

Using vRealize Operations Tenant App as a Service Provider 2.0

vRealize Operations 7.0



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VMware, Inc.
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

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vRealize Operations Tenant App for a vCloud Director as a Service Provider

The *vRealize Operations Manager Tenant App for vCloud Director as a Service Provider* guide provides information about configuring tenant user for vcloud director.

Intended Audience

This information is intended for anyone who wants to use the tenant view of vCloud Director. The information is written primarily for service providers to create users for an organization in vCloud Director.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to <http://www.vmware.com/support/pubs>.

Introduction

1

The vRealize Operations Manager Tenant App for vCloud Director as a service provider provides information about configuring a tenant app for vCloud Director.

The user who is a service provider can configure and create users for an organization to use the tenant application.

Integration with vRealize Operations Manager

2

You can integrate vRealize Operations Manager Tenant App for vCloud Director with vRealize Operations Manager to deploy the tenant view.

This chapter includes the following topics:

- [Deploy an OVF File for a Tenant App](#)
- [Log in to the Web Console](#)
- [Changing Default SSL Certificates](#)
- [vRealize Operations Manager Tenant App for vCloud Director as a plug-in](#)
- [Architecture and Port Requirements](#)

Deploy an OVF File for a Tenant App

To deploy a vRealize Operations Manager Tenant App for vCloud Director, you have to download and install the OVF file from the Solution Exchange website. Installation of Tenant App OVF file is done through vSphere Web Client.

Note Upgrade of vRealize Operations Manager Tenant App for vCloud Director is not supported from earlier version.

Prerequisites

- Verify that you are connected to a vCenter Server system with a vSphere Web Client, and log in to the vSphere Client.
- Verify that you have a data center created and a host system already added to it.

Procedure

- 1 From the vSphere Web Client navigator, select the host system in the management vCenter that you want to deploy the OVF file.
- 2 Click the **Actions** drop-down menu and select **Deploy OVF Template**.
- 3 From the Deploy OVF Template dialog box, select **Local File**.
- 4 Click **Browse** to the OVA file that is downloaded from the Product download page and click **Next**.

- 5 Rename the OVA file and location at which the OVF is deployed and click **Next**.
- 6 Verify the resource where you want to run the deployed OVF template and click **Next**.
- 7 Review the template details and click **Next**.
- 8 Scroll through the License Agreement and click **Accept > Next**.
- 9 Select a virtual disk format to store the files for the deployed template and click **Next**.
- 10 Click **Browse** to select a Destination Network or retain the default destination, and click **Next**.
- 11 Customize the template by providing the following information.

Option	Description
vRealize Operations Manager Hostname or IP Address	<p>This is a mandatory field. Enter the IP address or the host name of vRealize Operations Manager as a backend.</p> <hr/> <p>Note If you have provided the host name, ensure that it is resolvable through DNS.</p>

- a To modify an existing vRealize Operations Manager tenant App for vCloud Director settings in vSphere Web Client.
 - b Power off the vRealize Operations Manager tenant App for vCloud Director VM.
 - c Modify the tenant app settings.
 - d Power on the vRealize Operations Manager tenant App for vCloud Director VM.
- 12 Click **Next**.
 - 13 Review the settings and click **Finish**.

Log in to the Web Console

To access the tenant view UI, use the IP address of the deployed OVF file.

Prerequisites

Verify that you have deployed the OVF file.

Procedure

- 1 Open a Web browser and enter the IP address of the deployed OVF file.
- 2 Type the vRealize Operations Manager administrator user name and password.
- 3 Click **Login**.

Changing Default SSL Certificates

By default, vRealize Operations Manager Tenant App for vCloud Director has a self-signed certificate. The default certificate has to be modified. When you attempt to use vRealize Operations Manager Tenant App for vCloud Director over a trusted SSL Internet connection, and open the vRealize Operations Manager Tenant App for vCloud Director an interface in a Web browser; you receive warnings that the connection is untrusted (in Mozilla Firefox) or that problems have been detected with the website's security certificate (in Internet Explorer).

