

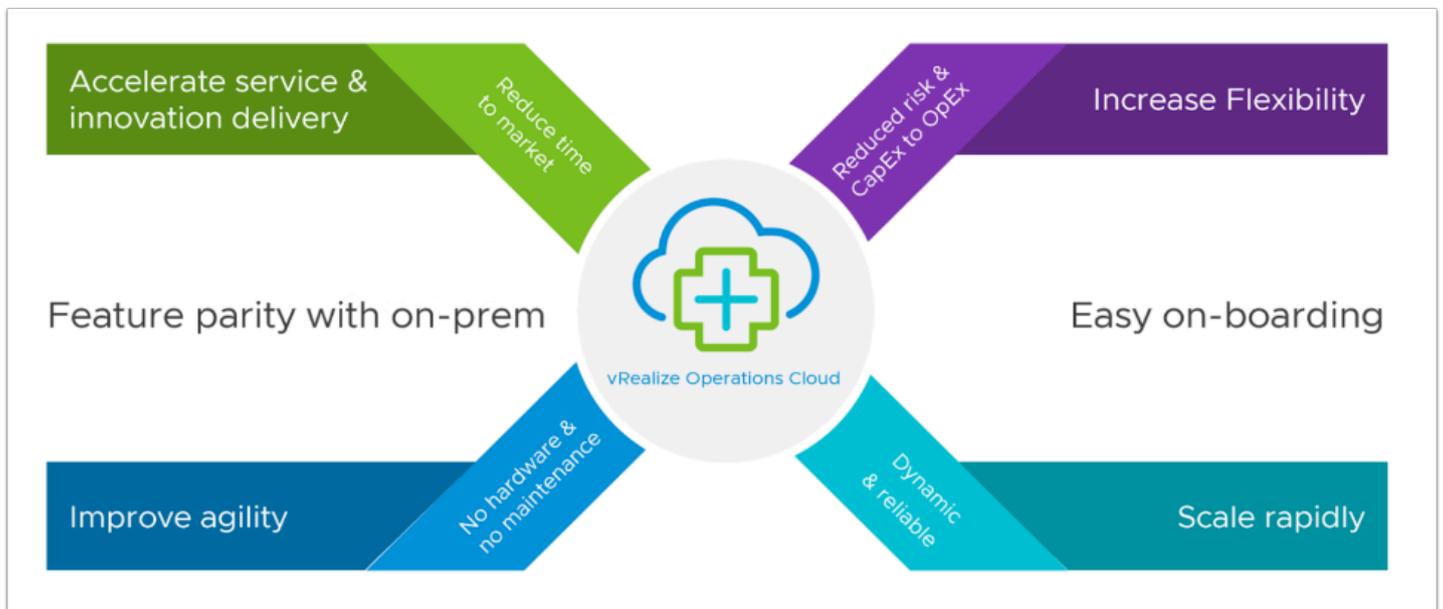
# Lab 6 - Multi-Cloud Operations Management

## Introduction

Aria Operations Cloud delivers a unified management platform to optimize, plan, and scale hybrid cloud deployments from applications to infrastructure, powered by AI/ML, as a service.

Aria Operations Cloud offers the same great features found in the on-premises version of Aria Operations, but gives customers accelerated access to new innovations. This means that the software is able to deliver self-driving IT through the prediction, prevention, and automatic remediation of issues both at the application level and at the infrastructure level.

Aria Operations Cloud Enables self-driving IT Operations Management across private, hybrid and multi-cloud environments with a unified operations platform that delivers continuous performance, capacity and cost optimization, intelligent remediation and integrated compliance through AI/ML and predictive analytics.



With Aria Operations Cloud you can:

- **Maximize ROI for Cloud Operations** - Examine the potential return on investment (ROI), reduction in unplanned downtime and other benefits that enterprises may realize when deploying VMware vRealize Operations in today's hybrid and multi cloud environments.
- **Accelerate the Journey to VMC on AWS** - Aria Operations Cloud simplifies management for your hybrid cloud from migration assessment and planning to operationalizing the hybrid cloud in production.
- **Unify visibility across multiple clouds** - Delivered as a service, Aria Operations meets the needs of modern IT strategies, including VM-based and containerized workloads, across private, hybrid, and multi-cloud deployments.
- **Increase Operational efficiency** - Bring data depth and context to your hybrid cloud by adding [VMware Aria Operations for Integrations](#). Monitor heterogeneous environments and make intelligent management decisions.

## Tasks

### Task 1 - Configure Aria Operation Accounts

- i** You can extend the monitoring capabilities of Aria Operations Cloud by installing and configuring management packs in Aria Operations Cloud to connect to, and analyze data from external data sources in your environment. Once connected, you can use Aria Operations Cloud to monitor and manage objects in your environment.

A management pack can be Login a connection to a data source, or it might include predefined dashboards, widgets, alerts, and views.

Solutions can include cloud accounts, other accounts, dashboards, reports, alerts, and other content. The cloud accounts and other accounts comprise of adapters, using which Aria Operations Cloud manages communication and integration with other products, applications, and functions. When a management pack is installed and the adapters are configured, you can use the Aria Operations Cloud analytics and alerting tools to manage the objects in your environment.

