VMware vRealize Operations for Horizon Administration

vRealize Operations for Horizon 6.2.1
VMware vRealize Operations for Horizon 6.2.1

vmware®

You can find the most up-to-date technical documentation on the VMware Web site at:

https://docs.vmware.com/

The VMware Web site also provides the latest product updates.

If you have comments about this documentation, submit your feedback to:

docfeedback@vmware.com

Contents

VMware vRealize Operations for Horizon Administration

VMware vRealize Operations for Horizon Administration provides information about how to use VMware vRealize™ Operations Manager™ to monitor a VMware Horizon™ with View™ environment.

Intended Audience

This information is intended for users who monitor the performance of objects in Horizon environments in VMware vRealize Operations Manager and administrators who are responsible for maintaining and troubleshooting a vRealize Operations for Horizon configuration.

Monitoring Your Horizon Environment

<div style="text-align: right; font-size: large;">**1**</div>

When you install the vRealize Operations for Horizon solution, preconfigured Horizon dashboards and predefined Horizon report templates appear in the vRealize Operations Manager user interface. You can use these Horizon-specific dashboards and reports along with the standard vRealize Operations Manager object monitoring features to monitor your Horizon environment.

This chapter includes the following topics:

- "Using the Horizon Dashboards," on page 7
- "Using the Horizon Reports," on page 17

Using the Horizon Dashboards

The Horizon dashboards are in the **Horizon** group in the **Dashboard List** menu in the vRealize Operations Manager user interface.

Most Horizon dashboards contain at least one master (or providing) widget and several receiving widgets. Master widgets provide data to receiving widgets, and receiving widgets update the data they display depending on the information they receive from master widgets.

The widgets on the Horizon dashboards are created from standard vRealize Operations Manager widgets. If your user account has the necessary access rights, you can modify the Horizon dashboards and widgets or create your own Horizon dashboards.

For information about creating and modifying dashboards and customizing widgets, see the *vRealize Operations Manager Customization and Administration Guide*.

Introducing the Horizon Dashboards

You can use the preconfigured Horizon dashboards to monitor the performance of your Horizon environment.

Table 1-1. Horizon Dashboard Summary

Horizon Dashboard	What It Shows	When To Use It
"Horizon Overview Dashboard," on page 9	Status of your end-to-end Horizon environment, including the top Horizon-related alerts.	- Assess Horizon pod usage, client performance, and the overall user experience - View the top Horizon-related alerts
"Horizon Infrastructure Dashboard," on page 9	Information about the health, workload, and connectivity of infrastructure hosts, remote desktops, datastores, and RDS hosts in your Horizon environment.	- Understand the relationships between objects in your Horizon infrastructure - Assess the underlying vSphere and Horizon infrastructure

Table 1-1. Horizon Dashboard Summary (Continued)

Horizon Dashboard	What It Shows	When To Use It
"Horizon User Sessions Dashboard," on page 10	Metrics and performance information for all types of sessions, including VDI desktop sessions, RDS desktop sessions, and application sessions.	■ Identify and troubleshoot poorly performing remote sessions
"Horizon VDI Pools Dashboard," on page 10	Metrics and performance information for VDI pools.	■ Troubleshoot poorly performing desktop virtual machines and sessions
"Horizon RDS Pools Dashboard," on page 11	Metrics and performance information for RDS pools. NOTE This dashboard is specific to Horizon with Horizon 6.0.3 and VMware Horizon 6 version 6.1 and version 6.2 environments.	■ Identify the RDS hosts that are using the most resources ■ Troubleshoot poorly performing RDS desktop and application sessions
"Horizon Applications Dashboard," on page 12	Status and performance information for application pools and their associated farms, RDS hosts, application sessions, applications, and Horizon clients. NOTE This dashboard is specific to Horizon with Horizon 6.0.x and VMware Horizon 6 version 6.1environments.	■ Understand the relationships between objects in your application infrastructure ■ Troubleshoot remote applications
"Horizon Desktop Usage Dashboard," on page 12	Usage data for all of the desktop pools in your Horizon environment, including VDI desktop pools.	■ View active and disconnected sessions and identify session trends for selected desktop pools ■ View top alerts for selected desktop pools ■ Collect in-guest process data from desktop sessions
"Horizon User Session Details Dashboard," on page 13	Detailed information about all types of sessions running in your Horizon environment, including VDI desktop sessions, RDS desktop sessions, and application sessions.	■ Troubleshoot poorly performing sessions ■ Identify when session problems occurred ■ Collect in-guest process data from desktop sessions
"View RDS Host Details Dashboard," on page 14	Detailed information about the RDS hosts in your Horizon environment.	■ View desktop and application sessions currently running on selected RDS hosts ■ Identify when RDS host problems occurred ■ Collect and view in-guest process data from RDS hosts
"Horizon Adapter Self Health Dashboard," on page 15	Health information for your Horizon adapters and the broker agents connected to those adapters. This dashboard also contains license compliance information.	■ Troubleshoot Horizon adapter problems ■ Monitor license use
"Horizon End User Experience Dashboard," on page 16	Health information for your resources.	■ Troubleshoot problems related to vCenter resources adapter.

Horizon Overview Dashboard

The Horizon Overview dashboard shows the overall status of your Horizon environment. Use the Horizon Overview dashboard to visualize the end-to-end environment, its underlying environment, and alerts.

