Unit 3: Service Capacity Configuration

This unit provides you with an overview of the Resource Capacity-Related features provided by Global Inventory Visibility. Additionally, you will learn how to configure some of the Capacity-Related features.

LESSON 3.1: Service Capacity Configuration

Introduction

This lesson provides you with an overview of the resource capacity-related features provided by Global Inventory Visibility.

Additionally, you will learn how to configure some of the capacity-related features.

Lesson Objectives

This lesson is designed to enable you to:

- Discuss basic resource capacity concepts.
- Configure the features related to resource capacity.
- Describe additional resource capacity configuration.
- Create resource pools.

References

For more information on Global Inventory Visibility, refer to:

- http://www.ibm.com/support/knowledgecenter/SS6PEW_9.5.0/com.ibm.help.giv.config.doc/configuration/c_ConfiguringResourceCapacity.html

Navigate to **Sterling Order Management** > **Sterling Order Management 9.5.0** > **Configuring supplied and add-on solutions** > **Sterling Global Inventory Visibility** > **Configuring** > **Configuring resource capacity**

Resource Capacity Overview

Resource Pool

A Resource Pool defines a set of individual resources that performs similar operations such as Delivery Service and Provided Service. Resource Pools provide the ability to define the Service Capacity that is available for delivery and Provided Services, by geographical area and Time Slots. Each Resource Pool owns a certain type of activities and has one or multiple resources associated with it. Many times a single operation require the involvement of different Resource Pools.

All Resource Pool is defined by the Organization that is providing the capacity. Each Resource Pool is associated with a single Node. Moreover, a Delivery Service Resource Pool is tied to Physical Ship Node. However, a Provided Service Resource Pool can be provided by a Node that is not necessarily a physical Ship Node.

Example

Consider a scenario, where Craig & Track provides installation services for electrical appliances. The Resource Pool at their Denver Node consists of electricians who service the Denver region and nearby cities. Additionally, the Denver Node maintains another Resource Pool for plumbing activities. When Craig and Track receives a request for installing washing machines, resources from the Plumbing and Electricians Resource Pool jointly complete the service requests.

Capacity Organization

The Capacity Organization is the Organization that plans the capacity and is solely responsible for defining Resource Pools. All Resource Pools must belong to one, and only one, Capacity Organization.The Capacity Organization is defined at the time of installation and must not be updated later. This Organization identifies the Service Capacity for a product. Moreover, it establishes ownership of capacity when a single physical location is shared across multiple Organizations without creating multiple logical locations. The Capacity Organization can define multiple Slot Groups, each containing multiple Service Slots.

The Capacity Organization provides capacity breakup, allowing all Organizations (part of the Capacity Organization) to have visibility to the capacities of all of the other Organizations that are part of the same Capacity Organization.

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Resource Capacity Overview

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Resource Capacity Maintained Externally

You can determine if an Organization maintains its own capacity or if it is maintained externally. If an Organization decides to maintain capacity externally, then capacity for all Resource Pools is gathered in real time during slot Availability Checks. A User Exit provides the required information in real time. The option to maintain capacity externally must be defined at the Capacity Organization level.

If capacity information cannot be obtained by any mechanism, you can flag the Resource Pool to indicate that capacity information is not available. Sterling Selling and Fulfillment Foundation treats this similar to *infinite* capacity, but still takes care of the day-of-week and regions served considerations.

Example

Consider a scenario where Enterprise Craig and Track uses a third-party fleet management tool for defining the Slot Capacity for each Resource Pool. When checking for slot Availability, Sterling Selling and Fulfillment Foundation makes a real-time User Exit call to find the slot Availability of the Resource Pool. This information is passed from the fleet management software.

 Note

Even though capacity can be kept externally, Resource Pools must still be defined in Selling and Fulfillment Foundation.

Service Slots

Before providing a delivery or Provided Service, an appointment with the customer is required. An appointment is set up during a specific Time Slot. A Service Slot is identified by a start time and an end time. A Capacity Organization can define multiple Slot Groups, each containing multiple Service Slots.

Slot Group

A Slot Group consists of a set of Service Slots. You can associate one Slot Group to a Resource Pool.

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Resource Capacity Overview

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Service Slots

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The ability to define multiple Slots and Slot Groups enables you to take appointments of different granularity for different Resource Pools.

Example

Consider a scenario, where a Resource Pool providing Delivery Service can only promise four hour time intervals. However, you can also promise two hour time intervals for a Resource Pool being used for some Provided Service. To illustrate this concept, assume that you provide the following two types of Delivery Services:

- **High-floor delivery** - For high-floor deliveries, you use a third-party Delivery Service Provider who can deliver within four hour Time Slots. You can create a Slot Group containing the following Service Slots:

Start Time	End Time	Slot Name
8:00 am	12:00 pm	First shift
1:00 pm	5:00 pm	Second shift
5:00 pm	9:00 pm	Third shift

- **White-glove delivery** - For white-glove deliveries, you use your own fleet and promise to deliver within two hour Time Slots. You can create a Slot Group containing the following Service Slots:

Start Time	End Time	Slot Name
8:00 am	10:00 pm	Early AM
10:00 am	12:00 pm	Late AM
1:00 pm	3:00 pm	Early PM
3:00 pm	5:00 pm	Late PM

You can associate the first Slot Group with the Resource Pool providing third party deliveries and the second Slot Group with the Resource Pool providing in-house deliveries.

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Resource Capacity Overview

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Regions, Region Schemas, and Region Levels

Region

Regions are the most basic building blocks for defining geography in Sterling Selling and Fulfillment Foundation. Each Region is itself a set of other Regions or a set of postal codes forming that Region. For example, the following list elaborates on the concept of regions:

- A Region USA consisting of 50 other regions - the 50 states.
- Each state consists of a varying number of regions - the counties in the state.
- Each county consists of cities or towns.

Region Schemas

A region schema represents the complete set of regions that define a specific geographic area. You can define regions in a hierarchical manner so that collected regions are defined easily with the least amount of data entry. You can define as many Region Schemas as your business requires. Organizations can associate the Region Schemas with the following purposes:

- Shipped Product Region Schema
- Delivery Region Schema
- Provided Service Region Schema
- Analytics Region Schema
- Selling Region Schema

Important

Only the Hub Organization can define the Region Schemas. Hub administrators can define Region Schemas in the Application Platform. Enterprises can select the appropriate Schema from the list of Schema's defined.

Region Level

Region Levels enable you to manage the Region Schemas in an effective manner. It classifies regions into distinct categories to facilitate easier searches later. Region level also helps to prevent data entry errors. One-time setup defines what level can be a child of which level. This helps in prevention of data entry errors such as adding a Country to a State inadvertently. For example Country, State, and City.

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Resource Capacity Overview

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Region Schemas for Resource Pools

While Region Schemas can be defined at the Hub level, they can be associated at the Resource Pool level. If a region schema is associated at the Resource Pool level, it overrides the region schema at the provider Organization level.

Service Capacity

Service Capacity is the total amount of service that can be provided by a Resource Pool for a particular Time Slot. Typically, Service Capacity can be of any of the following types:

- Standard Capacity
- Supplemental Capacity
- Additional Fixed Capacity

The following sections explain the different Service Capacity types.

Standard Capacity

Standard Capacity is defined on a day-of-the-week basis. It defines the Standard Capacity that is serviced by a Resource Pool.

Supplemental Capacity

There are certain situations where an Enterprise has additional capacity requirements. Supplemental capacity is the additional capacity that a Resource Pool offers in addition to the Standard Capacity. Supplemental capacity can be defined within each Standard Capacity period, for a day of the week. You can consider supplemental capacity when taking an appointment for a Work Order. Additionally, you can consider supplemental capacity when viewing available capacity in the Capacity Console. For example, a company with 10 delivery trucks may require a couple of third-party trucks to deliver products to an important client on a certain date. When creating a customer through Applications Manager, you can specify that the customer requires default supplemental capacity.

Additional Capacity

Additional capacity can be defined for a service type and region level combination. For example, deliveries take longer in the suburb than in the city. Therefore, you want to always add a certain amount of time per delivery for a certain region, for a certain service type.

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Resource Capacity Overview

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Resource Pool and Service Promising

A Resource Pool can either provide Delivery Services or Provided Services. Additionally, a Resource Pool is associated with a single Node. For a Delivery Service Resource Pool, this represents the Node from where products are delivered. For a Provided Service Resource Pool, this represents the Node responsible for managing the Resource Pool capacity.

When delivery or service requests are received, a number of parameters are considered before promising the service request. You can associate product lines with delivery or Provided Services.

