HP OpenView Performance Manager

For Windows®, HP-UX, Solaris

Software Version: 6.01

Installation, Upgrade and Migration Guide

February 2007

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This Guide's title page contains the following identifying information:

- Software version number, which indicates the software version
- Software release date, which indicates the release date of this version of the software

To check for recent updates, or to verify that you are using the most recent edition of a document, go to:

http://ovweb.external.hp.com/lpe/doc_serv/

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Please visit the HP OpenView support web site at:

http://www.hp.com/managementsoftware/support

This web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit enhancement requests online
- Download software patches
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and log in. Many also require a support contract.

To find more information about access levels, go to:

http://www.hp.com/managementsoftware/access_level

To register for an HP Passport ID, go to:

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Contents

1 Installing HP OpenView Performance Manager

Introduction

HP OpenView Performance Manager (OVPM) is a web-based analysis tool that helps you evaluate system performance, look at usage trends, and compare performance between systems.

OVPM runs as a Java servlet under the HP OpenView Tomcat web server. The Java servlet enables OVPM to host various features such as the OVPM Administrator interface on the server.

Using OVPM you view or draw graphs through a web browser. From the OVPM Home Page choose to use either the Java User interface or the Web Forms interface. For first-time connections to the Java User Interface, you are prompted to download a Java Plug-in (also called the Java 2 Runtime Environment).

By default the Tomcat server uses port number 8080, which is the port used by the web browser to access the OVPM Home page. For more information, see Web Server Port Configuration on page 13.

It is important to know your HP OpenView Tomcat, Java Software Developers Kit, and Java Plug-in component *versions* and *port settings*, BEFORE you install OVPM.

Suggested Install Preparation

1 Review the Release Notes located on the root of the CDROM program under Release Notes.

2 Review the Installation Planning Checklist on page 11 and follow the scenario closest to your planned install or upgrade.

3 In Installation Prerequisites on page 17, review the relevant section.

About the OVPM Installer

The OVPM installer automatically:

- checks disk space requirements are met
- checks for HP OpenView products already installed
- checks which ports are in use; if there is a conflict, prompts you to change the port setting
- provides a detailed log of what is detected
- performs upgrades for you automatically
- when install completes, provides a list of all installed components.

Installation Planning Checklist

▶ Reading the documents in the paperdocs directory requires the use of the Adobe® Reader® product. If necessary, download this from

http://www.adobe.com/products/acrobat/readstep2.html

Before you begin, use the checklist below to help plan your installation of OVPM and locate important information:

Where will you be installing OVPM?

On a server that never had OVPM or any other OpenView products installed before?

If so, see Installation Prerequisites on page 17 before starting your install.

On a server that had a trial version of OVPM installed before, then removed?

Check if you have an expired trial license installed. If so, OVPM will not work until you get a trial extension or install a proper license. See Licensing on page 35 for details on trial extensions and license installs.

On a server which has a cluster service running on it?

(For example, Service Guard or Windows 2003 Microsoft Cluster)

If so, see Installing to a Cluster Environment on page 30.

Are you upgrading from OVPM 4.05?

To upgrade from previous versions of OVPM there are technology and directory changes required to the Tomcat web server. Review the section Web Server Port Configuration on page 13 for details about these changes, and for how to preserve the Tomcat version, if needed.

Are you upgrading from OVPM 5.0?

To upgrade from OVPM 5.0, there are technology and directory changes required to the Tomcat web server. Review the sectionWeb Server Port Configuration on page 13 for details about these changes, and for how to preserve the Tomcat version, if needed.

Are other HP OpenView products installed on this server?

For information on installing OVPM with other products such as:

- HP OpenView Reporter
- HP OpenView Operations for Windows (OVO for Windows)
- HP OpenView Internet Services (OVIS)
- HP OpenView Performance Agent (OVPA)

See OVPM with Other HP OpenView Products on page 47 for more details.

Regarding Tomcat Versions:

If any of the following HP OpenView products are already installed, it is probably necessary to enter an alternate port setting when prompted during OVPM install as these products deliver their own version of Tomcat:

- HP OpenView Network Node Manager (NNM) - version 6.4 or later
- HP OpenView Operations for UNIX (OVO for UNIX) - version 8.0 or later
- HP OpenView Service Desk - version 4.5 or later
- HP OpenView Service Information Portal (SIP)/ HP OpenView Dashboard - any version

If any of these products are installed, or to check which ports are already in use, see the section Web Server Port Configuration on page 13 for more details.

Are you migrating any data from PerfView?

If you are using PerfView and need to migrate PerfView data, see Migrating from PerfView to OVPM on page 53.

Web Server Port Configuration

To view a list of ports already in use:

Type:

```
netstat -a  > <name of file>
```

By default HP OpenView Installer assigns port 8080, if it is not already in use. If it is already in use, the installer prompts for an alternate port number.

Tomcat uses ports 7105, 8008, 8009 and 8443. If any of these ports are in use by another application, or by another version of Tomcat, select unused port numbers for OVPM to use.

Changing the Web Server Port Numbers after Installation:

To change the http port number for the OVPM web server, after installation:

1   Stop the OVPM web server by typing:

```
ovpm stop
```

2   Use the following command:

```
<Install_Dir> /bin/ovpm config [-port portnumber]
```

where 'portnumber' is the port number to be used.

3   Restart the web server by typing:

```
ovpm start
```

> It is important to avoid port conflicts when changing the server's ports

You can use the HP OpenView Tomcat control script to check the availability of a port before setting it:

On UNIX:

```
cd <install_dir>
./ovtomcatctl -checkport <portnumber>
```

On Windows:

```
cd <install_dir>\bin
```

```
cscript ovtomcatctl.vbs -checkport <portnumber>
```

The HP OpenView Tomcat control script can also be used to set the HTTPS, shutdown or AJP ports for the OVPM web server. After setting one or more ports using the HP OpenView Tomcat control script, you must issue the -configure command to commit the change request. For example:

On UNIX:

```
cd <install_dir>/bin

./ovpm stop

./ovtomcatctl -sethttpsport <HTTPSportnumber>

./ovtomcatctl -setjk2port <JK2portnumber>

./ovtomcatctl -setshutdownport <ShutDownportnumber>

./ovtomcatctl -configure

ovpm start
```

On Windows:

```
cd <install_dir>\bin

ovpm stop

cscript ovtomcatctl.vbs -sethttpsport <HTTPSportnumber>

cscript ovtomcatctl.vbs -setjk2port <JK2portnumber>

cscript ovtomcatctl.vbs -setshutdownport <ShutDownportnumber>

cscript ovtomcatctl.vbs -configure

ovpm start
```

OVPM on Windows integrates with IIS using the JK2 port. If you change this value through the command line, you will need to change the worker.jakarta_ovpm.port value in the workers.properties configuration file to match. This file is found at:

```
<install_dir>\www\webapps\OVPM\WEB-INF\workers.properties
```

Firewall Considerations

OVPM provides a web interface. In order to access OVPM web pages on systems where OVPM is not installed, your OVPM environment must be configured to allow this type of access. Access to the standard OVPM user features is accomplished through a single TCP port (8080 by default). If you want to run the OVPM Administrator Interface, enable the TCP port for HTTPS also (8443 by default).

The exact mechanisms for enabling this type of interface will vary depending on the type of system, type of firewall, etc.

For example, on Microsoft Windows XP, Service Pack 2:

1   Select Start > Control Panel > Network Connections.

2   Right click on "Local Area Connection" and select Properties.

3   Under the Advanced tab, select the Windows Firewall "Settings..." button.

4   Select the Exceptions tab.

5   If you do not already have tomcat.exe in the Programs and Services list:

  –   Press the "Add Program..." button.

  –   Use the "Browse..." button to locate the Tomcat executable located in the `<OvInstallDir>\nonOV\tomcat\a\` folder.

6   Add the tomcat executable to the list of exceptions and exit.

For more information on setting up data communications between OVPM and datasources, see the Firewall documentation provided with the OVPA and OVO products.

Performance Considerations

OVPM runs as a Java Servlet under the Tomcat application server on the OVPM server system. As such the Java Virtual Machine runs the Tomcat application server plus the OVPM servlet code at the same time. As requests are processed, Java threads are created to allow for parallel processing and a more even response time. Each thread requires an allocation of virtual memory from the Java Virtual Machine when it runs. This memory is recycled once the thread terminates.

The system where the OVPM server is running must be configured to allow enough room for the Java Virtual Machine to do its job managing OVPM requests. The amount of each resource required will vary depending on the number and type of access to OVPM. Light and infrequent requests will likely finish before the next request is started and resources usage is low. Multiple simultaneous requests, and requests that require very large amounts of data handling will require more resources.

Symptoms of insufficient resources include a general slow-down during busy times. In severe cases, the Java Virtual Machine itself can crash due to resource starvation. In this case the OVPM server stops and no further requests are processed. Look in the Tomcat status file for indication of which resource was lacking. Most common problems come from a shortage of threads or virtual memory.

The Tomcat status file is found at `<tomcat_dir>`/logs/catalina.out on UNIX systems and `<tomcat_dir>`/logs/stdout.log on Windows. Where tomcat_dir is `<OvInstalldir>`/nonOV/tomcat/a/.

Installation Prerequisites

The minimum requirements are listed below. OVPM installer will check whether these requirements are met during the install process.

Hardware Requirements

A minimum of 600 MHz Processor speed with 512 MBytes of memory is recommended for proper performance. Installing on a slower system or one with less memory may result in slow performance.

Disk Space:

- 400MB in the temp directory
- 400MB in the <Install_Dir> directory
- 10MB in the <Data_Dir>directory (will grow to 100MB as OVPM runs)

Supported Platforms

OVPM is supported on HP-UX, Solaris and Microsoft Windows.

