VMware vRealize Operations Cloud Getting Started Guide

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VMware vRealize Operations Cloud services

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Contents

VMware vRealize Operations Cloud Getting Started Guide

This documentation contains information for administrators, virtual infrastructure administrators, and operations engineers who want to set up vRealize Operations Cloud.

Before You Begin with vRealize Operations Cloud

Before you start working in vRealize Operations Cloud, identify the public and private cloud accounts that you want to manage using vRealize Operations Cloud.

Table 1-1. Before You Onboard with vRealize Operations Cloud

To...	You need...
Sign up for or log in to vRealize Operations Cloud.	A VMware ID ■ Set up a My VMware account using your corporate email address. ■ Request for access. https://cloud.vmware.com/vrealize-operations-cloud
Connect to VMware Cloud services.	HTTPS port 443 opens to outgoing traffic with access through the firewall to: ■ *.vmwareidentity.com ■ gaz.csp-vidm-prod.com ■ *.vmware.com ■ *.vrops-cloud.com ■ s3-us-west-2.amazonaws.com/vrops-cloud-proxy **Note** These network settings are used by cloud proxy to connect to vRealize Operations Cloud. Make sure your cloud proxy can communicate with these URLs over HTTPS. For more information, see Configuring Cloud Proxies in vROps Cloud.
Add a vCenter cloud account.	Provide an account with the following read and write privileges: ■ vCenter IP address or FQDN ■ Permissions required to install a cloud proxy on the vCenter Server. For more information on privileges, see Privileges Required for Configuring a vCenter Adapter Instance.

How to Get Started with vRealize Operations Cloud

The VMware Cloud services platform is a web-based application that supports any number of VMware Cloud services.

Sign up for vRealize Operations Cloud

You can request access to the vRealize Operations Cloud program using the following link: https://cloud.vmware.com/vrealize-operations-cloud

You will receive an invitation email with an activation link. Click the link to log in to the VMware Cloud services platform and start your vRealize Operations Cloud instance.

Configure the VMware Cloud Services Platform

After you get access to the VMware Cloud services platform, you must set up an organization or use an existing organization. VMware Cloud service platform uses organizations to provide controlled access to one or more cloud services. You must belong to an organization before you can access a cloud service.

Note   If you have an existing organization, you may want to consider using that organization to maximize integrated experiences with cloud services

After you select the organization, you can choose the region where you want your vRealize Operations Cloud instance to be hosted. vRealize Operations Cloud is supported in multiple regions. Refer vRealize Operations Cloud Release Notes for the updated list instance to be hosted.

For more information on how to use the VMware Cloud services platform, see the VMware Cloud Services Documentation.

For issues related to vRealize Operations Cloud, contact help-vrops-cloud@vmware.com.

Activate vRealize Operations Cloud from VMware Cloud on AWS

You can activate a trial version of vRealize Operations Cloud from VMware Cloud on AWS. For more information, see Activation of vRealize Operations Cloud from VMware Cloud on AWS

Activation of vRealize Operations Cloud from VMware Cloud on AWS

When you activate vRealize Operations Cloud from VMware Cloud on AWS you get the opportunity to quickly onboard and use vRealize Operations Cloud service. vRealize 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.

As an organization owner in VMware Cloud on AWS, you will select the SDDC which will be configured for the trial access to vRealize Operations Cloud. After you have chosen to activate the service, the configurations needed for vRealize Operations Cloud service configuration occurs automatically eliminating the need for you to manually configure vRealize Operations Cloud Proxy which is needed for data collection.

When the vRealize Operations Cloud activation process is complete, you'll have access to vRealize Operations Cloud services trial which is free of charge and is valid for 30 days. After the trial period ends, the vRealize Operations Cloud service will not be available for access.

Activate vRealize Operations Cloud from VMware Cloud on AWS

Activate the vRealize Operations Cloud trial from VMware Cloud on AWS to explore the features of vRealize Operations Cloud. In this procedure, you'll activate the vRealize Operations Cloud trial for the SDDC of your choice from within the VMware Cloud on AWS UI.

Prerequisites

Before you begin, you'll need to have the credentials to log in to VMware Cloud Services console as a user with the Organization Owner role in the organization that owns the SDDC.

Procedure

1   Log in to your VMware Cloud on AWS console, open the page that lists all of your SDDCs, and click on **View Details** in the SDDC which will be configured for vRealize Operations Cloud trial.

2   On the selected SDDC, click the **Add Ons** tab.

3   On the SDDC's vRealize Operations Cloud add on card, click **Activate** in the pop-up dialog box that dispalys to start the activation process.

   The activation can take up to 90 minutes.

4   Once the activation is complete, your organization is created with 30 day trial access to vRealize Operations Cloud. You will see the **OPEN VREALIZE OPERATIONS** link. Click the link to launch vRealize Operations Cloud.

Results

You have access to most of the features of vRealize Operations Cloud with your SDDC auto configured to be monitored. A cloud proxy virtual machine is auto deployed and powered on in the associated vCenter Server and you do not need to provide any configuration details for the VMC SDDC.

Explore vRealize Operations Cloud from VMware Cloud on AWS

Explore the features of vRealize Operations Cloud to understand its functionality. Click the ? icon on a page to launch the online help for that screen.

Prerequisites

Complete the trial activation process.

Procedure

1   Click the **OPEN VREALIZE OPERATIONS** link from within VMware Cloud on AWS to launch he vRealize Operations Cloud.

2   vRealize Operations Cloud UI is launched, presenting the SDDC summary in the Environment section of vRealize Operations Cloud. On this page, you can explore the following tabs:

- Alerts

- Metrics

- Capacity

- Compliance

- Logs

- Events

3   Explore the dashboards which will help you get started with monitoring your VMware environment. The predefined dashboards help you understand your environment, the workload distribution of your hosts, clusters, and datastores, the capacity of your data center, and troubleshoot your VMs. For more information, see Predefined Dashboards in the *vRealize Operations Cloud Configuration Guide*. The following dashboards are useful:

- VMC Inventory Dashboard

- Management VM Monitoring

4   Pick a VM and explore the VM summary page. Use the troubleshooting workbench to find potential evidences for alerts. For more information see Troubleshooting Workbench Home Page in the *vRealize Operations Cloud User Guide.*

Purchase vRealize Operations Cloud from VMware Cloud on AWS

To purchase vRealize Operation, including during the trial period, choose the 'Create Subscription' option available in the SDDC's vRealize Operations Cloud add on card.

