



# HP Virtualization Performance Viewer

Software Version: 2.01

Linux operating system

## Getting Started Guide for Virtual Appliance

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# Chapter 1: Introduction

HP Virtualization Performance Viewer (HP vPV) is a web-based analysis and visualization tool that analyzes the performance trends of elements in virtualized environments. It enables virtualization monitoring by providing an overview of the environment, near-real-time and historical data analysis and triaging using an interactive dashboard. It also enables monitoring for cloud and hypervisor environments. HP vPV helps you visualize performance data for elements in the context of each other to rapidly analyze bottlenecks. HP vPV provides performance monitoring, graphing, and reporting in a single interface. You can use HP vPV to do the following:

## Performance Monitoring

- **Dashboard** provides quick and easy navigation to other HP vPV views.
- **Treemap** provides the graphical representation of the health of the environment. You can also identify and view the problems at a glance. Treemap provides quick analysis of the entities such as Datacenter, Host, or VMs.
- **Workbench** helps you to visualize and triage the performance of the monitored resources. You can troubleshoot problems that occurred in the past for a specific time period. You can draw and view graphs with the help of available metrics. Additionally, you can save frequently used graphs as favorites.
- **Alerts** help you to identify and troubleshoot the problems generated in your virtualized environment.
- **Real Time Guest Drill Down** detects overloads in the environment. You can drill down to determine the performance overload issue in VMs.

## Capacity Analysis and Optimization

- **Capacity Overview** provides right size recommendation of the resources in the environment.
- **Placement** provides suggestions for adding new VMs based on available or reclaimable capacity.
- **Forecast** helps to project future capacity utilization levels of different resources for a predefined time period. Using the Forecast feature, you can determine the Days to Capacity information to make optimal allocation and placement.
- **Modeler** helps to determine the impact of adding or deleting resources in your environment. You can estimate the future capacity utilization to proactively plan your hardware requirements.

## Chapter 2: Installing HP vPV

HP vPV is available as a virtual appliance for easy deployment in the VMware vCenter. You can use the VMware vSphere client interface to deploy the HP vPV virtual appliance.

You can download the HP vPV virtual appliance from: <http://www.hp.com/go/vpv>. You can install the HP vPV virtual appliance using the **Deploy OVF Template** functionality of the VMware vSphere client. To log on to the virtual appliance, the username is **root** and password is **vperf\*viewer**. For more information, see the *VMware documentation*.

### Prerequisites

Following are the prerequisites for installing HP vPV:

- Ensure that port 8081 is open to make HP vPV accessible from the remote browser, if there is a firewall on the system where HP vPV is installed.
- Ensure that port 8444 is open to access in Hypertext Transfer Protocol Secure (HTTPS) mode.
- Ensure that the port used for accessing HP vPV (8081, by default) is open in the firewall, if there is a firewall between HP vPV and Microsoft System Center Virtual Machine Manager (SCVMM) server.
- Ensure that the port 5480 is open to access the Virtual Appliance Management Interface (VAMI).

### Deploy the HP vPV Virtual Appliance

HP vPV is available as a Virtual Appliance for easy deployment in vCenter. You can use the VMware vSphere Client user interface to deploy the virtual appliance.

The supported VMware vCenter Server versions are 5.0, 5.1, and 5.5.

To deploy the HP vPV virtual appliance, follow these steps:

1. Open VMware vSphere Client.
2. Type the credentials and click **Login**.
3. Select **File > Deploy OVF Template**. The **Deploy OVF Template** window opens.
4. Click **Browse** to browse to the location where you have saved the HP vPV virtual appliance file.
5. Click **Next**. The window shows the details of virtual appliance.

6. Click **Next**. The End User License Agreement details appear.
7. Click **Accept** and then click **Next**.
8. Type a name for the virtual appliance in the **Name** field.
9. Select where to deploy the virtual appliance from the **Inventory Location** tree. Click **Next**.
10. Select the host or cluster where you want the virtual appliance to run. Click **Next**.
11. Select the specific host where to run the virtual appliance. Click **Next**.
12. Select the storage location where you want to store the virtual machine files. Click **Next**.
13. Select the disk format in which you want to store the virtual disks. Click **Next**.
14. Type the required Networking Properties and click **Next**. The window shows the details of the deployment.
15. Select the **Power on after deployment** check box.
16. Click **Finish**. The deployment task starts. After deployment, the virtual appliance name appears in the tree in the VMware vSphere Client user interface.

