OMT Bootcamp

Quantity Support

30 Minutes

ServiceNow Telecom, Media, and Technology (TMT)

Table of contents

Lab instance credentials

Field	Value
Username	admin
Password	As provided with your lab instance / **Magic link**

Lab objectives

You will achieve the following objectives:

- Understand the Quantity Support feature.

Scenario

In this lab, students will submit orders for different scenarios to validate the Quantity mapping behavior.

Personas

- James Smithson, Product Catalog Manager
- Mike Davis, Order Fulfilment Manager
- System Admin

Section 1 Product Catalog Modelling

Section 1.1 Browse the Catalog model.

1. Impersonate **James Smithson**, the *Product Catalog Manager*.

   - Select the **System Administrator profile photo** to open the user menu.
   - Select **Impersonate User**.
   - In the impersonate user dialogue box, search for, and select **James Smithson**.
   - Select **Impersonate user**.

4. Navigate to **Workspaces > CSM/FSM Configurable Workspace**.

5. Click on the **List** view icon and **navigate** to 'Product Offerings' from under the Offerings List group.

6. Click to open the Product Offering '**Premium Home Internet starting from $29'** by clicking on the PRDOFxxx number.

All				
∨ Specifications	☐ PRDOF00002	All in one mobile plan starting from $39/month	1	Mobile Plan
Specification Category	☐ PRDOF00003	All in one mobile plan starting from $49/month	1	Mobile Plan
Product Specifications				
Service Specifications	☐ PRDOF00004	Premium SD-WAN Offering	1	SD-WAN Service Package
Resource Specificatio...	☐ PRDOF00005	SD-WAN Gold Plan	1	SD-WAN Service Package
∨ Offerings	☐ PRDOF00006	SD-WAN Bronze Plan	1	SD-WAN Service Package
Product Offering Cat...	☐ PRDOF00007	Premium SD-WAN Offering v2	2	SD-WAN Service Package v2
Product Offerings	☐ PRDOF00100	Premium Home Internet starting from $29	1	Home Internet
∨ Compatibility Rule				
Compatibility Rule	☐ PRDOF00201	Premium Connected Navigation - Single Tenant	1	Connected Vehicle
∨ Customer				
Accounts	☐ PRDOF00402	Business Broadband Gold Plan	1	Ethernet Edge Device
Contacts				

7. Navigate to the **Catalog Hierarchy** tab and view the Catalog model.
   a. Notice the Home Internet Product is being made available via the Premium Home Internet Offer.

Premium Home Internet starting from $29

Details | Catalog Hierarchy | Product Offering Charac... (2) | Product Visuals | Versions (1) | Related Contracts

Premium Home Internet starting from $29
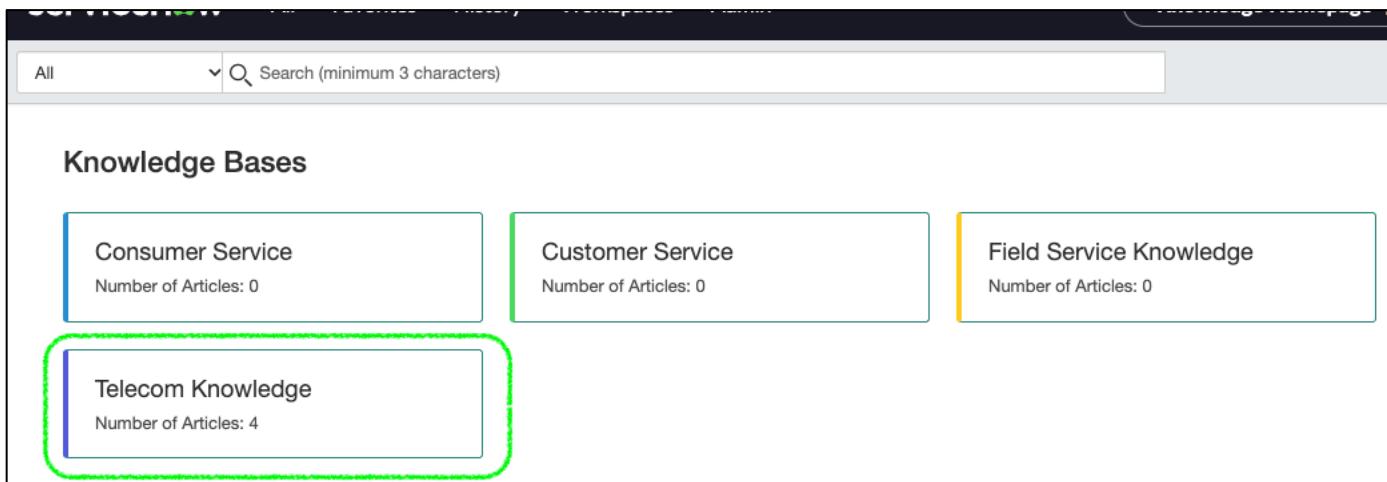
Home Internet

