Lab Guide

Orchestrating Cloud Workloads with Self-Service Catalog 101

Tim Norman & Rod Bridgman

Default Login / Password:

admin / Knowledge16

itil / Knowledge16

employee / Knowledge16

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Lab Goal

This lab explains how ServiceNow is configured to discover Amazon AWS and Microsoft Azure cloud resources.

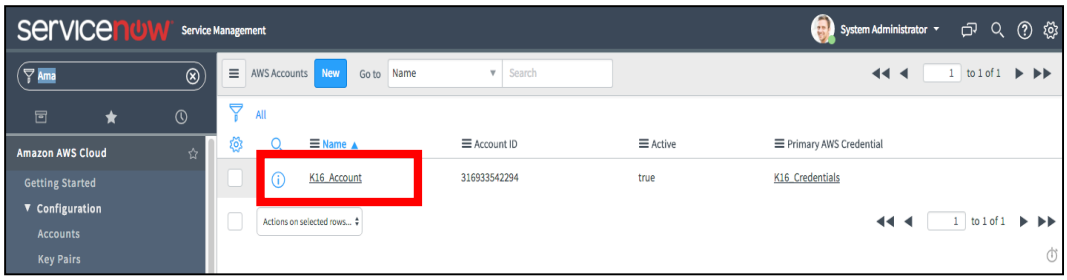
Lab 1.0 Configure ServiceNow for Cloud Providers

Log on to Your Lab instance

1. Navigate to the unique instance URL provided to you.
2. Log on with provided credentials.

Verify AWS Account Configuration

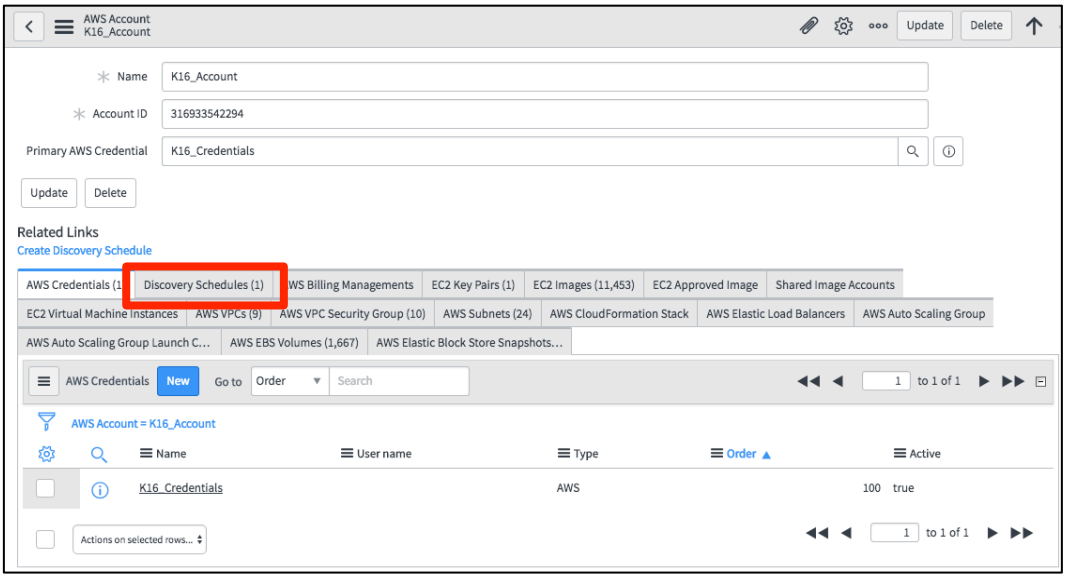
1. In the Navigation Filter, type **Ama**.
2. Using the Application Navigator, navigate to **Amazon AWS Cloud > Configuration > Accounts**.
3. Open Account, **K16_Account**.



4. Note that the Account and Primary AWS Credential fields are already populated.

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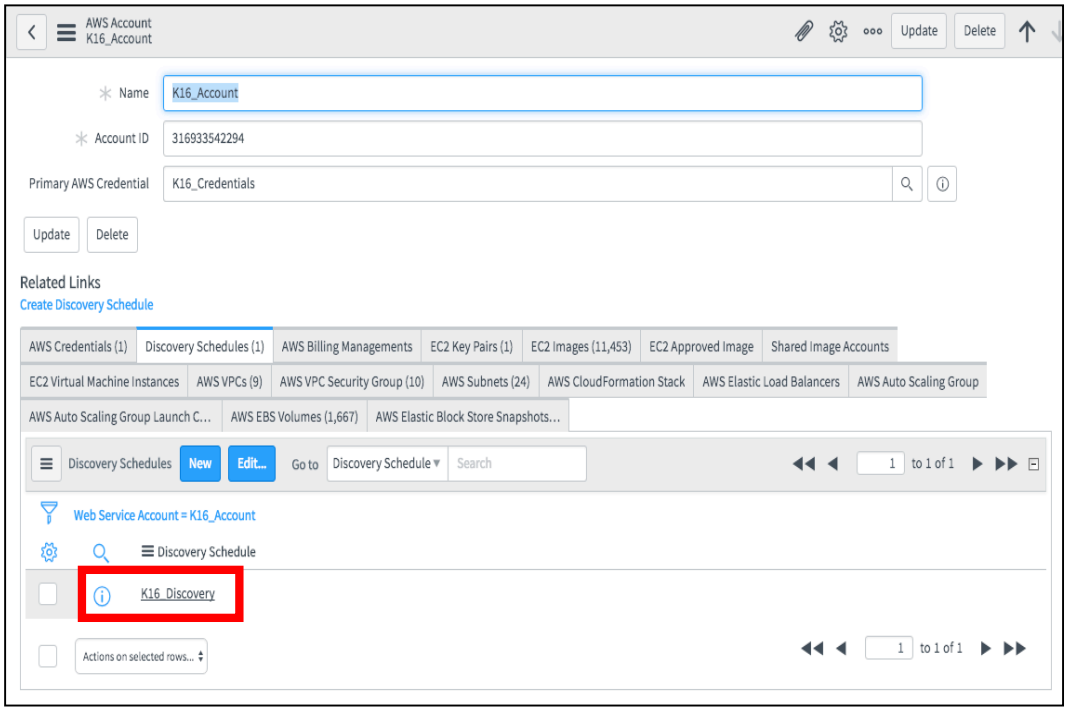
5. Click the **Discovery Schedules** tab.



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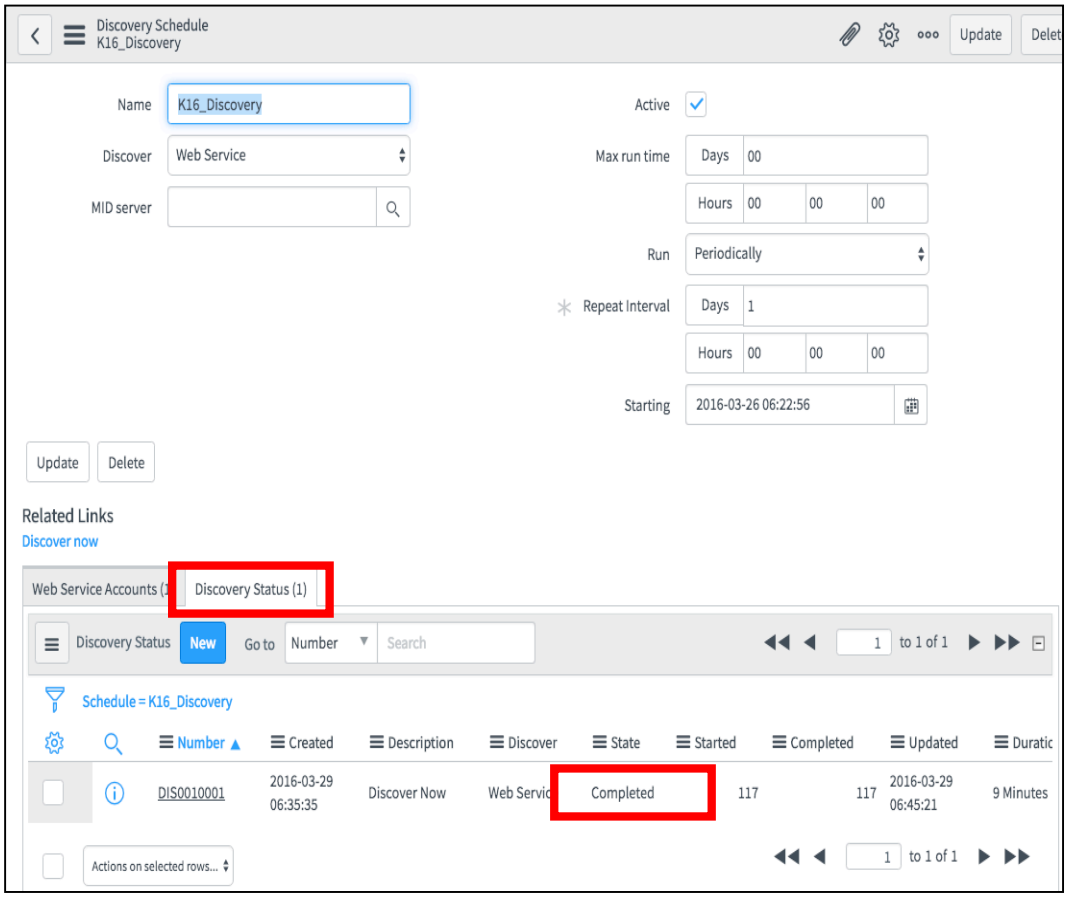
Discovery

1. Note the predefined Discovery Schedule, K16_Discovery.
2. Open the Discovery Schedule, **K16_Discovery**.



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3. Note the Discovery Status related list shows at least one Discovery process with a State of **Completed** and the duration of the Discovery. To save time, the Discovery process was completed prior to the lab.



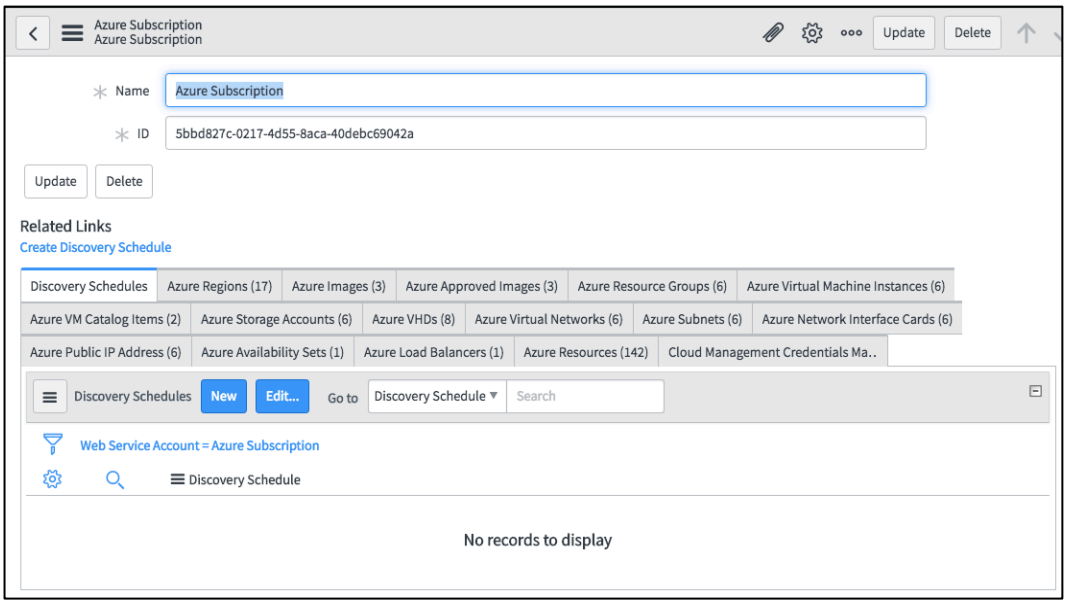
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Verify Microsoft Azure Account Configuration

1. Navigate to **Microsoft Azure Cloud > Configuration > Accounts (Subscriptions)**.

2. Open Account, **Azure Subscription**.

   Note that this is demonstration data with no Discovery Schedule defined. Navigate through the various tabs to view the previously discovered resources for this Azure subscription.



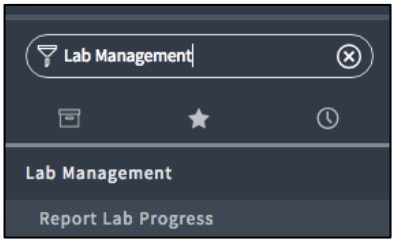
Lab Success Verification

1. Your screen should look like the example above.

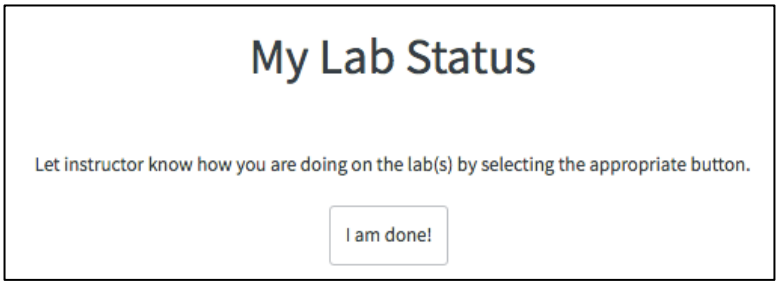
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Progress Report

1. Navigate to **Lab Management > Report Lab Progress**.



2. Click **I am done!**



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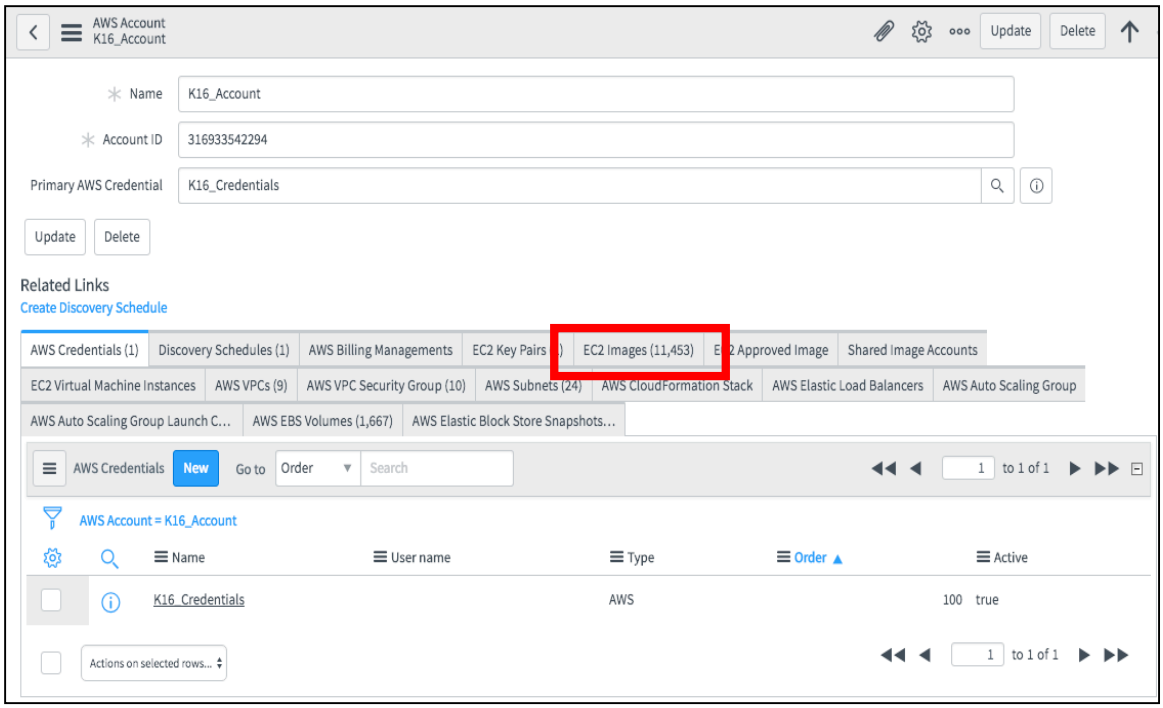
Lab Goal

This lab explains how to create Service Catalog Items for the Amazon AWS and Microsoft Azure cloud providers.