Change the SSL Certificate

You can resolve a problem by installing a signed certificate.

Procedure

- 1 Browse to **Administration > SSL Certificate**.
- 2 Click **Browse** to select a PEM file.
- 3 Click **Upload**.

vRealize Operations Manager Tenant App for vCloud Director as a plug-in

The vRealize Operations Manager tenant app for vCloud Director can also be accessed through the vCloud Director as a separate plug-in.

You can log in to the tenant app through the vCloud Director user interface. You can view a separate Welcome page from where you can access the tenant app features within the same user interface. This feature provides easy accessibility without having to access the tenant app in a separate browser with no change in the functionality of the tenant app. This is an optional feature, however, you can still continue to use the tenant app as a stand-alone UI.

After running the command, log in to vCloud Director user interface with the following browser URL to access the Operations Manager plug-in.

`https://IPaddress/ID/tenant/Org_name/...`

Configure with vCloud Director Tenant UI

After you have deployed the OVF template in the vSphere Web Client, configure the vCloud Director from the Tenant App directly.

Procedure

- 1 On the left pane, click **Administration > Support**.
- 2 Click **Configure with VCD Tenant UI**.
- 3 Enter the vCloud **Director Host name**.

4 Enter the **User Name** and **Password**.

Field	Description
AMQP Host	Provide the AMQP Host name or IP address information. The host information should be same as AMQP host that is configured in vCloud Director extensibility settings.
AMQP Password	Provide the AMQP password.
AMQP Port	Default is 5672. Provide the AMQP port number.
AMQP Virtual Host	Provide the virtual host. Retain the AMQP Port / as is. The host information should be similar to the host that is configured in vCloud Director.
AMQP user name and Password	Provide the AMQP user name and password.
AMQP Use SSL	Select this option to make a AMQP connection over SSL.
Tenant App Proxy	The IP address of the vRealize Operations Manager tenant App for vCloud Director is allocated automatically. If Tenant App is deployed in a private network, you can configure Load Balancer or a proxy to provide public access to Tenant App. In such cases, public address can be mentioned in this field.

5 Click **Start**.

The services are listed under the Self Health section. You can click the square icon to start action on the selected service.