The Horizon Top Alerts widget shows the alerts of the greatest significance for Horizon objects. When you select a pod in the Horizon Pods widget, the Pod Indicator Metrics, Pod Session Metrics, and Pod Capacity Metrics widgets show data for the pod that you selected.

Tips for Using the Horizon Overview Dashboard

- Click an alert in the Horizon Top Alerts widget to open the alert details.

- Use the Horizon Pods widget to determine the total number sessions, including the number of connected and disconnected sessions, for a selected pod. Use the Pod Session Metrics widget to view desktop, application, PCoIP, RDP, and Blast HTML session metrics.

- The vCenter Server Instance widget shows the vCenter that the View pod is associated with. It includes vCenter name, vCenter CPU capacity usage, vCenter usable memory, vCenter disk capacity remaining, and collecting status.

- The Capacity remaining widget shows the capacity related information of the selected vCenter in vCenter Server Instance widget. It shows the graph of used capacity and remaining capacity.

- The Reclaimable Capacity widget shows the reclaimable capacity of the selected vCenter in the vCenter Server Instance widget. It shows the reclaimable CPU, memory, and disk. It also shows the percentage of VMs in different status.

Horizon Infrastructure Dashboard

Use the Horizon Infrastructure dashboard to quickly assess the underlying vSphere and Horizon infrastructure that supports your Horizon environment.

Horizon Infrastructure Hosts, Horizon VDI Desktop VMs, View Datastores, and View RDS Hosts are Heat Map widgets. These widgets show information about the health, workload, and connectivity of infrastructure hosts, remote desktops, and datastores, RDS (Microsoft Remote Desktop Services) hosts in your Horizon environment.

You can select an object in any widget and click the **Dashboard Navigation** button on the widget toolbar to navigate to vSphere dashboards. You can double-click an object to navigate to the object **Summary** tab in vRealize Operations Manager.

NOTE RDS hosts are specific to Horizon with View 6.0.x and VMware Horizon 6 version 6.1 and later environments.

Tips for Using the Horizon Infrastructure Dashboard

- The colored rectangles in each widget represent particular objects. For example, in the Horizon VDI Desktop VMs widget, each rectangle represents a particular virtual machine. You can point to a rectangle to view basic information about its associated object.

- The size of the rectangle indicates the value of one metric, the color of the rectangle indicates the value of another metric, and the widget configuration determines which metric values the widget shows. For example, if you select **Sized by Workload - Colored by Health** from the **Configuration** drop-down menu, rectangles are sized according to the value of the workload attribute and are colored according to the value of the health attribute. Red indicates a low value and green indicates the high end of the value range.

Horizon User Sessions Dashboard

The Horizon User Sessions dashboard provides a quick view of all types of sessions running in your Horizon environment. The widgets on the dashboard are organized into three columns: the left column contains widgets for VDI desktop sessions, the middle column contains widgets for RDS desktop sessions, and the right column contains widgets for application sessions. Each column contains a Heat Map widget and four Top-N Analysis widgets.

You can click the **Dashboard Navigation** button on any widget toolbar to navigate to the Horizon Remote Session Details dashboard and see detailed information about a particular session.

NOTE RDS desktop sessions and application sessions are specific to View with 6.1 and later and VMware Horizon 6 version 6.1 or later environments.

Tips for Using the Horizon User Sessions Dashboard

- The colored rectangles in the VDI Desktop Sessions, RDS Desktop Sessions, and Application Sessions widgets represent particular objects. For example, in the VDI Desktop Sessions widget, each rectangle represents a particular VDI desktop. You can point to a rectangle to view basic information about its associated object.

- The size of the rectangle indicates the value of one metric, the color of the rectangle indicates the value of another metric, and the widget configuration determines which metric values the widget shows. For example, if you select **Sized by Workload - Colored by Health** from the **Configuration** drop-down menu, rectangles are sized according to the value of the workload metric and are colored according to the value of the health metric. Red indicates a low value and green indicates the high end of the value range.

- Use the Top-N Analysis widgets to view the sessions of each type that have the highest latency, transmission bandwidth, transmission packet loss, and logon times. Viewing the extreme performers in any category can help you to assess the overall performance of your environment.

Horizon VDI Pools Dashboard

Use the Horizon VDI Pools dashboard to view the performance of VDI desktop pools and sessions in your Horizon environment. A VDI desktop pool can be a linked-clone desktop pool, automated desktop pool, or manual desktop pool.

The widgets below the VDI Desktop Pools and VDI Desktop Pool Indicator Metrics widgets are organized into two columns: the left column contains widgets for VDI desktop pool virtual machines and the right column contains widgets for VDI desktop pool sessions. Each column contains a Heat Map widget and four Top-N Analysis widgets.

The VDI Desktop Pools widget is the master widget for the Heat Map widgets on the dashboard. For example, when you select a desktop pool in the VDI Desktop Pools widget, the VDI Desktop Pool VMs widget shows the desktop virtual machines in that desktop pool and the VDI Desktop Pool Sessions widget shows the desktop sessions that are currently logged on for that desktop pool.

You can click the **Dashboard Navigation** button on a widget toolbar to navigate to other dashboards. In some widgets, including VDI Desktop Pools and VDI Desktop Pool VMs, you can use **Dashboard Navigation** button to launch Horizon Administrator.

