Lab Guide

Designing Cloud Agnostic Workloads

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Introduction

ServiceNow Cloud Management Platform (CMP) is the plugin through which enterprises can manage their clouds. The clouds could be internal or public or hybrid. ServiceNow CMP has resource blocks which are the building blocks. Blueprints can be built using these out of the box resource blocks. The resource blocks can be out of the box as well as custom created. Catalog items can be created out of the blueprints and the end user can consume them. When a catalog item is ordered and is successful, the end users get a "Stack" that represents the runtime instance of the various resources in that blueprint. The end user can then invoke life cycle operations on these stack and manage them.

The blueprint can be specific to a cloud or can be agnostic. You can create a blueprint which is cloud agnostic and the end user can consume this against any valid cloud of her choice. The user can choose it or we can have policies choose it for them.

This lab explains how to create a blueprint and order the same using ServiceNow. The labs explore the following tasks:

- Land onto blueprint screen
- Create a blueprint which is cloud agnostic
- Create a catalog item from the blueprint and activate it
- Order the catalog item and order the same
- Check the status of the order

Lab Goal

Lab 1.1
Land onto Blueprint

Blueprints enable designers to assemble resources to create a workload. The designers get default provision and life cycle operations and these can be customized as needed.

Blueprints can be created via the graphical UI as well as yaml import.

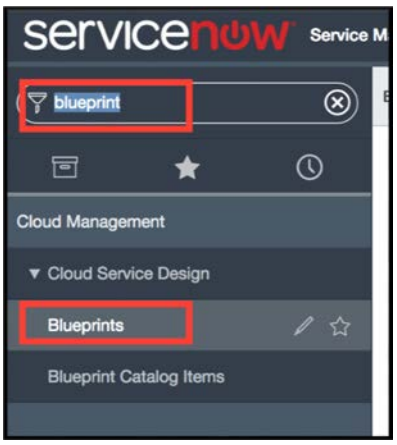
The goal of this lab is to land onto the blueprint home page where you can create blueprints.

Home Page

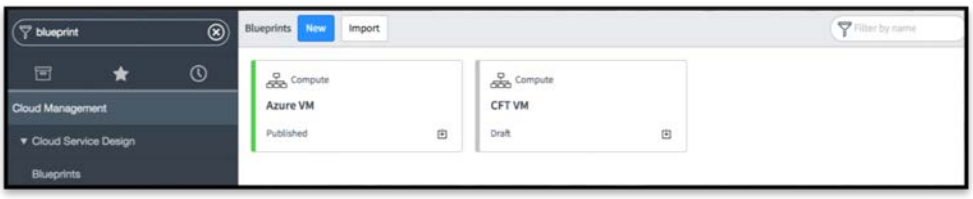
The starting point is the Blueprint Home Page.

1. Navigate to **Blueprint** by typing **blueprint** in the application navigator filter box.

2. Select **Blueprints** from under the Cloud Service Design module. This launches the Blueprint Page in the browser window.



3. The blueprint landing page appears. The screen lists the current available blueprints in the system.



Lab Goal

Lab 1.2 Create a Blueprint

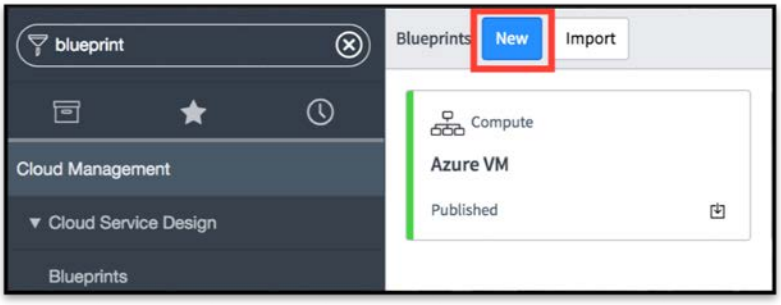
In this lab, you create a cloud agnostic blueprint.

At the end of this lab, you should have a published blueprint. In this blueprint, you have a virtual server and a storage volume which can be provisioned in any of the clouds.

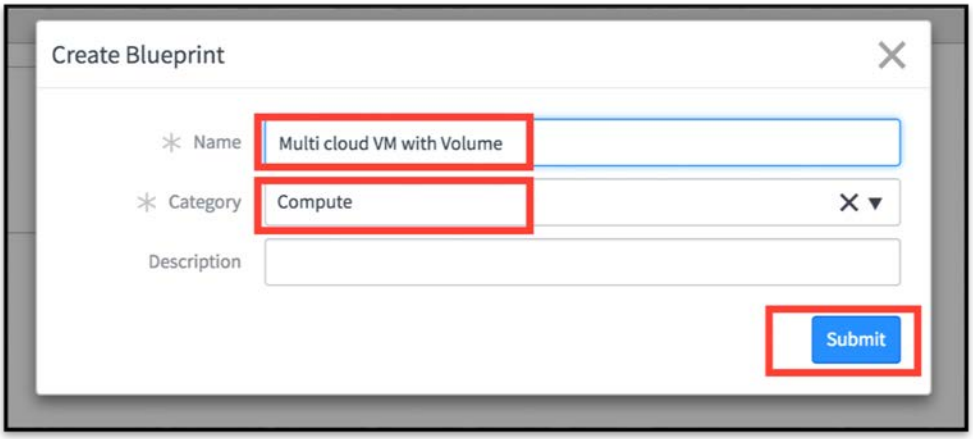
Home Page

The starting point is the Blueprint Home Page.

