- Simulate and analyze the recommendations for different scenarios, such as split a fulfillment line, substitute an item, use a different shipping method, ship from a different warehouse, and so on.

Use the Summary Page

Use the Order Promising Summary to examine predefined tables and graphs that have details about your promising performance.

- View a summary of the schedule performance for your sales orders.
- Identify potential risk areas for your schedules.
- Drill into the data, then use Check Availability to simulate different promising results.

Use the tiles on the Summary Page to get details.

Tile	Description
Schedule Performance	Find out what percentage of sales orders are on time and which ones aren't to meet the requested date. Examine how many lines you've promised over time, including the number of lines you've scheduled by the Requested Date.
Late Demand Count	Get the number of demands that are delayed. Examine them by category, such as delays that happen in Supply Chain Orchestration or in Order Management. See which sources are late according to the supply source or your customer.
Late Demand Value	Examine the monetary value of the sales orders that are delayed. Examine the value according to the category, supply source, or your customer.
Financial Performance	Get details about how promising affects your financial performance, such as revenue and fulfillment cost over time, or the margin percentage according to the schedule date.

Click **Drill To > Manage Order Promising Demands** to get details and make adjustments. For details, see *Overview of Managing Demand*.

Use the Actions menus to customize your layout.

Related Topics

- Overview of Supply Chain Planning Work Areas

Define Goals for Measures in the Order Promising Work Area

Create goals for your performance measures to determine what's important for order scheduling.

Promising uses the goals that you specify when it displays details in tiles on the Overview page.

You can create a goal only for a measure that's a currency, number, or percent.

Assume you want to specify that higher values are better for the Gross Margin Percentage measure, and you want to specify these ranges.

Value	Apply When the Gross Margin Is
High	Greater than 60. The graph is green.
Medium	31 to 60. The graph is yellow.
Low	0 to 30. The graph is red.

Try it.

1. Go to the Global Order Promising work area, then click **Tasks > Manage Planning Measures**.
2. On the Manage Planning Measures page, expand the Global Order Promising measure, click the row that has Gross Margin Percentage in the Measure column, then click **Edit**.
3. In the dialog that displays, click **Advanced > Goals**.
4. Select **High Values are Better**.
5. Set the values.

Attribute	Value
Low Range From Value	0
Low Range To Value	30
High Range From Value	60
High Range To Value	100

6. Click **Save and Close**.
7. Verify your set up.
    - Go to the Order Promising Summary, place your mouse over the Financial Performance tile, then verify that it displays the goals that you specified, and that the chart's color matches the range that you specified. For example, if the tile says `Gross Margin Percentage: 99.2%`, then the tile should be green.
    - Expand Financial Performance, then notice the bar chart in the Margin Percentage by Schedule Date area. Each bar indicates the Gross Margin Percentage for each day.

Edit Your Page Layouts

Page Layouts in the Order Promising Work Area

Use predefined measures to create graphs, charts, tables, and tiles, group them together in a pane, then display them in your own page layout.

A page layout is a predefined page that contains panes.

For example, the Order Promising Summary page is a predefined layout that has a single pane that contains four graphs:

- Schedule Performance
- Late Demand Count
- Late Demand Value
- Financial Performance

You can't edit the default layout of the Order Promising Summary page, but you can create your own layout. For example, you can create a page layout, display up to four panes, and then add graphs, charts, tables, and tiles that display the measures that are most useful to you to monitor performance.

You might want to also customize the layout in the Supply Chain Planning work area. For details, see *Create a Tile Set in Supply Chain Planning*.

Try It

Create your own layout with up to four panes.

1. Go to the Order Promising work area, click the **arrow** in the Page Layout list, then click **Create**.
2. In the dialog that displays, give your layout a name, then set the access.
    - **Public**. Allow other people to use your layout.
    - **Private**. Only you get to use your layout.
3. Click **Save and Close**.
   Notice that you have an empty page.
4. Click **Change**, select a layout, such as Two Pane Horizontal Split, then click **Save Layout**.
5. Click **Open**, and select a pane.
6. In the dialog that displays, search for and select a table, graph, or tile set, then click **OK**.
7. Click **Save Layout**.

Related Topics

- Create Tables, Graphs, Tiles, and Tile Sets

Manage Page Layouts

Make changes to a page layout so it meets your needs.

1. Go to the Global Order Promising work area.
2. Click the **arrow** in the Page Layout list, then click **Manage**.
3. Use the dialog that displays to manage the layout.
    - Edit the name, description, access level, and so on.
    - Add tiles to your layout.
    - Copy a layout.
    - Delete a layout that you created.
    - Set a layout as your default layout.
    - Rearrange tiles in your layout.

If the page layout is public, and if you don't own the layout, then you can't change it, but you can set it as your default layout.

Create a Copy

Assume you like the Order Promising Summary page layout but want to modify it. You can create a copy of it, and then edit the copy.

1. Go to the Global Order Promising work area.
2. Set the Page Layout to Order Promising Summary.
3. On the banner at the top of the page, next to Page Layout, click **Save Layout > Save As**.
4. In the dialog that displays, give your copy a name, then click **Save and Close**.
5. Edit the copy, then click **Save Layout**.

Create Tables, Graphs, and Tiles in the Order Promising Work Area

You can use predefined measures, dimensions, hierarchies, and members in the Selector Tool to create tables, graphs, and tiles.

Try it.

1. Go to the Order Promising work area, then click **Actions > Manage Tables, Graphs, and Analysis Sets**.
2. In the dialog that displays, click **Actions > Create**, and then click one:
    - Table
    - Graph
    - Tile
3. In the Available Measures area, expand Global Order Promising, then move one or measures to the Selected Measures area.

    A measure typically measures performance for your item, organization, customer, and supplier, and it typically measures performance over time. For example, Demand Count by Creation Date.

    See the List of Measures section later in this topic.
4. Click **Hierarchies**, then select the levels that you want to include for each table or graph.
    - If the Display attribute in the Hierarchy and Level Options area contains a check mark, then the table or graph will include that hierarchy.
    - Expand each hierarchy and specify the level. For example, expand the Time hierarchy, then add a check mark to All, Period, Week, or Day. If you select Week and Day, then the graph displays only weeks and days, starting at the week.
5. Click **Members**, then move the members that you want in your data to the Selected Members area. If you don't select a member, then the graph or table displays the dimension starting at the top level that you select in the Hierarchies tab.
6. Click **Layout**, then format the table, graph, or tile.
    - Use the Table Layout Options area to set up the table layout and specify how drilldowns work.
    - Use the Graph Layout Options area to select the graph type. Select from a wide variety, such as Vertical Bar Graph, Stacked Line Dual Y-Axis Graph, Bubble, and so on. Set the X axis, Y axis, and so on.
    - Use the Tile Layout Options area to select the graph type, and to add tables and graphs to the tile that you're creating.

Filter Your Members

When you're on the Members tab, click **Advanced Filter** (the funnel), then filter data according to predefined attributes.

Tab	Select Members According To
Levels	The level, such as Customer Site for customers, or Period for time.
Family	A parent and child relationship, such as the Days child in the Week parent.
Attributes	Item names that contain the word Economy. You can use only the Name attribute.
Measure Criteria	A criteria, such as items where the Gross Margin is greater than a value that you specify.
Time Range	A date range, a start date, or today's date.

Take Action in Your Filter

You can do an action on each filter.

Action	Description
Replace With	: Replace the current data with the members that meet your filter criteria.
Add	Add members that meet your filter criteria.
Keep	Keep only the members that meet your filter criteria.
Remove	Remove the members that don't meet your filter criteria.

Note

- You can apply filter criteria sequentially to refine your results. For example, select all the items for a category, and then keep the top 10 items according to sales volume.
- Click **Show Results** to display the filtered list of members.You can accept the results or do a reset.
- Expand **Criteria Steps** to display the criteria that the filter applied.
  - Click **X** in a row to remove a step.
  - Click **Show Criteria Change** to view the result of removing a criteria.

Use an Analysis Set

An analysis set is a set of filter criteria that contains the measures and members that you select in the tool. Open the Selector Tool dialog, then click:

- **Apply Analysis Set** to apply your filter to a table or graph. Use it to efficiently select the filters that you frequently use.
- **Save as Analysis Set** to save your filters as a list or as a script.

Link Your Tables

You can link a table or graph to another table or graph.

1. Go to the Global Order Promising work area, then click **Actions > Manage Table, Graphs, and Analysis Sets**.
2. In the dialog that displays, create a table, then save it.
3. Click **Actions > Manage Links**.
4. Click one of these tabs.
   - **To Table, Graph, or Page Layout**. Create a link to another table or graph.
   - **From Table or Graph**. Create a link to an open table or graph from another table or graph.
5. Click **+** (the plus sign), then select the table or graph to link to or link from.
6. Set the attributes.

Attribute	Description
Enable Dynamic Linking	Allow Promising to refresh the drill-to table or graph when data in the source table changes.
Pass Highlighted Selections and Selected Members	Send the data that's selected in the current table to the drill-to table or graph.

Attribute	Description
Pass User Specified Parameters	Use the attributes that you specify to send data to the drill-to table or graph.

7. Save your work.
8. Go to the Order Promising Summary page, then click **Drill To** on the tile where you added the link.

List of Measures

Here are the predefined measures that you can use.

- Demand Count by Creation Date
- Demand Count by Requested Date
- Demands Scheduled Late Percentage by Creation Date
- Demands Scheduled Late Percentage by Requested Date
- Demands Scheduled On Time Percentage by Creation Date
- Demands Scheduled On Time Percentage by Requested Date
- Gross Margin
- Gross Margin Percentage
- Late Demand Count by Creation Date
- Late Demand Count by Requested Date
- Late Demand Value by Creation Date
- Late Demand Value by Requested Date
- On Time Demand Count by Creation Date
- On Time Demand Count by Requested Date
- On Time Demand Value by Creation Date
- On Time Demand Value by Requested Date
- Revenue
- Total Fulfillment Cost by Creation Date
- Total Fulfillment Cost by Requested Date

Related Topics

- Create a Tile in Supply Chain Planning
- Create a Tile Set in Supply Chain Planning

Set Your Axis Scale

Use Axis Scale Options to refine your scale.

- Axis Scale Options applies to the Y axis and Y2 axis and you can use it only for bar, line, area, or combination graphs.
- Minimum is the starting point of the axis.
- Maximum is the ending point of the axis.

- Increment is the increase in values between maximum and minimum.

Specify the behavior.

- **Automatic**. Promising automatically adjusts the scale for the Y axis and the Y2 axis.
- **Manual**. You have to manually specify the scale for the Y axis and the Y2 axis.

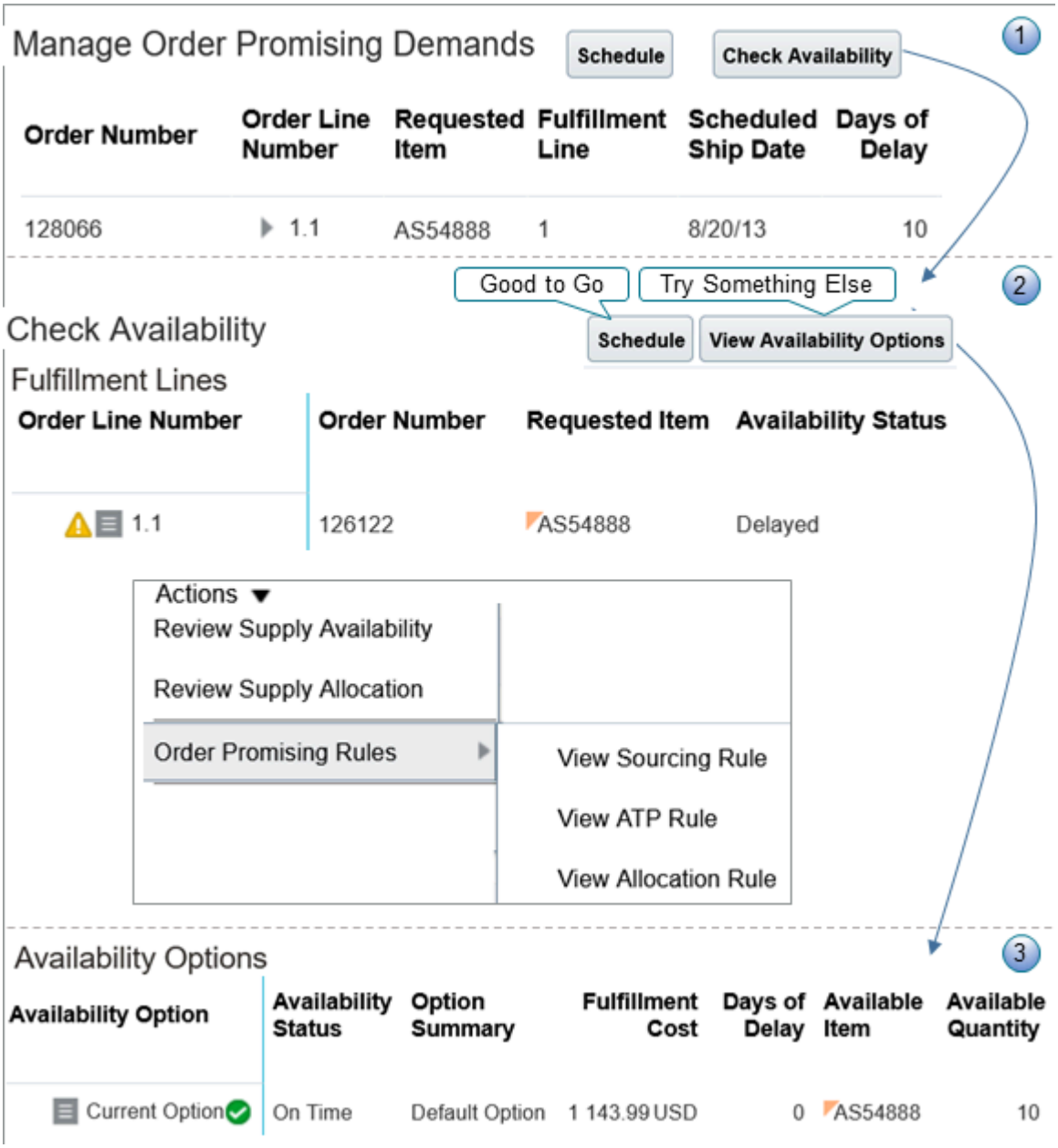
Assume you set Minimum to 3, Maximum to 10, and Increment to 2. The graph will display 3 as the lowest value, 10 as the highest value, and 5, 7, and 9 as incremental values for the Y axis or the Y2 axis.

5 Manage Demand

Overview

Overview of Managing Demand

Use the Manage Order Promising Demands page in the Order Promising work area to analyze demand. You can check availability, simulate different availability options, make changes that affect availability, then schedule your changes.



Here's what you can do.

1. Query for your order line and see if its delayed.
2. Check availability and get details about why the line is or isn't on time.
    - Get details about the availability for your item,such as the available quantity, shelf quantity, and allocated quantity.
    - Use the Review Supply Availability action to get the supply status for an item in one organization or across different organizations.
    - Use the Review Supply Allocation action to get the allocation for an item.
    - Get details about the ATP rules, sourcing rules, and allocation rules that Promising uses to promise the line.
    - Modify your order line attributes and simulate your modifications to see if they improve scheduling results.

- If the results meet your needs, you can schedule the line.

3. Simulate different availability options, then select the one that works best for you.

Time Zones

If you promise off the Promising server, and if you use daylight savings time (DST), then Promising promises each sales order in daylight savings time regardless of the time of year.

If you use database promising or source promising, then Promising promises in daylight savings time only when daylight savings time is in effect at the site where you locate the Promising server. For details, see *Database Promising* and *Source Promising*.

Get Details About Demand

Get details about demand, including the extent of delay, and who has what quantity for an item.

