HP Performance Manager

For the Windows®, HP-UX, and Solaris operating systems

Software Version: 8.10

Administrator Guide

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Contents

1 Conventions Used in this Document

The following conventions are used in this document when referring to the location of files on the HP Performance Manager server system.

The forward slash "/" is used on UNIX systems and the backward slash "\" is used on Windows systems. The forward slash "/" is used in the examples and specifications through out this document:

Convention	Description	On Windows Systems	On UNIX Systems
<install_dir>	The directory where Performance Manager is installed.	The default installation directory is `C:\Program Files\HP\HP BTO Software`. If you have the previous versions of HP Software products such as OpenView Performance Agent, OpenView Reporter or OpenView Operations installed on your system, the default Performance Manager installation directory is `C:\Program Files\HP OpenView`.	On HP-UX and Solaris systems, the installation directory is `/opt/OV`.
<data_dir>	The common data directory where data files and log files related to HP Software products are stored	On Windows 2003, the default data directory is `C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software`. On Windows 2008, the default data directory is `C:\ProgramData\HP\HP BTO Software\` If you have the previous versions of HP Software products such as OpenView Performance Agent, OpenView Reporter or OpenView Operations installed on your system, the default data directory is `C:\Program Files\HP OpenView\data`.	On HP-UX and Solaris systems, the data directory is `/var/opt/OV`.

Convention	Description	On Windows Systems	On UNIX Systems
<PM_data_dir>	The directory where the Performance Manager data files are placed.	On Windows, the default Performance Manager data directory is `<data _dir>\shared\server\.` However the default data directory on windows cluster is different. For more information, see Installing Performance Manager on a Cluster Environment in the *HP Performance Manager Installation, Upgrade and Migration Guide.*	On HP-UX and Solaris systems, the Performance Manager data directory is `/var/opt/OV/shared/ server.`
<java_dir>	The directory where the Java 1.50 SDK is installed.	On Windows systems, the default Java directory is `C:\Program Files\HP\HP BTO Software\ nonOv\jre\b.` If you have the previous versions of HP Software products such as OpenView Performance Agent, OpenView Reporter or OpenView Operations installed on your system, the default Performance Manager Java directory is `C:\Program Files\HP OpenView\nonOv\jre\b.`	On HP-UX and Solaris systems, the Java directory is `/opt/OV/nonOV/jre/b.`
<tomcat_dir>	The directory, where the Tomcat application server is installed.	On Windows system, the default tomcat directory is `C:\Program Files\HP\HP BTO Software\nonOV\tomcat\b.` If you have the previous versions of HP Software products such as OpenView Performance Agent, OpenView Reporter or OpenView Operations installed on your system, the default Performance Manager tomcat directory is `C:\Program Files\HP OpenView\nonOV\tomcat\b.`	On HP-UX and Solaris systems, the Tomcat directory is `/opt/OV/ nonOv/tomcat/b.`

Convention	Description	On Windows Systems	On UNIX Systems
<systemname>	The name of the system on which the Performance Manager server is running. While accessing Performance Manager through the Web browser, you need to replace this variable with the actual system name or the IP address of the system so that the network name servers can resolve to the Performance Manager system.		

2 Version Comparison Chart

The following table lists differences in user interface, Administration interface, features such as user logon and the user session timeout interval between OpenView Performance Manager 6.00 and Performance Manager 8.x.

Table 1   General

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Administration Interface	Yes	Yes. The Administration options are not available in a separate user interface, but in the Performance Manager user interface itself. The administrators can now manage nodes, users and customers by using the **Admin** menu options available in the Performance Manager user interface. The **Manage Nodes** and **Manage User**s options on the Admin menu are available only to the users with the administrator privileges.
Dual Interface	Yes	No. This version of Performance Manager has single web-based UI, which does not require JRE plug-in to the web browser.
All Customers logon	Yes The Performance Manager administrators can use the "All Customers" logon to carry out administration-related tasks.	No. The "All Customers" logon to log in as administrators is not available. Instead, you can use the blank customer logon to administer nodes, customers and users.

Table 1   General

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Changing Password	No.	Yes. The Performance Manager users can now change their passwords by using the **Change Password** option available on the **Admin** menu.
Configurable Session Timeout Interval	No.	Yes. The Performance Manager can configure the timeout interval for a user session. For more information, see Configuring Session Timeout Interval on page 29.
Secure communication with agents	Yes	Yes For a instructions to configure secure communication, see Configuring Secure Communication with Operations Agent and Performance Agent.

The data directory structure in OpenView Performance Manager 6.x and Performance Manager 8.10 is as follows:

Table 2   Directory Structure

Directory Structure	Performance Manager 6.x	Availability in Performance Manager 8.x
Data directory and data files	• On Windows systems, the default data directory is `C:\Program Files\HP openview\data` and the OVPM data files are available at `<data_dir>\conf\perf`. • On HP-UX and Solaris systems, the data directory is `/var/opt/OV` and the OVPM data files are available at `/var/opt/OV/conf/perf`.	• On Windows 2003, the default data directory is `C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software`. • On Windows 2008, the default data directory is `C:\ProgramData\HP\HP BTO Software\` and the Performance Manager data files are available at `<PM_data_dir>\conf\perf`. • On HP-UX and Solaris systems, the data directory is `/var/opt/OV` and the Performance Manager data files are available at `/var/opt/OV/shared/server/conf/perf`.

The following table lists the new and improved features that are available with Performance Manager 8.x.

Table 3   Performance Manager User Interface Features

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Drawing Graphs	Yes. The drawing feature is available as the 'Display' tab.	Yes. The drawing feature is available as the "Draw" button that enables you to draw out-of-the-box and user-defined graphs.
Designing Graphs	Yes The designing graphs option is available as the 'Design' tab.	Yes. The designing graphs feature is available as Design Wizard. Design Wizard provides the step-by-step approach to design or edit graphs. Using Design Wizard, you can design system comparison, instance comparison, multi-source and forecasting graphs. Using this feature, you can also edit the existing graphs. You can also design a graph by using the "Design a Graph" option available on the Graphs menu.
Favorites	No	Yes. You can create a list of favorites by adding graphs and access those easily.
Setting a Favorite Graph as Home page	No.	Yes. You can set your favorite graph as your Home page and access it. For more information, see the *HP Performance Manager Online Help* or *HP Performance Manager Tutorials*.
Drill-Down	Yes	Yes. The Drill-Down feature is enhanced. You can drill down performance data in tabular or graphical format to view data at the required level of granularity. You can also set conditions to highlight and filter content while viewing data in tabular format.
Zoom In and Zoom Out	Yes However, the option to zoom out in phases is not available. When you zoom out, the graph is always reset to its original state.	Yes. You can zoom in by clicking and dragging the mouse to form a rectangular area from left to right and zoom out by dragging the mouse from right to left. When you zoom in and zoom out of a graph, you can view data at various summarization levels. Unlike the previous version, Performance Manager 8.00 provides you with the option to zoom out in phases. When you zoom out, the graph is reset to its previous state.

Table 3   Performance Manager User Interface Features

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Automatic Communication Protocol Discovery	No. In this version, you need to configure protocols such as CODA and MWA, while adding systems to Performance Manager.	Yes. Performance Manager automatically discovers the communication protocol configured on the HP Performance Agent or HP Operations agent while designing or drawing graph. You can design or draw graphs using the data logged in Embedded Performance Component (EPC) or Performance Agent or both when these collectors are active on the same system.
Configurable Auto Refresh Interval	No.	Yes. Performance Manager administrators can configure the interval at which Performance Manager refreshes the drawn graphs automatically. For more information, see Configuring Auto Refresh Interval on page 30.
Lazy Loading of Nodes	No	Yes. The nodes under a group are loaded only when you expand the respective node-group tree. This option improves operational efficiency of Performance Manager in environments where a large number of nodes are managed through Performance Manager.
Loading Nodes in Batch	Yes	Yes. The SystemsMWA.txt and SystemsCODA.txt files to categorize nodes based on data sources are not available. Instead, you can now upload nodes in batch by adding the nodes and node groups in the pmsystems.txt file. For more information about loading nodes in batch, see Uploading Nodes in Batch on page 44. The default node group is **All**. You can also configure to add a node automatically to the default group whenever you add a node to any node group. For more information, see Managing the Default Node Group on page 43.
Graphlist	Yes. In this version, the graph list displays the graphs based on the node you select for drawing or designing a graph.	Yes. The graphs listed in the graph list pane remain the same, irrespective of the node you select.

Table 3   Performance Manager User Interface Features

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Displaying Data for adjacent time intervals on a drawn graph.	No	Yes. This version of Performance Manager provides **Next** and **Prev** buttons that enable you to view performance data for adjacent time intervals at the same summarization level. Using these buttons, you can identify patterns and isolate problems.
Fetching data for adjoining time intervals on a drawn graph	No	Yes. You can choose to fetch data for adjoining time intervals from the same source and view it within the same graph at a higher summarization level by using the **Append** and **Prepend** buttons.
Instance Prompting for multi-instance metrics	Yes.	Yes. Whenever you draw a graph with multi-instance metrics, Performance Manager prompts you to select one or more instances so that you can view data for only those instances that are of interest to you. You can enable or disable the instance prompting option by setting the **Instance Selection** option on the **Graphs** menu to "On" or "Off".
Support for data sources Generic Databases and HP OpenView Internet Services	Yes	No
Support for Flat File data source	Yes	Yes Usage of flat files as data source is not supported in Performance Manager, version 8.00.
Shifts and Holidays	Yes	No.
Using OVPMExclude.txt to configure exclusion of groups of systems from HP Reporter.	Yes	No.