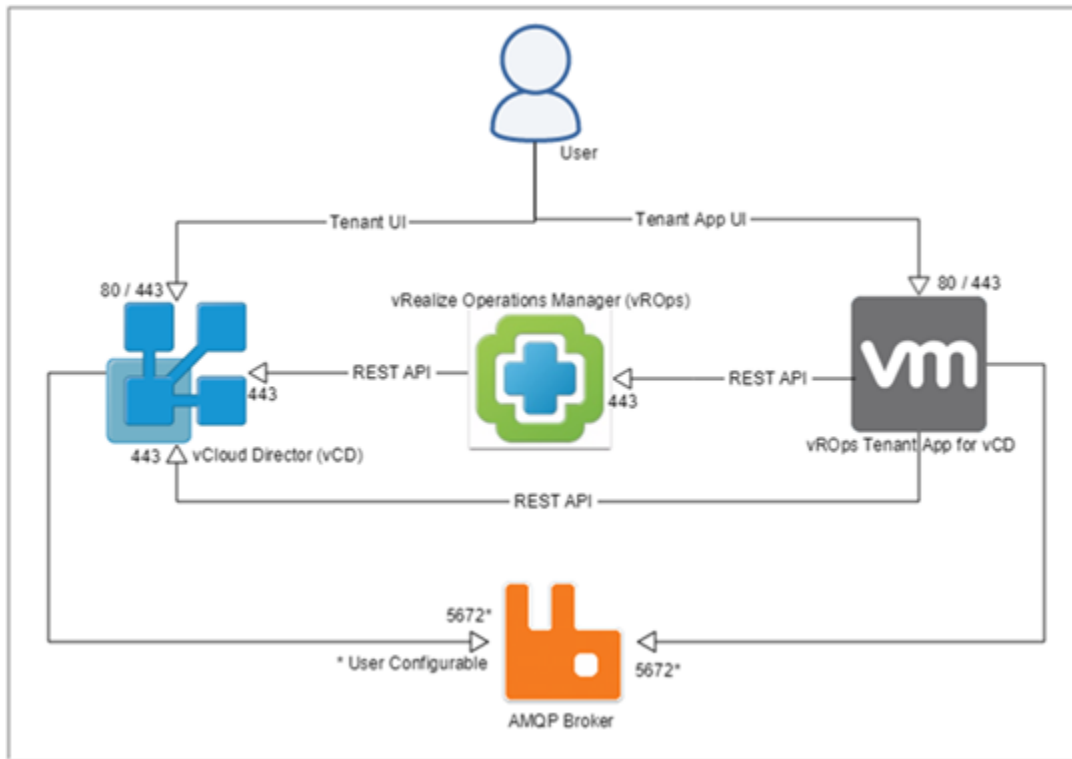
Architecture and Port Requirements

The vRealize Operations Manager Tenant App for vCloud Director as a plug-in is an optional feature that can be used to access through vCloud Director UI. Each of the components within the architecture has different ports that are communicating with each other.

Note Ensure that the vRealize Operations Manager Tenant App for vCloud Director, vRealize Operations Manager, and AMQP are communicating with each other.

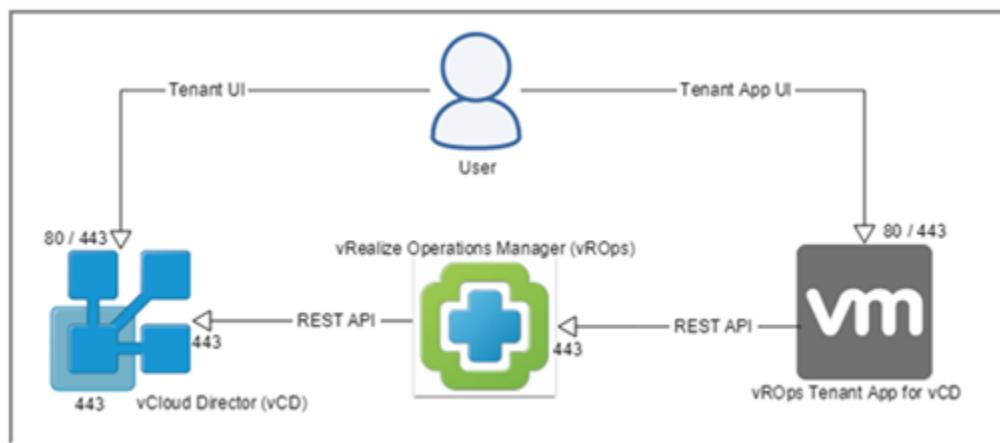
The following architecture provides the port requirement for the integration of vRealize Operations Manager Tenant App for vCloud Director as a plug-in.

Figure 2-1. Integration of vRealize Operations Manager Tenant App for vCloud Director as a plug-in



The following architecture provides the port requirement of the vRealize Operations Manager Tenant App for vCloud Director as a stand-alone app.

Figure 2-2. Integration of vRealize Operations Manager Tenant App for vCloud Director as a stand-alone App



Install Management Pack for vCloud Director

3

The Management Pack for vCloud Director consists of a PAK file that contains out-of-the-box dashboards for the newer resource objects that are brought in from vCloud Director.

The solution that you downloaded includes a PAK file. Save that PAK file to a temporary folder on your local system.