Service Promising for Delivery Service

When promising for Delivery Services, the following points are considered:

- Checking for an available slot for product delivery and recording a customer appointment based on that availability
- Scheduling the delivery based on the recorded appointment
- Notifying the delivering Node to make the delivery

Service Promising for Provided Service

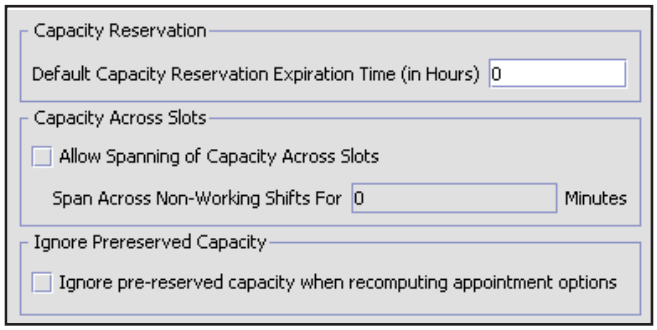
Typical steps in the promising process for Provided Services are:

- Checking for an available slot for the service and recording a customer appointment based on that availability
- Scheduling the service based on recorded appointment
- Notifying the delivering Node to make the delivery

Resource Capacity Configuration

Capacity Rules

You can define rules to set capacity reservation expiration limits and to allow resource capacity assignments to span across Service Slots. The following figure displays the Capacity Rules screen.



Procedure to Define Capacity Rules

1. Launch **Applications Manager**.
2. Go to **Applications > Global Inventory Visibility > Resource Capacity > Capacity Rules**. Double-click **Capacity Rules**. The Capacity Rules (DEFAULT) screen displays.
3. Enter the values as specified:
   - In the **Capacity Reservation** panel:
     - **Default Capacity Reservation Expiration Time (in Hours)** enables you to enter the number of hours after which a capacity reservation should expire. After the expiration time is passed, the reservation is available for purging.
   - In the **Capacity Across Slots** panel:
     - Select **Allow Spanning of Capacity Across Slots** to allow resource capacity assignments to span multiple Service Slots. This option is only available to Resource Pools that maintain capacity at the service resource level and have a Service Slot Group that is not hierarchical.
     - **Span Across Non-Working Shifts For <n> Minutes** enables you to enter the number of minutes for which a shift can span across its adjacent non-working shift or shifts.
   - In the **Ignore Pre-reserved Capacity** panel:
     - Select **Ignore pre-reserved capacity when recomputing appointment options** to ignore pre-reserved capacity for capacity calculations.
4. Click  to save the changes.

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Resource Capacity Configuration

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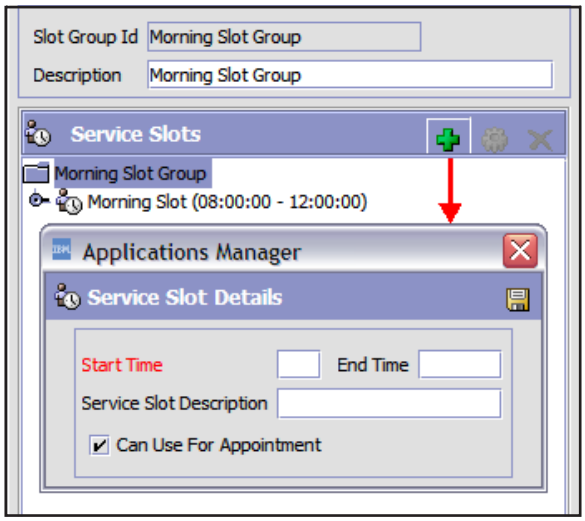
Slot Groups

A Slot Group is a collection of Service Slots. A Service Slot is defined as a period against which Service Item Promising can be made. You can define multiple slots and Slot Groups, enabling you to schedule appointments of different granularity for different Resource Pools.

The following figure displays the Slot Groups screen.



Procedure to Configure Slot Groups

1. Launch **Applications Manager**.
2. Go to **Applications > Global Inventory Visibility > Resource Capacity > Slot Groups**.
3. Double-click **Slot Groups.** The Service Slot Groups screen displays.
4. Choose the **Create New** icon. The **Service Slot Group Details** window opens.
5. Enter the values as specified in the table:
   - **Slot group ID:** Enter the name of the slot group.
   - **Description:** Enter a brief description of the slot group.
   - **Service Slots:** A list of the slot group service slots.
6. Click  .

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Resource Capacity Configuration

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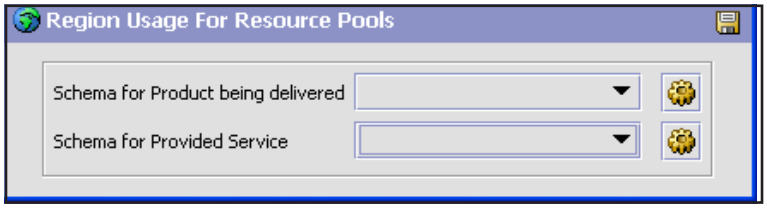
Region Schema Selection for Resource Pool

Sterling Selling and Fulfillment Foundation enables you to define the Region Schemas used for configuring Delivery Service Resource Pools and Provided Service Resource Pools. The following figure displays the region schema usage for Resource Pool.

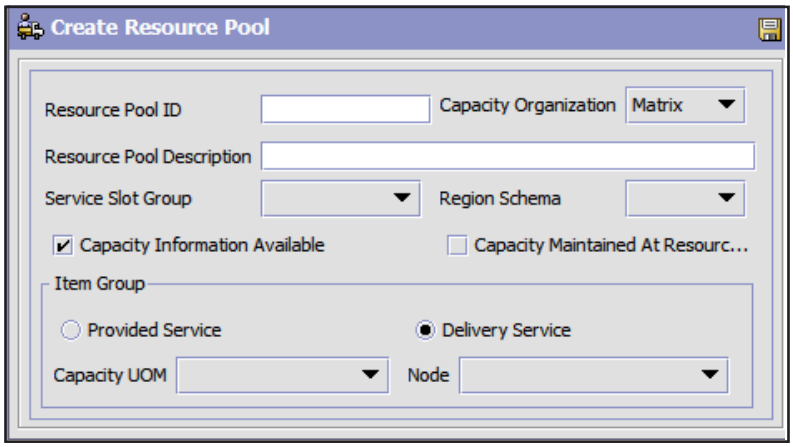


You can create a schema and associate it with the products delivered or with a Provided Service. Alternatively, you can select from a list of schemas.

Resource Pool

Service Nodes can provide multiple delivery and Provided Services. Resource Pools define the amount of Service Capacity that is available for these services by geographical area and Time Slots. A Resource Pool is a collection of resources needed to perform a Delivery Service or Provided Service. A Resource Pool is defined by the Organization that is providing the capacity.

The following figure displays the **Resource Pool** configuration.



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Resource Capacity Configuration

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Resource Pool

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Procedure to Create a Resource Pool

1. Launch **Applications Manager**.
2. Go to **Applications > Global Inventory Visibility > Resource Capacity > Resource Pools**. Double-click **Resource Pools.**

   The **Resource Pool Search** screen displays.
3. Click  to create a Resource Pool.
4. Enter the values as specified:
   - Resource Pool ID specifies the name of the Resource Pool.
   - Select the **Capacity Organization** that maintains the capacity within this Resource Pool.
   - Enter a brief description of the Resource Pool.
   - Select the **Service Slot Group** you want to use to determine service promising. Important: When you change the Service Slot Group, ensure that you reset the capacity of the original Slot Group in the Capacity Console. The capacity should be made unavailable.
   - Select the **Region Schema** to associate with this Resource Pool.
   - Select **Capacity Information Available** to indicate that this Resource Pool can be considered as a source for capacity. If you do not select this, infinite capacity is considered.
   - Select **Capacity Maintained At Resource Level** to indicate that capacity is maintained at the resource level for this Resource Pool.
   - In the **Item Group** panel:
     - Select **Provided Service** to configure a Resource Pool for one or more Provided Services.
     - Select **Delivery Service** to configure a Resource Pool for one or more Delivery Services.
     - From the **Capacity UOM** menu list, select the unit of measure of the capacity for the Resource Pool.
     - From the **Node** menu list, select the Node to associate with the Resource Pool.
5. Click. 

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Resource Capacity Configuration

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Resource Pool Details

You can configure additional Resource Pool parameters such as the region details, service skills of the resources, provider contact details, resources, and additional capacity limits. These parameters can be defined for an existing or new Resource Pool.

Procedure to Configure Resource Pool Details

1. Launch **Applications Manager**.
2. Go to **Applications > Global Inventory Visibility > Resource Capacity > Resource Pools**. Double-click **Resource Pools.** The Resource Pool Search (DEFAULT) screen displays.
3. Click the **Node** menu and select an appropriate Node.
4. Click  to list all the Resource Pools of the selected Node.
5. The Search Results panel displays the list of Resource Pools belonging to the selected Node.
6. Double-click the appropriate **Resource Pool ID**. The details of the selected Resource Pool along with the different tabs associated with it displays.
7. Enter the values as specified:
   - In the **Service Skills** tab, enter the identification number and description of the service skill.