1. Click the **New** button on the top.

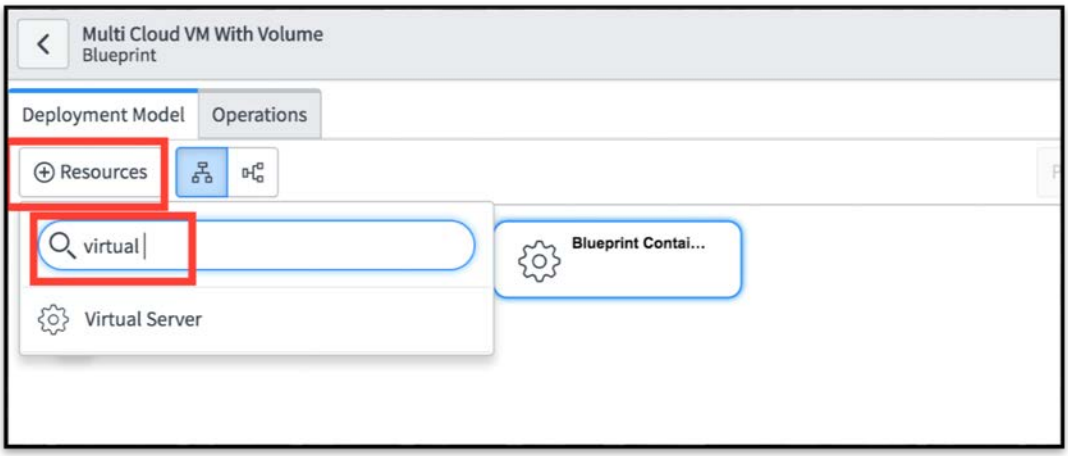


2. A pop-up window opens with Name, Category and Description. Fill in with your values. For this lab, use Name **Multi cloud VM with volume** and Category **Compute**.



3. The blueprint canvas and the **Blueprint Container** resource now appear. This container resource represents the blueprint.

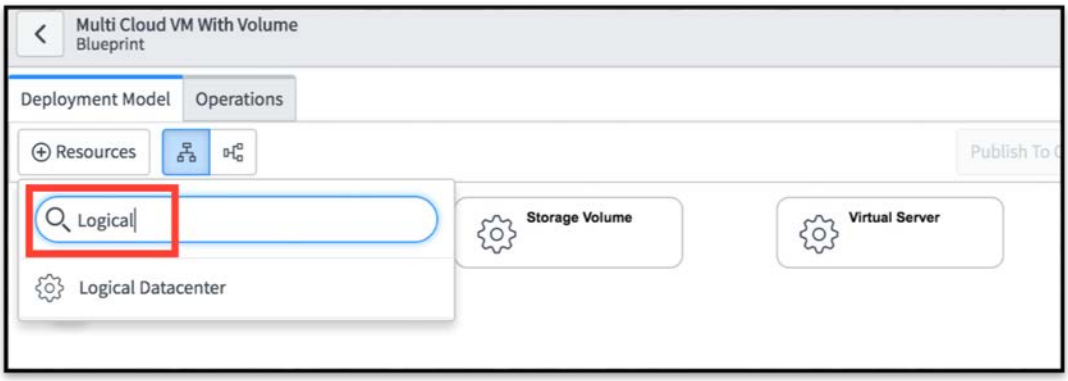
4. Find the **Resources** button on the left in the canvas and click it. The resources drop-down list opens. Type **virtual server**. The Virtual Server resource block opens. Choose it to add to the canvas.



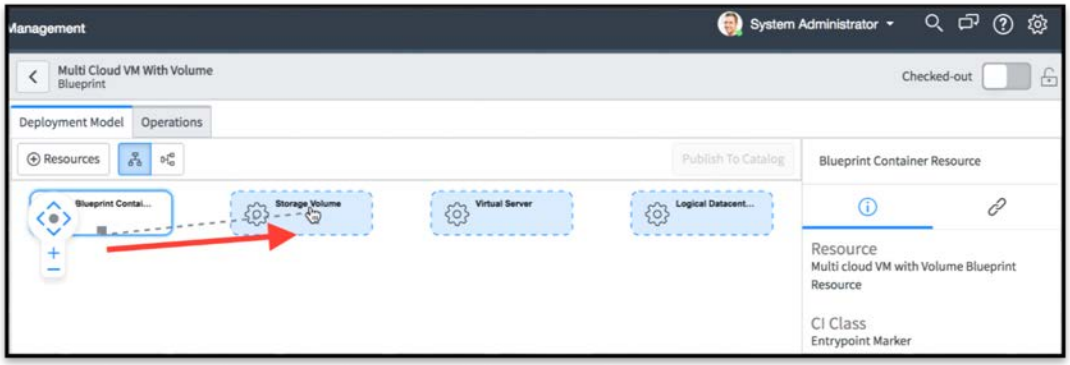
5. Click the **Resources** button and in the resources drop-down search field type in **storage volume**. The **Storage Volume** resource block appears. Choose it to add to the canvas.