Table 3   Performance Manager User Interface Features

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Configurable Representation of missing data.	Yes	No. In this version, options such as hidden, previous and zero to represent missing data on graphs are not available. However, while designing a graph, you can specify markers to represent the available data points on the graph. This helps you identify the missing data points in a specific interval.
Hide/Show option to view metrics from drawn graphs	Yes	No
Multiple filters for metric level filtering	Yes Multiple filters can be specified using logical operators such as "AND" and "OR".	Yes • The Performance Manager user interface allows you to specify multiple metrics while specifying the metric properties, by providing "AND" and "OR" operators as radio buttons which you can select while designing a graph. • You can also specify multiple filters by modifying the graph templates. Use the logical operators such as "AND" and "OR". For example, you can specify FILTER: SYSTEMNAME=MYOWNSYS&&APP_NAME=Other, would only select data from the systems where the system name was "MYOWNSYS" and the application name was "Other". You can either use the "OR" operator or the "AND" operator. You must not use a combination of both these operators.
The "=@"" filter	Yes. The "=@" is used in special cases to match all the values from the data source and separate each value into a metric.	No. Performance Manager does not support the "=@" filter. However, when you specify @@<*Metric Name*> in the metric label, each value from the data sources is separated into a single metric. In case of a multi-instance metric, the @@<instance metric> is automatically added to the metric label.
The "*" expression for metric filter and table filter and table highlights	Yes	No Performance Manager supports only valid regular expressions.

Table 3   Performance Manager User Interface Features

Feature	Availability in Performance Manager 6.00	Availability in Performance Manager 8.x
Enabling client authentication security by using the authip_vpi file.	Yes	No.

The following table lists the keywords that are not available with Performance Manager 8.x.

Table 4   Batch Parameters

Keywords	Availability in Performance Manager 6.0	Availability in Performance Manager 8.x
Running Graphs in Batch	Yes In this version, to run the batch operation, Performance Manager should be running.	Yes. The Performance Manager users need not have the Performance Manager server running to carry out batch operation.
Keywords for Graph subtitles such as `@@SHIFT, @@SKIPDAYS, @@SHOWDAYS,` and `@@NOHOLIDAYS`	Yes	No
`GRID,GRIDHORIZ,GRIDVERT, PIXELSHIGH, PIXELSWIDE, 3D, JAVAGRAPHPOINTS, JAVATABLEPOINTS, MISSINGDATA,FILTER, SFMETRIC, SFCOMPARE, SFVALUE, FILLSTYLE,SORTBYLABEL and GROUP.`	Yes	No
The Planner and forecast graph specification such as `BUDATASOURCE, BUSYSTEMNAME, BUEXTENDED, BUCLASS, -init` and `BUMETRIC.`	Yes	No
Special purpose specifications such as `JAVAGRAPHS, ENDOFMETRIC, FORMTEMPLATE, NUMBEROFMETRICLINES, GETNEWFORM, DRAWGRAPH, SAVECONFIG, SAVEGRAPHCMD, LOADGRAPHCMD, DELETEGRAPHCMD, LOADTEMPLATENAME, SAVETEMPLATENAME, LOADGRAPHNAME, SAVEGRAPHNAME, RESETFORM, DISCOVERSYSTEM, SKIN, NOMARKERS, NOTOOLBAR` and `TOOLBAR.`	Yes	No

For information on the parameters that are available with Performance Manager 8.00, see Running Graphs in Batch on page 53.

3 Overview of Administration Tasks

Performance Manager provides end-users with a web-based user interface that can be used to display performance data in a variety of formats such as graphs, tables and spreadsheets. For the end-user to efficiently work with the Performance Manager interface, Performance Manager administrator must perform the following tasks:

- Set security policy

- Manage trial and permanent license keys

- Configure Performance Manager workspace

- Set up connections to the data sources

- Manage output files and disk space

Accessing Performance Manager

To access Performance Manager in the non-secure mode, use the following URL:

```
http://<systemname>:8081/OVPM
```

To access Performance Manager in secure mode, use the following URL:

```
https://<systemname>:8444/OVPM
```

In this instance, *<systemname>* refers to the name of the system on which Performance Manager is installed. If you have Performance Manager installed on a cluster environment, make sure you replace *<systemname>* with the cluster name. For more information on installing Performance Manager on a cluster setup, see the *HP Performance Manager Installation, Upgrade and Migration Guide*.

You can also access Performance Manager from the HP Operations Manager for Windows console and through the command line interface. For information on accessing Performance Manager from the HP Operations Manager console, see the documentation related to HP Operations Manager for Windows.

You can invoke Performance Manager and draw graphs from any application that can recognize a URL reference. For more information on drawing graphs by passing parameters in URL, see Drawing Graphs by Passing Parameters in URL on page 51..

During installation, if the default http, https, Shutdown port and JK2-AJP 13 ports, that is, 8081, 8444, 8006 and 8010 respectively, are in use by any other application, the following warning message appears.

```
INFO:Shutdown port is free

INFO:HTTP Port is free

WARNING:HTTPS Port is in use. Change after installation
```

Although the installation of Performance Manager will be successful, you will not be able to access Performance Manager using the default port numbers. You must change the default http, https, shutdown and JK2-AJP 13 port settings to access Performance Manager. For more information, see the troubleshooting tip for Unable to Access Performance Manager on page 77.

Performance Manager Commands

You can use the following commands to administer Performance Manager workspace through command prompt.

<install_dir>/bin/ovpm <Options>

In this instance, *<options>* can be any of the following commands:

- **status** - To check the Performance Manager execution status.

- **start** - To start the Performance Manager application.

When you run **ovpm start** command, all the applications that use OvTomcatB are started.

- **stop** - To stop the Performance Manager application.

When you run **ovpm stop** command, all the applications that use OvTomcatB are stopped.

- **config** - To change the web server port settings. For more information, see Changing Web Server Port Settings on page 29.

- **restart** - To stop and then start the Performance Manager application.

- **license** - To check or update the product license. When you run this command, the AutoPass User Interface appears. For more information, see Installing the Performance Manager License Key on page 25.

- **trace** - To start or stop generating detailed trace files. When you run the **ovpm trace** command, the **TRACELEVEL** value is automatically set to 1 in the OVPMConfig.ini file, to turn on tracing.

- **version** - To display the version of Performance Manager installed on your system.

- **uploadsystems** - To upload the node groups specified in the pmsystems.txt file. Make sure you do not specify "all", while running this command. For more information on the pmsystems.txt file and uploading nodes in batch, see Uploading Nodes in Batch on page 44.

  It is recommended that you stop Performance Manager before running the upload systems command.

- **deploywar** "*<location>*" - To deploy and extract Performance Manager war file. In this instance, *location* refers to the location of the war file. This option automatically does the following:

  a Stop Performance Manager application

  b Extracts the OvPMWeb.war file. This file contains the binaries for Performance Manager

  c Start Performance Manager application

▶ Use this command to deploy any hotfixes for HP Performance Manager. When you use this command, all the graphs generated by ovpmbatch will be deleted.

Logging on to Performance Manager

By default, Performance Manager does not require you to log on with any user name or password. If there is no password assigned to the blank customer, the default home page appears on starting Performance Manager. However, if the blank customer has a password assigned, you need to log on using the password set for the blank customer.

No users are configured in Performance Manager by default and all Performance Manager clients share the same area for their graphs and user preferences. For more information on configuring customers and users, see Configuring Customers and Users on page 49.

If JavaScript support is not enabled in your browser settings, you will see a blank Home page, after you log on to Performance Manager. For information on enabling JavaScript support, see the troubleshooting tip for Unable to View the Contents on Performance Manager Home Page on page 73

▶ In the current version of Performance Manager, the administration options to configure nodes, customers and users are available from the Performance Manager user interface. You need to click on the menu option "Admin" on the Performance Manager default Home page to access these options.

4 Setting up Performance Manager

This section describes the configuration tasks that you should perform after you have successfully installed Performance Manager.

Installing the Performance Manager License Key

To use Performance Manager, you require a license key password. When you install Performance Manager and use it for the first time, a 60-days trial license is 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, follow these steps:

1   Run the following command at the command prompt:

    `<install_dir>\bin\ovpm license`

    The status of your Performance Manager license is displayed and the "License Command>" command line prompt appears.

    > On HP-UX and Solaris systems, export the **`DISPLAY`** variable to direct the AutoPass GUI to the proper display window, before running the **`ovpm license`** command.

    If you are running Performance Manager with a trial license, the message "Instant On: Yes", license expiration date and the number of days left for the expiration of license appear.

    If you have installed the permanent product license, the message "HP Performance Manager has a permanent license" appears.

2   Run the command **`gui`** at the License Command> command prompt. The **HP Autopass** user interface appears. The screen displays the following options:

    - Retrieve/Install License Key

    - Install/Restore License Key from file

    - Install/Restore License Key through E-mail/Fax

3   Click any of the three options and continue with the steps that follow. For more information, see the *HP Autopass Online Help.*

Performance Manager in Localized Languages

Performance Manager is internationalized so that it can adapt some features such as date, time and number formats to match the language used on the client's locale. Generally, the user interface and documentation will remain in English, but you can modify the date, time, and the number format settings by changing the system locale.