VMware solutions include adapters for the following:

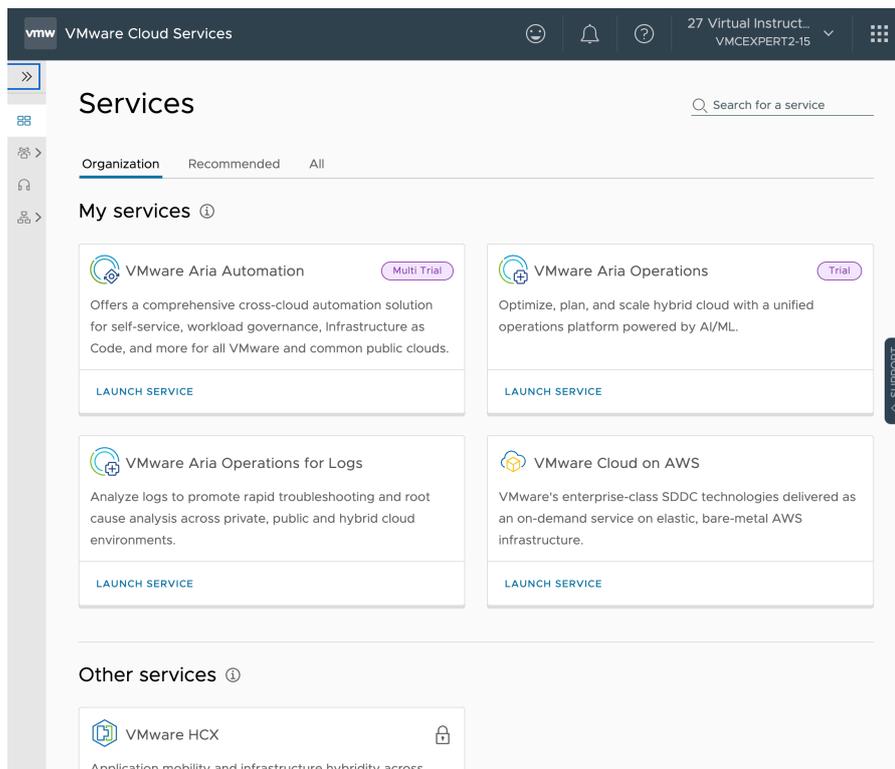
- Storage Devices

- Log Insight
- NSX for vSphere
- Network Devices
- VCM

Third-party solutions include AWS, SCOM, EMC Smarts, and many others.

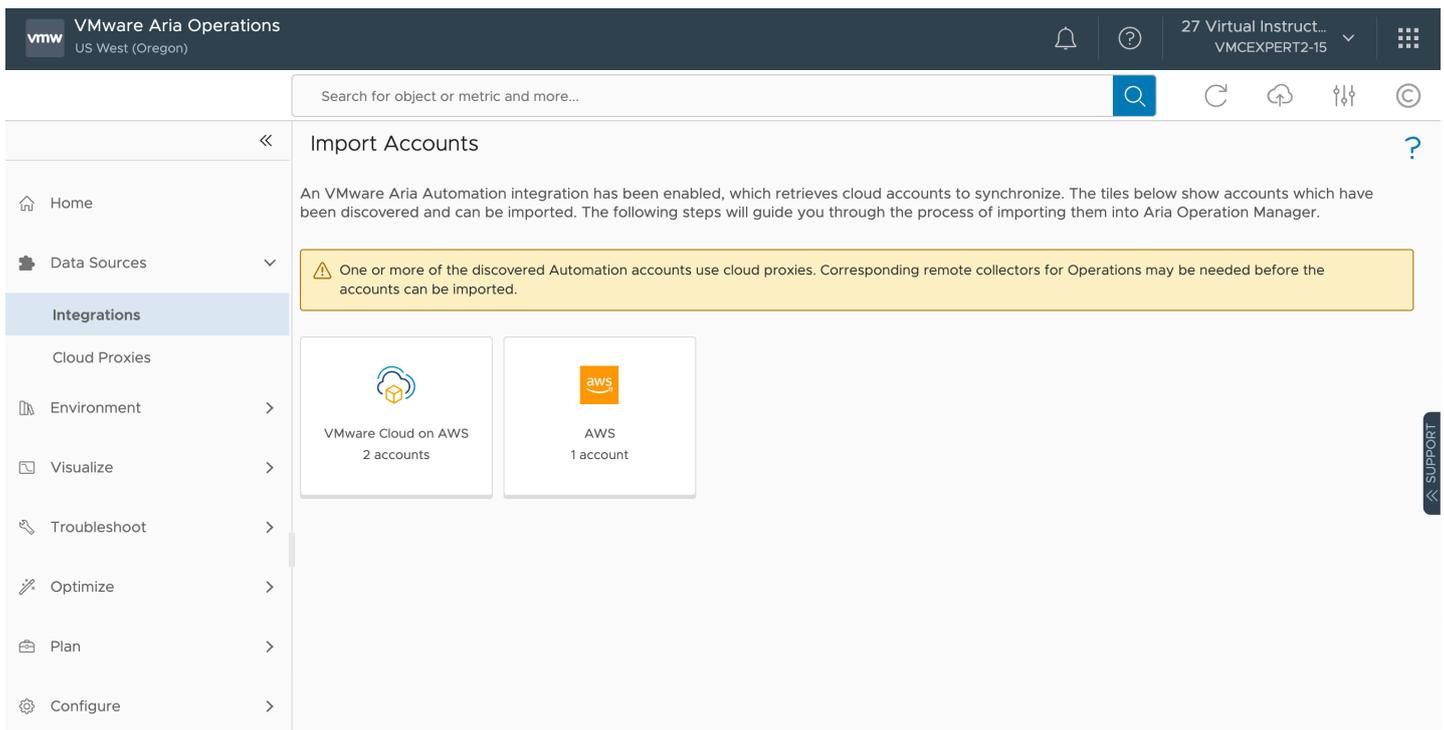
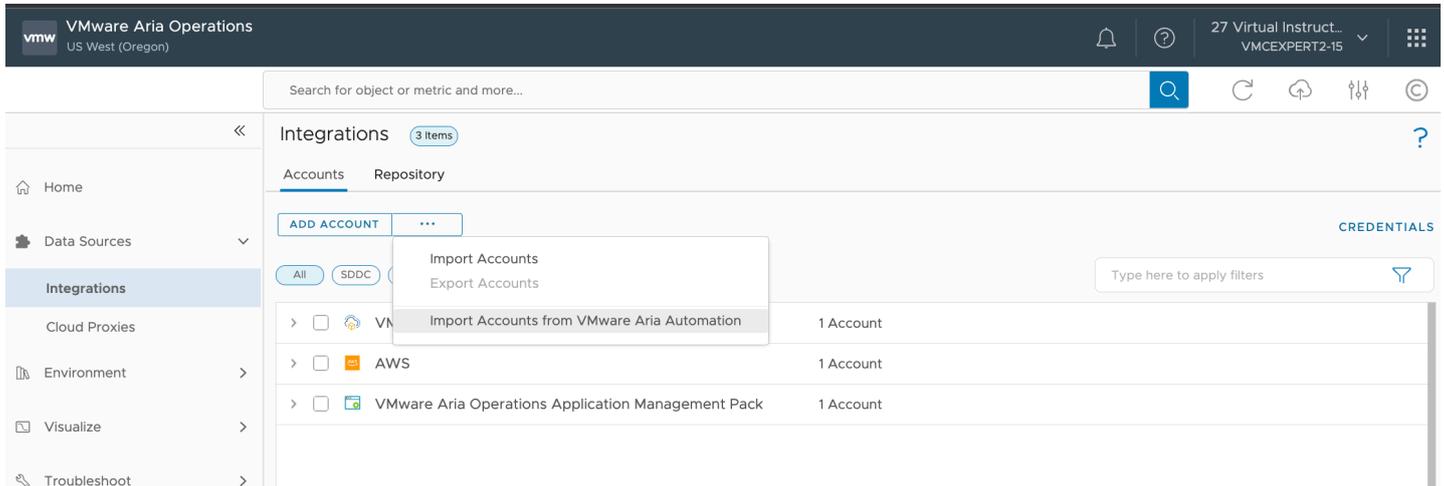
Other management packs such as the VMware Management Pack for NSX for vSphere, can be added to Aria Operations Cloud.