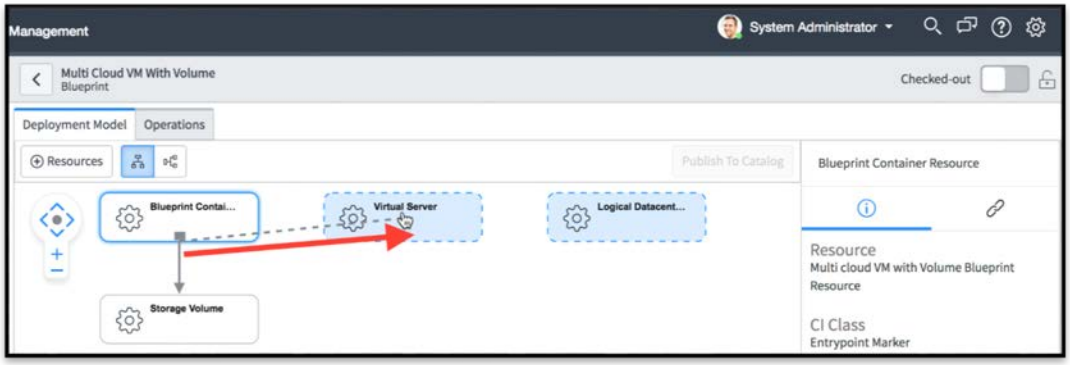
6. Click the **Resources** button and in the **Resources** drop-down field, type **logical datacenter**. The Logical Datacenter block appears. Choose it to add to the canvas.



7. Mouse over the Blueprint Container resource block. The connector appears on the bottom of the block. Drag a line from the connector to the Storage Volume resource block.



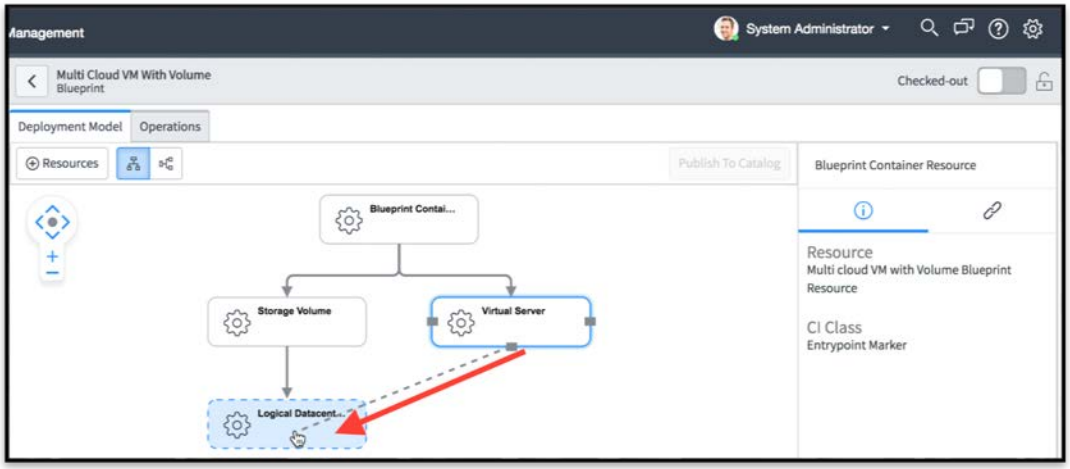
8. Mouse over the **Blueprint Container** resource block and the connector appears on the bottom of the block. Drag a line from the connector to the **Virtual Server** resource block.



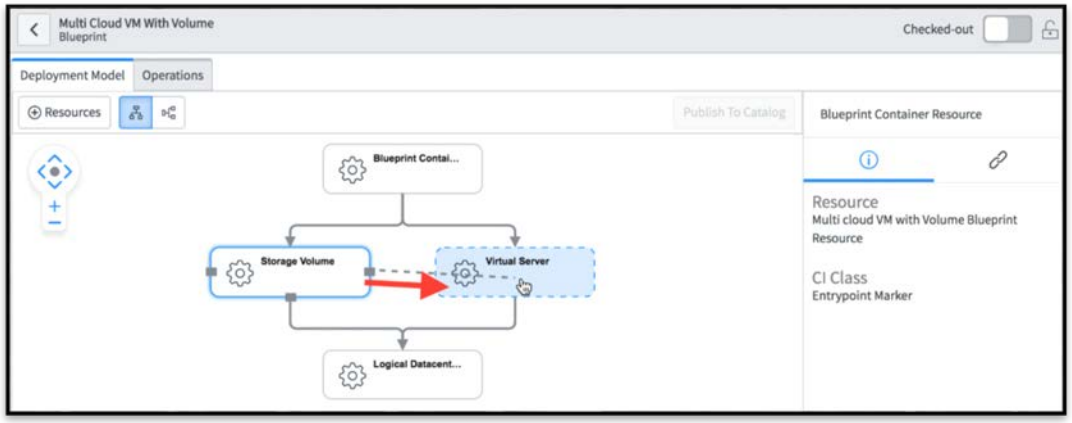
9. Drag a line from the **Storage Volumes** connector to the **Logical Datacenter** resource block. By doing this, you indicate that this Storage Volume is going to be hosted on the Logical Datacenter.