Lab 2.0 Create Catalog Items for Cloud Providers

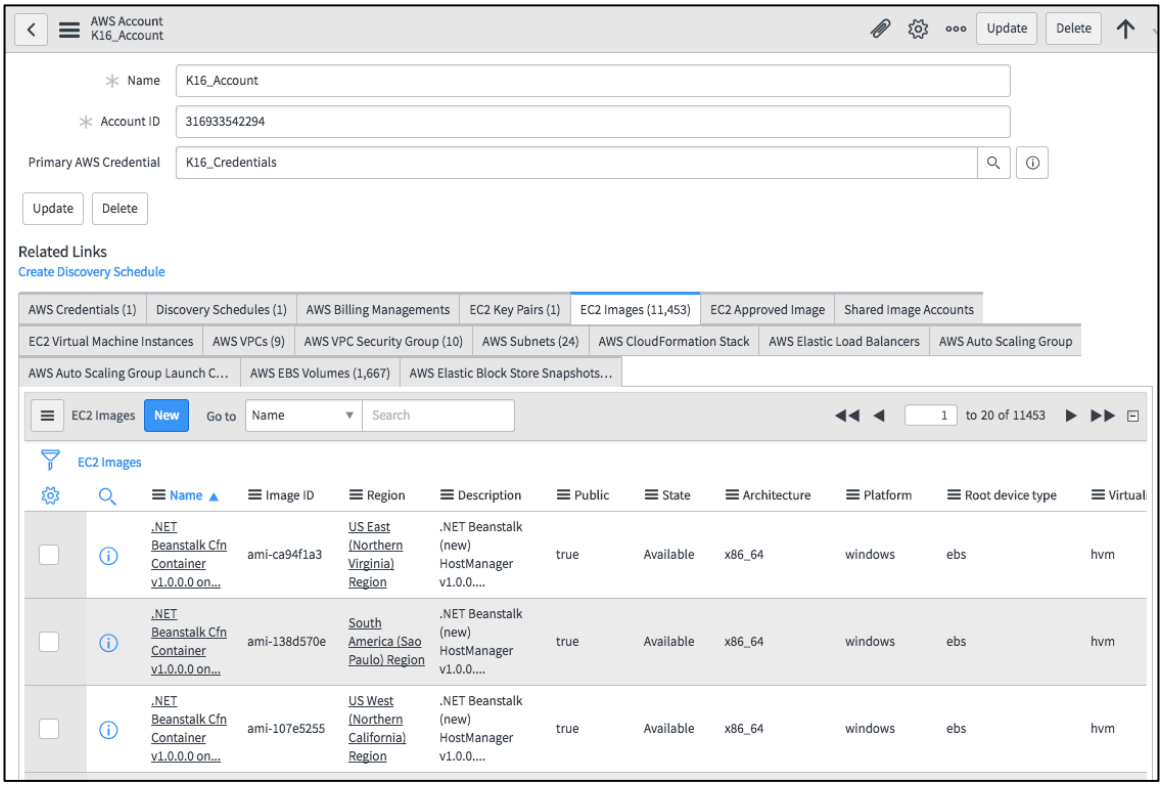
Approve AWS EC2 Image

1. Navigate to **Amazon AWS Cloud > Configuration > Accounts**.
2. Open Account, **K16_Account**.
3. Click the **EC2 Images** tab.

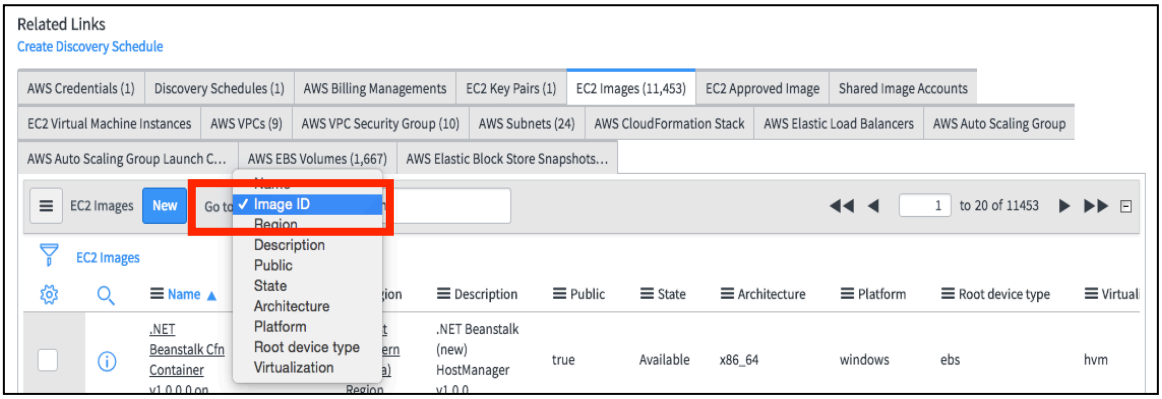


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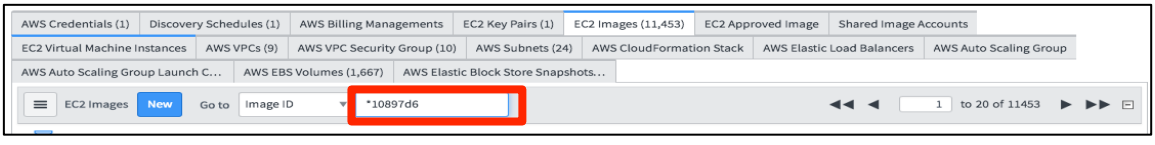
4. Note the thousands of EC2 Images that have been discovered. These images are provided by Amazon to be used as templates to provision virtual machines.



5. On the EC2 Images form header, select **Image ID** from the **Go to** drop-down list.

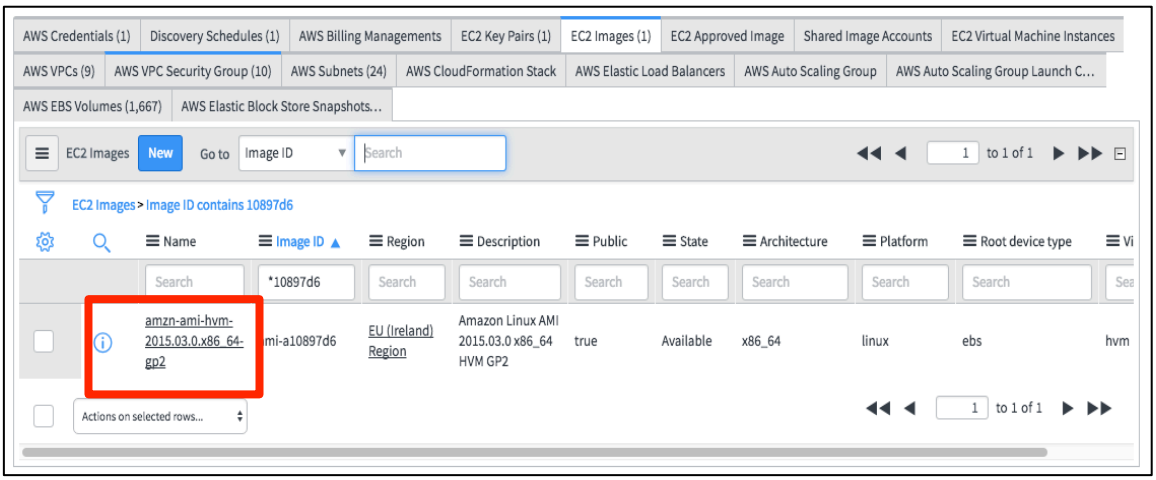


6. On the EC2 Images form header **Search** field, type ***10897d6**. Press **<Enter>**.



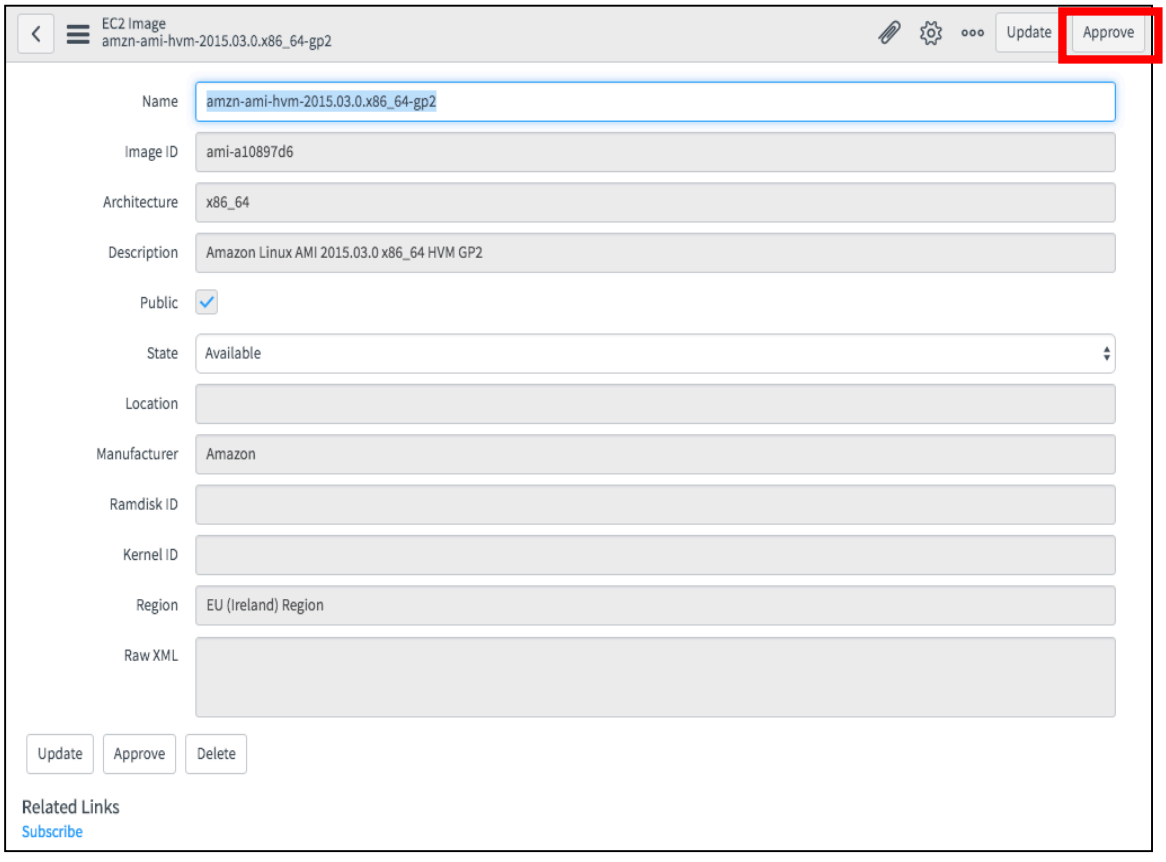
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7. The search should find one image named **amzn-ami-hvm-2015.03.0.x86_64-gp2**. Open the image record.



8. Note the image details such as Architecture, Description, and Region.

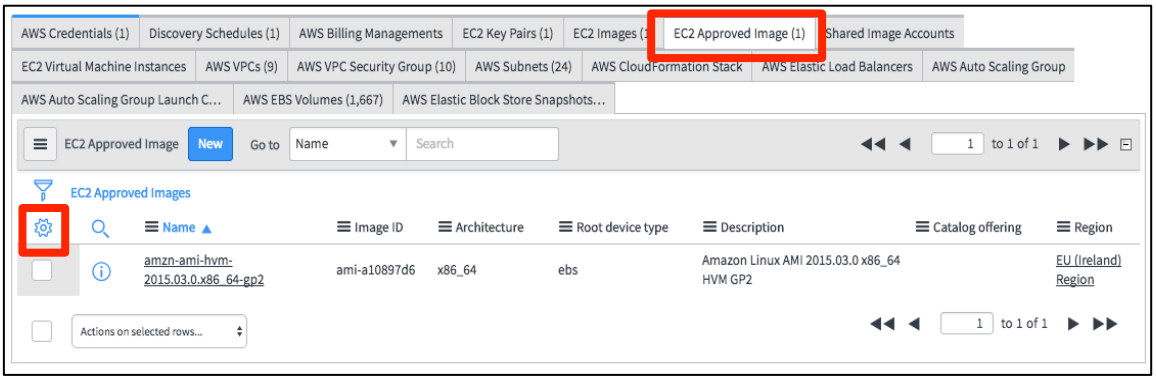
9. Click **Approve**.



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10. Select the **EC2 Approved Image** tab and note that your approved image is listed.

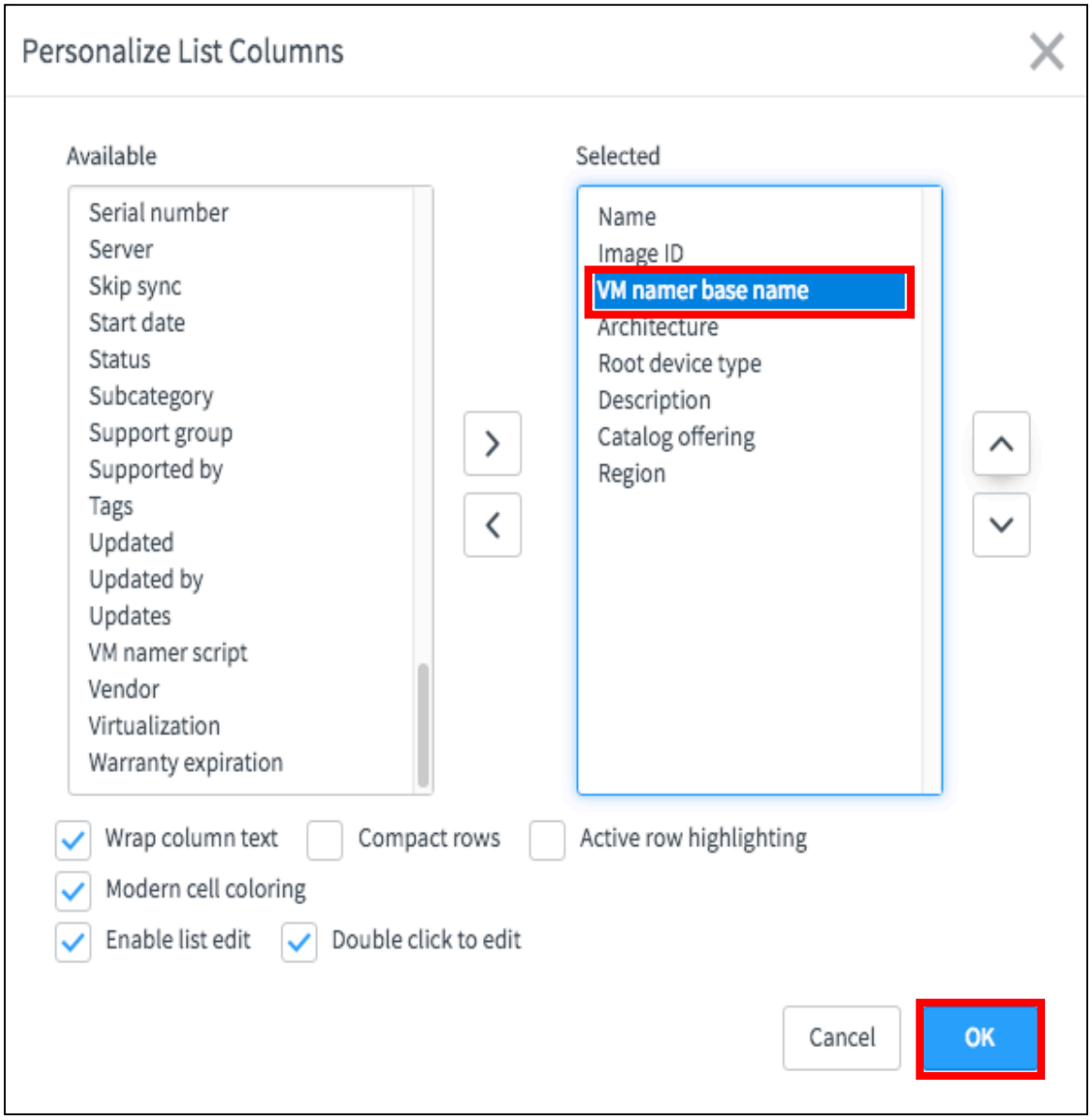
11. Select the **gear icon**.