Tips for Using the Horizon VDI Pools Dashboard

- Use the graphs in the VDI Desktop Pool Indicator Metrics widget to see the values of selected metrics over time and obtain a quick view of the trends in KPIs.

■　The colored rectangles in the VDI Desktop Pool VMs and VDI Desktop Pool Sessions widgets represent particular objects. For example, in the VDI Desktop Pool VMs widget, each rectangle represents a particular virtual machine. You can point to a rectangle to view basic information about its associated object.

■　The size of the rectangle indicates the value of one metric, the color of the rectangle indicates the value of another metric, and the widget configuration determines which metric values that the widget shows. For example, if you select **Sized by Workload - Colored by Health** from the **Configuration** drop-down menu, rectangles are sized according to the value of the workload metric and are colored according to the value of the health metric. Red indicates a low value and green indicates the high end of the value range.

■　Use the Top-N Analysis widgets for desktop virtual machines to view the virtual machines that have the highest CPU, memory, disk, and network workload. Use the Top-N Analysis widgets for desktop sessions to view the sessions that have the highest latency, transmission bandwidth, transmission packet loss, and logon times. Viewing the extreme performers in any category can help you to assess the overall performance of your environment.

Horizon RDS Pools Dashboard

Use the Horizon RDS Pools dashboard to view the performance of the farms, RDS hosts, RDS desktop pools, and application pools in your Horizon environment. The Horizon RDS Pools dashboard is specific to Horizon with Horizon 6.1 and later environments.

The widgets on the Horizon RDS Pools dashboard are organized into three columns: the left column contains widgets for farms, the middle column contains widgets for RDS desktop pools, and the right column contains widgets for application pools.

Each column on the Horizon RDS Pools dashboard contains a Resource List widget, a Heat Map widget, and four Top-N Analysis widgets. Each Resource List widget is the master widget for the Heat Map widget in its column. For example, when you select a farm in the Farms widget in the first column, the Heat Map widget in that column shows data for the farm that you selected.

In the Farms, RDS Desktop Pools, and Applications Pools widgets, you can click the **Dashboard Navigation** button on the widget toolbar to launch Horizon Administrator. In the other widgets, you can click the **Dashboard Navigation** button to navigate to other dashboards.

Tips for Using the Horizon RDS Pools Dashboard

■　The colored rectangles in the RDS Hosts, RDS Desktop Sessions, and Application Sessions widgets represent particular objects. For example, in the RDS Hosts widget, each rectangle represents a particular RDS host. You can point to a rectangle to view basic information about its associated object.

■　The size of the rectangle indicates the value of one metric, the color of the rectangle indicates the value of another metric, and the widget configuration determines which metric values the widget shows. For example, if you select **Sized by Workload - Colored by Health** from the **Configuration** drop-down menu, rectangles are sized according to the value of the workload metric and are colored according to the value of the health metric. Red indicates a low value and green indicates the high end of the value range.

■　Use the Top-N Analysis widgets for RDS hosts to view the RDS hosts that use the most CPU processor time and have the highest number of committed bytes in use, disk transfers per second, and bytes sent per second. Use the Top-N Analysis widgets for RDS desktop and application sessions to view the sessions that have the highest latency, transmission bandwidth, transmission packet loss, and session logon times. Viewing the extreme performers in any category can help you to assess the overall performance of your environment.

Horizon Applications Dashboard

Use the Horizon Applications dashboard to view the status and performance of application pools and their associated farms, RDS hosts, application sessions, application instances, and application users. The Horizon Applications dashboard is specific to Horizon with Horizon 6.1 and later environments.

NOTE You can hide dashboards that are not relevant to your Horizon environment. For information about configuring dashboards, see the vRealize Operations Manager documentation.

Tips for Using the Horizon Applications Dashboard

■ Application Pools widget shows all the application pools in current environment. It is the master widget in this dashboard and shows the following data of application pool: pool name, number of application instances, average application launch time and collection status.

■ Application Pool Relationship widget shows all the parent/children object of the selected pool.

■ Application instances widget shows all the running instances of the selected application pool in application pools widget. The following instance data are shown: user name, pool name, session state, application duration, server name, VM name, and collection status.

■ Application Instance Resource Trend widget shows the detailed instance resource consumption trend. The time period is last hour by default. The data shown are instance health, workload, CPU, memory, disk read bytes per second, and disk write bytes per second.

■ Application Use widget shows the users that launched the selected application in the last hour(default time period). You need to export the data in this widget to a csv file to see the detailed application user report.

Horizon Desktop Usage Dashboard

Use the Horizon Desktop Usage dashboard to view usage data for the desktop pools in your Horizon environment.

The All Desktop Pools widget lists all of the VDI desktop pools in your Horizon environment and is the master widget for the dashboard. When you select a pool in the All Desktop Pools widget, the other widgets on the dashboard show information about the pool you selected. The All Desktop Pools widget also contains several columns that show aggregate metrics.

You can select a desktop pool in the All Desktop Pools widget and click the **Dashboard Navigation** button to navigate to other Horizon dashboards or launch Horizon Administrator.

Tips for Using the Horizon Desktop Usage Dashboard

■ Use the Desktop Resource Trend widget to view connected and disconnected sessions for the selected pool. The charts in this widget enable you to compare the number of sessions during different time periods.