If Performance Manager is localized to a specific language, you can use the language it is localized to as well as English. In localization, the user interface elements, web pages, log files, online help and user documentation are translated to a specific language. The Performance Manager 8.10 version is available in English, Japanese, Korean and Simplified Chinese languages.

If the language settings on the Performance Manager server are different from those on the client, the user interface elements, web pages and help will be displayed as per the language settings of the client's desktop. If Performance Manager is not localized to the locale of the client, by default all the items appear in English.

You need to configure the language and locale settings of your system as required before starting Performance Manager. After changing these settings, start Performance Manager.

Time Zones

If the time zone settings on the Performance Manager server are different from those on the agent, the settings on the Performance Manager are used. If the Performance Manager server, agent and client are in three different time zones, the time zone settings on the Performance Manager server are used while drawing or previewing a graph.

Configuring Performance Manager for Security

You can configure Performance Manager for security in the following ways:

- Restrict Physical access to the Performance Manager server - You need physical access or logon to perform activities such as uploading systems through command line interface and installing Performance Manager license key. You can configure Performance Manager for additional system logon security. For example, reconfiguring Performance Manager on a UNIX server requires you to log on to the system with root or super user credentials.

- Restrict network access to the Performance Manager server - You can restrict network access to the Performance Manager server by using segregated networks or firewalls.

- Configuring customers and users - You can restrict access to data by configuring customers and users.

- Changing Web Server Port Settings - You can change the default port settings for security. For more information, see Changing Web Server Port Settings on page 29.

- Using secure communications - You can configure Performance Manager to use Secure Sockets (https) communication with the clients. For more information, see Using Secure Sockets Layer (SSL or HTTPS) below.

Using Secure Sockets Layer (SSL or HTTPS)

The **HTTP** and **HTTPS** protocols are by default enabled for Performance Manager. The default port numbers for **HTTP** and **HTTPS** are 8081 and 8444 respectively. You can choose to use either of the protocols. However, to ensure security for administration-related tasks, you must access Performance Manager in the secure communications mode. To access Performance Manager in the secure mode, use the following URL:

```
https://<systemname>:8444/OVPM
```

To access Performance Manager in the non-secure mode, use the following URL:

```
http://<systemname>:8081/OVPM
```

You can also change the default port settings for both **HTTP** and **HTTPS** communications. For more information, see Changing Web Server Port Settings on page 29.

Disabling Secure Communications

To disable secure communications, follow these steps:

1   Stop Performance Manager if it is running.

2   Run the following command at the command prompt:

```
cd <install_dir>\bin

ovconfchg -ns NONOV.TomcatB -set EnableHttps False
```

3   Restart Performance Manager.

Using SSL or HTTPS with the Tomcat Application Server

To use **SSL** or **HTTPS** protocols with the Tomcat application server, you need to obtain a server certificate for Tomcat, after installing Performance Manager. The certificate obtained after Performance Manager installation can be replaced in the following scenarios:

*   When connecting to Performance Manager using **HTTPS** protocol, the certificate is compared against the name of the system to ensure that the names match. If the names are not similar, most browsers alert the users so that they can decide to either continue or cancel the connection. If the name used by **HTTPS** users is different from the name used by the Performance Manager installation, you need to obtain a different certificate.

*   You may need to obtain a new certificate, when you want to fill the fields in the certificate that are left blank during the Performance Manager installation. The certificate contains many fields to provide information such as issuer of the certificate and also warrants that what it enables is safe. The Performance Manager installation certificate leaves most of these fields blank.

*   When you want to change the default certificate password to avoid unauthorized changes, you need to replace the existing certificate.

To replace the tomcat SSL certificate, follow these steps:

1   Delete the existing certificate. To delete the existing certificate, you need to run the Java SDK program called Keytool. Run the following commands at the command prompt.

```
keytool -delete -alias ovtomcatb -keystore /var/opt/OV/certificates/
tomcat/b/tomcat.keystore
```

➤ The default password for deleting an existing certificate and creating a new certificate is *changeit*.

2   Restart the Performance Manager server.

3   Create a new certificate. To create a new certificate, run `Keytool` by entering the following commands at the command prompt:

```
keytool -genkey -alias ovtomcatb -keyalg RSA -keystore /var/opt/OV/
certificates/tomcat/b/tomcat.keystore
```

4   Restart the Performance Manager server.

Changing Web Server Port Settings

The default **HTTP** port number to access Performance Manager interface is 8081 and the default port number for secure connection is 8444. All client systems are authorized to connect to Performance Manager server.

To change the default port number for the Performance Manager server:

1   Check for the availability of the port number you want to use, by running the following commands at the command prompt:

On Windows systems:

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

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

On UNIX systems:

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

```
ovtomcatbctl -checkport <portnumber>
```

A message indicating if the port is available or in use appears. For example if you are checking for the availability of the port number 8081, the message, "Port Number 8081 is not in use" appears, if the port number is available. If the Port Number 8081 is not available, a message indicating that the port number is used by another program or service appears.

2   Stop Performance Manager by running the following command at the command prompt:

```
ovpm stop
```

3   To change http port number for Performance Manager server, run the following command at the command prompt:

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

```
ovconfchg -ns NONOV.TomcatB -Set HTTPPort <port number>
```

```
ovconfchg -ns NONOV.TomcatB -Set HTTPSPort <port number>
```

4   Restart the Performance Manager server.

Configuring Session Timeout Interval

You can set the expiration time or timeout interval for a user session. If a user session is inactive for the interval you specified, the session expires and the system logs out the user. The default timeout interval for all user sessions is set to one hour.

To modify the default timeout interval:

1   Open the `ovpmconfig.ini` file available in `<PM_data_dir>/conf/perf` directory.

2   Specify an interval for the **SESSION_TIMEOUT** parameter in minutes. For example, 30, to set it for 30 minutes.

3   Save the file.

4   Restart Performance Manager.

If the user has the **Automatically Refresh** option enabled for an active graph, the session will not expire, although the user does not perform any activity for the specified time interval.

Configuring Auto Refresh Interval

Performance Manager administrators can configure the interval at which Performance Manager can refresh the drawn graphs automatically so that the graph is updated with the latest data. The default interval to automatically refresh a graph is 300 seconds. This can be configured in the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory.

To specify a different value for auto refresh interval, follow these steps:

1   Open the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory.

2   Specify a value for the **GRAPH_AUTOREFRESH_RATE** parameter. The value you enter here should be in seconds. For example, if you specify the interval as 30 seconds and if you have the Automatically Refresh check box selected on the Performance Manager user interface, Performance Manager automatically refreshes the data displayed on a drawn graph at every 30 seconds.

3   Save the file.

4   Restart Performance Manager.

On selecting the **Automatically Refresh** check box available on the Performance Manager user interface, the graph is redrawn to display the latest and updated performance data. To view this check box, navigate to the last set of records on a graph.

Configuring Java Virtual Machine Memory

To avoid out of memory exceptions caused due to insufficient memory in the Java Virtual Machine (JVM), you can configure Performance Manager to stop accepting requests by using the **JVM_MIN_MEMORY** parameter. On setting this parameter to a specific value, Performance Manager will not accept requests, if the available memory is less than the value you specified and the error message, "This request cannot be processed, because the Performance Manager server has run out of memory" appears. If the request is for XML graphs, Performance Manager displays an XML file with the "Out of Memory Error" message. As this parameter is not set by default, you need to specify it in the `OVPMconfig.ini` file.

To specify **JVM_MIN_MEMORY**, follow these steps:

1   Open the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory.

2   Enter the **JVM_MIN_MEMORY** parameter and specify a value, for example 5. The value you enter here are in MBs(MegaBytes). For example, if you define the memory value as 5 MB and the Java heap size is less than 5 MB, Performance Manager will not accept requests, until the available memory for the Java heap size is greater than the value specified for the **JVM_MIN_MEMORY** parameter.

3   Save the file.

4   Restart the Performance Manager server.

The default value for maximum JVM heap size is 512 MB. If you anticipate a higher load, set the heap size to a higher value.

5 Integrating with Other HP Software Products

Performance Manager does not collect system performance data by itself, but displays data collected by other data sources in graphical or tabular formats. To enable Performance Manager to present data collected by various sources, you must configure Performance Manager to locate the data sources. For a list of all the products which integrate with HP Performance Manager, see *Release Notes*.

Performance Manager can capture and display data from the following data sources and databases:

HP Performance Agent

Performance Agent provides information about the performance of a system. It efficiently logs information about the health of a system and can also provide the information required to monitor the activities of a system during a specific time interval, at various levels of granularity.

Performance Agent collects in-depth performance data for a system and logs it at a configurable data interval for further analysis. Performance Agent also analyzes the collected data and sends notifications to other tools such as HP Operations Manager for immediate attention.

HP Operations Agent, EPC

HP Operations Manager deploys the HP Operations agent to the systems it monitors. HP Operations agent includes Embedded Performance Component (EPC) that can log information about the general health and performance of a system. Products such as Performance Manager can retrieve and display data logged in EPC. The data logged here is also evaluated to identify bottlenecks or conditions requiring operator's attention and brought to the attention of the Operations Manager console.

HP Reporter

Reporter contains a database that consolidates data from a various performance products including Performance Agent and Operations agent. Reporter discovers systems that have agents configured and groups them according to the rules set by the Reporter administrator. If Performance Manager is configured for integration with Reporter, these systems and groups are imported to Performance Manager. For more information, see Integrating with HP Reporter on page 40..