 Important

Service skills are defined by the default administrator and here we select the required service skills for that Resource Pool.

   - In the **Provider Contact Address** tab, enter the address and contact information of the Organization providing the Resource Pool.

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Resource Capacity Configuration

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Resource Pool Details

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- The **Regions** tab lists regions serviced by the resource pool:
  - Select **Service Specific Regions** to be able to define particular service regions from the Regions table.
  - Select **Service All Regions** to indicate that this resource pool can service all regions configured in the region usage.
  - Select **By Regions Only** if this resource pool serves the specified regions for all time slots throughout the selected days. **Note:** After you check this option, you cannot select the By Regions And Slots unless you delete all the region associations to this resource pool first.
  - Select **By Regions And Slots** if this resource pool only services specified time slots throughout the day. **Note:** After you check this option, you cannot select the By Regions Only unless you delete all the region associations to this resource pool first.
- In the **Resources** tab, provide the **Resource ID, Calendar ID** of the calendar the resource is using, and any additional **notes** on this resource.
- In the **Additional Capacity Limits** tab:
  - Select **Capacity is Limited By Weight** to limit the capacity by weight. Select the appropriate UOM from the Weight UOM menu list.
  - Select **Capacity is Limited By Volume** to limit the capacity by Volume. Select the appropriate UOM from the Volume UOM menu list.

 Note

You cannot modify the additional capacity limits configured for the same UOM types. However, modification is possible only if one of the capacity limits are not configured.

8. Click 

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Resource Capacity Configuration

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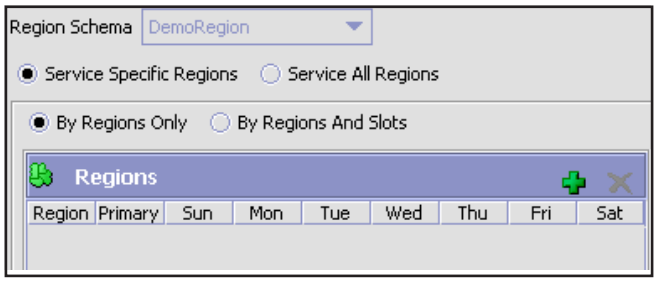
Configuring Regions

You can associate regions that define the set of geographical areas with a set of Resource Pool services. You can specify the days of week and time of the day when a Resource Pool services a region. Additionally, you can specify whether the region is the Resource Pool primary region. If a region is not marked as a primary region, it is considered as all other Resource Pools that are configured with the region marked as a primary region have no available capacity. The following figure displays the Region layout.



Procedure for Configuring Regions

1. Start a **Resource Pool** and view its details.
2. Click the **Regions** tab.
3. Enter the values as specified in the table:
   - Select **Service Specific Regions** to define particular service regions from the Regions table.
   - Select **Service All Regions** to indicate that this Resource Pool can service all regions configured in the region usage.
   - Select **By Regions Only** if this Resource Pool Services the specified regions for all Time Slots throughout the selected days.
   - Select **By Regions And Slots** if this Resource Pool only services specified Time Slots throughout the day.
   - **Regions** specify a list of regions serviced by the Resource Pool.
4. Click  .

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Resource Capacity Configuration

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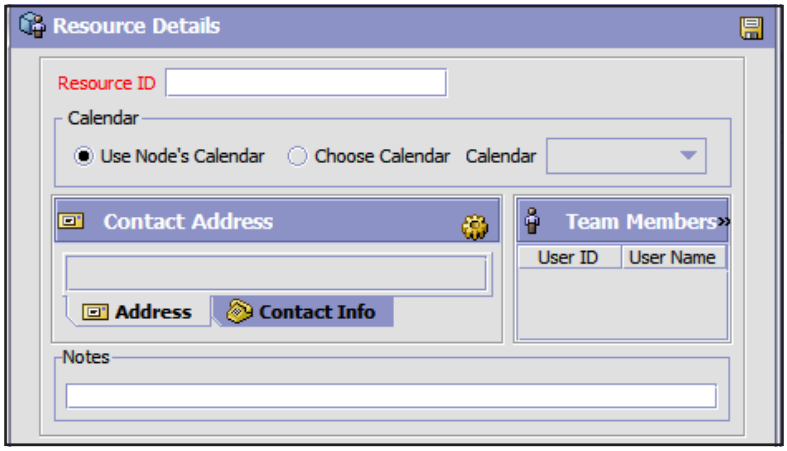
Assign Resources

A service resource represents one or more people that work as a team. It is represented as a single entity that can perform Provided or Delivery Services and is associated with a single Resource Pool. Each resource is associated with one of the calendars defined by the Node of its Resource Pool or uses a Node shipping calendar. You can also associate team members with a service resource that can be selected to perform Work Order tasks in the Application Console.

The following figure displays the **Resource Details** screen.



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Resource Capacity Configuration

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Assign Resources

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Procedure to Assign Resources

1. Start a **Resource Pool** and view its details.
2. Click the **Resources** tab.
3. Choose  from the Resources panel In the Resource Pool Details screen. The Resource Details window displays.
4. Enter the values as specified:
   - **Resource ID** specifies the identification number of the resource.
   - In the **Calendar** panel:
     - Select **Use Node's Calendar** to use the shipping calendar of the Node with which the Resource Pool is associated.
     - Select **Use Calendar** to use a calendar that is not the Node's shipping calendar.
     - Select a **Calendar** for the service resource to use. The calendars of the Node and the primary Enterprise of the Node display in the menu list.
   - **Contact Address** table specifies a resource's contact address. Choose the Contact Info tab to view additional contact information.
   - **Team Members** table enables you to add team members resource. These team members are added to Work Order appointments when this resource is selected run the appointment.
5. Click 

Additional Resource Capacity Configurations

Services Sourcing Configuration

Provided Services include services such as installation, and can be a stand-alone line in an Order. A Provided Service can be fulfilled as a part of the Order or can be fulfilled at a later stage. Therefore, Sterling Selling and Fulfillment Foundation enables you to configure Sourcing Rules for Provided Services to control which Node, external Organization, or group of Nodes should be considered for Sourcing Provided Service items.

Factors that affect Sourcing Rules for Provided Services

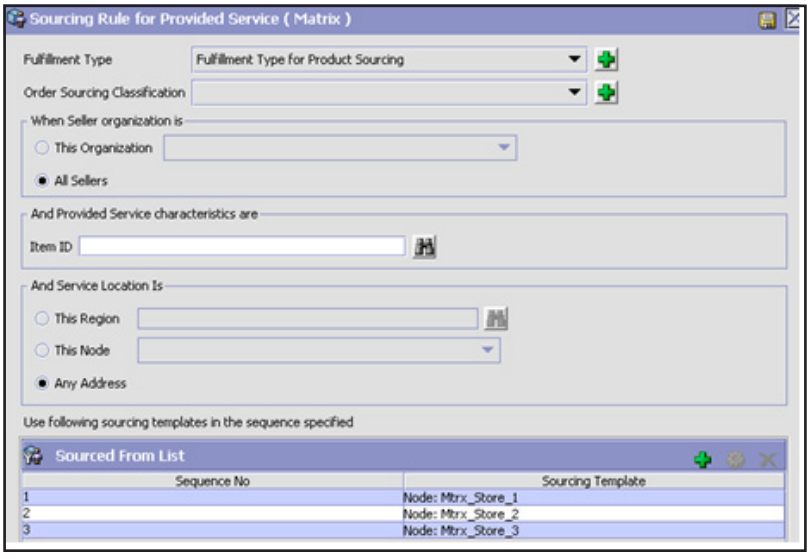
The Sourcing Rules are based on the following parameters:

- Fulfillment type
- Order Sourcing classification
- Seller Organization
- Item ID
- Geographical region of the location where the service is to be provided
- Node where the service is to be provided.

How does it work?

Assume that the parameters such as fulfillment type, item ID, and region are specified and for these specifications, the Sourcing is defined to process from Node1. When scheduling an Order, the Sourcing Rule checks for these parameters and sources the Order from Node1.

The following figure displays the Sourcing Rule for Provided Service.



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Additional Resource Capacity Configurations

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Standard Capacity Definition

In Sterling Selling and Fulfillment Foundation, capacity is defined in terms of two parameters:

- **By Resource** - The number of resources available to perform a task.
- **By Time** - The number of hours it takes to perform a task.

Standard Capacity is used to define these capacities for a specific period. It is defined on a yearly basis considering some assumptions and past experiences. You can create Standard Capacities at the Resource Pool level.

Important

You can edit the capacities defined in the Standard Capacity at any instance.