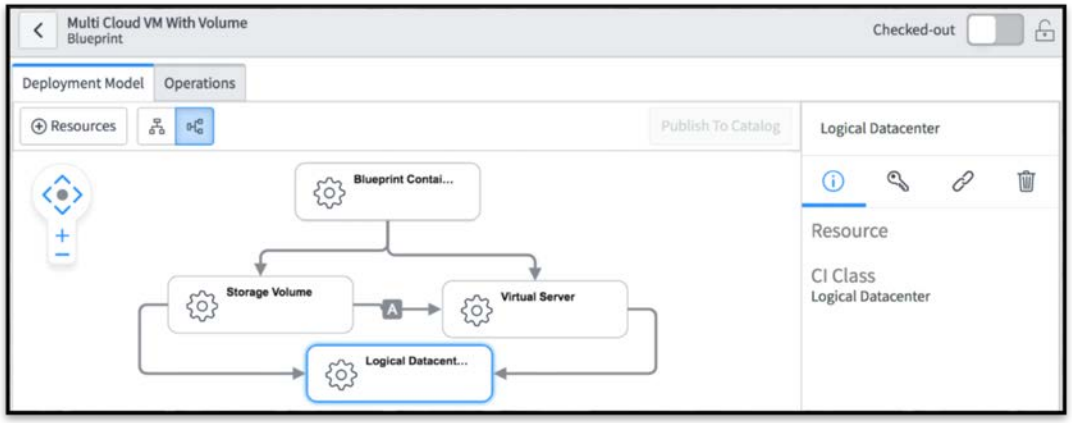
10. Drag a line from the **Virtual Servers** connector to the **Logical Datacenter** resource block. By doing this you indicate that this Virtual Server is going to be hosted on the Logical Datacenter.



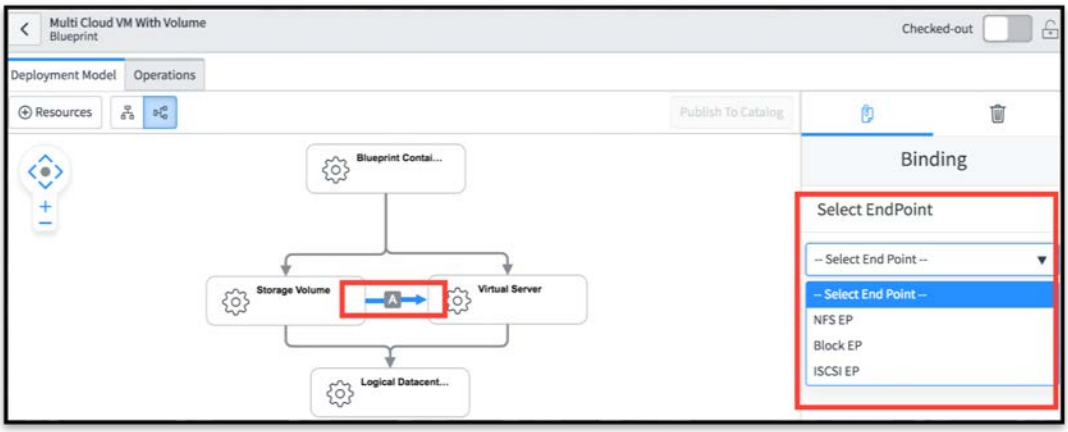
11. Mouse over the **Storage Server** resource block to see a connector on its sides. Choose this connector and drag a line to the **Virtual Server** block. By doing this you indicate that is Storage Volume is bound to the Virtual Server.

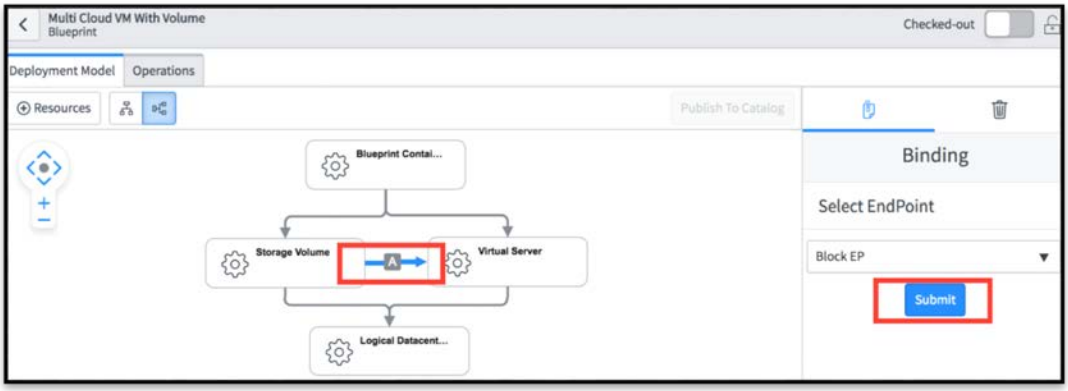


12. Storage Volume resource supports multiple endpoints like **block**, **iscsi** and **nfs**. Choose the **block** endpoint. In this blueprint, you have the Virtual Server resource consume the block endpoint, which the Storage Volume implements.