1. Go to the Global Order Promising work area.
2. Click **Open**.
3. In the Open Table, Graph, or Tile Set dialog, click the **row** that has the value, then click OK.

Attribute	Description
Name	Manage Order Promising Demands

4. On the Manage Order Promising Demands page, search for your area of interest, such as customer, item, or organization.
5. Click your **order line** in the search results.
6. In the Analytics section, Examine the data.

Data	Description
Demand Line Scheduling Distribution	Get details about promising performance according to the customer, item, category, organization, and supplier. See how much delay there is, such as 1 to 3 days delay, 4 to 7 days, and so on.
Item Availability	Get details about the item, including the quantity that's available for the item at various organizations and suppliers. Here's how this section displays quantity: - Shelf quantity. The amount of supply that's available for an item in an organization or supplier. - Allocated quantity. The amount of supply that Promising has reserved to meet demand from the sales order. - Available quantity. The amount of supply that's available to fulfill new sales orders, but that Promising hasn't allocated. Available quantity equals shelf quantity minus allocated quantity. Note

Data	Description
	◦ The numbers you see depend on how you set up your global sourcing rule. For details, see *Source Your Supply Chain*. ◦ If you specify a substitute for the item, then the Item list of values includes the substitute item.

Examine Shipment Sets and Arrival Sets

Examine promising results for your shipment sets and arrival sets.

1. Go to the Manage Order Promising Demands page. For details, see *Overview of Managing Demand*.
2. In the Search area, use the Set Name attribute to search for the set you want to examine.
3. In the search results, click **View > Columns**, then add a check mark to each option.

Option	Description
Set Name	See all lines that are in the same set.
Set Type	See if the set is a shipment set or an arrival set.

Note

- A shipment set is a set of order lines that you group together so they all ship at the same time.
- An arrival set is a set of order lines that you group together so they all arrive at the same destination on the same date. Fulfillment can ship the fulfillment lines from different warehouses on different days, but they arrive together at the destination at the same time regardless of the shipping method or ship-from location.

Assume you order the AS54888 Computer on fulfillment line 1, and it includes a mouse on line 2 and a keyboard on line 3. You ship each line from different warehouses on different dates. You can use an arrival set to make sure the computer, mouse and keyboard all arrive on the same date.

Note

- Promising independently determines the best ship from location and shipping method for each line in the set. If you check availability for a line in a set, then Promising checks availability for all lines in the set. If a line is delayed, then Promising sets the scheduled date of all lines in the set to the latest arrival date from the line that has the longest delay.
- All lines in the set must have the same values for these attributes:
  - Customer
  - Customer Site
  - Ship From Organization
  - Ship To Location
  - Shipping Method
  - Shipment Date

    - Arrival Date
- If you add a new line to a set, then you must make sure the attribute values on the new line match the values of the other lines in the set.
- If you override the schedule for an arrival set and manually provide the:
    - Scheduled shipment date. Promising calculates the scheduled arrival date for you.
    - Scheduled arrival date. Promising calculates the scheduled shipment date for you.
- You can manage lines in a shipment set in Order Management, and Promising will promise them in a shipment set. For details about how to manage shipment sets in Order Management, see *Guidelines for Managing Shipment Sets* and *Ship Order Lines in Shipment Sets*.

Check Availability

Check Availability

Use Check Availability to explore different ways to promise your fulfillment line.

1. Go to the Global Order Promising work area.
2. Click **Open**, then search for and open Manage Order Promising Demands. For details, see *Get Details About Demand*.
3. On the Manage Order Promising Demands page, do a search, select a line in the search results, then click **Actions > Check Availability**.
4. Use various actions on the Check Availability page, such as View Availability Options, Review Supply Availability, View Availability Details, and so on.

Examine the Attributes

Order Management sends different details to Promising depending on whether Order Management has scheduled the fulfillment line.

Type of Attribute	Description
Requested	The name of the attribute includes the word *requested*. Order Management hasn't scheduled and or shipped the fulfillment line. For example, Requested Item, Requested Quantity, or Requested Ship Date. You can't change the value for most of these attributes, but you can change the Requested Ship From Warehouse and the Requested Shipping Method.
Scheduled	The name of the attribute includes the word *scheduled*. Order Management has scheduled but not yet shipped the fulfillment line. You can check availability for a scheduled fulfillment line to see if you can improve the promising result.
Result	The name of the attribute includes the word *available* or *expected*. An attribute that contains the result of Promising analyzing your supply chain and promising an item.

Type of Attribute	Description
	For example, Available Item, Available Quantity, or Expected Ship From Warehouse. You can't modify the value of a promising result, but you can influence it by changing some other attribute, such as changing the Requested Ship From Warehouse. The values that you set provide a way for you to simulate different fulfillment scenarios. Assume the item on the line is the AS54888 computer, the requested ship date is March 1, and the line doesn't allow substitutions. • The availability result suggests to use the AS54888 but with a delayed, expected ship date of March 10. • You change the fulfillment line to allow a substitution,then refresh the result. • The availability result now specifies to use a substitute item, the AS6000 computer, with an expected ship date of March 1.

Schedule the Fulfillment Line

To schedule the line, select it, then click **Actions > Schedule**.

Promising doesn't commit any changes that you make on the Check Availability page until you schedule the line. If you schedule the line, then Promising sends the revised line to Order Management and removes the line from the Check Availability page.

Check Availability in Oracle Order Management

You can also check availability in Order Management and manually schedule a fulfillment line.

1. Go to the Order Management work area, then click **Manage Fulfillment Lines**.
2. Select a fulfillment line, then click **Check Availability**.

Order Management displays fulfillment lines according to the requested date for each line. The results try to minimize delay for each line. You can change each line, such as changing the priority or the requested ship from warehouse, or remove a line from a shipment set. You can schedule the promising results to meet your needs, such as to incur less cost but more delay.

What You Set	What Promising Does
Scheduled Shipment Date	Uses the Scheduled Shipment Date that you set to calculate the Scheduled Arrival Date.
Scheduled Arrival Date	Uses the Scheduled Arrival Date that you set to calculate the Scheduled Shipment Date.
Scheduled Shipment Date and Scheduled Arrival Date	Uses both values to promise the item.

Note

- Promising considers shipping methods, lead times, transit times, calendars, and so on to determine the dates that it calculates.
- if you don't set the shipping method, carrier, mode of transport, and service level, then Promising sets them.

- If you set the scheduled shipment date, scheduled arrival date, and shipping method, then Promising doesn't consider the transit time between the source and destination.
- If you set a shipment date or arrival date that isn't a working day, then Promising uses the previous working day to calculate the dates.
- The Supply Details area displays these dates on the Manage Fulfillment Lines page in the Order Management work area.
- If all lines in a shipment set have the same ship from organization, ship to location, and shipping method, then you can set the scheduled dates for these lines. You must use the same scheduled shipment date or scheduled arrival date on each line.

For details, see *Schedule Fulfillment Lines Manually*.

Related Topics

- Refresh Results
- Get the Results You Need

Refresh Results

Click Refresh Results on the Check Availability page, and Promising will refresh the results according to changes that you make on the page.

Promising checks availability for all lines in your batch of lines regardless of what lines you select, and it processes them according to the values that you set in the Override Priority attribute on the lines. If you change the value of any *requested* attribute on any line, then Promising uses your new values when it checks availability.

Expect That Results Will Be Different

The supply and demand that's available in your supply chain is constantly changing, so you might receive different results each time you check availability or refresh results. Promising might be able to promise an item on time in one result, but not in the next result.

Act Before Time Expires

Data in your supply chain is constantly changing. Other sales orders might consume supply for the same item on your fulfillment line, or more supply for the item might become available, so Promising sets a time limit to make sure your results remain accurate.

If the promising results meet your needs, then schedule the line before the results expire. The same results might not be available after you refresh because of other changes that happen in your supply chain.

To see how much time is remaining for your promising results, examine the static text on the Check Availability page, immediately below the word Done. For example:

```
Your results expire in 9:59
```

If the results expire, then click **Actions > Refresh Results**.

Related Topics

- Get the Results You Need

See How Promising Estimates Availability

See how your Promising set up affects the statuses that you see in the Order Management work area.

Here's what happens when you add an item on the catalog line of a sales order or click Check Availability on an order line in the Order Management work area.

1. Order Management sends the order line to Promising. The line includes some important details that Promising uses to promise the item.
    - Requested Date
    - Warehouse
    - Item
    - Customer
    - Shipping Method
2. Promising uses the Order Promising Sourcing Assignment Set (MSP_DEFAULT_ASSIGNMENT_SET) profile option to identify the sourcing rules it will apply according to the order line details. See *Manage Promising Profiles*.
3. Promising examines all the assignment levels that you have specified on your assignment set. It starts at the most specific assignment level, and continues until it finds a match. If it doesn't find a match, then it uses the global level. For details about these levels, see *Set Your Assignment Levels*.
4. Promising uses your global sourcing rules to identify the source it will use to fulfill the item. The sourcing rules specify the inventory or warehouse to use to source the item. See *Source Your Supply Chain*.
5. Promising uses the item and organization from the sales order to identify the ATP rule it will use.
    - If you have more than one ATP rule, then Promising uses the Assignment Basis attribute on your assignment set to determine which one to use. For details, see Allocate Your Rules.
    - Promising examines all levels that have an ATP rule, then uses the rule that's at the most specific level.
    - If Promising can't identify an ATP rule, then it returns an error:
      `ATP rule cannot be determined - No data was retrieved`

    See *ATP Rules*.
6. Promising uses your ATP rules differently depending on the rule's mode.

Mode	Description	Status That Promising Sends to Order Management
Supply Chain Search	Examines the data that you've collected to determine supply. For example, Promising looks at supply that you currently have on hand and sees if it can meet the demand that you're getting from the fulfillment line. You must regularly run the Collect Planning Data scheduled process. It collects supply and demand data to make sure Promising uses data that accurately	- In Stock - Out of Stock - Low Inventory

Mode	Description	Status That Promising Sends to Order Management
	reflects the supply that's currently available in your supply chain. For details, see *Collect Data for Global Order Promising*.	
Lead Time	You can measure different types of lead time, such as manufacturing lead time, transit time, or total lead time. Promising uses your lead times to determine availability and the scheduled ship date.	Out of Stock
Infinite Availability	Promising doesn't measure anything in your supply chain, and instead sets the promise date to the requested date.	In Stock

See *Promising Modes for ATP Rules*.

7. Promising sends details to Order Management.
    - Warehouse
    - Scheduled Ship Date
    - Message that includes availability details, including what stock is on hand, out of stock, low availability, can't fulfill, or there will be a delay of x days
8. You can now go to the Shipping area on the order line, then click Estimate Order Availability. Promising will examine your supply chain and return a message, such as on time, out of stock, delayed, or can't fulfill right now.

    If you don't have a sourcing rule and an ATP rule that Promising can use, then Promising returns `No data was retrieved`.

Estimate Order Availability

Here's what happens when you go to the Shipment Details area on a sales order and click **Estimate Order Availability**, depending on the mode that you use on your ATP rule.

Mode	Status That the Order Management Work Area Displays
Supply Chain Search	if supply is available and the requested date: • Is a working day, then the status is `On Time` • Isn't a working day, then the status is `Delay of x days` • If supply isn't available, then the status is `Delay of x days`
Lead Time	If the requested date is:

Mode	Status That the Order Management Work Area Displays
	• After today's date plus the calculated lead time, then the status is `On Time`. • Before today's date plus the calculated lead time, then the status is `Delay of X days`. If the calculated lead time is greater than the number of days that you set in the MSP_GOP_HORIZON_DAYS profile option, then the status is Cannot fulfill. See *Manage Promising Profiles*.
Infinite Availability	`On Time`

Use the Availability Results

Get the Results You Need

If you don't get the results you need when you check availability, then use these guidelines to help you get them.

Consider Priority

Consider the promising results for your lower priority lines before you change a higher priority line. If promising for the lower priority line meets your needs, then schedule it. Changing a value for a higher priority line might affect a lower priority line, so Promising automatically expires the lower lines when you change a higher priority line.

Give Promising More Options

The less specific you are, the more flexibility you give Promising to deliver the item on time. Here's how you can be less specific:

- Don't specify a ship from warehouse
- Don't specify a shipping method
- Allow splits
- Allow substitutions

For details, see *Guidelines for Using Supply Chain Search*.

Modify Your Rules

Check Availability might find more than one way to fulfill your item, but it only displays one result for each line, and the result it displays provides the least amount of delay while using the rules that you have specified.

- Available-to-promise rules
- Sourcing rules
- Allocation rules

These rules affect availability. You might need to modify them to meet your availability requirements. For details, see *See How Promising Estimates Availability*.

Examine Data in Your Supply Chain

Changing values on the line can only go so far in meeting your availability requirements. Use the Review Supply Availability action and the Review Supply Allocation action to get details about the supply and allocation that's available in your supply chain. For details, see *Overview of Managing Demand*.

Set the Priority

Promising returns a result for each fulfillment line that minimizes the lateness for each line in your batch of lines. Promising processes each line in the batch sequentially, according to the Original Priority attribute and the Override Priority attribute on the Check Availability page.

Fulfillment for higher priority lines might affect fulfillment for lower lines because Promising pegs the higher priority lines first, and that removes the supply that's available to the lower priority lines. But not to worry, you can override the original order priority.

Promising displays the original priority in multiples of 10, such as 10, 20, 30, and so on. To override the original priority, you can insert any number between the multiples of 10 in the Override Priority attribute.

Assume you have three order lines and their priorities are 10, 20, and 30. The lowest number has the highest priority, so Promising will process line 1 first, then line 2, then line 3. Let's say the customer on line 3 is your highest priority customer, so you want to process line 3 first. Here's how you can do that.

Order Line	Original Priority	Override Priority
1	10	10
2	20	20
3	30	5

If you refresh, then Promising will process line 3 first, then line 1, then line 2.

Note that the Check Availability page in the Order Management work area doesn't display the order priority in multiples of 10. Instead, it displays priority 1, 2, 3, and so on.

Change Values on Fulfillment Lines

Use the Order Management work area to change values for these attributes on the fulfillment line.

Attribute	Description
Requested Ship From Warehouse	Remove the value, and Promising can use any warehouse. Change the value, and Promising will use the warehouse that you specify to source the item. Removing the value gives Promising the most flexibility and has a better chance of promising the item on time. It means Promising can use your rules and item attributes to identify possible warehouses.
Requested Shipping Method	Remove the value, and Promising can use any method, such as rail, air, and so on. Removing the value gives Promising the most flexibility and has a better chance of promising the item on time. It means Promising can use your rules and item attributes to identify possible methods.

Attribute	Description
Demand Class	Change the value so Promising can consider some other demand class, and that means Promising can look at other supply.
Allow Substitution	Enable this option so Promising can look at supply for another item. For details, see Specify Supply Details for Sales Orders.
Allow Splits	Enable this option so Promising can consider splitting the fulfillment line into more than one line, then use different promising results for each line.

Remove Lines from Shipment Sets

Order Management ships all lines in a shipment set together on the same date, using the same shipping method. The Check Availability page displays lines in a shipment set in a hierarchy.

- You can click **Actions > Remove from Set** to remove a fulfillment line from the set, refresh, then examine the results to determine whether the results improve for the set, identify which lines cause delay, and so on.
- The Check Availability page displays each removed line as a separate line in your batch of lines. You can ship the removed line on a different date, and use a different shipping method to ship the line.
- If you remove a line, and then schedule it individually outside of the shipment set, then Promising sends the line to Order Management with the new schedule, and as an individual line that's no longer part of the set.
- You can add a line that you removed from a set back to the set.
- If a line wasn't originally part of the set, then you can't add it to the set.