■ Use the Pool desktop Sessions widget to view all connected and Disconnected sessions for the selected pool. This widget also contains several metric columns, including Logon Timestamp. You can click the Dashboard

Navigation button to navigate to the Horizon user Session Details dashboard.

Use the Top Pool Alerts widget to view active alerts for the selected pool and its children.

■ Use the Pool Events widget to view a timeline of pool events and alerts.

- You can use the Running Application/Processes & Users widget on the horizon Desktop usage dashboard to obtain information about in-guest processes and their resource usage for Desktop session objects.

- Use the Use VDI Desktop Resource Consumptions widget to view user consumptions for sessions.

Retrieve In Guest Process Data for Desktop Sessions

You can use the Running Application/Processes & Users widget on the horizon Desktop usage dashboard to obtain information about in-guest processes and their resource usage for Desktop session objects.

Prerequisites

Verify that you have selected the Horizon Desktop usage dashboard from the Dashboard list.

Procedure

1   To retrieve information about processes run by the user, run the **Get Desktop Processes** action.

2   To retrieve information about processes run by the system, run the **Get Desktop Services** action and run the Get Desktop/Client trace-route.

Horizon User Session Details Dashboard

Use the User Session Details dashboard to view detailed information about all types of sessions running in your Horizon environment.

NOTE   RDS desktop sessions and application sessions are specific to Horizon with Horizon 6.1 and later and VMware Horizon 6 version 6.1 environments.

The Horizon Remote Sessions widget lists all of the VDI desktop sessions, RDS desktop sessions, and application sessions in your environment and is the master widget for the dashboard.

Tips for Using the Horizon User Session Details Dashboard

- Use the Session Indicator Metrics widget to view the values of important session metrics, including session health, session workload, session logon time and PCoIP session latency, bandwidth, and packet loss.

- Use the Session Logon Breakdown widget to view important logon metrics, profile load time, shell load time, and Interactive session time.

- Run actions in the Session Processes widget to obtain information about in-guest desktop processes and their resource usage, including CPU, memory, and IO use. The Get Desktop Processes and Get Desktop Services actions can help you determine which desktop processes and applications are using the most resources. The Get Desktop/Client Traceroute action provides information about network distance and quality between the desktop and client.

- Use the Session Health & Events widget to see a timeline of health and anomalies for the selected session. The timeline is annotated with session-related events and alerts.

- Use the Users widget to all the active users(users that ever logged in to Horizon) in current Horizon environment across pod.

- Use the Application Launched By User to find out the when was the selected application launched by which user in the selected time period.

- Use the Session Related Objects widget to look at the related object of the selected session.

Retrieve In-Guest Process Data for Session Objects

You can use the Session Process widget on the Horizon Remote Session Details dashboard to obtain information about in-guest processes and their resource usage for Horizon session objects.

Session objects include VDI Desktop Session, RDS Desktop Session, and Application Session.

Prerequisites

Verify that you have selected the Horizon Remote Session Details dashboard from the dashboard list.

Procedure

■ For all types of session objects, run the **Get Desktop Processes** action to retrieve processes run by the user.

■ For VDI Desktop Session objects only, run the **Get Desktop Services** action to retrieve processes run by the system.

> **NOTE** The Get Desktop Services action does not exist for RDS Desktop Session, and Application Session objects. For these session objects, you must retrieve system process data at the host object level.

What to do next

You can retrieve in-guest process data for host objects. See

View RDS Host Details Dashboard

This dashboard shows the detailed information of each RDS host in the horizon environment including host health, session count, desktop count, application count, PCoIP related data, detailed session data of the host, and the user resource consumption on the selected host.

> **NOTE** RDS hosts are specific to Horizon with View 6.1 and above and VMware Horizon 6 version 6.1 environments.

The RDS Hosts widget shows all of the RDS hosts in your environment and is the master widget for the dashboard.

Tips for Using the View RDS Host Details Dashboard

■ Use the RDS Host Indicator Metrics widget to view the values of important host metrics, including health, workload, total sessions, desktop sessions, application sessions and PCoIP latency, bandwidth, and packet loss.

■ Run actions in the RDS Host Processes & Users widget to obtain information about in-guest host processes and their resource usage, including CPU, memory, and IO use. The Get Host Processes, Get Host Services, and Get Host Users actions can help you determine which host processes, applications, and users are using the most resources.

■ The RDS Host Sessions widget shows the desktop and application sessions currently running on the selected host. Information about the collection state and status, health score, workload, session state, protocol, and latency for each session appears in sortable columns. You can click the **Dashboard Navigation** button to navigate to the View Remote Session Details dashboard.

■ Use the RDS Host Health and Events widget to see a time line of health and anomalies for the selected host. The time line is annotated with host-related events and alerts. Use the toolbar buttons to select the types of events and alerts to display.

- Use the User Resource Consumption to see how many resources are used by each user in the selected RDS host. The data include information such as user name, pool name, cpu, disk, memory, and network.

Retrieve In-Guest Process Data for Host Objects

You can use the RDS Host Processes & Users widget on the Horizon RDS Host Details dashboard to obtain information about in-guest processes and their resource usage for View host objects.

Host objects include RDS Hosts.