Known Limitations

Known Limitations of the vRealize Operations Cloud activation from VMware Cloud on AWS.

- Near Real Time Monitoring is not supported out of the box. To enable it, contact VMware support if you have the requirement.

- Application Monitoring is not supported out of the box. For workaround, contact VMware support if you have the requirement.

- Service Discovery is not supported.

- SDDC Health Management Pack is not supported.

- Management Packs are not supported out of the box. The workaround is to install a separate cloud proxy and configure it for Management Packs.

- VMC Billing and the ability to change Configuration Limits is not supported out of the box.

To enable VMC Billing and change configuration limits replace the default VMC credentials (Navigate to **Administration > Solutions > Cloud Accounts** and select the auto configured VMC account) with new credentials containing the CSP Refresh Token.

- SDDC Discovery is not supported out of the box. To enable it replace the default VMC credentials as above.

- vRealize Operations Cloud will be supported in the US-West region, regardless of where the SDDC is located.

Notes

- If vRealize Operations Cloud service already exists in the given org, the activation will get associated with that instance of vRealize Operations Cloud and not start a new trial period.

- vRealize Operations Cloud activation will take up to 90 minutes. During this time you will see the tile showing a spinner while the setup finishes.

- In an organization if vRealize Operations Cloud is activated for an SDDC from VMC UI, then for rest of the discovered SDDC's monitoring same activation flow needs to be followed and you cannot manually configure a cloud proxy for the discovered SDDC's monitoring

After You Log In to vRealize Operations Cloud

After you log in to your vRealize Operations Cloud, you can monitor your Software-Defined Data Center (SDDC) vCenter Server instances using vRealize Operations Cloud.

To get your SDDC connected to your vRealize Operations Cloud setup, deploy the cloud proxy from vRealize Operations Cloud. For more information, see Configuring Cloud Proxies in vRealize Operations Cloud.

To start monitoring your SDDC vCenter Server instances, connect your vRealize Operations Cloud with the vCenter Server using cloud proxy. For more information, see Adding Accounts.

Quick Start Page

After you log in to vRealize Operations Cloud from a web browser, you see the Quick Start page.

The Quick Start page provides an overview of key areas of vRealize Operations Cloud.

Quick Start Page Before Cloud Accounts Are Configured

When you log in to vRealize Operations Cloud and no cloud accounts are configured, the Quick Start page displays guided tours in the Optimize Performance, Optimize Capacity, Troubleshoot, and Manage Configuration sections. Watch these guided tours to understand how the product functions. If your user account does not have administrative rights, the Quick Start page prompts you to contact the administrator for configuration of cloud accounts.

As an administrator, you must also first set up a cloud account or configure an adapter before you can start using vRealize Operations Cloud. Until you do so, you see links to guided tours about vRealize Operations Cloud.

Quick Start Page After Cloud Accounts Are Configured

When you log in to vRealize Operations Cloud after the cloud accounts or adapter instances are configured, and the initial setup is complete, the Quick Start displays the following sections.

Optimize Performance

Displays links to workload optimization, right sizing, recommendations, and optimization history.

Optimize Capacity

Displays links to assess capacity, reclaim resources, plan scenarios, assess costs and optimize cost.

Troubleshoot

Displays links to the troubleshooting workbench, alerts, logs, dashboards and applications.

Manage Configuration

Displays links to the compliance, configuration of virtual machines, hosts, clusters and distributed switches, and the sustainability dashboard.

The other tiles you can see are:

Extend Monitoring

Displays links to the following VMware website:

- True Visibility Suite

- vRealize Operations Aggregator

- Explore vRealize Operations REST APIs

Learn and Evaluate

Displays links to the following sites:

- Introduction to vRealize Operations

- Evaluate vRealize Suite

- vRealize Operations Cloud Guided Tour

- Additional Learning

- Evaluate Sample Dashboards

- Browse and download code samples from VMware

Run Assessments

Displays shortcut links to the VMware vRealize Cloud Management Assessment and vSphere Optimization Assessment (Deprecated) sites.

For more information on how to use vRealize Operations Cloud features, see the VMware vRealize Operations Cloud Documentation.

In-App Guided Tours

In-app guided tours in vRealize Operations Cloud help you get started with configuring and using the product. These guides are designed to help you achieve the best time to value by enabling the self-learning journey. In-app guided tours are categorised based on high level goals. Within each tour, you will see a list of guides which will help you perform tasks to achieve the goal of completing the workflow easily and quickly.

You can see the list of in-app guided tours when you click the green color + launcher icon in the bottom right of the vRealize Operations Cloud UI. The tours which are displayed depends on your role. For example, administrators and trial users see different in-app tours.

vRealize Operations Cloud offers the following in-app guided tour categories:

- Connect VMC Tour

- Connect vSphere Tour

- Create Dashboards Tour

- Explore Availability Tours

- Explore Dashboards & Reports Tour

- Explore Inventory Tour

- Generate a Report Tour

- Introduction to In Product Guides

- Performance Management Tours

- Setup Alert Notifications Tour

- Troubleshoot an Object Tour

Click on a tour to see the guides under it. When you launch a guide, vRealize Operations Cloud displays on-screen help text which gives you instructions on how to complete the task. The on-screen text can also help you navigate to the page in the vRealize Operations Cloud UI from where you must start the task. The on-screen help text changes as you move to the next step of the task. You can exit the guided tour at any point of time.

Get Support

You can get support after logging in to the vRealize Operations Cloud console and opening the Support panel. The Support panel is available on every screen.