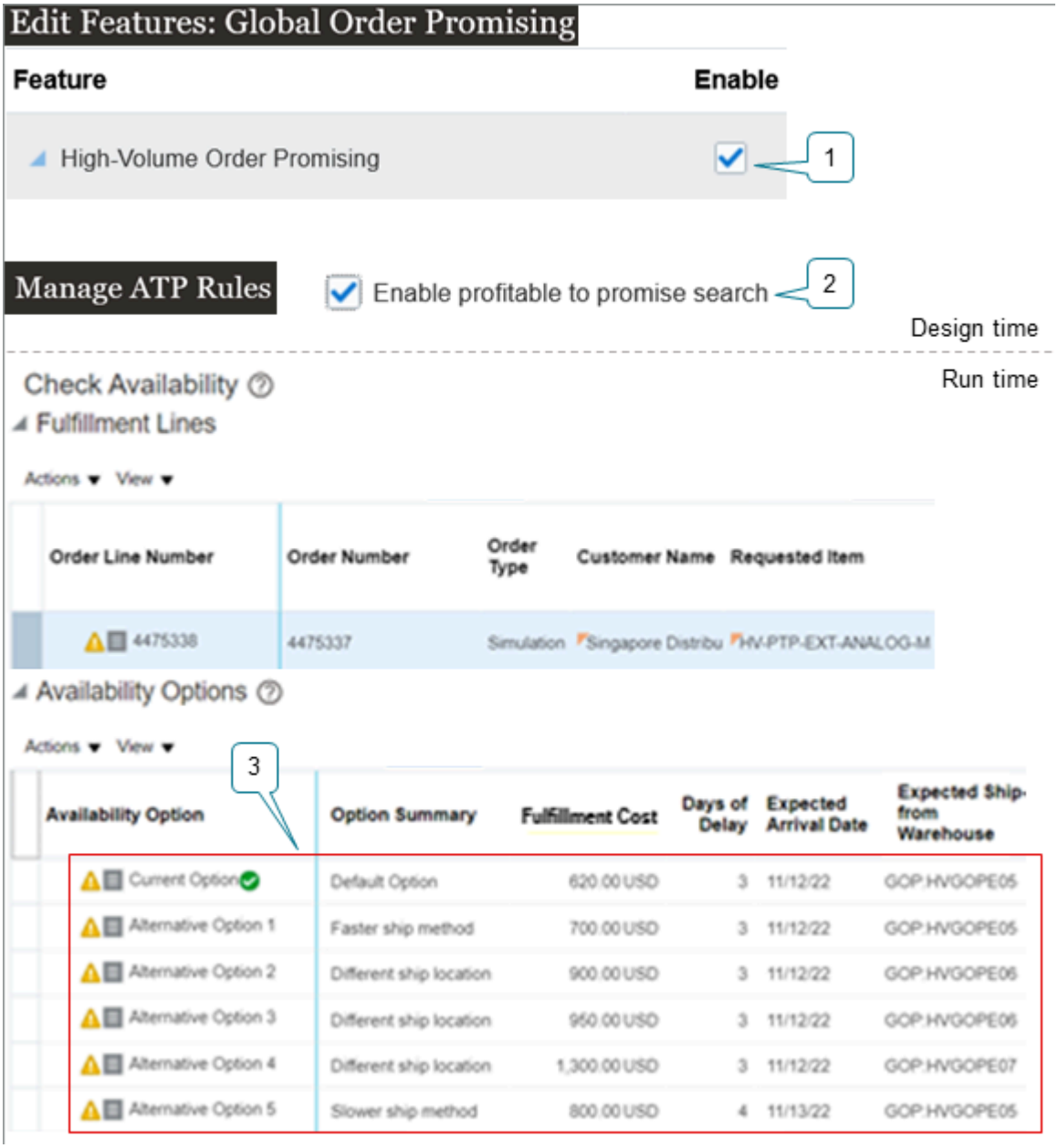
Related Topics

- Assignments and Promising Rules
- View Availability Details

Create Alternative Fulfillment Scenarios to Reduce Cost

Set up Promising so you can select an alternative fulfillment scenario that has the lowest total cost to fulfill the item.

Maximize your profit margin. Use the option that costs the least in your profitable to promise flow. Reduce the cost that you incur for the item in your organization, the cost to transfer the item between organizations, and the transit cost that you incur to ship the item from your supplier.



Here's what you do.

1. Enable the High Volume Order Promising feature. Promising will include the cost that you incur to ship the item from the ship from location to your customer's site when you schedule the arrival date. You can also include a manufactured item's resource cost and material cost from a bill of resources.
2. Enable profitable to promise on your ATP rule. Use it so you can change the source that you would normally use to fulfill the item to a source that's more cost effective.

3. At run time, use the Check Availability action to examine the default availability option that Promising is currently using and alternative options that might be more cost effective, for example, by using a different shipping method or by shipping from a different location. Use the default, or select an alternative.
For example, select from one of these:

Availability Option	Option Summary	Fulfillment Cost	Days of Delay	Expected Arrival Date	Expected Ship From Warehouse
Current Option	Default Option	$620	3	1/1/2023	Denver
Alternative Option 1	Faster Ship Method	$700	3	1/1/2023	Denver
Alternative Option 2	Different Ship Location	$900	3	1/1/2023	Seattle
Alternative Option 3	Different Ship Location	$950	3	1/1/2023	Portland
Alternative Option 4	Different Ship Location	$1,300	3	1/1/2023	San Francisco
Alternative Option 5	Slower Ship Method	$800	4	1/2/2023	Denver

Notice how the action prioritizes on time delivery over cost. For example, option 5 costs less than options 2, 3, and 4, but option 5 is last in the list because it adds another day of delay.

Prioritize

Promising's number one objective is to fulfill the sales order on time or with minimum delay. If promising finds that there's more than one way to fulfill the order within the requested date, then it considers the cost for each source to help decide which source to use. For example, it considers inventory cost, transfer cost, and delivery cost. If you have to manufacture the item, then it also looks at the rolled up cost.

Here's how Promising prioritizes demand.

Priority	Description	Sort Top Six Fulfillment Scenarios on Check Availability Page According To
1. On Time Delivery	Promising gives the highest priority to fulfilling the sales order on time or with the minimum delay according to the requested date and the quantity.	Expected promise date
2. Cost	Promising gives the next highest priority to fulfilling the sales order according to cost.	Cost

Here are the costs that Promising considers.

Cost	Description
The item's standard cost.	If you have the item in stock, then Promising uses the standard cost of the item or the cost to substitute it.

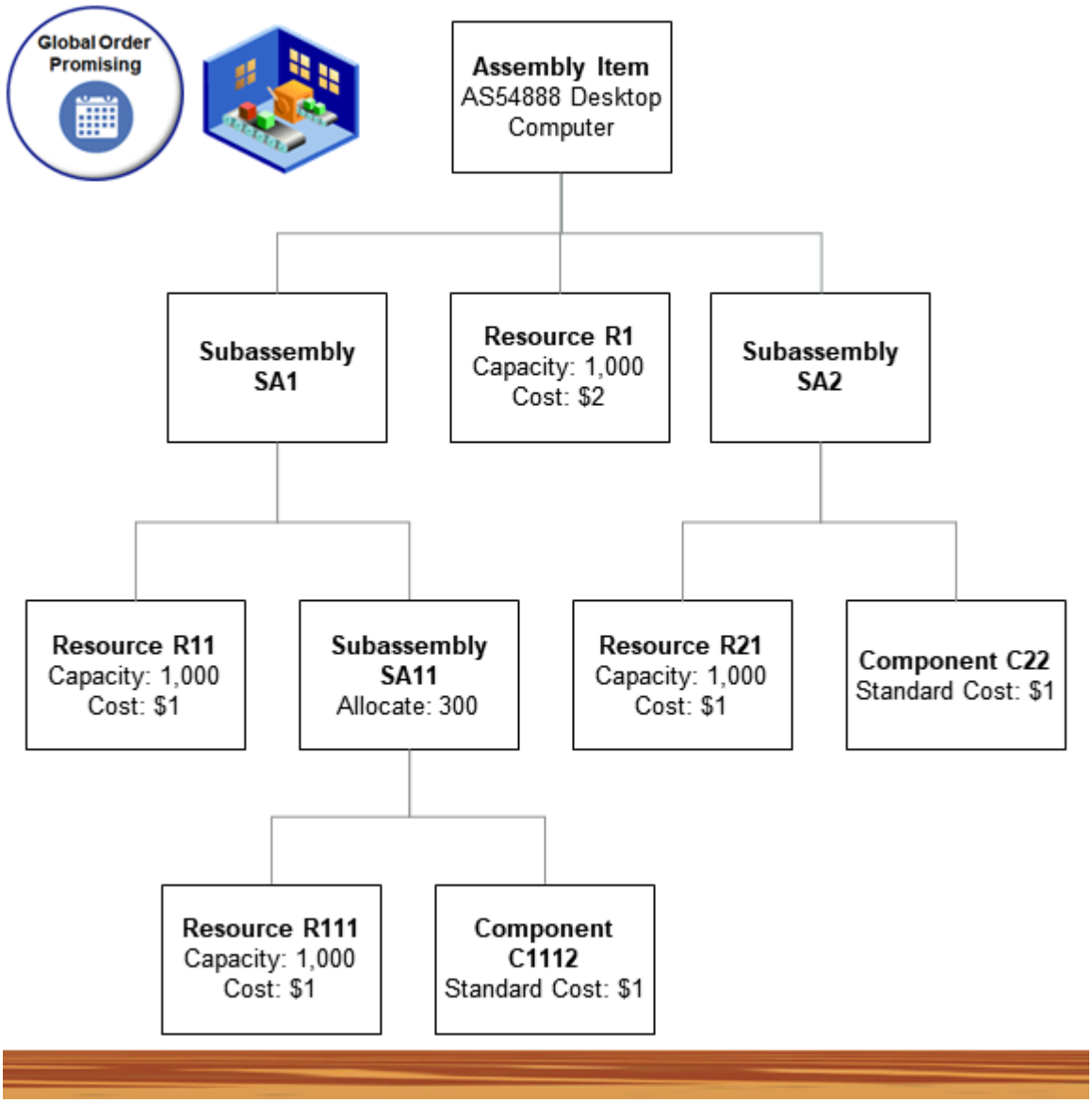
Cost	Description
	You must collect the item's cost.
Supplier cost at the supplier's location.	If you purchase the item, the Promising uses the supplier cost that you import through the Approved Supplier List file based data import (FBDI).
Cost to transfer the item: • Between organizations • From the supplier's site to an organization • From the ship-from location to your customer's site	Promising uses the transfer cost for each unit that you specify in the Manage Transit Times task for each of these types of transfers.

The bill of resources doesn't include cost for an item that you manufacture. Instead, Promising calculates it.

Cost	Description
Cost to build the item and its subassemblies.	Includes the resource cost for each critical resource in the bill of resources. If your item has more than one level, then Promising rolls up the resource costs. You must collect the resource cost.
Cost of the raw materials for the item's manufacturing components.	Promising uses the standard cost of the item. If you must purchase the raw materials, then Promising uses the supplier's cost at the supplier location.
Cost to transport the raw material, manufacturing components, or subassemblies to your factory.	Promising uses the transfer cost for each unit that you specify in the Manage Transit Times task to determine the cost that you incur when you transport the item from your supplier to your organization or between organizations.

Example

Assume you have this supply chain network.



Assume

- You need to promise an order line for the AS54888 Desktop Computer item, with a quantity of 10.
- The AS54888 includes subassembly SA1 and subassembly SA2.
- You use the R1 resource to assemble SA1 and SA2.
- Capacity is for each day and cost is for each unit. For example, R1 can build 1,000 units each day at a cost of $2 for each unit.
- You make each subassembly from other subassemblies or manufacturing components, and you use different resources to assemble them.
- You build the subassemblies and the AS54888 in you factory.
- All manufacturing components and resources are available in the factory.

To calculate the total fulfillment cost, Promising adds the standard cost for each of the manufacturing components. It then adds the resource costs that you incur to build the subassemblies and the AS54888.

Resource or Manufacturing Component	Cost for Each Unit	Quantity	Total
C22	$1	10	$10
C1112	$1	10	$10
R1	$2	10	$20
R21	$1	10	$10
R11	$1	10	$10
R111	$1	10	$10
-	-	**Total Fulfillment Cost:**	$70

Note

- Promising uses the critical manufacturing components and critical resources from the bill of resources.
- Promising looks at all possible paths through your supply chain, then gives you the least expensive path.
- Promising doesn't return the individual cost for any assembly or subassembly when you build the item. Instead, it returns the cost when it promises the AS54888 from your available to promise inventory after you finish building the item.

Promise According to Arrival Date

Promising considers the cost of shipping the item to your customer when you promise according to the arrival date. Assume you need to promise an order line for the AS54888 item with a quantity of 10. You have three different factories that can build the item, and the cost to build and ship each unit is different for each factory.

Rank	Factory	ATP Supply	Transit Time	Cost to Build Each Unit	Cost to Ship Each Unit	Fulfillment Cost
1	Denver	10	2 days	$1	$1.30	$23.00
2	Seattle	30	2 days	$2	$0.25	$22.50
3	San Francisco	30	3 days	$5	$1.50	$65.00

Denver has the highest rank, but Promising will fulfill the item from Seattle because Seattle can promise the item in the same amount of time that Denver can, but Seattle has the lowest cost. Here's the math for the fulfillment cost.

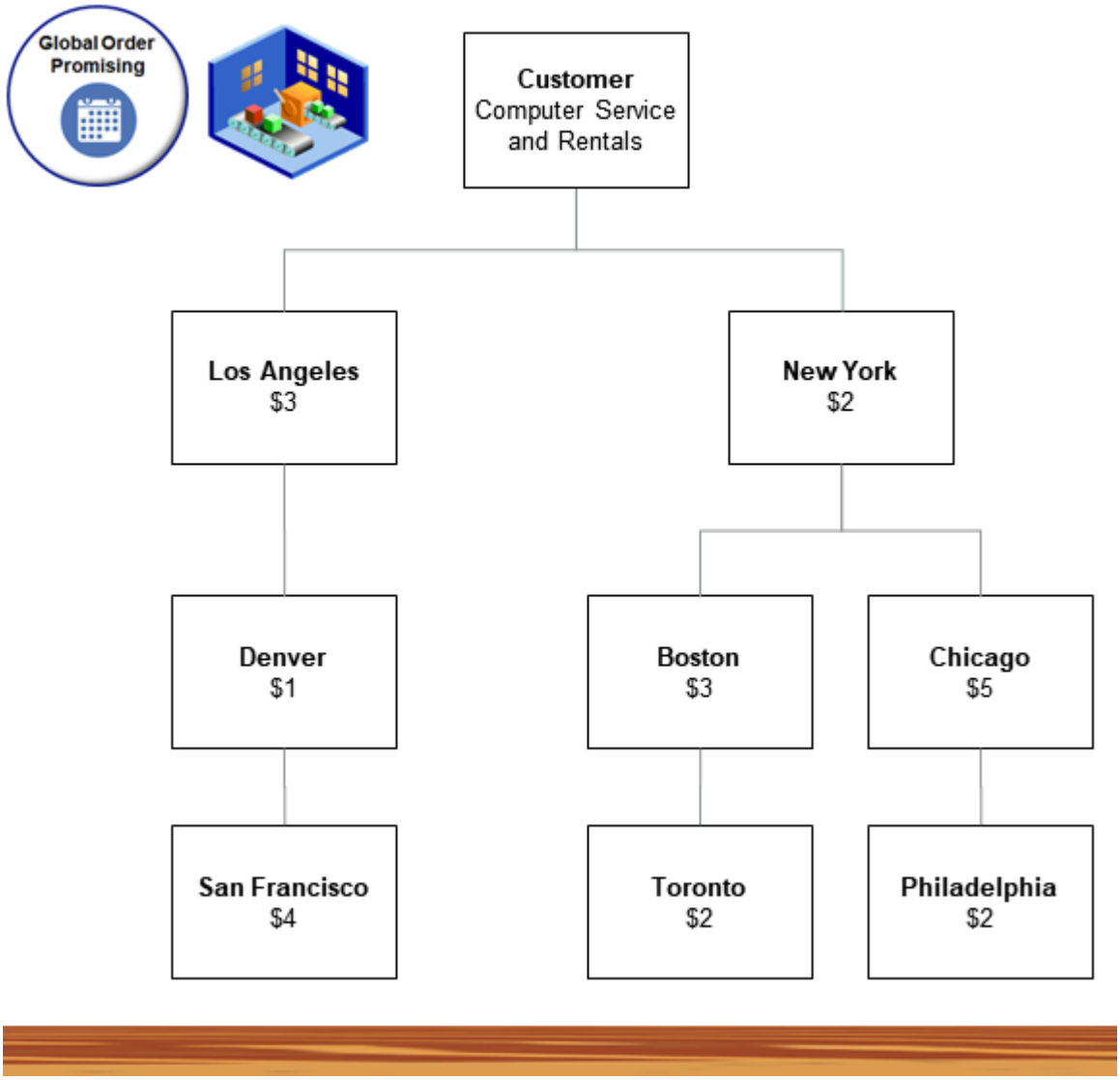
Factory	Cost to Build Each Unit	Cost to Ship Each Unit	Quantity	Fulfillment Cost	Math
Denver	$1	$1.30	10	$23.00	$1 plus 1.30 multiplied by 10

Factory	Cost to Build Each Unit	Cost to Ship Each Unit	Quantity	Fulfillment Cost	Math
Seattle	$2	$0.25	10	$22.50	2 plus 0.25 multiplied by 10
San Francisco	$5	$1.50	10	$65.00.	5 plus 1.50 multiplied by 10

The same logic applies when you transfer supply from a supplier except Promising looks at the cost to transfer each unit instead of the cost to build each unit.