Example

You can define a Standard Capacity of eight working hours per resource per day for five days in a week and for the next one year, based on some of the following assumptions:

- The resource is working full time
- The resource is not quitting in the mid year

How to define Standard Capacity

1. Start **Application Console**.
2. Go to **Inventory > Capacity Console**.
3. Enter an appropriate Node and search for capacity details for all the Resource Pools within the selected Node.
4. Click **Standard Capacity**.

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Additional Resource Capacity Configurations

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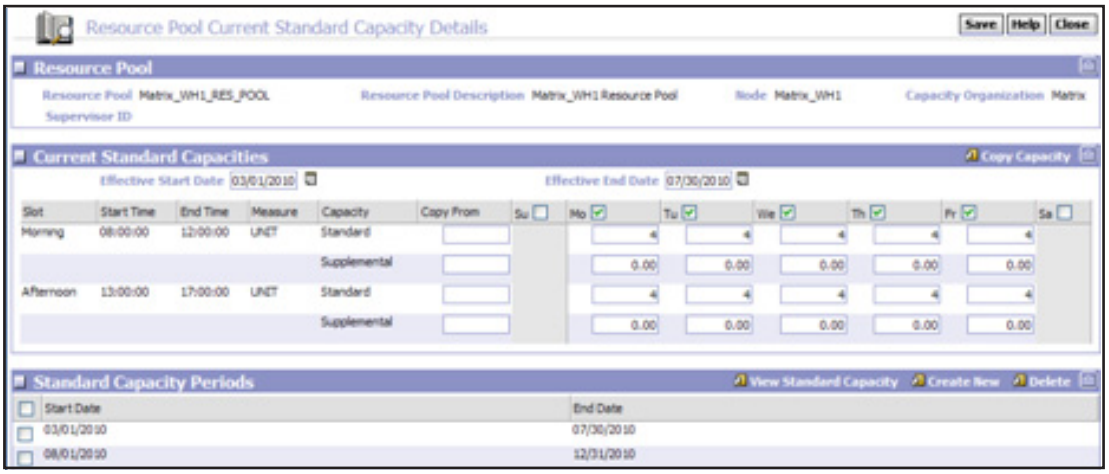
Standard Capacity Definition ....(Continued)

Tasks you can perform

You can perform the following tasks in the Standard Capacity Details screen:

- Define the Standard and Supplement Capacity in terms of time (Hours).
- Define the days on which the resources work (Enable the days, Sun, Mon, Tue, and so on).
- Specify the number of hours the resources work in each slot.
- Copy the capacity (hours/units/days) for all the working days by clicking **Copy Capacity**.
- Create new Standard Capacities.
- Delete an existing Standard Capacity.

The following figure displays the current Standard Capacity details for a specific Resource Pool, Matrix_WH1_RES_POOL.



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Additional Resource Capacity Configurations

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Override Capacity

Sterling Selling and Fulfillment Foundation enables you to override capacities for:

- A single day
- Different slots in a day
- Multiple days
- All days in a week

Standard Capacities are defined for a long period and are based on assumptions. Some unidentified changes to the Resource Pool must be addressed and therefore, you can override capacities as and when the cases arise. You must mention the reason for overriding the capacity.

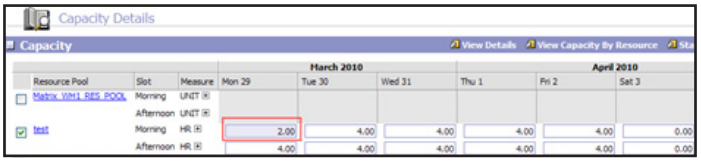
Note

Overriding capacities for a specific time does not affect the Standard Capacity definitions.

Example

Assume that the Standard Capacity is defined as 8 hours per day, five days a week, and for 12 months. One of the resources takes leave for two days in a week. Therefore, you can override capacities for those two days when the resource is on vacation to the Resource Pool to which they belong.

The following figure displays the overridden capacity for the morning slot for a Test Resource Pool.



Exercise 3.1.1: Create a Resource Pool

Scenario

Matrix maintains a large customer base in and around Massachusetts. They provide Delivery Services for all the items they sell. They have a dedicated fleet of vehicles to carry the items and resources that deliver items to high rise apartments, provide curb delivery and so on.

In this exercise, you are required to create a Resource Pool for Delivery Services to address all delivery requests.

Instructions

For ease of understanding, the procedures are in three parts.

1. Procedure to create a Slot Group.
2. Procedure to select a region usage for Resource Pool.
3. Procedure to create a Resource Pool for Delivery Services.

Each procedure is taken up in the following sections.

Procedure to Create a Slot Group

1. Go to **Applications Manager** > **Applications > Global Inventory Visibility.**
2. Click the icon **Load Rules for Organization** on the left pane. Select **Matrix** from the Organization drop down list. Click **OK**.
3. Go to **Resource Capacity > Slot Groups**. Double-click **Slot Groups**. The Service Slot Groups screen displays.
4. Click  to create a Slot Group.
5. Type the Slot Group Id as **Slot Group**.
6. Type the Description as **Always Available Slot Group**.
7. Click  to save the settings. The newly created Slot Group displays.
8. Select the **Always Available Slot Group** and  click.
   a. Type **08:00** as the Start Time.
   b. Type **12:00** as the End Time.
   c. Type **Morning Slot** as the Service Slot Description.
9. Click  to save the settings.

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Exercise 3.1.1: Create a Resource Pool

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Instructions

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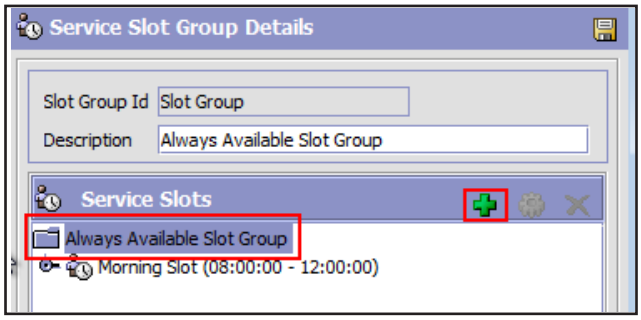
10. To set up the Afternoon Slot to start at 13:00 p.m. and end at 17:00 p.m., select **Always Available Slot Group** and click the icon.



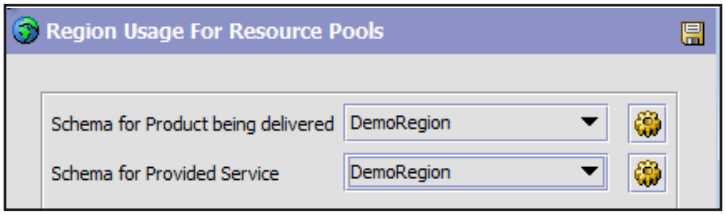
    a. Type **13:00** as the Start Time.
    b. Type **17:00** as the End Time.
    c. Type **Afternoon Slot** as the Service Slot Description.

11. Click to save the settings.

Procedure to Select a Region Usage for Resource Pools

1. Go to **Global Inventory Visibility > Resource Capacity > Region Usage for Resource Pools**.
2. Double-click **Region Usage for Resource Pools**. The Region Usage for Resource Pools dialog box displays.
3. Select **DemoRegion** from Schema for Product being delivered and Schema for Provided Service.

   This means that resources belonging to the Resource Pools can be allocated exclusively to fulfilling the regions defined in the DemoRegion Schema.



4. Click . The Region Usage For Resource Pools is set up.

(Continued on next page)

Exercise 3.1.1: Create a Resource Pool

(Continued)

Instructions

....(Continued)

Procedure to Create a Resource Pool

1. Go to **Global Inventory Visibility > Resource Capacity**. Double-click **Resource Pools**. Ensure that Matrix rules are loaded as the Organization.
2. Click  to create a Resource Pool. The Create Resource Pool screen displays
3. Type **DSRP01** in the Resource Pool ID field and **Resource Pool For Product Delivery** in the Resource Pool Description field.
4. Ensure that the Capacity Organization is selected (**Matrix**).
5. Select **Slot Group** from the Service Slot Group drop down list.
6. Select **DemoRegion** from the Region Schema drop down list to set up the DSRP01 Resource Pool to service regions specified in the region schema.
7. To configure this Resource Pool to maintain capacity for Delivery Services, select the **Delivery Service** radio button.

 Note

This will ensure that the capacity in this Resource Pool is displayed when you search for Delivery Service Capacity in the Capacity Console

8. Select **Unit** from the Capacity UOM drop-down list.
9. Select **Matrix_WH1** as the service Node from the Node drop down list.
10. Click  .The Resource Pool Details window displays.
11. Ensure that **Use Node's Calendar** is selected.
12. Click the **Regions** tab and then select **Service All Regions** radio button.

    Note: This will ensure that this Resource Pool services all regions mentioned in the Region Usage For Resource Pools.
13. Click  .