**Note:** For more information, see the VMware documentation. The steps are subject to change based on VMware.

### Logging in to the Virtual Appliance

You can log in to the HP vPV Virtual Appliance using the username as **root**. The default password is **vperfr\*viewer** and it is recommended to change the password after logging in.

Here is a [short video](#) on deploying the HP vPV Virtual Appliance and getting started with HP vPV.

## Upgrade Scenarios

You can upgrade HP vPV *only* from version 2.00 to 2.01.


**Note:** Make sure that you take a snapshot of HP vPV 2.00 machine before upgrading to 2.01 as rollback is not supported.

## Upgrading HP vPV using the Virtual Appliance

If you already have HP vPV version 2.00 deployed on the virtual appliance and want to upgrade to version 2.01, you can do it in the following two ways:

- **"Using CDROM Updates (Using .iso)"**
- **"Using Specified Repository (Using .zip)"**

### Using CDROM Updates (Using .iso)

1. Log on to VMware vSphere Client.
2. In the left tree pane, select the HP vPV machine that is to be upgraded.
3. Click the **Connect/disconnect CD/DVD devices of the virtual machine**  icon. Select **CD/DVD drive1**.
4. Click **Connect to ISO image on local disk**. Windows Explorer appears.
5. Select the HPPV\_VA\_2.01.xxx\_UPDATE.iso file. Click **Open**.
6. In the HP vPV 2.00 interface, select **Admin** and click the **Data Sources** tab.
7. Launch the HP vPV Virtual Appliance Management web interface using the link provided at the bottom of the page.
8. Log on to the HP vPV Virtual Appliance using the username as **root**. The default password is **vperf\*viewer**.
9. Click **Update** tab. The **Update Status** page appears.
10. Click **Settings**. The **Update Settings** page appears.
11. In the **Update Repository** section, select **Use CDROM Updates**.
12. Click **Status**. The **Update Status** page appears.
13. Click **Check Updates**. The available updates appear.
14. Select the update and click **Install Updates**. The upgrade process begins.

### Using Specified Repository (Using .zip)

1. Download and unzip HPPV\_VA\_2.01.xxx\_UPDATE.zip in the Web folder at the server (Web or FTP) location.
2. Launch the HP vPV Virtual Appliance Management web interface using the link provided at the bottom of the page.
3. Log on to the HP vPV Virtual Appliance using the username as **root**. The default password is **vperf\*viewer**.



4. Click **Update** tab. The **Update Status** page appears.
5. Click **Settings**. The **Update Settings** page appears.
6. In the **Update Repository** section, select **Use Specified Repository**.
7. In the **Repository URL** box, type the server location where the update file is placed.
8. In the **Username** and **Password** box, type the User name and Password, if any.
9. Click **Status**. The **Update Status** page appears.
10. Click **Check Updates**. The available updates appear.
11. Select the update and click **Install Updates**. The upgrade process begins.

## Verify the Upgrade

You can verify the upgrade to HP vPV version 2.01 by performing either of the following:

- In the HP vPV interface, go to the **Help** icon and click **About HP vPV**. A dialog box appears with the version information.
- Verify the version by running the following command at the command prompt:

```
pv version
```

**Note:** After the upgrade, it is recommended to check the status of HP vPV processes using the following command:

```
/opt/OV/bin/ovc
```

If any of the processes are not running, run the following command to restart the processes:

```
pv restart
```