1. From your VDI Desktop launch a web browser and access the VMware Cloud Console <https://console.cloud.vmware.com/>
2. Log using your VMware Cloud Login if required
  - Username: **vmcexpert#-xx@vmware-hol.com**
  - Password: **VMware1!**
3. Right Click the **VMware Cloud on AWS** tile and choose open in a new window  
Or, in a new browser tab go to <https://vmc.vmware.com/console/sddcs>
4. Click the **VMware Aria Operations Cloud** tile



5. In the left pane, under **Data Sources**, click **Integrations**
6. Click the **ellipsis** (3 horizontal dots), then click **Import Accounts from VMware Aria Automation**
7. Click **VMware Cloud on AWS**

8. Select the check box next to your SDDC
9. In the Default Collector Group Dropdown select your Aria Operations Proxy Appliance
10. Repeat step 9 for **your VMC on AWS vCenter** and **NSX-T Manager** (3 Proxy drop-down selections in total)
11. Click **Validate**
12. At the **Review and Accept Certificate Prompt**, click **Accept** to accept the Certificate
13. At the bottom of the page click **Import**. The Status will show Warning while the services start and data collection begins. **This process takes up to 5 minutes.**



VMware Aria Operations  
US West (Oregon)

27 Virtual Instruct...  
VMCEXP2-15

Search for object or metric and more...

### Import Accounts

Review the discovered cloud accounts below and verify that each credential can be validated. vCenter and VMC cloud accounts will also require that you specify a suitable Collector/Group unless they are directly reachable from VMware Aria Operations.

Account Name	URL	Credential	Collector / Group	Action
<input checked="" type="checkbox"/> VMC on AWS 29	https://api.mgmt.clk	CSP Token imported	aops-proxy_2-29	VALIDATE
VMCEXP2-29	10.229.14.4	cloudadmin@vmc.local (imported)	aops-proxy_2-29	
VMC on AWS 29 - NSX-T	nsxManager.sddc-52-43-161-87.vmwarevmc.com	Reference to VMC CSP Token	--Select--	
				Default collector group Ungrouped Collectors aops-proxy_2-29
<input type="checkbox"/> vmcexpert2_30 VMC	https://api.mgmt.clk	CSP Token imported	Default collector group	VALIDATE
d82a2def-2a24-476d-b07a-1382e291b42f	10.230.14.4	cloudadmin@vmc.local (imported)	--Select--	
vmcexpert2_30 VMC - NSX-T	nsxManager.sddc-52-32-61-72.vmwarevmc.com	Reference to VMC CSP Token	--Select--	

## Review and Accept Certificate

Certificate Thumbprint: 24f41904981d0ae6ff9ba82f38585968e38fba10  
 Issued to: CN=vcenter.sddc-35-160-56-71.vmwarevmc.com, OU=CPBU, O="VMware, Inc", L=P  
 Issued by: CN=Entrust Certification Authority - L1K, OU="(c) 2012 Entrust, Inc. - for authorized  
 Expires: May 9, 2023 7:08:57 PM GMT-04:00

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Click Accept if you trust the certificate. Use the credentials to connect.

CANCEL ACCEPT

8

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Search for object or metric and more...