Result

You should be able to view a new Resource Pool DSRP01 created for providing Delivery Services for a region schema DemoRegion .

Optional Exercise

Create a Resource Pool

In addition to the Delivery Services, the Enterprise wants to offer Provided Services to their customers in North America. However, as a trial run they want to provide the services in the morning between 8:00 am and 12:00 pm only. In order to fulfill their customers' requests, they want to maintain a dedicated team of electricians, plumbers, and so on, to cater to all the Provided Service requests. In this exercise, you are required to create a Resource Pool for Provided Services.

Note: The Slot Groups and Region Schema are created for you.

Instructions

1. Launch **Applications Manager**.
2. Go to **Global Inventory Visibility**.
3. Create a Resource Pool with the following values:

Field	Description
Resource Pool ID	PSRP01
Service Slot Group	Morning Slot Group
Region Schema	PSRP Schema
Capacity Information Available	Yes
Item Group	Provided Service
Capacity UOM	Hour
Node	Matrix_WH1
Service Skills	Electrical Wiring
Regions	Service All Regions

4. Click  to save the service.

Result

You should be able to view a new Resource Pool for Provided Service called PSRP01.

Lesson Review

Completed Objectives

This lesson has been designed to enable you to:

- Discuss basic Resource Capacity concepts.
- Configure the features related to Resource Capacity.
- Describe additional Resource Capacity Configuration.
- Create Resource Pools.

Unit 5: Managing Returns

This unit explains how order returns are managed by Sterling Selling and Fulfillment Foundation. It also focuses on how to process Return Orders and Blind Returns and manage the product items returned.

LESSON 5.1: Managing Returns

Introduction

This lesson will provide you with an overview of order returns configuration.

Lesson Objectives

This lesson is designed to enable you to:

- Describe a return order process.
- List the stages in the reverse logistics domain.
- Explain the different Return Order pipelines.
- List the parts of a Return Order.
- Create a blind return.
- Create a Return Order against a Sales Order.
- Create and close a receipt against a Return Order.

References

For more information on order returns configuration, refer to:

- http://www.ibm.com/support/knowledgecenter/SS6PEW_9.5.0/com.ibm.help.rev.log.config.doc/configuration/c_IntroductionToReverseLogisticsConfiguration.html

Navigate to **Sterling Order Management** > **Sterling Order Management 9.5.0** > **Configuring supplied and add-on solutions** > **Sterling Reverse Logistics** > **Reverse logistics configuration**

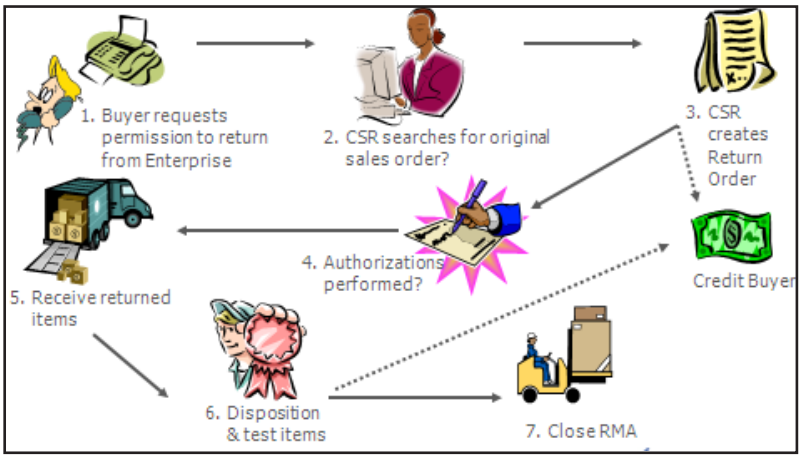
Overview of Reverse Logistics

Introduction

Reverse Logistics is the strategy of managing and controlling orders returned from customers to refurbish, if needed, and be placed back into the status of a saleable product. Reverse Logistics can be configured to track returns from the moment a replacement order is submitted, throughout the entire reverse logistics and repair cycle until the item is returned to stock or discarded.

Returns Cycle Illustration

The Returns Cycle is the lifecycle of a Return Order. The Returns Cycle is illustrated.



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Overview of Reverse Logistics

(Continued)

Returns Cycle Activities

The main **Returns Cycle** activities are described:

1. Supplier Creates Return Order

   Usually, a **Return Merchandise Authorization number (RMA#)** is required before a return can be processed. The **RMA#** is generated after a buyer contacts the company the items are being returned to. The company then creates a Return Order with an RMA#, and instructs the buyer about how to proceed with the return.

2. Buyer Returns Items to Supplier

   The buyer ships the items back to the company, seller, or warehouse or brings the items to a store specified by the Enterprise.

3. Supplier Inspects Items

   When the seller receives the returned items, they inspect the items and decide what to do with the physical inventory being returned.

4. Supplier Issues Credit

   After the items are inspected at the ship node, the ship node credits the Enterprise for the returned items, and the Enterprise credits the buyer. These credits can or cannot be the same as the original price paid for the items.

Reverse Logistics Domain

Reverse Logistics Domain can be divided into five stages. These are explained in the following paragraphs.

1. Returns Planning

Companies typically perform Returns Forecasting, Resource Planning, and Optimization and Inventory Management Planning activities as part of Returns Planning.

(Continued on next page)

Overview of Reverse Logistics

(Continued)

Reverse Logistics Domain ....(Continued)

2. Gatekeeping

Gatekeeping is Returns Policy definition and adherence. For example, customers can return items within 14 days.

3. Returns Coordination

Returns Coordination is the process of returning an item to the supplier. This process includes the creation of an RMA, selection of a node that accepts the returned item, and notification of the return authorization number to the customer.

4. Returns Execution

Returns execution takes place at a warehouse at the time of receipt of the returned items. This process includes receipt handling activities, assignment of a disposition code to the items, creation of exchange or repair order and configuration of status and process monitors.

5. Settlement and Audit

Settlement and audits deal with crediting the customer for the returned items.

 Note

Returns Coordination, Returns Execution, and Settlement and Audit are handled by the application.

Reverse Logistics Pipeline

Introduction

Reverse Logistics Pipeline is the flow of transactions required to manage and control orders returned from customers to refurbish, if needed, and place back into the status of a saleable product.

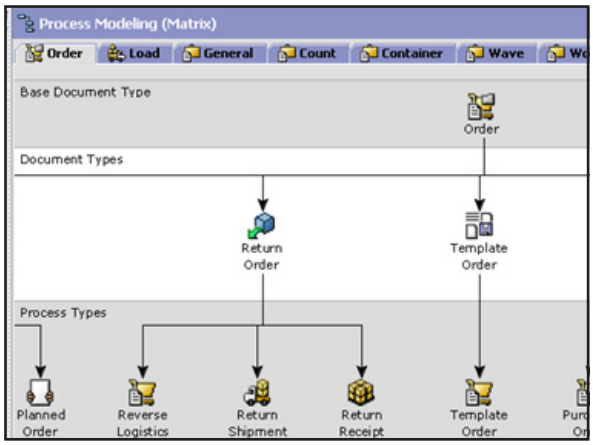
Associated Process Types

A Return Order can go through different processes. These processes are called **Return Order Process Types**. Return Orders are associated with three standard Process Types:

- **Reverse Logistics** - used to create return orders.
- **Return Shipment** - gives visibility into the movement of a Return Order from the initiator to the receiver.
- **Return Receipt** - allows acknowledgment of the Return Order arrival and facilitates further returns handling.

To view the Process Types for Return Order, go to **Applications Manager > Applications > Application Platform > Process Modeling**.

The following figure displays the different Process Types for Return Orders.