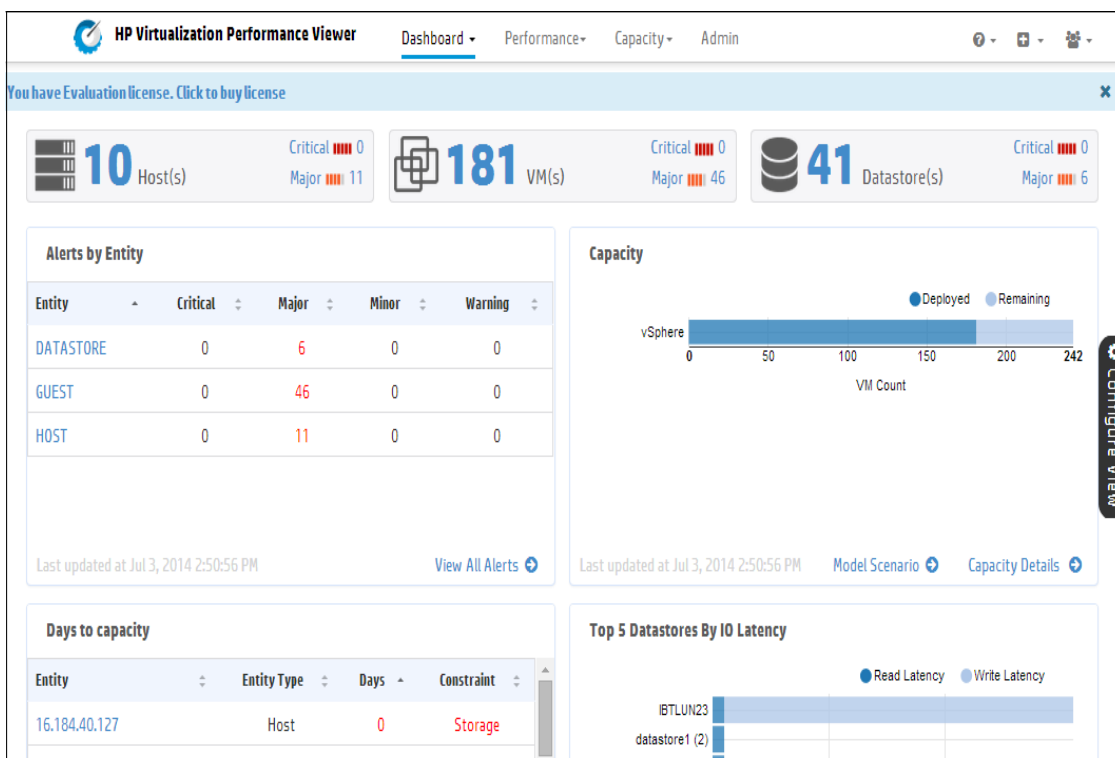
## Chapter 3: Accessing the HP vPV interface

After HP vPV is installed successfully, access the HP vPV interface using one of the following URLs:  
**http://<system\_name>:8081/PV** or **https://<system\_name>:8444/PV**

where, <system\_name> is the system name of the HP vPV server.

**Note:** PV is case sensitive.

HP vPV Interface appears as:




## Adding Data Sources

When accessing HP vPV interface for the first time after installation, **Data Sources** tab in the **Admin** page opens. Provide the details of the data sources that HP vPV must monitor.

The screenshot shows the Administration interface with the 'Data Sources' tab selected. The interface includes a navigation bar with tabs for 'Data Sources', 'Data Management', 'Integrations', 'License Management', and 'Optimization'. Below the navigation bar, there is a 'Domain:' dropdown menu set to 'VMware vCenter'. Below that are three input fields: 'vCenter IP/Host Name:' with the value 'vcenter.host.domain', 'User Name:' with the value 'test', and 'Password:' with the value '\*\*\*\*\*'. At the bottom right, there are two buttons: 'Test Connection' and 'Add'.

HP vPV supports the following data sources:

- VMware vCenter
- Microsoft Hyper-V
- KVM
- Xen
- OpenStack
- HP aPaaS

For more information on adding data sources, open the **Data Sources** tab on the **Admin** page and click  - **Help** or see *Virtualization Performance Viewer Online Help*. This opens the context-sensitive help for the Data Sources tab.