For an updated list of supported platforms, please refer to this web site:

http://support.openview.hp.com/sc/support_matrices.jsp

HP-UX

On HP-UX systems the following operating system versions are supported for OVPM:

— HP-UX 11.0, 11.11 PA

— 11.23 PA and IPF

Java Development Kit (JDK) Requirements

The default HP-UX configuration, specifically kernel parameters and system tuneables, does not support certain types of Java applications well. Applications that typically need to be tuned by hand are large, server-side Java applications that are long running, have large numbers of threads, and have a large ratio of client to server connects, such as OVPM.

Java Out-of-Box is a stand-alone bundle that upon installation will install startup (RC) scripts, modify kernel parameters, rebuild the kernel, and reboot the system. During startup, the startup scripts will modify system tuneables, thus providing better "out of the box" behavior for Java. For more information, visit this website:

http://www.hp.com/products1/unix/java/java2/outofbox/index.html.

HPjconfig is a Java configuration tool for tuning your HP-UX 11 PA-RISC & Itanium system kernel parameters to match the characteristics of your application. HPjconfig provides kernel parameter recommendations tailored to your Java enterprise services (Web server, Application Server, etc.) and HP-UX hardware platform. It offers save and restore functions for easy distribution of tailored recommendations across your user base. **http://www.hp.com/products1/unix/java/java2/hpjconfig/index.html.**

The following patches or their successors must be applied to your system before installing this version of OVPM. For HP-UX systems, examine the web site:

http://www.hp.com/products1/unix/java/patches/index.html

Table 1   Required HP-UX patches

Required HP-UX Patches to support Java Development Kit (JDK) version 1.4.2_02 or higher	
HP-UX PA 11.00	PHSS_33262 HP aC++ -AA Runtime binaries (aCC A.03.65) PHSS_33032 ld(1) and linker tools cumulative patch PHCO_33609 libc cumulative patch, has other patch dependencies PHCO_29959 Pthread library cumulative patch, has other patch dependencies
HP-UX PA 11.11	PHCO_33711 11.11 libc cumulative patch PHSS_33033 ld(1) and linker tools cumulative patch PHSS_33263 11.11 HP aC++ -AA runtime libraries (aCC A.03.65) PHCO_30544 Ptread enhancement and fixes
HP-UX IA (11.22/11.23)	PHSS_32064 libunwind Library Cumulative Patch

Solaris

The following Solaris operating system versions are supported for OVPM on SPARC processors:

- Solaris 8
- Solaris 9
- Solaris 10

Java Development Kit (JDK) Requirements

The following patches or their successors must be applied to your system before installing this version of OVPM. For Solaris systems, examine the web site

http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/J2SE

Table 2   Required Solaris Patches

Required Patches to support Java Development Kit (JDK) version 1.4.2_02 or higher	
Solaris 8	108434-09 32-Bit Shared library patch for C++
	Note: 108435-08 is the corresponding 64-bit patch
	108993-26 SunOS 5.8: LDAP2 client, libc, libthread and libnsl libraries patch
	109147-16 SunOS 5.8: Linker patch

Microsoft Windows

The following Windows operating system versions are supported for OVPM:

- – Windows 2000, Service Pack 4
- – Windows XP, Service Pack 2
- – Windows 2003, Service Pack 1

Java Development Kit (JDK) Requirements-

The following patches or their successors must be applied to your system before installing this version of OVPM. For Windows systems, examine the web site:

http://java.sun.com/j2se/1.4.2/system-configurations.html

Table 3   Required Windows Patches

Required Patches to support Java Development Kit (JDK) version 1.4.2_02 or higher	
Windows 2000, XP, 2003	Windows Scripting Host version 5.6, C++ library msvcp60.dll

Client Requirements

Once OVPM is installed, you access the OVPM Web Page from a web browser.

- If you select the **Java User Interface** from the OVPM Home Page, you will be prompted to download the Java 1.4.2 plug-in, also called Java 2 Standard Edition (J2SE) to the system where the browser is executing. The Java plug-in can be manually downloaded from http://java.sun.com/j2se/1.4.2/download.html f**or version 1.4.2 (preferred).**

- **If you select the Web Form Interface**, a web browser is still needed to view the HTML graphs. Most browsers are supported except if you are viewing them through programs such as Reflections X or X-Windows.

Database Requirements

OVPM does not have it's own database. However you can configure OVPM to connect to other databases as a datasource, such as HP OpenView Reporter, OVIS or in some cases a generic database like SQL Server or Oracle.

See the OVPM Administrator Guide for more information on connecting to other databases as sources of data (for example lists of systems or performance metrics).

Supported Browsers

- — Mozilla 7
- — Fire Fox 1.0 and 1.5
- — Internet Explorer 6

Solaris and HP-UX Installation

1 Login as root User to install OVPM.

2 Run the setup program from the CDROM file system:

   a To use an X11 interface, export the DISPLAY variable to point to an
      X11 terminal if necessary. For example,
      export DISPLAY=<systemname>:0.0

   b Execute the command
      `<cdrom_mount>`/HPOvPM_6.01.000_setup.bin
      or execute the command:
      `./<cdrom_mount>`/install

3 When prompted:

   ```
   Do you want to continue installing this product? (Y/N)
   ```

   "Y' continues the install; "N" quits the install.

4 When prompted:

   ```
   Do you want to use the X-Windows interface (may require
   setting DISPLAY)? (Y/N)
   ```

   "Y" launches the HP OpenView Graphical User Interface; "N" runs install
   in command line mode.

   ▶ The Graphical User Interface is the same as used for a Windows
      installations. See Windows Installation on page 25 to preview the
      screens provided.

5 A prompt for the License Information displays:

   ```
   I accept the terms of the License Agreement (Y/N):
   ```

   Select the option you agree to.

6 A prompt on the port configuration displays. For example:

   ```
    Tomcat Servlet Container Configuration

   - - - - -- - -- - - - - - - -- - --
   ```

The default port selection (8009) for Tomcat Servlet
Container Configuration is already in use by another
application. If you prefer not to use the suggested available
port selection below, you may change it at this time. Port to
use for JK2 AJP communication via Apache If you want to change
something on a previous step, type 'back'. You may cancel this
installation at anytime by typing 'quit'.

Enter the port number (DEFAULT: 8080): 8080

7   As the installer runs the update status is displayed. When the following
    displays the install is complete:

```
Congratulations

      Application Directory: /opt/OV/

       Data Directory: /var/opt/OV/

       Demosunt1:/tmp/CDROM # lue 8009 from XPL database.
```

8   Verify the OVPM Server is running.

Type:

```
ovpm status
```

You should see something like this:

```
*************Tomcat log  File****************

Jan 13, 2006 12:37:52 PM
org.apache.coyote.http11.Http11Protocol start

INFO: Starting Coyote HTTP/1.1 on http-8443

Jan 13, 2006 12:37:53 PM org.apache.jk.common.ChannelSocket
init

INFO: JK2: ajp13 listening on /0.0.0.0:8009

Jan 13, 2006 12:37:53 PM org.apache.jk.server.JkMain start

INFO: APR not loaded, disabling jni components:
java.io.IOException: java.lang.U

nsatisfiedLinkError: no jkjni in java.library.path

Jan 13, 2006 12:37:53 PM org.apache.jk.server.JkMain start

INFO: Jk running ID=0 time=2/181  config=/opt/OV/nonOV/
tomcat/a/conf/jk2.properties
```

```
Jan 13, 2006 12:37:53 PM org.apache.catalina.startup.Catalina
start

INFO: Server startup in 27144 ms

*********************************************

Local tracing is disabled

The OV trace server is running

The OVPM application server is running
```

9 Test the server from a browser:

http://<systemname>:8080/OVPM

Windows Installation

1   Review documentation available from the OVPM install screen, and on-line help is available from each of the product screens. In addition the *OVPM Administrator's Guide* contains a full description of the command line interface and other operation's features.

2   **When installing from a CDROM**, the OVPM install page displays automatically.
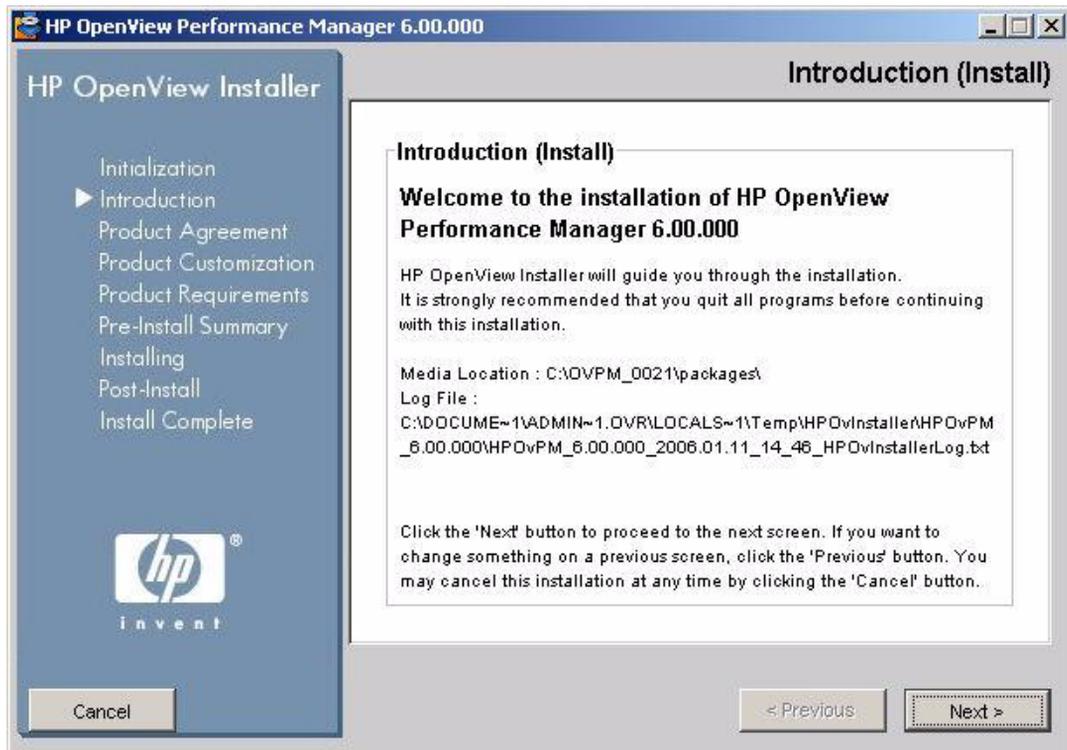
3   To install OVPM, select "Install OVPM" from the OVPM install page. Select "Open" when asked whether to save or open this file. or launch `HPOvPM_6.01.000_setup.exe` on the CDROM.