How Promising Examines Your Supply Chain Network

Example 1



Note

- You need to promise an order line that has a quantity of 20.
- The requested arrival date on the line is the system date.
- A quantity of 10 units are available on the requested arrival date at every organization in your network.
- You can split the line across factories but you must deliver the entire quantity together in a single shipment.

Promising will look at every node in your network until it has fulfilled the requested quantity.

Result	Supply Chain Path	Fulfillment Cost	Math
Default	Los Angeles first, and then Denver	$40	• 10 units in Los Angeles at $3 each equals $30. • 10 units in Denver at $1 each equals $10. • $30 plus $10 equals $40.
Alternative 1	New York first, and then Boston	$50	• 10 units in New York at $2 each equals $20. • 10 units in Boston at $3 each equals $30. • $30 plus $20 equals $50.

Note

1. Promising will start with the default path, which is Los Angeles.
2. If the Los Angeles path can't meet demand, then Promising will look at the New York path.
3. The Los Angeles path costs less, so Promising will promise from Los Angeles.

Example 2

Assume the same scenario except with a quantity of 30.

Result	Supply Chain Path	Fulfillment Cost	Math
Default	New York first, then Boston, then Toronto	$70	• 10 units in New York at $2 each equals $20. • 10 units in Boston at $3 each equals $30. • 10 units in Toronto at $2 each equals $20. • $20 plus $30 plus $20 equals $70.
Alternative 1	Los Angeles first, then Denver, then San Francisco	$80	• 10 units in Los Angeles at $3 each equals $30. • 10 units in Denver at $1 each equals $10. • 10 units in San Francisco at $4 each equals $40. • $30 plus $10 plus $40 equals $80.
Alternative 2	New York first, then Chicago, then Philadelphia	$90	• 10 units in New York at $2 each equals $20. • 10 units in Chicago at $5 each equals $50. • 10 units in Philadelphia at $2 each equals $20.

Result	Supply Chain Path	Fulfillment Cost	Math
			• $20 plus $50 plus $20 equals $90.

Note

1. Promising will start with New York as the default path.
2. If the New York path can't meet demand, then Promising will look at Boston because Boston is more cost effective than going through Philadelphia.
3. If Boston can't meet demand, then Promising will look at the Los Angeles path because going through Los Angeles is more cost effective than going through Philadelphia.

Guidelines

- The bill of resources doesn't include the cost to manufacture the item. Instead, promising calculates that cost when it promises the item according to the item cost, transfer cost, and so on.
- Promising considers transfer cost for a manufactured item according to your sourcing rule. It won't consider the cost that you incur to transfer the item between organizations in your bill of resources. If you want Promising to apply a transfer cost, then you must specify that the item is critical at the source and at the destination in your bill of resources.
- Make sure you set up costs correctly in your Oracle Applications, such as your transfer cost, standard item cost, supplier cost, resource cost, and so on.

Try It

1. Set up your ATP rule.
   - Go to the Global Order Promising work area.
   - Click **Tasks > Manage ATP Rules**.
   - Create a new rule or open one that you already have for editing, then set the attributes.

Attribute	Value
Enable Profitable to Promise Search	Contains a check mark. You must enable this attribute. Promising will assume this option is enabled for all organizations in your supply chain network, and will use this feature for all of those organizations.

2. If you drop ship your item, then:
   - Set the attribute.

Attribute	Value
Promising Mode	Supply Chain Availability Search

- Click **ATP Rule Assignment**, then set the attribute.

Attribute	Value
Assigned to Organization	Set this attribute to your drop ship validation organization.

3. At run time, use the Check Availability action to examine your availability options. Use the default, or select an alternative.

Split or Substitute Fulfillment Lines

Promising might split a fulfillment line across warehouses, substitute items, or dates.

Promising splits an order only if the Allow Partial Shipments of Lines attribute on the line contains Yes.

Split a Warehouse

Promising splits a line across warehouses only if the Requested Ship From Warehouse attribute on the original fulfillment line doesn't contain a value.

Promising uses the sourcing rule for the fulfillment line to determine which ship from warehouses it can consider.

If Promising splits across warehouses, then each fulfillment line that the split creates contains a different value in the Expected Ship From Warehouse attribute.

Substitute the Item

Promising substitutes one item for another item only if the Allow Substitutions attribute on the fulfillment line contains Yes.

If Promising splits lines when it substitutes the item, then each fulfillment line that the split creates contains a different value in the Available Item attribute.

Assume the fulfillment line has a quantity of 100 for the AS54888 desktop computer, the AS6000 is a substitute for the AS54888, 80 units are available for the AS54888, and 50 for the AS6000. The Check Availability action will split the fulfillment line into lines x and y:

- Line x will have 80 units for the AS54888
- Line y will have 20 units for the AS6000

Consider Dates

Promising creates two dates when it splits availability across dates.

- The first date contains the quantity that's available on the requested date.
- The second date contains the remaining quantity that's available for the same item and from the same organization.

Assume the fulfillment line has a quantity of 100 for the AS54888 desktop computer, 80 units are available on March 1, and 40 units are available on March 10. The Check Availability action will split the fulfillment line into lines x and y:

- Line x will have 80 units and an expected delivery date of March 1.
- Line y will have 20 units and an expected delivery date of March 10.

Consider Lead Times

Promising examines lead time when it determines how to split a fulfillment line.

How You Fulfill the Item	Lead Time Attributes That Affect Promising
Manufacture	• Fixed • Variable • Postprocessing Days
Purchase	• Preprocessing Days • Processing Days • Postprocessing Days
Transfer	• Postprocessing Days
Drop Ship	• Preprocessing Days • Processing Days

Make sure you consider how these lead times affect splits and substitutions when you set them up. Here's how you do it.

1. Go to the Product Information Management work area.
2. Click **Tasks > Manage Items**.
3. Search for, then open your item for editing.
4. Click **Specifications > Planning**.
5. In the Lead Times area, set the values for the attributes, as necessary.
    - Preprocessing Days
    - Postprocessing Days
    - Processing Days
    - Variable
    - Fixed

Other Lead Times That Affect Promising

Make sure you also consider your other setups.

Other Fantastic Lead Times	And Where to Find Them
Cumulative manufacturing lead time and cumulative total lead time in an available-to-promise rule	See the section that starts with *Lead Times Usage in Oracle Manufacturing*. Also see *Promising Modes for ATP Rules*.

Other Fantastic Lead Times	And Where to Find Them
Supplier Lead Time	See the Manage Sourcing Rules section in *Set Up Drop Ship in Order Management*
Transit Lead Time	*Transit Times*

Related Topics

- Source Your Supply Chain

Examine Availability Dates

The date attributes on the Check Availability page provide details about when Order Management requested the item, when shipping will ship and deliver it, and so on.

- The Check Availability page converts and displays most of these dates in the local time zone where the destination or source resides.
- The destination time zone is the time zone where the customer or the organization that receives the item resides.
- The source time zone is the time zone where the organization or the supplier that ships the item resides.
- The page displays some dates in the time zone that you use when you create the sales order in Order Management.
- Promising assumes the orders that you import use the Coordinated Universal Time (UTC) time zone.

Here are some more details.

Attribute	Description
Requested Arrival Date	Date when the customer requested to receive the item, in the time zone where the customer site resides.
Requested Arrival Date at Customer Site	Date when the customer requested to receive the item, in the time zone where the customer site resides.
Requested Ship Date	Date when the sales order requested to ship the order to the customer, in the time zone where the customer resides.
Requested Ship Date at Ship-from Site	Date when the sales order requested to ship the item from the warehouse or supplier, in the time zone where the warehouse or supplier resides.
Expected Ship Date	Date when Promising expects that we can ship the item, in the time zone where the ship-from warehouse resides.
Expected Arrival Date	Date when Promising expects the item will arrive at the customer site, in the time zone where the customer site resides. If it's a transfer, then this date is in the time zone where the receiving organization resides.
Scheduled Ship Date	Date when the item is scheduled to ship, in the time zone where the organization or supplier that will ship the item resides.
Scheduled Arrival Date	Date when the item is scheduled to arrive, in the time zone where the customer site resides.

Attribute	Description
	If it's a transfer, then this date is in the time zone where the receiving organization resides.
Latest Acceptable Date	Date that the sales order specifies as the last day that the customer is willing to accept the item, in the time zone where the customer resides.
Latest Acceptable Date In Local Time Zone	Date that the sales order specifies as the last day that the customer is willing to accept the item for: • Arrival. In the time zone where the customer site resides. • Ship. In the time zone where the ship-from organization resides.
Earliest Acceptable Date	Date that the sales order specifies as the first day that the customer is willing to accept the item, in the time zone where the customer resides.
Earliest Acceptable Date In Local Time Zone	Date that the sales order specifies as the first day that the customer is willing to accept the item for: • Arrival. In the time zone where the customer site resides. • Ship. In the time zone where the ship-from organization resides.
Order Creation Date And Time	The date and time when you create the sales order in Order Management.

Here are two different ways that you can specify a time zone for your supplier or customer.

- Use a CSV file when you upload your planning data.
- Go to the Plan Inputs work area, then use the Maintain Supply Network Model page.

Time Zone Differences

If you don't specify a time zone for the supplier or for the customer, then Promising uses the values that you specify on the Order Promising Options page as the default time zone for the supplier or for the customer. For more, see:

- *Manage Order Promising Options*
- *Source Promising*
- *Database Promising*

Set the Ship-to Region or Zone

You might need to specify the ship-to region or zone when you check availability.

If:

- You don't assign a sourcing rule that's higher in the sourcing hierarchy than the region, and:
- You don't assign a sourcing rule at a more specific level, such as customer or item, and:
- The Order Entry Specialist adds a new site or a new customer on the sales order at run time.

Then:

- You must set a value in the Ship to Region or Zone attribute, and the value that you set must match the region that you specify in your sourcing assignment. Promising will use it to determine what sourcing to use in your sourcing rule.

You typically specify the customer site in your party data when you set up each customer. Promising looks at the party data, not custom run time data that isn't typically part of the data model.

To set the attribute, go to the Check Availability page, click **View > Columns** in the fulfillment line area, add a check mark to the Ship-to Region or Zone attribute, then set the value for the attribute on the line.

Use Fulfillment Analytics

Use Analytics section on the Check Availability page to get details and evaluate the promising results for your fulfillment line. You can use these analytics each time you refresh the results.

If you improve the results for one line, and if the lines in your batch request the same item, then the results for other lines in your batch might degrade. Use the analytics to determine whether the overall results meet your needs.

Aggregate Batch Scheduling Metrics

Use the Aggregate Batch Scheduling Metrics analytic to analyze the total margin and total fulfillment cost for your lines. Promising uses the cost details that you collect into the planning repository to calculate the fulfillment cost of each line, and then aggregates these results. Promising considers various costs, such as:

- Cost of the item in your organization
- Cost to purchase the items or its manufacturing components
- Shipping cost
- Resource usage cost

The promising mode affects how Promising calculates cost. Promising provides the lowest cost option, by default. Consider the simplest case, where Promising uses existing, on hand supply at a warehouse to promise the order. Here's that calculation for the fulfillment cost for a line.

- (Cost of the item multiplied by the quantity) plus (the shipping cost for each unit multiplied by the quantity)

Fulfillment Line Promising Distribution

Use the Fulfillment Line Promising Distribution analytic to analyze results according to what's on time and what's delayed. Use the pie charts to get details, such as:

- The number of lines that are on time
- The number of lines that are delayed 4 to 7 days
- The number of lines that are delayed 15 days or more

Note

- Use the Original chart to see what's on time and what's delayed before you did a refresh. The delay in this chart is the number of days between the requested arrival date and the scheduled arrival date.
- Use the Proposed chart to see what's on time and what's delayed after you make changes and do a refresh. The delay in this chart is the number of days between the requested arrival date and the expected arrival date.

Why Is My Inventory Different From What's Available?

Learn why the inventory that you have for an item in Inventory Management is different from the inventory that Order Promising finds in your supply chain, and how you can fix that.

Promising Allocates Supply, but Inventory Doesn't See the Change

Promising returns the supply that's available to promise. This supply can include inventory that's currently on hand in inventory. It also includes supply that Promising can get from a purchase order, work order, or transfer. Assume there's no supply on hand in inventory today, but Promising finds 5 purchase orders, each with a quantity of 20, and with an expected delivery date of today. You'll see a quantity of 0 in the Inventory Management work area, but Promising will tell you a quantity of 100 is available.

Promising returns all the supply that's available on a particular day. Assume Promising finds five different purchase orders. Each purchase order is scheduled to deliver a quantity of 20 on each day for the next 5 days. If you ask Promising to get availability on day:

- 1, Promising will tell you 20 are available.
- 2, Promising will tell you 40 are available.
- 3, Promising will tell you 60 are available.
- 4, Promising will tell you 80 are available.
- 5, Promising will tell you 100 are available.

But if Inventory has a quantity of 0 on any of these days, then the Inventory Management work area tells you there's no on hand inventory.

Promising decreases the supply that it promises, but Inventory won't see the decrease until Promising actually reserves supply. Assume:

- You have a quantity of 100 in on hand supply on Monday.
- On Wednesday there's a purchase order with a quantity of 20.
- You create a sales order with a quantity of 90 on Monday and Promising promises it to arrive on time but doesn't reserve supply.
- You create another sales order with a quantity of 20 on Thursday.
- Promising promises it to arrive on time but doesn't reserve supply.
- You create a third sales order on Friday with a quantity of 20.

Promising only sees that 10 are available:

- 100 on hand minus 90 for the first sales order equals 10.
- 10 plus 20 from the purchase order equals 30.
- 30 minus 20 from the second sales order equals 10.

You might see a quantity of 100 for Item Availability in the Inventory Management work area because Promising didn't reserve supply for the sales orders.

Quick Availability and Check Availability Return Different Results

Promising returns availability in two different ways.