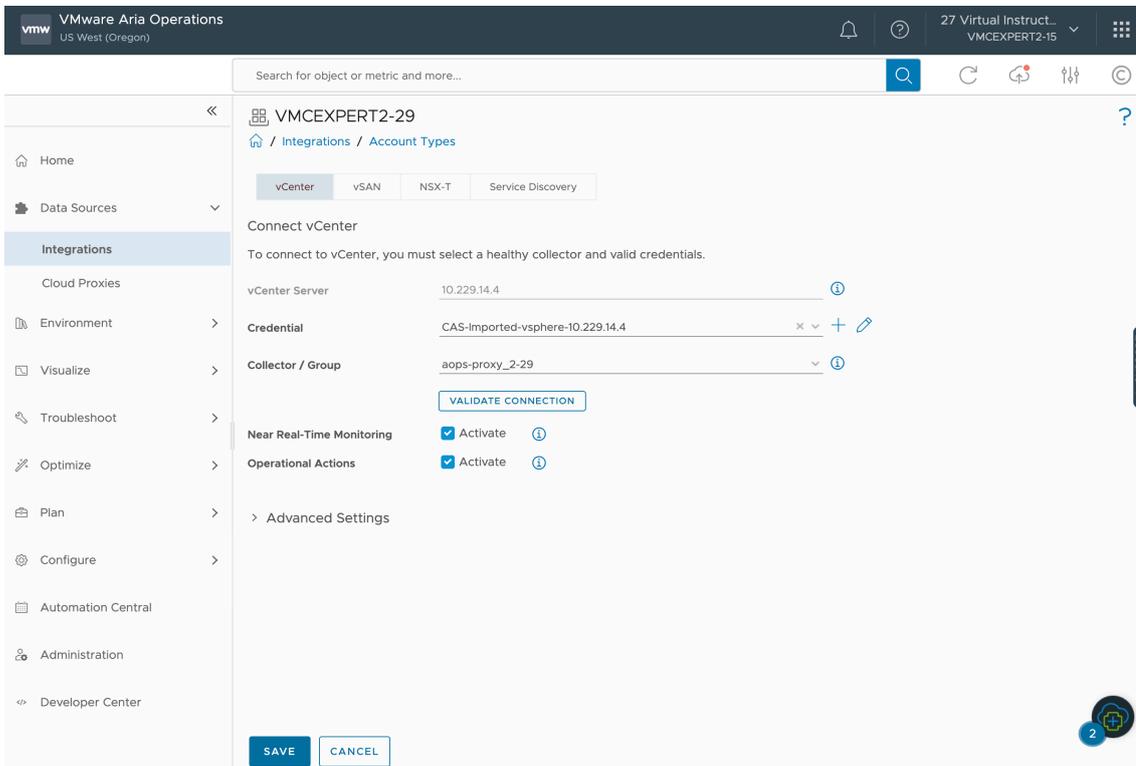
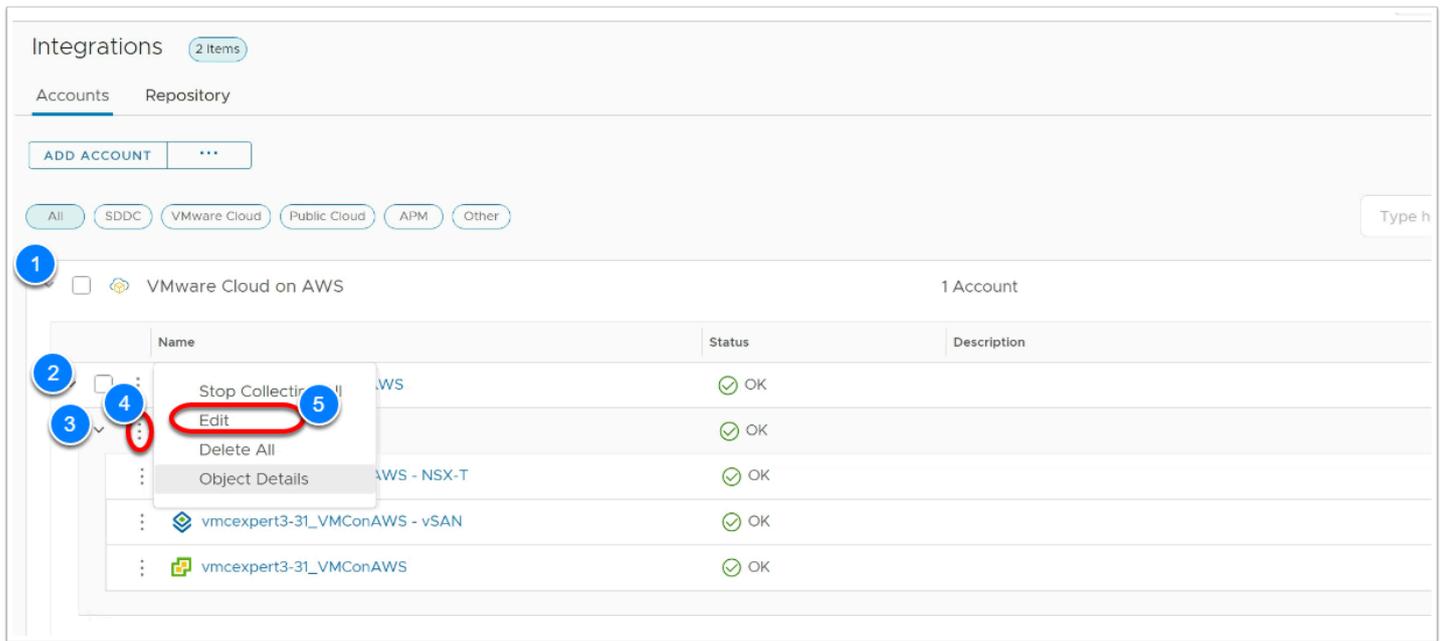
### Import Accounts