Procedure

1 To get support:

  a   Make sure you are logged in to the vRealize Operations Cloud console.

  b   Click the **?** (Question icon) on the top right of the console.

  c   Use the Support panel to:

   ■ Search for answers through product documentation, communities, and knowledge-base articles.

   ■ View page level help.

   ■ View help content specific to the current screen on docs.vmware.com.

   ■ Contact VMware support engineers or customer support representatives.

   ■ Create and manage support requests.

   ■ Ask questions in VMware communities.
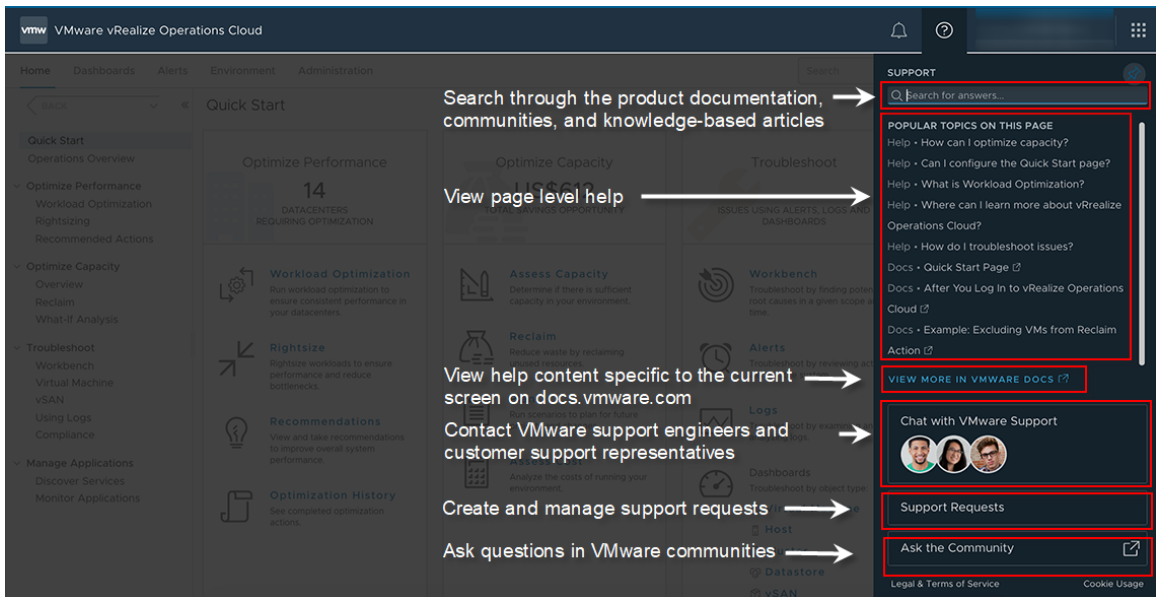
2 See How Do I Get Support for more information about using VMware Cloud Services in-product support.

Cloud Proxy FAQ

This topic covers some frequently asked questions about vRealize Operations Cloud Proxy.

Configuration

1   What are the prerequisites for setting up a cloud proxy account?

    Prerequisites are given in the topic, Configuring Cloud Proxies in vRealize Operations Cloud.

2   What does one-way connection mean?

Only outbound connections are initiated from cloud proxy to vRealize Operations Cloud, over `tcp/443`. Inbound ports to cloud proxy are not required. This ensures higher security as firewall ports need not be open to allow incoming connections. Also, cloud proxy can facilitate vCenter actions.

3   How do I edit environment settings for cloud proxy?

You can edit vApp options. For more information, see Edit OVF Details for a Virtual Machine.

4   How are certificates managed?

Certificates are managed by cloud proxies. But for any additional proxy servers with SSL communication, you need to provide certificate(s).

5   What credential is used to login to cloud proxy?

You can login as the "root" user. You are expected to set a new password on the first login to cloud proxy VM.

SSH access is disabled by default, so the first login must be done via the vCenter console. You can run the following command to start SSH service:

```
systemctl start ssh
systemctl enable sshd
```

To reset password, see the VMWare KB Article, 2001476.

6   Where can I configure the local HTTP proxy for VMC on AWS?

Perform the following steps:

a   Login to vRealize Operations Cloud and go to the Administration page.

b   Go to Cloud Accounts.

c   Select VMC on AWS.

d   Click + next to credentials to add a credential.

e   In proxy details, add details for the local HTTP proxy. (Do not add details for cloud proxy here).

For more details, see Configuring VMware Cloud on AWS in vRealize Operations Cloud.

7   Will I be notified if the connection between cloud proxy and vRealize Operations Cloud breaks down?

You can configure alerts/notifications on the *vRealize Operations cloud proxy* object. For more information, see Monitoring the health of Cloud Proxies.

vRealize Operations Cloud automatically generates notifications for the following scenarios:

■   Cloud proxy is not reachable.

■   Cloud proxy is nearing sizing limits.

8   How do I change account for cloud proxy?

You can edit vApp options. For more information, see Edit OVF Details for a Virtual Machine.

9 How can I check the status of cloud proxy?

For more information, see Monitoring the health of Cloud Proxies.

Sizing

1 How should I size the cloud proxy?

For information on sizing, see the VMWare KB article 78491

2 How would I know if cloud proxy is nearing sizing limit?

vRealize Operations Cloud customers will receive an email when cloud proxy is nearing sizing limit.

Upgrade

1 How do I upgrade cloud proxy?

Cloud proxy is upgraded automatically. In case the upgrade fails, see the VMWare KB article 80590.

Migration

1 What is the difference between Remote Collector, Application Remote Collector and cloud proxy?

The Remote Collector performs the data collection role from remote location sites and uploads data to the analytics nodes. Bidirectional connectivity is required between Remote Collector and analytics nodes. The Application Remote Collector discovers and collects data for applications running in Guest operating systems at a scale .