Quick Availability	Check Availability
Includes only the supply that's currently available at one location.	Includes supply that's available and potentially available at one location, including creating supply by buying it, making it, or transferring it.

Quick Availability	Check Availability
	Assume you have a sales order with a quantity of 120, and you have these quantities in your supply chain. • 10 that's on hand in Warehouse x • 10 that you can buy through a purchase order • 100 that you can transfer from Warehouse y Inventory Management will display 10 for Quick Availability because that's all there is that's on hand. But Check Availability will say it can promise the entire quantity on time.

Canceled

Assume you cancel your Friday order, which has a quantity of 20. Promising can see that this quantity is no longer pegged to the order, so it increases the supply that's available, but Inventory might not see this change.

Scheduled but Not Shipped

Promising might schedule your order but order fulfillment might not set the status to Shipped.

Assume Promising and Inventory both see a quantity of 100, and Promising schedules a new order with a quantity of 10. Promising reduces its supply to 90 (100 minus 10). If fulfillment doesn't ship the order, then Inventory doesn't see the change, and will continue to show 100.

You must collect the sales order when you ship it to keep Promising and Inventory synchronized. Promising considers supply according to how you set up past due supply and past due demand on your ATP rule. Assume you set past due demand to 5 days but don't set past due supply. You have an order with a quantity of 10 that Promising scheduled on day minus 3. If fulfillment hasn't shipped the order, then Promising considers the demand as new demand, and allocates supply for the order again.

Or assume you set past due supply days to 5 but don't set past due demand. You have supply for a quantity of 10 on day minus 3, and restart the promising server. Promising might reallocate this supply to a different order.

Supply Chain Orchestration

Assume Promising finds that there's no on hand supply in Inventory. Promising instead identifies supply that's available through a transfer and sends a pegging type of ATP to Supply Chain Orchestration, but Orchestration can't tell whether Promising is looking at on hand inventory or future supply, such as through buy, make, or transfer. Orchestration tries to create a reservation in Inventory but it fails because there isn't any on hand supply. You must manually resolve this problem only after on hand supply is available.

For example, assume:

- You submit a sales order in a back-to-back flow on day 1, with a requested date on day 30 for a quantity of 10.
- Promising schedules the order, and identifies that there's a purchase order that will provide supply of 20 on day 28 in the warehouse.
- Promising sends an ATP recommendation to Orchestration, but there isn't any on-hand supply on day 1.
- Orchestration creates the supply order, starts the reservation, but the reservation request fails because there isn't any on hand supply.

Review Supply Availability

The Set Up Your Items in Product Information Management page has a snapshot of supply that Promising can currently see. Promising uses this snapshot to identify what supply is available to meet demand, but the snapshot doesn't have details about supply in Inventory. To fix this problem, you must regularly collect data.

Remedies

Collect

You can avoid each of the problems described above. To keep quantities synchronized between Promising and Inventory Management, you must periodically collect data so Promising and Inventory are viewing the same data in your supply chain. For details, see *Collect Data for Global Order Promising*.

Examine Your ATP Rule

- Promising returns availability only if the rule's mode is Supply Chain Search. So, if you need availability, use Supply Chain Search.
- Promising adds availability from each source that you specify. Examine the sources that you've specified and make sure Inventory can see the same supply.
- If you enable the Search Components and Resources option, then Promising considers the supply that's available for the configured item.
- If you set the Past-Due Demand Considered in Days attribute, then you should also set the Past-Due Supply Considered in Days attribute, and set them to a low number, such as 30 or less.

For details, see *ATP Rules*.

Try Different Options

Try Different Availability Options

To examine different ways to fulfill a fulfillment line, go to the Check Availability page, click a fulfillment line, then click View Availability Options.

Here's what Promising does:

- Examines the supply that's available in your supply chain to determine the best possible promise dates.
- Uses the same logic that it uses to determine availability. It looks at values on the fulfillment line. It also looks at your available-to-promise rules, sourcing rules, and allocation rules.
- If supply isn't available in the requested warehouse, then Promising looks upstream to see what supply is available.
- Adds lead times and creates a promise date.
- Doesn't actually create supply until you select and schedule an option. For example, it doesn't create a transfer document between your supplier and the ship-from warehouse when its creating the option. At this point, it is only looking at different possible outcomes.

Here's what Promising displays in the Availability Options area:

- One or more options instead only the best option.
- A status for each option that indicates whether the option is on time, delayed, or split into on time and delayed.
- Only what's available. If values on the line are highly restrictive, you might get fewer or even only one option.
- Options in rank order, according to:
  a. Amount of delay for the option, and then
  b. Cost, and then
  c. Whether Promising substituted the item
- The option that has the least amount of delay and cost is in the number 1 position, and is the default option.

You can use less specific values on the line to allow Promising to consider more options:

- Don't specify the ship from warehouse, and Promising will look at all warehouses according to your promising rules and the item's organization.
- Don't specify the shipping method, and Promising will look at all methods according to your promising rules.
- Allow splits, and Promising will consider splitting the line as way to improve promising results.
- Allow substitutions, and Promising will look at substituting the item for another item as way to improve promising results.

Related Topics

- Get the Results You Need
- View Availability Details
- Select and Schedule

Select and Schedule

Examine the Option Summary attribute to get an idea of what Promising did to determine availability for the option, such as substituted the item for another item, then select and schedule your option.

Use the summary to help you select an option so it meets your promising objective. For example, if your objective is to get the item there on time even if it costs more, and if the summary for option 1 is Different Ship Location, and if the summary for option 2 is Slower Ship Method, then select option 1.

Here are some of the values you might see in the Option Summary attribute:

- Default Option
- Slower Ship Method
- Different Items
- No Substitutes
- Different Ship Location
- Different Split
- No Split
- Item Split
- Date Split

- Source Split

Select and Schedule

If you like what you see, select the option in the Availability Options area, then click **Actions > Select and Schedule**.

Here's what Promising does next:

1. Uses the option to promise the fulfillment line according to the option's attributes.
2. Commits the supply that the availability option specifies to the fulfillment line.
3. Removes the fulfillment line from the Check Availability page.
4. Sends the line to Order Management, and the Order Management work area displays the fulfillment line with the new schedule.

Note that you might get different results each time you check availability because other promising activity is constantly affecting supply. You might get different results even if you don't change values on the fulfillment line.

View Availability Details

Get details about how Promising comes up with an option.

1. Go to the Manage Order Promising Demands page. For details, see *Check Availability*.
2. Click a **fulfillment line**, then click **View Availability Options**.
3. In the Availability Options area, click the **row** that has your option, then click **Tasks > Availability Details**.
   Notice that the Availability Details area displays your item. If it's a configured item, it will display it in a hierarchy.
4. In the Availability Details area, click a **row**, click **Actions**, then click one of these actions.
   - Review Supply Availability
   - Review Supply Allocation
   - Pegging Properties
   - Order Promising Rules > View Sourcing Rule
   - Order Promising Rules > View ATP Rule
   - Order Promising Rules > View Allocation Rule
   - Export

Note

- Use these details to learn how Promising searched for supply in your supply chain.
- Use it to help identify the cause of delay for a fulfillment line. For example, examine the sourcing rule, ATP rule, and allocation rule that Promising used when it created the option. See if you can modify them to improve results.
- Get details about where Promising found supply to promise the option, such as whether it found only on-hand supply for the item, found supply that it can transfer from another organization, or supply that it can buy from a supplier. Consider whether you can modify your supply chain to improve results, such as adding a supplier.

Pegging Properties

Use these properties to see what might cause delay. For example, use the Manufacturing Calendar or the Carrier Calendar to see what calendars Promising is using. You might be able to modify the calendar to improve promising results.

The properties depend on the type of row that you select. Here are some example properties for an item that you make.

- ATP Mode
- Lead Time
- Required Quantity
- Required Date
- Manufacturing Calendar
- Resource Calendar

Here are some example properties for an item that you transfer.

- Carrier
- Mode of Transport
- Service Level
- Shipping Calendar
- Receiving Calendar
- Carrier Calendar
- Expected Fulfillment Cost
- Expected Shipping Cost

Related Topics

- See What Supply is Available and Allocated

See What Supply is Available and Allocated

See what supply is available and what supply is allocated.

Review Supply Availability

Use this action to examine the current state of supply that's available for your item. This action measures availability in different ways.

Measure Type	Description
Supply	Total supply that's currently available for the item.
Consumed	Supply that Promising consumed while promising the item.
Net	Net supply that's available for the item. Net equals Supply minus Consumed.
Cumulative	Cumulative, net supply for the item over time.

The Supply, Net, and Cumulative types apply for a specific time frame, such as January 1 through January 15, and the action indicates what's available during these dates.

The Consumed type doesn't have a value according to date because Promising can consume supply for a fulfillment line from more than one date range.

This action applies only when you use an available-to-promise (ATP) rule to promise your item, and only if you set the rule's mode to Supply Chain Search. If you set the mode to Infinite Availability, then you can still use the action but the values will show that the item is infinitely available. See *Promising Modes for ATP Rules*.

Review Supply Allocation

Use this action to see what Promising has allocated for your item, according to organization, demand class, and week.

Promising assumes that Monday is the first day of the week.

This action measures allocation in different ways.

Allocation	Description
Target	Supply that Promising allocated to the demand class in one week according to your allocation rule. Promising includes historical shipments in the calculation, and then determines the target allocation value. Promising does this when you specify a date range to consider shipping history in your allocation rule.
Consumed	Allocation that Promising already used to promise other fulfillment lines in the demand class.
Available	Allocation that's still available for one week.
Cumulative Available	Cumulative allocation that's available.

Use this action to get details about how Promising meets demand and get insights into the overall performance of your allocation.

- For example, see the total demand quantity for each week, the demand quantity that promising has scheduled to ship or deliver on time, and the fill rate percentage for each item that you allocate.
- Examine the total and on-time revenue for each node to help you determine the financial impact of allocating supply.
- Use the action's demand summary to help make more informed decisions about how to allocate a limited amount of supply that's available in your supply chain.

Here's a description of some of the attributes that you can examine when you use this action.

Attribute	Description
Demand Quantity	Total quantity of the demand that exists in an allocation node for each week.

Attribute	Description
Scheduled On Time Percentage	Percentage of scheduled sales orders out of the total number of scheduled orders that are on time for the week, where the scheduled ship date is less than or equal to the requested ship date, or the scheduled arrival date is less than or equal to the requested arrival date. For example, if 94 orders are on time, and you have a total of 100 orders for the week, then this attribute displays a value of 94%.
Scheduled Fill Rate Percentage	Percentage of the scheduled quantity out of the total quantity that is on time for the week, where the scheduled ship date is less than or equal to the requested ship date, or the scheduled arrival date is less than or equal to the requested arrival date. Assume you have a total of 100 sales orders for the week, and the total quantity for them is 1,000 units. If 94 orders are on time, and if the total quantity for these on time orders is 800 units, then this attribute displays a value of 80%.
Demand Revenue	Revenue that you can expect to get from demand in the allocation node, measured according to the requested date that happens during the week.
Scheduled On Time Revenue	Revenue that you can expect to get from demand in the allocation node, when: • The requested ship date equals the scheduled ship date. or • The requested arrival date equals the scheduled arrival date.

Review Supply and Allocation Across Organizations

You can review supply outside of the context of an availability option.

1. Go to the Order Promising work area, then click **Open**.
2. In the dialog that displays, click the **row** that has one of these values, then click **OK**.
    - Review Supply Availability
    - Review Supply Allocation
3. Search according to date, item, and warehouse.
4. Examine the results.

Review Supply Availability is similar to the one that you see through an availability option, except it looks at demand class according to how you allocate supply. You can also use the Item attribute and the Warehouse attribute to specify which warehouse to look at that builds the item. If you don't specify a warehouse, then the action lists supply for all organizations that build the item.

To filter your search, click **Advanced** in the search area, the add values to more attributes, such as Supplier Name, Work Center, Resource, and so on.

Review Supply Allocation is the exact same action that you see through an availability option.

Related Topics

- Promising Modes for ATP Rules
- Allocate Your Rules
- Guidelines for Using Supply Chain Search
- Consider Shipping History

6 Set Up Fulfillment Flows

Drop Ship

Promise Sales Orders in Your Drop Ship Flow

Drop ship is a supply chain & manufacturing technique where the seller relies on a supplier or contract manufacturer to build, store, and ship an item to your customer.

You can use Global Order Promising to help fulfill a drop shipment.

Here's what you need to do:

- Create the global sourcing rule that Promising will use to identify suppliers who can fulfill the drop ship, then select one of them to do it. Specify the supplier calendar, supplier capacity, and supplier lead times.
- Create the assignment that Promising will use to assign the item to the sourcing rule that you just created.
- Go to one of the Supply Chain Planning work areas, then click **Tasks > Maintain Supply Network Model**. In the Search Results area, click **View > Columns**, then display the Drop Ship Validation Organization attribute. Use the Drop Ship Validation Organization attribute to create a validation organization for your drop shipment.

Get more:

- Learn what a drop shipment is and how the flow works. For details, see *Overview of Drop Ship in Order Management*.
- Learn how Promising fits in the drop ship flow. For details, see *How Drop Ship Works in Order Management*.
- Learn how to set it up so it works with Order Management. For details, see *Set Up Drop Ship in Order Management*.

Related Topics

- Promising Modes for ATP Rules
- Assign Your Sourcing Rules
- Source Your Supply Chain
- Assignments and Promising Rules

Use Check Availability to Simulate Fulfilling Your Sales Order

Use Check Availability to consider various sources to fulfill the fulfillment line, including other suppliers or on-hand supply from different warehouses.

Drop Ship

- Examine attributes that have fulfillment details for your drop ship.
- Get details about the supplier's current capacity to fulfill demand for the order.

- If Order Management already scheduled and reserved supply for the purchase order, then Promising respects the reservation. It helps to make sure some other sales order can't use the reserved supply.

Back-to-Back

Use Check Availability to consider various sources to fulfill the fulfillment line, including other warehouses.

You can see how Promising pegs supply. Go to the Check Availability page, then click **Actions > View Availability Details**. For example, if Promising pegs supply to a transfer, then Promising sends a recommendation for a transfer order to Supply Chain Orchestration when Promising schedules the order. Orchestration creates the transfer order and creates a reservation.

If you change the requested date or quantity for an order after Orchestration creates the reservation, then Promising uses the reserved supply that it already has. Assume you increase the order quantity from 2 to 5. Promising keeps the supply that it reserved for 2, and recommends to create supply for a quantity of 3.

Related Topics

- Check Availability

Back-to-Back

Promise Sales Orders In Your Back-To-Back Flow

Back-to-back is a supply chain management technique where you receive supply at a warehouse then ship it directly to your customer. You can use Global Order Promising to help fulfill a back-to-back order.

You typically use back-to-back fulfillment to fulfill a high cost or a slow moving item. You usually don't stock the item in inventory but instead build it in reply to demand.

Here's the general flow:

- You create a sales order and submit it to fulfillment.
- Promising creates and schedules supply for the order.
- You procure and receive supply in your warehouse.
- Supply Chain Orchestration reserves supply, then Inventory Management manages it in inventory during shipping.

You set up your implementation to automatically do this work, including selecting the source, reserving supply until its fulfilled, and automatically adjusting fulfillment when supply or demand changes.

For details, see *Overview of Back-to-Back Fulfillment*.

How Promising Promises a Back-to-Back Sales Order

Oracle Promising chooses the best possible sources across the supply chain to help fulfill an item in your back-to-back flow.

1. You create a sales order in Oracle Order Management that includes a back-to-back item. The Back-to-Back Enabled attribute in the Product Information Management work area specifies whether the item is a back-to-back item.
2. Order Management sends demand details about the order to Promising.
3. Promising uses the sourcing rules, ATP rules, and other setups that you've done to analyze sources in your supply chain, considers supply recommendations from Oracle Supply Chain Orchestration, then selects the source that can most closely meet demand.