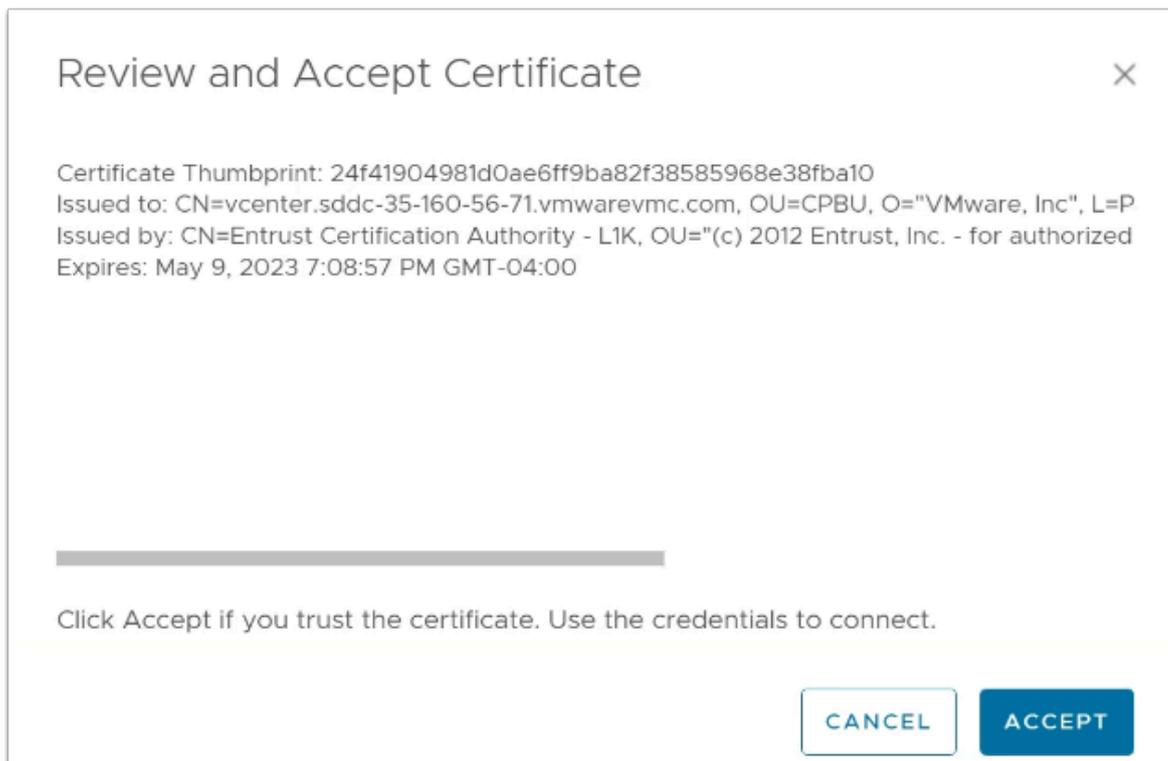
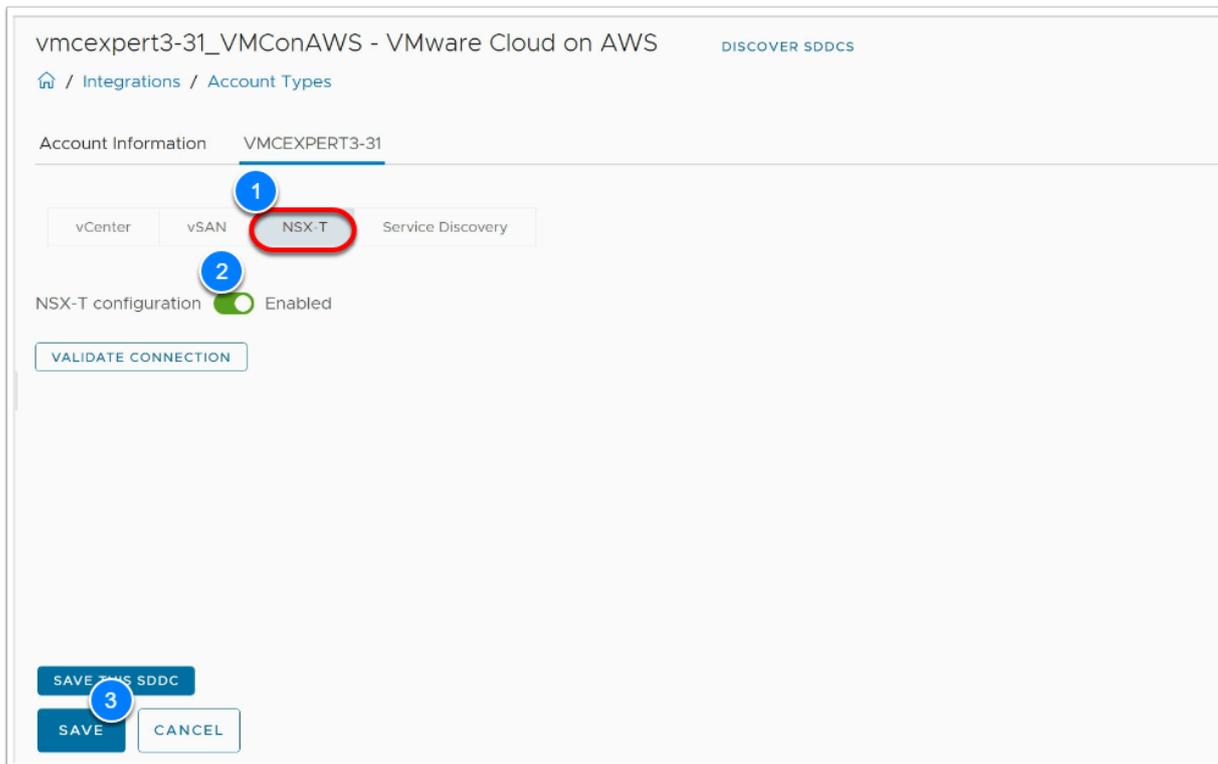
Review the discovered cloud accounts below and verify that each credential can be validated. vCenter and VMC cloud accounts will also require that you specify a suitable Collector/Group unless they are directly reachable from VMware Aria Operations.