Prerequisites

Verify that you have selected the Horizon RDS Host Details dashboard from the Dashboard list.

Procedure

- To retrieve information about processes run by the user, run the **Get Server Processes** action.

- To retrieve information about processes run by the system, run the **Get Server Services** action.

Horizon Adapter Self Health Dashboard

Use the Horizon Adapter Self Health dashboard to view health information for vRealize Operations for Horizon adapters and for the vRealize Operations for Horizon broker agents that are connected to those adapters. You can also use the Horizon Adapter Status dashboard to verify license compliance.

The Select Horizon Adapter widget is the master widget for the adapter-related widgets on the dashboard. When you select an adapter in the Select Horizon Adapter widget, the Horizon Adapter Statistics and Horizon Adapter Status widgets show data for the adapter that you selected.

The Select Horizon Broker Agent widget is the master widget for the broker agent-related widgets on the dashboard. When you select a broker agent in the Select Horizon Broker Agent widget, the Horizon Broker Agent Event DB Collection Statistics, Horizon Broker Agent Metric Collection Statistics, Horizon Broker Agent Topology Collection Statistics, and Horizon Broker Agent Status widgets show data for the broker agent that you selected.

Tips for Using the Horizon Adapter Self Health Dashboard

- Use the Horizon Adapter Status widget to view important metrics for the selected adapter, including the length of the last collection period, the number of desktops that sent data samples during the last collection period, and the total number of objects that the adapter received during the last collection period.

- Use the Horizon Broker Agent Status widget to view important metrics for the selected broker agent, including the topology, metric, and database event collection times and the user session, desktop virtual machine, and database event record counts.

- Use the License Usage History widget to check license compliance during the past 30 days. This graph tracks the number of concurrent users connected to the Horizon environment.

- Use the Active License Alerts widget to view open license alerts associated with the Horizon adapter that you selected. You can double-click an alert to view information about its possible cause and its effect on your environment.

- Horizon collection statistics for the selected broker agent in the Horizon Broker Agent Topology Collection Statistics, Horizon Broker Agent Metric Collection Statistics, and Horizon Broker Agent DB Event Collection Statistics widgets. These widgets show simple graphs that contain the values of their associated collection metrics over time.

Understanding Broker Agent Metrics

Although the broker agent metrics on the Horizon Adapter Status dashboard are accurate, their values might be misleading. Because these metrics correspond to different activities within the broker agent, they are updated at different intervals. For this reason, some metrics might appear to be stale or not up-to-date.

For example, the Topology Collection Time, User Session Count, and Desktop VM Count metrics in the Horizon Broker Agent Status widget are updated only once per hour. Because the User Session Count metric value can be up to an hour old, it might not agree with the session count value that appears on other dashboards.

In another example, the DB Event Collection Time and DB Event Record Count metrics might show a question mark (?) to indicate that there is no data, even though data has been collected. This situation occurs when no relevant vRealize Operations for Horizon database events are collected during the last six hours because these metrics are updated only when the broker agent sends events (for example, session connection and Horizon error events) to the adapter.

In general, metric collection metrics are sent every five minutes and topology collection metrics are sent every hour. Database event collection metrics might be sent as often as once per minute or as seldom as there are relevant vRealize Operations for Horizon events.

Horizon End User Experience Dashboard

The End User Experience Dashboard continually monitors vCPU/vRAM and vDisk to alert of infrastructure performance that could negatively impact user-session experience via a heat map layout.

Tips for using the Horizon End User Experience Dashboard

- vCPU experience shows the vCPU performance of each VM or host in Horizon environment with a heat map. This heat map widget has several built-in configuration: VM CPU ready%, VM CPU demand%, VM CPU contention%, host cpu contention%, host cpu usage%.

- vCPU relationship shows the related object of the selected VM or host in the vCPU experience widget.

- vCPU ready chart shows the vCPU ready% trend of the selected VM or host in the vCPU experience widget.

- vDisk experience shows the vDisk performance of each VM or datastore in Horizon environment with a heat map. This heat map widget has several built-in configuration: VM Disk latency, VM Disk latency by IOPS, datastore latency.

- vDisk relationship shows the related object of the selected VM or datastore in the vDisk experience widget.

- vDisk latency chart shows the total latency of all instance trend of the selected VM or datastore in the vDisk experience widget.

- Active session alert widget shows all alerts of current horizon active sessions.

- Pool critical alerts widget shows the critical alert number of all VDI desktop pools. The color bound set be customized. The default bounds are: 1 Yellow, 10 Orange, and 15 Red.

- PCoIP experience shows the PCoIP performance of each VDI desktop session in Horizon environment with a heat map. This heat map widget has several built-in configuration: PCoIP latency, PCoIP Packet loss, PCoIP bandwidth, PCoIP Latency by BW, and session total logon time.

- PCoIP relationship shows the related objects of the selected VDI desktop session in the PCoIP experience widget.

- PCoIP chart shows the VDI desktop session data according to the selected configuration of the PCoIP experience widget.

- vRAM experience shows the vRAM performance of each VM in Horizon environment with a heat map. This heat map widget has several built-in configuration: VM memory swap and VM RAM usage%.

- vRAM relationship shows the related object of the selected VM in the vRAM experience widget.

- vRAM chart shows the VM data trend according to the selected configuration of the vRAM experience widget.