➤ Performance Manager supports integration with only one system running Reporter. However, it supports access to a large number of systems that are running PA or Operations agent. The names of these systems can be obtained from Reporter or entered locally by using the Admin menu options available on the Performance Manager interface or loaded from a file. For more information, see Managing Nodes on page 43.

Integrating with HP Interconnect

You can also integrate Performance Manager with HP Interconnect. Upon integration, HP Interconnect sends the URL requests to Performance Manager to retrieve data in the XML format.

HP Interconnect provides several application and utility pluglets that enable integration with various HP Software products such as Operations Manager for UNIX. For more information on HP Interconnect and the pluglets used for integration with other HP Software products, see *HP Interconnect User Guide*.

Collecting Data from Performance Agent, EPC, Reporter and SPIs

Embedded Performance Component logs data on the system being monitored by Operations Manager. The various Smart Plug-Ins (SPIs) monitor applications such as Databases, and Mail Servers. The SPI instrumentation is deployed on all the systems to capture the application data. These SPIs use either EPC or Performance Agent to log and manage their data.

Reporter provides a data warehouse to centrally store the summary of data collected by EPC and Performance Agent. Reporter discovers the agents installed on various systems in the network, gathers and summarizes data on a nightly basis, and saves it in its central database. It then generates reports that group and rank the systems' data in a variety of ways. Reporter generates new reports each night that provide a management-level overview of the performance of the systems in the enterprise.

When displaying data from Reporter, Performance Manager fetches data from the Reporter central database. This data can be retrieved for a single system or for multiple systems at once. The granularity of the data is determined based on the summarization done by Reporter while gathering data. Because data is not obtained directly from the Reporter-discovered systems, Reporter data source displays only the data that is gathered and stored in its database. This is typically data until the previous midnight. For this reason, the Reporter data is not considered real-time. However, displaying data from the Reporter database can ensure that the production systems are not being asked to retrieve performance data during their peak usage periods. For more information on Configuring Performance Manager for integration with Reporter, see

While drawing a graph to display data collected by the data source, for example Performance Agent, Performance Manager connects to the system on which Performance Agent is running and retrieves data directly from the Performance Agent log files. This data is near real-time and can be only a few minutes old. However, Performance Manager does not store the data retrieved from the data sources and discards it after the graph is drawn. When you try drawing the same graph, Performance Manager again connects to the system and fetches data from the data sources.

Communication Protocols

You can design or draw graphs using the data logged in EPC or Performance Agent or both when these collectors are active on the same system. To connect to the systems where agents are running, Performance Manager uses the name or the IP address of the desired system.

Performance Manager uses HTTP(s) or RPC as the communication protocol for Performance Agent and **HTTP(s)** as the communication protocol for EPC.

While designing or drawing a graph, Performance Manager automatically discovers the communication protocol configured on Performance Agent or Operations agent and tries to connect to these data sources through the communication protocol specified for `DEFAULT_DATACOMM`, for example, HTTP. If the connection through the default communication protocol is not successful, it tries to connect to these sources through the other (in this instance, RPC) protocol.

When the user clicks the System Information icon on the Performance Manager user interface and tries to fetch information about a particular node, Performance Manager tries to connect to the system running Performance Agent through the RPC communication protocol. If the connection cannot be established successfully through the RPC protocol, it tries to connect to the systems running data sources (Performance Agent and EPC) through the HTTP protocol. If you have Reporter configured on your system, it also checks if the node is available in the Reporter database. When Performance Manager retrieves information about the node, it displays a report on the node. The typical contents of this report are as follows:

- Data sources running on the node

- Data communication protocols used by Performance Manager to connect to the systems

- The communication protocol through which the data source running on that system was found.

- The number of disks and CPUs available on the system.

- The version of the Operating System installed on the system.

- The list of key metrics and available metric classes.

Changing the Default Data Communication Protocol

Performance Manager by default uses the HTTP(S) protocol to connect to the system running EPC or Performance Agent.

To change the default data communication protocol, follow these steps:

1 Open the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory

2 Modify the parameter `DEFAULT_DATACOMM` as required. For example, to change the default data communication protocol to RPC, specify the parameter as `DEFAULT_DATACOMM = RPC`.

▶ The default protocol is **HTTP(S),** therefore communicating with an agent through RPC protocol for the first time will be comparatively slower. Similarly, if the default protocol is set to RPC, connecting to an agent through HTTP(S) protocol for the first time will be comparatively slower. Therefore, it is recommended to set the `DEFAULT_DATACOMM` based on the most common protocol used in the agents in your environment.

3 Restart Performance Manager.

Configuring Secure Communication with Operations Agent and Performance Agent

Using secure communications prevents unauthorized access to data that you transfer across the network and restricts access to the agents to specifically enabled installations of Performance Manager. However, secure communication is slower than regular communications due to the effort to encrypt and decrypt the data.

Secure communications with Operations Agent

HP Operations agent version 8.00 and later provides you with the option to configure secure communications with Performance Manager. To configure secure communications with the Operations agent, follow these steps:

1. Follow the instructions for installation and configuration of secure data communication for Operations Manager.

2. On the system, where you want secure communications to be used, change the configuration to set **SSL_SECURITY** to **ALL**.

3. Log on to the system and run the following command:

   cd <Install_Dir>/bin

   ovconfchg -namespace coda -set SSL_SECURITY ALL

Performance Manager will use regular communications (**HTTP**) to any agent that is not configured for secure communications, or does not support it.

Secure Communication with Performance Agent

If you have already configured **HTTPS** communication in the Operations Manager 8.00 environment, make the following changes to configure secure communication between Performance Agent and Performance Manager.

On the Performance Agent system, set SSL_SECURITY to REMOTE for coda. Run the following commands:

   ovconfchg -ns coda -set SSL_SECURITY REMOTE

Performance Manager will now automatically use secure communications (**HTTPS**) to any agent, which has secure communication configured.

Installing Certificates

For Performance Manager to communicate to nodes in the managed environment using the Secure Socket Layer (SSL) protocol, you need to install the root certificates issued by a trusted authority.

The steps to install these certificates vary with the environment in which Performance Manager is installed. The following sections describe the steps to configure secure communication with agents for each scenario.

Performance Manager in a Standalone Setup

Installing Certificates on a system that has only Performance Manager installed

To install certificates on a system that has only Performance Manager installed and not any of the agents (Operation agent or Performance Agent), follow these steps:

1. Set the certificate server on the Performance Manager system by running the following command at the command prompt:

   ovconfchg -ns sec.cm.client -set CERTIFICATE_SERVER <server_name>

   In this instance, **<server_name>** refers to the name of the management server that issues the certificate.

2   Send a certificate request to the management server by running the following command:

    ovcert -certreq

3   Log on to the management server and run the following command to check the pending requests:

    ovcm -listpending -l

    The list of the pending requests will be displayed in the following format:

    ```
    RequestID:     654ed592-e23c-7528-1d96-daf5d58f48e9

    Context:

    CN:     fb4e0a42-cc82-7528-1db0-b70ce0890a80

    Nodename:     MySystem

    IPAddress:     15.154.79.66

    PeerAddress: 15.154.79.66

    Platform:     Windows 5.2, CPU: IA32

    InstallType: Manual

    TimeReceived: 4/6/2007 10:43:44 PM India Standard Time
    ```

4   Note the Request ID and run the following command to grant the certificate request:

    ovcm -grant <RequestID>

    In this instance, **<RequestID>** refers to the ID displayed in the list of pending requests after running the o**vcm -listpending -l** command; for example, **654ed592-e23c-7528-1d96-daf5d58f48e9**

    The certificate will be deployed to the Performance Manager server.

5   Log on to the Performance Manager server and export the certificate to the "server" resource group. To export the certificate, follow these steps:

    a   To export the certificate to a file, run the following command:

        ovcert -exportcert -file <file> -pass <passphrase>

        For example, **ovcert -exportcert -file C:\temp\cert -pass 123**

    b   To export the trusted certificate to a file, run the following command:

        ovcert -exporttrusted -file <file1>

        For example, **ovcert -exporttrusted -file C:\temp\cert1**

6   Import the certificate to the "server" resource group by running the following command:

    ovcert -importcert -file <file> -ovrg server -pass <passphrase>

    For example, **ovcert -importcert -file c:\temp\cert -ovrg server -pass 123**

▶   To import these certificates, use the same password, which you used while exporting these certificate.

7   Import the trusted certificates to the "server" resource group by running the following command:

    ovcert -importtrusted -file <file1> -ovrg server

    For example, **ovcert -importtrusted -file C:\temp\cert1 -ovrg server**

Installing certificates on a system that has Operations agent and Performance Manager installed

To install certificates on a system that has Operations agent (HTTPS agent with the certificate) installed before Performance Manager, follow these steps:

1   Log on to the Performance Manager server.

2   Export the certificate to the resource group - 'server':

   a   To export the certificate to a file, run the following command at the command prompt:

   `ovcert -exportcert -file <file> -pass <passphrase>`

   For example, `ovcert -exportcert -file C:\temp\cert -pass 123`

   b   To export the trusted certificate to a file, run the following command at the command prompt:

   `ovcert -exporttrusted -file <file1>`

   For example, `ovcert -exporttrusted -file C:\temp\trusted`

3   Import the certificates to the resource group - server:

   `ovcert -importcert -file <file> -ovrg server -pass <passphrase>`

   For example, `ovcert -importcert -file c:\temp\cert -ovrg server -pass 123`

4   Import the trusted certificates to the "server" resource group:

   `ovcert -importtrusted -file <file1> -ovrg server`

   For example, `ovcert -importtrusted -file C:\temp\trusted -ovrg server`

▶ To import these certificates, use the same password, which you used while exporting these certificates.