Account Name	Import from	Credential	Collector / Group	Status
VMC on AWS 29 dd70b1f0-dedc-43bf-8000-8f9d70af299c	https://api.mgmt.clk	CSP Token imported	aops-proxy_2-29	SUCCESS
VMC on AWS 29 10.229.14.4	cloudadmin@vmc.local (imported)	Credential	aops-proxy_2-29	
VMC on AWS 29 - NSX-T nsxManager.sddc-52-43-161-87.vmwarevmc.com	Reference to VMC CSP Token	Credential	aops-proxy_2-29	
vmcexpert2_30 VMC d82a2def-2a24-476d-b07a-1382e291b42f	https://api.mgmt.clk	CSP Token imported	Default collector group	VALIDATE
vmcexpert2_30 VMC 10.230.14.4	cloudadmin@vmc.local (imported)	Credential	--Select--	
vmcexpert2_30 VMC - NSX-T nsxManager.sddc-52-32-61-72.vmwarevmc.com	Reference to VMC CSP Token	Credential	--Select--	

IMPORT CANCEL

14. Under **Accounts**, expand **VMware Cloud on AWS**
15. Expand your VMware Cloud on AWS Collection (i.e. **vmcexpert3-31\_VMConAWS**)
16. Expand your **VMC on AWS SDDC** (i.e. **VMCEXP2-31**)
17. Click the **three vertical dots** to the left of your SDDC, click **Edit**
18. Check **Near Real-Time** Checkbox to **Activate** it
19. In the **Real-Time Monitoring** dialog check the **I Understand the affects of near real-time monitoring** checkbox
20. Click **OK**
21. Click **Validate Connection**
  - If prompted, **Accept** the certificate presented
22. Click the **NSX-T** Tab
23. Move the **slider to enable** the collection of NSX-T configuration
24. Click **Validate Connection**
25. Click **OK**
26. Click **Save**





27. Under **Accounts**, expand VMware Cloud on AWS
28. Expand your VMware Cloud on AWS Collection (i.e. **vmcexpert3-31\_VMConAWS**)
29. Expand your VMC on AWS SDDC (i.e. **VMCEXPERT3-31**)
30. The status for all SDDC components should read **OK**.
  - **Note: You may need to wait for up to 5 mins and refresh as data collection happens**

The screenshot shows the 'Integrations' page with 2 items. Under the 'Accounts' tab, there is an 'ADD ACCOUNT' button and a menu icon. Below are filter buttons for 'All', 'SDDC', 'VMware Cloud', 'Public Cloud', 'APM', and 'Other'. A search bar is present with the text 'Type here to apply filters'. The main table lists accounts with their names, status (all 'OK'), descriptions, and collectors (all 'vROPs-Proxy\_3-31'). One account is expanded to show a sub-account 'VMCEXP3-31' and five other sub-accounts.

 We will now add your AWS account to Aria Operations Manager by importing the account information from Aria Automation. Importing accounts from Aria Automation ensures we don't share cloud accounts details with multiple users, management of those accounts can also therefore be done centrally.

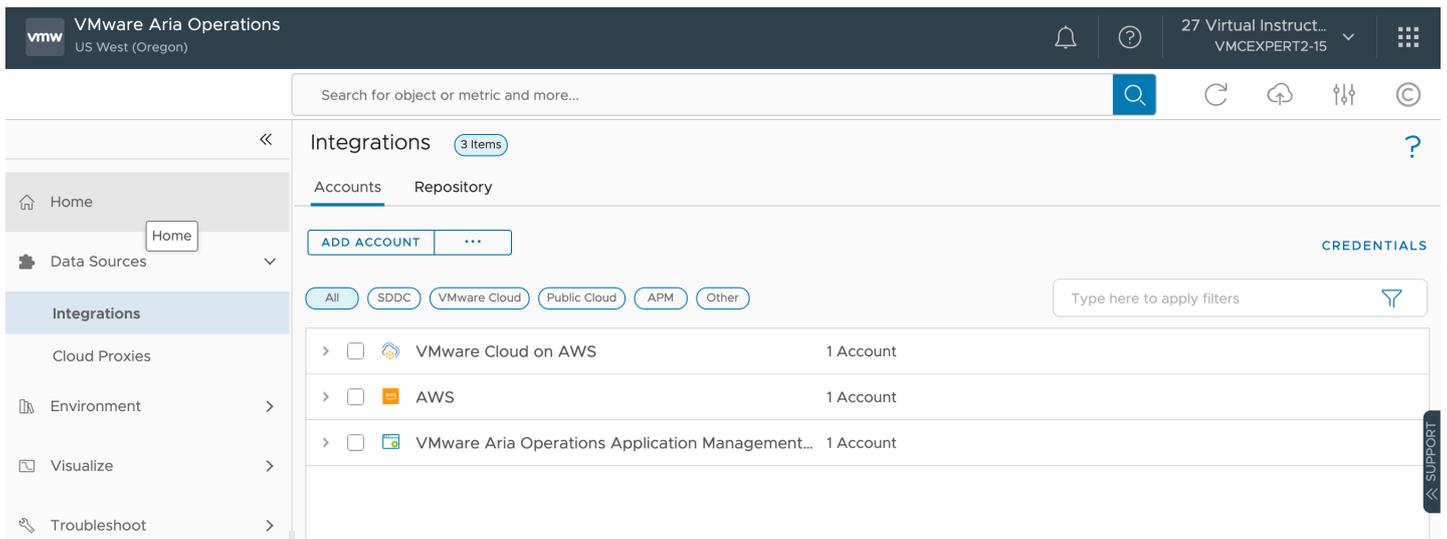
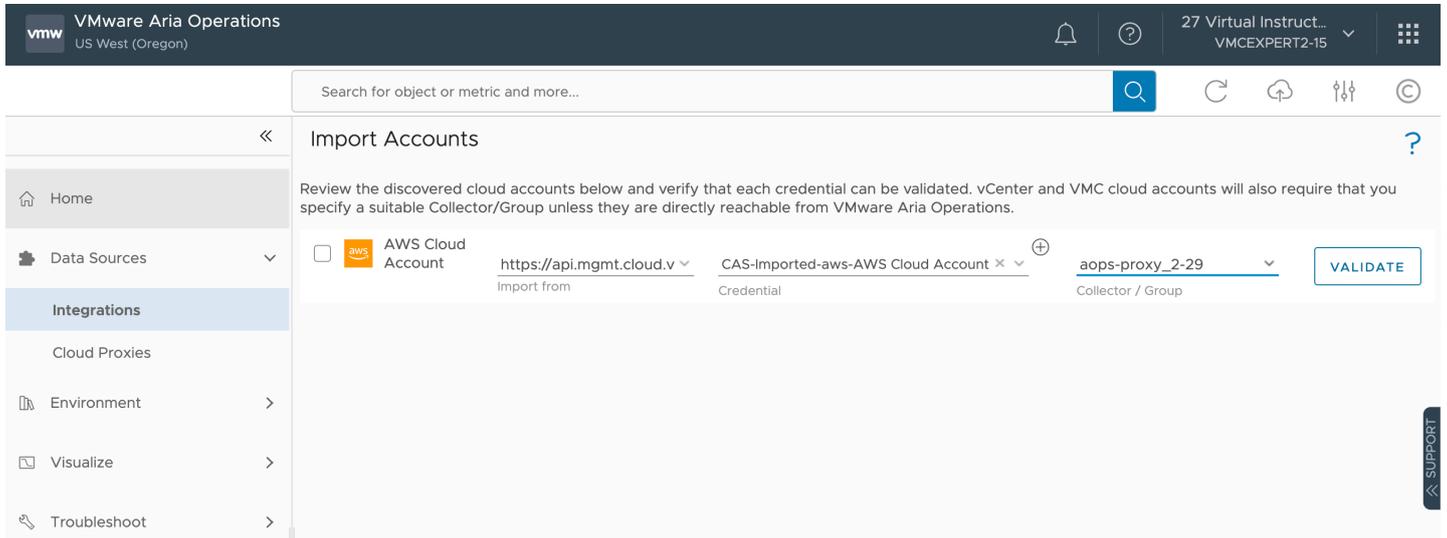
31. Click the **3 horizontal dots** next to Add Account
32. Click **Import Accounts from VMware Aria Automation**