Procedure

- 1 Log in to the vRealize Operations Manager user interface with administrator privileges.
- 2 In the left pane of vRealize Operations Manager, click the **Administration** icon and click **Solutions**.
- 3 On the **Solutions** tab, click the plus sign.
- 4 Browse to locate the temporary folder and select the PAK file.
- 5 Click **Upload**. The upload might take several minutes.
- 6 Read and accept the EULA, and click **Next**. Installation details appear in the window during the process.
- 7 When the installation is completed, click **Finish**.

What to do next

Configure an adapter instance for the management pack.

4

Install NSX Management Pack

The management pack for NSX consists of a PAK file.

Prerequisites

Download and save the PAK file from Marketplace.

Procedure

- 1 Log in to vRealize Operations Manager user interface with administrator privileges.
- 2 In the left pane of vRealize Operations Manager, click **Administration** icon and click **Solutions**.
- 3 On the **Solutions** tab, click the plus sign.
- 4 Browse to locate the temporary folder and select the PAK file.
- 5 Click **Upload**. The upload might take several minutes.
- 6 Read and Accept the EULA and click **Next**.
Installation details appear in the window during the process.
- 7 When the installation is finished, click **Finish**.

What to do next

Configure the adapter instance for the management pack.

Configuring the Management Pack for vCloud Director

5

To configure the Management Pack for vCloud Director, you can add an adapter instance and credential in vRealize Operations Manager. You can optionally modify adapter-level and instance-level properties.

Product Solutions for vRealize Operations Tenant App for vCloud Director

The solutions tab provides a mechanism to create different adapter instances using the tenant app.

Prerequisites

Verify that the management packs are installed and configured.

Procedure

- 1 On the left pane, select **Administration > Solutions**.
- 2 To add a vCenter adapter instance:
 - a Select the **vCenter Server** tab and click **Add**.
 - b Enter the **Display name** of the vCenter instance and enter a valid **Description**.
 - c Enter the Hostname or FQDN of the vCenter Server.
 - d Enter the vCenter Server **Username** and **Password**, and click **Save**.
- 3 To add a vCloud Director adapter instance:
 - a Select the **vCloud** tab and click **Add**.
 - b Enter the **Display name** of the vCloud instance and enter a valid **Description**.
 - c Enter vCloud Director **Hostname** or **FQDN**.
 - d Enter the **Organization** name.
 - e Enter the **Username** and **Password**.
 - f Enter the **AMQP Password** and click **Save**.

- 4 To add an NSX adapter instance:
 - a Select the **NSX** tab and click **Add**.
 - b Enter the **Display name** of the NSX instance and enter a valid **Description**.
 - c Enter NSX Manager **Hostname** or **FQDN**.
 - d Enter the **vCenter Server** Hostname or FQDN.
 - e Enter the **VC Username** and **Password**.
 - f Enter the **NSX Username** and **Password**, and click **Save**.

To calculate the cost for resources, use an NSX adapter instance. For more information on billing, see [Chapter 7 Billing in Tenant App](#).

- 5 Save vRealize Operations credentials:
 - a Enter the vRealize Operations **Username** and **Password**.
 - b Click **Save**.

Note Ensure to save your credentials, as the tenant app reuses the vRealize Operations credentials to generate monthly bills.

Report Templates Tab

On the **Report Templates** tab you can run and schedule report generation.

In the menu, click **Environment**, and then in the left pane select an object and click **Reports > Report Templates** to access the Reports Templates tab.

All templates that are applicable for the selected object are listed on the **Report Templates** tab. You can order them by report name, subject, date they were modified, last run, or owner.

You can filter the templates list by adding a filter from the right side of the panel.

Table 6-1. Predefined Filter Groups

Filter Group	Description
Name	Filter by the template name. For example, you can list all reports that contain <i>my template</i> in their name by typing my template .
Subject	Filter by another object. If the report contains more than one view applicable for another type of object, you can filter by those objects.

vSphere users must be logged in until the report generation is complete. If you log out or your session expires, the report generation fails.

Note The maximum number of reports per template is 10. With every new generated report, vRealize Operations Manager deletes the oldest report.