Cloud proxy takes the role for both Remote Collector and Application Remote Collector, in addition, it needs only one-way connectivity to analytics nodes and does not require connectivity from analytics nodes to itself.

The best practice for the on-prem vRealize Operations Cloud users is to leverage cloud proxy, for the vRealize Operations Cloud users this is the only supported option.

2 Should I use Remote Collector or cloud proxy for monitoring?

VMWare recommends that you use cloud proxy to take advantage of the latest enhancements. Also, application monitoring is only supported through cloud proxy.

High Availability

1 Is high availability supported?

Cloud proxy supports high availability. You can add multiple cloud proxies to a collector group. If the collecting cloud proxy fails or gets disconnected, collection can be picked up by another proxy in the group.

Note   Since the failover is initiated after a period of 10 minutes, few collection cycles are lost.

To troubleshoot cloud proxy issues, see Cloud Proxy Troubleshooting.

Configuring Cloud Proxies in vRealize Operations Cloud

Using cloud proxies in vRealize Operations Cloud, you can collect and monitor data from your on-prem data center or cloud (VMC on AWS, VMC on Dell EMC, Azure VMware Solution, Google Cloud VMware Engine). You can deploy one or more cloud proxies in vRealize Operations Cloud to create a one-way communication between your end-point environment and vRealize Operations Cloud. The cloud proxies work as one-way remote collectors and upload data from the end-point environment to vRealize Operations Cloud. Cloud proxies can support multiple vCenter Servers or cloud accounts. For public cloud (AWS, Azure, GCP), the default collector can collect and monitor data.

Prerequisites

- Verify that you have an IP address, a DNS entry, and permissions to deploy OVF templates in vSphere.

- Log in to vSphere and verify that you are connected to a vCenter Server system.

- Verify that the outgoing HTTPS traffic is allowed for the cloud proxy. The cloud proxy communicates with the vRealize Operations Cloud gateway using HTTPS.

- Connect to VMware Cloud services using the HTTPS port 443 as it opens to the outgoing traffic with access through the firewall to:

  - *.vmwareidentity.com

  - gaz.csp-vidm-prod.com

  - *.vmware.com

  - *.vrops-cloud.com

  - s3-us-west-2.amazonaws.com/vrops-cloud-proxy

- Add a vCenter cloud account and provide an account with the following read and write privileges:

  - vCenter IP address or FQDN

  - Permissions required to install a cloud proxy on the vCenter Server.

  For more information on privileges, see, Privileges Required for Configuring a vCenter Adapter Instance.

Procedure

1 Log in to vRealize Operations Cloud.

2 From the left menu, click **Data Sources > Cloud Proxy**, and then click **New**.

3   Save the OVA path. Optionally, click **Download Cloud Proxy OVA** to download and save the OVA file locally.

   ▪ To copy the link for the VMware vRealize® Operations Cloud Appliance™, click the **Copy Path** icon for the Cloud Proxy OVA.

   ▪ To download and save the OVA file locally, click **Download Cloud Proxy OVA**.

4   Navigate to your vSphere, select the name of your vCenter Server cluster, and select **Deploy OVF Template** from the **Actions** menu.

5   Insert the ova link and then click **Next**.

   ▪ Paste the cloud proxy ova link in the **URL** field.

   ▪ Click the **Local File** option, browse, and select the downloaded OVA file.

6   Follow the prompts to install the OVA on your vCenter Server.

   For the most current information about sizing and scaling, see Knowledge Base article 78491.

7   When prompted to enter the One Time Key (OTK) in the **Customize template** screen, return to the Install Cloud Proxy page in vRealize Operations Cloud, and click the **Copy Key** icon.

   The One Time Key expires 24 hours after generation. To avoid using an expired key, click **Regenerate Key** before proceeding. The one time key is used by the cloud proxy to authenticate to vRealize Operations Cloud.

8   Return to vSphere and paste the key in the **One Time Key** text box to install the vRealize Operations Cloud Appliance.

9   (Optional) Set up a proxy server in the **Customize template** screen.

   a   Enter details in the **Network Proxy IP Address** and **Network Proxy Password** properties.

   b   To enable SSL, select the **Use SSL connection to proxy** check box.

   c   If you are using SSL, you can verify the certificate of the proxy server. Public certificate authorities are used to verify the proxy server certificate. To enable this, select the **Verify proxy's SSL cert** check box in the **Verify SSL cert** property.

   d   If you have a custom certificate authority, paste the root certificate authority in the **Custom CA** property to verify the certificate of the proxy server. The root certificate authority is passed on to the cloud proxy. Do not include the following lines from the certificate authority:

   ```
   "-----BEGIN CERTIFICATE-----"

   "-----END CERTIFICATE-----"
   ```

10 Click **Finish**.

   The deployment takes a few minutes to finish.

11 Locate the cloud proxy you just installed, select the vRealize Operations Cloud Appliance, and click **Power on**.

> **Note** You must power on the vRealize Operations Cloud Appliance within 24 hours of registering it. After 24 hours, the One Time Key expires, and you must delete the vRealize Operations Cloud Appliance and deploy another cloud proxy.

12 Return to the Cloud Proxy page in vRealize Operations Cloud to view the status of the cloud proxy you just installed.

Option	Description
Name	The name of the cloud proxy.
IP	The IP address of the cloud proxy.
Status	Status of the cloud proxy. For example, the Getting Online status is displayed for a few minutes when you add a new cloud proxy. Once the cloud proxy is connected to vRealize Operations Cloud, the status changes to Online. If the vRealize Operations Cloud is not connected, the Offline status is displayed.
Cloud Accounts	The number of cloud accounts that are created and associated with the cloud proxy.
Other Accounts	The number of accounts that are created and associated with the cloud proxy.
Creation Date	Installation date of the cloud proxy.

13 To view the accounts that are using this connection, click the Cloud Proxy.

The communication from the cloud proxy to cloud is one way. The cloud proxy initiates this connection and if necessary, it also pulls data from cloud (like the adapters configuration or upgrade pak). The cloud proxy requires a regular Internet access over the https protocol but it does not need any special firewall configuration. The cloud proxy verifies the certificate of the cloud service it connects to and if there are transparent proxy servers which do stop SSL, it might cause connectivity problems for the cloud proxy.