The screenshot shows the VMware Aria Operations interface. The top navigation bar includes the VMware logo, 'VMware Aria Operations US West (Oregon)', a notification bell, a help icon, and a user profile '27 Virtual Instruct... VMCEXP3-31-15'. A search bar is at the top. The left sidebar has a navigation menu with 'Home', 'Data Sources', 'Integrations', 'Cloud Proxies', 'Environment', 'Visualize', 'Troubleshoot', and 'Optimize'. The main content area shows the 'Integrations' page with 2 items. The 'ADD ACCOUNT' button has a dropdown menu open with three options: 'Import Accounts', 'Export Accounts', and 'Import Accounts from VMware Aria Automation'. The table below shows two accounts: 'VM...' and 'VMware Aria Operations Application Management... 1 Account'.

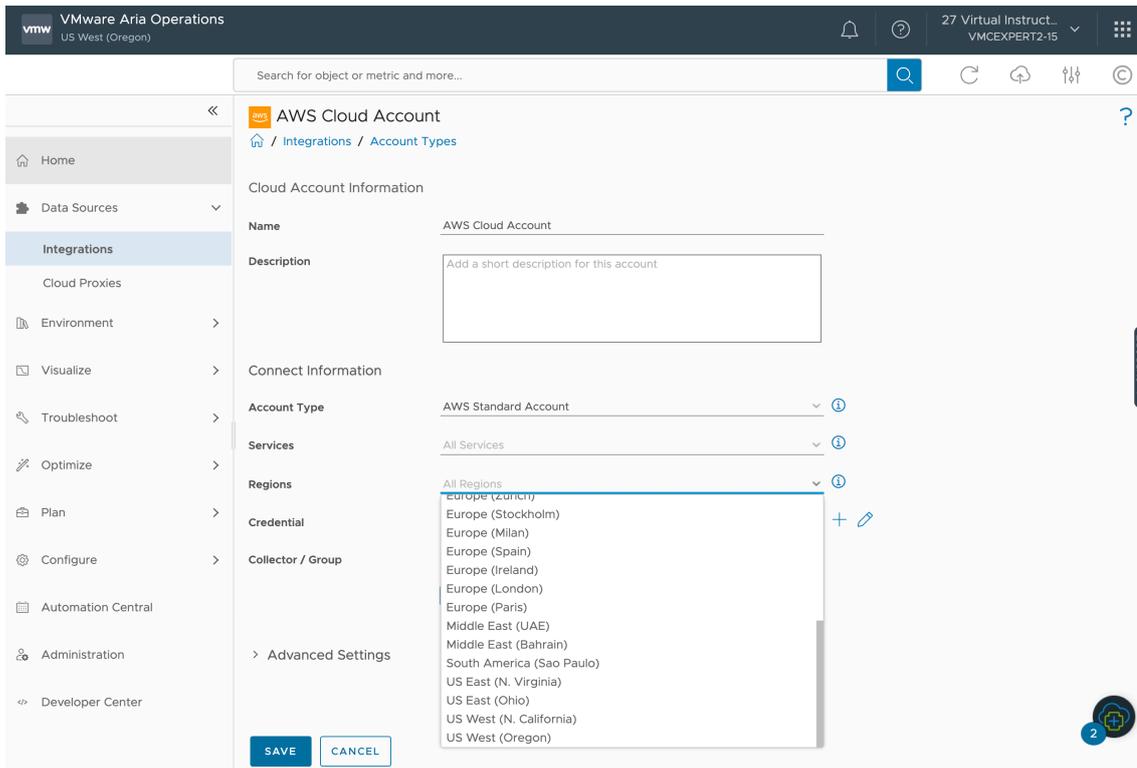
33. Select **AWS**
  - **NOTE:** If **AWS** isn't listed as an option, the cloud account has already been imported by the student using the other SDDC in your org. An AWS account can only be imported by

a single Aria Operation Proxy. **Skip to task 1.1 and complete the remaining tasks.**  
Recall that Aria Operations is ORG based, not SDDC based.

