

vRealize Operations Management Pack for Cloud Director Availability Install and Use Guide

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vRealize Operations Management Pack for Cloud Director
Availability 1.0



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Introduction



vRealize Operations Management Pack for Cloud Director Availability is an add-on management pack for vRealize Operations Manager that cloud providers use to monitor the VMware Cloud Director Availability incoming replicated workloads.

Use vRealize Operations Management Pack for Cloud Director Availability to monitor the incoming vApp and virtual machine replications to VMware Cloud Director. In vRealize Operations Manager, monitor replicated workloads that are incoming either from on-premises sites running vSphere or incoming from other VMware Cloud Director cloud sites.

Use vRealize Operations Management Pack for Cloud Director Availability on its own or use it with vRealize Operations Management Pack for vCloud Director installed, to provide additional monitoring.

Intended Audience

Use vRealize Operations Management Pack for Cloud Director Availability as **cloud provider administrator** or **cloud provider operator** using VMware Cloud Director Availability in a disaster recovery environment that complies with the requirements for capacity, scalability, business continuity, and disaster recovery. VMware software familiarity is required. This document explains the installation and use of vRealize Operations Management Pack for Cloud Director Availability in vRealize Operations Manager.

Install and Configure vRealize Operations Management Pack for Cloud Director Availability

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Install vRealize Operations Management Pack for Cloud Director Availability by using the .pak file in the vRealize Operations Manager instance. Register the management pack directly with VMware Cloud Director Availability. When using multiple Cloud Service instances, register the management pack with VMware Cloud Director, by using VMware Cloud Director **system** credentials for the pack in vRealize Operations Manager.

Prerequisites

Verify that the `vmware-VcdaAdapter-1.0.0-build_number.pak` file is downloaded locally to your computer.

Procedure

- 1 Log in to vRealize Operations Manager.
- 2 Click the **Administration** tab.
- 3 In the left pane, click **Solutions > Repository**.
- 4 In the bottom of the **Repository** page, click **Add/Upgrade**.
- 5 Install the management pack by completing the **Add Solution** wizard.
 - a In the **Select Solution** page, click **Browse** and select the `vmware-VcdaAdapter-1.0.0-build_number.pak` file.
 - b After selecting the file, click **Upload**.
 - c After the upload finishes, click **Next** when you see `The PAK file signature is valid`.
 - d In the **End User License Agreement** page, read the agreement, select the **I accept the terms of this agreement** check box, and click **Next**.
 - e In the **Install** page, wait for the installation to finish and click **Finish**.

In the bottom of the **Repository** page, under **Other Management Packs**, you see **Management Pack for Cloud Director Availability**.
- 6 In the left pane, click **Management > Credentials**.
- 7 In the **Credentials** page, click **Add New Credential**.

8 In the **Manage Credentials** window, create the credentials to use in the management pack when connecting to a VMware Cloud Director instance.

- a From the **Adapter Type** menu, select **Cloud Director Availability Adapter**.
- b In the **Credential Kind** menu, you see **Cloud Director Credentials** selected.
- c In the **Credential name** text box, enter a name for the credentials.
- d In the **Username** text box, enter the VMware Cloud Director provider admin user name.
For example, you can use **root@system**.
- e In the **Password** text box, enter the VMware Cloud Director provider admin password.
- f Click **OK**.

9 Register the new management pack adapter instance.

- a In the left pane, click **Solutions > Other Accounts**.
- b In the **Other Accounts** page, click **Add Account**.
- c Under **Account Types**, click **Cloud Director Availability Adapter**.
- d In the **New Account** page, under **Cloud Account Information**, enter a name and optionally, a description for the adapter instance.
- e Under **Connect Information**, configure the connection of the management pack adapter instance.

Option	Description
Cloud Address	Enter the IP address or fully qualified domain name of: <ul style="list-style-type: none"> ■ VMware Cloud Director or ■ VMware Cloud Director Availability Enter the VMware Cloud Director address when more than one Cloud Service instance (site) is registered in VMware Cloud Director, for the adapter to use all registered VMware Cloud Director Availability instances.
Cloud Director Address	<ul style="list-style-type: none"> ■ Select true, when in Cloud Address you entered the VMware Cloud Director address. ■ Select false, when in Cloud Address you entered the VMware Cloud Director Availability address.

- f From the **Credential** menu, select the credentials name that you created in step 8.c.

- g (Optional) Expand **Advanced Settings**, to configure the following settings.