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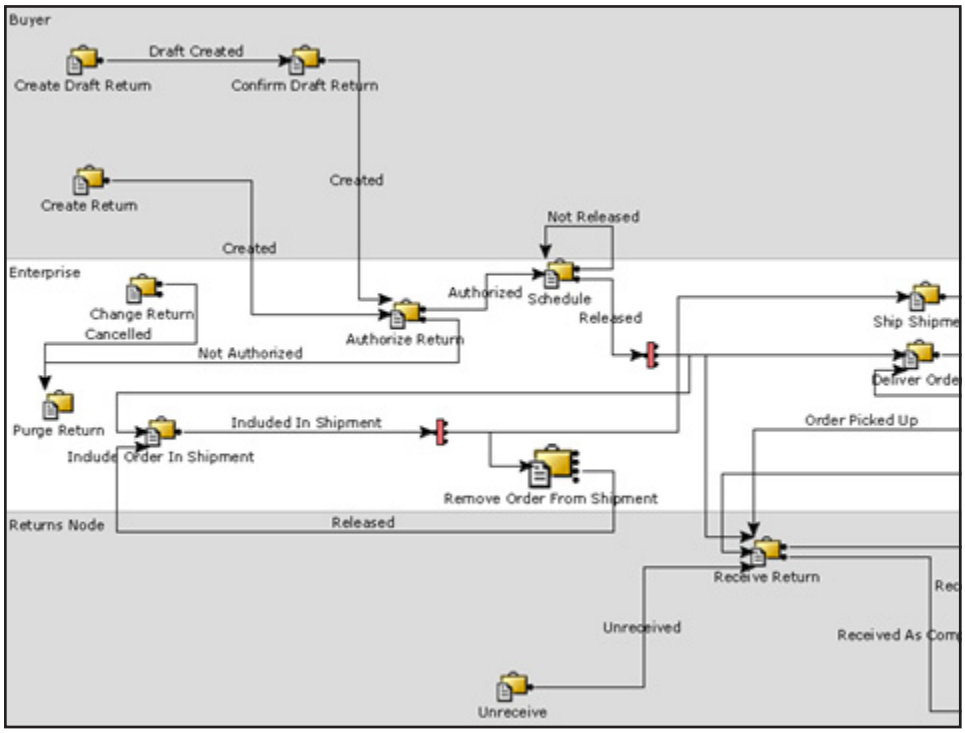
Reverse Logistics Pipeline

(Continued)

Reverse Logistic Pipeline

The following figure shows the **Reverse Logistics** pipeline.



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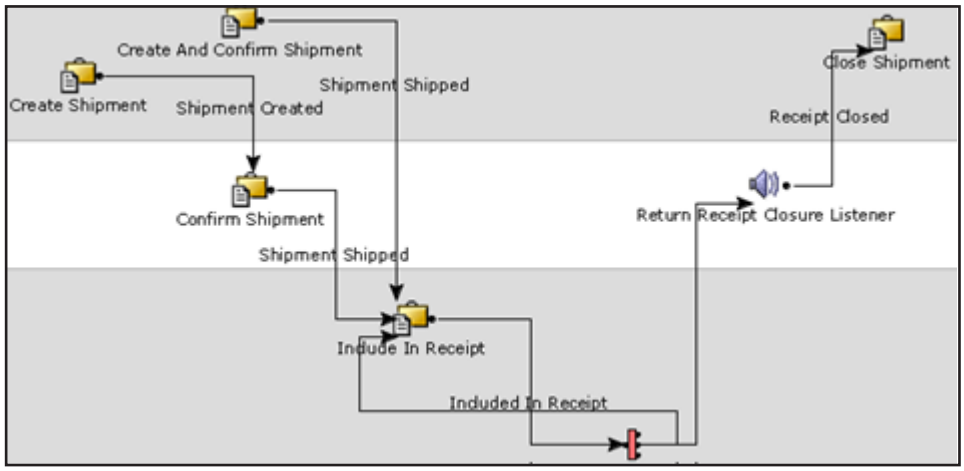
Reverse Logistics Pipeline

(Continued)

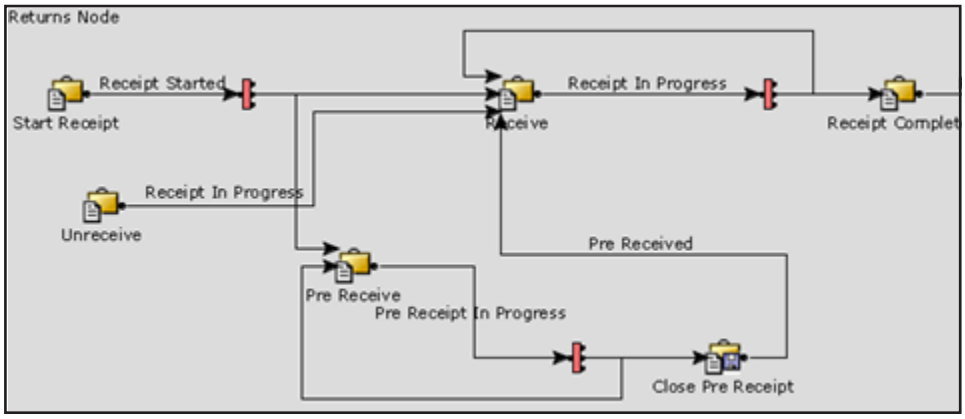
Return Shipment Pipeline

The following figure displays the **Return Shipment** pipeline.



Return Receipt Pipeline

The following figure displays the **Return Receipt** pipeline.



Returns Management

Parts of a Return Order

A Return Order can be divided into three levels:

Return Order Header Level - contains all of the return order lines that is returned.

Return Order Line Level - contains each individual line that is returned.

Return Order Release Level - contains all of the lines that is released to a return node.

Blind Returns

You can create a Return Order without a corresponding Sales Order and is called a blind return. A blind return occurs when items are returned without any advanced notification, such as a Return Merchandise Authorization (RMA).

Procedure to Create a Blind Return Order

1. Log in to **Application Console**.
2. Go to **Reverse Logistics > Create Return Order**.
3. The main fields to be specified are:
   - **Return #** specifies a unique identifier for the Return Order. If you do not specify a Return #, the system will assign a Return # to the Return Order.
   - **Return Against Order** is specified as No. This indicates that the Return Order is not created against a Sales Order.
   - **Return To Node** specifies the node to which the returned items must be sent.
   - **Return By Gift Recipient** specifies that the items are being returned by the gift recipient of the original Sales Order.
4. Click **Create Return**. The **Return Details** screen displays.
5. Specify the fields. The main fields are explained:
   - **Item ID** specifies the item that being returned.
   - **Line Quantity** specifies the quantity of the item being returned.
   - **Reason Code** specifies a reason for the return of the item.

(Continued on next page)

Returns Management

(Continued)

Blind Returns ....(Continued)

- **Return to Node** specifies the node that is handling the return of a particular return line.
- **Refund To** allows you to specify the details of the person or organization to which the refund must be processed.

6. Click **Save**.
7. Click **Confirm** to confirm the Return Order. The **Return Order** moves to the **Created** status.
8. Click **Authorize** to authorize the Return Order. The **Authorize Return** window displays.
9. To Authorize the Return Order, in **Authorization Details** panel, select **Authorized** from the menu list.
10. Click **Save**. The **Return Order** moves to the **Authorized** status.
11. Click **Release** to release the Return Order. The **Return Order** moves to the **Released** status.

Return Order Creation against Sales Order

You can create a Return Order for an existing Sales Order.

Procedure to Create a Return Order Against a Sales Order

1. Log in to **Application Console**.
2. To locate the original Sales Order, go to **Order > Order Console**.
3. Enter the Sales Order details and click **Search**. The **Order Details** screen for the Sales Order displays.
4. To create a Return Order against the order, click **>>** and select **Create Return**. The **Returnable Order Lines** window displays.
5. Specify the fields. The main fields are explained:
   - **Return #** specifies a unique identifier for the Return Order. If you do not specify a Return #, the system assigns a Return # to the Return Order.
   - **Return Against Order** is specified as Yes. This indicates that the Return Order is created against a Sales Order.

(Continued on next page)

Returns Management

(Continued)

Return Order Creation against Sales Order ....(Continued)

- **Return To Node** specifies the node to which the returned items must be sent.
- **Return By Gift Recipient** specifies that the items are being returned by the gift recipient of the original Sales Order.

6. Click **Save**. The **Return Detail** window displays.
7. Click **Confirm** to confirm the Return Order. The **Return Order** moves to the **Created** status.
8. Click **Authorize** to authorize the Return Order. The **Authorize Return** window displays.
9. Click **Save** in the **Authorize Return** window. The Return Order moves to the **Authorized** status.
10. Click **Release** to release the Return Order. The **Return Order** moves to the **Released** status.
11. Close the **Return Detail** window and the **Returnable Order Lines** window. The Sales Order moves to the **Return Created** status.

This completes the procedure to create a Return Order against a Sales Order.

Return policies and validations

Clear and concise return policies improve customer satisfaction and makes the return process more convenient. An Enterprise defines the return policies.

If a customer returns an item to the store, the item is validated against the return policies. The return validations prevent fraud and enable a smooth return transaction. On completing the return validations, the customer is refunded through the appropriate payment method.

Returns validations

Validations for returns processing belong to the Returns domain. Return validations provide a mechanism to determine whether to run the override rules for the validation. When an override rule configured for the validation fails, it might result in a violation that requires manager approval. Following are the validations required for return processing:

- **Is Returnable**: Identifies an item as returnable/non-returnable.
- **Return Window**: Specifies the duration or time period within which an item can be returned.
- **Return Reason**: Specifies reason codes for returning an item.
- **Unit Price Limit**: States the unit refund value for an item in an order line.
- **Blind Line**: Specifies whether a blind line in a return order is accepted or rejected.