## Chapter 4: Licensing

The following types of licenses are available for HP vPV:

- **Community:** The product is free for you to use but certain features are restricted.
- **Evaluation:** You can use the evaluation version of the product, without any feature restrictions, for a period of 60 days. During this period, you can evaluate the product and if required upgrade to the permanent licensed version of the product. For more information on the features available with this license, go to <http://www.hp.com/go/vpv>.
- **Express:** You can use the product but certain features are restricted. The license is valid for a defined subscription period. The validity starts on a date as per the order placed by the subscriber and the capacity value is decided based on the subscription.
- **Premium:** You can use all the product features without any restrictions. Premium license is valid for a defined subscription period. The validity starts on a date as per the order placed by the subscriber and the capacity value is decided based on the subscription.

## Types of Licenses

The following table lists the available features for the Community, Express, Premium, and Evaluation HP vPV Licenses:

Feature	Community License	Express License	Premium License	Evaluation License
Number of Instances	25 instances	6000 Tested up to 6000 instance. Larger configurations can be supported. For more information, see the HP vPV Sizing Guide.		
Data Retention	Up to 24 hours	90 days	90 days	60 days
Enterprise Directory Integration	No	Yes	Yes	Yes
Reports	Yes	Yes	Yes	Yes
HP OM, HP PM and HP BSM Integration	No	Yes	Yes	Yes
HP CSA Integration	No	No	Yes	Yes
Guest Operating System drill down for advanced troubleshooting	No	No	Yes	Yes

Feature	Community License	Express License	Premium License	Evaluation License
Current Capacity Reports (Only for VMware™ vSphere and Microsoft™ HyperV)	No	No	Yes	Yes
Best-fit Capacity Optimization (Only for VMware™ vSphere and Microsoft™ HyperV)	No	No	Yes	Yes
Virtual Machine Placement (Only for VMware™ vSphere )	No	No	Yes	Yes
Capacity Demand Forecast (Only for VMware™ vSphere and Microsoft™ HyperV)	No	No	Yes	Yes
Alerting (Only for VMware™ vSphere )	No	Yes	Yes	Yes
Capacity Modeler (Only for VMware™ vSphere )	No	No	Yes	Yes
Dashboard	No	No	Yes	Yes

## Activating the Evaluation License

To activate the evaluation license, follow these steps:

1. Go to the **License Management** tab in the **Admin** page.
2. Click **Start Evaluation**. The evaluation license is activated.

**Note:** The evaluation license expires after 60 days and the community license is activated. All product features are available for the Evaluation License. The only difference between the Evaluation License and Premium License is the validity. For more information on licensing, see *License Management* section in *Virtualization Performance Viewer Installation Guide*.

## Chapter 5: Troubleshooting

The following section details how to troubleshoot HP vPV:

### Vertica database is filled to near capacity due to the increase in the log file size.

Symptom	The Vertica database is filled to near capacity due to the increase in the log file size.
Causes	Vertica database consolidates and retains the log data in a <b>.gz</b> file daily. By default, this process (called 'rotate') continues for 52 weeks.
Resolution	<p>To create more space on the Vertica database implement any one of the two solutions below:</p> <p><b>Solution 1</b></p> <ol style="list-style-type: none"><li>1. Go to <b>/opt/vertica/config/logrotate/</b>.</li><li>2. Open the <b>pv</b> file.</li><li>3. In the pv file, under <b># and keep for 52 weeks</b> change the value of <b>rotate</b> from 52 to the number of weeks for which you want to save the rotated log files.</li></ol> <p>For example: <b>rotate 3</b></p> <p>In this instance, the Vertica database will retain the <b>.gz</b> files for 3 weeks.</p> <ol style="list-style-type: none"><li>4. Repeat <b>step 3</b> for all instances of <b># and keep for 52 weeks</b>.</li><li>5. Save and close the file.</li></ol> <p><b>Solution 2</b></p> <ol style="list-style-type: none"><li>1. Login as a root user.</li><li>2. Run the following commands on the HP vPV server:</li></ol> <pre>cd /opt/vertica/bin  ./admintools -t logrotate -d pv -r weekly -k &lt;number_of_weeks&gt;</pre> <p>where, <i>&lt;number_of_weeks&gt;</i> is the number of weeks for which you want to retain the rotated logs.</p>