Note: *In this exercise, you will submit an Order for the Home Internet product for a quantity more than 1.*

Section 2 Quantity Support for Product Order
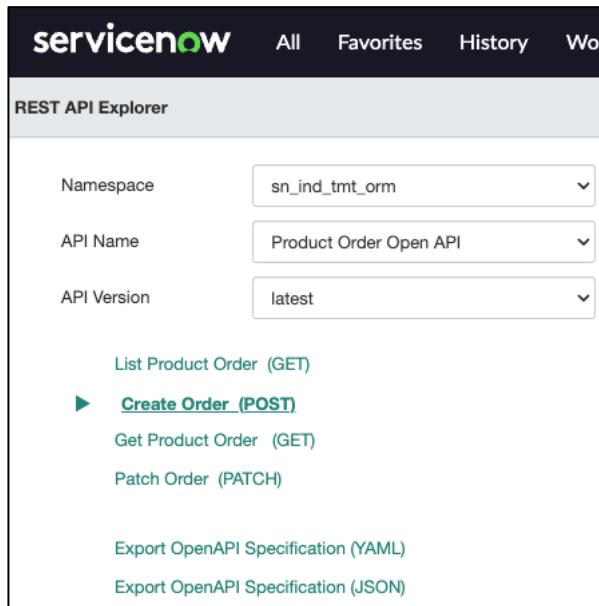
**Section 2.1 Submit the TMF622 Product Order for Home Internet**

1. End Impersonation and continue as **System Admin**.

2. Navigate to **All > Knowledge (under Self Service)**

3. Click on **Telecom Knowledge** from the available Knowledge Bases.

4. From the list of articles, click on '**TMF622 Quantity Support for 'n' OLIs'**.

   a. This will download a JSON file for the TMF622 Product Order payload.

5. Open the JSON file in your choice of text editor and observe the following in the payload –

   a. Under **productOrderItem**, there is a single Order Line Item (OLI).

      i. This OLI is for the **product specification 'Home Internet'**.

      ii. **Quantity** field is set to 5.

6. Back to the ServiceNow instance, **navigate** to **All > REST API Explorer**.

   a. Click on **Explore**.

7. For the Product Order submission, set the following –

   a. **Namespace = sn_ind_tmt_orm**

   b. **API Name = Product Order Open API**

c. **API version = latest**

d. Click on the **Create Order (POST)** API

8. On the right canvas, scroll until the **Request Body** section and click on the **Raw** tab.

a. Copy and paste the JSON payload here.

b. Click on **Send** to submit the Order.

c. Click on **OK** on the confirmation pop-up.

Request Body

Builder Raw

```
{
 "id": "ORDER1001",
 "ponr": "false",
 "href": "/api/sn_ind_tmt_orm/order/productOrder/933cd90c7cfd35507f448cb71a70aabc",
 "orderCurrency": "USD",
 "priority": 4,
 "orderDate": "2023-10-05T15:49:24.000Z",
 "channel": [
   {
     "id": "58ad5522c3702010df4773ce3640ddb2",
     "name": "Agent assist"
   }
 ],
```

Send

d. Post submission, give it a few moments scroll down the page, and confirm a positive order submission response with **status code 201**.

e. From the **Response Body**, note the "id" (Sys Id) returned for the Order submitted.

Response

Status code	**201 Created**
Execution time (ms)	2001

Headers

Connection	keep-alive
Content-Encoding	gzip
Content-Type	application/json
Date	Fri, 06 Oct 2023 09:42:32 GMT
Keep-Alive	timeout=20
Server	ServiceNow
Server-Timing	sem_wait;dur=0, sesh_wait;dur=0
Transfer-Encoding	chunked
X-Content-Type-Options	nosniff
X-Is-Logged-In	true
X-Transaction-Id	699fd9104910

Response Body

```
{
  "id": "719fd55cb07131107f44413347a0412c",
  "pom": "false",
  "href": "/api/sn_ind_tmt_orm/order/productOrder/719fd55cb07131107f44413347a0412c",
  "orderCurrency": "USD",
  "priority": 4,
  "orderDate": "2023-10-05T15:49:24.000Z",
  "channel": [
    {
      "id": "58ad5522c3702010df4773ce3640ddb2",
      "name": "Agent assist"
    }
  ],
```

Section 2.2 Validate Product Order Quantity Support

1. Continue as **System Admin**.

2. For ease of working, duplicate the browser window as we will return to the REST API Explorer again.

3. **Navigate** to **Workspaces > CSM/FSM Configurable Workspace**

4. **Click** on the List icon on the left and **navigate** to **Customer Orders > All**.