   Promising pegs supply against the order, and this pegging affects the supply recommendation. If Supply Chain Orchestration creates a supply order, then Promising respects the pegging during any subsequent reschedule. This approach makes sure that no other demand can use the pegged supply.
4. Promising schedules the sales order.
5. Promising examines your supply chain, then sends a supply recommendation to Supply Chain Orchestration. The recommendation requests to buy, make, or transfer supply, or to use on-hand inventory.
6. Supply Chain Orchestration creates a supply document according to the recommendation.

Type of Flow	Supply Document
Buy	Purchase order in Oracle Procurement
Make	Work order in Oracle Manufacturing
Transfer	Transfer order in Oracle Inventory Management
On-hand	Reservation request for on-hand inventory in Inventory Management

7. Promising sends scheduling details to Order Management and Supply Chain Orchestration.

Fulfillment is different for each type of flow.

Purchase Order

1. Promising sends scheduling details to Order Management and Supply Chain Orchestration.
2. Supply Chain Orchestration sends details about the supply that's needed to meet demand to Procurement.
3. Procurement creates and then sends a purchase order to Inventory Management.
4. Inventory Management reserves the supply that it needs to fulfill the order, then ships the order to your customer.

Work Order

1. Supply Chain Orchestration sends details about the supply that's needed to meet demand to Manufacturing.
2. Manufacturing creates and finishes the work order.
3. Inventory Management reserves the supply, then ships the sales order to your customer.

Transfer Order

1. Supply Chain Orchestration sends details about the supply that's needed to meet demand to Inventory Management.
2. Inventory Management reserves supply and creates a transfer order.
3. Inventory Management does the transfer, then ships the order to your customer.

On-Hand

Promising might request to use on-hand inventory when on-hand supply is available in the fulfillment warehouse.

1. Supply Chain Orchestration sends a recommendation to Inventory Management to reserve the on-hand supply.
2. Inventory Management reserves the supply, then ships the order to your customer.

Related Topics

- Set Up Promising to Support Your Back-to-Back Flow

Set Up Promising to Support Your Back-to-Back Flow

Setting up Promising to support your back-to-back flow is similar to the setup that you do for a standard flow.

1. Go to the Product Information Management work area, open the item that you're fulfilling for editing, such as the AS54888 Computer, then make sure the Back-to-Back Enabled option contains Yes.

   Promising uses this option to determine whether to send a supply request to Supply Chain Orchestration. If it contains No, then Promising won't send the request.
2. Create a sourcing rule so Promising can send buy, make, transfer, or on-hand recommendations to Supply Chain Orchestration.
3. Create an available-to-promise (ATP) rule so Promising can send scheduling details to Order Management.
4. Assign your rules.

Related Topics

- Promising Modes for ATP Rules
- Assign Your Sourcing Rules
- Source Your Supply Chain
- Assignments and Promising Rules
- Enable Your Item for Back-to-Back Fulfillment

Keep Global Order Promising and Inventory Management Synchronized

Keep the values that you see for item availability in Oracle Global Order Promising and on-hand availability in Oracle Inventory Management synchronized.

You might encounter a wide range of problems when item availability and on-hand availability aren't synchronized in a timely way.

- You have a lot of open, scheduled sales orders that are in manual reservation status and they consume all of the supply that Promising is aware of. You unschedule these orders but Promising isn't aware that it can now use that supply to reserve the item for new sales orders. This might happen because you collected data before you unscheduled the orders.
- You see that there's plenty of supply in on-hand availability, but Promising splits the fulfillment line anyway when you don't expect it too. If Promising doesn't know what's currently on-hand in inventory, and can't fulfill the entire line, it might split the line according to the quantity it can promise and put the rest on backlog.
- Promising uses supply on a first-in, first-out basis. Assume you place order x on Monday with a requested date that happens on Wednesday. Promising will consume all the supply it needs for x on Monday. You then create order y on Tuesday with a requested date of today, but there's no supply left even though you can see that there's still quantity in inventory. That's because the supply for x is reserved and hasn't shipped, but you haven't collected data.

Example

Promising promises each sales order according to the details that it gets from various sources, including Inventory. Promising then sends fulfillment dates to Oracle Order Management. The supply can include supply that's currently on-hand in inventory and supply that Promising gets from purchase orders, work orders, and transfer orders.

For example, Inventory Management might currently have 0 on-hand, but you expect to receive 5 purchase orders today, each with a quantity of 20. The On-Hand Availability attribute in Inventory Management has a quantity of 0, but the Item Availability attribute in Promising has a quantity of 100.

Assume Promising calculates supply one time each day, and you receive 5 purchase orders every day for the next 5 days, each with a quantity of 20:

Day	Item Availability	On-Hand Availability
1	20	0
2	40	0
3	60	0
4	80	0
5	100	0

Promising will use future supply. It will reduce available-to-promise supply when it schedules and promises each sales order, but Inventory Management sees these changes only after it reserves and schedules the order. Assume:

- You have a quantity of 100 in on-hand inventory on Monday.
- On Tuesday you receive a purchase order with a quantity of 20.
- You create sales order x on Wednesday with a quantity of 90.
- You create sales order y on Thursday with a quantity of 20.
- Promising schedules order y to arrive on time.

- Promising consumes 90 units of supply on Wednesday and 20 more units on Thursday.
- You can see that on hand availability in Inventory Management is 100 units, but Promising returns only 10 units (100 minus 90).

Use the Correct Web Service and Collect Data

Promising uses different web services to determine item availability.

Web Service	What it Includes
Quick Availability	Supply that's currently available at one or more organizations, according to your sourcing rules.
Check Availability	Supply that's potentially available at one or more organizations. It includes quantities that it can get through transferring supply from another source, making supply, or buying it. This value is for fulfilling one sales order.

Assume your sales order has a quantity of 120. You have a quantity of 10 on-hand, 100 is available through transfer from another organization, and 10 is available through a purchase order. Inventory will display a quantity of 10 for Item Availability. If you use:

- Quick Availability. Promising includes a quantity of 20 and can't fulfill the sales order on time.
- Check Availability. Promising includes a quantity of 120 (10 on-hand plus 100 through transfer plus another 10 through purchase), and can schedule the fulfilled quantity of 120 today.

To avoid this problem, you must periodically collect data so the quantities that Promising sees are synchronized with the quantities that Inventory Management sees. For details, see *Collect Data for Global Order Promising*.

Cancel a Sales Order

Assume you schedule a sales order that has a quantity of 20 on day 4, which reduces item availability to 60. You cancel the order later that day in Order Management, and now item availability is back to 80. Promising can see that this quantity is no longer reserved and increases its available-to-promise supply, but Inventory Management isn't aware of the return so on-hand availability still shows only 60.

To avoid this problem, periodically collect data so the quantities that Promising sees are synchronized with the quantities that Inventory Management sees.

Order Hasn't Shipped

Assume Inventory Management and Promising each have a quantity of 100 of the AS54888 desktop computer. Promising schedules an order line that has a quantity of 10 but the order status hasn't yet achieved Shipped status. Promising reduces its available-to-promise supply to 90 (100 minus 10), but Inventory Management sees the change only after the line achieves Shipped status, so on-hand availability continues to show 100.

To avoid this problem, collect order data when you ship the order. The next time you start the Promising server, Promising will see that the order is done.

If you set up your available-to-promise rule for past-due supply and past-due demand days so that the unshipped orders fall within the dates that Promising uses to promise the item, then Promising might consider the supply as available.

Assume you set the days for past due demand to 5, Promising schedules the order on day minus 3, fulfillment is processing the sales order and it has a quantity of 10 but hasn't shipped it, then Promising will consider the demand as new demand and allocate supply for the order again.

Back-to-Back Orders

Assume you have some available-to-promise supply but no on-hand supply in inventory.

- Promising sends a pegging type of ATP to Supply Chain Orchestration so orchestration can create supply.
- Promising sends an available-to-promise recommendation to Orchestration, Orchestration creates a reservation in Inventory Management, but the reservation fails because there isn't any on-hand supply in inventory.
- Orchestration doesn't know whether the available-to-promise supply comes from on-hand inventory or from future supply. You must wait until on-hand supply is available, then manually resolve the failed reservation.

Assume you submit a sales order on day 1 with a request date of day 30 for a quantity of 10 for the AS54888 item.

- Promising finds out that there's supply coming into the shipping warehouse on day 28 with a quantity of 20 through a purchase order.
- Promising sends an available-to-promise supply recommendation to Orchestration to fulfill the order, but there isn't any on-hand supply in inventory today, which is day 1.
- Orchestration creates the supply order and sends a reservation request but the request fails because there isn't any on-hand supply.
- You use the Review Supply Availability action to determine the supply that's available for the sales order, but this action has only a snapshot of supply that exists at a given point in time. It doesn't have any supply details from Inventory Management.

Use the Review Supply Availability action to view the latest availability data. See *Overview of Managing Demand*.

Set up Your Material Status and Subinventory

Promising only considers subinventories that are available to promise. Here's how you can make sure a subinventory is available to promise.

1. Manage the material status.
    - Go to the Setup and Maintenance work area, then go to the task.
        - Offering: Manufacturing and Supply Chain Materials Management
        - Functional Area: Inventory Management
        - Task: Manage Material Statuses
    - On the Manage Material Statuses page, click the **row** that has your status, then click **Actions > Edit**. If you already assigned the status to inventory, then you can't edit the status. You must remove that assignment then edit the status, or create a new status.
    - In the dialog that displays, set the values.

Attribute	Value
Allow Reservations	Enabled
Include in ATP	Enabling these attributes makes sure that Promising and Inventory Management will have the same on-hand quantity for your item.

Attribute	Value
Nettable	This set up also makes sure that Promising won't reduce the quantity that's available to reserve for an item in inventory when you don't enable Allow Reservations for a locator.

- Click **OK > Save and Close**.

2. Assign the status to the subinventory.
    - Go to the task.
        - Offering: Manufacturing and Supply Chain Materials Management
        - Functional Area: Inventory Management
        - Task: Manage Subinventories and Locators
    - On the Manage Subinventories page, select the row that has your subinventory, then click **Actions > Edit**.
    - Set the Material Status attribute to the status that you created in step 1.

Collect Entities That Promising Needs to Plan for Fulfillment

Make sure you collect the entities that Promising needs to accurately plan fulfillment for your item. For example, here are some of the entities that you might need to collect, depending on your needs.

Reference Entities	Supply Planning Data
• Approved Supplier List • Calendars • Item Subinventories • Items • Subinventories • Suppliers	• On Hand • Purchase Orders and Requisitions • Reservations • Sales Orders • Transfer Orders

For details, see *Collect Planning Data for Order Management*.

Examine Your ATP Rules

Examine the ATP rule that you've set up for the organization that fulfills the item.

- Make sure you set the Promising Mode attribute on the rule to Supply Chain Availability Search. Promising determines availability only if you use this mode.
- Make sure you include all possible sources when you set up your sourcing rule. Promising considers all sources that you specify, and adds up their supplies when it determines availability.
- Enable the Search Components and Resources option on your available-to-promise rule. Promising will consider each manufacturing component and resource when it determines availability.
- Don't set the Past-Due Demand Considered in Days attribute and the Past-Due Supply Considered in Days attribute on your available-to-promise rule to a high value. Keep these values below 30. Using a high value might affect performance. Consider using the average number of days it takes your implementation to fulfill a sales order.

For details, see *Set Up Promising Rules and Sourcing Rules for Order Management* and *Create Promising Rules for Your Configuration Model*.

Determine the Supply That's Actually Available to Promise

Use the Supplies and Demands table.

- Go to the Plan Inputs work area, click **Open**, then search for and open Supplies and Demands.
- On the Supplies and Demands page, query for your item and the order type, then examine the quantity in the search results. It displays the quantity that Promising collected.

Use actions.

Action	Description
Review Supply Availability	Examine the supply that's available for you item, such as the quantity at the start of the day, the amount consumed, how much is still available, and so on.
Item Availability	Examine the quantity that's on the shelf, quantity that's already allocated to sales orders, and the quantity that's available to promise. You access it in the same way that you access Review Supply Availability.

For details, see *See What Supply is Available and Allocated*.

Transfer

Promise Sales Orders in Your Transfer Flows

Use an internal material transfer to transfer your item from one business unit to another business unit in the same organization.

You can do an interorganization transfer or create a transfer order to do the transaction.

You create a transfer order as a new document in Inventory Management.

- Use the document to select, ship, receive, deliver, and return the item.
- View shipments and receipts for the transfer order.
- Update attributes on the transfer order, such as source organization, requested delivery date, requested quantity, and so on.

How Promising Promises a Transfer Order

Get details about how promising promises a transfer order.

1. Supply Chain Orchestration creates a source for your transfer, such as min-max planning, back-to-back, spreadsheet upload, or planning.

2. Supply Chain Orchestration uses the document creation rules that you set up to determine whether to use a transfer order or a purchase order to make the transfer happen. For details, see *Guidelines for Setting Up Rules That Create Supply*.
3. Promising looks for supply at more than one source organization to determine the best possible way to promise the transfer order, depending on the sourcing rule that you specify for the destination organization. For details, see *Source Your Supply Chain*.

You can use Check Availability to monitor fulfillment for the transfer order and prioritize shipment. Use it to view potential promising results and availability options, and to do a what-if simulation for the transfer. For details, see *Check Availability*.

Related Topics

- Set Up Promising to Support Your Transfer Flow

Set Up Promising to Support Your Transfer Flow

Learn how to set up promising to support your transfer flow.

1. Use the Maintain Supply Network Model task in one of the Supply Chain Planning work areas to associate the customer with an internal organization. Order Management represents an internal organization as a customer, so you must do this set up. Create this association only for each organization that receives the transfer.
2. Create a local sourcing rule. You can set up more than source organization for your transfer, then rank them. Promising uses the supply details that are available internally to promise the transfer. For details, see *Sourcing Rule* and *Consider Your Sourcing Hierarchy and Assignment Set Hierarchy*.

Related Topics

- Source Your Supply Chain
- Assignments and Promising Rules
- Assign Your Sourcing Rules

Collect Transfer Orders for Expense Destinations

A transfer order for an expense destination transfers material between organizations that are both part of the same company. So, you don't bill the transfer but instead expense it to your accounting.

Here's what Promising does.

- Considers supply at the source for this type of transfer.
- Doesn't conserve supply at the destination.
- Doesn't track material after you ship it from the source because you don't typically add the item to inventory at the destination.
- Processes requests from Oracle Order Management or some other ordering system.

If Promising receives a request from Order Management, then Order Management creates a fulfillment line for the transfer. You can use the Order Management work area to do the same actions on the line that you can do on any other fulfillment line, such as check availability.

You can also view the fulfillment line on the Manage Order Promising Demands page in the Order Promising work area and do actions on the line.

Here's what you need to do.

1. Go to the Plan Inputs work area, then click **Tasks > Collect Planning Data**. For details, see *Collect Data for Global Order Promising*.
2. In the dialog that displays, click **Supply Planning Data**, then move the Sales Orders and the Transfer Orders entities to the Selected Entities list.
3. Click **Submit**.

7 Use Database Promising or Source Promising

Database Promising

Database Promising

Use database promising to more quickly and accurately schedule some of your promising flows.

Use it with these flows and set ups:

- Standard flow when you set the source type to Buy From or Transfer From on your sourcing rule.
- Standard flow when you manufacture the item. For details, see *Overview of Using Bills of Resources with Promising*.
- Drop ship flow.
- Back-to-back flow.
- All other flows.
- Configured items.

Drop Shipments

You don't need to set up an ATP rule for a sales order that you promise in a drop shipment when you use database promising. However, if you use profitable-to-promise, then you must create an ATP rule and enable the Profitable to Promise option on that rule. For details, see *Set Attributes on Your Supply Chain Search* and *Create Alternative Fulfillment Scenarios to Reduce Cost*.