Using the Horizon Reports

The predefined report templates for an object type appear on the **Reports** tab in
vRealize Operations Manager. To access the **Reports** tab for a Horizon object, select **Environment > Horizon Horizon Environment** and select the object. All of the reports that are associated with that object appear on the **Reports** tab.

Introducing the Horizon Reports

The predefined Horizon reports provide information about remote desktop and application usage, desktop and application pool configuration details, and license compliance.

To generate a report, you select an object, click the **Reports** tab, and click **Report Templates**. The listed report templates are associated with the object you selected. The object determines the scope of the generated report. For example, you can run a template against one specific pool or all pools, depending on the object you select.

Table 1-2. Summary of Horizon Reports

Template Name	Recommended Objects	Report Content
Horizon Application Pool Details	■ Application Pool ■ Pod Pools (tier) ■ Horizon Pod	Application pool configuration and application pool, RDS farm, and RDS host usage information.
Horizon Application Pool Usage	■ Application Pool ■ Pod Pools (tier) ■ Horizon Pod	Current application usage count, usage trend, and sessions.
Horizon Desktop Pool Usage	■ VDI Desktop Pool ■ RDS Desktop Pool ■ Pod Pools (tier) ■ Horizon Pod	Desktop pool usage information, including usage count and trend and connected and disconnected desktop information.
Horizon Pod License Compliance	■ Horizon Pod	Current and daily maximum usage count and last 30-day trend.
Horizon Pool Usage Overview	■ Pod Pools (tier) ■ Horizon Pod	Overview of desktop and application pool session usage.
Horizon RDS Desktop Pool Details	■ RDS Desktop Pool ■ Pod Pools (tier) ■ Horizon Pod	Configuration, usage trend, logon and PCoIP latency trend, RDS farm usage, and host usage for RDS or TS desktop pools.
Horizon VDI Desktop Pool Details	■ VDI Desktop Pool ■ Pod Pool (tier) ■ Horizon Pool	VDI desktop pool configuration information, desktop status counts, and usage, logon, PCoIP latency, and error trends.
Horizon VDI Desktop Session Statistics	■ VDI Desktop Pool ■ Pod Pool (tier) ■ Horizon Pool	VDI desktop pool connection, logon, PCoIP, and workload statistics.

Table 1-2. Summary of Horizon Reports (Continued)

Template Name	Recommended Objects	Report Content
Horizon Application Usage Report	■ Horizon Pod ■ Application Pool	Application usage information in last 7 days(by default), including Application pool name, pool's farm name, application launch times, application peak concurrent instances, and application total usage time.
Horizon User Session Statistics	■ User	This report shows the session statistics of the users in the horizon environment. This report is suggested to run the object Horizon environment or Horizon pod. In the generated report, following data are shown: user name, total application session duration, total RDS desktop session duration and total VDI desktop session duration. The data is calculated and aggregated with the selected time period. The default time period is last 7 days.

Maintaining
vRealize Operations for Horizon

<div style="text-align: right; font-size: 2em;">2</div>

If your Horizon environment changes after the initial configuration of the broker agent, you can modify the broker agent settings on the Horizon Connection Server host where the broker agent is installed.

This chapter includes the following topics:

Pair the Broker Agent with a Horizon Adapter Instance

If you reinstall the Horizon adapter to which the broker agent is connected, or you want to connect the broker agent to a different Horizon adapter instance, you must reconfigure the broker agent to pair with the Horizon adapter instance.

Prerequisites

- Verify that you have the server key for the Horizon adapter instance to pair with the broker agent. You specified the server key when you created a credential for the adapter instance.

- Verify that you have the IP address of the Horizon Connection Server host where you installed the Horizon adapter.

- Both the broker agent and the Horizon adapter must run on the same TLS version before they can be paired.

Procedure

1   Log in to the Horizon Connection Server host where you installed the broker agent with a domain user account.

    Local accounts do not have the necessary privileges to configure the broker agent settings.

2   From the **Start** menu, select **VMware > vRealize Operations Horizon Broker Agent Settings**.

3   In the **vRealize Operations Horizon Adapter** section of the vRealize Operations Horizon Broker Agent Settings dialog box, type the IP address and port number for the node or remote collector where the Horizon adapter instance is running.

    By default, the broker agent uses port 3091 to communicate with the Horizon adapter. You can modify the default port number, depending on your network configuration.

4   Type the adapter server key and confirm the server key for the Horizon adapter and click **Pair** to start the pairing process.

The status of the pairing process appears in the status area of the wizard.

5   After the pairing process succeeds, click **Next** till you are at the Configure The Broker Agent Service wizard.

6   Restart the Broker Agent service.

7   Click **Next** and **Finish**.

Modify the Broker Agent Service Logging Level

You can modify the logging level for the Broker Agent service by modifying the broker agent configuration.

Procedure

1   Log on to the Horizon Connection Server host where the broker agent is installed with a domain user account.

Local accounts do not have the necessary privileges to configure all settings.

2   From the **Start** menu, select **VMware > vRealize Operations Horizon Broker Agent Settings**.

3   In the **vRealize Operations Horizon Broker Agent Service** section on the vRealize Operations Horizon Broker Settings dialog box, select a log level from the **Log level** drop-down menu.