5. **Click** open the latest order submitted (ORDxxxx) with **State = New**.

   Note: The Id returned in the API response payload is reflected in the browser URL for the Order.

6. For the Order, **navigate** to **Order Line Items** sub-tab.

   a. Validate there is a single OLI with **Order Quantity = 5.**

7. Click on the **Approve** action button.
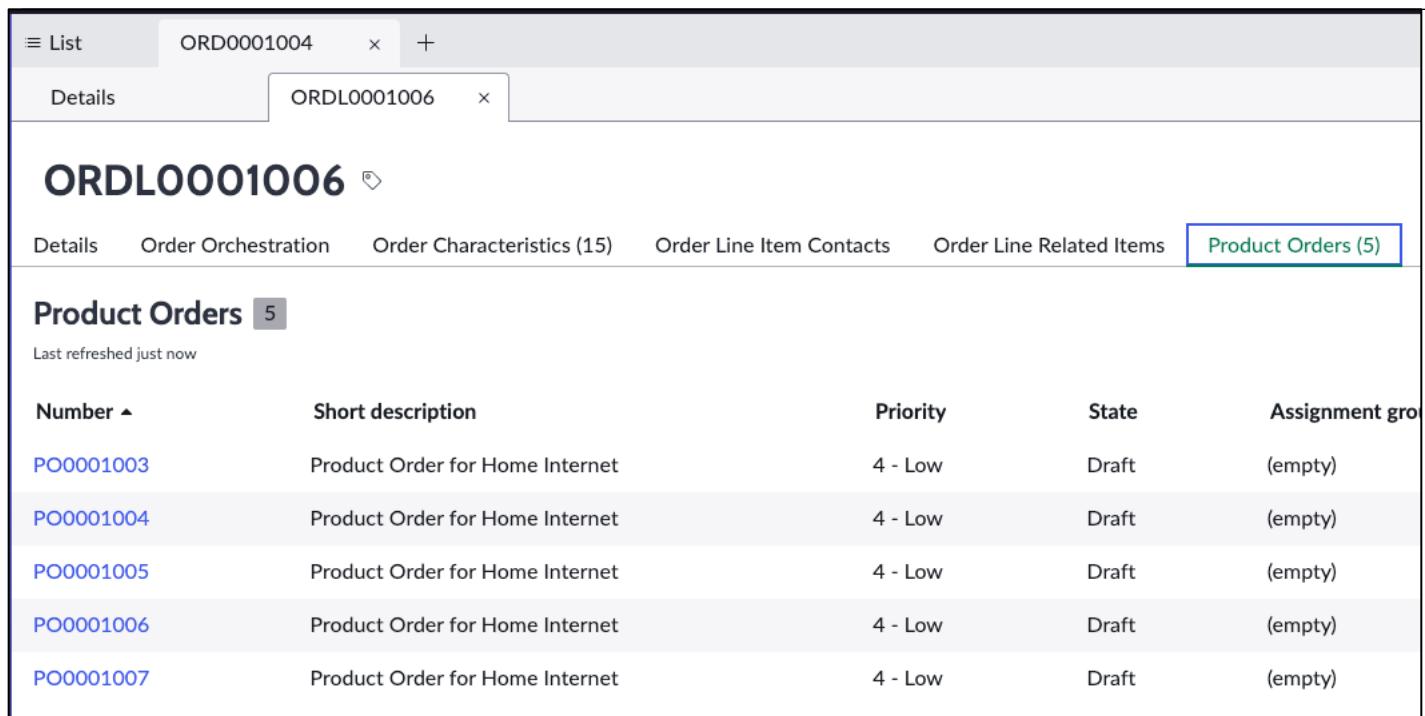
8. **Refresh** the Order Line Item List by clicking on the refresh icon.

9. Once the **State = In Progress**, click on the Order Line Item and **navigate** to the **Product Orders** sub-tab.

10. Validate the number of the Product Order records are equal to the quantity set in the payload.

    a. Allow for the decomposition process to complete. It may take some time. Check by refreshing the list.

> *With Quantity Support, setting the Quantity against the Order Line Item allows for single line item in the payload. During decomposition the quantity set creates that many Domain Order and hence that many Inventory records.*

servicenow.