Installing certificates on a system, which is upgraded to Performance Manager 8.00 from OVPM 5.00 or 6.00

If you have upgraded from OVPM 5.00 or 6.00 to Performance Manager 8.00 and you have the HTTPS agent already installed with certificate, follow the steps described in the Installing certificates on a system that has Operations agent and Performance Manager installed section.

Installing certificates on a system that has Operations Manager installed

If Performance Manager is installed on a system that has Operations Manager for Windows or Operations Manager for UNIX installed, Performance Manager will automatically be able to communicate with the agents managed by that management server through HTTPS.

Performance Manager on a Cluster Setup

Installing certificates on a cluster setup that does not have Operations Manager installed

If Performance Manager is installed on a cluster setup that does not have Operations Manager for Windows or Operations Manager for UNIX installed, follow these steps:

1   Log on to the Performance Manager system.

2   Run the following command at the command prompt to generate the core ID:

   `ovcoreid -create -force -ovrg server`

3   Get the core ID for the "server" resource group:

    `ovcoreid -show -ovrg server`

4   Log on to the Management server and run the following command to issue the certificate:

    `ovcm -issue -name <nodename> -file <file> -coreid <coreid> -pass`
    `<passpharse>`

    In this instance, `<nodename>` refers to the name of system that has Performance Manager installed.

    `coreid` refers to the output of `'ovcoreid -show -ovrg server'` command in the PM system.

    For example, `ovcm -issue -name MySystem -file C:\temp\cert -coreid`
    `fb4e0a42-cc82-7528-1db0-b70ce0890a80 -pass 123`

5   Export the trusted certificate by running the following command:

    `ovcert -exporttrusted -file <file1>`

    For example, `ovcert -exporttrusted -file C:\temp\trusted`

6   Transfer *<file>* and *<file1>* from the Management Server to the system running Performance Manager.

7   In the Performance Manager system, run the following commands to import the certificates to the "server" resource group:

    `ovcert -importcert -file <file> -ovrg server -pass <passphrase>`

    For example, `ovcert -importcert -file c:\temp\cert -ovrg server -pass`
    `123`

    `ovcert -importtrusted -file <file1> -ovrg server`

    For example, `ovcert -importtrusted -file C:\temp\trusted -ovrg server`

▶ To import these certificates, use the same password, which you used while exporting these certificates.

Installing certificates on a cluster setup that has Operations Manager installed

If Performance Manager is installed on a cluster setup that has Operations Manager for Windows or Operations Manager for UNIX installed, Performance Manager will automatically be able to communicate with the agents managed by that management server through HTTPS.

Installing certificates on a cluster setup after upgrading from OVPM 5.00 or 6.00 to Performance Manager 8.00

If you have upgraded from OVPM 5.00 or 6.00 to Performance Manager 8.00 on a cluster setup that does not have Operations agent, Operations Manager for Windows or Operations Manager for UNIX installed, follow the steps described in Installing certificates on a cluster setup that does not have Operations Manager installed on page 38 to install certificates.

If you have upgraded from OVPM 5.00 or 6.00 to Performance Manager 8.00 on a cluster setup that has Operations Manager for Windows or Operations Manager for UNIX installed, Performance Manager will automatically be able to communicate with the agents managed by that management server through the HTTPS protocol.

Integrating with HP Reporter

Reporter discovers systems on which Performance Agent and EPC are installed. It also groups these systems based on operating systems. However, the Reporter administrators can alter this and add groupings of their own. The systems and groups defined in Reporter are automatically available in Performance Manager if the integration is successful.

To integrate with Reporter, Performance Manager must be able to connect to the Reporter database, which is used by Reporter. To access its database from Performance Manager, the Reporter database must be either Oracle or SQL Server.

➤ For Performance Manager and Reporter integration to be successful, make sure that Reporter is installed in the Mixed Authentication mode. If reporter is installed in Windows Authentication mode you need to set the registry key to mixed mode. Also you need to create a user profile "openview" with password "openview". For instructions to create the user, see Reporter documentation.

If Reporter is installed in the Windows Authentication mode with SQL 2005 as its database, set the registry key to mixed mode as described in the following steps:

1 Visit **http://www.microsoft.com**.

2 Search for *How to change the default login authentication mode to SQL while installing SQL Server 2000 Desktop Engine by using Windows Installer*.

3 Follow the steps to set the registry key to mixed-mode as described in the above-mentioned article.

The **PORT** entry in the OVPMConfig.ini file refers to the default port number, which is not used by Performance Manager while connecting to Reporter.

To change the entry to a dynamic port number, follow these steps:

1 Click **Start** ->**Programs**->**Microsoft SQLServer 2005**->**Configuration Tools**->**SQL Server Configuration Manager**. The **SQL Server Configuration Manager** screen appears.

2 On the left pane, expand SQL Server 2005 Network Configuration and click **Protocols for <Instance Name>**. For information on finding the instance name, see the *HP Reporter Installation and Special Configuration Guide*.

3 On the right pane, right-click on **TCP/IP** and select the **Enable** option from the context menu.

4 Restart *<Instance Name>*.

5 On the right pane of the SQL Server Configuration Manager screen, right-click on **TCP/IP** and select **Properties** from the context menu. The **TCP/IP Properties** screen appears.

6 Click the **IP Addresses** tab. The TCP Dynamic Port number will be displayed under IPALL. Specify this port number in the OVPMConfig.ini file for **PORT** under **REPORTER** section.

7 Save the file.

8 Restart Performance Manager.

When Performance Manager is installed on the same Windows system as Reporter, it is automatically configured for integration. If Reporter is installed after Performance Manager or is installed on a different system, you need to modify the OVPMconfig.ini to locate the Reporter database.

To modify the OVPMconfig.ini to locate Reporter database, follow these steps:

1 Open the OVPMconfig.ini file available in the <PM_data_dir>/conf/perf directory.

2 Update the information under the **[REPORTER]** section by removing the comment marks
"*;*", from the example lines and replacing the remaining information with the values that
match your installation.

For example,

```
If Reporter product is installed:

    [REPORTER]

    SYSTEM = mysys

    DSN = reporter

    TYPE = sqlserver

    USER = openview

    PASSWORD = openview

    PORT = 1521

    MINCONN = 5

    MAXCONN = 10

    CONNEXPIRE = 60

    SLEEPTIME = 2000

    MAXRETRY = 30
```

In this instance:,

SYSTEM	Refers to the name of the system that contains the database.
DSN	Refers to the name of the data source, that is, Reporter.
TYPE	Refers to the type of database, for example, SQL server or Oracle.
USER	Refers to the user name that should be used to access the database.
PASSWORD	Refers to the Password of the User.
Port	Refers to the Port number where the database server listens. On systems that host an Oracle database, this is generally 1521. If Reporter is on SQL Server database, you need to find the TCP Dynamic Port number and change the value for **PORT**. For information on configuring port settings for SQL 2000 and SQL 2005: 1 Visit **http://support.microsoft.com** 2 Search for information on how to connect to a named instance of SQL server 2005 or 2000, and how to configure an instance of SQL server to use either a static or dynamic port. 3 Follow the instructions provided in the search results.
MINCONN	Refers to the minimum number of database connections to maintain.
MAXCONN	Refers to the maximum number of database connections to maintain.

CONNEXPIRE	Refers to the number of seconds before a connection expires or the maximum number of seconds a connection can be checked out before it is automatically closed and recycled. A value of 0 means a connection can be checked out indefinitely. The default is 60 seconds.
SLEEPTIME	Refers to the number of milliseconds to sleep between retries when a thread is unable to get a free connection. The default value is 2000 milliseconds.
MAXRETRY	Refers to the maximum number of times a thread should try to get a free database connection before it stops. The default value for **MAXRETRY** is 30.

3 Restart Performance Manager.

Proxied Log Files

When the agent log file is transferred to another system and then mounted under that system's agent, it is referred as "proxied" by the second system. A proxied log file is automatically detected and configured by HP Reporter, while discovering the system running the hosts the log file.

To add a proxied log file manually, on the Performance Agent system, add the system as **[system-name]DATASOURCE_NAME**.

In this instance, **DATASOURCE_NAME** refers to the name of the data source as specified in `ovcodautil -obj` output or the entry in `perflbd.rc` file.

In this instance:

- **system-name** refers to the name of the system that hosts the log file.

- **datasource** is the name of the data source in the `perflbd.rc` file.

For example, if the host name of the system is system.xyz.com and the data source in the `perflbd.rc` is abc, the syntax for adding this proxied log file is as follows:

> **[system.xyz.com]abc**

After adding a proxied log file successfully, check if the log file is available by clicking the "System Information" icon and viewing information about the host system.

6 Managing Nodes

The **Admin** menu in the Performance Manager user interface provides you with options to add node group and nodes, attach nodes to or detach nodes from a customer, and delete nodes. For information on configuring nodes, see the *Performance Manager Online Help* and *HP Performance Manager Tutorials*. The links to the Help pages and Tutorials are available on the Help menu of the Performance Manager user interface.