12. Add **VM namer base name** to the Selected box and move it up before Image ID.

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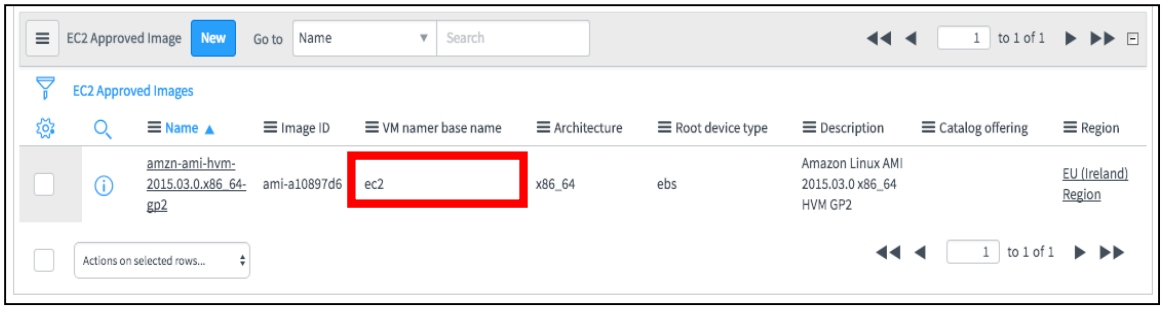
13. Click **OK**.



14. The list shows the base name prefix to be used for virtual machines provisioned from this image. In this case ec2.

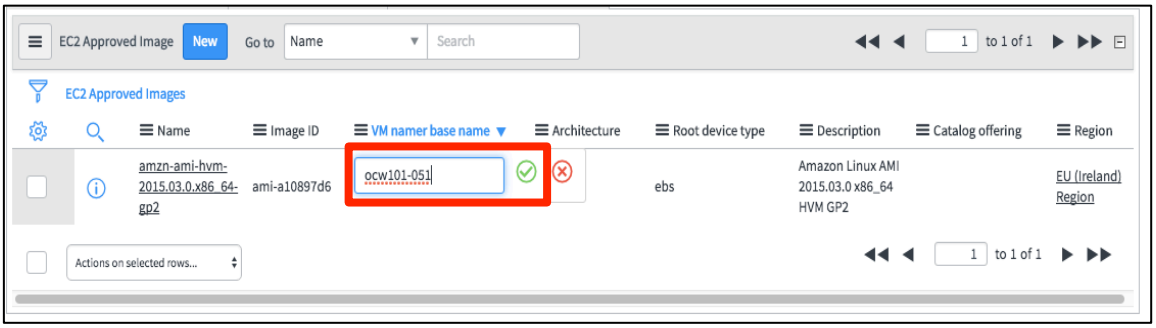
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15. Double click **ec2** in the VM namer base name field.



16. Change ec2 to the name of your lab instance (e.g., **ocw101-051)**.

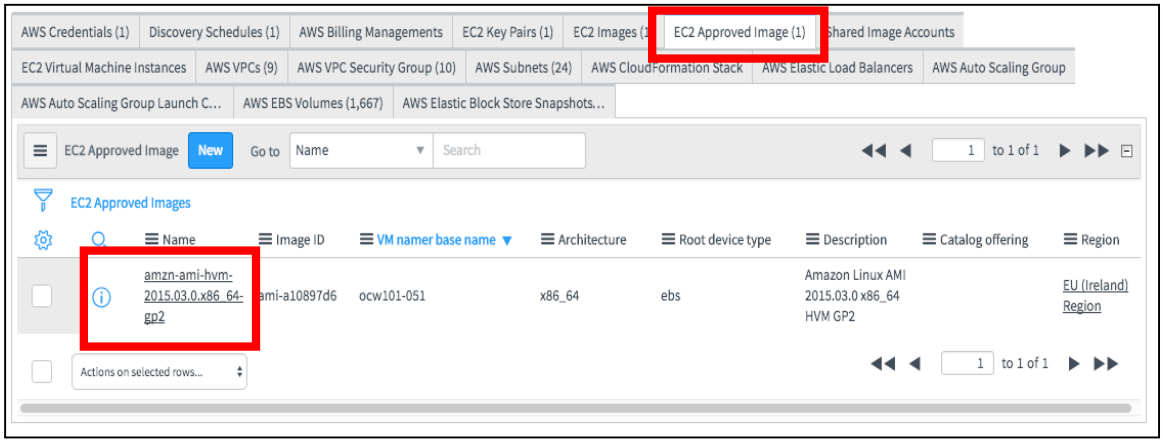
17. Click the **green** checkmark.



Create AWS EC2 Catalog Item

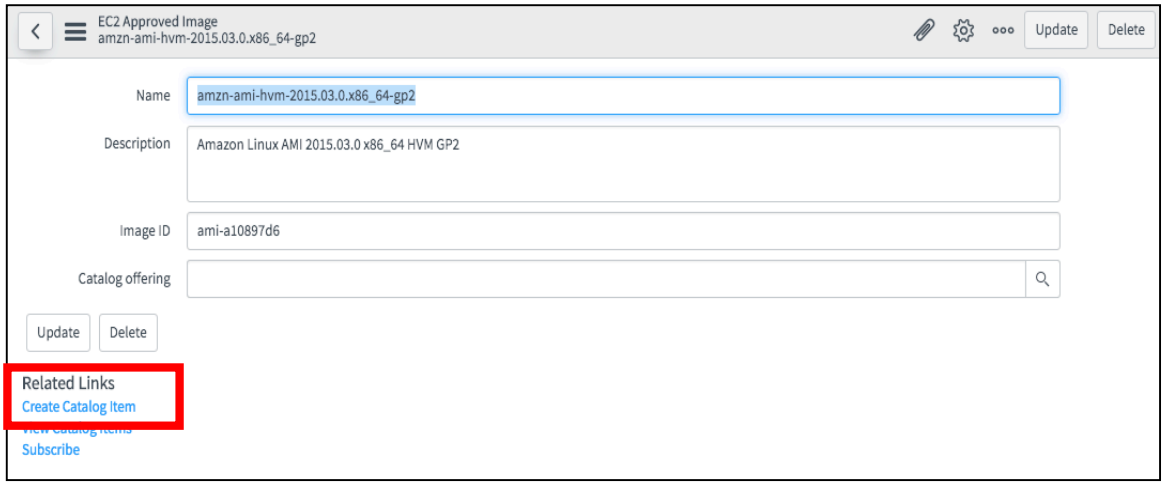
1. Select the **EC2 Approved Image** tab and note that the approved image is listed.

2. Open the approved image record, **amzn-ami-hvm-2015.03.0.x86_64-gp2**.



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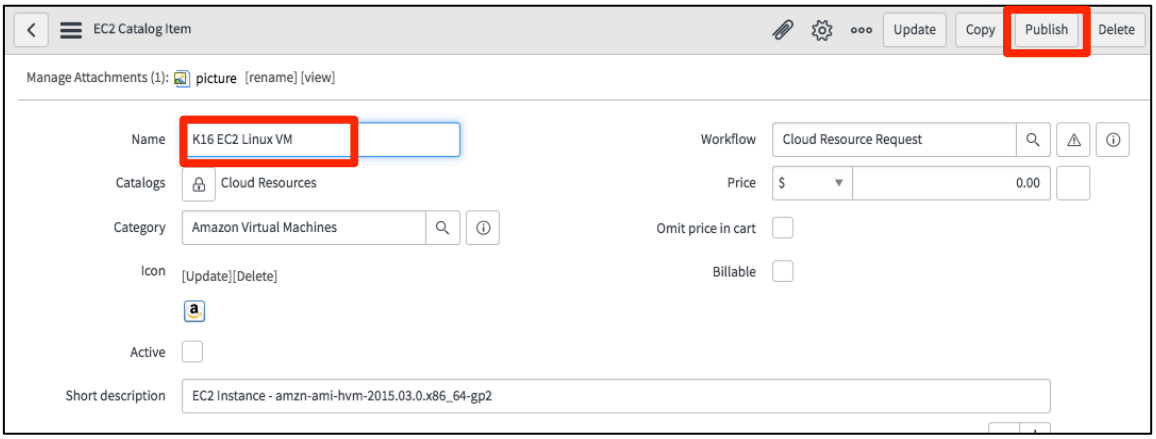
3. Under Related Links, click **Create Catalog Item**.



4. In the Catalog Item Name field, remove the default text and type **K16 EC2 Linux VM**.

5. View the other Catalog Item information by scrolling down the form.

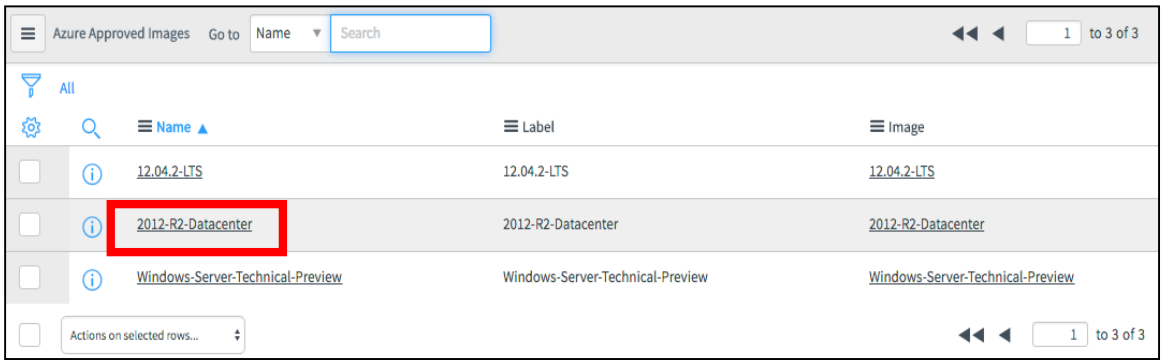
6. Click **Publish**.



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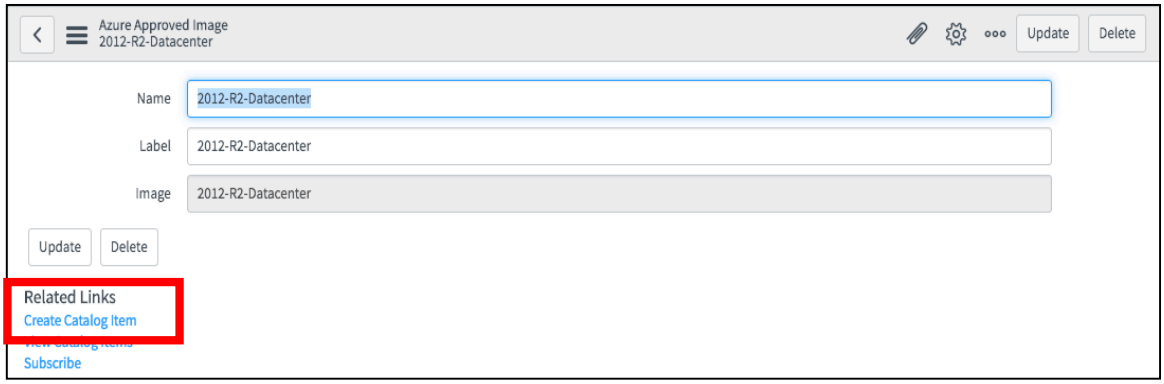
View Microsoft Azure Images

1. Navigate to **Microsoft Azure Cloud > Approved Images**.
2. Open the Azure Approved Image, **2012-R2-Datacenter**.



Create Microsoft Azure Catalog Item

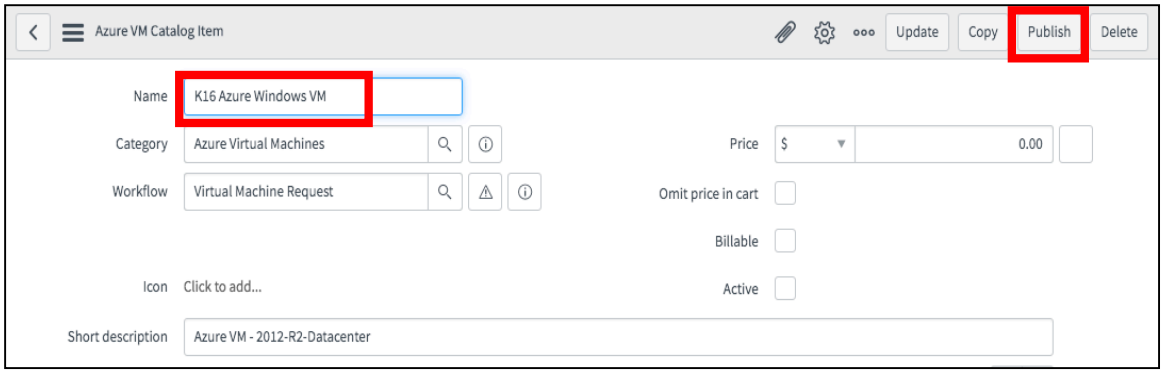
1. Click **Create Catalog Item** under Related Links.



2. In the Catalog Item Name field, remove the default text and type **K16 Azure Windows VM**.

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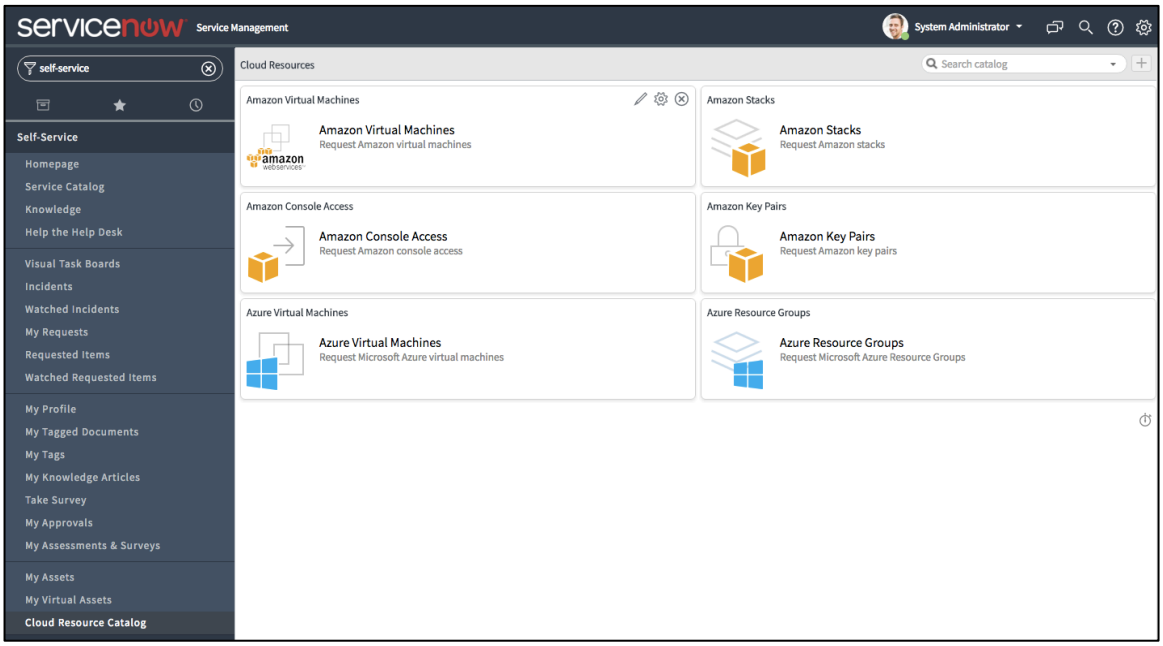
3. View the other Catalog Item information by scrolling down the form. Click **Publish**.