≡ List   ORD0001004   ×   +

| Details | ORDL0001006   × |

ORDL0001006 🏷

Details   Order Orchestration   Order Characteristics (15)   Order Line Item Contacts   Order Line Related Items   **Product Orders (5)**

Product Orders   5
Last refreshed just now

Number ▲	Short description	Priority	State	Assignment gro
PO0001003	Product Order for Home Internet	4 - Low	Draft	(empty)
PO0001004	Product Order for Home Internet	4 - Low	Draft	(empty)
PO0001005	Product Order for Home Internet	4 - Low	Draft	(empty)
PO0001006	Product Order for Home Internet	4 - Low	Draft	(empty)
PO0001007	Product Order for Home Internet	4 - Low	Draft	(empty)

Section 3 Quantity Support for Service Order

Using similar steps in the above sections, validate the quantity support behavior for Service Orders.

Section 3.1 Browse the Catalog model.

1. Impersonate as **James Smithson**, Product Catalog Manager.

2. Navigate to **Service Specifications** and select the '**Managed Firewall Service v3'** and view the **Catalog Hierarchy**.
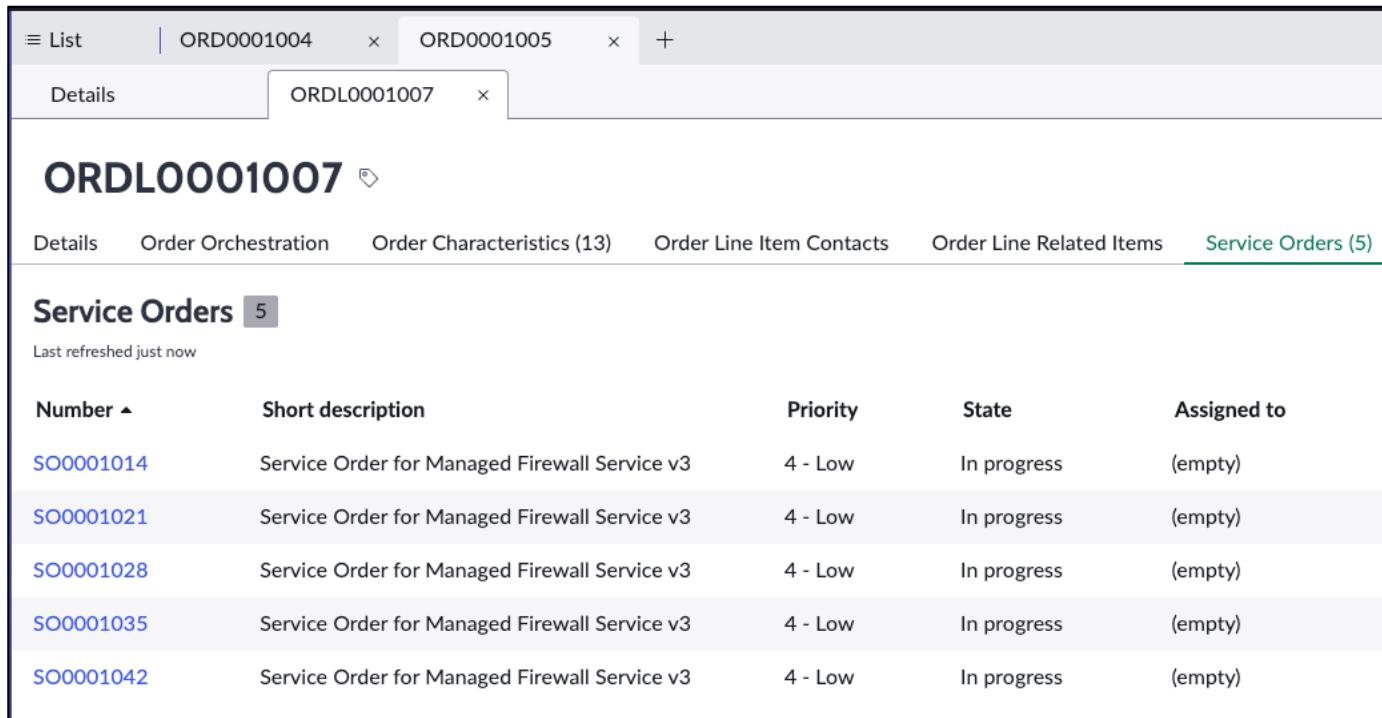
Note: *In this exercise, you will submit an Order for the Managed Firewall Service for quantity more than 1*

Section 3.2 Submit the TMF641 Service Order for Managed Firewall Service

1. **End Impersonation** and continue as **System Admin**.

2. **Navigate** to the **Telecom Knowledge** Articles and download the '**TMF641 Quantity Support for 'n' OLIs'** JSON.