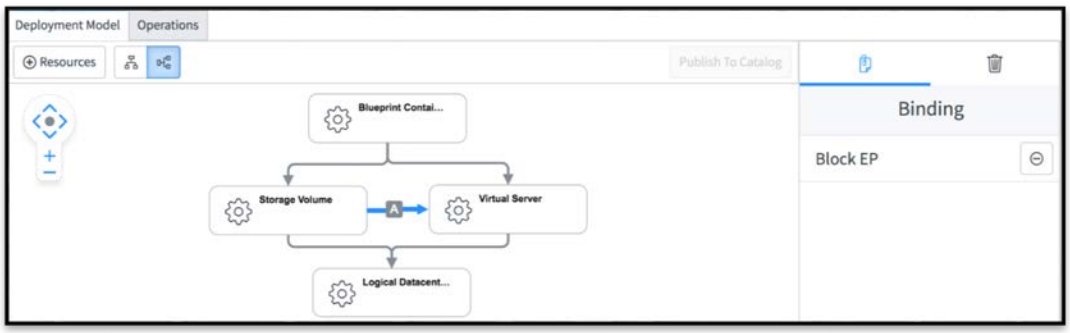


13. Click the **A** line which connects the Storage Volume and the Virtual Server. The right side tab shows the possible bindings between these two resources. Choose **Block** as the end point.