Lab Success Verification

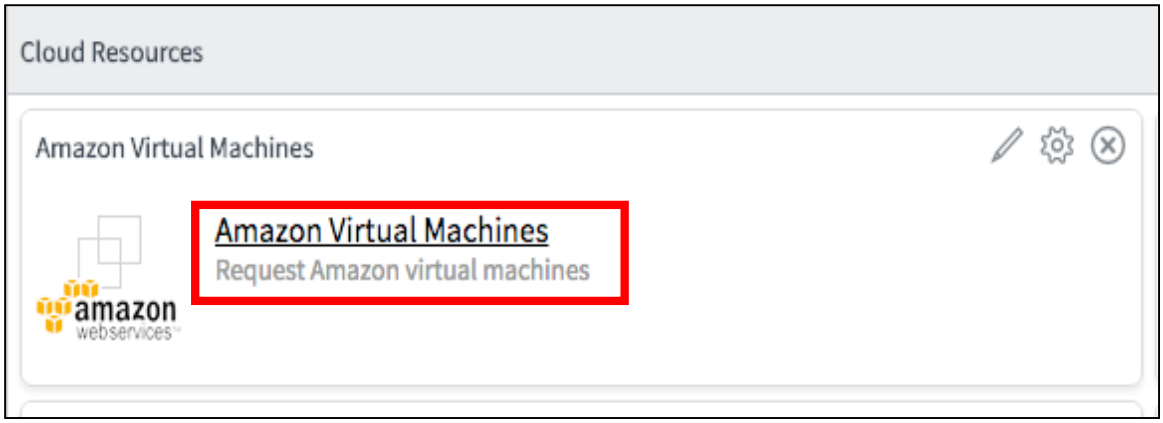
1. Navigate to **Self-Service > Cloud Resource Catalog**.

2. Note Amazon and Azure Cloud services are available from the Cloud Resource Catalog.

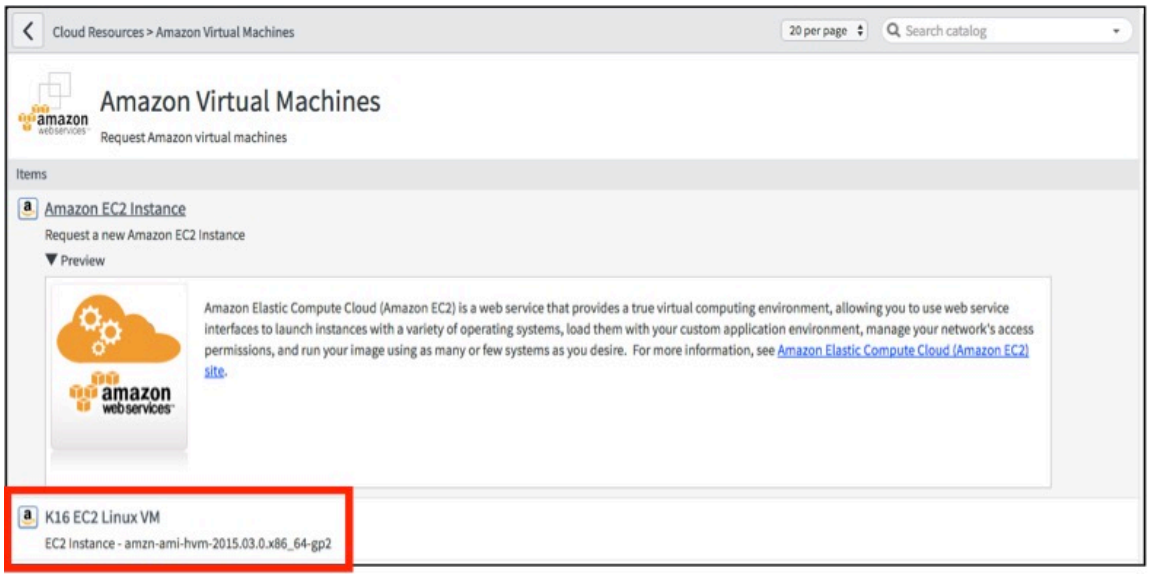


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3. Select **Amazon Virtual Machines**.



4. Note that your **K16 EC2 Linux VM** is listed.

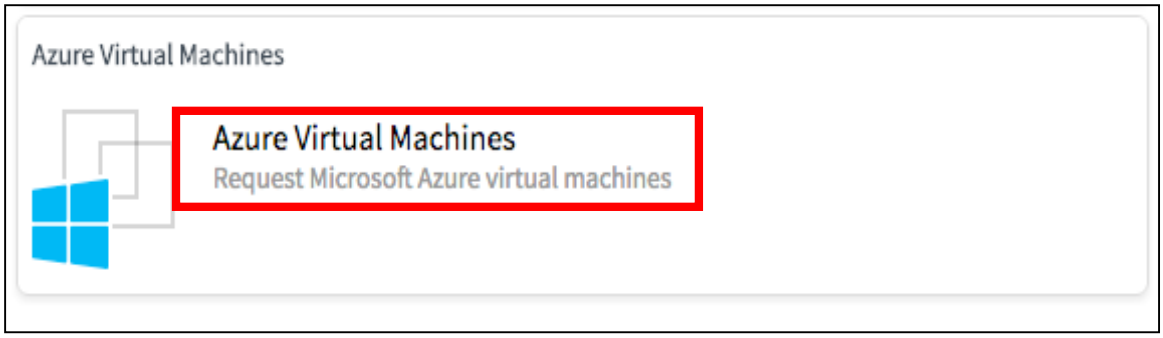


5. Return to the Cloud Resource Catalog home page by the **back button** on the form header.

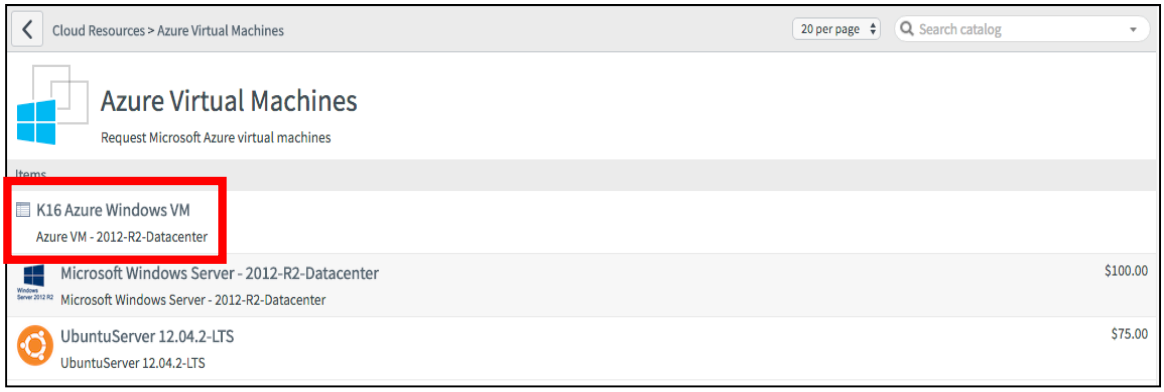


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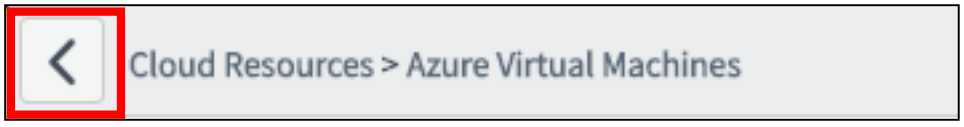
6. Select **Azure Virtual Machines**.



7. Note that your **K16 Azure Windows VM** is listed.



8. Return to the Cloud Resource Catalog home page by the **back button** on the form header.



Progress Report

1. Navigate to **Lab Management > Report Lab Progress**.
2. **Click I am done!**

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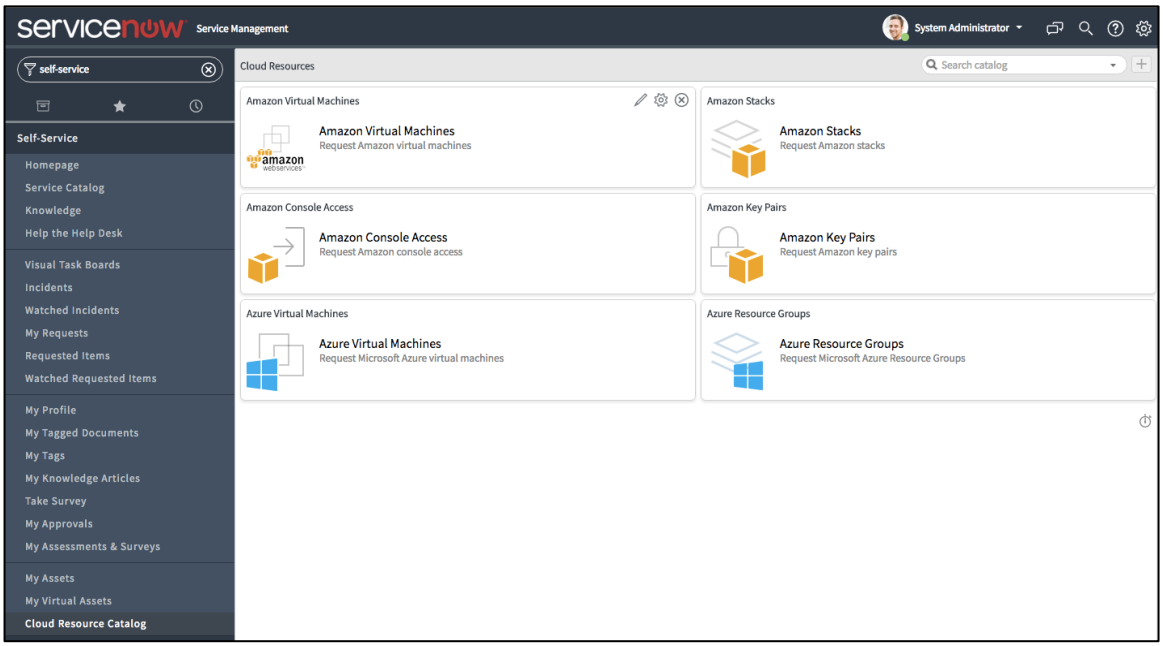
Lab Goal

This lab explains how to request Cloud Services from the Service Catalog.

Lab 3.0 Request Cloud Services from Catalog

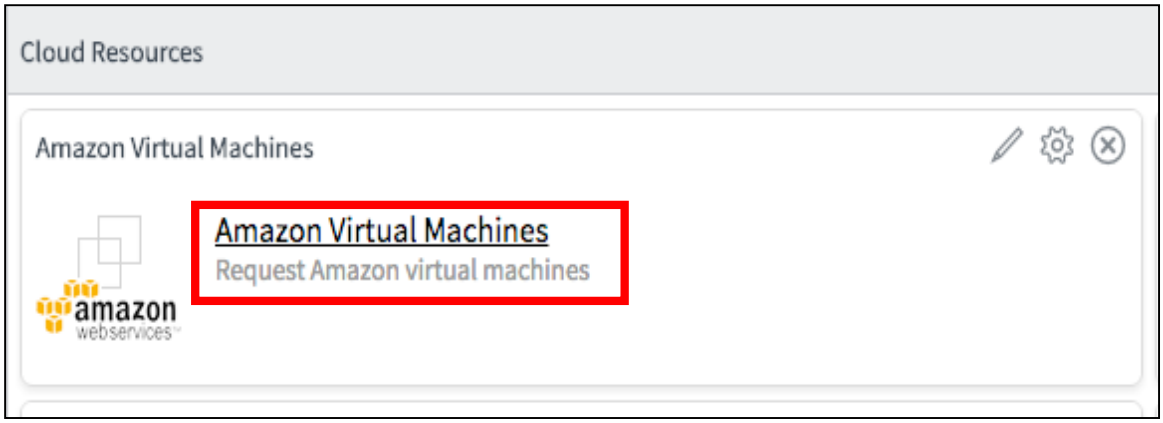
Request AWS Virtual Machine

1. Navigate to **Self-Service > Cloud Resource Catalog**.

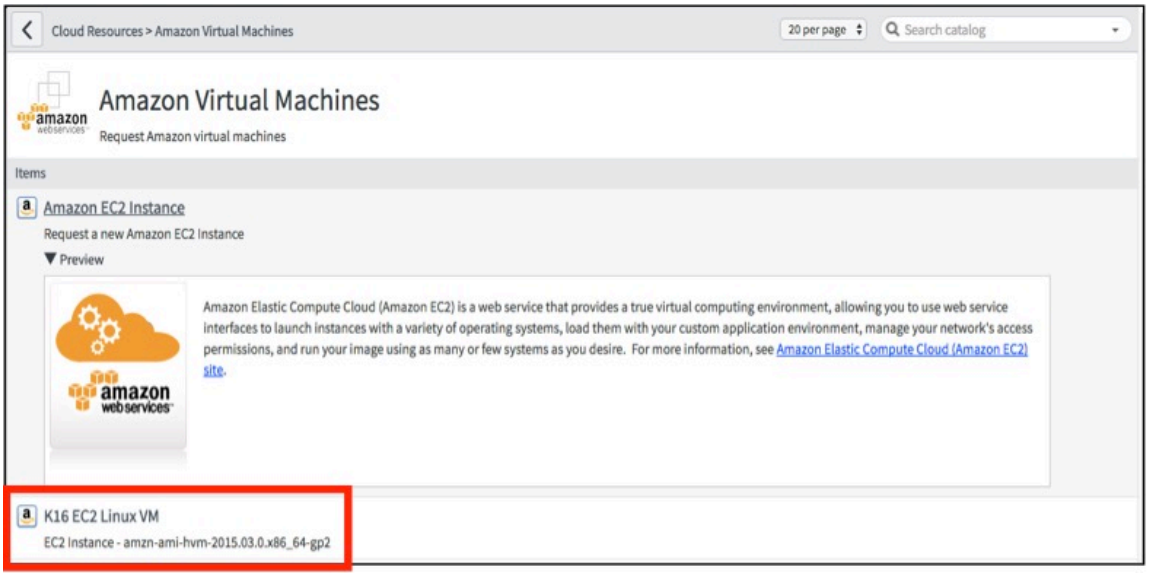


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2. Select **Amazon Virtual Machines**.



3. Select **K16 EC2 Linux VM**.

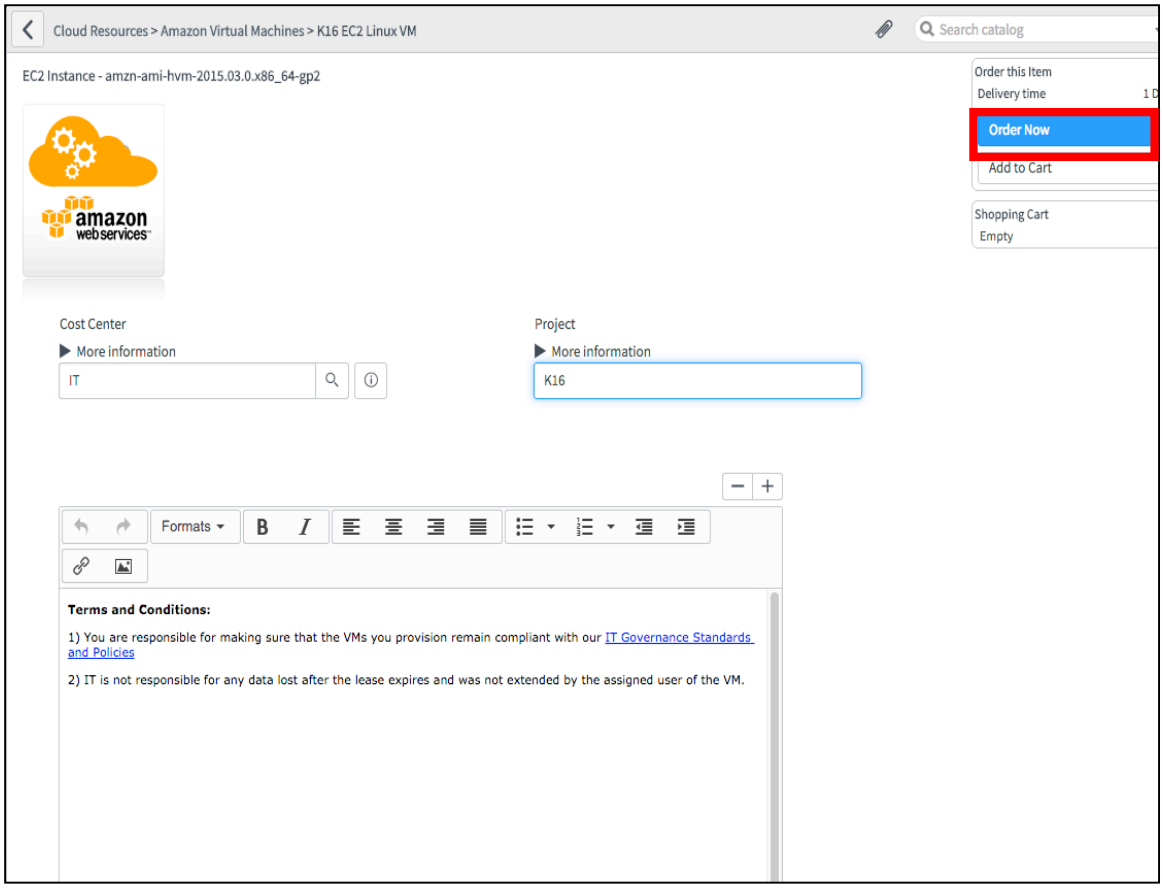


4. Update the fields in the request form as follows:

   Cost Center: **IT**
   Project: **K16**
   Size: **T2 Micro | 1vCPU | 1 GiB**
   Business Purpose: **Lab**
   Assignment Group: **Dev Ops**
   Application: **Retail Portal**
   Business Service: **Bond Trading**