Generated Reports Tab

All reports that are generated for a selected object are listed on the **Generated Reports** tab.

In the menu, click **Environment**, and then in the left pane select an object and click **Reports > Generated Reports** to access the Generated Reports tab.

You can order the reports by the date and time that they were created, the report name, the owner, or their status. If the report is generated through a schedule, the owner is the user who created the schedule.

Note The maximum number of reports per template is 10. With every new generated report, vRealize Operations Manager deletes the oldest report.

You can filter the reports list by adding a filter from the right side of the panel.

Table 6-2. Predefined Filter Groups

Filter Group	Description
Report Name	Filter by the report template name. For example, you can list all reports that contain <i>my template</i> in their name by typing my template .
Template	Filter by the report template. You can select a template from a list of templates applicable for this object.
Completion Date/Time	Filter by the date, time, or time range.
Status	Filter by the status of the report.
Subject	Filter by another object. If the report contains more than one view applicable for another type of object, you can filter by those objects.

You can download a report in a PDF or CSV format.

Billing in Tenant App

Tenant App generates monthly bills to provide an account of the overall expenses used for resources in an organization.

This chapter includes the following topics:

- [Generate a New Bill](#)
- [Configure Using Pricing Policy](#)

Generate a New Bill

You can generate bills from the tenant app UI by selecting a resource name from an organization.

Prerequisites

Verify that pricing policies are created for a selected resource.

Procedure

- 1 On the left pane, click **Metering > Bills**.
- 2 Click **GENERATE NEW BILL**.
- 3 Select a resource from the list of resources and click **Next**.
- 4 Select a policy name and click **Next**.
- 5 Provide the required period for generating a new bill from the selected resources and policies.
- 6 Provide a **Title** and click **Finish**.

Configure Using Pricing Policy

You can calculate the cost for each virtual machine and resources.

Note vRealize Operations Manager 7.0 supports vRealize Operations Manager Tenant App for vCloud Director.

You can optionally list the Organizations vDCs for which the adapter instance collects data. For policy allocation models, see *vCloud Director' Administrator's Guide*.

Prerequisites

- Install the Management Pack for vCloud Director. See [Chapter 3 Install Management Pack for vCloud Director](#).
- Verify that your system meets the configuration requirements. For more information on configuration requirements, *VMware vRealize Operations Management Pack for vCloud Director 4.5 Guide*.
- Verify that you have vRealize Operations Manager 7.0.
- Verify that the management packs for vCenter Server, vCloud Director, and NSX is configured.

Procedure

- 1 On the left pane, click **Metering > Configuration** tab.
- 2 Select the **Pricing Policies > Add New Policy**.
- 3 To create a pricing policy:

Option	Description
Base Settings	<ol style="list-style-type: none"> a Enter the Policy Name. b Select the Pricing Policy Type from the drop-down menu. c Enter a valid description for the Policy Description and click Next.
CPU Rate and Storage Rate	<p>You can charge the CPU rate based on GHz or VCPU Count.</p> <ol style="list-style-type: none"> a For the Base rate, select the Charge Period and Charge Based on from the drop-down menu. b Enter a valid number to calculate the Base Rate price. c Select the Charge Based on Power State by selecting the charge from the drop-down menu. a For Fixed Cost, enter a valid number to calculate the cost per GHz or per unit. b Click Next.
Memory Rate	<ol style="list-style-type: none"> a For the Base rate, select the Charge period from the drop-down menu. b Select the Charge Based on. c Enter the Base Rate and Fixed Rate. d Select the Charge Based on Power State from the drop-down menu.
Network Rate	<ol style="list-style-type: none"> a Enter the External Network Transmit and External Network Receive rates. b Under Network Transmit Rate, select the Change Period from the drop-down menu. c Enter the Base Rate and Fixed Cost. d Under Network Receive Rate, select the Change Period from the drop-down menu. e Enter the Fixed Cost.
Advanced Network Rate	<ol style="list-style-type: none"> a Enter the base rate, fixed cost, charge period information in the displayed fields. b Select the necessary size from the drop-down for each of the items under Edge Gateway Size.