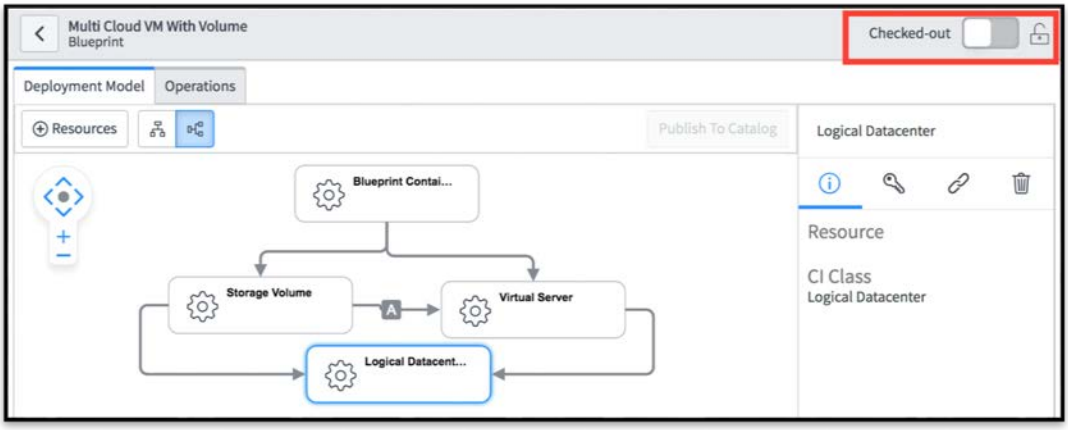


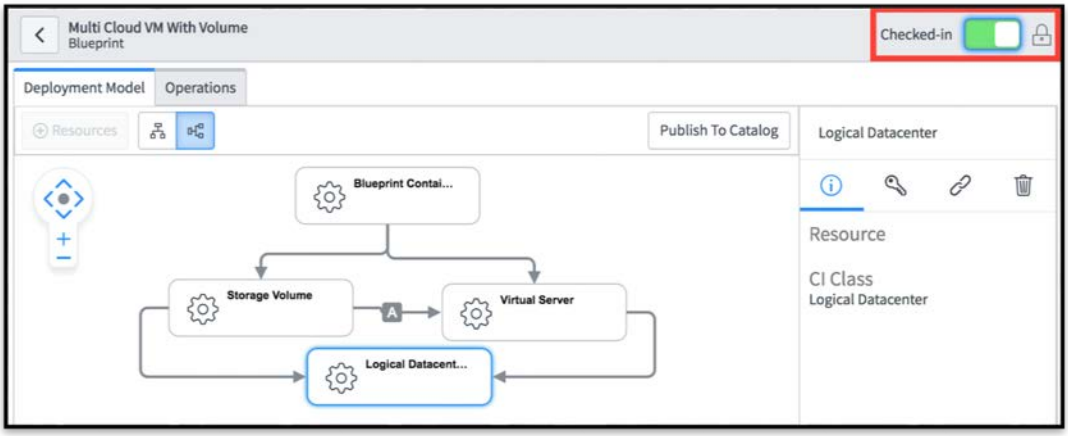


14. As you click the **Submit** button, the two resources are bound and the binding is based on the Block EP endpoint.



15. Check in the blueprint so you can create a catalog item in the next lab exercise.





Lab Goal

Lab 3.1
Create a catalog item

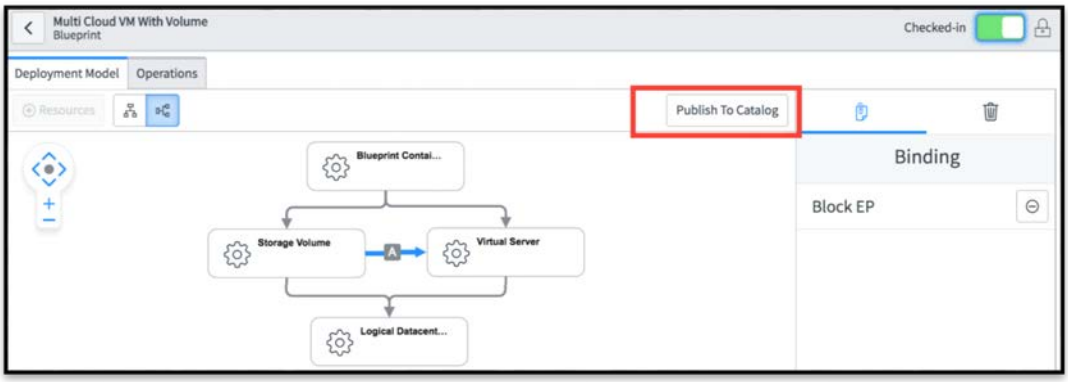
The goal of this lab is to publish the just created blueprint and create a catalog item based on it. This catalog item can then be consumed by the end user.

Home Page

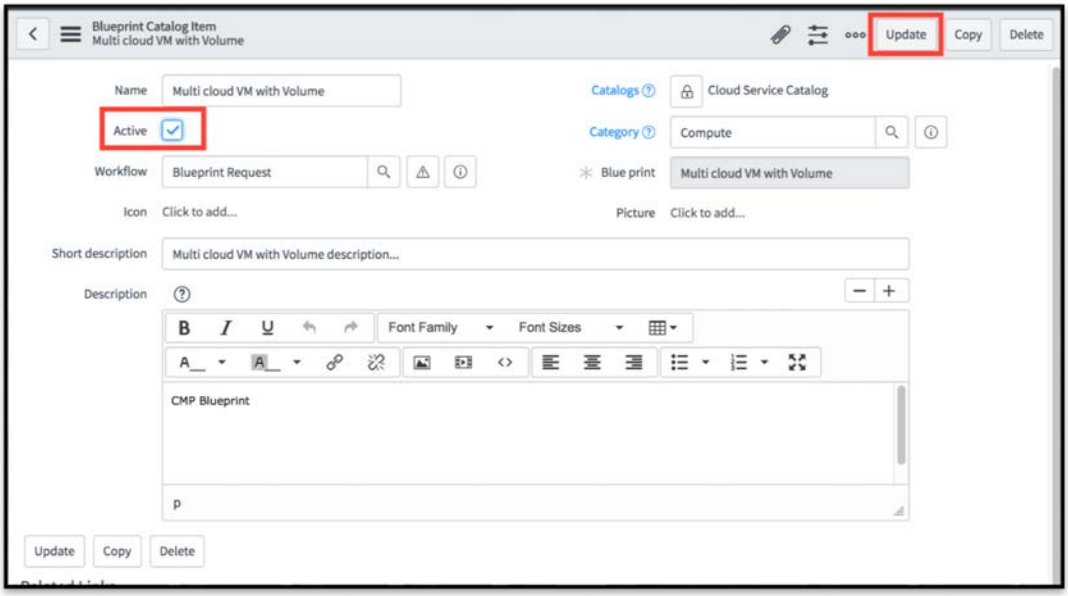
The starting point is the **Blueprint Home Page**.

1. Navigate to the **blueprint** screen and click on the just created blueprint.

2. Click the **Publish To Catalog** button on the top. This creates a catalog item based on the current blueprint. The system takes you to the catalog item definition page.



3. Click on the **Active** radio box and update the record. The system leads you back to the blueprint page. Now the catalog item is ready to be consumed by end users.



Lab Goal

Lab 4.1
Order a Catalog Item

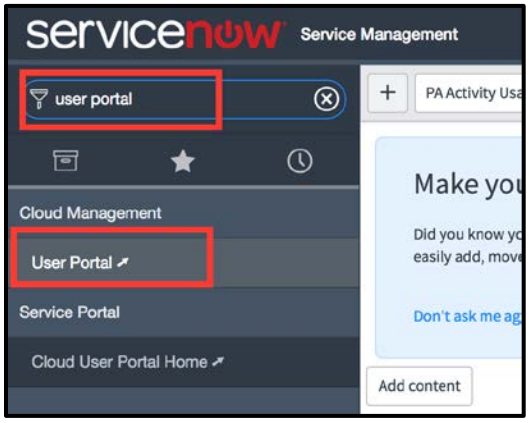
The goal of this lab is to consume the just-created catalog item.