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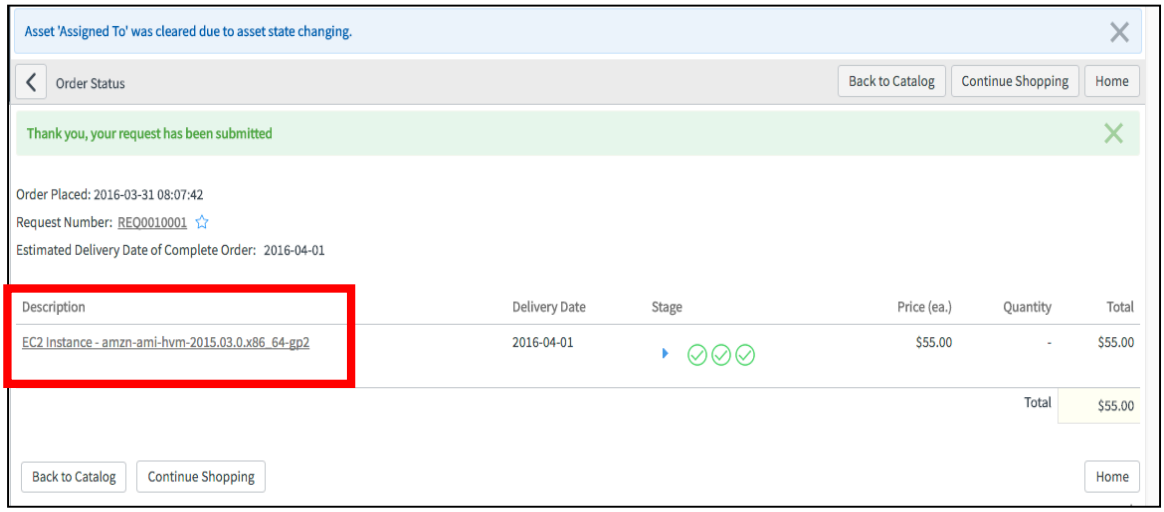
5. Click **Order Now**.



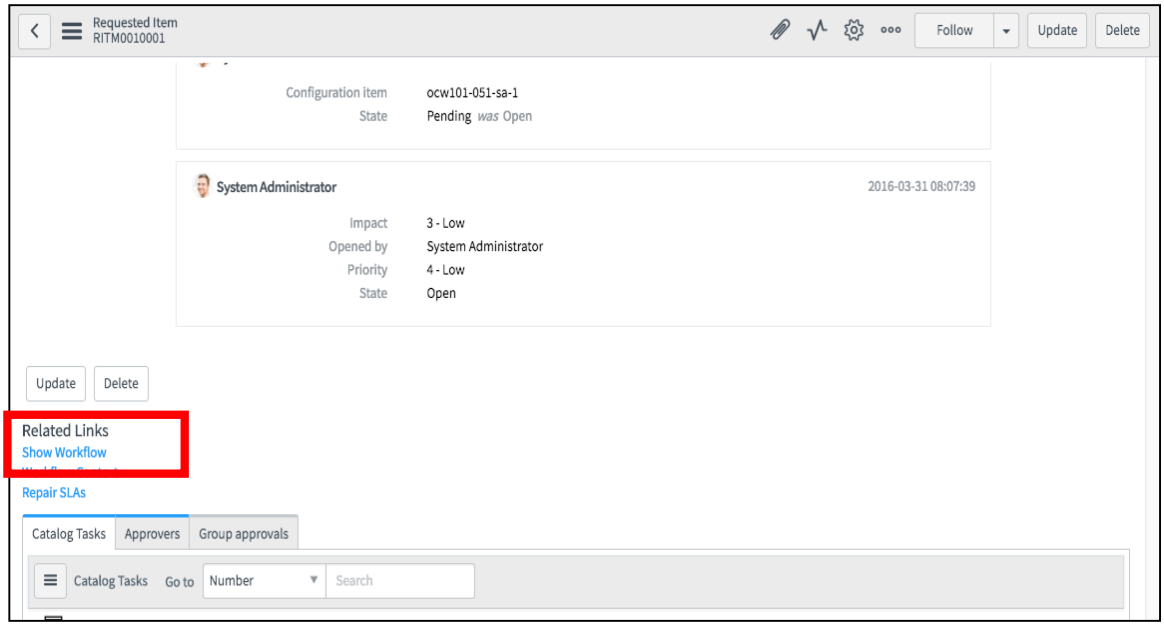
6. Note the request submitted confirmation message.

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7. Click the **EC2 Instance - amzn-ami-hvm-2015.03.0.x86_64-gp2** link under Description to open the Requested Item.

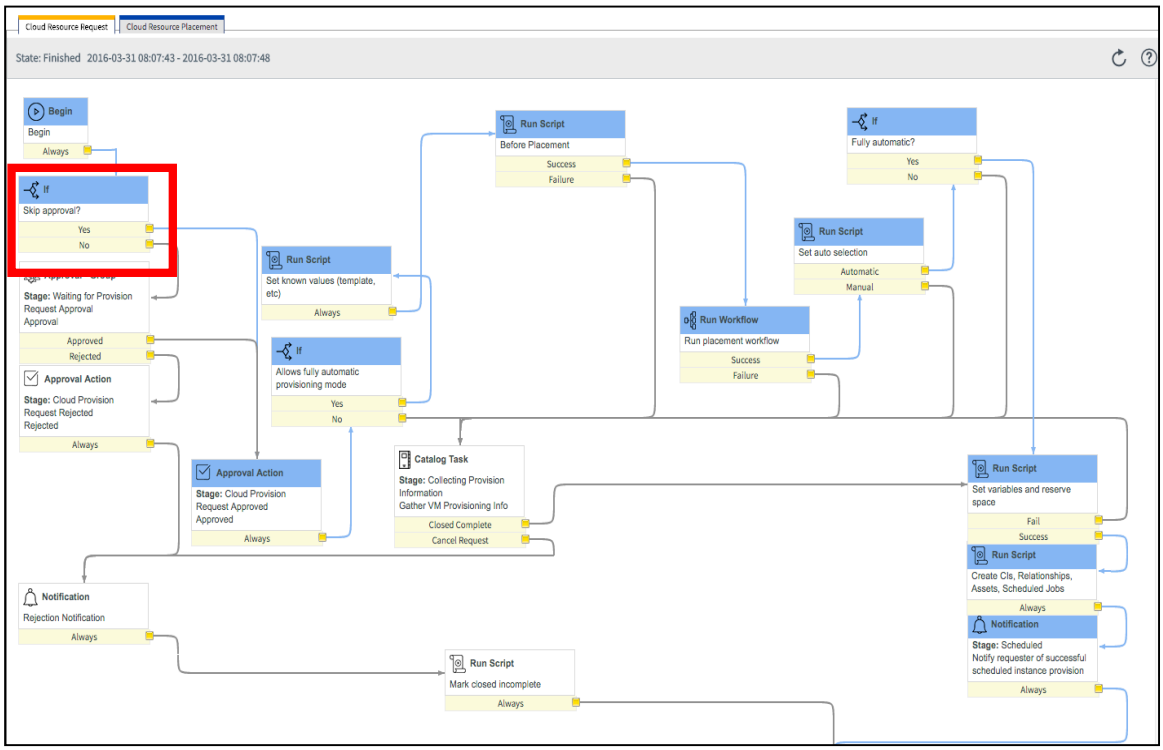


8. Scroll down the Requested Item form. Click **Show Workflow** under Related Links.



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9. The workflow automatically executes when you submit the order. The blue boxes (Activities) and blue lines show the steps and path the process followed. Note the Approval at the beginning of the process was skipped as the Catalog Item is configured to Skip Approval.

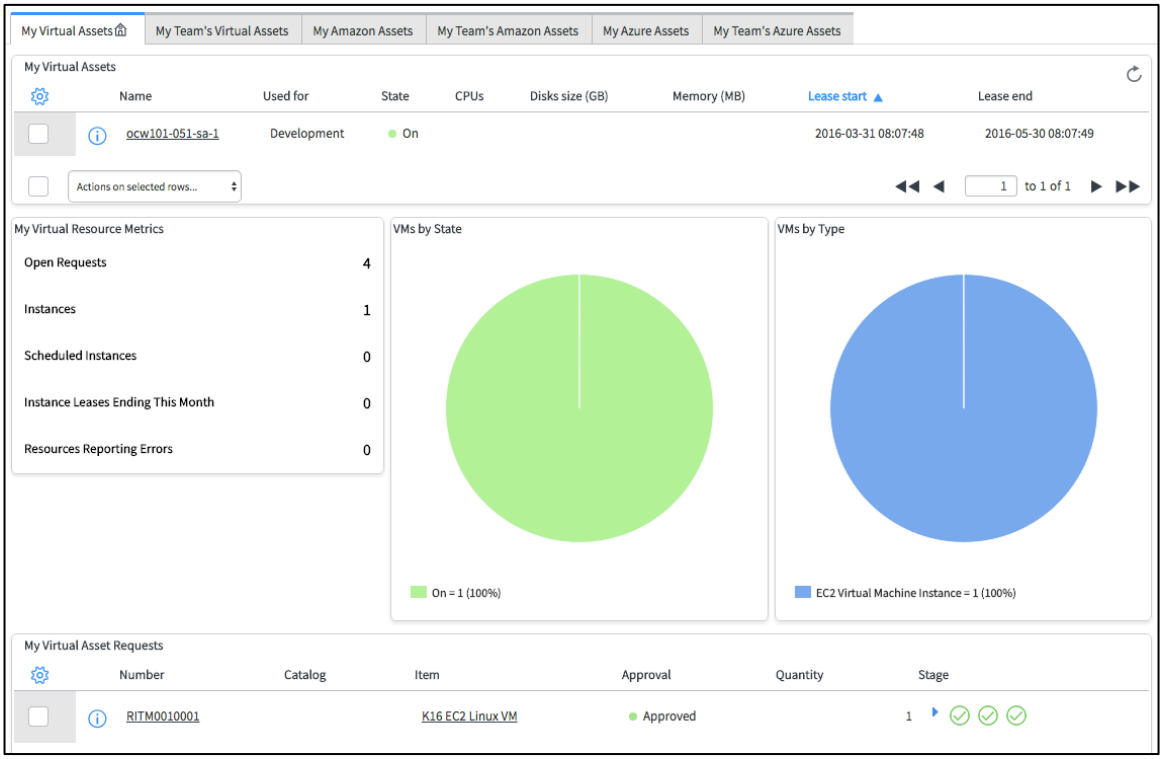


10. Close the Workflow window and return to the Requested Item.

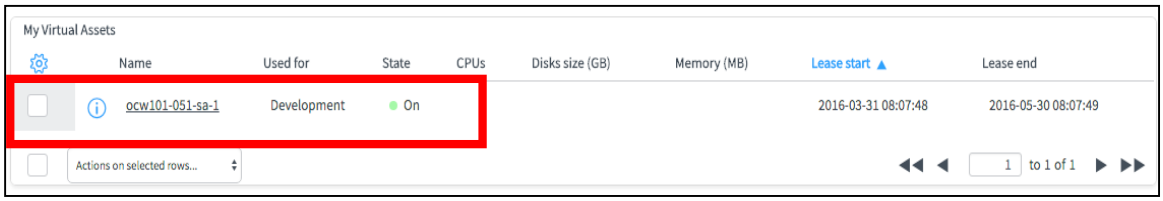
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Lab Success Verification

1. Navigate to **Self-Service > My Virtual Assets**.



2. Confirm that the Amazon VM you requested is listed under My Virtual Assets with a State of **On**.



Progress Report

1. Navigate to **Lab Management > Report Lab Progress**.

2. Click **I am done!**

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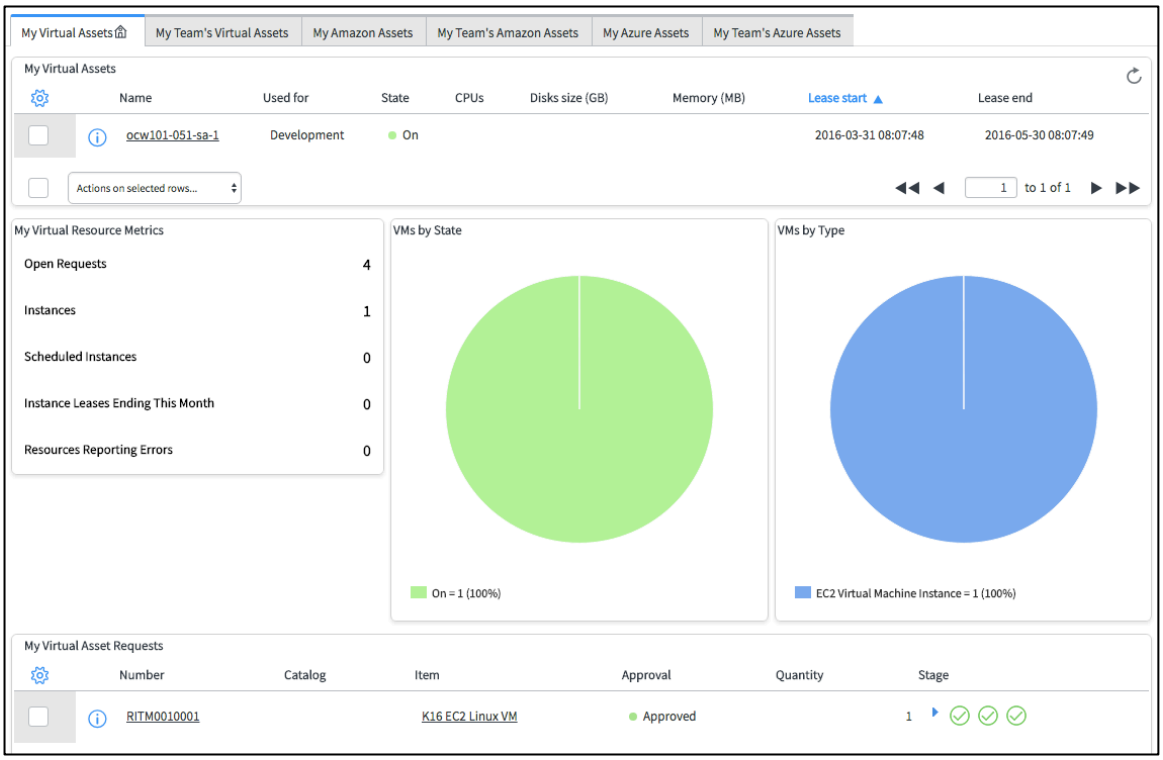
Lab Goal

This lab explains how users are empowered to manage their Cloud services through Self Service.