4   The installer launches. If you see Application requirement check warnings box display, click "Continue."

5   If a "System Restart may be required." message box displays, click "Continue." After you complete your install or upgrade of OVPM, you may need to reboot.

6   Click Next. The License Agreement screen displays. Select the button to accept if you accept the terms, then select Next.

7   The Pre-Install Summary screen displays. To view the list of components that will be installed or upgraded, expand the tree.
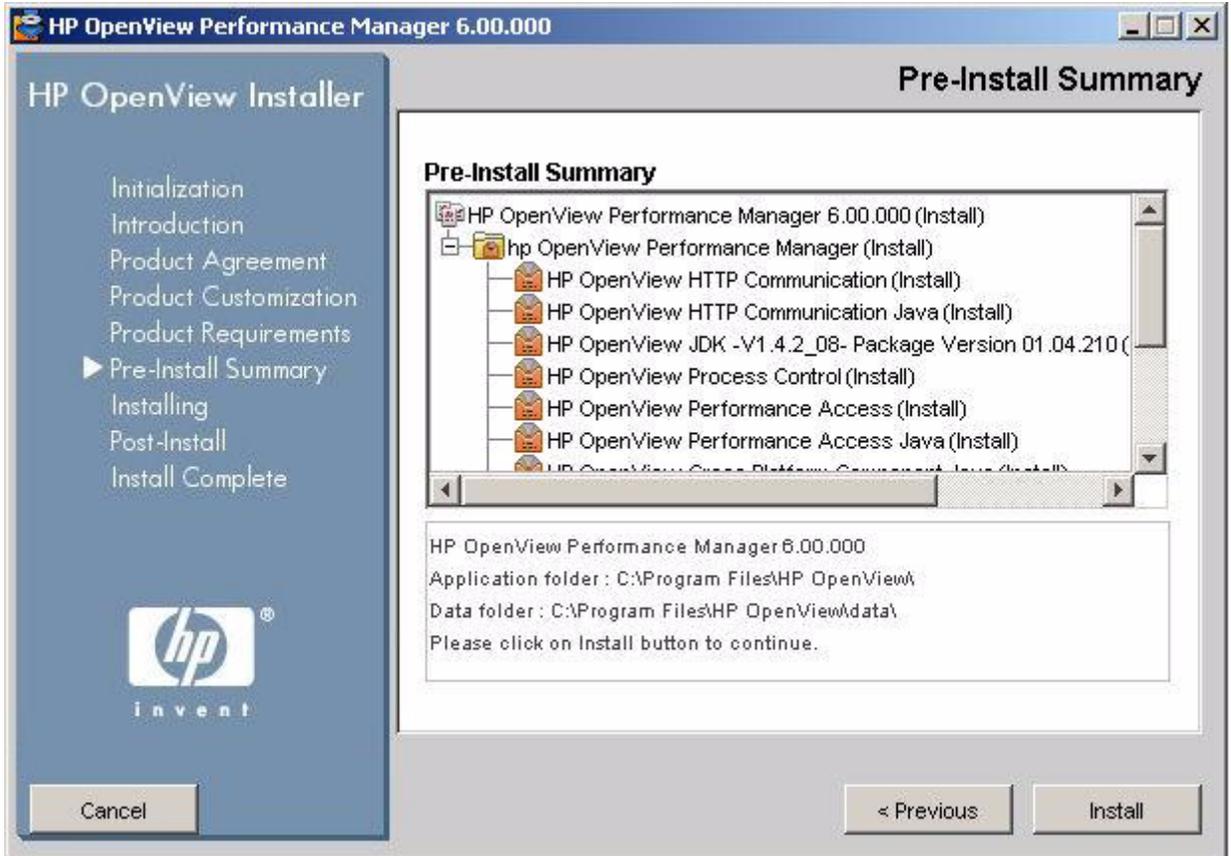
> - If you have other HP OpenView products already installed, OVPM installs automatically to the directory where they are installed.
>
> - If you have OVPM 5.0 installed, you will be prompted to remove the Apache Tomcat. The HP OpenView Tomcat Servlet Container - V5.0.28 - package will install.

8   Click Install.

9   When the install is complete, click on the Details tab and expand the tree to view the list of files that are shared between OVPM and other HP OpenView products.
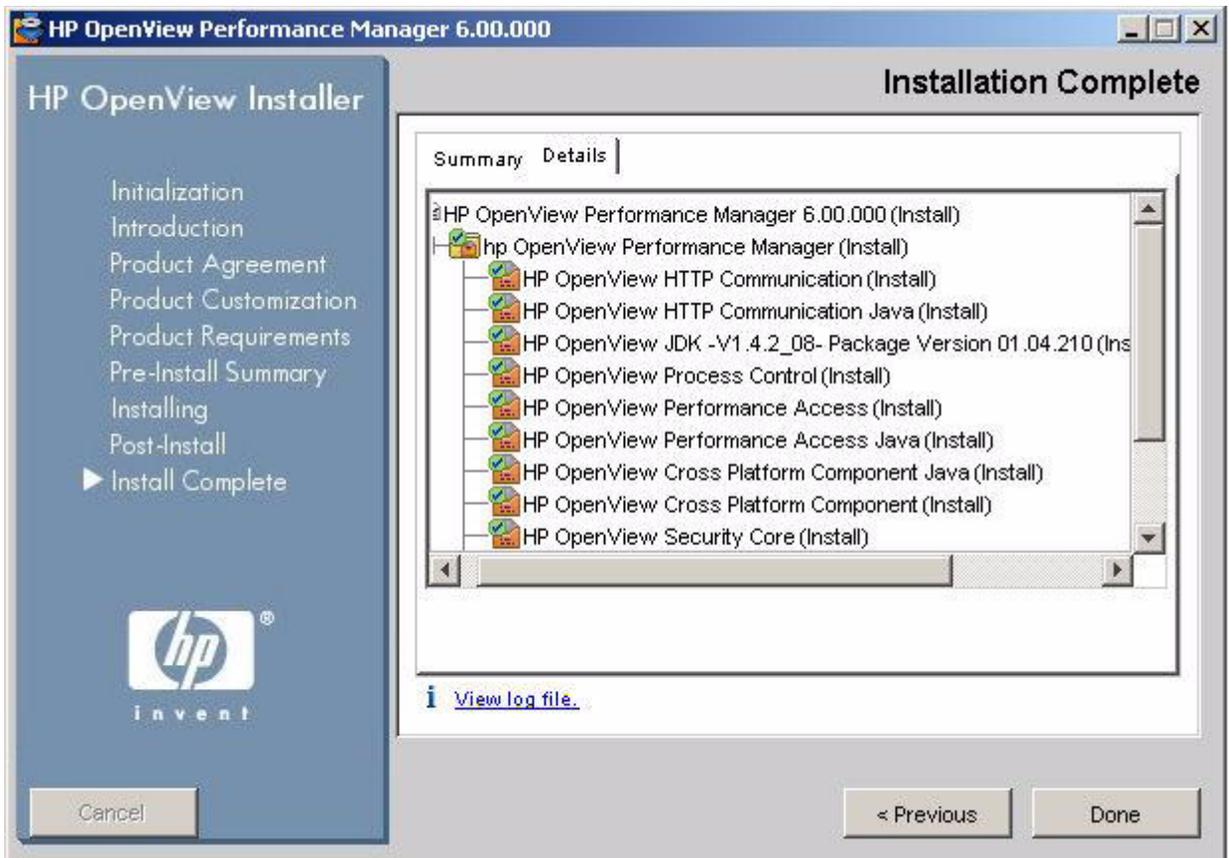
> If the install did not complete, you have the option to Roll Back the install or quit. The Roll Back uninstalls the new components it was about to install or upgrade. The Roll Back will not uninstall the components or HP OpenView products already installed.

10 To view the log file on your system, click View Log Files.

	HP OpenView Performance Manager Installation log file - Microsoft Internet Explorer

File Edit View Favorites Tools Help

← Back ▾ → ▾ ⊗ 🔁 🏠 | 🔍Search 📑Favorites 🎬Media 🎬 | 🔃 ▾ 🖨 ⲱ ▾ 🗐 🛍

Address 🔳 :\Documents and Settings\Admin.OVRTEST\Local Settings\Temp\HPOvInstaller\HPOvPM_6.00.000\HPOvPM_6.00.000_2006.01.11_14_46_HP

Log session start time Wed Jan 11 14:46:39 PST 2006

Time	Thread	Level	Category	Message
3719	AWT-EventQueue-0	INFO	root	Current Locale for the installation: English
3719	AWT-EventQueue-0	INFO	com.hp.ov.installer.ovapp.misc.FileManager	Directory to be deleted does not exist: C:\OpenView\Data\HPOVInstall
3735	AWT-EventQueue-0	INFO	com.hp.ov.installer.ovapp.iaPanel.IACustomPanelPleaseWait	Initializing the please wait panel
5579	Thread-21	INFO	com.hp.ov.installer.ovapp.core.Initializer	Completed the extraction of the resources \ADMIN~1.OVR\LOCALS~1\Temp\HPOvP
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	No export file required for this application
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	=================================
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	I N S T A L L E R C O N F I G U R A T I O
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	=================================
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	System OS Name : Windows 2000
6298	Thread-17	INFO	com.hp.ov.installer.ovapp.misc.OvInstallUtilities	System OS Version : 5.0

11 To check that OVPM is running. Double-click on the Performance Manager icon.

12 The OVPM service (Tomcat) starts automatically after install and restarts each time the system reboots.

You can manually stop, start and restart the OVPM service using windows Services on "OvTomcat" or using the dos commands "ovpm start", "ovpm stop", "ovpm restart".