Managing the Default Node Group

You can configure to add a node automatically to the default node group "All", whenever you add a node to a node group in Performance Manager.

To configure this, follow these steps:

1   Open the OVPMconfig.ini file. This configuration file will be available in the <PM_data_dir>/conf/perf directory.

2   Set the **MANAGE_DEFAULT_NODEGROUP** to **True**. By default, the value for this property is set to **False**.

3   Save the file and restart the Performance Manager server.

▶   When you set **MANAGE_DEFAULT_NODEGROUP** to **True**, the **All** node group is automatically managed, whenever a node is included in or excluded from the other node groups. However, it is recommended to set it to **False**, as it might slow down the performance.

Configuring for Importing Nodelist from HP Operations Manager

To import node groups from Operations Manager for Windows 8.00 and later to Performance Manager, both Operations Manager for Windows and Performance Manager should be installed on the same system. If you have Operations Manager for Windows installed on your system, the node group importing is configured automatically during Performance Manager installation. In other words, the **IMPORT_OVOW_NODELIST** parameter in the OVPMconfig.ini file will automatically be set to **TRUE**. If Operations Manager for Windows is not installed on the same system, **IMPORT_OVOW_NODELIST** by default will be set to **FALSE**.

To import nodelist from Operations Manager for Windows, follow these steps:

1   Open the OVPMconfig.ini file. This configuration file is available in the <PM_data_dir>/conf/perf directory.

2   Under the [OVOW] section, make sure **IMPORT_OVOW_NODELIST** is set to **TRUE**.

3   Save the file.

▶   The **IMPORT_OVOW_NODELIST** parameter, when set to **False** disables importing of nodelist from Operations Manager. If you do not have Operations Manager for Windows installed on the same system, make sure **IMPORT_OVOW_NODELIST** is set to **FALSE**.

When you have Operations Manager for Windows and Performance Manager installed on the same machine, you can enable importing of nodelist from Operations Manager and stop Performance Manager from using its own nodelist, by modifying the **IMPORT_OVPM_NODELIST** parameter in the OVPMconfig.ini file. For example. if you set **IMPORT_OVOW_NODELIST** to **TRUE** and **IMPORT_OVPM_NODELIST** to **FALSE,** importing of nodelist from Operations Manager for Windows will be enabled and Performance Manager cannot use its nodelist. In such a case, the **Manage Nodes** option on the **Admin** menu of the Performance Manager interface will not be available.

When you install Performance Manager on a system that already has Operations Manager for Windows installed, the **IMPORT_OVPM_NODELIST** parameter in the OVPMconfig.ini file will automatically be set to **False**.

▶   Performance Manager users can reload the node groups from Operations Manager and Reporter at runtime by using the **Reload from HPOM** and **Reload from Reporter** options, respectively. These options are available on the **Nodes** menu of Performance Manager user interface.

Uploading Nodes in Batch

To upload nodes in batch to Performance Manager, you need to specify the node groups in the pmsystems.txt file. Before editing the pmsystems.txt file, consider the following information:

- Blank lines and lines beginning with the number sign (#) in the file are considered comments.

- **GROUP:** specifies a group name. Nodes added under **GROUP** are grouped under the name you specify. The **GROUP** entry should always end with **END_GROUP** parameter. A succeeding **GROUP:** line starts a new group.

- Performance Manager considers the lines that are not commented or that do not have the number sign(#) as system names. A system name should be valid for network addressing. Make sure you have entered a valid system name. It is recommended to use names of the nodes, as IP addresses can confuse users, when they want to select a node to draw or design a graph.

- To indicate a log file that is being proxied by another node on which Performance Agent is running, make sure the name of the original system precedes the name of the hosting system. The syntax **[hostname]actualsystem** indicates that actual system log files are mounted under Performance Agent on the hostname system. For more information on proxied log files, see Proxied Log Files on page 42.

- You can add a system to more than one group by listing the system after each of the desired group specifications.

To upload nodes in batch, follow these steps:

1   Copy the sample pmsystems.txt file available in the <install_dir>/newconfig/ OVPM. to the **<PM_data_dir>/conf/perf** directory.

2   Open the `pmsystems.txt` file placed in the **`<PM_data_dir>/conf/perf`** and edit the file to add nodes groups and names as shown in the following example:

GROUP: MyGroup1

> **System1.xyz.com**

> **System2.xyz.com**

END_GROUP

In this instance, **GROUP** refers to the node groups.

> ➤ While adding a group or node group, make sure you place nodes within the **GROUP:** and **END_GROUP** tags.

3   Save the file and place it in the **`<PM_data_dir>/conf/perf`** directory.

4   Stop Performance Manager if it is running.

5   To upload the systems specified in the `pmsystems.txt` file:

a   Run the **ovpm uploadsystems** command

b   Start Performance Manager.

> ➤ When the upload is successful, the `pmsystems.txt` file is renamed to `systems_bkp.txt`. In case of exceptions while uploading, the old `OVPMSystems.xml` will be replaced. If the `OVPMSystems.xml` file is corrupted during any other operation, Performance Manager will automatically replace it with the default `OVPMSystems.xml` file.

6   Start Performance Manager server by running the **ovpm start** command.

Adding Nodes Temporarily

You can add a node from the **Node Selection** screen on the **Home page** and **Design Wizard** temporarily using the **Add Node** option. The nodes added on these screens will not appear when you refresh the web page.

It is now possible to enable or disable the **Add Node** option by configuring the **DISABLE_TEMP_NODE_ADDITION** parameter. By default, this parameter will not be present in the OVPMconfig.ini file and the **Add Node** option will be enabled and available to all users. For more information, see Appendix A, OVPMConfig.ini Parameters.

However, the users with administrator privileges can add a node to a node group on the Performance Manager server permanently by using the **Manage Nodes** option available on the Admin menu. For more information refer to the *HP Performance Manager Tutorials* or *Online Help*.

7 Managing Flat Files

Performance Manager supports the usage of flat files as data sources. A flat file is essentially an ASCII text file with one record per line. Every field in the line is separated by a tab, or a comma. A header line at the top of the file defines the contents of the file including the date, time and metric names.

The flat file format supports multiple metrics in one file. Only one class will be seen in Performance Manager for every file data source. The class name for flat file is "`FILEDATA`". Multiple Instances can be supported by simply including a field that can be used to differentiate each instance.

File Names and Locations

Flat file names supported by Performance Manager must not include any embedded spaces and terminate with the file extension `.bus`. Example: `MyOwnData.bus`.

Flat files must be saved on the Performance Manager server. Flat file can be uploaded by the Performance Manager administrator and cannot be uploaded or managed from the user interface. While designing or drawing graphs using flat file as data source, by default, Performance Manager will look for flat files in the following directories based on the logon name:

`<PM_data_dir>/conf/perf`	Flat file available in this location will be available to customer with blank user credentials and all users attached to this customer
`<PM_data_dir>/conf/perf/VPI_CUST_`*<customername>*	Flat files available in this location will be available to the specific customer and all users attached to that customer

For example: If "user1", "user2" and "user3" are attached to "customer1", then all the flat files available in the location `<PM_data_dir>/conf/perf/VPI_CUST_customer1` and can be accessed by "customer1" and all users attached to "customer1".

Sample Flat Files

When you install HP Performance Manager, by default the following sample flat files will be available in the location `<Install_dir>\newconfig\OVPM`

- `HPCASE.bus`
- `CaseBus1.bus`

To use these sample files, you must copy the same to the appropriate location based on your credentials.

Flat File Format

The format of a flat file supported by Performance Manager must contain the following:

- Header Line - The first line in the file is a header line. This line identifies the fields in the data lines

- Data lines - The data consists of one or more numerical and textual fields. Each line in the file represents one data sample, except for the first line which is a header line.

Any blank spaces at the beginning or end of a field are ignored. Blank lines and lines starting with a pound sign **#** are ignored.

Header Line

The first line in the file is a header line. The header line identifies the fields in the file. Each field in the header line contains the date and time specifiers and a metric name. These fields are separated by a delimiter character (tab or comma).

A metric name enclosed in double quotes indicates that this field contains textual data. A metric name which is not enclosed in quotes indicates the field is numeric. Metric names should not contain any delimiter characters (space, tab or comma).

The first field in a flat file must be the date and time field. The date and time specifier in the header line consists of the characters "Y","M","D". The order of the date field indicates the format. Example: (YMD = Year, Month, Day) or (MDY = Month, Day, Year).

The time specifier consists of the string "TIME" and optionally an AM/PM indicator. If time is in 24 hour format then "TIME" is all you need. If the time is in 12 hour format then enter the indicator that will be found in the time strings to indicate "PM" (For example: TIMEPM). Note that TIME is not a separate column but is considered a part of the DATE/TIME column.

Data lines

- Each field is separated from the other fields by a delimiter character (tab or comma).

- Textual fields that contain delimiters must be enclosed in double quotes.

- If there are no special characters in the field then the double quotes are optional.

- Numerical data can be an integer or a floating point. PM will convert the data to floating point for analysis.

- The first field in each line must be the date and optionally the time of the sample. Dates can be specified in any order of Year, Month and Day separated by non-numeric, non-delimiter characters (as specified in the header line).

- Time format is Hour then Minute, separated by a non-numeric, non-delimiter character. If time is in a 12 hour format, then you need to specify AM or PM as appropriate.

- If the number of data lines exceed 10,000, you might experience slow response while drawing a graph.