Home Page

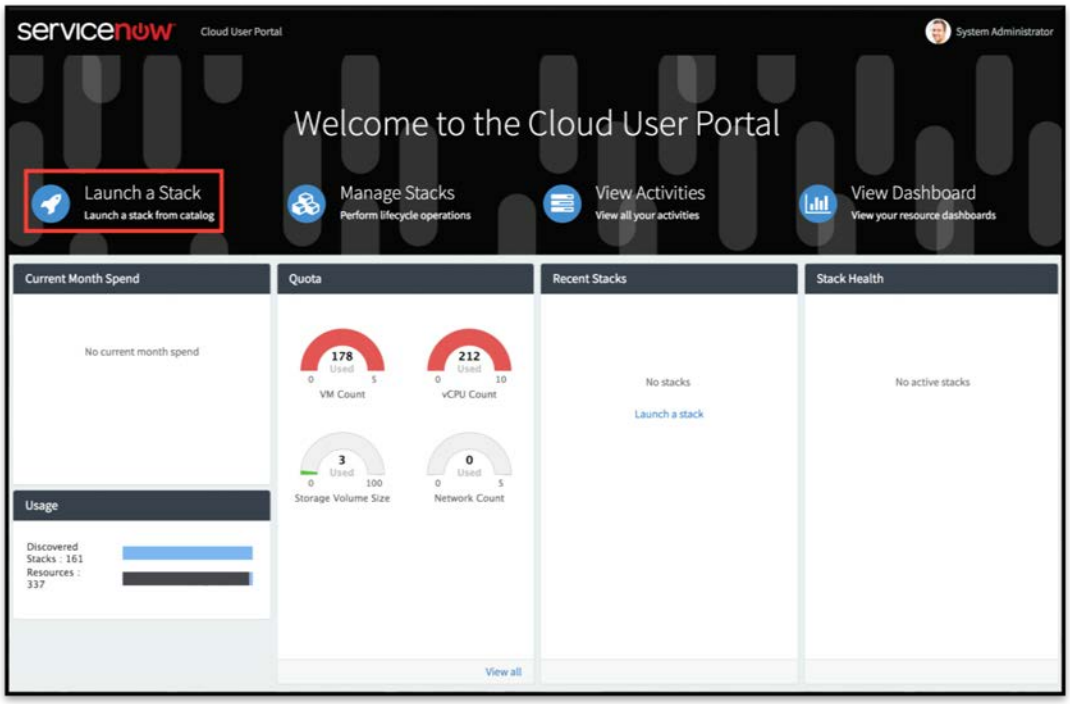
The starting point is the **Blueprint Home Page**.

1. Navigate to Blueprint by typing user portal in the application navigator filter box.

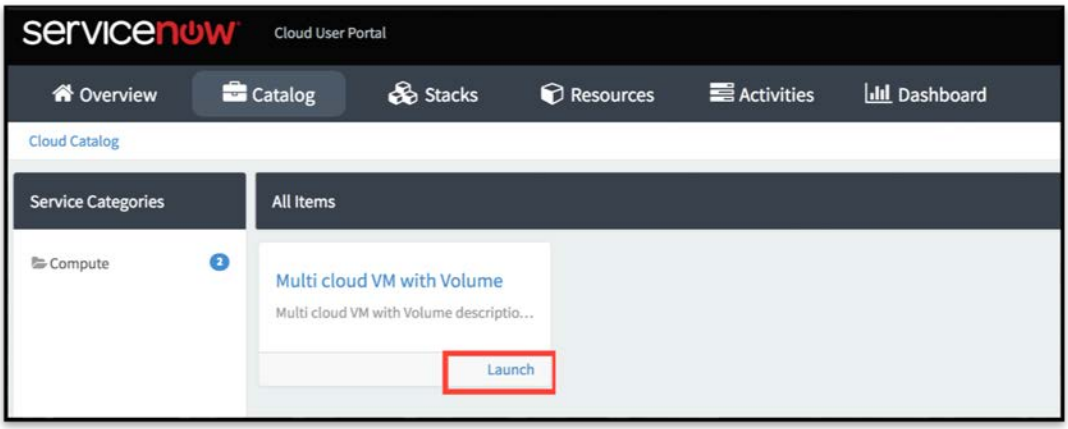
2. Select **User Portal** from the Cloud Management module. This launches the user portal page in a separate browser window.



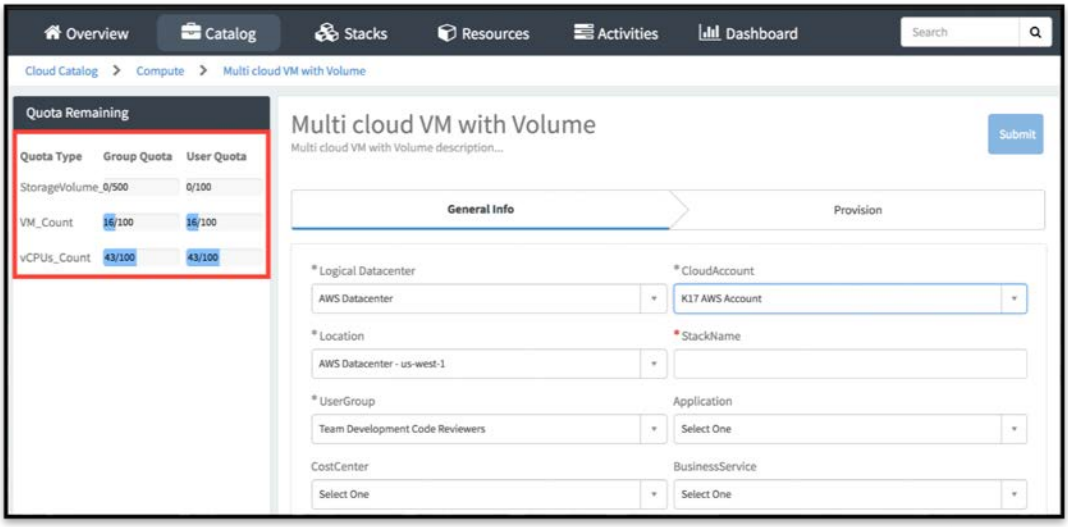
3. The user portal is the portal of consuming and managing the users cloud. Click the **Launch a Stack** control on the left.