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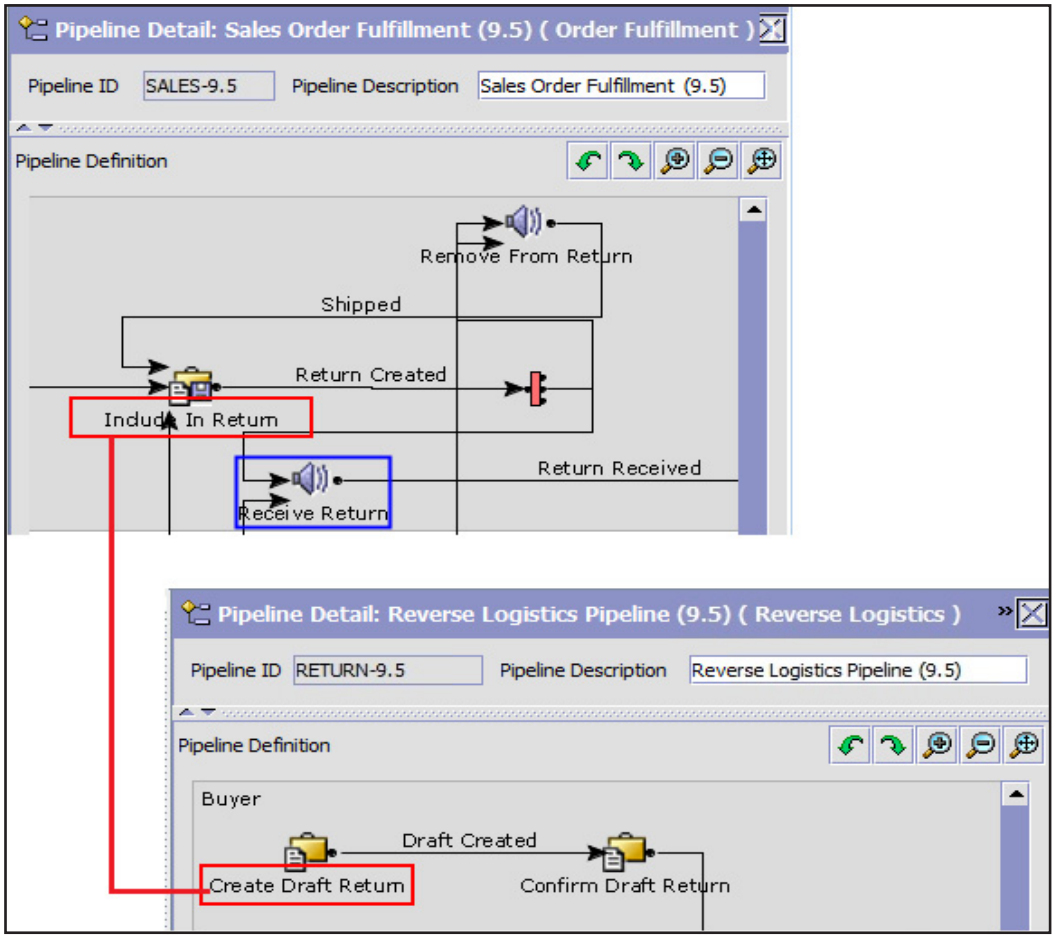
Returns Management

(Continued)

Sales Order to Return Order Relation

The "Include in Return" Transaction in the Sales Order Fulfillment pipeline calls the "Create Draft Return" Transaction in the Reverse Logistics pipeline, creating a link between the two Transactions. The following figure displays the relation between the "Include in Return" Transaction and the "Create Draft Return" Transaction.



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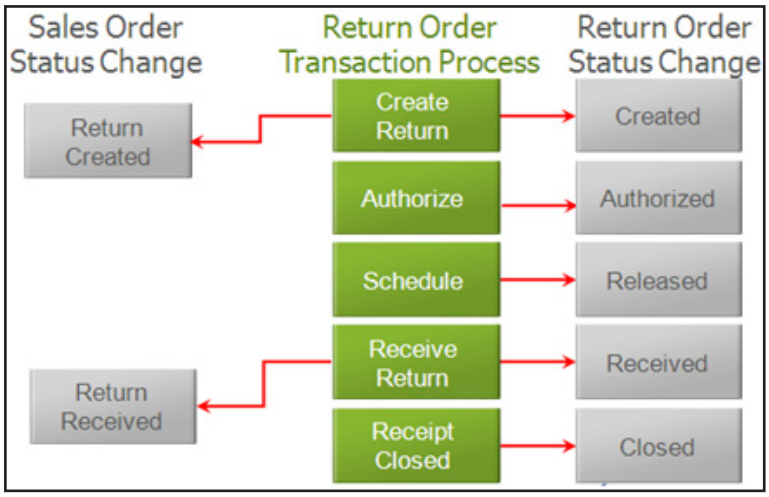
Returns Management

(Continued)

Sales Order to Return Order Relation

....(Continued)

The following figure illustrates the status changes for Return Orders and corresponding status changes for a Sales Order.



Refunds on Return Orders

It is common for customers to return items back to the store for various reasons. If a customer tries to return an item without a receipt, then, subject to various return policy rules applicable, the item is considered for return as the return order is associated with the original sales order. The customer's shopping experience becomes more satisfactory if the customer has the option of returning the item and getting back the appropriate refund.

In Sterling Selling and Fulfillment Foundation, refunds are processed on the Return Order itself, instead of the Sales Order, which is considered complete. Customers can be informed of a refund before an in-store transaction is complete. This allows the store associate to offer the customer with a refund that can be altered, and then update the sales order. After the customer accepts or rejects the refund amount, the store associate has the ability to modify the conditions of the refund.

(Continued on next page)

Returns Management

(Continued)

Return Shipment Creation

You can create a shipment for a Sales Order that is in the Released status.

Procedure to Create and Ship a Shipment for a Return Order

1. Log in to **Application Console**.
2. Locate a Sales Order in the Released status by browsing to **Reverse Logistics > Return Console**.
3. Specify the Return Line Statuses as **Released** and click **Search**.
4. Select a Return Order from the Return Order list by clicking a Return # hyperlink. The Return Detail screen displays.
5. Click  from the **Return** panel. The **Return Releases For Order** window displays.
6. From the **Return Releases** panel, click a **Release #** hyperlink. The **Return Release Details** window displays.
7. From the Return Release panel, click **Create Shipment**. The Return Shipment Details window displays. Note, the shipment is in the '**Shipment Created**' status.
8. From the Shipment panel, click **Confirm Shipment** to confirm the created shipment. The shipment moves to the '**Shipment Shipped**' status.
9. Click **Close** in the Return Shipment Details window, the **Return Release Details** window, and the **Return Releases For Order** window. The **Return Order** is now in the '**Shipped**' status.

Return Order Specific Configurations

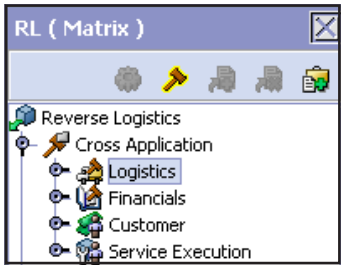
Introduction

Return Order specific configurations can be divided into four categories:

- Logistics
- Financials
- Customer
- Service Execution

To view the Return Order specific configurations for an organization, you must go to **Applications Manager > Applications > Reverse Logistics > Cross Application**.

The following figure displays the different categories for Return Order specific configuration.



Each of the four categories is taken up in the following sections.

Logistics

Logistics manages the flow of resources between customers and suppliers. Logistics is divided into three subcategories:

1. Logistics Attributes

   Logistics Attributes are the rules and common codes used during shipping of an order.

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Return Order Specific Configurations

(Continued)

Logistics

....(Continued)

The following figure displays the different **Logistics Attributes** that you can configure.

As part of Logistics Attributes, you can define:

- Freight Terms

  Freight terms specify how transportation costs are calculated. You can define common codes that are used when associating a freight term to a carrier.

- Modify Carrier Reason

  You can define common codes that is seen in the Reason Code menu list when you modify a Carrier.

- Other Rules

  You can define additional rules pertaining to transit time such as Distance Per Day and Default Carrier Service For Transfers,

2. Delivery Codes

   Delivery code identifies the entity that pays for the transportation costs. For example, Enterprise or Supplier. Only a Hub administrator can add, modify, or delete delivery codes.

3. Shipment Modes

   Shipment mode describes how an order is shipped. For example, Truck Load (TL) and Less Than Truckload (LTL). Remember that only a Hub administrator can add, modify, or delete shipment modes.

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Return Order Specific Configurations

(Continued)

Financials

Financials define the type of payments that the system accepts and the rules surrounding payment collection. Financials is divided into three subcategories:

1. Payment Processing Rules Determination

   Payment Processing Rules, such as the type of payment or the order in which multiple payment types are applied, can be determined at either the Seller or Enterprise level. You can also specify whether payment processing is performed for draft orders. Note: Only a Hub administrator can set Payment Processing Rules.