3. **Validate** the **Specification** and **Quantity** fields in the payload.

4. **Navigate** to **All > REST API Explorer**.

5. For the Service Order submission, set the following –

    a. **Namespace = sn_ind_tmt_orm**

    b. **API Name = Service Order Open API**

    c. **API version = latest**

    d. Click on the **Create Order (POST)** API

6. Copy and paste the JSON payload and submit the order.

Section 3.3 Validate Quantity Support for Service Order

1. Post Order **Approval**, **Navigate** to **Order Line Item > Service Orders**.

2. Validate the number of the Service Order records is equal to the quantity set in the payload. It may take several moments to generate all the Service Order records.

≡ List	ORD0001004 ×	ORD0001005 ×	+

Details	ORDL0001007 ×

ORDL0001007 🏷

Details	Order Orchestration	Order Characteristics (13)	Order Line Item Contacts	Order Line Related Items	Service Orders (5)

Service Orders 5
Last refreshed just now

Number ▲	Short description	Priority	State	Assigned to
SO0001014	Service Order for Managed Firewall Service v3	4 - Low	In progress	(empty)
SO0001021	Service Order for Managed Firewall Service v3	4 - Low	In progress	(empty)
SO0001028	Service Order for Managed Firewall Service v3	4 - Low	In progress	(empty)
SO0001035	Service Order for Managed Firewall Service v3	4 - Low	In progress	(empty)
SO0001042	Service Order for Managed Firewall Service v3	4 - Low	In progress	(empty)
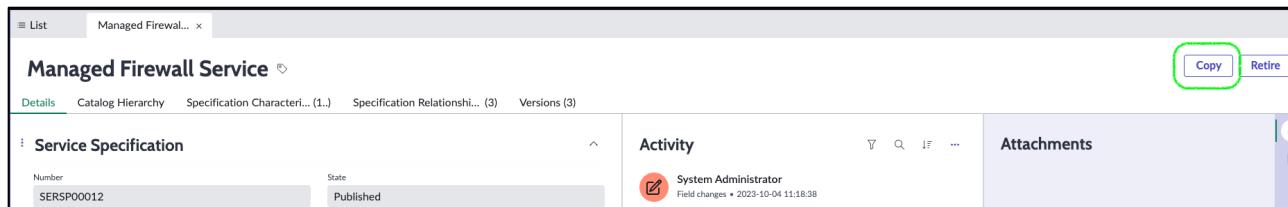
With Quantity Support, setting the Quantity against the Order Line Item allows for single line item in the payload. During decomposition, the quantity set creates that many Domain Order and hence that many Inventory records.

Section 4 Quantity Mapping

In this section of the lab, students will configure quantity mapping against a Specification Relationship and submit Add and Change orders to validate the behavior.
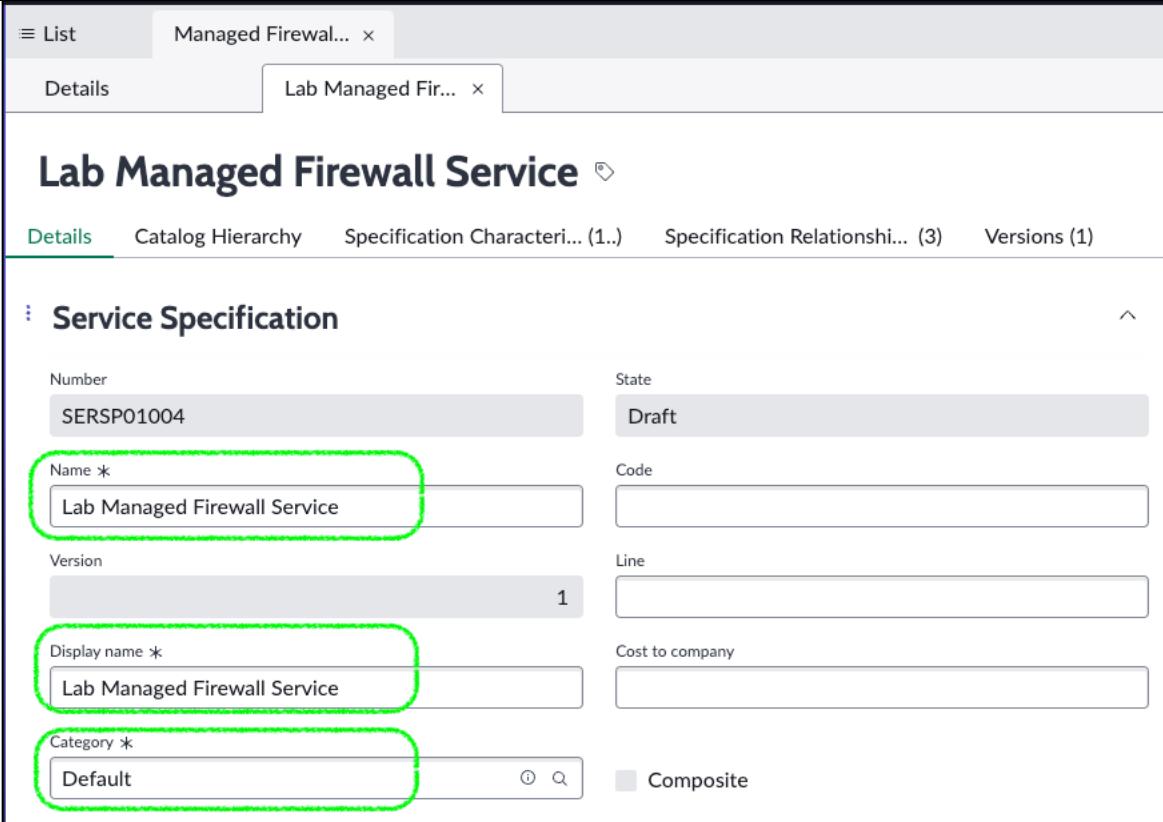
Section 4.1 Create a Catalog Model