Option	Description
Guest OS Rate	<ul style="list-style-type: none"> a Enter the Guest OS Name. b Select the Charge Period and Charge Based on Power state from the drop-down menu. c Enter the Fixed and Base rate.
VM Tag Rate	<ul style="list-style-type: none"> a Enter the Tag Key and Tag Value. b Select the Charge Period and Charge Based on Power state from the drop-down menu. c Enter the Fixed and Base rate.
VCD Metadata Rate	<ul style="list-style-type: none"> a Enter the Metadata. b Select the Charge Period and Charge Based on Power state from the drop-down menu. c Enter the Fixed and Base rate.
Review	Review the summary and click Finish .

- 4 From the list of **Organization VDCs**, select an Org VDCs and click **Assign**.
 - 5 Select any name to assign the policy to the selected Organization VDCs and click **Assign**.
- You can see the assigned policy name under the selected organization VDC.

User Access Management for an Organization



Service providers can create users and give them access to an organization. Service providers have access to components like Provider Dashboard, Organization, Resource Pools, and Provider VDCs . You can also import user account information that resides on another machine, you must define the criteria used to import the user accounts from the source machine as an Active Directory user or an OpenLDAP user.

Prerequisites

- Verify that the Management Pack for vCloud Director is installed and configured in vRealize Operations Manager.
- Verify that vCloud Director is integrated with vRealize Operations Manager.
- To integrate with OpenLDAP or Active directory, verify that you have added authentication sources in vRealize Operations Manager and the user names are present in Active Directory or OpenLDAP. For more information on adding authentication sources, see *vRealize Operations Manager* information center.

Procedure

- 1 On the vRealize Operations Manager Tenant App for a vCloud Director page, click **Administration > Access Management**.
- 2 Click **Manage Users** tab and click **ADD USER**.
- 3 Select any Organization and click **Next**.
- 4 To create a new local user, enter the required fields and click **Add User**.
- 5 To import an existing user from Active Directory or Open LDAP, click **Import** and select the import location.
- 6 Click **Search** and then **Add User**.
- 7 To enable the plugin access, toggle the button of the associated organization.

You have created a user with permissions to access an organization.

Support Bundle for vRealize Operations Manager Tenant App for vCloud Director

9

vRealize Operations Manager tenant app for vCloud Director support bundles contains log and configuration files that help troubleshoot.

To access the Support bundle, navigate to **Administration > Support > Support Bundle**.

To generate a support bundle, click **Generate** . You can also download or delete the support bundle.

Viewing Tenant App Components

10

A service provider can view four dashboards of the tenant app.

This chapter includes the following topics:

- [Organizations](#)
- [Organization VDCs](#)
- [vApps](#)
- [Virtual Machines](#)
- [Metric Selector](#)
- [Provider Overview](#)
- [Provider Virtual Data Center](#)
- [Resource Pools](#)

Organizations

Organizations contain a list of organizations in which it can contain multiple organization VDCs.

Provider Dashboard

The dashboard provides an overview of the Provider Virtual Data Center, which combines the compute and memory resources of a single vCenter Server resource pool with the storage resources of one or more datastores available to that resource pool. For more information, see the *VMware vCloud Director Documentation Center*.

Table 10-1. Provider Dashboard

Field	Description
Organization Summary	This section provides the number of (objects) Organizations, Virtual Datacenters, vApps and virtual machines that are available in a data center.
Provider VDC Capacity Overview	This section provides the capacity of CPU usage, memory, and Storage for each provider.

Table 10-1. Provider Dashboard (Continued)

Field	Description
System Status	This section provides a list of all the alerts and alert definitions for a list of objects.
Organizations Overview	This section provides a list of Organizations and including user and CPU, VMs, vApp information.