### Unable to Access HP vPV

Symptom	Unable to access HP vPV through the default network port settings.
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Causes	<ul style="list-style-type: none"> <li>Your system has <b>ovTomcatB</b> configured to run with the non-root user or non-local system account privileges and you have HP vPV installed on such a system.</li> <li>You cannot access HP vPV using the default http (8081) or https (8444) ports if these ports are in use by other applications.</li> </ul>
Resolution	<ul style="list-style-type: none"> <li>Check if <b>ovTomcatB</b> is configured to run with the non-root user or non-local system account privileges. If so, modify the settings to run <b>ovTomcatB</b> with the Administrator or root user privileges.</li> <li>Try accessing HP vPV by using the following URL:   <code>http://&lt;IP address/system name&gt;:&lt;port number&gt;/PV</code>                       where, <i>&lt;IP address/system name&gt;</i> is the IP address or the system name of the HP vPV server and <i>&lt;port number&gt;</i> is the port number of the HP vPV server.                       If the HP vPV Home page does not appear, check if the default ports are in use.</li> <li>To change the port settings, follow these steps:                         <ol style="list-style-type: none"> <li>Run the following command at the command prompt to change the port numbers for HTTP, HTTPS, and Shutdown Ports:  <code>&lt;bin_dir&gt;ovconfchg -ns NONOV.TomcatB -set HTTPPort &lt;port number&gt;</code>   <code>&lt;bin_dir&gt;ovconfchg -ns NONOV.TomcatB -set HTTPSPort &lt;port number&gt;</code>   <code>&lt;bin_dir&gt;ovconfchg -ns NONOV.TomcatB -set ShutdownPort &lt;port number&gt;</code> </li> <li>Restart HP vPV.</li> </ol> </li> </ul>

#### Unable to connect to HP vPV server through HTTPS protocol

Symptom	HP vPV is unable to connect to the server through secure communication (HTTPS) protocol.
Cause	The connection times out when HP vPV is not able to connect through the secure client in the default timeout interval of one second.
Resolution	Use the parameter <b>SECURE_CLIENT_CONNECT_TIMEOUT</b> to adjust the timeout interval to connect to HP vPV server depending on your Internet connectivity or infrastructure setup.

#### Deployment of HP vPV fails

Symptom	The deployment of the HP vPV Virtual Appliance fails.
Cause	This may happen when the time on the ESX server is set to a future time.
Resolution	Ensure that the time on the ESX server is set correctly.

### Unable to view content on HP vPV home page

Symptom	The HP vPV Home page does not display anything except the header.
Cause	JavaScript is not supported or Adobe® Flash Player is not installed in your browser. Adobe® Flash Player version 10.3 is the minimum required version.
Resolution	<p>Install Adobe® Flash Player and enable JavaScript support for the Internet Explorer (IE) or Mozilla Firefox browser by adding HP vPV to your list of Trusted Sites.</p> <ul style="list-style-type: none"><li>• To add HP vPV Web server URL to a trusted site, perform the following steps:  For IE browser<ol style="list-style-type: none"><li>a. From the Tools menu, click <b>Internet Options</b>. The Internet Options pop-up window appears.</li><li>b. Click <b>Security</b> tab.</li><li>c. Select the <b>Trusted Sites</b> icon.</li><li>d. Click <b>Sites</b>. The Trusted Sites pop-up window appears.</li><li>e. Type the HP vPV web server URL and click <b>Add</b>. The typed URL appears in the list of trusted sites.</li><li>f. Click <b>Close</b>.</li><li>g. Click <b>OK</b>.</li><li>h. Restart the browser.</li></ol> For Mozilla Firefox browser<ol style="list-style-type: none"><li>a. From the <b>Edit</b> menu, click <b>Preferences</b>. The Options pop-up window appears.</li><li>b. Click <b>Privacy</b> tab.</li><li>c. Click <b>Exceptions</b>.</li><li>d. Type the HP vPV web server URL in the box under Address of web site.</li><li>e. Click <b>Allow</b>.</li><li>f. Click <b>Close</b>.</li><li>g. Click <b>OK</b>.</li><li>h. Restart the browser.</li></ol></li></ul>