The cloud proxy also supports connection through the corporate proxy server. The proxy settings are given during OVF deployment.

14 (Optional) To remove a cloud proxy, click **Remove**.

What to do next

Upgrade your cloud proxy. For more information, see the topic called Upgrading Cloud Proxy in the *VMware vRealize Operations vApp Deployment Guide*.

Troubleshoot any cloud proxy issues. For more information, see Troubleshooting Cloud Proxy.

Managing Cloud Proxies in vRealize Operations Cloud

You can use cloud proxies in vRealize Operations Cloud to collect and monitor data from your on-premises data centers.

Cloud proxies provide high availability within your cloud environment, you can group two or more cloud proxies to form a collector group. The cloud proxy collector group ensures that there is no single point of failure in your cloud environment. If one of the cloud proxies experiences a network interruption or becomes unavailable, the other cloud proxy from the collector group takes charge and ensures that there is no downtime. All other user-initiated manual operations on the collector, such as to stop or restart the collector manually, do not result in automated rebalancing.

Note When cloud proxies provide high availability within your cloud environment, the cluster can survive the loss of one data node without losing any data. However, the cloud proxy does not gurantee that the adapter instance will collect all the data during adapter instance failover (or when reassigning the adapter instance). vRealize Operations Cloud cloud proxy only provides additional application level data protection to ensure application level availability

You can also use cloud proxies to rebalance the resources across the collectors in your collector group. The Rebalance option is available as part of the Edit menu in the Collector Groups page.

Note You can use the rebalance option before the vCenter Adapter initiates data collection. Once the data collection starts, the rebalance option is disabled.

Adding Cloud Proxies To a Collector Group

You can create a cloud proxy collector group from the available collectors in your cloud environment. You can add two or more cloud proxies to a collector group.

Where You Add New Cloud Proxies

From the left menu, click **Data Sources > Cloud Proxy**. Click **New**.

Add New Cloud Proxy Workspace

Option	Description
Name	Name of the cloud proxy.
IP	IP address of the cloud proxy VM in the vCenter Server.
Status	Status of the cloud proxy when connected. For example, the Online status is displayed when the VM is connected.
Cloud Accounts	Number of cloud accounts that are created and associated with the cloud proxy.
Monitoring Accounts	Number of cloud accounts that are monitored using the cloud proxy.

Option	Description
IP/FQDN	The IP or FQDN address of the vCenter Server instance to which the cloud proxy is connected.
Port	The network port that vRealize Operations Clouduses to communicate with a vCenter Server system and vRealize Operations Cloud components.

Linking Cloud Proxy with a Collector Group

When you create collector groups in your cloud environment, you have the option to include one or more cloud proxies in the Collector Group.

Note It is recommended that you do not add cloud proxy to a collector group from remote collectors. For cloud proxy, a separate cloud proxies group can be created which contains only cloud proxies.

From the **Add New Collector Group** page, select one or more cloud proxy accounts you want to link with the collector group and click **Save**. The selected cloud proxy accounts are now part of the collector group.

Monitoring the Health of Cloud Proxies

You can view the status and health of your cloud proxy after you add it in vRealize Operations Cloud. You can then monitor the health and view alerts and metrics of your cloud proxy using the vRealize Operations Cloud Proxy object.

Procedure

1   Log in to vRealize Operations Cloud.

2   From the left menu, click **Data Sources > Cloud Proxy**.

The list of cloud proxies is displayed.

3   Click a **Cloud Proxy**.

The **Cloud Proxy Details** page opens.

Each cloud proxy might have one or more adapters. You can also view the health and status of these adapters from this page.

Table 1-2. Cloud Proxy Page Options

Option	Description
Proxy ID	ID of the cloud proxy.
IP Address	IP address of the cloud proxy.
OVA Version	The OVA file version used to install the cloud proxy.
Creation Date	Date of creation of the cloud proxy.

Table 1-2. Cloud Proxy Page Options (continued)

Option	Description
Status	Status of the cloud proxy. For example, the Getting Online status is displayed for a few minutes when you add a cloud proxy. Once the cloud proxy is connected to vRealize Operations Cloud, the status changes to Online. If the vRealize Operations Cloud is not connected, the Offline status is displayed.
Last Heartbeat	Last time stamp when vRealize Operations Cloud ran a Health Check for this cloud proxy. When you click a cloud proxy to view its details, vRealize Operations Cloud sends a heartbeat to check if the cloud proxy is still reachable.
CPU	CPU usage.
Memory	Memory usage.

4   If your cloud proxy is not collecting data, you can view the health of the cloud proxy. From the left menu, click **Environment > Inventory**, select the **vRealize Operations Cloud Proxy Object** from the list, and then click **Show Detail**.

For more details, see Inventory Tab and Inventory: List of Objects.

5   After you locate the vRealize Operations Cloud Proxy object, you can view the object details using the Summary tab. For more information, see Summary Tab.

6   Use the Alerts tab to monitor the health of the cloud proxy. If there are any issues, troubleshoot them using the Metrics tab.

If your cloud proxy is not working properly, an alert is displayed.

```
One or more vRealize Operations services on a cloud proxy are down
```

To clear this alert, perform the following steps:

■   Check the network connectivity and configuration for the cloud proxy.

■   Take the cloud proxy offline and then bring it online.

If the problem still persists contact VMware support.

Note   It is recommended that you create a notification rule for this alert so that, quick remediation steps can be taken, if necessary.

7   (Optional) You can use the cloud proxy command line interface for other cloud proxy related actions. For more details, see Using the Cloud Proxy Command-Line Interface.

Upgrading Cloud Proxy

Cloud Proxies are upgraded to a compatible cluster version automatically after the cluster upgrade. Expect a downtime of one or two cycles, as the cloud proxy does not collect any data

during this period. Data collection resumes after the upgrade is complete. In case the automatic upgrade fails, you can upgrade your cloud proxy manually using the CLI.