Organization Overview

This dashboard provides an overview of resources for an organization.

Table 10-2. Organization Dashboard

Field	Description
Organization Summary	Provides a summary of all the organizations that are in your inventory.
Organization VDC Capacity Overview	Provides an of overview CPU, Memory, and Storage usage of an organization.
System Status	Provides a system status of the criticality of alerts that are generated by the organization.
Organization VDC Utilization Summary	Provides a summary of VDC utilization of an organization.
vApp Utilization Summary	Provides a summary of vApp utilization of an organization.

Organization VDCs

You can view a list of organizations VDCs associated with your organization.

To view the organization VDC details, click the VDC Name from the list of organization VDCs.

Field	Description
Capacity Overview	This text box provides information about the CPU, Memory, and Storage usage of an organization VDC.
List of vApps	This text box provides information of a list of vApps that are used in an organization VDC.

vApps

vApp is a virtual machine that is loaded with an operating system, applications, and data. It is a virtual system that contains one or more individual virtual machines with parameters that define operational details. Cloud resources also provide access to storage and network connectivity.

To view more details about a vApp, click the vApp name from the list of vApps. The tenant app displays a list of vApps that an organization contains. It provides information about the following.

- Organization VDC
- vCPU count
- Memory Allocation
- Storage Allocation

- Number of VMs
- Snapshot Size
- Owner of the selected vApp

When you click a vApp name from the list of vApps, you are then directed to the page that lists its associated VMs.

Virtual Machines

You can view a list of VMs that are associated within a organization.

The virtual machines provide information about.

- vCPU count
- Memory allocation
- Storage allocation
- Snapshot size of each VM

To see a detailed view of your virtual machine, click a virtual machine from the list of VMs.

Field	Description
VM summary	Provides an overall summary of the VM status and its memory allocation.
CPU Information	<ul style="list-style-type: none"> ▪ CPU usage (MHz). This field provides you with the overall CPU usage of the selected VM. ▪ CPU Usage (%). This field provides you with the percentage of CPU usage of a selected VM.
Memory Information	<ul style="list-style-type: none"> ▪ Memory usage (MHz). This field provides you with the overall memory usage of the selected VM. ▪ Memory Usage (%). This field provides you with the percentage of memory usage of a selected VM.
Storage Information	<ul style="list-style-type: none"> ▪ Average Read Request ▪ Average Write Request
Network Information	<ul style="list-style-type: none"> ▪ Packets Dropped ▪ Network Rate

Metric Selector

With metric selector, you can view the metrics over a time. You can select a resource type, resource, metric, and time range to view the metric graph. All metrics time stamp are in the UTC time zone in the vRealize Operations Manager tenant app for vCloud Director.

Provider Overview

The dashboard provides an overview of provider virtual datacenter, which combines the compute and memory resources of a single vCenter Server resource pool with the storage resources of one or more datastores available to that resource pool.

For more information, see *VMware vCloud Director Documentation center*.

Table 10-3. Provider Dashbaord

Field	Description
Organization Summary	This section provides the number of (objects) Organizations, Virtual Datacenters, vApps and Virtual machines that are available in a datacenter.
Provider VDC Capacity Overview	This section provides the capacity of CPU usage, memory and Storage for each provider.
System Status	This section provides a list of all the alerts and its alert definitions for a list of objects.
Organizations Overview	This section provides a list of Organizations and it user and CPU, VMs, vApp information.

Click **Export**, to export the list of provider VDCs in an excel format.

Provider Virtual Data Center

Provider Virtual Data Center (PVDC) combines the compute and memory resources of a single vCenter Server resource pool with the storage resources of one or more datastores available to that resource pool. This page provides a list of all the PVDCs that are available in your data centers.

Resource Pools

You can configure resource pools to a provider VDCs to allocate resources to provider VDC. This page provides a list of resource pools that are configures for provider VDCs in your datacenter.

Click **Export**, to export the list of resource pools in an excel format.