Lab 4.0 Manage Cloud Services

View Configuration Item record

1. Navigate to **Self-Service > My Virtual Assets**.

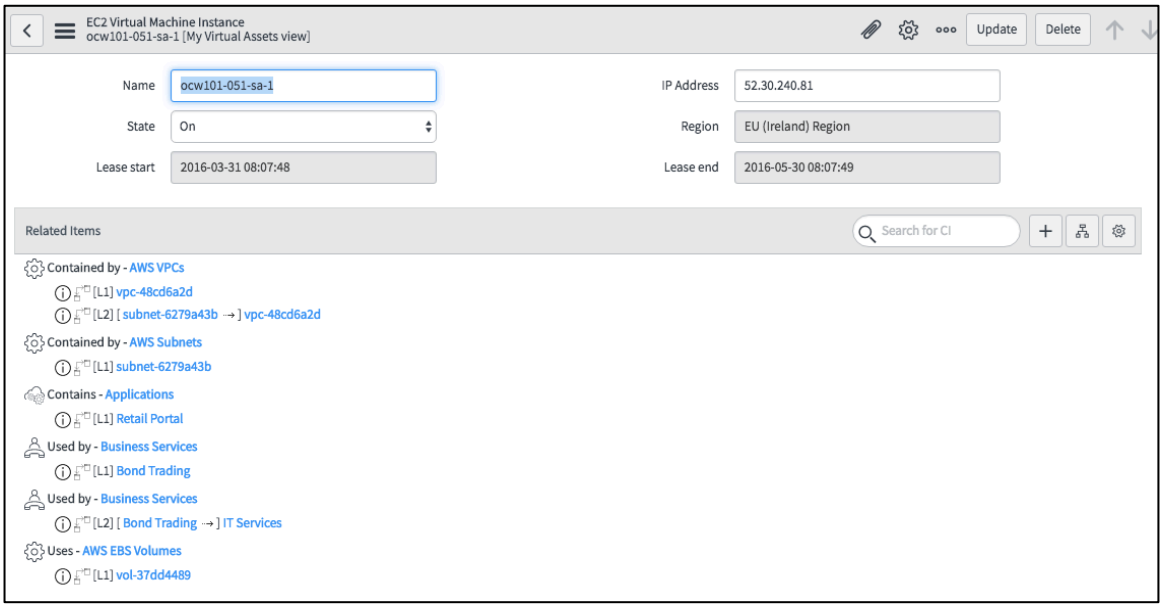


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2. Click the link under the Name column to open the Configuration Item record for your EC2 VM.



3. View the attributes for your VM including State, IP Address, Region and Lease Start and End dates. In addition, note relationships that your VM has to the Bond Trading Business Service and Retail Portal Application (these relationships were automatically created based upon the selections you made in the VM request).

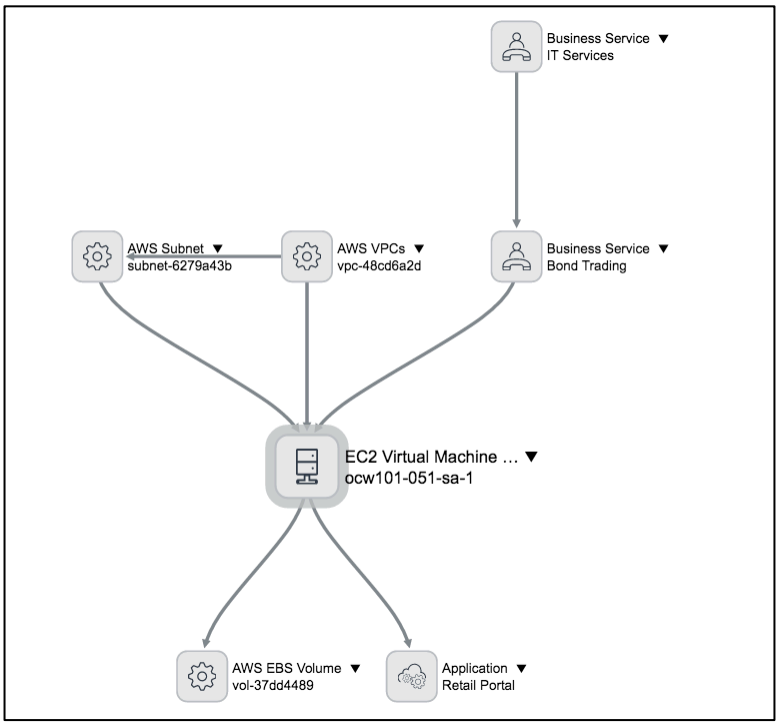


4. Click on the **Show BSM View** button to see a graphical view of the relationships.

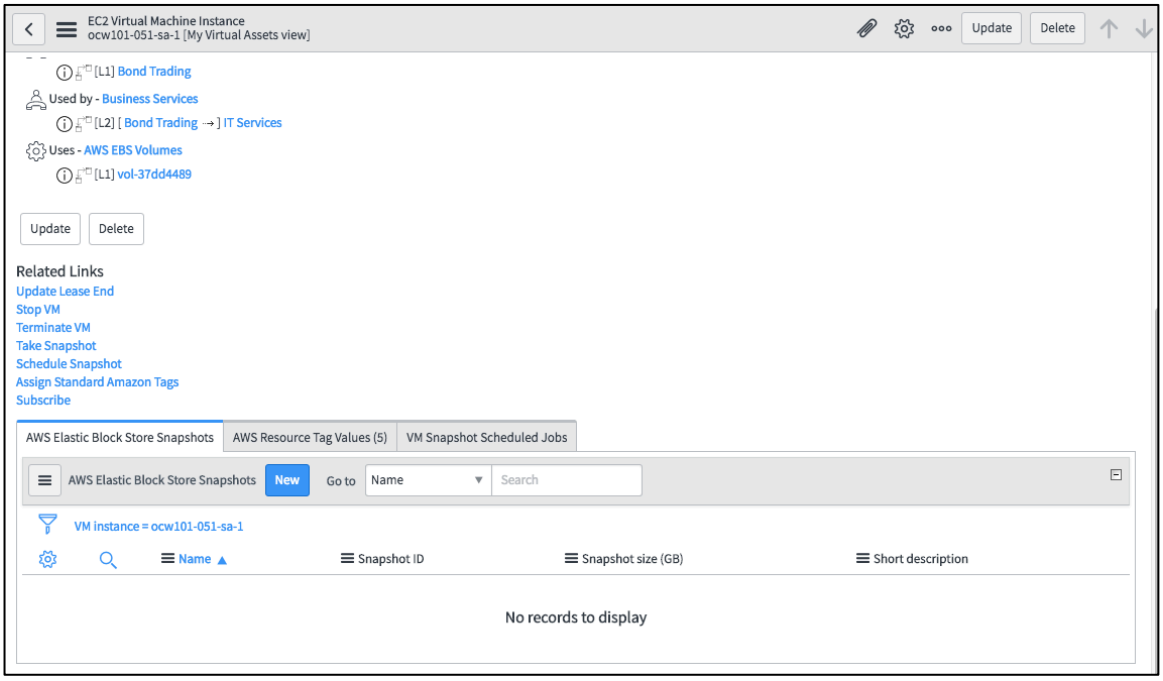


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5. View the relationship between your VM and the Bond Trading Business Service.



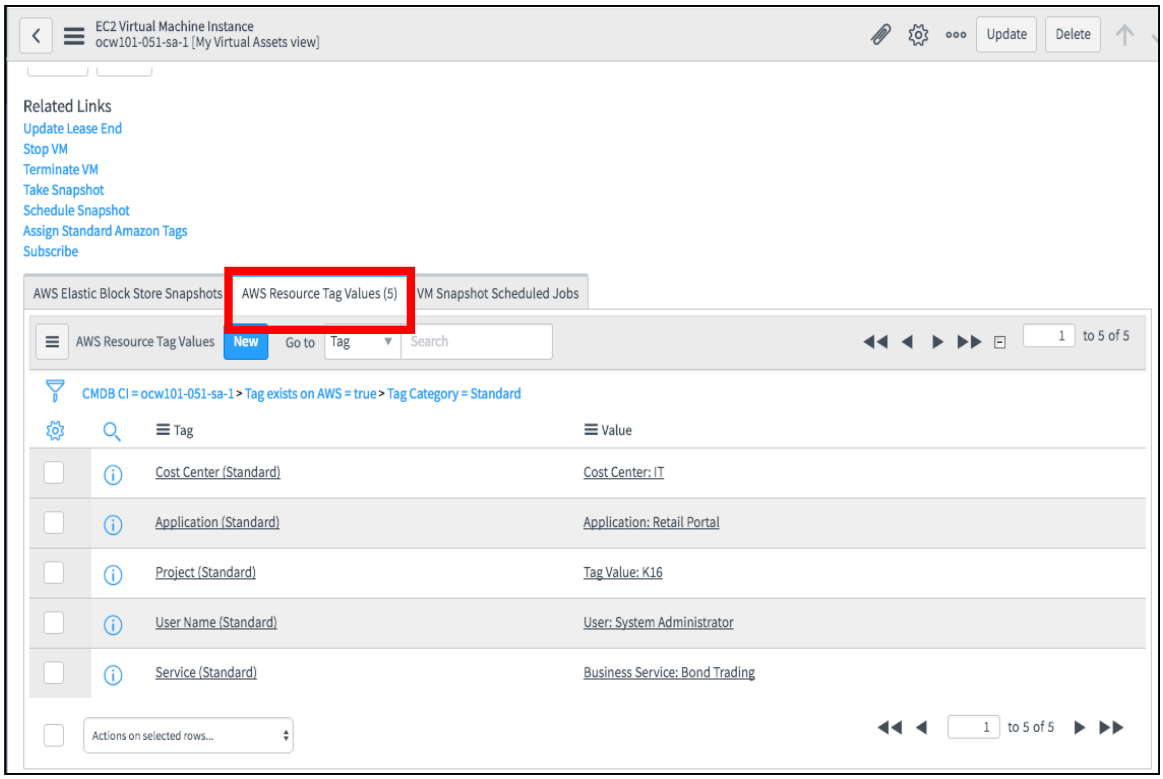
6. Close the BSM View window and return to the CI record. Scroll down the CI form to view the Related Links and the related lists.



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7. Click the **AWS Resource Tag Values** tab to view the default Tags that have been assigned to the VM.

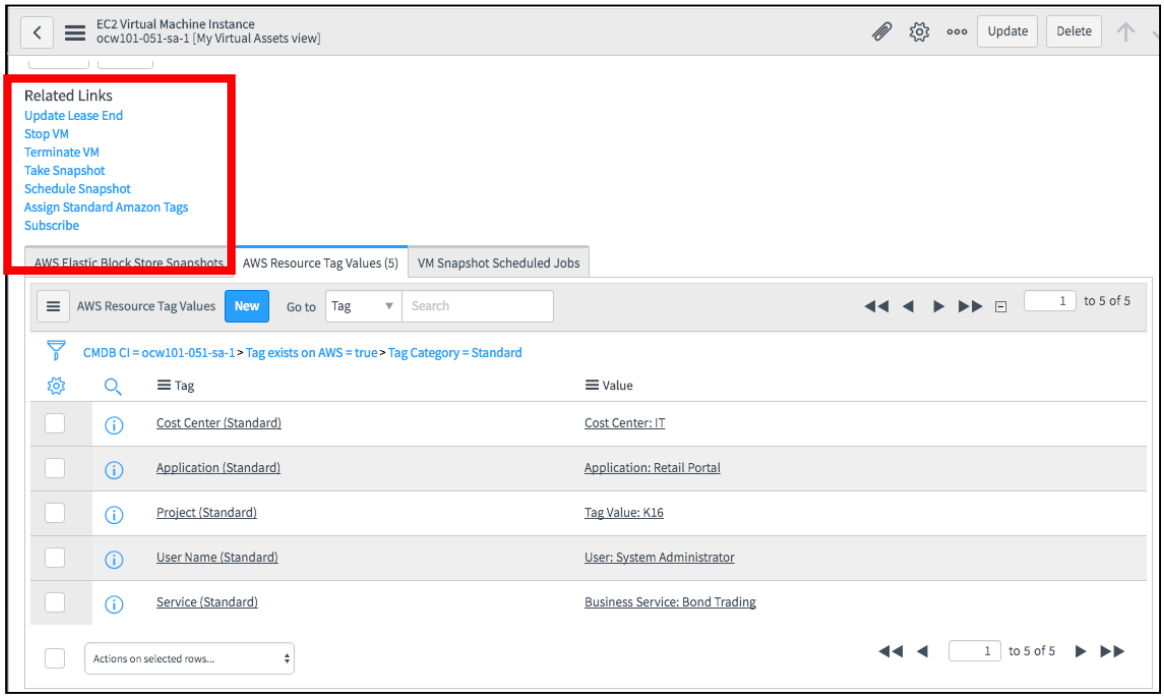
   Tagging is useful for tracking Amazon resources and performing cost breakdowns (e.g., reporting on resources/costs by Department, Cost Center, Project, Service, Group, User, or whatever is necessary). Note the Tag values are automatically populated from the Request. Additional Tags can be created and automatically populated if required.



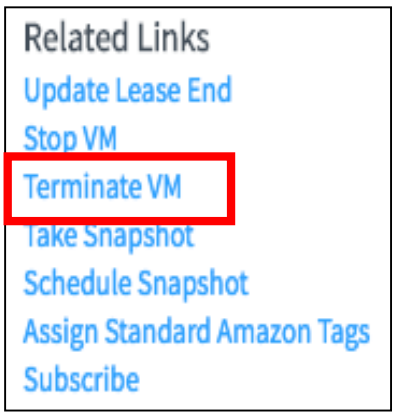
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Manage VM

1. Under Related Links, note the management tasks that can be performed on the VM. When ordered, your VM was chosen for Development and therefore does not fall under Change Control. If, however, your VM was chosen for Production, any changes trigger a Change Request that will need to be approved before the change can be implemented.

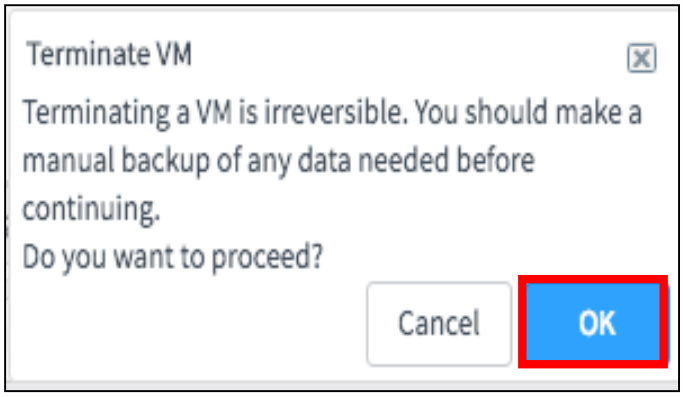


2. Under Related Links, select **Terminate VM**.



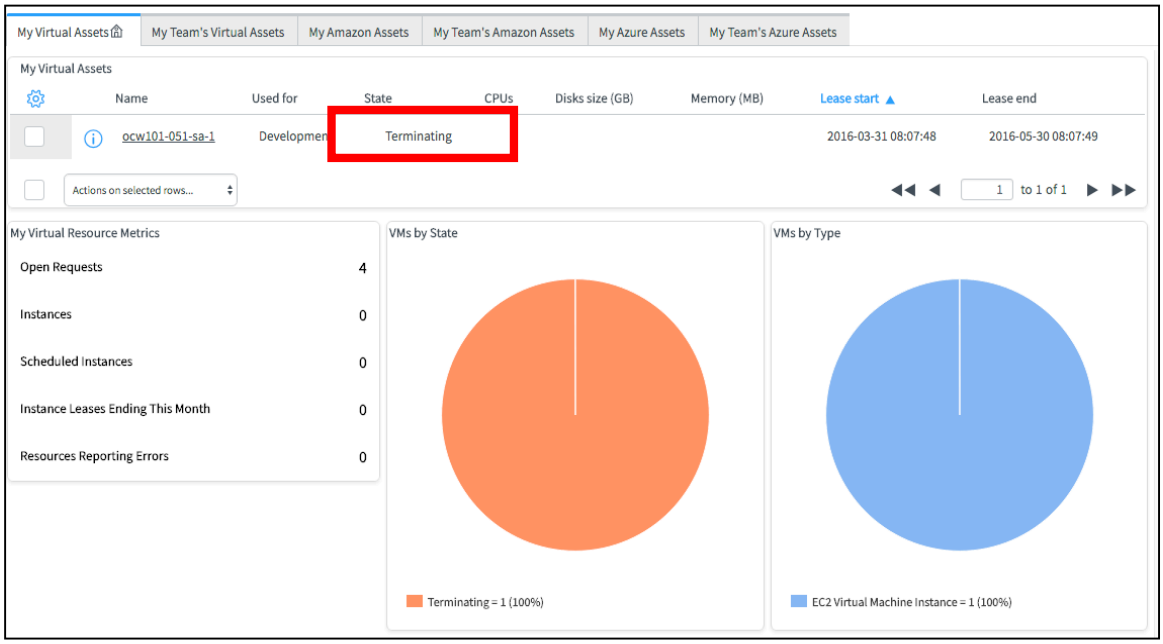
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3. Click **OK**.