13 Use the Performance Manager shortcut on the desktop to go directly to the OVPM home page.

Installing to a Cluster Environment

OVPM can be used in a clustered environment where multiple processors share access to common disk space and one or more systems will act as a "fail-over" processor for the other when there is a hardware failure. For example, if you had a two-node cluster, and node A shuts down, the cluster management system detects that node A is not available, and a cluster fail-over occurs. The cluster management system would start OVPM running on node B. However, if node A was running, and OVPM stopped, OVPM would not automatically failover to node B.

To run OVPM on a cluster, OVPM must be installed on the primary node (also called processor) and on each node that will be used in a fail-over. In order to maintain OVPM configuration information and saved user graphs in the event of a fail-over, these files must be placed on a disk system that is shared by all the processors.

The figure below shows how customers interact with OVPM when it is running on a cluster:

Figure 1   OVPM Running on a Cluster
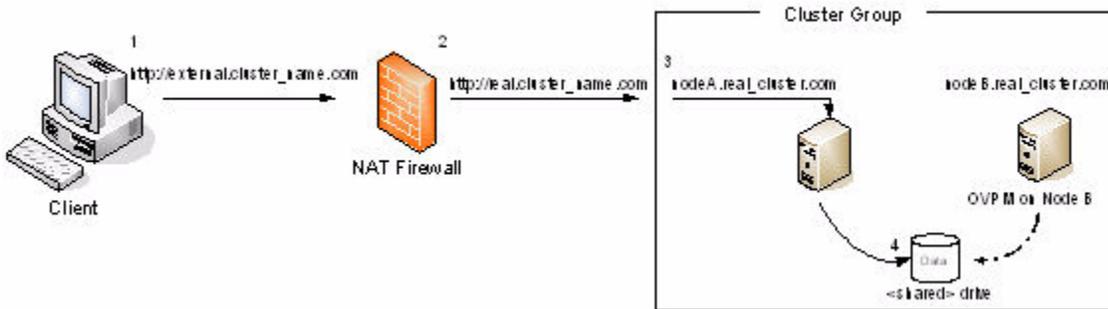
1   Customer enters the URL for OVPM from outside the firewall: *external_cluster_name*.**com:**<*external port number*>**/OVPM**. The cluster appears as a single system to the customer accessing it through a browser.

2   The URL request is resolved by the NAT firewall server and sent to the cluster server. **<real_cluster_name.com:8080/OVPM>**

3   The cluster server passes the request to Node A **<nodeA.real_cluster.com>**.

4   Node A processes the request, saves any configuration changes (i.e. customized user graph template, new customer login, new data source) to the shared drive and returns the information in reverse order to the customer.

5   Node B is not active, but can have access to the shared drive if Node A fails.

6   Should Node A fail, the cluster service would move the resource group to Node B, and OVPM on Node B continues process requests from customers who send their requests via the external-name for the cluster. The switchover to node B is transparent to the customer because Node B is accessing the configuration files (drive H) that were previously accessed by Node A.

Unsupported Cluster Types

- High Availability (where the cluster is designed to avoid a single point of failure)

- Scalability (increase of the cluster computing power with addition of multiple processors)

- Network Load Balancing

Cluster Requirement Guidelines for a two-node cluster

▶   Since OVPM is only cluster-aware, a dedicated resource group for OVPM is not required.

The following is a guideline for the requirements to setup OVPM on Microsoft Windows 2003 with Microsoft Cluster Server (MSCS) as cluster software, with the following resources available:

— Two dedicated shared disks

— Cluster quorum

— Shared disk for storage OVPM configuration files

— Three dedicated static IP addresses, configured in DNS (FQDN) including name and reverse lookup entries

— Two cluster node stationary names and IP addresses

— One cluster's virtual server name and IP address

— OVPM install bits.

For information about how to install Windows 2003 Cluster Server; see the Guide to Creating and Configuring a Server Cluster under Windows Server 2003 at:

http://www.microsoft.com/technet/prodtechnol/windowsserver2003/ technologies/ clustering/confclus.mspx

for details.

Follow these steps:

1 Setup the cluster group and verify that the cluster is operational - move the cluster resource group containing the Quorum disk to all configured cluster nodes. Make sure that the designated shared disk that will be used to store OVPM's configuration files is visible from each cluster node and have the same drive letter assigned. (My Computer > Manage > Disk Management).

2 Designate a cluster resource group containing the shared disk for the storage of the OVPM configuration files. These groups are typically created by the MS Cluster Wizard for all shared disks discovered. Otherwise the group needs to be created in the MS Cluster Administrator manually.

➤ It is not necessary to create a dedicated group for the OVO for Windows application because the customer will be accessing the server via the Cluster Name, not the individual node name.
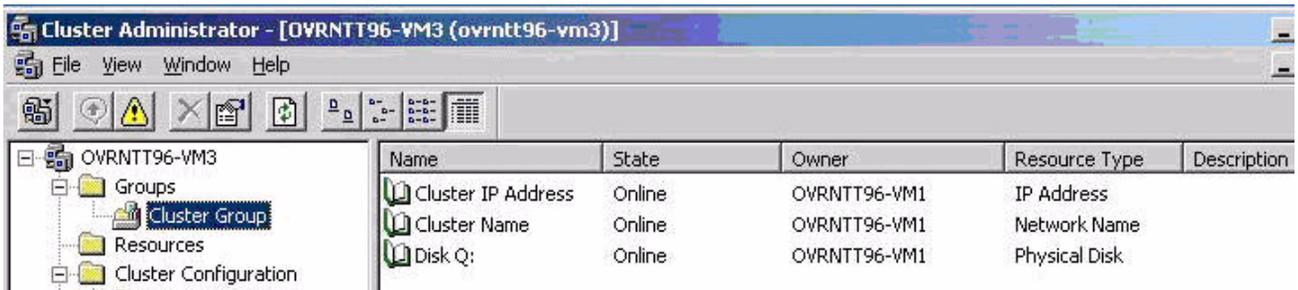
Installing OVPM to a Microsoft Windows 2003 Cluster

1   Select a cluster node and designate this system as the first (primary) cluster node to be installed.

▶   Make a note of this node because when uninstalling this first node needs to be uninstalled last.

2   Check if the Shared disk designated for the storage of the OVPM configuration files is available and accessible to the current system. If not, move the group to the current node using the Microsoft Cluster Administrator.

3   Install OVPM. Insert the CD into the disk drive. The installer is the same process as installing to a standard Windows server.

4   On the primary node:

Copy the contents of the `<data_dir>`\conf\perf directories to the shared disk drive; paste the files into a shared directory on the *<shared>* drive for the nodes in the cluster.

For example:

From node A (your primary node), copy:

`c:\Program Files\HP OpenView\Data\conf\perf`

To the shared disk H: with "Share" in the path name

`h:\ Program Files\HP OpenView\Data\`*Shared*`\conf\perf`

Where *<shared>* can be any directory desired on the shared disk.

5   On the primary OVPM node, modify the `OVPMInstall.ini` to indicate the new location of the data\conf\perf files.

a   cd to `c:\<install_dir>\www\webapps\OVPM\WEB-INF\ OVPMInstall.ini`

b   Open the `OVPMInstall.ini` file and add this line indicating the shared directory <share> and path to the `conf\perf` files. For example:

`SHAREDPATH=H:\Program Files\HP OpenView\Data\Shared`

c   Save and close the `OVPMInstall.ini` file.

       d   Restart OVPM on the primary node. (Make sure you do not have any OVPM windows open before you issue the OVPM stop then the OVPM start commands.)

6   Repeat steps 4 a-e for all the other fail-over nodes where OVPM is to be installed.

7   Test access and failover. From an IE browser, test your connection to the OVPM server using the cluster name and port.

Installing OVPM to Solaris/HP-UX Clusters

To run OVPM in a cluster fail-over situation, follow the following steps:

1   Install OVPM on each node (primary plus any fail-over nodes).

2   On the primary node, copy the contents of the `<data_dir>`/conf/perf directory to the shared disk system as `<shared>`/conf/perf where *<shared>* can be any directory desired on the shared disk.

3   On each OVPM node, edit the `OVPM.install.ini` file, located in the directory `<install_dir>`/OVPM/webapps/OVPM/WEB-INF on UNIX and `<install_dir>`/www/webapps/OVPM/WEB-INF on Windows. Add a line that indicates the shared directory being used *<shared>*:

SHAREDPATH=*<shared>*

4   Restart OVPM on the primary node.

5   When a cluster fail-over occurs, the cluster management system should handle reassigning the failed system's name and IP address to one of the backup processors and starting the applications on that system. Make sure that the ovpm start command is issued if it hasn't already been.

▶   By default the ovpm start command should be issued when the backup processors are rebooted. It is OK to leave OVPM running on these systems so long as simultaneous updates to configuration or user graph templates is not attempted.

Licensing

A license key password is required to use OVPM. When the software is installed and used for the first time, a 60-day trial license will be granted. Within this 60-day period, you must obtain a permanent license key password or a trial evaluation extension to continue using the product.