1. **Impersonate** as **James Smithson**, the Product Catalog Manager.

2. **Navigate** to **Workspaces > CSM/FSM Configurable Workspace**.

3. **Click** on **Lists** and navigate to **Specifications > Service Specifications**.

4. **Click** open the **Managed Firewall** Service specification and once open, click on the **Copy** action button.

   a. <mark>Note not to open the v2 or v3 versions of the spec.</mark>

5. In the copy of Spec, set the following fields on the **Details** tab.

   a. Change the Name to **Lab Managed Firewall Service.**

   b. Change the Display Name to **Lab Managed Firewall Service.**

   c. Change the Category to **Default.**

6. Click on **Save**.

servicenow.

7. On the '**Lab Managed Firewall Service'**, navigate to the **Specification Relationships** sub-tab.

8. Click open the relationship record where the **Target specification = Firewall & DMZ**.

   a. To open the record, click on the hyperlink in the **first column** of the list.

   b. Once the record is open, click on the **three dots** located top right (next to Save) and select **Delete**.

      i. In the confirmation page, select **Delete**.

   c. Once deleted, this takes us back to the relationship record list. Click on refresh and notice there is no entry for the deleted relationship.

9. Repeat the deletion process for

   a. **Target Specification = Threat and Intrusion Prevention Service.**

   b. **Target Specification = Firewall Administration**

   After this, the Specification Relationship record list will be empty (if not, refresh the list)

10. Navigate to the **Service Specifications** List (via Lists)

11. **Click** open the **Firewall Administration** Service specification and once open, click on the **Copy** action button.

12. In the copy of Spec, set the following fields on the **Details** tab.

    a. Change the Name to **Lab Firewall Administration**.

    b. Change the Display Name to **Lab Firewall Administration**.

    c. Change the Category to **Default**.

13. Click on **Save**.

14. Navigate to the **Specification Relationships** sub-tab

15. Click open the relationship record where the **Target specification = Cisco Firewall Management System**.

    a. To open the record, click on the hyperlink in the **first column** of the list.

    b. Once the record is open, click on the **three dots** located top right (next to Save) and select **Delete**.

16. Click on the **Publish** action button to publish the '**Lab Firewall Administration**' spec.

    a. Click **OK** on the confirmation page.

    b. The details page shows the newly created and published specifications.

Lab Firewall Administration

Details | Catalog Hierarchy | Specification Characteri... (1..) | Specification Relationships | Versions (1)

Service Specification

Number	State
SERSP01006	Published
Name *	Code
Lab Firewall Administration	—
Version	Line
1	—
Display name *	Cost to company
Lab Firewall Administration	—
Category *	
Default	☐ Composite
Type	
Resource Facing	☐ Installation required

17. Navigate back to the '**Lab Managed Firewall Service'** specification.

    a. Click on the **Specification Relati**onships sub-tab (this should be empty)

    b. Click on **New** action button to create a new relationship.

    c. Set the fields as below –

        i. **Target Type = Service Specification**

        ii. **Target Specification = Lab Firewall Administration**

        iii. **Relationship Type = Requires**

        iv. **Min = 1, Default = 1, Max = 3**

        v. **Quantity characteristic = Administration Support**

    d. Click on **Save.**

18. While still on the Specification Relationship record, click on the **Decomposition** Rules sub-tab.

   a. Click on **New** to add a rule.

      i.   Set the **Characteristic = Administration Support**

      ii. Leave the **Characteristic Option = empty/blank**

   b. Click on **Save** and close the decomposition rule sub-tab.