You must also assign the item to the Drop Ship Validation Organization. For details, see *Promise Sales Orders in Your Drop Ship Flow*.

For details, see *Include Supplier Capacity When You Promise ATO Items*.

Configured Items

Database promising considers the lead times in a drop ship flow or a buy flow when it promises a configured item.

Drop Ship Flow

- The supplier for an assemble-to-order item in a drop shipment typically uses the same capacity to supply different configuration for a configured item. It consumes capacity according to the supplier's calendar. Promising will consume the capacity that you specify for the configured item in the approved supplier list.
- Promising uses the lead time offset for a configure-to-order item when it calculates the scheduled ship date for the sales order. Promising also considers the item's processing lead time for each configure option.
- Promising considers each configure option that the user chooses when it calculates the schedule dates, then uses these dates to calculate the total lead time for the configured item.

Here's how Promising calculates the lead time for a configured item.

```
Total lead time equals the lead time of the root parent plus the longest lead time of the configure option
 at each level of the item hierarchy.
```

Here are more details about how Promising uses lead times when it promises your item in a drop ship flow.

Item	Where Promising Gets The Lead Times
Root Parent	Preprocessing lead time and the supplier lead time that you specify in the approved supplier list for the root parent of the model. If you don't specify a supplier lead time, then Promising uses the processing lead time.
Configure Option	Supplier lead time that you specify in the approved supplier list for each configure option.

Assume you sell the AS54888 desktop computer as a configured item, and it's the root parent.

```
AS54888 Desktop Computer
 Monitor configure option
 24" Monitor
 32" Monitor
 Keyboard configure option
 Business Keyboard
 Gaming Keyboard
```

Assume you have these lead times.

Item	Lead Time
AS54888	5 Days
24" Monitor	4 Days
32" Monitor	2 Days
Business Keyboard	1 Days
Gaming Keyboard	3 Days

Assume you order the AS54888 with the 32" Monitor and the Business Keyboard. The lead time for the 32" monitor is 2 days, the lead time for the Business Keyboard is 1 day, so Promising uses the 32" monitor's lead time when it calculates the total lead time.

Here's the calculation for all configurations.

Configuration	Configure Option That Has the Longest Lead Time	Lead Time of the Root Parent	Total Lead Time
24" Monitor Business Keyboard	4 days	5 days	9 days
24" Monitor Gaming Keyboard	4 days	5 days	9 days

Configuration	Configure Option That Has the Longest Lead Time	Lead Time of the Root Parent	Total Lead Time
32" Monitor Business Keyboard	2 days	5 days	7 days
32" Monitor Gaming Keyboard	3 days	5 days	8 days

Buy Flow

Promising uses the same lead times and calculations that it uses in a buy flow, but with a few differences.

- It also looks at the postprocessing lead time from the approved supplier list for the root parent.
- If the approved supplier list includes the lead time for the configured item and lead time for the assemble-to-order item, then Promising uses the configured item's lead time.
- If you don't specify the processing lead time for the root model or for any of the configure options, the Promising assumes the lead time is zero.
- You can also specify the processing lead time in the receiving organization.

Related Topics

You can enable the Search Components and Resources attribute when you promise a configured item. For details, see *Set Attributes on Your Supply Chain Search*.

Back-to-Back

- Promising considers the item's postprocessing lead time from the Product Information Management work area when it recommends supply in a back-to-back flow. The requested delivery date corresponds to the dock date on the purchase order or transfer order, or to the completion date on the work order.
- Promising applies the postprocessing lead time to the dock date or to the completion date when it calculates the scheduled ship date for the sales order.
- Promising can consider the work order, transfer order, or purchase order as soon as you collect it.
- Promising doesn't consider your ATP rule's Infinite Availability attribute at the ship-from organization. If Promising can't identify a supply source by the end of the promising horizon, then it returns an error that say's inventory isn't available.

Bill of Resources

Standard Items

You can use a bill of resources to identify a subset of the manufacturing components and resources in the bill of materials that are most likely to affect manufacturing's lead time. Promising then examines only the subset instead of all the manufacturing components when it promises in a capable-to-promise flow. For details, see *Overview of Using Bills of Resources with Promising*.

Configured Items

Promising uses your bill of resources to identify the required components and resources that you need to build an assemble-to-order configured item. Promising will consider the lead time for each configure option regardless of whether you enable the Search Components and Resources option on your ATP rule.

If the pick-to-order item or if the component in a kit is an assembled item, then Promising will use your bill of resources the same way that it does when it promises a standard item.

Process Work Definitions

- Promising uses your bill of resources for the primary item to create capable-to-promise supply for the primary item.
- If you modify an attribute on the order line, such as the quantity or date, then Promising will update the supply and demand for the primary item in your downstream fulfillment applications.

If you collect work orders, then Promising will consider supply from:

- Any work order that you have for the primary item, and will use it as available-to-promise supply.
- The work orders, and use it as available-to-promise supply to meet demand for each coproduct and byproduct. Promising doesn't recommend new supply for coproducts and byproducts, but it can consider existing supply to meet demand.

For details, see *Use Work Definitions with Your Bill of Resources*.

Product Information Management

Promising considers the Create Supply attribute and the Create Supply After attribute that you specify for the item in the Product Information Management work area. It does this when available-to-supply supply isn't available and it needs to make supply or buy supply in your capable-to-promise flow.

Value of the Create Supply Attribute	Description
No	Promising won't make supply or buy supply for the item even if you have a sourcing rule for the item.
Yes	If you also set the Create Supply After attribute, then Promising will use your sourcing rule to make supply or buy supply.

For details about this behavior, go to *Oracle Cloud Application Update Readiness*. In the Essential Content area, under What's New, click HTML in the Supply Planning row. On the What's New page, click Update 22B, then search for Create New Supplies Based on Earliest Date Constraint.

Consume Transfers at the Same Time

If you transfer supply from an upstream organization to the ship-from organization, then Promising will adjust the upstream organization's supply so it happens at the end of the previous day or at the end of the day that the upstream organization receives the request.

If the upstream organization and the ship-from organization are in different time zones, then you might find it helpful to specify when to consume supply.

Assume the upstream organization is in Eastern Standard Time (UTC minus 5) and the ship-from organization is in Pacific Standard Time (UTC minus 8). Set up Promising so it consumes supply on the same day for both time zones.

1. Go to the Global Order Promising work area, then click **Tasks > Order Promising Options** page. For details, see *Manage Order Promising Options*.
2. Set the Time Period Tolerance for Upstream Searches parameter.

If you use the default value of 0.5, and if the request for supply at the upstream organization arrives before 12 PM, then Promising will consume supply on the previous day. If it arrives after 12 PM, then Promising will consume supply on the current day.

The value is a fraction of a 24 hour day. For example, 0.5 equals 12 hours because 0.5 is one half of a 24 hour day, which is 12 PM. For another example, 0.8 equals 19.2 hours into a 24 hour day, which is 7:20 PM.

Allocate Supply in a Hierarchy

You can allocate supply in a hierarchy to improve the way you distribute supply for an item that's in high demand and when you have only a limited amount of supply to distribute. For details, see *Allocate Supply in a Hierarchy*.

Profitable to Promise

If you need to use profitable to promise in a drop shipment, then enable the Profitable to Promise option on the ATP rule that you use to assign the item in the drop ship validation organization.

The bill of resources doesn't contain cost for the item even if you enable the Capable to Promise option on your bill of resources to promise an item that you manufacture. Instead, Promising determines cost when it promises the item according to the:

- Items and resources that you specify are critical
- Items and resources that Promising actually consumes
- Supply that Promising consumes from your supply sources

For background details, see the Profitable to Promise section in *Set Attributes on Your Supply Chain Search*.

Substitute the Item

Promising substitutes the item differently depending on the features that you use.

You Enable the Constraint-Based Planning Feature	You Enable the Respect Organization-Specific Item Substitution Rules Feature	Promising Will
Yes	Yes	Use a substitute item from the organization that you specify for the item in the Product Information Management work area.
No	Yes	Use the item substitutes that you specify in the master organization, and Promising won't consider any item substitutes that you specify in each organization.

For details, see *Overview of Constraint-Based Supply Planning*. Also, go to *Oracle Cloud Application Update Readiness*. In the Essential Content area, under What's New, click HTML in the Supply Planning row. On the What's New page, click Update 22B, then search for Respect Organization-Specific Item Substitution Rules.

Earliest Acceptable Date

You can use the Earliest Acceptable Date attribute on the order line to specify a date before the requested date. Set the Request Type attribute on the line to Ship On to specify the earliest acceptable ship date, or set it to Arrive On to specify the earliest arrival date.

Promising considers the Earliest Acceptable Date attribute when it calculates the scheduled ship date and the scheduled arrival date, but it puts a priority on meeting the requested date. If you specify the Requested Arrival Date attribute and

the Earliest Acceptable Date attribute on the order line, then Promising promises the sales order so it arrives on or after the Earliest Acceptable Date. For details, see *Examine Availability Dates*.

Promising Horizon and Other Order Promising Options

Promising doesn't use the promising horizon with database promising, so you don't need to worry about setting it when you use database promising.

You can also set some of the promising options to specify how to handle supply searches that happen at the same time, how to consider time zones, how to use supplier capacity that's infinitely available, how to use troubleshooting details, and so on.

For details, see *Manage Promising Profiles*.

REST API and SOAP

Use the Supply Allocation Availability REST API to get details about your allocation hierarchy. For details, see the Test Your Setup section in *Allocate Supply in a Hierarchy*.

Use the Quick Availability Check REST API to get details about the supply that's currently available in your supply chain. For details see *Allocate Supply Through REST API*.

Suppliers and Supplier Capacity

If you set up and collect supplier and supplier site details, then Promising uses that information during planning.

You can set up Promising so it considers supplier capacity as infinitely available. If necessary, you can use the Order Promising Options page to tell Promising to use this capacity even after you upload capacity data through file-based data import (FBDI).

Source Promising

Use source promising when you have a large volume of items and organizations in a back-to-back flow. Also, you don't need to collect transactional entities when you use source promising. For details, see *Schedule Sales Orders for Back-to-Back Items*.

You can also use source promising when you don't use a back-to-back flow. For details, see *Get Promising Dates in Real Time*.

Guidelines

Apply these guidelines when you use database promising:

- You don't need to refresh the server after you collect data.
- If the MSP_ENABLE_GOP_WITH_NEW_ARCH profile is Yes, then you're using database promising. For details, see *Manage Planning Profile Options*.

Troubleshoot

See *Troubleshoot Performance Problems in Order Promising*.

Manage Order Promising Options

Use the Order Promising Options task to set up database promising.

The default values on the Order Promising Options page will meet most of your typical needs. Modify them only in consultation with your Oracle product team.

To set the options, go to the Global Order Promising work area, then click **Tasks > Order Promising Options**.

Locking Options

Promising might receive request y to promise an item while it's still processing an earlier request x to promise that item. You can specify how to lock inventory to make sure Promising doesn't consume the same inventory for these requests.

Assume Order Management sends request x, and then sends request y to Promising to promise an item.

Option	Description
Maximum Waiting Period for Inventory Lock	Specify how long the lock lasts. The default value is 10,000 milliseconds (10 seconds). Assume you set this option to 10. At run time, Promising receives request x from Order Management to promise an item, then Promising locks inventory for the item at 03:14:00 AM, where 03 is hours, 14 is minutes, and 00 is seconds. Promising will lock inventory until 03:14:11 AM. If Promising receives request y before 03:14:11 AM, then it will reject request y.
Wait Time to Retry Inventory Locking	Specify how long request y must wait before it tries again. The default value is 1,000 milliseconds (1 second). Assume you set: • Maximum Waiting Period for Inventory Lock to 10 seconds • Wait Time to Retry Inventory Locking to 2 seconds Request y will try again every two seconds until it reaches the maximum: • 03:14:02 • 03:14:04 • 03:14:06 • 03:14:08 • 03:14:10 If Promising releases the lock before the maximum, then the retry is successful and Promising locks inventory for request y. For example, if Promising releases the lock for request x at 03:14:06 AM, then it will lock inventory for y at 03:14:08 AM.
Life Span for Unreleased Locks	If an error happens that causes the lock to remain in place, then use Life Span for Unreleased Locks to specify how long to keep the lock. Promising will permanently release the lock according to the value that you set. The default value is 1 minute. Assume you set: • Maximum Waiting Period for Inventory Lock to 10 seconds • Life Span for Unreleased Locks to 1 minute

Option	Description
	If Promising places a lock at 03:14:00 AM, and then an error happens that prevents Promising from releasing the lock at 03:14:11 AM, then Promising will release the lock at 03:15:00 AM. You must set Life Span for Unreleased Locks to a value that's higher than you set for Maximum Waiting Period for Inventory Lock. This makes sure Promising won't release the lock before the maximum expires.
Dependency Group Locking Policy	The default value is Enable Full Locking. Assume: • Promising locks inventory for request x, and x includes item A and item B. • Promising receives request y, y includes item B and item C, and y is waiting for Promising to release the lock. If you set this option to: • Enable Full Locking. Promising will lock inventory for y only after it finishes processing request x for A and B. • Enable Partial Locking. Promising will wait for the maximum to expire, and then lock inventory for C but not for B. It doesn't lock inventory for B because it's still processing x's request for B.

Time Zone Options

Specify how to handle differences in time zones. For more, see *Examine Availability Dates*.

Option	Description
Default Time Zone	If the request that Promising receives to promise an item doesn't include a time zone for the customer, supplier, or organization, then Promising will use the time zone that you specify in this option. The default value is UTC.
Time Period Tolerance for Upstream Searches	Specify the number days to adjust the time when you encounter time zone differences during an upstream search for supply. You can set this option to a value that's between 0.1 and 1. The default value is 0.5, which represents half a day. Assume you set Time Period Tolerance for Upstream Searches to 0.5. If the adjustment happens: • Before 12 Noon. Promising assumes the request happens at the end of the previous time period. • After 12 Noon. Promising assumes the request happens at the end of the current time period. For more, see *Database Promising*.

Model Analysis Options

Option	Description
Generate Replay Data Sets	Set a value:

Option	Description
	• **No**. Don't create replay data. This is the default value. • **Yes**. Create replay data while Promising promises each sales order in real time. Replay data includes diagnostic messages that you can use to troubleshoot problems. • **Yes, and Repromise**. Create replay data, and also repromise the sales order each time you submit it to fulfillment. Generate replay data while Promising promises each sales order at run time, and also when Promising repromises sales orders that it collects at run time. For example: 1. Set the Generate Replay Data Sets attribute to Yes, then click **Save and Close**. 2. Go to the Order Management work area, then create and submit a sales order. 3. Run the Extract Global Order Promising Replay Data scheduled process, then examine its log to help troubleshoot. For details, see *Troubleshoot Setup Problems in Order Promising*. 4. Set the Generate Replay Data Sets attribute to No, then click **Save and Close**.
Life Span for Replay Data Sets	Specify how long to keep replay data. The default value is 24 hours.

General Options

Option	Description
Consider Infinite Supplier Capacity	If you enable this option, then Promising will assume supplier capacity is infinitely available even if you import it through file-based data import. Promising will ignore supplier capacity even if the request to promise includes that capacity.
Plans	If you enable this option, then Promising will include supply plans when it promises your item. Each supply recommendation will include a planned order, and Promising will assume that this supply is available to promise. The supply recommendation from Oracle Supply Planning provides the planned order.
Simulation Set	Select the simulation set that you want the *Create Bills of Resources*scheduled process to create. This set will contain the bills of resources that you need to build each capable-to-promise item in your make flow. For details, see *Overview of Using Bills of Resources with Promising*.
Enable Order Synchronization with Orders Promised Using The Memory-Resident Solution Synchronization Interval in Minutes	Don't use these options.