To obtain a permanent license, run the following command:

```
<install_dir>/bin/ovpm license
```

Your license status will be displayed and then you will receive a command line prompt: License Command. If OVPM is running with a trial license, it will display a message indicating Instant On: Yes. Instant On is the trial license feature. If the permanent product license is already installed, it will display a message indicating HP OpenView Performance Manager has a permanent license.

If you have an internet connection and wish to obtain a permanent password, enter the command GUI on the OVPM server. This will bring up the HP OpenView AutoPass GUI. On HP-UX and Solaris, you may have to export the DISPLAY variable to direct the AutoPass GUI to the proper display window before running the ovpm license command.

When the AutoPass GUI first runs, click OK to continue past the Temporary Evaluation screen (this dialog will always display, regardless of your license status). Then perform the following steps:

1   In the Internet Connection dialog, select either Direct Connection or enter the Proxy information required.

2   Select **Install Permanent Password** in the dialog and enter the HP OpenView purchase order information from your Entitlement Certificate.

3   Select the LTU (License To Use) number that corresponds to the number of licenses purchased. Note: Only one license is needed per installation on a server.

4   Fill out the customer information form.

5   When finished, the password keys will be installed automatically.

If you used the **www.webware.hp.com** website to request a license password and have received it via e-mail, you will need to install it manually. Follow these steps:

1   Extract the password from the e-mail attachment and save the license keys in a plain ASCII text file on the system where OVPM is installed.

2   Enter this command: `<install_dir>`/bin/ovpm license

3   After displaying your current license status, you will receive a `License Command>` prompt. Enter install.

4   You will then be prompted for the name of the file created in step 1 above. Enter the full path to the file. If this process is successful, you will see a message "Password successfully added"; otherwise, an error message will be displayed.

To request a Trial (Evaluation) License Extension, access the webware website to get contact information for evaluation software passwords. Contact the License Center in your region to request a Trial (Evaluation) License Extension. The Product Number and Name will be "TRIAL-OVPM". This is a one time 60-day extension. You will receive your password key by email and it can be installed manually using the process described above.

For more complete details about licensing, see the `AutoPass_guide.pdf` document in the `<install_dir>`/paperdocs/PM/C directory.

Uninstalling OVPM

During the uninstall process a message screen warns that the OvControl command (`ovc -start`) has failed.

In general this is not a problem: OVPM's uninstall has just uninstalled the HP OpenView Control component, hence the command fails. The user should ignore the warning in all cases except on Solaris systems.

On Solaris systems, when OVPM is uninstalled but HP OpenView Control is left on the system (because other HP OpenView applications, like OVPA, are using it), the `ovc -start` command will still fail because of the file's permissions on Solaris. In this case, run `ovc -start` from the command line as the root user.

On Windows

Use the Windows control panel to "Add/Remove programs" and remove "HP OpenView Performance Manager".

On uninstall, a screen asks whether you want to "Repair" or "Uninstall" the product. Select Uninstall.

On HP-UX and Solaris

1   Logon as root or superuser.

2   Change to the directory `/opt/OV/Uninstall/HPOvPM`.

3   Run the setup program:

   — To use an X11 interface: Export the DISPLAY variable to point to an X11 terminal if necessary. Then execute the command:

      `./setup.bin`

   — To use a non-X11 interface, execute the command:

      `./setup.bin -i console`

4   Select Uninstall.

Removing configurations and user graph templates

Removing OVPM does not remove configurations or user graph templates. This assists in a re-install of OVPM later, if required.

To remove them, use the ovpm_clnup script located under *<Install_dir>*/support. This script removes the following files and directories:

<Data_dir>/conf/perf/VPI_*

<Data_dir>/conf/perf/OVPMconfig.ini

<Data_dir>/conf/perf/OVPMUsers.xml

<Data_dir>/conf/perf/systemsCODA*

<Data_dir>/conf/perf/systemsMWA*

2 Upgrading OVPM

This chapter provides important information about upgrading from OVPM 4.0 and OVPM 5.0 to OVPM 6.01 on Windows, HP-UX or Solaris systems.

Upgrading from OVPM 4.0

Windows

No customer preparation required unless you have customized your default templates. OVPM 6.01 will overwrite the default templates for each graph. If you have any customized or default templates you want to keep, before you start move these to another directory, then move them back to the `<uninstall dir>`/newconfig/OVPM after upgrade to OVPM 6.01 is complete.

During the upgrade process, the OVPM 6.01 Installer detects OVPM 4.05 and removes it.

During the upgrade process, the OVPM 6.01 installer detects whether the OVPM 4.0 Apache Tomcat is installed, removes it, and replaces the Apache Tomcat with HP OpenView Tomcat.

Data such as your list of datasources and customized graphs are saved and not changed.

The Install program upgrades 4.0 to 6.01 in the following manner:

1   OVPM 6.01 installer detects whether OVPM 4.0 and the Apache Tomcat was installed. If it is, the OVPM 4.0 Apache Tomcat webserver is removed from `<install dir>`\Program Files\Apache Software Foundation\Tomcat 4.0 and the HPOvTomcat-05.00.285 is installed to HP OpenView\nonOV\tomcat directory

2   The installer also checks whether the default port is already in use.

Uninstalling, after an upgrade from OVPM 4.0 only

After you upgrade from OVPM 4.0 to OVPM 6.01, you will see two entries in your Add/Remove Program list of Currently Installed Programs.

This occurs because OVPM 4.0 used a different installer program to install OVPM 4.0. If you click on the support link, you receive the following error messages:

- Error opening installation log file. Verify that the specified log file location exists and is writable. OK.

- There was an error during the MS Core Uninstallation. Look in `C:\Program Files\OpenView\Data\HPOVInstall` directory for the Uninstall log.

You can ignore these messages. They occurred because during the upgrade, the original OVPM 4.0 install/uninstall logs are removed.

Keep on clicking OK and the uninstall program will remove OVPM 4.0.

HP-UX and Solaris

No customer preparation is required unless you have customized your default templates. OVPM 6.01 will overwrite the default templates for each graph. If you have any customized or default templates you want to keep, before you start move these to another directory, then move them back to the `<uninstall dir>`/newconfig/OVPM after upgrade to OVPM 6.01 is complete.

During the upgrade process, the OVPM 6.01 Installer detects OVPM 4.05 and removes it.

Data such as your list of datasources and customized graphs are saved and not changed.

The Install program upgrades 4.0 to 6.01 in the following manner:

1   OVPM 6.01 installer detects whether OVPM 4.0 and the Apache Tomcat is installed, if it is the OVPM 4.0 Apache Tomcat webserver is removed from `/opt/tomcat404` and the HP OpenView Tomcat is installed to `/opt/OV/nonOV` directory.

2   The installer checks whether the default installation port is already in
    use.

3   The installer then installs the `HPOVTomcatA` file to the `/opt/OV/nonOV/`
    `directory`.

Upgrading from OVPM 5.0

The OVPM 6.01 Install program detects whether OVPM 5.0 and the Apache Tomcat are installed.

On UNIX platforms:

If the installer detects OVPM 5.0 is installed, the installer removes the

  `/opt/jakarta-tomcat-5.0.25` directory and its contents.

The installer then installs the `HPOVTomcatA` file to the `/opt/OV/nonOV/` directory.

On Windows platforms:

If the OVPM 6.01 installer detects OVPM 5.0 is installed:

1 A prompt offers to remove the Apache Tomcat (HP OpenView Tomcat(A) Servlet Container Service) from the `Apache Software Foundation\jakarta-tomcat-5.0.25` directory. If "Uninstall" is selected, the installer removes all files from the `Apache Software Foundation\jakarta-tomcat-5.0.25\` directory and the Tomcat5 service shuts down.

2 The Uninstall of the Apache Tomcat leaves `\Programs Files\Apache Software Foundation` empty, but may not remove the directory. It is recommended you manually delete the Apache Software Foundation directory.

3 The installer then installs the `HPOVTomcatA` file to the `HP OpenView\nonOV\tomcat` directory.

Preserving Tomcat 5.0.25

OVPM 6.01 installs a new version of Tomcat (HP OpenView Tomcat, version 5.0.28). The previous version (5.0.25) can be preserved by taking the following steps:

On Windows

A prompt offers to remove the Apache Tomcat (HP OpenView Tomcat(A) Servlet Container Service) from the `%ProgramFiles%Apache Software Foundation\jakarta-tomcat-5.0.25` directory. If "Uninstall" is selected, it removes all files from the Apache Software Foundation directory and Tomcat5 service shuts down.

The Uninstall of the Apache Tomcat leaves %ProgramsFiles%\Apache Software Foundation empty, but may not remove the directory. It is recommended you manually delete the Apache Software Foundation directory.

The installer then installs the HPOVTomcatA to the `%OvInstallDir%nonOV\tomcat` directory.

Please note that even if the old version of Tomcat is preserved, its service will be set to manual and you will need to change the ports it uses to avoid conflicting with the new version of Tomcat used by OVPM 6.01.

On UNIX or Solaris

If you need to keep the `/opt/jakarta-tomcat-5.0.25`:

1 Uninstall OVPM 5.0 by running `/opt/OV/Uninstall/HPOvPM/ setup.bin` (UNIX).

The uninstall of OVPM 5.0 will leave the `/opt/jakarta-tomcat-5.0.25` directory on the system.

2 When installing OVPM 6.01, the installer will not detect the presence of OVPM and will leave the Apache Tomcat-5.0.25 in place.

3 When the install is complete, you will have two instances of tomcat installed:

— `/opt/jakarta-tomcat-5.0.25`

— `/opt/OV/nonOV/tomcat/a`

4 You need to manually configure which port the Tomcat install by OVPM 6.01 will use. For information on configuring ports, see Web Server Port Configuration on page 13.