Option	Description
Remove deleted replications	<ul style="list-style-type: none"> ■ To keep showing the replications in vRealize Operations Manager that are deleted from VMware Cloud Director Availability, select true. ■ To remove the replications in vRealize Operations Manager that are deleted from VMware Cloud Director Availability, select false.
Auto discover Cloud Director Availability instances from Cloud Director	<ul style="list-style-type: none"> ■ To discover VMware Cloud Director Availability instances from VMware Cloud Director, select true. ■ To enter the addresses of up to five instances of VMware Cloud Director Availability, select false.

Note If using the Tunnel Service address as VMware Cloud Director Availability Service Endpoint when registering in VMware Cloud Director, you must select **Allow admin access from anywhere** in VMware Cloud Director Availability for the discovery of replications. For more information, see [Managing Public Administrative Access](#). If instead using the Cloud Service address when registering in VMware Cloud Director, you can leave **Restrict Admin APIs by source IP** selected and the replications are still discovered.

- h In the bottom of the **New Account** page, click **Add**.
- i In the **Review and Accept Certificate** window, verify the thumbprint of the certificate and click **Accept**.

You see a **Testing adapter instance connection message**, followed by **Saving adapter instance**.

Results

In the **Other Accounts** page, you see the **Status** of the new adapter instance as **OK**. The installation of the Cloud Director Availability Adapter is complete.

Use the Metrics

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In vRealize Operations Manager, use the preconfigured VMware Cloud Director Availability metrics to monitor all incoming vApp and virtual machine replications to VMware Cloud Director.

In vRealize Operations Manager, the vRealize Operations Management Pack for Cloud Director Availability provides the following metrics for the VMware Cloud Director Availability incoming replications:

- Replication type
- Replication state and recovery state
- Replication health
- Recovery Point Objective (RPO)
- Service Level Agreement (SLA) profile
- Storage policy
- Consumed storage
- Topology - the source and the destination:
 - Organization
 - Site
 - Virtual data center (VDC)

Find the metrics in the **Environment** page, under the following two inventories under **Management Pack for Cloud Director Availability**.

Provider Incoming Replications

Shows an inventory with all incoming vApp replications, followed by all incoming virtual machine replications for the provided VMware Cloud Director account.

Tenant Incoming Replications

Shows an inventory with every VMware Cloud Director organization, every organization virtual data center (*Tenant OrgVDC*), and lists all storage policies and all incoming vApp and virtual machine replications under the OrgVDCs.

Prerequisites

- Verify that vRealize Operations Management Pack for Cloud Director Availability is installed and configured. For more information, see [Chapter 2 Install and Configure vRealize Operations Management Pack for Cloud Director Availability](#).
- Verify that vRealize Operations Management Pack for vCloud Director is installed and configured to see the inventory under **Management Pack for Cloud Director Availability > Tenant Incoming Replications**.

Procedure

- 1 Log in to vRealize Operations Manager.
- 2 Click the **Environment** tab.
- 3 In the left pane, click **Management Pack for Cloud Director Availability > Provider Incoming Replications**.
 - a In the left pane, expand the hierarchy starting with **Vcda World** and expand the name of your adapter instance.
 - b To see the incoming vApp replications metrics, in the left pane, click any of the vApp replications, click the **Metrics** tab, and expand **All Metrics** or **All Properties**.

vApp Replications Metrics	Description
All Metrics > Instances > Consumed Storage (MB)	The space required to recover the protected vApp.
All Properties > Status > Replication Type	The type of incoming vApp replication: Protection or Migration.

- c To see the incoming virtual machine replications metrics that are constantly updating, in the left pane click any of the virtual machine replications, click the **Metrics** tab, and expand **All Metrics**.

Constantly Updating Virtual Machine Replications Metrics	Description
All Metrics > Instances > Average Instance Size (MB)	The average size of the multiple point-in-time instances.
All Metrics > Instances > Consumed Storage (MB)	The space required to recover the protected virtual machine.
All Metrics > Instances > Number of Instances	The number of point-in-time instances.
All Metrics > Status > Overall Health	The health of the virtual machine replication. The health is one of the following: Green, Yellow, Red, or Unknown.
All Metrics > Status > Recovery State	The state of recovery of the virtual machine replication. The state is one of the following: Failed-Over, Fail-Over, Not started, Reversed, Test image ready, or Unknown.
All Metrics > Status > Replication State	The state of the virtual machine replication. The state is one of the following: Healthy, Error, Paused, Powered Off, Initial Synchronizing, Synchronizing, Pruning, or Unknown.