	<ul style="list-style-type: none"> <li>• If Adobe® Flash Player is not installed in your browser, HP vPV Home page does not appear. The browser displays a message stating that you must Install Adobe Flash Player to view the HP vPV Home Page. Click the message to download Adobe® Flash Player.</li> <li>• If JavaScript is not enabled in your browser, HP vPV Home page does not appear in the IE browser even after adding it as a trusted site. The browser displays a message stating that JavaScript is not enabled in your browser and you must enable JavaScript to view the page.</li> </ul> <p>To enable JavaScript support, perform the following steps:</p> <p>For IE browser:</p> <ol style="list-style-type: none"> <li>a. From the <b>Tools</b> menu, click <b>Internet Options</b>. The Internet Options pop-up window appears.</li> <li>b. Click the <b>Security</b> tab. Check if the security level in your browser settings is set to High.</li> <li>c. Make sure the <b>Trusted Sites</b> icon is selected and click <b>Custom Level</b>. The Security Settings pop-up window appears.</li> <li>d. Scroll down to Scripting section and select the <b>Enabled</b> option under <b>Active Scripting</b>.</li> <li>e. Click <b>OK</b>.</li> <li>f. Click <b>Apply</b>.</li> </ol> <p>For Mozilla Firefox browser:</p> <ol style="list-style-type: none"> <li>a. From the Tools menu, click <b>Options</b>.</li> <li>b. Click <b>Content</b>.</li> <li>c. Select the <b>Enable JavaScript</b> check box.</li> <li>d. Click <b>OK</b>.</li> </ol>
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**HTTP Status 404 - /PV Error**

Symptom	When trying to access HP vPV, you get the HTTP Status 404 - /PV Error message.
Cause	The message appears if the <INSTALLDIR>/www/webapps/PV directory is empty.
Resolution	Extract the Perf.war file again from <Install_Dir>/newconfig/PV to <Install_dir>/www/webapps/PV. Run the command <i>pv deploywar</i> .

**What are the log files available with HP vPV?**

The following table lists the log files available with HP vPV:

Component	Description	Location
pvcd (PV Collection Daemon)	<p>pvcd daemon uses XPL tracing mechanism. A default pvcdXPL.itc (trace configuration) is available in /opt/OV/support directory.</p> <p>To start the tracing, run                      /opt/OV/support/ovtrccfg -app pvcd -cf                      /opt/OV/newconfig/conf/xpl/trc/pvcdXPL.itc                      The XPL trace files are present at /tmp/pvcd_*.trc.</p> <p>To stop tracing, run                      /opt/OV/support/ovtrccfg -app pvcd -off</p>	<p>If tracing is enabled, /tmp/ directory contains the trace files (use - ls /tmp/pvcd_*.trc)</p>
	<p>pvcd and pvconfig tools log important status and error messages, if any, in System.txt.</p>	<p>/var/opt/OV/log/System.txt</p>
Collectors	<p>vCenter and OpenStack collector status log file                      /var/opt/OV/log/status.virtserver</p>	<p>/var/opt/OV/log/status.virtserver</p>
	<p>KVM collector status log file</p>	<p>/var/opt/OV/log/status.kvm</p>
	<p>XEN collector status log file</p>	<p>/var/opt/OV/log/tmp/status.xen</p>
Database Transaction	<p>Vertica catalog file to view database transactions</p>	<p>/var/opt/OV/databases/pv/catalog/pv/v_pv_node0001_catalog/vertica.log</p>
User Interface	<p>Local trace and log messages are logged in ovpmtrace.0.txt and ovpm.0.log</p>	<p>/var/opt/OV/log</p>

## Chapter 6: HP vPV Community

You can get HP vPV related information from the HP vPV Community through the following:

### **HP vPV Blogs**

You can get more information and use cases for HP vPV in [HP vPV Blog](#)

### **HP vPV Videos**

You can view HP vPV demonstration videos and tutorials in [HP vPV Videos](#).

### **HP vPV Community Forum**

You can access the HP vPV community forum to get help and ask any questions that you may have. You can address any queries regarding HP vPV in the [HP vPV forum](#).

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Just add your feedback to the email and click send.

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