2. Payment Type

   Payment types are the different methods of payment that can be used in financial transactions between organizations, for example, credit card or check.

3. Payment Rule

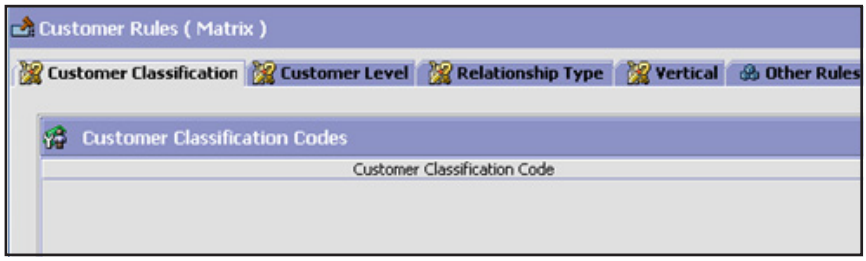
   Payment Rules are the rules that an organization uses at the time of payment collection.

Customer

Customer defines the customers that buy from an organization, and their attributes, such as their classification, primary information, and service preferences. Customer is divided into three subcategories:

1. Customer Rules

   Customer rules specify the different attributes of your customers. Customer rules enable you to group different customers based on common attributes. The following figure displays the different Customer Rules that you can configure.



As part of Customer Rules, you can define:

- Customer Classification

Customer Classification Codes are used to group customers. Customer Classification Codes can be specified when you define customers.

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Return Order Specific Configurations

(Continued)

Customer

....(Continued)

- Customer Level

  Customer Level specifies the rank of a customer. For example, Platinum level customers.

- Relationship Type

  Relationship Type specifies the type of relationship the customer has with your organization. For example, Distributor and Reseller.

- Vertical

  Vertical specifies the industry vertical the customer belongs to. For example, Telecommunications.

- Other Rules

  Other rules specify miscellaneous rules such as the preferred Slot Group for the customer.

2. Customer Definition

   You can define a customer when establishing a relationship with a buyer organization or an individual buyer. You can either define a new buyer or select an existing buyer, as a customer. When defining a customer, you must assign a unique Customer ID to the customer.

3. Contact Types

   Contact types specify how a customer prefers to be contacted. For example, by email. Remember that only a Hub administrator can create, modify, or delete contact types.

Service Execution

Service Execution specifies the service supervisor for a node and additional information about customers. Service Execution is divided into two subcategories:

1. Service Supervisors

   Service Supervisor is the supervisor associated with a node for a seller organization. You can assign a single supervisor for a node and seller organization combination.

2. Questions

   You can define a set of questions that the customer can be asked when it is determined that additional address information is required.

Exercise 5.1.1: Create a Blind Return

Scenario

A customer, Tom Jones, purchases an Omega Progressive-Scan DVD Player from a Matrix store. After returning home, Tom notices that one of the accessories is missing from the DVD Player pack. He decides to return the DVD Player and get a refund. However, Tom is neither able to locate the original Sales Order document nor recall any details of the Sales Order.

You are required to create a blind return for Omega Progressive-Scan DVD Player (Item ID 100002), without the original Sales Order. The item must be returned to the node Matrix_WH1.

Instructions

Procedure to Create a Blind Return

1. Log in to **Application Console** using username as **admin** and password as **password**.
2. Go to **Reverse Logistics > Create Return Order**.
3. Specify the Enterprise as **Matrix**.
4. Specify the **Return To Node** as **Matrix_WH1**.

Important

The Return Against Order is specified as 'No'. This means that the Return Order is not being created against an existing order.

5. Click **Create Return.** The **Return Details** screen displays.
6. Enter the customer address in the **Refund To** by clicking  .The address is as specified:

   Tom Jones

   123 Juniper Street

   Boston MA

   US
7. Click **Save** in the Modify Address window. The system auto-populates the 'Return From' panel with the same address.

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Exercise 5.1.1: Create a Blind Return

(Continued)

Instructions

....(Continued)

8. In the Return Lines panel, specify:
   - Item ID as **100002**.
   - Reason Code as **Damaged Items**.
   - Return To Node as **Matrix_WH1**.
   - Line Quantity as **1**.
9. Click **Save**. The Return Order moves to the '**Draft Created**' status.
10. Click **Confirm** to confirm the Return Order. The Return Order moves to the '**Created**' status.
11. Click **Authorize** to authorize the Return Order. The Authorize Return window displays.
12. To authorize the Return Order, select **Authorized** from the Authorized Drop Status list.
13. Click **Save**. The Return Order moves to the '**Authorized**' status.
14. Click **Release** to release the Return Order. The Return Order moves to the '**Released**' status.

Result

This completes the procedure to create a blind return without an associated Sales Order reference.

Exercise 5.1.2: Create Return Order

Scenario

A customer purchases an item from one of the Matrix stores. She finds the item to be damaged and decides to return it to the store. She arrives at the Matrix store with the item and the original Sales Order document.

You need to create a Return Order against the Sales Order. The item should be returned to the node Matrix_WH1.

Instructions

Procedure to Create a Return Order Against a Sales Order

1. Log in to **Application Console** using username as **admin** and password as **password**.
2. To locate the original Sales Order, go to **Order > Order Console**.
3. Search for an order in the **shipped** status.
4. Open the Order by clicking the hyperlink.
5. To create a Return Order against this order, click **>>** and select **Create Return**. The **Returnable Order Lines** window displays.
6. In the **Returnable Order Lines** panel, specify:
   - Return Quantity as **1**.
   - Reason Code as **Damaged Items**.
7. Click **Save**. The Return Detail window displays.
8. Confirm the Return Order by clicking **Confirm**. The Return Order moves to the '**Created**' status.
9. Authorize the Return Order by clicking **Authorize**. The **Authorize Return** window displays.
10. Under the Authorization Details panel, select **Authorized** from the Authorize Drop Status list.
11. Click **Save** in the Authorize Return window. The Return Order moves to the '**Authorized**' status.
12. Click **Release** to release the Return Order. The Return Order moves to the '**Released**' status.
13. Close the Return Detail window and the Returnable Order Lines window. The Sales Order moves to the '**Partially Return Created**' status.

Result

This completes the procedure to create a Return Order against a Sales Order.

Exercise 5.1.3: Create and Close a Receipt

Scenario

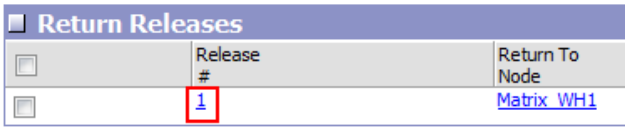
A customer walks into a store to return a defective item. She calls up the store in advance to inform the store associate that she plans to return the item. In response, the store associate creates and releases a Return Order for this return.

Assume that you are a store associate who is handling the receipt of returned items. You need to create and close a receipt for the Return Order.

Instructions

Procedure to Create and Close a Receipt against a Return Order

1. Log in to **Application Console** using username as **admin** and password as **password**.
2. To locate the original Return Order, go to **Reverse Logistics > Return Console**.
3. Click Search to search for return orders. You need to select the order that was returned in the previous exercise.
4. To create a Receipt against this Return Order, click  from the Return panel. The **Return Releases For Order** window displays.
5. From the Return Releases panel, click the Release#1 hyperlink.



   The **Return Release Details** screen displays.
6. Click **Start Receipt** from the Return Release panel. The **Start Receipt** window displays.
7. Enter the Receipt# as **RE47**.

Note

If the receipt happens at a warehouse, pallet, and case details can also be specified.

8. Click **Save**.
9. Click **Report/Record Receipt** from the Return Release panel to specify a Disposition Code. The **Receive** window displays the Receipt Status as '**Receipt Started**'.

(Continued on next page)

Exercise 5.1.3: Create and Close a Receipt

(Continued)

Instructions

....(Continued)

10. Specify the Disposition Code as **Damaged items area** in the Lines to Receive panel.

    You can also specify the number of items that are being received in the Receiving Quantity field.
11. Click **Save**.
12. Click **Close**.
13. Click **Close Receipt** to close the Receipt. The status of the Return Order now displays as '**Receipt Closed**'.
14. Click **Close** in all the open windows. The status of the Return Order displays as '**Partially Return Received**'.

    To view the Receipt details for the Return Order, you can click  .

Result

This completes the procedure to create and close a Receipt for a Return Order.

Lesson Review

Completed Objectives

This lesson was designed to enable you to:

- Describe a Return Order process.
- List the stages in the reverse logistics domain.
- Explain the different Return Order pipelines.
- List the parts of a Return Order.
- Create a blind return.
- Create a Return Order against a Sales Order.
- Create and close a receipt against a Return Order.