3 OVPM with Other HP OpenView Products

It is possible to install OVPM standalone on a system or on a system together with other HP OpenView products. Installing on a system with other HP OpenView products may make integration between products easier.

This chapter provides important information about installing OVPM on a system together with the following HP OpenView Products:

- OVIS
- OVPA
- OVO for Windows and UNIX
- HP OpenView Reporter
- HP OpenView Smart Plug-Ins
- SIP
- HP OpenView Self-Healing Services

Planning your Install (Windows, Solaris, and HP-UX)

After installing OVPM, you should verify that other HP OpenView products are running. The OVPM install will stop shared components in order to perform necessary upgrades. Once the install is complete, it attempts to restart these services. You can use the HP OpenView Control Service to confirm the state of HP OpenView services:

```
<Install_Dir>/bin/ovc -status
```

HP OpenView Reporter and OVIS

When OVPM is installed on a Windows system where HP OpenView Reporter or OVIS is installed, these products will be automatically integrated with one another.

It is recommended that you install HP OpenView Reporter or OVIS first, and then install OVPM. HP OpenView Reporter and OVIS may require that you run the `HPGC4to5.bat` script, if they are installed after OVPM. This script updates OVPM configuration files, and will be run automatically by OVPM and OVIS 6.10. Other HP OpenView applications – earlier versions of OVIS and HP OpenView Reporter – will not execute the script automatically in their installs, so you will need to run it from the command line. The script can be found in the Support directory:

```
<Install_Dir>\Support\HPGC4to5.bat
```

Additional information about HP OpenView Reporter and OVIS integration with OVPM can be found in the OVPM *Administrator's Guide* under the heading **Configuring Reporter and OVIS**.

OVO and the OVPA

If you install OVPM on a system with the HP OpenView Operations agent (OVO agent), please verify that the latest patches for the agent are installed. Patches for the OVO agent (Embedded Performance Component) are deployed by the Management Server.

If you wish to use HTTPS secure communications to collect data from either the OVO agent or the OVPA, a security certificate must be deployed from an OVO Management Server to the OVPM server. The recommended approach is to manage the OVPM server; deploying an agent configured for secure communication to the OVPM server will deploy the security certificate. Additional information can be found in the *Performance Agent Installation and Configuration Guide* under Configuring Secure Communication or the *OpenView Operations for Unix HTTPS Agent Concepts and Configuration Guide*.

Coexistence with OVO 7.x Agent

- After completing the install of OVPM on a managed node, verify that the opcagt process is running with opcagt -status. To start the agent, issue the command `opcagt -start`.

- If the OVPM server is managed by OVO for Windows 7.50, please apply patch OVOW_00194 (or the latest available agent patch), before installing OVPM.

Check HP OpenView services after installation

After completing the install of OVPM, verify the status of HP OpenView services with `ovc -status`. To start any stopped services, issue the command `ovc -start`.

HP OpenView SMART Plug-Ins

If you install any SPI after OVPM on Windows, you should run the following batch file to complete the process:

`<Install_Dir>\Support\HPGC4to5.bat`

DB SPI

HP OpenView Smart Plug-ins for Databases (DB-SPI) version 8.10 fully supports OVPM. Earlier Database SPI versions (prior to 8.10), can also support OVPM if certain requirements are met. See additional documentation on the OVPM installation media under `<Install_Dir>\Support\DBSPI` for more details.

SIP / HP OpenView Dashboard

It is recommended that you install and configure the HP OpenView Dashboard or SIP first, and then install OVPM.

OVPM installs a separate instance of Tomcat to the system. This may require that you change the port numbers used by OVPM's Tomcat to avoid port conflicts with the SIP/HP OpenView Dashboard's application server. Please see Web Server Port Configuration on page 13 for more details.

HP OpenView Self-Healing Services

HP OpenView Self-Healing Services collects data useful in the problem resolution process. HP recommends the use of Self-Healing Services, and it is included in every support contract.

How to use Self-Healing Services

Documentation and downloads for Self Healing Services are available at:

http://support.openview.hp.com/self_healing.jsp

Once Self-Healing Services is installed on a system, you should be able to submit a Self-Healing incident against the OVPM product. It is recommended that before submitting a Self-Healing incident, the problem is reproduced with OVPM trace enabled. This is to make sure that appropriate trace messages are available in the trace file when the Self-Healing Services collects data from the system.

When Self-Healing Services is not available

The OpenView Self-Healing Services product may not be available on all platforms where OVPM runs. It is recommended to use the Self-Healing Services product when it is available, where it is not, the Self-Healing data collector bundled with OVPM can be used as a standalone tool.

How to use Self-Healing Data Collector as a standalone tool

To use the Self-Healing data collector as a standalone tool:

1   Enable OVPM trace and reproduce the problem.

2   Go to the directory *<OVPM install dir>*`/support/OVGC/`
    `SelfHealing/bin`   using the command prompt or shell.

3   Run the script collector.sh (UNIX) or collector.bat (Windows) in the following way:

`<collector.sh | collector.bat> -f <file path>`

where *<file path>* is the fully qualified name for the output file, where all the collected files will be zipped.

4   Transfer the output file as a binary file to your HP support engineer.

The Self-Healing Services data collector does not collect web browser log information. Therefore, if a problem is found in the OVPM Java client, copy and save the log information from the web browser's Java console into a separate file, and upload that file into the submitted Self-Healing incident, using the Self-Healing Services GUI.

4 Migrating from PerfView to OVPM

This section describes how to migrate your HP PerfView configuration to OVPM for HP-UX, Solaris and Windows.

HP PerfView on HP-UX and Solaris is also known as OpenView Performance Manager version C.03.xx for HP-UX and Solaris, but in this document is referred to as PerfView to avoid confusion with the new OVPM version.

OVPM and PerfView both display data collected by OVPA. The data displays include various graphs and tables. Both products include predefined graph templates plus the ability for a user to define their own graphs. The main differences between these products reside in the following:

Which Agents Are Supported

Table 4   Supported Agents

Agent	PerfView	OVPM	Comments
OVPA	Yes	Yes	OVPA is also known as VantagePoint Performance Agent (VPPA) and as Measureware (MWA).
OVO agent	No	Yes	OVO agent Extended Performance Component started shipping with OVO agent version 7. This agent uses a new firewall friendly datacomm protocol.
OVPA 4.0	Maybe	Yes	OVPA 4.0 uses the same firewall friendly datacomm as used by OVO agent. On some platforms (Linux) this new datacomm is the only one available. Other platforms that already support the older datacomm may continue to provide it as an option. PerfView will only communicate to an agent if the older datacomm is available.

Table 4   Supported Agents

Agent	PerfView	OVPM	Comments
HP OpenView Reporter	No	Yes	The HP OpenView Reporter gathers data from a large number of performance agents, summarizes it and saves it in a database. HP OpenView Reporter graphs can quickly do system comparisons, like finding the busiest systems, that are difficult when connecting to one system at a time. HP OpenView Reporter supports OVPA, OVPA 4 and OVO agent. HP OpenView Reporter can also summarize data from the OVO event lists.
OVIS	No	Yes	OVIS probes network services such as web pages, name servers, and email and stores data about their availability and response times into a database. Showing actual measured service response times alongside system performance data can provide much more meaningful information.
Generic DB	No	Yes	Time series data can be accessed from generic Oracle and SQL Server databases, providing the data meets OVPM requirements.
Flat File	No	Yes	Data in flat text files with fields separated by comma or tab delimiters. PerfView supported similar data files as input to its Business Units trending module, but it could not graph them or otherwise treat them as normal data.

The User Interface

PerfView runs locally on the system where it is installed. There are versions of PerfView that run on HP-UX, Solaris, and Windows platforms. The PerfView display can be redirected to another UNIX X-Window display.

OVPM is accessed through a web browser. OVPM must be installed on an HP-UX, Solaris or Windows system, but users from a wide variety of platforms can access it through their own web browsers.

Product Add-Ons

PerfView Monitor is an event management console that is used to monitor performance alarms from the MeasureWare agents. Use the OVO Console for a generalized event manager that handles OVPA and OVO agent alarms plus many other event sources. OVO also provides for centralized deployment and configuration of agents.

Other differences will be discussed in detail throughout this section.

What Happens to PerfView?

When OVPM releases it is shipped as a product update to all PerfView customers with a support contract. OVPM can be installed on the same system as PerfView and both versions can run without interference. New orders for PerfView are filled with OVPM. Special procedures may be made available for a limited time to order additional copies of PerfView for those situations that require it.

Eventually, you should plan on migrating from the older PerfView technology to the new OVPM technology. The rest of this document describes how to migrate your existing PerfView configuration (system lists, groupings, custom graph templates, drill-down templates) into OVPM. Since both technologies will coexist on the same system, this migration can happen at your own pace.

Migration Components

Program Files

Step one in migrating from PerfView to OVPM is to install the OVPM product. Do not uninstall PerfView before installing OVPM. Both products can be installed on the same machine while you migrate your operations to OVPM. Once you have successfully moved all your PerfView configuration to the new product, then you can uninstall PerfView.

System Lists

PerfView kept a list of systems, and possibly groups of systems that it could contact. You can migrate this information to OVPM without having to re-enter it. Before you do, consider that OVPM integrates with the **HP OpenView Reporter** product. HP OpenView Reporter searches for installed performance agents in your environment. Each night it updates this list with any systems that have been added to your network. If you configure OVPM to use HP OpenView Reporter, then OVPM will automatically know about the systems that contain performance agents. HP OpenView Reporter is not required to use OVPM, but if both products are used together, they will leverage each other's capabilities.