8 Configuring Customers and Users

The **Admin** menu available on the Performance Manager interface provides you with options to configure customers and users. You can create customers and users to:

- Restrict unauthorized access to performance data.

- Save graphs created by the users in the folders specific to their logons. You can protect the data of each customer by password and thus, prevent unauthorized access.

- Define privileges to the user profiles and authorize them to perform only those tasks to which they have access. For example, you can authorize some users to draw graphs and save those on the server and restrict other users from creating or editing graphs.

Configuring Customers

You can assign each customer a logon password to prevent one customer from viewing another customer's data. However, using the blank customer ID and password, you can access all the data. You can assign password to a blank customer to prevent unauthorized access.

Using the **Admin** menu options available on the Performance Manager user interface, you can add or delete a customer, attach users and nodes to a customer, view and edit customer profiles. For more information on configuring customers, see the *HP Performance Manager Online Help* and the *HP Performance Manager Tutorials*.

➤ A blank customer cannot be deleted. When you delete any other customer, all users attached to the customer are deleted and any nodes attached to the customer will no longer be attached.

Configuring Users

If you attach users to a customer, the users will have not have access to the graph definitions created by the customer. Any graph template created by a user or customer is unique to the user or customer and cannot be viewed by a different user or customer.

You can also protect user logons with passwords and define privileges for each user.

The profiles that authorize a user to perform the required tasks in Performance Manager are as follows:

Normal	The users with this profile can draw any out-of-the-box graphs. They can also edit, and save the new and modified graph definitions.

Read Only	The users with this profile can draw any out-of-the-box graphs, edit, create new graph definitions. However, they will not be authorized to save any new or modified graph definitions on the Performance Manager server.
Display Only	The users with this profile can draw any out-of-the-box graphs, but will not be authorized to create their own graph definitions or to modify any existing graph definition.

Using the **Admin** menu options, you can add a user to a customer, view and edit a user profile and delete a user. For more information on configuring users, see the *HP Performance Manager Online Help* and the *HP Performance Manager Tutorials*.

9 Drawing Graphs by Passing Parameters in URL

You can invoke Performance Manager and draw graphs from any application that can recognize a URL reference.

To invoke Performance Manager from any application and draw graphs, follow these steps:

1   Use the following URL.

    http://<systemname>:<port number>/OVPM?

    In this instance:

    - **<systemname>** is the name of the system on which the Performance Manager server is running. While accessing Performance Manager through the Web browser, you need to replace this variable with the actual name of the system or server, or the IP address of the system so that the network name servers can resolve to the Performance Manager system. For example, **system.abc.com.**

    - 8081 is the default HTTP port number. If you have changed the port settings, you can specify the port that is assigned to Performance Manager. If you want to know the port number to which Performance Manager is configured, run the following command at the command prompt:

      <install_dir>\bin\ovconfget

    - **OVPM** is used to locate the server processing code. The question mark after OVPM indicates that the following URL syntax is a string of parameters to be passed to the Performance Manager server code, when it runs.

    ▶ If the blank customer is assigned a password, Performance Manager prompts you to log on by displaying the Login page when you pass parameters. To access graphs:

    a   Enter the password for blank customer and click **Login** on the Login screen or enter the following parameters in the URL.

        CUTSTOMER=&PASSWORD=<password>

        In this instance, <password> is the Password assigned to the blank customer.

    b   If you have a logon, specify your user name and password for the **CUSTOMER** and **PASSWORD** parameters in the URL to access graphs.

2   Enter the **SYSTEMNAME** parameter and specify a value for it. For example, **SYSTEMNAME=SYSTEM.ABC.COM**

3   Enter the **GRAPHTEMPLATE** parameter and specify a value for it, for instance, **GRAPHTEMPLATE=Agents**

4   Enter **GRAPH** parameter and specify the graph you want to draw, for instance **GRAPH="Global History"**. The Global History graph for the system.abc.com appears.

You need to use a combination of delimiters as listed below for the url string:

Delimiters between name-value pairs	Delimiters between name and value
&	=
:	-

► • You need to use a combination of delimiters as listed below for the url string:

— If you use "&" as a delimiter between pairs, then use "=" as the delimiter which connects the name and the value

Example:

**http://<servername>:8081/
OVPM?SYSTEMNAME=SYSTEM.ABC.COM&GRAPHTEMPLATE=Agents&GRAPH="Global
History**

— If you use "-" as a delimiter between pairs, then use ":" as the delimiter which connects the name and the value

Example:

**http://<servername>:8081/
OVPM?SYSTEMNAME=SYSTEM.ABC.COM:GRAPHTEMPLATE-Agents:GRAPH-"Global
History**

• If the name of the graph has a blank space, you must replace it with a connector to draw the graph; for example; **graph="Global+History"**.

For information on the keywords or parameters that can be passed in the URL to generate graphs, see Keywords on page 55.

10 Running Graphs in Batch

You can access Performance Manager and generate graphs by running the **ovpmbatch** script. To run the script, you need to enter the **GRAPHTEMPLATE**, **SYSTEMNAME** and **GRAPH** parameters. You can also specify additional parameters such as **GRAPHTYPE**.

For example, if you run the following commands at the command prompt, the graph you specified will be generated:

```
ovpmbatch GRAPHTEMPLATE=VPI_GraphsAgents.txt GRAPH="Global History"
SYSTEMNAME=system.abc.com
```

In this instance:

- **GRAPHTEMPLATE=VPI_GraphsAgents.txt** refers to the graph template file. You can also specify **Agents** as the value for **GRAPHTEMPLATE.**

- **GRAPH="Global History"** refers to the name of the graph.

- **SYSTEMNAME=system.abc.com** refers to the system from where the data is collected and displayed on the graph.

- The values for **GRAPHTEMPLATE** and **GRAPH** are case-sensitive.
- If the name of the graph has a blank space, make sure you enclose the name with double quotes. for example, **graph="Global History"**.

For information on keywords and parameters used in the batch operation, see

While running graphs in batch, you can generate data for a graph or table in the text file format. For example, if you draw a graph using the Global History graph template and specify the **GRAPHTYPE** as CSV or TSV, the graph type saved in the template will be overwritten and the data will be displayed in the specified text file format. After the batch operation, Performance Manager prints the output to standard out. You can redirect standard out to a disk file.

For example, if you specify **ovpmbatch GRAPHTEMPLATE=VPI_GraphsAgents.txt GRAPH="Global History" SYSTEMNAME=system.abc.com GRAPHTYPE=XML >globahistory.xml**, a global history graph is generated in the xml format and standard out is redirected to the disk file you specified.

You can also direct the output to a directory of your choice by specifying the following parameter:

```
outputdir=<directory>
```

The directory will be created if it does not exist. If you specify the output directory, the output will be saved as stdout.txt in the specified directory. The HTML file will be saved as graph.htm and the first graph image will be saved as graph.png. The additional graph images will be named graph1.png, graph2.png and so on.

The output generated in the tabular format is written to the graph.htm file in HTML text.

If you do not redirect the standard out to a disk file and if you do not specify the output directory, the URL to view the graph appears after the successful completion of batch operation. The output of the **ovpmbatch** operation is saved on the Performance Manager web server in the `<INSTALL DIR>\www\webapps\OVPM\datafiles\batch\`*`<session_id>`* directory.

In this instance, *<session_id>* refers to the alphanumeric value based on the session ID automatically generated by Performance Manager.

Managing Output Files

When the users generate HTML graphs by running **ovpmbatch**, the HTML and PNG files are written to the default output directory based on the parameters used to generate the graph.

For example, if you have drawn a global history graph from the mysys.india.net by typing **`<install_dir>/bin/ovpmbatch GRAPHTEMPLATE=Agents GRAPH="Global History" SYSTEMNAME=mysys.india.net`** command at the command prompt, the **`Location http://<systemname>:<portnumber>/OVPM/datafiles/batch/<graph>.htm`** URL appears.

In this instance, *<graph>* represents any random number generated by Performance Manager.

To view the output as a web page, enter **`http://<systemname>:<port number>/OVPM/datafiles/batch/<graph>.htm`** in the browser.

When **ovpmbatch** creates a regular graph, it creates an HTML file and necessary `png` image files. The output of the ovpmbatch table graphs is saved in HTML format, as <graph>.htm file.

To locate the output files on your local system disk, navigate to the **`<install_dir>/www/webapps/ovpm/datafiles/batch`** directory.

Keywords

The following table lists the parameters and keywords that are used in graph templates, in URLs and batch operation to generate graphs:

Table 1   General Parameters

Keyword	Value	Description

`PARAMETER<n>:`
`-p<n>`
In this instance, <n> is a number from 1 to 9.
	Parameter Value	Defines the default parameter value. Using parameters allows easy generalization of templates so that a different graph template is not required for each parameter value.
		
		While processing the template file, substitutions can be made using up to nine parameters named `PARAMETER1` to `PARAMETER9`. This substitution is performed on each template line before that line is processed. You can use parameters to substitute any part of the template file syntax (including filter values, metric and class names.)
		
		The template file should set a default value for a parameter using the `PARAMETER` statement. The syntax for this statement is `PARAMETER` followed by exactly one digit from 1 to 9, followed by a colon, for example, `PARAMETER1:`, `PARAMETER2:`,... `PARAMETER9:`. When you provide a default parameter, it will be substituted into succeeding template lines wherever the syntax `@@PARAMETERn` is found. For example, the following statements are equivalent:
		
		`FILTER: SYSTEMNAME="MYSYSTEM" and PARAMETER1: MYSYSTEM FILTER: SYSTEMNAME=@@PARAMETER1`
		
		You can override a parameter by supplying a different value in the URL or command line interface.