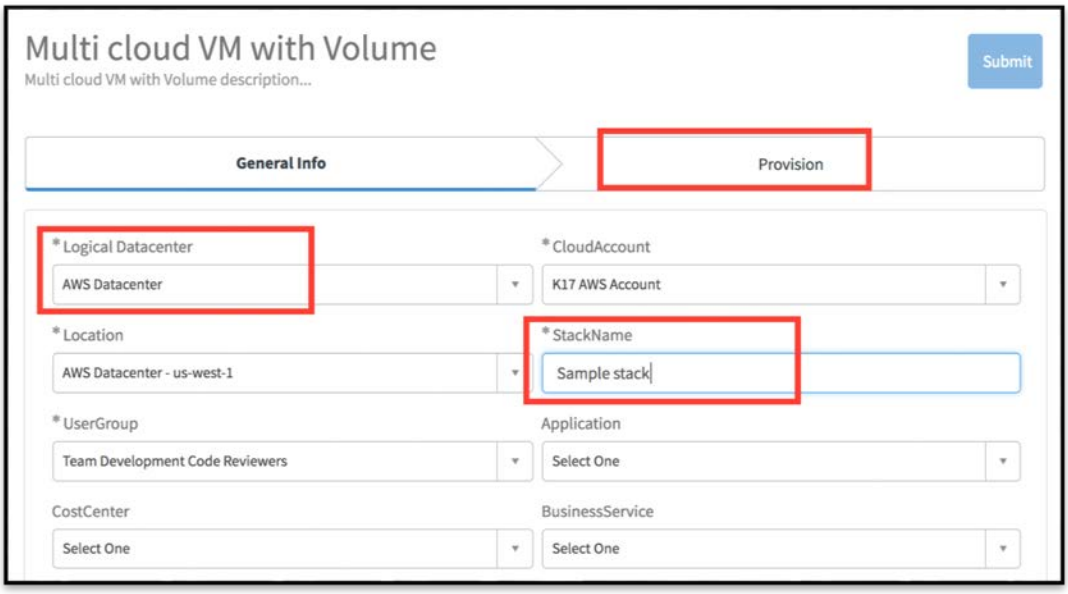
4. The user portal now shows the list of catalog items that can be ordered by the user. Click **Launch** under the catalog item just created, **Multi cloud VM with Volume**.



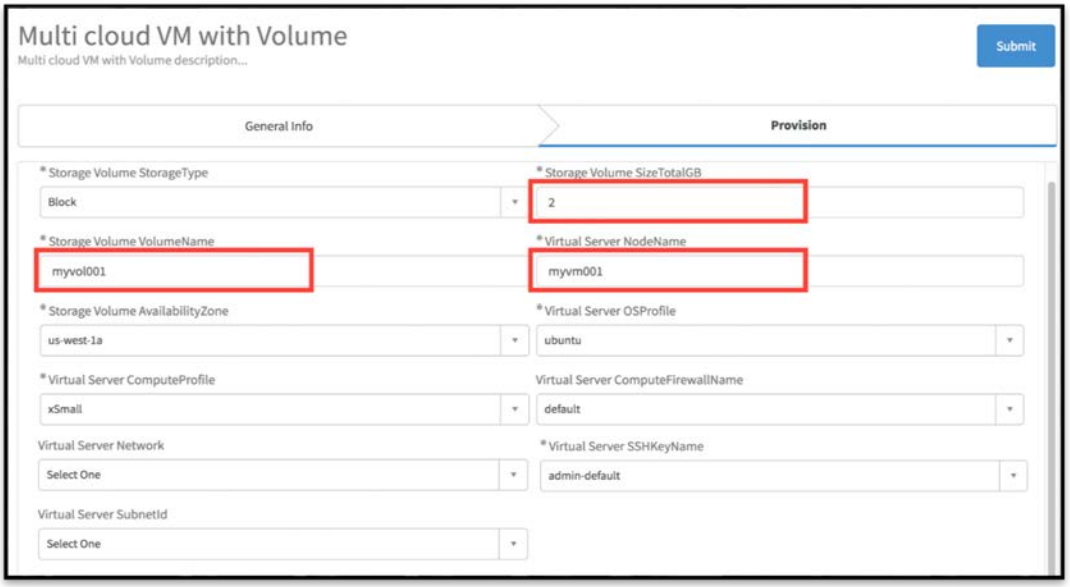
5. The order form for the catalog item shows up. The user's quota shows up as well.



6. Choose **AWS Datacenter** as the Logical Datacenter. Choose the **K17 AWS Account** for the cloud account. Enter any valid name like **Sample stack** for the stack name. Click the **Provision** tab next.



7. Enter values for **Storage Volume Name**, **Storage Volume SizeTotalGB** and **Virtual Server NodeName** as in the image below. Click **Submit**.



8. The system guides you to the Activities tab. Enter values for **Storage Volume Name**, **Storage Volume SizeTotalGB** and **Virtual Server NodeName** as in the image below. Click **Submit**. The request item number displays. When the process is complete, the details of the stack can be found in the Stacks tab.