   Note: *Setting the option blank indicates, the decomposition will trigger as long as the selected characteristic has some value, it is not dependent on a specific value.*

19. Back on the Specification Relationship record, click on the **Quantity Mappings** sub-tab.

    a. Click on **New** to add a mapping.

        i. Select the **Option = Basic (Customer Managed**)

        ii. Set **Quantity = 1**

        iii. **Click** on **Save** and Close the sub-tab**.**

        iv. **Refresh the Quantity mappings list.**

    b. Repeat the process to add additional Quantity mappings as below -

| Option	Quantity
Standard (with backup and upgrade management support)	2
Premium (with all features including CLI)	3

20. Navigate to the Details tab for the specification '**Lab Managed Firewall Service'**.

    a. Click on **Publish**.

    b. Click **OK**.

21. Navigate to the **Catalog Hierarchy** tab.

    a. Refresh the browser window.

b. Validate that you see the below structure?

Section 4.2 Submit Add Order using Quantity Characteristics

1. **Impersonate another user** as **Mike Davis**, the fulfilment manager.

2. **Navigate** to **Workspaces > CSM/FSM Configurable Workspace.**

3. Click on Lists, navigate to **Customer Orders > All**.

4. Click on **New**, select '**Order a new service'** and click on **Create**.

5. Select an **Account** and **Contact**

6. Choose a **Location**

7. Under Specifications, select the newly built '**Lab Managed Firewall Service'**

8. Click on **Configure** and navigate to the **Characteristics** tab

9. Set the values as below –

    a. **Administration Support = Standard**

b. For all other characteristics, choose any values of your choice.
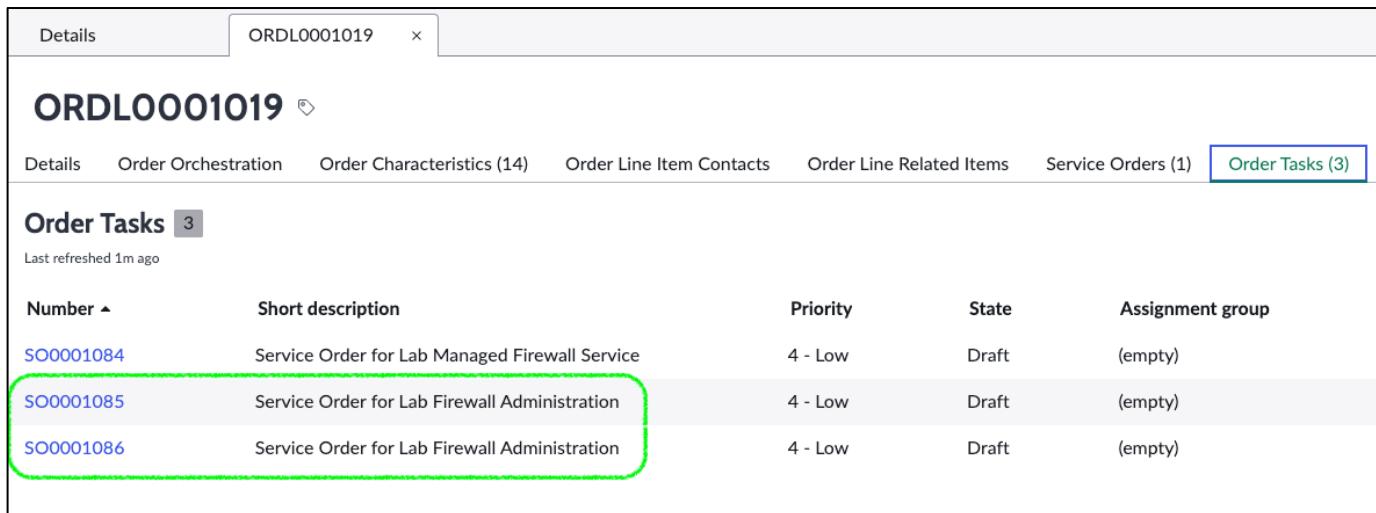
10. Click on **Review** and **Submit** Order.

11. Navigate to the Order from the List and **Approve** it from the Details page.

12. Navigate to the **Order Line Items** tab and click on the Order Line Item.

13. From the Order Line Items, navigate to the **Order Tasks** sub-tab.

   a. How many **Service Orders for Firewall Administration** do you notice?