- d To see the incoming virtual machine replications metrics that rarely change, in the left pane click any of the virtual machine replications, click the **Metrics** tab, and expand **All Properties**.

Rarely Changing Virtual Machine Replications Metrics	Description
All Properties > Resources > Storage Policy Id	The id of the storage policy of the virtual machine replication.
All Properties > Resources > Storage Policy Name	The name of the storage policy of the virtual machine replication.
All Properties > Status > Replication Type	The type of incoming virtual machine replication: Protection or Migration.
All Properties > Status > RPO (Minute(s))	The RPO time of the virtual machine replication.
All Properties > Status > SLA Profile	The SLA profile of the virtual machine replication.
All Properties > Topology > VApp Replication ID	The id of the source vApp replication for this virtual machine.
All Properties > Topology > VApp Replication Name	The name of the source vApp replication for this virtual machine.

- e To see the metrics for source and destination topology, click either a vApp or a virtual machine replication, click the **Metrics** tab and expand **All Properties > Topology**.

vApp and Virtual Machine Replications Topology Metrics	Description
All Properties > Topology > Destination Organization Id	The id of the destination organization.
All Properties > Topology > Destination Organization Name	The name of the destination organization.
All Properties > Topology > Destination Site	The name of the destination site of the replication.
All Properties > Topology > Destination VDC Id	The id of the destination virtual data center.
All Properties > Topology > Destination VDC Name	The name of the destination virtual data center.
All Properties > Topology > Source Organization Name	The name of the source organization.
All Properties > Topology > Source Site	The name of the source site.
All Properties > Topology > Source VDC Name	The name of the source virtual data center.

- f In the left pane, click **Back**.
- 4 In the left pane, click **Management Pack for Cloud Director Availability > Tenant Incoming Replications**.
- a In the left pane, expand **vCloud World > Your Cloud Director Adapter Instance > Organization > Tenant OrgVDC**.
You see the incoming vApp replications, followed by the incoming virtual machine replications.
 - b In the left pane, expand **vCloud World > Your Adapter Instance > Organization > Tenant OrgVDC > Storage Policy**.
You see the incoming virtual machine replications that are using this **Storage Policy**. Under the **Tenant OrgVDC > * (Any)** storage policy, you see the incoming virtual machine replications that are configured with the *** (Any)** storage policy.
 - c In the left pane, click any of the vApp or virtual machine replications, click the **Metrics** tab and expand **All Metrics** or **All Properties**.
You see the metrics for the incoming vApp and virtual machine replications as in steps 3.b, 3.c, 3.d, and 3.e.

Use the Views

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In vRealize Operations Manager, use the preconfigured VMware Cloud Director Availability view. The **VCDA Incoming VM Replications** view shows a list of all incoming vApp and virtual machine replications with their metrics and properties.

Procedure

- 1 Log in to VMware vRealize Operations.
- 2 Click the **Dashboards** tab.
- 3 In the left pane, click **Views**.
- 4 From the **Actions** menu, select **Manage Views**.
- 5 In the **Views** page, to filter the views in the **Quick filter (Name)** text box enter **vcda**.
- 6 To make the listed view available in the left pane, click **VCDA Incoming VM Replications**.
 - a If opening the view for the first time, in the top-right corner click **Select Preview Source**.
 - b In the **Select an Object** window, select "**Cloud Director Availability Adapter > Vcda Adapter Instance > Your Instance Name**" and click **OK**.

In the view, you see all metrics listed as described in [Chapter 3 Use the Metrics](#) for all incoming replicated workloads.

Use the Reports

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In vRealize Operations Manager, use the preconfigured VMware Cloud Director Availability report. The **Vcda Vm Replications** report shows a list of all incoming vApp and virtual machine replications and their metrics and properties.

Procedure

- 1 Log in to VMware vRealize Operations.
- 2 Click the **Dashboards** tab.
- 3 In the left pane, click **Reports**.
- 4 In the **Reports** page, to filter the views in the **Quick filter (Name)** text box enter **vcda**.
- 5 In the left of the **Vcda Vm Replications** report, click the vertical ellipsis menu and select **Run**.
- 6 In the **Select an Object** window, select "**Cloud Director Availability Adapter > Vcda Adapter Instance > Your Instance Name**" and click **OK**.

The report runs and generates new data.

- 7 Under the report name, click **Generated reports**.
- 8 In the **Generated Reports** tab, select a report and under the **Download** column, to download the report click the **.pdf** or **.csv** file icon.

In the exported report file, you see all metrics listed as described in [Chapter 3 Use the Metrics](#) for all incoming replicated workloads.