If HP OpenView Reporter is not installed, the names of the systems with performance agents can be entered through a simple text file (systemsMWA.txt in the application data directory). You could edit this file and add your systems and groups, or you can run the **PVMigrate** utility. PVMigrate is described more fully later, but one of its functions is to copy the list of systems and groups currently configured in PerfView into the SystemsMWA.txt file where they will be recognized by OVPM. The OVPM Administrator Interface is used to edit systems and groups interactively. Once the configuration is saved by the Administrator's Interface program, the lists of systems and groups will be transferred into an internal format and the systemsMWA.txt file will be renamed to systemsMWA.txt.bak.

User Graph Templates

You can create your own graph definitions and save them in PerfView. To use these same graphs in OVPM, the templates need to be migrated into OVPM format. OVPM has a different set of features that you may want to take advantage of. For instance, all OVPM graphs are generic. That is, each graph

can be drawn against any other system that provides that same data metrics, without having to create a graph template for each system. If you have designed several graphs that are identical except for the system, then you might be able to remove all but one of them when you move to OVPM.

You can display each of your user-defined graphs in PerfView, then re-engineer and save them in OVPM. An easier way would be to use the **PVMigrate** utility program to convert your user-defined PerfView graphs to OVPM. You can then edit and/or delete them to suit your needs. (PVMigrate is discussed in greater detail in a later section of this document.)

Predefined PerfView Graph Templates

PerfView provides several predefined graph templates. OVPM also provides a set of predefined graph templates. You may examine the OVPM templates and decide to use them. If you want to copy the exact PerfView graph definitions, use the **PVMigrate** utility, described later.

Drill-Down Templates

When PerfView displays a graph, it allows you to "drill down" and show tables of supporting data for the time covered in the graph. OVPM allows tables of data to be drawn at any time, not just from a graph, and allows much more flexibility in terms of summarizing the data, etc.

If you have customized the drill-down metrics for PerfView, and you want to preserve this customization, use the **PVMigrate** utility to copy PerfView drill-down templates into OVPM tables.

Batch Execution

Both PerfView and OVPM allow execution from batch scripts. The capabilities and syntax are quite different between the two products and will be covered in a separate topic.

Step By Step Migration

The **pvmigrate** executable is shipped with OVPM to assist in migrating configuration information from PerfView. It is not required to begin using OVPM and can be run at any time. You should only have to run the program once in order to copy your PerfView information into a form that is usable by OVPM. Running PVMigrate will not affect the running of PerfView in any way.

Running pvmigrate

1   Migrate the PerfView systems, groups, custom graphs and default drill-down templates.

   a   Login with root or superuser capabilities (or at least as a user with the permissions to write into the <data_dir>/conf/perf directory).

   b   Execute one of the following commands:

   ```
   <install_dir>/bin/pvmigrate
   ```

   To migrate PerfView's configured systems, groups, custom graphs and default drill-down templates.

   ```
   <install_dir>/bin/pvmigrate all
   ```

   To migrate all the above plus all the PerfView predefined graph templates. Use this option if you want to preserve the default PerfView graphs instead of converting to use the default OVPM graph templates.

   When running OVPM, these graphs will be listed under the "PerfView" graphs when logged in using the blank logon name.

2   **(Optional)** Migrate individual user's custom drill-down templates.

   a   Login as the user with the custom drill-down templates.

   b   Execute the following command:

   ```
   <install_dir>/bin/pvmigrate local
   ```

This will create a file called VPI_GraphsPerfView_user.txt where user is the logon user name. If this user has write permissions to the `<data_dir>`/conf/perf directory, then the file will be created there. If not, the file will be created in the current directory and must be copied to `<data_dir>`/conf/perf.

c   Repeat this step for any additional users with customized drill-down templates. When running OVPM, these drill-down templates will be under the "PerfView_user" graphs when logged in using the blank logon name.

A Few Differences You Will See in Migrated Templates

During the migration, some features of PerfView may not be available and so are lost. Most notably, you will lose any Sort and Filter information from your drill-down tables. You can add filtering to the tables using the OVPM graph editors. Sorting can be adjusted dynamically whenever you draw a table using the "Use Java Graphs" option.

Some other features may be added. Notably, PerfView labeled metrics using a combination of the data source, class, instance, and metric names, for example, "SCOPE:GLOBAL:GLOBAL:GBL_CPU_TOTAL_UTIL". Later versions of PerfView shortened this to just the system name and metric name "MySystem:GBL_CPU_TOTAL_UTIL", or including the instance name "MySystem:Desktop:APP_CPU_TOTAL_UTIL".

•   OVPM supports user-defined metric labels. During the migration, the metric names will be changed to resemble the drill-down labels in PerfView. The first example becomes "CPU %" and the last one becomes "DeskTop CPU %". The system name will be included in the graph titles ("Global History for MySystem").

•   Graphs with more than 8 metrics were shown in PerfView, 8 at a time with scrolling to show new metrics. OVPM supports hundreds of metrics on one graph so you will see all the metrics at once.

•   With OVPM, you can draw a graph for more than one system at a time by selecting multiple systems before you press "Draw Graph". This feature is not available in PerfView. You can even draw a graph for "Every System in the Group" but be careful if you ask for thousands of graphs. It may take some time.

- For multi-instance graphs (Application, Transaction, etc.), PerfView could prompt you to select which instance you want to graph. OVPM can do this also but by default it will draw all instances. If more than one metric is in the graph, then each instance will be drawn on its own graph to avoid confusion.

If you migrate the predefined PerfView graphs, you will see that PerfView could actually define a different graph based on the type of system it was accessing. "History" is actually a different graph for HP-UX, NT, Windows, and MPE systems. During the migration these different graphs will be identified by appending the system to the graph name.

- "History" is the graph for HP-UX and most systems
- "NT History" is for NT systems
- "Windows History" is for Windows 3.1 and Windows 9x
- "MPE History" for HP3000 systems running the MPE operating system.

When drawing a system, you should select the one that most closely matches the system you are drawing. OVPM's approach to this situation is to combine all metrics into one graph. Those metrics not available on a system will not be drawn. You can edit your graph definitions to do the same thing if you desire.

OVPM supports two methods of viewing graphs:

1 The simplest is HTML where each graph is rendered as a static gif or png file. This format is easiest to view on different web browsers and the fastest to display over slow network connections. Once drawn, there is no interaction with the graph, other than to cut and paste, or print.

2 Java Graphs are the most powerful. They allow interaction with a graph once it is drawn, including zooming, changing the graph type, etc. The Java Graph most closely resembles the interactions possible with the PerfView graphs. Running a Java Graph requires that a Java Plug-in be installed on the system where the web browser is running. It takes a little longer to get started, but is then much more helpful and interactive once it is running.

Graph templates may be drawn using either graph interface. Graphs developed using one interface can be drawn using the other interface. Because the Java Interface is more capable, avoid using the Web Forms interface to edit graphs that were created using the Java interface. Some features may be lost.

To use drill-down tables, choose the system and the date range, select the drill-down table from the graph list and press "Draw Graph". There is no need to draw a graph before you can see table data. If you want to closely match PerfView, you should choose "Points Every = unsummarized". Using different "Points Every" values can summarize data to show longer time intervals. Use care when summarizing multi-instance data like APPLICATION or TRANSACTION since the instance identification may be lost by summarizing.

Take a look at the OVPM predefined graphs in the "Agents" graph template for some ideas on what else can be done with the data.

PerfView Batch Commands

PerfView supports the use of a command file, and using parameters on the command line to avoid having to run the user interface. OVPM allows batch access either through command line using `ovpmbatch` file (redirected stdin) or via web URL. The number of keywords (commands) in OVPM is quite large and a direct 1-to-1 mapping does not exist for PerfView. The following table should give an idea of which keywords to look at for equivalent functionality. Note that OVPM does not support direct output to a printer at this time.

Table 5   PerfView Batch Commands

PerfView Command		ovpmbatch keyword
?	Print command line syntax	?
batch	Specify batch mode	Not needed
b[egindate] <date_specifier>	Specify begin date	**STARTTIME**=yyyy,mm,dd,hh,mm,ss
dest <destination-string>	Specify printing destination, either file or printer	(always output to file or stdout) **outputdir=**<directory>
ds <datasource_name>	Specify input data source (required)	**DATASOURCE=**MWA **CLASS=**<datasource_name>:<class_name>
e[nddate] <date_specifier>	Specify end date	**STOPTIME=**yyyy,mm,dd,hh,mm,ss
ex[clude] **w**[eekends]**ex[clude]** **h**[olidays	Exclude holidays and/or weekends	**SKIPDAYS=**SAT,SUN **NOHOLIDAYS=**1 **SHOWDAYS=**23456
format ["ascii", "wks", "graph"]	Specify output format	**GRAPHTYPE=** Line, area, bar, horiz bar, pie,table, htable, gauge, xml, baseline, csv, tsv, forecast
graph <graph name>	Draw a graph	(one graph per execution)
gn <graph_name>	Specify graph name	**GRAPH=**<graph_name>

Table 5   PerfView Batch Commands

PerfView Command		ovpmbatch keyword
gt ["line", "pie", "stacked"]	Specify graph type	**GRAPHTYPE=** Line, area, bar, horiz bar, pie,table, htable, gauge, xml, baseline, csv, tsv, forecast
h[elp]	Print command line syntax	**?**
in[clude]["w[eekends]" " **h**[olidays]"	Include holidays and/or weekends	(default) **SHOWDAYS=**1234567
instance <class_name=instance_ name>	Specify an instance of a class	**INSTANCE=**instance_name **FILTER=**<anymetric_name=value,.>
met[ric] <metric_name>	Specify a metric	**METRIC=** <metric_name> Prior to specifying the METRIC= keyword, the following keywords must have been supplied. Once supplied, they do not need to be repeated for each additional metric: **DATASOURCE=**MWA (as needed) **SYSTEMNAME=**system_name **CLASS=**<class_name>
prn [printer_alias]	Specify printer alias	(feature not available)
range <date_range>	Set the range of dates to graph	**DATERANGE=**<#>< Minutes, Hours, Days, Weeks> **ENDING=**<now> <last> <date/time>

Table 5　PerfView Batch Commands

PerfView Command		ovpmbatch keyword
shift <starttime-stoptime>	Set the shift hours	**SHIFT=**HH:MM-HH:MM
sum <summarization_level>	Select a summarization level	**POINTSEVERY=** **NUMBEROFPOINTS=**
ymax <max_value>	Specify y-max value	**MINY=** **MAXY=** **MINYR=** **MAXYR=**

- <date_specifier> is either an integer containing UNIX GMT, or a date string in the system
- locale<destination-string> "lp" or a file name (.bmp, .gif, .png)
- <directory> disk directory name where files will be created
- <datasource_name> defaults to "SCOPE"
- <metric_name>node_name:data_source:class_name:instance_name:metric_name
- <date_range> "month0112", "w-1", "w1" "month4"
- <starttime-stoptime> 08:00-17:00
- <summarization_level> 5M, 15M, 30M, 1H, 3H, 6H, 12H, 1D, 1W

Feature Comparison

The differences in functionality between PerfView (OVPM 3) and OVPM are outlined in the tables below. Colored text highlights those features one product has that the other does not.