The available log levels are Off, Error, Warning, Information, and Verbose. The log level is set to Information by default. To troubleshoot problems, set the logging level to Information. To view detailed messages, including micro steps, queries, and returned results, set the logging level to Verbose.

NOTE   If you set the logging level to Verbose, log files can become large very quickly. Set the logging level to Verbose only for short periods of time. Broker agent log files are purged once a week.

---

4   Click **Apply** to save your settings.

The status of your configuration appears in the Applying Configuration Settings window.

5   After the configuration settings are successfully applied, click **Close** to close the Applying Configuration Settings window.

Reissue Horizon Desktop Authentication Tokens

If you believe that the security of your Horizon environment might be compromised, you can issue a new authentication token for each desktop virtual machine and RDS host in your Horizon environment by restarting the Broker Agent service. By default, a new authentication token for each desktop virtual machine and RDS host is issued every hour.

Change the Desktop Pools to Monitor

You can add or remove desktop pools from the scope of monitored objects by modifying the broker agent configuration.

Prerequisites

Obtain the IDs for the desktop pools to monitor. You can find pool IDs in Horizon Administrator. For more information, see the administration document for your Horizon version.

Procedure

1   Log on to the Horizon Connection Server host where the broker agent is installed with a domain user
    account.

    Local accounts do not have the necessary privileges to configure all settings.

2   From the **Start** menu, select **VMware > vRealize Operations Horizon Broker Agent Settings**.

3   In the **Desktop pools** section on the vRealize Operations Horizon Broker Settings dialog box, select
    Specify desktop pools and type the IDs of the desktop pools in the text box.

    Use a comma to separate each desktop pool ID. If you do not select **Specify desktop pools**,
    vRealize Operations Manager monitors all desktop pools.

4   Select whether to include or exclude the listed desktop pools.

5   If you are monitoring a Horizon 6.0 with Horizon or later environment, select whether to monitor
    application pools.

    You cannot filter the application pools to monitor. If you select this setting,
    vRealize Operations Manager monitors all application pools.

6   Click **Test** to verify that the broker agent can connect to the desktop pools that you specified.

7   Click **Next** to proceed.

Change Horizon Events Database Credential Settings

If the credentials for your Horizon events database change after the initial broker agent configuration, you
must modify the credential settings for the database in the broker agent configuration.

Procedure

1   Log on to the Horizon Connection Server host where the broker agent is installed with a domain user
    account.

    Local accounts do not have the necessary privileges to configure all settings.

2   From the **Start** menu, select **VMware > vRealize Operations Horizon Broker Agent Settings**.

3   In the **Events database** section of the vRealize Operations Horizon Broker Agent Settings dialog box,
    type the event database user name and password.

4   Click **Validate DB Credentials** to verify that the broker agent can connect to the Horizon events
    database.

5   Go to the service page and restart the service.

6   Click Next and Finish.

Troubleshooting a vRealize Operations for Horizon Installation

<div style="text-align: right;">3</div>

If problems occur after you install and configure vRealize Operations for Horizon, you can collect log files and send the files to VMware for technical support.

This chapter includes the following topics:

- ■ "Create a vRealize Operations Manager Support Bundle," on page 23
- ■ "Download vRealize Operations for Horizon Broker Agent Log Files," on page 24
- ■ "Download vRealize Operations for Horizon Desktop Agent Log Files," on page 24
- ■ "View the Collection State and Status of a Horizon Adapter Object," on page 24
- ■ "Horizon Collector and Horizon Adapter Log Files," on page 26
- ■ "Modify the Logging Level for Horizon Adapter Log Files," on page 26

Create a vRealize Operations Manager Support Bundle

If the Horizon adapter does not operate as expected, you can gather log and configuration files in a support bundle and send the support bundle to VMware for analysis.

Procedure

1   Log in to the vRealize Operations Manager user interface with admin privileges.

2   Click the **Administration** tab and select **Support > Support Bundles**.

3   Click the **Create Support Bundle** (plus sign) icon.

4   Select the type of support bundle to generate and the nodes to include in the support bundle.

5   Click **OK** to create the support bundle.

The progress of the support bundle appears in the Status column on the Support Bundles pane. Support bundle creation might take several minutes, depending on the size of the logs and the number nodes. You can click the **Reload Support Bundle** icon to refresh the status.

6   Select the support bundle and click the **Download Support Bundle** icon to download the support bundle to the server.

You cannot download a support bundle until its status is Succeed. For security, vRealize Operations Manager prompts you for credentials when you download a support bundle.

7   (Optional) Send the support bundle to VMware for support.

Download vRealize Operations for Horizon Broker Agent Log Files

If the vRealize Operations for Horizon broker agent does not operate as expected, you can download the broker agent log files and send the log files to VMware for support.

By default, broker agent log files are purged after one week.

Procedure

1   Log in to the Horizon Connection Server host where the broker agent is installed as an administrator.

2   Navigate to `C:\ProgramData\VMware\vRealize Operations for Horizon\Broker Agent\logs` on the Horizon Connection Server host.

The `logs` directory contains the broker agent log files.

3   Use an archive program to create a ZIP file that contains the log files in the `logs` directory.

4   Send the ZIP file to VMware for support.

Download vRealize Operations for Horizon Desktop Agent Log Files

If the vRealize Operations for Horizon desktop agent is not operating as expected, you can download the desktop agent log files from the remote desktop and send the log files to VMware for support.