For more information on what data gets collected, see VMware vSphere Solution in vRealize Operations Cloud.

You can manually upgrade your cloud proxy Using the Cloud Proxy Command-Line Interface on Cloud.

Using the Cloud Proxy Command-Line Interface

You can use SSH to access the cloud proxy instance and use its Command-Line Interface to run the following actions:

- Manually upgrade your cloud proxy in case the automatic download of the latest binary fails. When automatic download fails, you see a notification on the vRealize Operations Cloud user interface. To manually upgrade your cloud proxy instance to latest version, see the following KB article 80590.

- Generate support bundle.

- Gather the status of the cloud proxy's health and connectivity details.

Command Line	Description
`cprc-cli -h, --help`	Displays the help message and use of command-line interface.
`cprc-cli -s, --status`	Prints the cloud proxy life-cycle status, configuration details, upgrade related information and more. It is useful to catch necessary information related to support and troubleshooting, or to check the connection to vRealize Operations Cloud, or to check the product version number, and so on.
`cprc-cli -u PRODUCT_PAK, --upgrade PRODUCT_PAK`	The cloud proxy instance is enabled for an automated upgrade by default. But if the automated upgrade fails due to any exceptional issue, use this command line to upgrade your cloud proxy instance to the desired version.

Command Line	Description

8.3 Release `cprc-cli -sb, --generate-support-bundle`   8.4 Release `cprc-cli -sb, --generate-support-bundle`   8.5 Release `cprc-cli IS_HEAVY -sb, --generate-support-bundle IS_HEAVY`
The `IS_HEAVY` option should be specified as true or false. For example:
 	
`cprc-cli -sb true`
 	
`cprc-cli -sb false`
 	
With the true option, the support bundle is generated with journal.ctl logs. With the false option, the support bundle is generated without journal.ctl logs
	Generates the cloud proxy support bundle which is a package of logs, configurations, and status files. The support bundles are necessary for product support and troubleshooting. Generated support bundles can be found at the `/storage/db/vmware-vrops-cprc/support/` location.

`cprc-cli -rsb SUPPORT_BUNDLE, --remove-support-bundle SUPPORT_BUNDLE`	Removes any specified support bundle. Although generated support bundle packages can be removed using system embedded commands, it is recommended to use this command for that action.
`cprc-cli -fm, --enable-fips-mode`	Enables FIPS mode for cloud proxy.

Adding Accounts

You can add and configure accounts associated with solutions that you add to vRealize Operations Cloud. After you have configured the account, can collect data from or send data to the target system. You can access the other accounts page at any time to modify your adapter configurations. Cloud accounts specify the connection info for the public and hybrid cloud you want to monitor. You can add and configure cloud accounts associated with solutions that are provided with or that you add to vRealize Operations Cloud. After you have configured the account, vRealize Operations Cloud can communicate with the target system. You can access the **Accounts** tab in the **Integrations** page at any time to modify your adapter configurations.

From the left menu, click **Data Sources > Integrations**. In the Accounts tab, click **Add Account** and select the solution you want to manage.

To manage accounts for the vSphere solution, see Configure a vCenter Server Cloud Account.

To manage the AWS cloud account, see Configuring the AWS Cloud Account.

To manage the Microsoft Azure cloud account, see Configuring the Microsoft Azure Cloud Account.

To manage the VMware Cloud on AWS cloud account, see Configuring the VMware Cloud on AWS Cloud Account.

Prerequisites

Note   Activate the account before adding and configuring accounts.

vCenter Server Cloud Account in vRealize Operations Cloud

The VMware vSphere solution connects vRealize Operations Cloud to one or more vCenter Server instances. You collect data and metrics from those instances, monitor them, and run actions in them.

To manage your vCenter Server instances in vRealize Operations Cloud, you must configure a cloud account for each vCenter Server instance.

To configure a vCenter Server cloud account, see vCenter Server Cloud Account.

AWS Cloud Account in vRealize Operations Cloud

The Management Pack for AWS is pre-installed in vRealize Operations Cloud. You add and configure the AWS cloud account in vRealize Operations Cloud to collect metrics from the Amazon Web Services.

To manage the AWS cloud account, see AWS Cloud Account.

Microsoft Azure Cloud Account in vRealize Operations Cloud

The Management Pack for Microsoft Azure is pre-installed in vRealize Operations Cloud. You add and configure the Azure cloud account in vRealize Operations Cloud to collect metrics from Microsoft Azure.

To manage the Microsoft Azure cloud account, see Microsoft Azure Cloud Account.

VMware Cloud on AWS

vRealize Operations Cloud offers a VMware Cloud on AWS cloud account that provides an integrated and cohesive experience for managing your SDDCs. This cohesive experience is provided by minimizing the user inputs while configuring the VMware Cloud on AWS SDDCs as an endpoint.

vRealize Operations Cloud unlocks the following key use cases to manage your hybrid cloud powered by VMware Cloud on AWS:

- Continuous Performance Optimization: Workload optimization ensures that applications have the resources they need. Here, VMs are moved to other clusters within the same datacenter (or custom datacenter) to meet the performance, operational, and the business intent that you have defined.

- Efficient Capacity and Cost Management: Capacity planning for VMware Cloud on AWS helps you track and manage the capacity of Clusters, Hosts, VMs, Datastores, and Disk groups. Cost Management helps you monitor the cost of running infrastructure on VMware Cloud on AWS.

- Intelligent Remediation: Troubleshoot your VMware Cloud on AWS environment using the existing dashboards and alerts of vCenter.

- Integrated Configuration and Compliance: While configuring the SDDCs for VMware Cloud on AWS, you can even configure the instances of vSAN and NSX-T. Compliance supports VMware Cloud on AWS that includes vSAN and NSX-T.

This use case shows the process of configuring VMware Cloud on AWS in vRealize Operations Cloud with its limitations and dashboards.