Table 6

HIGH LEVEL CAPABILITIES		
Functionality	**PerfView**	**OVPM**
Integration	VPO / NNM	OVO 7.x, 8.x OVIS 4.x, 5.x, 6.x HP OpenView Reporter 3.x HP OpenView Interconnect SIP
Performance Comparison	Systems on Networks, Applications on Systems	Systems on Networks, Applications on Systems, Any data class on Systems
Real-Time Monitoring	Near - updates every 5 minutes	Near - updates every 2 minutes or on demand.
Viewing Platform	UNIX or Windows consoles	Web Browsers from any platform
Grouping of Systems	Yes, configure these yourself	Yes. Automatically uses groups and systems from HP OpenView Reporter DB. If no HP OpenView Reporter, then you configure individual systems and groups
List individual systems	Yes, add 1 system at a time.	Yes, create list in text files or add through user interface
Web Browser Display	No	Yes
Platforms	HP-UX, Solaris, Windows	HP-UX, Solaris, Windows

DATA SOURCES		
Functionality	**PerfView**	**OVPM**
Add additional temp data sources to Measureware	Yes, local datasources	Mount datasources to local MeasureWare agent to access.
Flat File Input	Business unit forecasting only	Yes - generic graphs and Business unit forecasting
Connect to Group	Yes	Yes
Draw graph for all systems in Group	No	Yes
Connect to individual System	Yes	Yes
Read MPE Data Sources	Not directly. User can extract MPE logs, copy them to the PV system, then connect by mounting a "local data source".	Not directly. User can extract MPE logs, copy them to a MWA system, mount as data source.
Search for system name.	No (only finds system already configured in Systems in Group Source list)	Yes, when used with HP OpenView Reporter, the system list will be populated automatically.

DATA SOURCES		
Functionality	**PerfView**	**OVPM**
Sources	MeasureWare (NCS and DCE)	MeasureWare (NCS and DCE), OVPA 4, OVO agent, HP OpenView Reporter, OVIS, HP OpenView Transaction Analyzer, Generic DB, Flat File.
View DSI Metrics	Yes	Yes
View Individual System Config	Yes - Summary detail	Yes - System Information

GLOBAL SETTINGS		
Functionality	**PerfView**	**OVPM**
Date/Time selection	Start/Stop date Date ranges Weekends Holidays Shifts Points Every (5,15,30,60min and 1,3,6,12,24 Hours)	Start/Stop date Date ranges **Any days of the week** Holidays Shifts Points Every (anything you want)
Max Points in graph	1024	1024 in web graph 2048 in Java Graph User selectable for "expert users"
Set Threshold Value	Draws line through graphs	No
Setup Printer	Yes	Uses printer configured for system, selected in browser.

GLOBAL SETTINGS		
Functionality	**PerfView**	**OVPM**
Use at Startup Checkbox	Saves current user settings as default for future sessions.	Can save client settings on demand.
Use Global Settings	Checkbox on Main Interface	Automatic
Visual Settings	Yes (see Graph features)	Yes (see Graph features)
Look and Feel selectable	No	Yes, using skins and client settings

GRAPHS		
Functionality	**PerfView**	**OVPM**
3-dimensional graphs	No	Yes
Add metrics to an open graph (bring in additional data without starting over).	Yes	Yes
Background color	Yes (32)	Yes (>200)
Calculated Metrics	No	Yes
Metric Summations	As defined by agent	As defined by agent average, sum, minimum, maximum, last, count
Custom Graphs	Yes	Yes

GRAPHS		
Functionality	**PerfView**	**OVPM**
Data Display Formats	Line, stacked, pie, table	Line, area, pie, table, bar, CSV, TSV, XML, Excel Spreadsheet, gauge, baseline, forecast
Data Filtering	System Instance metric Add metrics to open graph Select metrics from multiple systems for comparison. Specific process name or user	System Instance metric Any metric Allows combination selections Allows Metric segregation (all metric values, but split into separate lines) Yes
Drill-Down (also see Table Features below)	Time, Numbers, Global, Application, Process, Disk, volume, netif, Configuration (Displays non graphable multi-instance data	Time, Numbers, any graph or table, including user-defined (Displays non graphable multi-instance data) User selectable summarization level
Dual Y Axis	No	Yes
Generic templates	Only predefined	All
Graph Templates	Predefined Save from GUI	Predefined Save from GUI or edit Text file
Graph Templates with multiple systems, individually changeable	No, must recreate template	Yes

GRAPHS		
Functionality	**PerfView**	**OVPM**
Graphs mix data sources (OVIS, MWA, CODA, HP OpenView Reporter)	No	Yes
Grid	On/Off	None, Horiz, Vert, Both
Horizontal Scroll	Scrolls to date and time	Scrolls to date and time
Invoke from VPO or VPW operator actions	Yes	Yes (OVO for Windows, OVO for UNIX)
Label X Axis	Yes	Yes
Label Y Axis	No	Yes
Legend Placement	Top/Bottom/ None	Bottom
Line colors	Pick from 216 or make up your own.	Pick from 216 or make up your own.
Line features	Width (4) individual or all Color (32) type (8)	Width, color, type, marker, fill style
Metric labels	"SYSTEM:CLASS:INSTANCE:METRIC	"Metric name or user-defined Automatic label generation when used with metric segregation filtering.
Metrics PerGraph	32 with 8 visible at one time on graph screen	Hundreds visible but very small so added "Multiple Graphs" facility to create new graphs to handle overflow metrics.

GRAPHS		
Functionality	**PerfView**	**OVPM**
Missing Data Points	Hidden	Hidden, previous, or zero
Multi-System Compare	Yes	Yes
Print Graph	Embedded print drivers for PCL and PS to a file	Uses print drivers on system.
Save Data Formats	Text, wks, bmp, gif, png	Text, HTML, bmp, gif or png, xml, csv, tsv, Excel Spreadsheet
Time Resolution	Ability to change to display points every 5,15,30,60 mins and 1,3,6,12,24 hours.	Redraws graph at new resolution over a wide selection of summarization and number of points.
Vertical Scroll Bar	Dynamically rescales vertical axis Slider on graph	In Java graphs Drag a box
View Template Summary	Yes	Yes
ZoomT	To a particular day and time or a period of time (horizontal scroll). Zoom-in to highlighted data range. Zoom-out to original	To a particular day and time or a period of time (drag a box for vertical and horizontal). Horizontal scroll. Zoom-out to original.

TABLE/DATA		
Functionality	**PerfView**	**OVPM**
Export Data	Flat ASCII Lotus Worksheet	Flat ASCII (csv, tsv) **XML, GIF** Excel Spreadsheet
Table Features	Sorts By Column Resequences columns Selects/Deselects metric Saves Template Highlight Filter	Sorts By Column (Java table) Resequences columns (Java table) Selects metrics in template Saves template Highlight Filter
Table templates	Limited number, one per data class.	Unlimited number, same as graph templates.

CUSTOMERS		
Functionality	**PerfView**	**OVPM**
Restrict Data by logon	No	By customer
Password Protection	No	By customer and user

HELP		
Functionality	**PerfView**	**OVPM**
On-Item Metric Help	Yes - on graphs and drill-down	Metrics Help tables available from graph design screens
Online Help Topics	About, Contents, on Metrics, Item, Window, Using Help, on Versions, Quick Start	HTML Help. On Metrics, on Window, Getting Started, Concepts Guide

ALARMS		
Functionality	**PerfView**	**OVPM**
Acknowledge	Acknowledges and then goes away	Uses OVO console
Alarm updates	Updates alarms every 15 seconds	Uses OVO console
Custom graphs	Ability to tie to alarm conditions and / or specific systems	Ability to tie to alarm conditions and / or specific systems from OVO/Windows
Define Alarm Set	Start, Repeat, End, Alert, Agent Reset, Agent End, Agent Error, Information Diagnostic, Acknowledged	Uses OVO console
Filter	System, Type, Severity	Uses OVO console

ALARMS		
Functionality	**PerfView**	**OVPM**
Graph	Pulls specific graph in response to alarm Highlights where alarm occurs, with full drill-down capabilities	Yes (will do from OVO) No
Receive or Block from each Data Source	Yes	Uses OVO console
Threshold based	Yes	Uses OVO console

FORECASTING (PV PLANNER)		
Functionality	**PerfView**	**OVPM**
Capacity Planning	PerfView Planner	OVPM forecast graphs
Event monitoring	PerfView Monitor	No. Use OVO or NNM for this
Baselining	No	Yes