Horizon administrators can use the `vdmadmin` command to create a Data Collection Tool (DCT) bundle that contains to log files from one or more remote desktops. For information about creating DCT bundles, see the Horizon administration document for your Horizon version.

Prerequisites

Verify that you can use Horizon Client to connect to the remote desktop.

Procedure

1   Use Horizon Client to connect to the remote desktop from which to collect the desktop agent log files.

2   On the remote desktop, navigate to `C:\ProgramData\VMware\vRealize Operations for Horizon\Desktop Agent\logs` and locate the desktop agent log files.

Desktop agent log file names begin with `v4v-` and `v4-*` (For example, `v4-msgserver.log`).

3   Use an archive program to create a ZIP file that contains the desktop agent log files.

4   Send the ZIP file to VMware for support.

View the Collection State and Status of a Horizon Adapter Object

You can view collection state and status information for a adapter object in the vRealize Operations Manager user interface. This information can help you diagnose and troubleshoot adapter problems.

You can also view important metrics, statistics, and license information for Horizon adapter instances on the Horizon Adapter Self Health dashboard. See

Procedure

1   Log in to the vRealize Operations Manager user interface with admin privileges.

2   Click the **Administration** tab and click **Environment Overview**.

3   Expand **Adapter Instances** and click **Horizon Adapter Instance**.

Horizon adapter instance objects appear on the **List** tab in the right pane.

4 Point to the icon in the **Collection State** column to see whether vRealize Operations Manager should be collecting data for the adapter instance object.

The collection state indicates whether vRealize Operations Manager should be collecting data for the object.

Option	Description
Collecting	Object is set to collect data.
Not Collecting	Object is set to not collect data.
Starting	Collection is starting.
Stopping	Collection is stopping.
Updating	Object is being updated.
Failed	Object configuration problem.
In Maintenance	Object is in scheduled maintenance.
In Maintenance (Manual)	Object is in manual maintenance.
Removing	Object is being removed.

5 Click the icon in the **Collection State** column to view more information about the collection state.

Option	Description
Adapter Instance	Name of the adapter instance.
Collector Name	Name of the collector on which the adapter instance is running.
Last Heartbeat	Amount of time since vRealize Operations Manager received a heartbeat message from the adapter instance. A long period of time might indicate a connection problem.
Heartbeat Sleep Time	Heartbeat sleep time value, which determines the interval between heartbeat messages. The default heartbeat sleep time value is 10 seconds.
Status	Status message from the collector.
Last Collection Time	Amount of time since the end of the last collection cycle and the number of metrics that the adapter instance collected during that cycle.
Last Collection Duration	Length of time of the last collection cycle.
Metric Sparklines	Graphical representations of the last collection cycle duration and the number of metrics and objects that the adapter collected during that cycle.

6 Point to the icon in the **Collection Status** column to see whether vRealize Operations Manager is receiving data for the adapter instance object.

The collection status value indicates whether vRealize Operations Manager is receiving data for the object. An object has a status value only if its collection state is Collecting.

Option	Description
Data Receiving	vRealize Operations Manager is receiving data for the object
Old Data Receiving	Data is not current. The most recent value is at least five monitoring cycles old.
No Data Receiving	The adapter instance is collecting data, but vRealize Operations Manager has not received data for the object.
None	vRealize Operations Manager or collection was recently started and no data has been received for five monitoring cycles.
Unknown	Status of the object is not known.
No parent object monitoring	The adapter instance object is stopped.
Collection down	Collector or adapter instance is not operational.

What to do next

If you discover problems with a Horizon adapter instance, you can check the log files for error messages. See "Horizon Collector and Horizon Adapter Log Files," on page 26.

Horizon Collector and Horizon Adapter Log Files

You can view collector and Horizon adapter log files in the vRealize Operations Manager user interface. Log files are organized in log type folders.

Procedure

1   Log in to the vRealize Operations Manager user interface with admin privileges.

2   Click the **Administration** tab, click **Support**, and click **Logs**.

3   Select **Log Type** from the **Group by** drop-down menu.

4   Double-click the **Collector** folder and double-click the folder for the node on which the adapter instance is running.

5   Perform these steps to view log files.

    a   Double-click a log file to view the contents of the log file.

    b   Type line numbers in the **Starting line** and **# of lines** text boxes and click the **Load log content** icon (>) to view a specific part of the log file.

6   Click the **Reload Tree** icon to reload the log tree information and collapse all open folders.

Modify the Logging Level for Horizon Adapter Log Files

You can modify the logging level for the collector node that contains the log files for a Horizon adapter instance.

Procedure

1   Log in to the vRealize Operations Manager user interface with admin privileges.

2   Click the **Administration** tab, click **Support**, and click **Logs**.

3   Select **Log Type** from the **Group by** drop-down menu.

4   Expand the **Collector** folder.

5   Select the node on which the Horizon adapter instance is running and click the **Edit Properties** icon.

6   In the Logging Level column, select the logging level for the Horizon adapter log class.

To troubleshoot problems, set the logging level to Info. To view detailed messages, including micro steps, queries, and returned results, set the logging level to Debug.

NOTE   If you set the logging level to Debug, log files can become large very quickly. Set the logging level to Debug only for short periods of time.

7   Click **OK** to save your changes.

Index