4. Navigate to **Self-Service > My Virtual Assets**.

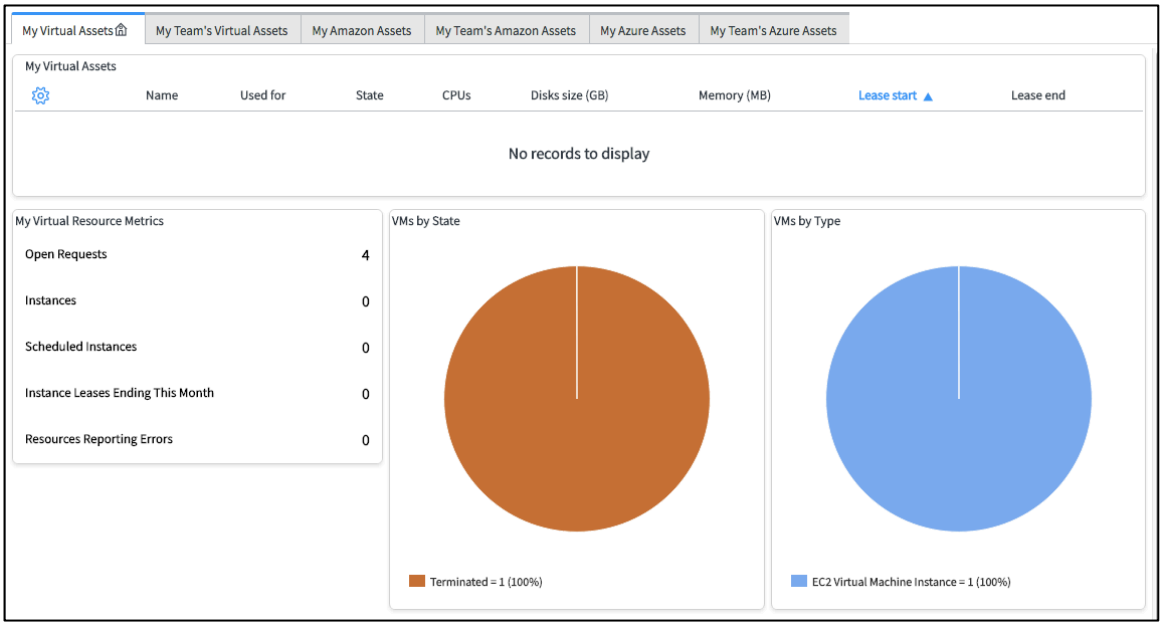
5. Note your VM State is **Terminating**.



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Lab Success Verification

1. After approximately 90 seconds, refresh the **My Virtual Assets** screen to confirm your VM has been terminated. The VM should disappear from the My Virtual Assets list.



Progress Report

1. Navigate to **Lab Management > Report Lab Progress**.
2. Click **I am done!**

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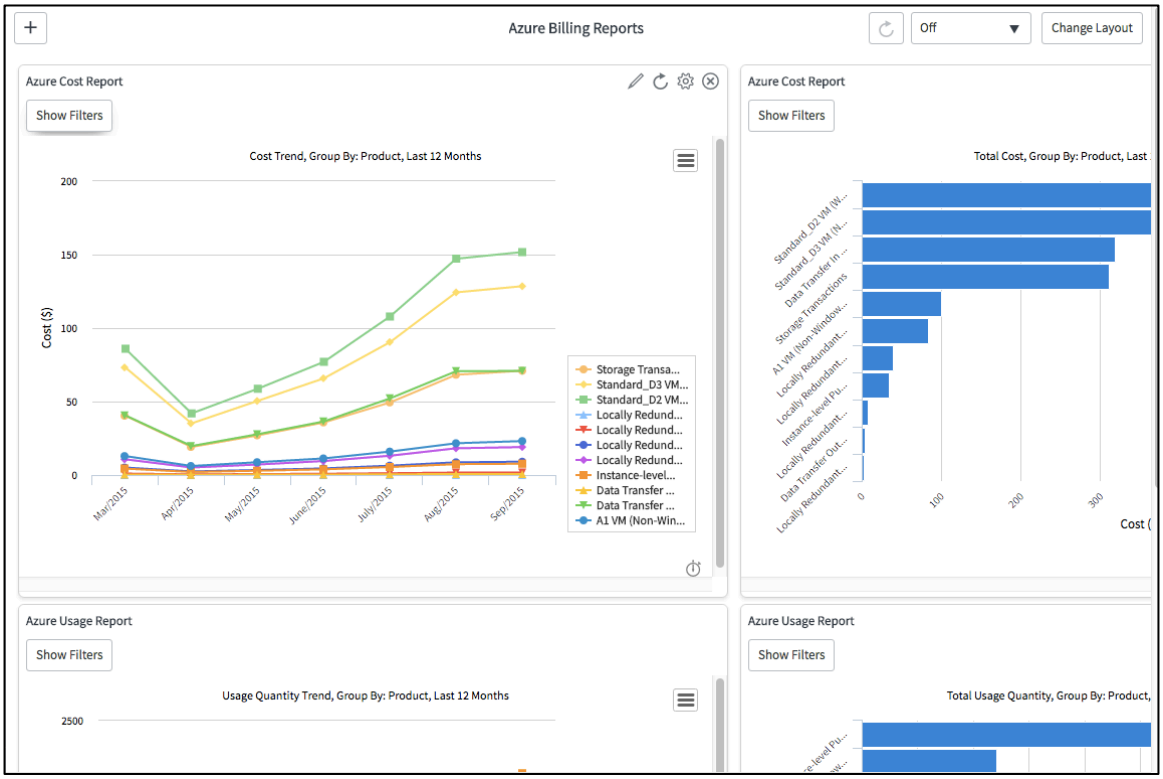
Lab Goal

This lab explains how ServiceNow can track and report on the cost and usage of Cloud Services.

Lab 5.0 Manage Cloud Service Cost and Usage

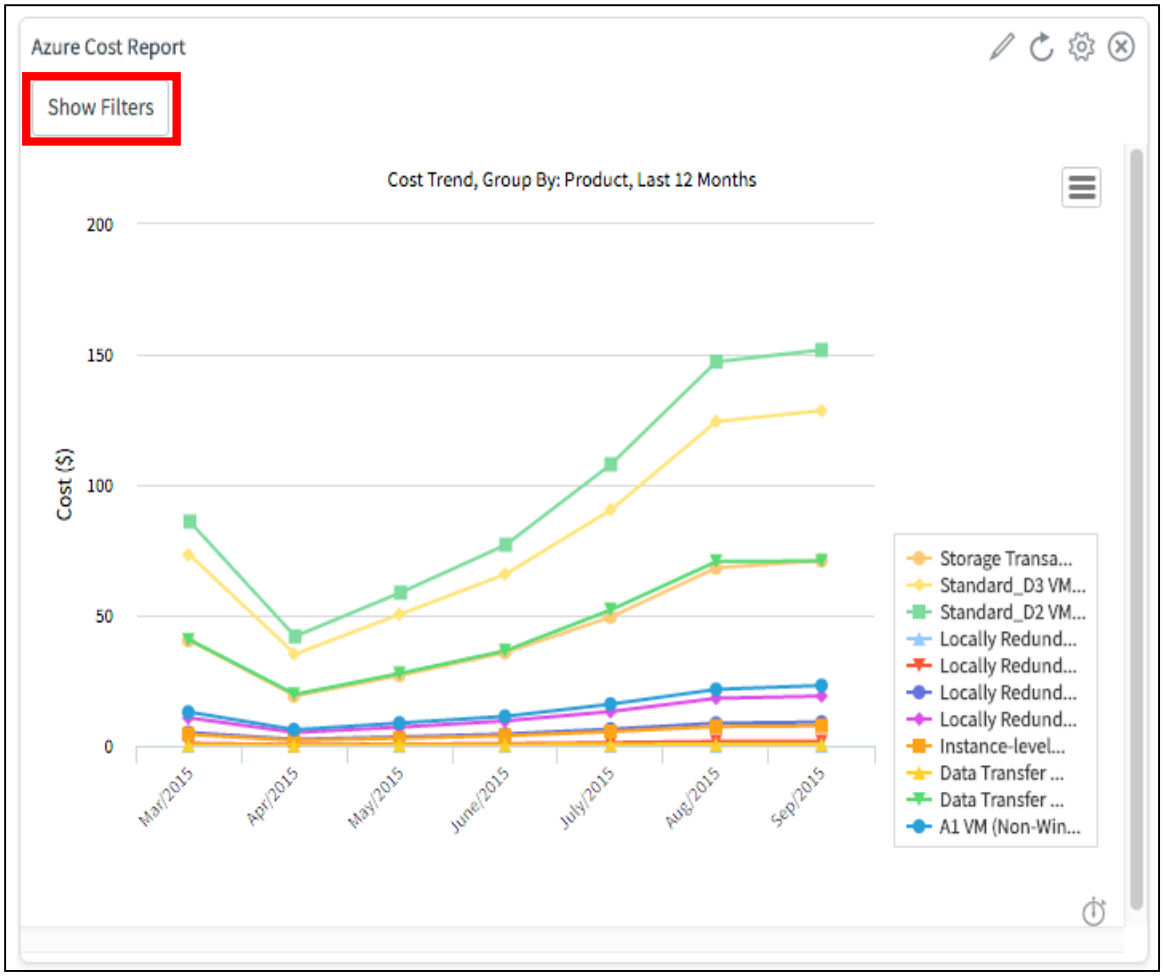
View Cost and Usage

1. Navigate to **Microsoft Azure Cloud > Reports > Cost & Usage Reports**. Note the different views showing Cost and Usage information over time.



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2. In the Azure Cost Report, select **Show Filters**.

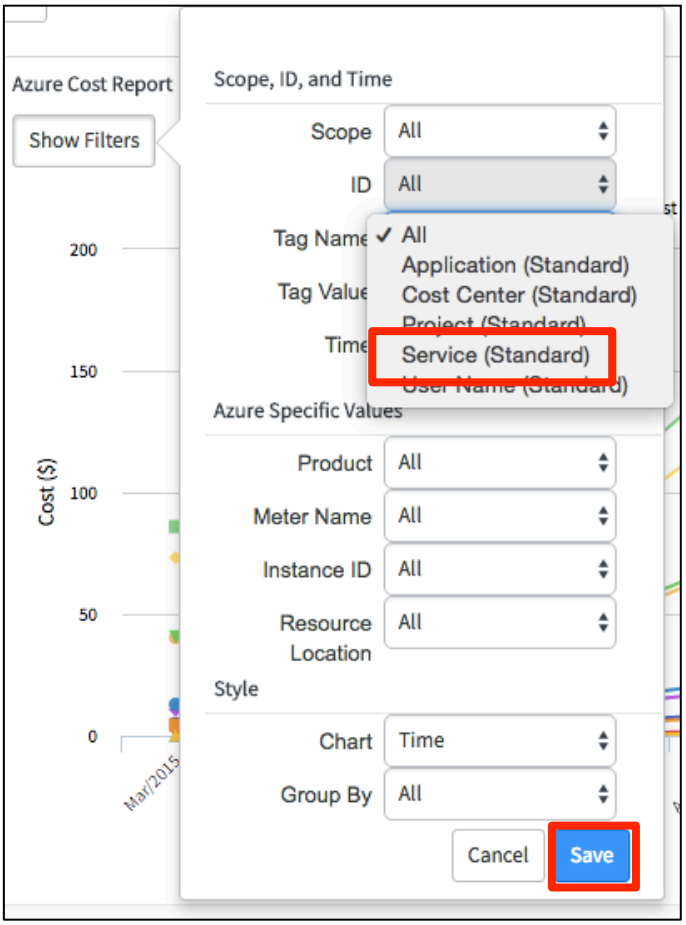


3. In the **Filters** selection, set the following

   Tag Name = **Service (Standard)**
   Tag Value = **DevOps**

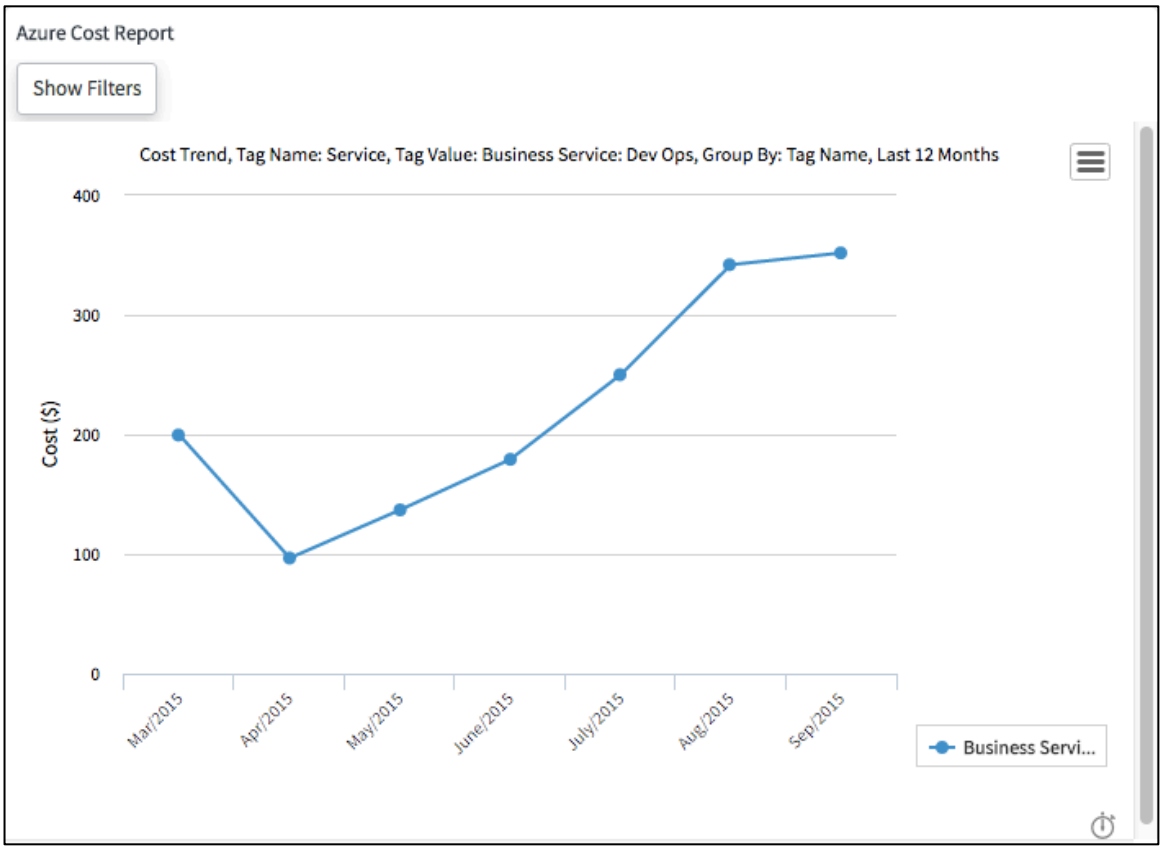
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4. Click **Save**.