- Configuring a VMware Cloud on AWS instance in vRealize Operation Cloud.

- Understanding the limitations of VMware Cloud on AWS integration.

- Dashboards in VMware Cloud on AWS.

vRealize Cloud Federation Adapter

vRealize Cloud Federaton Adapter allows you to gain visibility into the entire federated environment through a unified view across on-premises and cloud instances of vRealize Operations and across multiple vRealize Universal components. This helps you with consistent operations across clouds, monitoring and analyzing the overall performance, capacity, compliance, and cost of the federated environment at a global level.

You must be subscribed to vRealize Cloud Universal to get the Cloud Federation Adapter. The Cloud Federation Adapter platform provides physical and logical views of workloads across the global and granular level details with the ability to cut across geographies and specific time frames, using multiple vRealize Universal components data. These analytical capabilities enable organizations to identify gaps and plan changes to gain more efficiency, density, and cost savings out of the federated multi-cloud environment. Organizations can move and manage workloads between on-premises and vRealize Operations Cloud accordingly.

The Cloud Federation Adapter is integrated with vRealize Automation, vRealize Operations, vRealize Log Insight, Cloud Automation Services, and Log Intelligence. It provides a worldwide single management console that allows a single cloud admin to analyze and plan workload optimization across the entire global cloud environment from a single interface.

Configure vRealize Cloud Federation Adapter

To configure the vRealize Cloud Federation Adapter, see Configuring Cloud Federation Adapter.

Dashboards in vRealize Cloud Federation Adapter

The vRealize Cloud Federation Adapter dashboard provides a unified view across on-premises and cloud instances of vRealize Operations organizations. This dashboard provides consistent IT operations across clouds with cost, usage inventory, and performance. With vRealize Operations Cloud enterprise edition, vRealize Operations Manager is integrated with vRealize Automation so that the pricing and monitoring of deployments provides visibility to on-premise workloads.

The Cloud Federation Analytics dashboard helps you visualize the entire IT estate, both on-premise and in the cloud. The federated view provied the optics to monitor and understand multi-cloud costs. For more information on the dashboards in the Cloud Federation Adapter, see Cloud Federation Adapter Dashboards.

Integration of vRealize Operations Cloud and vRealize Log Insight Cloud

When vRealize Operations Cloud is integrated with vRealize Log Insight Cloud, you can send logs for supported objects to vRealize Log Insight Cloud. In vRealize Operations Cloud, you can search for these logs, view the logs for an object, and launch the vRealize Log Insight Cloud service.

Supported Objects

The following objects are supported for integration between vRealize Operations Cloud and vRealize Log Insight Cloud:

- vSphere

- VMware vSAN clusters, Disks and Disk Groups

- vCenter

- ESXi hosts, and virtual machines

- NSX-T Services:

    - Load Balancer Virtual Server

    - Load Balancer Pool

    - Load Balancer Service

    - Logical Switch

    - Logical Router

    - Firewall Section

    - Group

    - Transport Zone

    - Transport Node

    - Edge Cluster

    - Router Service

    - Management Appliances

    - Manager Cluster

    - Load Balancers

    - Manager Node

    - NSX-T Manager Service

Integrating the Services

The integration of the vRealize Operations Cloud and vRealize Log Insight Cloud services happens automatically if you can access both the services.

For information about signing up for and getting started with each service, see the following topics:

- Before You Begin with vRealize Operations Cloud

- Getting Started Checklist for vRealize Log Insight Cloud

If you are not a VMware Cloud on AWS user, you have to deploy a cloud proxy and then configure vCenter and an ESXi host to send logs for these objects to the cloud proxy for vRealize Log Insight Cloud. For information about configuring vCenter and ESXi, see:

- Forward vCenter Server Appliance Log Files to Remote Syslog Server

- Configure Syslog on ESXi Hosts

If you are a VMware Cloud on AWS user, you do not have to deploy a cloud proxy. You also do not have to configure vCenter or an ESXi host, because audit and firewall logs for these objects are already available.

To publish the application or guest OS logs from a virtual machine, you must deploy a Log Insight Agent in the virtual machine. The agent helps forward the virtual machine guest OS logs to the cloud proxy for vRealize Log Insight Cloud. For information about Log Insight Agents and how to install and configure them, see Working with vRealize Log Insight Agents.

Searching for Logs

To search for logs from vRealize Operations Cloud, in the menu, select **Troubleshooot > Log Analysis**. Use the search text box to find logs. You can also select a time range next to the search text box to find log events within the range. Time ranges are inclusive when filtering.

Viewing Logs for an Object

You can view logs for an object in one of the following ways:

- From the symptoms in the **Troubleshoot > Alerts** screen.

- By selecting an inventory object from the left pane of the **Environment > Object Browser** page, and clicking the **Logs** tab

You can troubleshoot a problem in your environment by correlating the information in the logs with the metrics, which might help you determine the root cause of the problem. By default, the **Logs** tab displays different event types for the last five minutes. For vSphere objects, the logs are filtered to show the event types for the object that you select and logs from supported objects within that hierarchy.

The supported objects are vSphere, vCenter, ESXi hosts, and virtual machines. The supported VMware vSAN objects are cluster, Disk Groups and Disks. If an object that is not supported has objects that are supported within its hierarchy, the enclosing object shows logs from the objects within its hierarchy. For example, if a cluster has ESXi hosts and virtual machines within its hierarchy, the cluster shows logs from ESXi hosts and virtual machines.

Using the vRealize Log Insight Cloud Service

To use the vRealize Log Insight Cloud service from vRealize Operations Cloud, select **Troubleshooot > Log Analysis**. Click **Launch Log Insight Cloud**. From the **Explore Logs** page in vRealize Log Insight Cloud, you can create queries to extract events based on timestamp, text, and fields in log events. vRealize Log Insight Cloud presents charts of the query results.

For information about vRealize Log Insight Cloud, see the vRealize Log Insight Cloud documentation.