Source Promising

Source Promising

If you use source promising, then Promising can promise back-to-back orders without collecting data for the item, supply, or demand. Promising gets this data directly from the supply and demand data in your supply chain.

Promising can schedule your back-to-back sales order in these flows:

- Buy from source without considering supplier capacity
- Transfer from source
- Make at source and promise according to lead-time
- Use available-to-promise supply
- Don't consider supply capacity

Flows That You Can't Use

You can't use source promising for these flows that rely on item availability.

Feature, Setup, or Flow	Why You Can't Use It
Supplier capacity	Promising views supplier capacity as infinite.
Substitute each item according to each customer Supplier lead time and supplier calendar Supplies for planned sales orders Sourcing according to each option	These flows are specific for each item.
Internal material transfer Drop ship	These flows aren't compatible with back-to-back promising.
Sourcing assignment according to item	Promising doesn't collect data for an item in a back-to-back flow. • For global sourcing, from the item region, item demand class, item customer, or item customer site. • For local sourcing, from the assignment for the item organization.
Available-to-promise assignment according to item	Promising doesn't collect data for an item in a back-to-back flow for the item or the item's organization.

You also can't use back-to-back promising with unlisted infinite availability or lead time promising.

For details about collecting, see *Collect Data for Global Order Promising*.

Web Services and REST API

Oracle Order Management and Oracle Global Order Promising use a unique set of values to identify and manage the fulfillment line and other attributes on the sales order. If you use Order Management, and if you use source promising, then you can't use a web service or REST API to schedule or cancel a sales order through your own application. You must make these changes only through Order Management. This is necessary to make sure these values remain accurate.

If you don't use Order Management, then you can use a web service or REST API to call Global Order Promising and promise your sales orders from your own ordering system.

For details and examples, go to *REST API for Oracle Supply Chain Management Cloud*, then expand Supply Chain Planning.

Use Source Promising in Your Back-to-Back Flows

Use source promising in your back-to-back flow. Promise an item and track it at run time to keep your supply and demand data accurate during fulfillment.

An Oracle execution system is an Oracle application that receives a request to fulfill demand for an item, and then executes fulfillment for that item. Oracle Inventory Management and Oracle Manufacturing are each an example of an Oracle execution system.

Your execution systems can create and update purchase orders, transfer orders, and work orders during fulfillment to meet demand. You can view these systems as providing the source of your promising data, so we refer to promising that uses data from these systems to promise fulfillment as *source promising*.

You can use source promising to update Oracle Global Order Promising immediately when these changes happen in your execution system, and Promising will respect these reservations when it promises each new sales order. You don't need to collect data to make this happen because it's automatic.

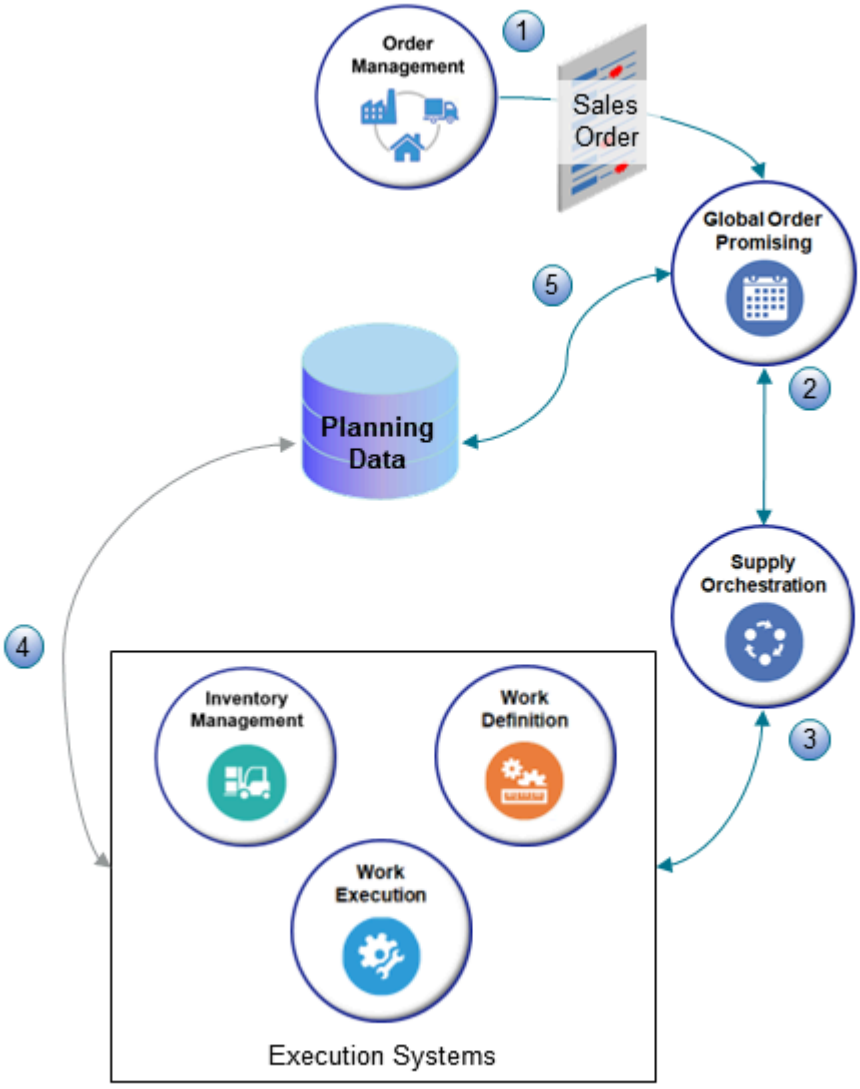
Realize these benefits.

- Promise your back-to-back items more accurately.
- Track supply at run time instead of through data that you collect at design time.
- Improve scalability to a high volume of transactions.
- Integrate Promising with your execution systems so you can create the buy, make, or transfer supply that you need to schedule each of your back-to-back sales orders instead of relying on collecting a large volume of data.
- Reduce run time and other operational overhead to improve efficiency.
- Get more realistic promising dates.

Use this feature when:

- You primarily promise items in a back-to-back flow and you don't need to collect planning data about them at run time.
- You need to promise a large volume of back-to-back orders and you need to do it with high availability at the item and organization assignment level.

How it Works



Note

1. Oracle Order Management sends a request to Promising to promise an item.
2. Promising sends a supply recommendation to Oracle Supply Chain Orchestration. Promising doesn't rely on collecting data.
3. Supply Chain Orchestration interacts with an Oracle execution system, such as Oracle Inventory Management or Oracle Manufacturing.
4. The execution system gets ATP rules and sourcing rules from the planning repository, then sends a reply to Supply Chain Orchestration that has data about the item, the supply, and the demand that's currently in your supply chain.

5. Promising uses reference data from the planning repository that you set up and collect during design time for all business entities except for your ATP rules and sourcing rules. It also gets transaction data and item data from source applications, such as Oracle Order Management, Oracle Procurement, Oracle Inventory, and Oracle Manufacturing.

   Promising also gets details about the ATP rules and sourcing rules that you use for set up but that don't involve the item you're promising.

Assignment Levels

Source promising doesn't refer to the item data that you collect into the Planning repository, so Promising has no visibility to the item setups that you make in the planning work areas. This means you can can't use assignment levels that include the item, such as Item and Customer, Item and Demand Class, Item and Region, and so on.

However, you can use these assignment levels for your global sourcing rule:

- Global
- Region
- Demand Class
- Customer
- Customer and Site
- Category
- Category and Region
- Category and Demand Class
- Category and Customer
- Category and Customer
- Category and Site

You can use these assignment levels for your local sourcing rule:

- Organization
- Category and Organization

This feature will ignore any assignment you create that includes the item, even if you collect the item for planning purposes.

For details, see *Consider Your Sourcing Hierarchy and Assignment Set Hierarchy*.

Guidelines

- You must set the Promising Mode attribute in your available to promise rule to Supply Chain Search. You must not set the mode to Lead Time or to Infinite Availability. For details, see Promising Modes for ATP Rules.
- You must continue to collect reference data into the Planning repository. You don't need to collect item, supply, or demand data.

You can't specify different set ups for each item. For example, you can't specify:

- A different supplier capacity, supplier lead time, or supplier calendar for each item.
- A different supply plan for each item.

- To exclude a specific supply source when your user selects an option or option class in an assemble-to-order configured item at run time.

Setup

Do the same setup and follow the same guidelines that you use in the *Get Promising Dates in Real Time* topic, except also make sure that you set the Back-to-Back Enabled attribute to Yes when you set up the item in the Product Information Management work area.

To view a demonstration of how to do the setup, including using Inventory Management to modify supply, go to *Schedule Sales Orders for Back-to-Back Items Using Transactional Supply*, then view the demonstration that starts at 04:26.

For background, see *Source Promising*.

8 Troubleshoot

Overview

You might come across situations where you don't get the data that you expect to see while managing or promising a sales orders. Use this chapter to help resolve problems that you might encounter with your order promising setup.

Troubleshoot Setup Problems in Order Promising

Get details about some troubles and ways to resolve them.

Trouble	Shoot
The Create Order page typically displays a status for on-hand availability for each order line. • In Stock • Out of Stock • Low Inventory But I see a message instead. `No Data was Retrieved` This message indicates that there might a problem with a sourcing rule, assignment set, or ATP rule.	1. Create a sourcing rule and an assignment set. a. Create a global sourcing rule that uses the Transfer From source type. b. Create an assignment set and set its assignment level to Global, Item, or Category. Don't set it to Organization, Item and Organization, or Category and Organization. c. Assign your global sourcing rule to the assignment set. For details, see *Source Your Supply Chain*. 2. Create an ATP rule. a. Create an ATP rule and set its promising mode to Supply Chain Availability Search. b. Select **Search Components And Resources**. c. Set the supply type to On Hand. d. Assign the ATP rule to your item or your organization. For details, see the chapter that starts with *Assignments and Promising Rules*. 3. Enable the MSP_DEFAULT_ASSIGNMENT_SET profile option at the site level. Use the assignment set that you created earlier in this procedure. See *Manage Promising Profiles*. If you don't have the privilege, send a request to enable the profile option. Send it to the administrator who manages setup tasks in order promising. 4. Run the *Refresh and Start the Order Promising Server* scheduled process. If you already set up a global sourcing rule but you still get `No Data was Retrieved`, try this: 1. Make sure you set the assignment level in your assignment set to Global, Item, or Category. 2. If you set the assignment level to Item Category, then make sure you control that catalog at the master level, and that you assign that category.
The on-hand status for an order line on the Create Order page doesn't match what I have in inventory. Order promising uses sourcing rules, ATP rules, supply data, and details from the order to confirm stock levels when you add	1. Make sure the assignment set has a sourcing rule. 2. Make sure the assignment level for the sourcing rule doesn't include the value Organization. 3. Make sure the sourcing rule includes the source organizations that might have on-hand availability. 4. Collect data for the on-hand supply.

Trouble	Shoot
an order line. You must make sure your rules include the organizations that have on-hand availability.	5. Use the Supplies and Demands area of the Plan Inputs page to make sure you collected supply data.
I can't find the item, inventory organization, or other reference data when I create my order promising rule. You must make sure this data is available to the order promising server.	1. Collect data. 2. Use the Plan Inputs page or the Maintain Supply Network Model page to verify that you collected data. 3. Review the collected data on the Review Collected Order Reference Data page in the Setup and Maintenance work area.

Extract Global Order Promising Replay Data

Use the Extract Global Order Promising Replay Data scheduled process to help troubleshoot problems that come up when you schedule a sales order, such as when you check availability, automatically schedule a sales order, promise an order again after collecting data, override a scheduled date, and so on. For example:

- Promising uses supply to promise a sales order but some other demand already consumed that supply.
- Promising can't accurately promise a sales order because there's isn't enough information about the demand, or some aspect about the demand exceeds predefined limits.
- Some other technical problem happens. We can use this scheduled process to help trace the conditions that cause the problem.

Note: Run this scheduled process only when your Oracle product team asks you to run it or when you create a service request for Global Order Promising.

Try it.

1. Go to the Order Promising work area, click **Tasks > Order Promising Options**, then make sure the Generate Replay Data Set option contains a check mark.
2. Do the steps that cause the problem.
3. Go to the scheduled processes work area, then run the Extract Global Order Promising Replay Data scheduled process.

   Use these parameters to filter the data that the scheduled process will look at.

Parameter	Description
Request Type	Select the type of request that you need to troubleshoot. o RepromiseScheduleSalesOrders CheckAvailability AutoSchedule ScheduleSalesOrders
Request Date	Select the date when Promising received the request to promise the item that you're troubleshooting.

Parameter	Description
	The scheduled process filters the dates that you can select according to the value that you set in the Request Type parameter. Assume you check availability on June 1 2023 and on June 5 2023, and you set the Request Type to CheckAvailability. You can set Request Date to 2023-06-01 or 2023-06-05. For details, see *Check Availability*.
Requested-by User	Select the user who made the request. The scheduled process filters the users that you can select according to the person who did the request. Assume Diane Cho checks availability on June 1 2023 and June Tsai checks availability on June 5 2023. If you set the Request Type to CheckAvailability, and if you set the Request Date to 2023-06-01, then you can set the Requested-by User only to Diane Cho. If the user runs the request from the Order Management work area, then Order Management might not send the user's name but instead send a generic value to Promising. If this happens, then set Requested-by User to that generic value.
Sales Order Number	Select the number that identifies the sales order that you need to troubleshoot. The scheduled process filters the order numbers that you can select according to the values that you set in Request Type, Request Date, and Requested-by User. Assume Diane Cho requests availability for sales order 76546 and for sales order 76546 on June 1. If you set Request Type to CheckAvailability, Request Date to 2023-06-01, and Requested-by User to Diane Cho, then you can set Sales Order Number to 76546 or 76546.
Replay Key	Select a value that uniquely identifies the request to promise an item. The scheduled process filters the values that you can select. If an application sends the same request to promise an item more than one time, then Promising uses a unique, sequential value to identify each request. Select the highest value to troubleshoot the most recent request.

All parameters are required.

4. Notice that the scheduled process creates the GOPReplay_*replayKey* zip file. It includes the ReplayHeader_*replayKey* csv file and the ReplayData_*replayKey* csv file.
5. Remove the check mark from the Generate Replay Data Set option on the Order Promising Options page. You must disable this option before proceeding. Leaving it enabled over a longer period of time might affect performance in your deployment.
6. Save the GOPReplay_*replayKey* zip file to your hard drive, then send it to your Oracle product team for analysis.
7. Work with your Oracle product team to resolve the problem.

For important details, see *Guidelines for Using Scheduled Processes in Order Management* and *Extract Global Order Promising Replay Data*.

More Help

For more help, see:

- *Order Promising Common Problems and Solutions (Doc ID 1395854.1)*
- *Analyzing and Resolving Out of Stock Availability Messages when Creating Orders (Doc ID 2648525.1)*
- *Master Note Order Promising and Collections (Doc ID 2649499.1)*

Related Topics

- Collect Data for Global Order Promising
- Create a Sourcing Rule
- ATP Rules
- Create an Assignment Set

Troubleshoot Performance Problems in Order Promising

Examine some troubles and ways to resolve them.

Trouble	Shoot
You encounter unexpected promising results when you use a database solution.	1. Go to the Scheduled Processes work area. 2. Run the *Extract Global Order Promising Replay Data* scheduled process. Set these parameters when you run it. o Request Type o Request Date o Requested-by User o Sales Order Number o Replay Key 3. Go to the Setup and Maintenance work area, then go to the task. o Offering: Order Management o Functional Area: Orders o Task: Review Collected Order Reference Data 4. Examine the extracted data and make sure it looks correct. The options that you set to analyze models on the Order Promising Options page determines the replay data. For details, see *Collect Data for Global Order Promising*.