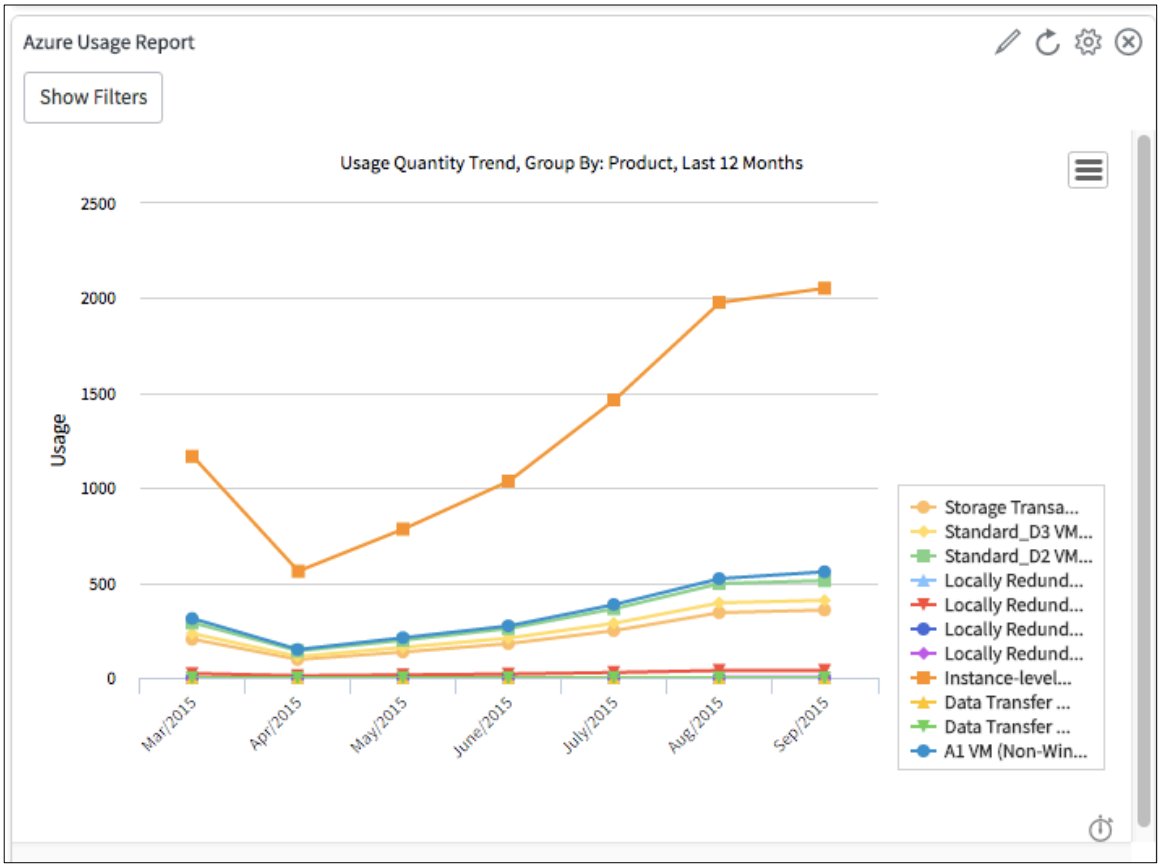
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5. View the Cost of Azure resources for the DevOps Business service over time.

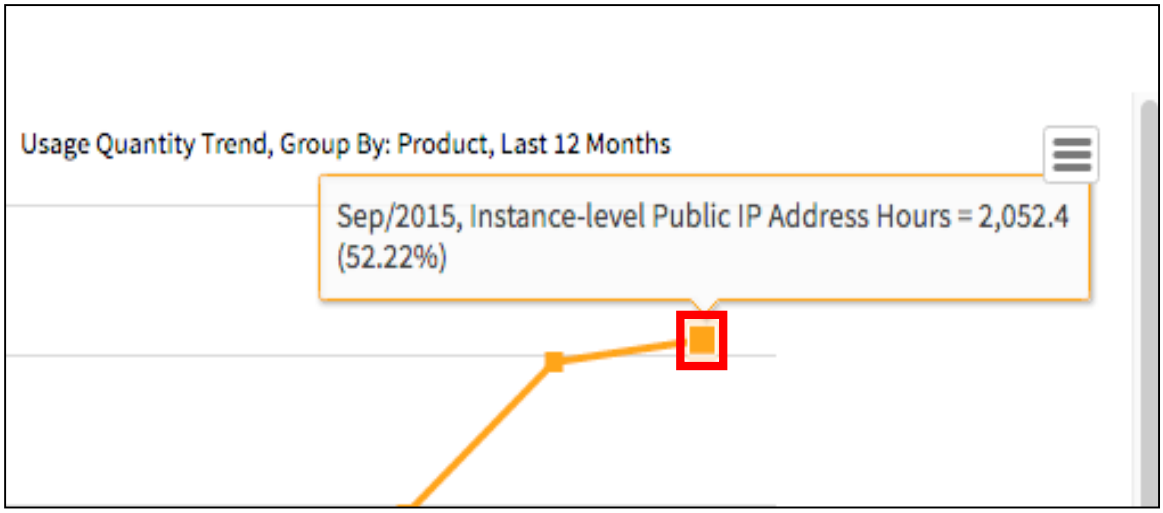


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6. Scroll to the Azure Usage Report. Note the usage by Azure Product.

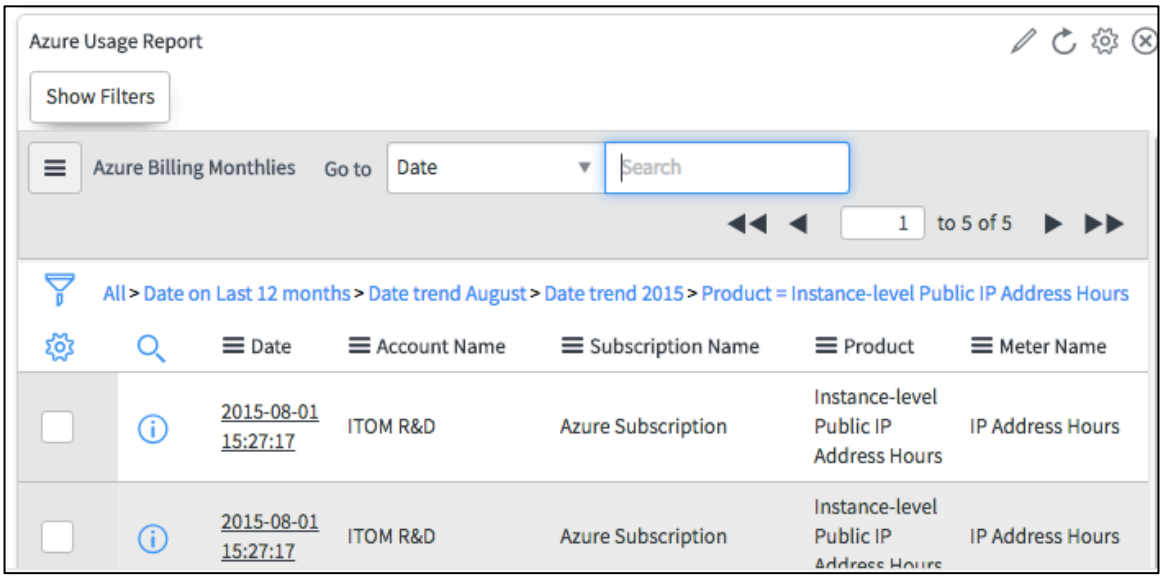


7. Click the **orange trend line** to drill down into the detailed breakdown of usage.



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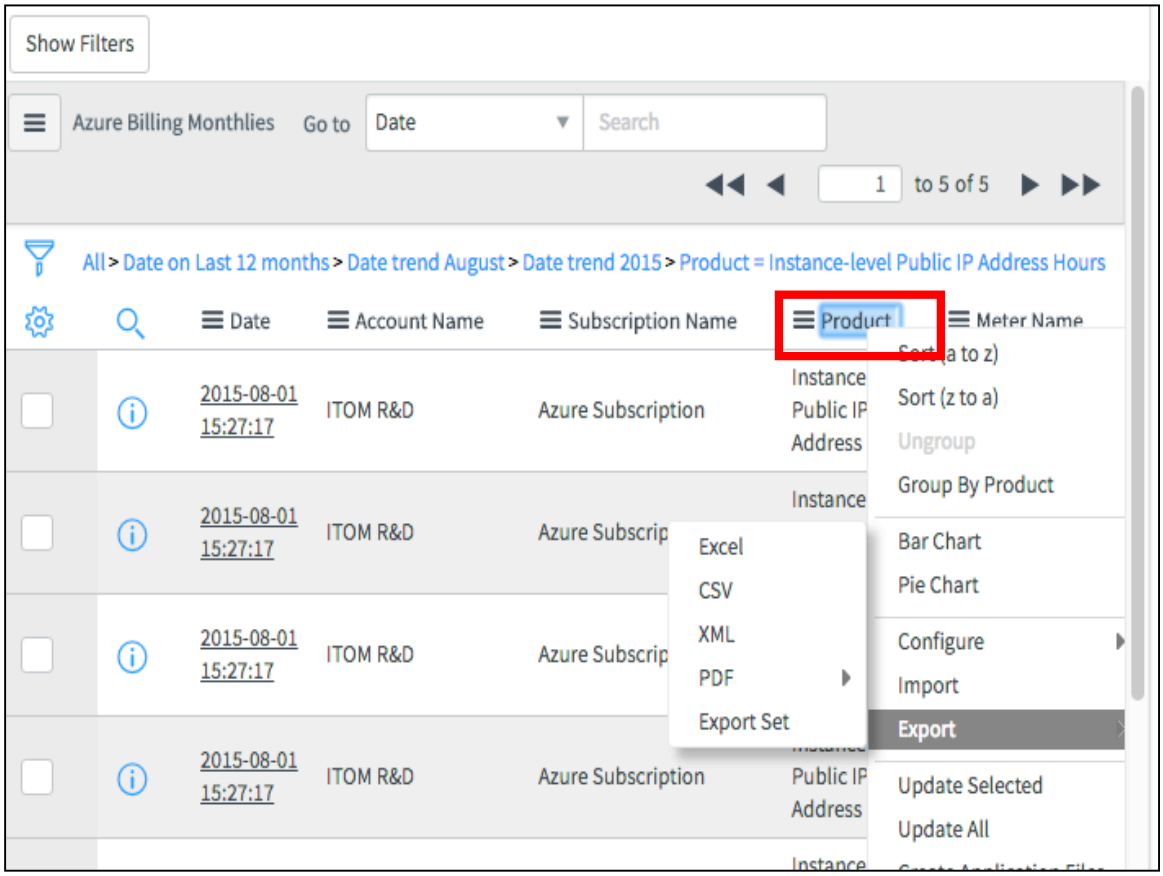
8. View the usage detailed breakdown information.



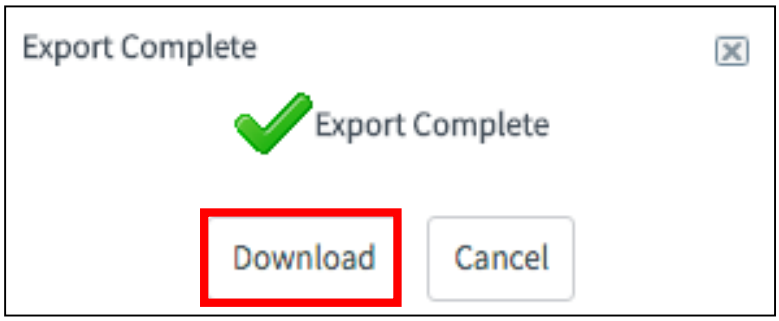
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Lab Success Verification

1. Right click the Product column and select **Export > PDF > Detailed Portrait**.

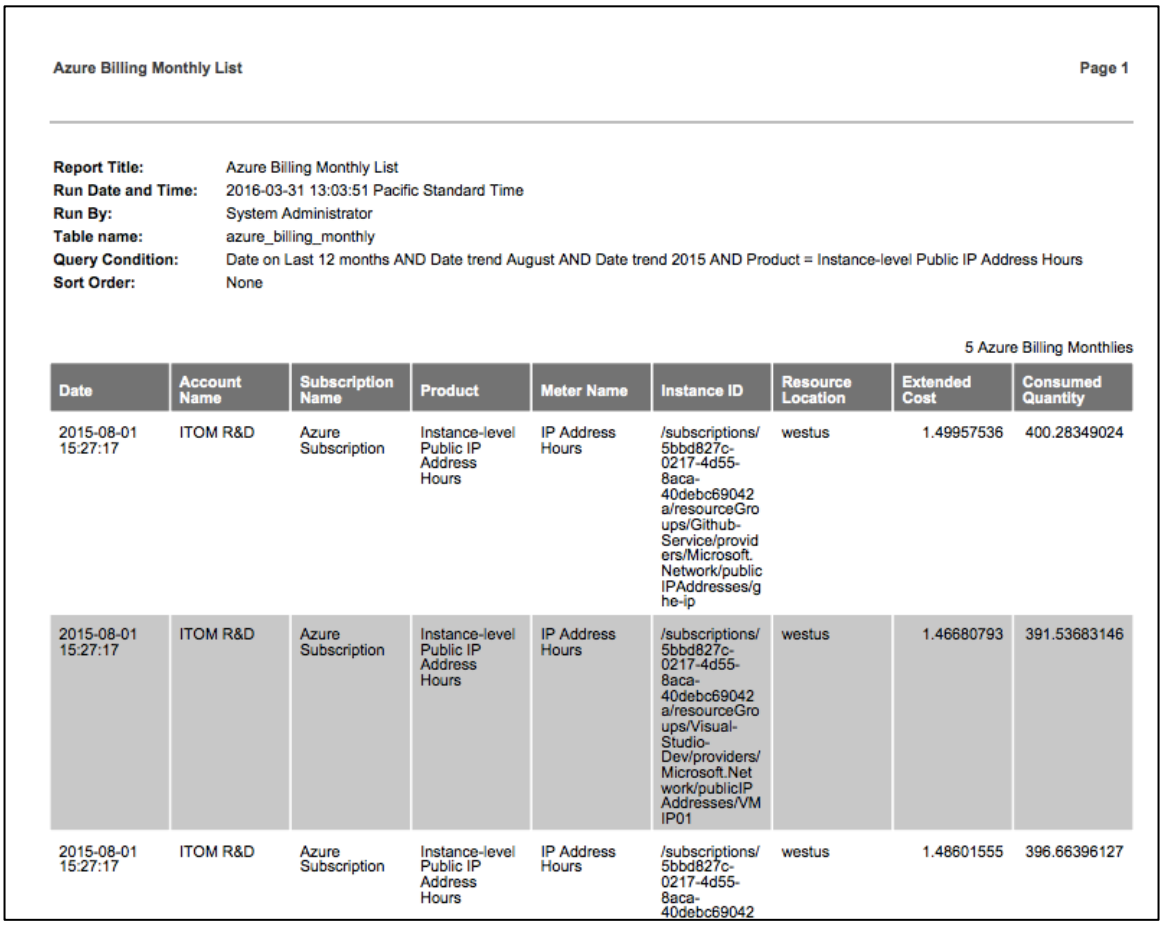


2. Click **Download**.



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3. Open the Downloaded PDF and view the detailed usage and cost information.



Azure Billing Monthly List **Page 1**

Report Title: Azure Billing Monthly List
Run Date and Time: 2016-03-31 13:03:51 Pacific Standard Time
Run By: System Administrator
Table name: azure_billing_monthly
Query Condition: Date on Last 12 months AND Date trend August AND Date trend 2015 AND Product = Instance-level Public IP Address Hours
Sort Order: None

5 Azure Billing Monthlies

Date	Account Name	Subscription Name	Product	Meter Name	Instance ID	Resource Location	Extended Cost	Consumed Quantity
2015-08-01 15:27:17	ITOM R&D	Azure Subscription	Instance-level Public IP Address Hours	IP Address Hours	/subscriptions/5bbd827c-0217-4d55-8aca-40debc69042a/resourceGroups/Github-Service/providers/Microsoft.Network/publicIPAddresses/ghe-ip	westus	1.49957536	400.28349024
2015-08-01 15:27:17	ITOM R&D	Azure Subscription	Instance-level Public IP Address Hours	IP Address Hours	/subscriptions/5bbd827c-0217-4d55-8aca-40debc69042a/resourceGroups/Visual-Studio-Dev/providers/Microsoft.Network/publicIPAddresses/VMIP01	westus	1.46680793	391.53683146
2015-08-01 15:27:17	ITOM R&D	Azure Subscription	Instance-level Public IP Address Hours	IP Address Hours	/subscriptions/5bbd827c-0217-4d55-8aca-40debc69042	westus	1.48601555	396.66396127

Progress Report

1. Navigate to **Lab Management > Report Lab Progress**.

2. Click **I am done!**

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