Troubleshooting

The troubleshooting steps are for vSphere administrators who deploy the cloud proxy OVA file. If you use the command-line-interface to troubleshoot the cloud proxy deployment, you will need to set the root password.
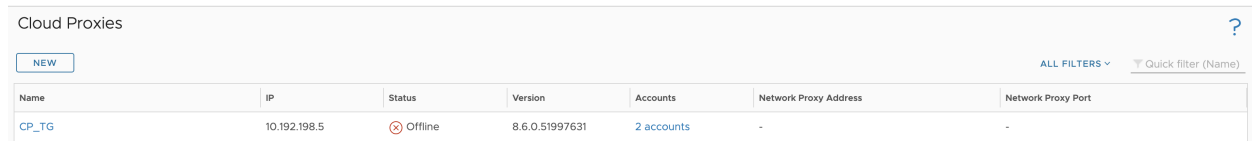
For troubleshooting issues, contact help-vrops-cloud@vmware.com.

Cloud Proxy Troubleshooting

Cloud proxy troubleshooting steps are provided to help you easily resolve issues that you may come across in vRealize Operations Cloud.

Before you proceed with troubleshooting, see the Cloud Proxy FAQ.

Cloud Proxy VM is running, but the status is Offline in vRealize Operations Cloud.

Cloud Proxies							?
NEW						ALL FILTERS ˅	⊤ Quick filter (Name)
Name	**IP**	**Status**	**Version**	**Accounts**	**Network Proxy Address**	**Network Proxy Port**	
CP_TG	10.192.198.5	⊗ Offline	8.6.0.51997631	2 accounts	-	-	

The following problems could result in vRealize Operations Cloud displaying the status of cloud proxy as offline.

1   Incorrect network proxy information in cloud proxy configuration.

    Solution: Ensure that the network proxy configurations mentioned in the vApp options are correct. For more details, see Edit OVF Details for a Virtual Machine

2   Incorrect Firewall settings.

    Solution: Ensure that the prerequisites are met. For details, see Configuring Cloud Proxies in vRealize Operations Cloud.

3   The logs folder `/storage/log` is running out of partition space.

    Solution: Remove log files to ensure that enough space is available. Note that this is an exceptional case. In normal conditions, log files are auto archived.

4   One or more of the following services are down: `httpd-north.service`, `haproxy.service` and `collector.service`.

Solution:

- Check service status by running the following command: `systemctl status <service name>`.

- To start service, use the following command: `systemctl start <service name>`.

Cloud proxy is online and state of Cloud Account is `Collecting`, but status is `Object Down`.

	Name	Status	Description	Colle
☐ ⋮ 🔲 CA_TG		⚠ Warning		CP_
☐ ⋮ 🔲 API ADAPTER SAMPLE		⊘	r Adapter Instance	Clo

vCenter — 2 Accounts

State: Collecting
Status: Object down
Message: Unable to connect to VC

VMware vRealize Application Management Pack — 2 Accounts

The following problem could result in vRealize Operations Cloud displaying the state of Cloud Account as `Collecting`, while the status is, `Object Down`.

1 Incorrect account credentials.

Solution: Check and update the credentials used while setting up the cloud account.

Cloud proxy status is stuck in `Going Online`.

Name	IP	Status	Version	Accounts	Network Proxy Address	Network Proxy Port
CP_TG	10.192.198.5	○ Going Online	8.6.0.51997631	2 accounts	-	-

Cloud Proxies — NEW — ALL FILTERS ⌄ Quick filter (Name)

It can take up to 15-20 mins on first reboot, for the cloud proxy to be registered and come online. Wait for the specified time to see if cloud proxy comes online.

Cloud proxy does not upgrade automatically, after the upgrade of vRealize Operations Cloud

There could be a few possible reasons why cloud proxy does not upgrade automatically after an upgrade of vRealize Operations Cloud.

1 High network latency leading to PAK download failure. Latency of >500ms is not supported.

Solution: See the VMWare KB article 80590 on how to manually upgrade cloud proxy via CLI.

2 Upgrade status is stuck at `Running` since the previous upgrade had failed.

Solution: Follow the steps given below to change the upgrade status.

a Stop the casa service: `systemctl stop vmare-casa.service`.

b   Change the upgrade status from RUNNING to NONE in the following files:

```
./storage/db/vmware-vrops-cprc/status/cprc.upgrade.status
./storage/db/vmware-vrops-cprc/status/cprc.pak.status
```

c   See the VMWare KB article 80590 and run the manual upgrade.

Cloud proxy gets disconnected at regular intervals

This is a known limitation related to DNS resolution failure. Contact VMware support.

View and Subscribe to the Service Status Page

VMware publishes service operational status and maintenance schedules at status.vmware-services.io.

Subscribe to the status page to get real-time email or SMS notifications on the service status.

Procedure

1   Go to https://status.vmware-services.io to view the service status dashboard and incidents.

2   Click **Subscribe to Updates**.

3   Select the notification methods you prefer to subscribe to for the service.

vRealize Operations Cloud Upgrades and Maintenance

vRealize Operations Cloud is regularly updated. These updates ensure continuous delivery of new features and bug fixes.

Before vRealize Operations Cloud is updated, you receive an email. You also receive a notification in the VMware Cloud Services Platform (CSP). The email and notifications are sent out to org owners at the following intervals:

- 72 and 24 hours before the upgrade

- Just before the upgrade starts

- After the upgrade is complete

To ensure that you receive these email notifications, ensure that donotreply@vmware.com is added to your email allow list.

Important   During upgrades:

- Do not create content because it will not be persisted. This includes new dashboards, views, reports, alerts, symptom definitions and custom groups.

- Alerts and reports generated during maintenance period are not persisted, but are sent out to an external system if they are configured to do so.

- Metric collection continues during the maintenance period, except during the last 15 minutes.

- The vRealize Operations Cloud UI and APIs are available during the maintenance period, except during the last 5 minutes.

For more information about the vRealize Operations Cloud updates, see the release notes.