34. Select **CAS-Imported-aws-AWS** from the credential drop-down
35. Select your AOPS Proxy in the Collector/Group drop-down
36. Click **Validate**
37. Click **Import** (at the bottom of the page)

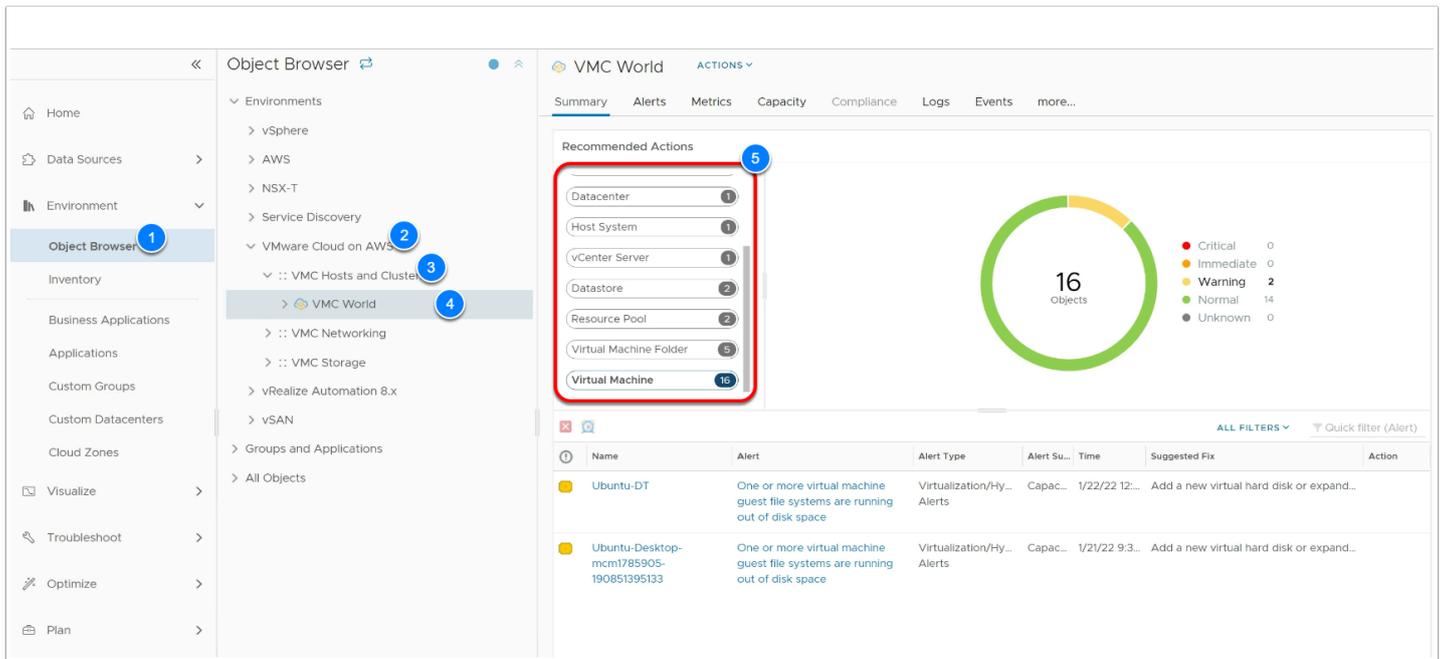


38. Expand the **AWS** Account Category
39. Select the **3 vertical dots** next to your AWS account and click Edit
40. In the Regions field select the **region your lab environment is deployed within**  
**NOTE: We only use us-west-2 (US West Oregon) for these labs**
41. Click **Save**



## Task 1.1 - Confirm the account visibility in Aria Operations Cloud

1. In the left pane, Expand **Environment**
2. Click **Object Browser**
3. Expand **VMC Cloud on AWS**
4. Expand **VMC Hosts and Cluster**
5. Select **VMC World** and confirm you can see information about the following:
  - VMC Organization
  - SDDC
  - Host System
  - vCenter
  - Virtual Machines



6. Expand **AWS**
7. Expand **AWS Accounts**
8. Select **AWS Cloud Account** to see an overview
9. Expand **AWS Cloud Account**
10. Select **AWS US West (Oregon)** to see a summary of the region
11. Expand **AWS US West (Oregon)**
12. Scroll down and select your student ID **ie VMCEXPERT#-##**
13. View the summary data for your VPC
14. Expand your **VMCEXPERT#-##** account
15. Take note of the following
  - Active Alerts
  - Metrics
  - Relationship
16. Expand **AWS Regions**
17. Select **AWS US West (Oregon)**
  - Instances
  - Relationship
18. Expand **US West (Oregon)**
19. Select your VMCEXPERT#-## Account
20. In the **Relationship** tile hover the mouse over the **IGW**
21. Click **Details**
22. Hover your mouse over **VPC (VMCEXPERT#-XX)** where # is your lab environment number and xx is your student number
23. Click **Details**

The screenshot displays the VMware Aria Operations console for VMCEXP2-29. The left sidebar shows the navigation menu with 'Object Browser' selected. The main content area is divided into several sections: 'Active Alerts' (no alerts), 'Metrics' (all values at 0), 'Tags' (listing cloudformation tags), and 'Relationship' (a diagram showing connections to AWS US West (C), igw-0126009bc3a, Security Group, and Subnet).

## 24. Review the following

- Metrics
- Tags
- Relationship
  - Subnet
  - Security Group
  - Internet Gateway
  - Load Balancer (the Load balancer should be visible if you completed lab 4)

## Conclusion