From the Quantity mapping, **Standard** is mapped to a quantity = 2.

14. **Close** the Service Orders one by one in the following order – (Click open the Service Order record and use the **Close** action button)

   a. Service Order for Lab Firewall Administration (2 instances)

   b. Service Order for Lab Managed Firewall Service

      i. Make a note of the Product Inventory record number (PIxxxx) from the Details tab.

15. Closing all Domain Orders updates the Order Line Item and Order to **Closed Complete** state.

servicenow.

Section 4.3 Submit Change Order to change Quantity – 1

Note: In this section, students will change the quantity characteristics such that the number of instances of Domain Orders are increased.

1. From the Lists, navigate back to **Customer Orders > All**

2. Click on **New**, select '**Change service**' and click on **Create**.

3. Select the same **Account** and **Contact** as used in previous section.

4. Identify & select the Service Inventory record previously created with the PIxxxx number, and click on **Configure**.

5. Click on the **Characteristics** tab for the selected Inventory record.

6. Select the '**Administration Support**' characteristic and change its value from **Standard** to **Premium**.

    a. Observe the Previous and Char value columns with the respective values.

Characteristic	Previous characteristic value	Characteristic value	Characteristic option
Administration Support	Standard (with backup and upgrade management support)	Premium (with all features including CLI)	Premium (with all features including CLI)
CPE Type	Physical	Physical	Physical
Firewall coverage	Basic(Up to 5 sites)	Basic(Up to 5 sites)	Basic(Up to 5 sites)
Firewall Security	Basic	Basic	Basic

7. Leave the other characteristics unchanged.

8. Click on **Review** and **Submit** the Order.

9. From the **List** view, click open the **Order** submitted.

10. **Navigate** to the **Order Line Item > Order Characteristics**

    a. Observe the previous and new values for the changed characteristic.

11. **Navigate** back to the Order Details tab and **Approve** the Order.

12. Once the Order state is **In Progress**, navigate to **Order Line Item > Order Tasks**

13. Observe the number of '**Service Order for Lab Firewall Administration'**.

Details	ORDL0001020	×

ORDL0001020 🏷️

Details	Order Orchestration	Order Characteristics (4)	Order Line Item Contacts	Order Line Related Items	Order Tasks (4)

Order Tasks 4
Last refreshed 1m ago

Number ▲	Short description	Priority	State	Assignr
SO0001087	Service Order for Lab Managed Firewall Service	4 - Low	Draft	(empty)
SO0001088	Service Order for Lab Firewall Administration	4 - Low	Draft	(empty)
SO0001089	Service Order for Lab Firewall Administration	4 - Low	Draft	(empty)
SO0001090	Service Order for Lab Firewall Administration	4 - Low	Draft	(empty)

From the Quantity mapping, Premium is mapped to a quantity = 3.

14. By opening each **Service Order for Lab Firewall Administration**, validate the Actions mapped against each.

    a. Two of them should have action of **Change** (these correspond to the existing inventory records)

    b. One of them should have an action of **Add** (newly added as a result of quantity change)

    > **Note:** *Order Management Application evaluates existing Inventory data to identify and assign actions against the Domain Order.*

15. **Close** the Domain Orders in the suggested sequence (as done in the previous section)

16. Closing all Domain Orders updates the Order Line Item and Order to **Closed Complete** state.

Section 4.4 Submit Change Order to change Quantity – 2

Note: In this section, students will change the quantity characteristics such that the number of instances of Domain Orders is decreased.

1. Follow the same steps as the previous section to raise a Change Order and change the

   '**Administration Support'** characteristics from '**Premium**' to '**Basic**'.

2. **Navigate** to **Order > Order Line Items > Order Line Item > Order Tasks**

3. Identify the actions against each of the '**Service Order for Lab Firewall Administration'.**

4. Do you notice, that two of the Service Orders have Disconnect Action, while one of them as Change?

   Note: *Order Management Application evaluates existing Inventory data to identify and assign actions against the Domain Order.*

   The Change from Premium to Basic meant the quantity changed from 3 to 1.

5. Try Closing the Domain Orders in the earlier suggested sequence.

   a. Do you see an error?

Order Management returns an error as you need assign the Inventory record that should be deleted v/s changed. This gives control to the fulfillment agent, rather than the Application randomly deleting or changing the records.

6. Close the error notification.

7. On the Details page for the Service Order, on the **Product Inventory** field, choose the Inventory record to be deleted/changed and then **Close** the order.

8. Close the parent **Service Order for Lab Managed Firewall Service**.

9. Closing all Domain Orders updates the Order Line Item and Order to **Closed Complete** state.

Congratulations! You have completed this lab.