`CUSTOMER:`	Customer Name	The customer name restricts access to the data that belongs to a particular customer. A different password may be required to access each customer's data. In case of blank customers, you need not specify customer name or password unless the blank customer logon is assigned a password.
`PASSWORD:`	Password	If customer restricted views are enabled for a data source, a password may be required in order to access that customer's data. This can be a different password for each customer, or a blank customer password. In case of Blank customers, you need not specify Password, unless the blank customer is assigned a password.
`GRAPHTEMPLATE:`	Template file name, for example, Agents	Identifies the name of the file containing the graph specifications.
`GRAPH:`	Graph Name	Identifies the name of the graph within the graph template file.
`GRAPHTITLE:`	Title String	Specifies the title string for the graph.*

Table 1   General Parameters

Keyword	Value	Description
GRAPHSUBTITLE:	Second Title String	Specifies the second title string for the graph.*
	*Keywords can be added to the Title or SubTitle fields to substitute the actual values for: • **@@[SYSTEM]** - The name of the system being graphed. • **@@DATERANGE** - Total time shown in the graph (the default value is 7 Days). • **@@POINTSEVERY** - The amount of time summarized into each data point • **@@STARTTIME** - The beginning time in the graph, for example, 05/14/07, 06.00 PM • **@@STOPTIME** - The last time in the graph, for example, 05/21/07, 06.00 PM)	
YAXISTITLE:	Title String	Specifies the label for the left Y-Axis.
YAXISTITLERIGHT:	Title String	Specifies the label for the right Y-Axis.
GRAPHTYPE:	line	For line or multi-type graphs.
	area	For a filled area graph.
	bar	For a bar graph.
	hbar	For a horizontal bar graph.
	mixed	Metrics can be a combination of line and area.
	pie	For a pie chart.
	table	For a table with time intervals in columns and metrics in rows.
	htable	For a table with time intervals in rows and metrics in columns.
	gauge	For an automotive type gauge, one per metric.
	csv	For a text file with Comma Separated Values.
	tsv	For a text file with Tab Separated Values
	excel	For data in the Microsoft Excel Spreadsheet (requires you to install Microsoft Excel on the client system)
	xml	For data in the xml format. Performance Manager prints the XML output generated after batch operation to standard out.
GRAPHBACKGROUND:	<color>	Color of graph background.
GRAPHMETRICSPERGRAPH:	<number>	The maximum number of metrics on a single graph. The default is 8.
GRAPHMULTIPLEGRAPHS:	Yes or No	The default value is No. When set to Yes, it creates additional graphs if the total number of metrics to be graphed exceeds the value. Text editors do not display the default values. To change the default settings, you need to specifically include the keywords.

Table 1   General Parameters

Keyword	Value	Description
`DATERANGE:`	<daterange>	Range of date/times to include in the graph. If you do not specify any values for `DATERANGE: ENDDATE: STARTDATE: STARTTIME:` or `STOPTIME:`, the default date range values that is a duration of **7 Days**, ending **Now** will be used. If you specify "all" for date range, all the data collected in the data source will be used in graphing.
`BEGINDATE:` `ENDDATE:`	<datetime>	The earliest and latest date and time to be included in the graph. This parameter works in conjunction with the `DATERANGE:` parameter to set the time covered in the graph. The format of the `ENDDATE:` field depends on the settings on the Performance Manager Server system. `ENDDATE` sets the end of the time interval chosen with `DATERANGE`. The default end date, **Now** sets the current date and time as the end of the interval. If you specify "Last", the date and time when data was last collected in the log file will be used. You can also specify date and time for `ENDTIME`. The date and time format, which matches that of the Performance Manager server, will be used. For example, if the settings of a particular region use the `MM/DD/YYYY` date format, you need to use the same format in your specifications. If the value you specify has spaces in between, make sure you place the value within quotes.
`STARTTIME:` `STOPTIME:`	<datetime>	`STARTTIME` is the earliest date/time to be included in the graph and `STOPTIME` is the latest date/time to be included in the graph. If you set the beginning and ending date and time by explicitly using the `STARTTIME:` and `STOPTIME:` parameters, any values entered for `DATERANGE:`, `BEGINDATE:` and `ENDDATE:` will be ignored. `STARTTIME:` and `STOPTIME:` use a locale neutral format for specifying dates and times (`YYYY,MM,DD HH:MM:SS`). The values must be specified in the following order: `Year, Month, Day, Hour, Minute, Second`. For example, the syntax for specifying 17th August 2007, 23.30:50 is 2007, 8, 17, 23, 30, 50.
`STACKED:`		Specifies that the area and bar graphs should "stack" the value of one metric on top of the previous metrics.
`NUMBEROFPOINTS:`	<number>	Refers to the number of data points to be displayed on a graph (default is 100 points). This value is used to summarize the data for each data point and to fit the graph in a single window, when `POINTSEVERY` value is set to auto. For other `POINTSEVERY` values, Performance Manager determines the number of (data points/time intervals) for each graph and provides options to view the next or previous set of data points or intervals. For line, area, and table graphs, the default value for *<number>* is 100. You need not specify a number for Pie and Gauge graph types. **Note**: It is recommended that you do not to set the *<number>* value to more than 1000.

Table 1   General Parameters

Keyword	Value	Description
`POINTSEVERY:`	<pointsevery>	Determines the granularity (number of data points) on the graph. This value is used in conjunction with the NUMBEROFPOINTS value to determine the level of summarization to use.
`FORCEPOINTSEVERY:`	<pointsevery>	Specifies the pointsevery value that should be forced. When this value is specified, it will override any pointsevery value selected by the user while drawing a graph.
`SORTBY:`	value or reverse	Sorts metrics according to their average value; that is from the highest value to the lowest value (value) or from the lowest to highest value (reverse). The default value for normal and complex graphs is to sort metrics by the sequence according to the specifications. The default value for comparison graphs such as instance comparison and system comparison is to sort metrics according to their average value.
`SORTBYVALUE:`		Sorts metrics according to their average value. This is the default value for comparison graphs.
`SUMFROMRAW:`		On specifying this parameter, the unsummarized data from the Performance Agent data source is fetched from the system and then summarized by Performance Manager. This feature should only be used in cases where summarization of the data from the data source is not desirable. Using this feature can cause large volumes of data to be transferred from the system and can slow down the performance. This parameter can be specified only while fetching data from Performance data source. **Note**: This keyword has no parameters, but must be used as **`SUMFROMRAW=value`** to maintain ovpmbatch required parameter pattern of **`key=value`**.
`MINY:`	<real number>	The minimum value on the left (default) Y-Axis. For the Gauge graph type, the parameter selects the minimum value on the gauge scale.
`MAXY:`	<real number>	The maximum value on the left (default) Y-Axis. For the Gauge graph type, the parameter selects the maximum value on the gauge scale.
`MINYR:`	<real number>	The minimum value on the right (optional) Y-Axis.
`MAXYR:`	<real number>	The maximum value on the right (optional) Y-Axis.
`DISPLAYHTMLGRAPH`	None	Using this parameter will result in a HTML graph with header and trailer similar to the print view of a drawn graph from the Performance Manager user interface.

The specifications listed in the following table apply only to the forecast graphs.

Table 2   Forecast Graph Specifications

Keyword	Value	Description
FORECASTTYPE	smooth	Draws a graph with the actual metric and a smoothed metric line. Smoothing is performed by doing a seven point running average (3 before, the point itself and 3 after) on each data point and repeating a maximum of 10 times. The smoothed graph does not extend beyond the existing data to predict or forecast future data values; it only shows the trend in the existing data. **Note**: If you are trying to draw a smoothing trend, you need not specify the Forecast Ending date.
	linear	Performs a least squares linear regression calculation to fit a straight line to the original data. This forecast line is then extended past the end of the data, until it reaches the Forecast Ending date.
	exp	Draws a graph in which the trend begins by approximating a straight line, but increases or decreases dramatically into a steep curve characteristic of exponential expansion, where points reflect the value "n", typically the value of e or 2.718 raised to a power (n0, n1, … nn). While the Linear method fits most data, there are some metrics that are known to behave in a non-linear manner. For example, as system load increased, response times typically degrade in an exponential fashion. For this type of metric, the exponential curve method might be more appropriate.
	s	Draws a graph in which the trending method constrains a forecast line to lie between the **S-Curve Min** and **S-Curve Max** values and fits into an **S** shaped curve. The S-Curve method is often useful in forecasting bounded metrics such as CPU Utilization. CPU Utilization cannot be less than zero or more than 100. The linear and exponential forecasts are not constrained and therefore will predict values that are unbounded.
FORECASTDATEDAY: **FORECASTDATEMONTH:** **FORECASTDATEYEAR:**	<1-31> <1-12> <1970-2037>	Specifies the end of the forecast period. This date should always be set after the graph End Date. Make sure that your forecast duration is either equal or less than the Duration specified for actual data. **Note:** The forecast ending date is not used for the Smoothing trending method.
SHOWVALIDATE:		Displays the data following the End Date and prior to the Forecast Ending Date, if found, as validation data. Performance Manager will not use this data for forecasting, but you can use this data to verify if the forecasts match the actual data.

Table 2   Forecast Graph Specifications

Keyword	Value	Description
`INTERVALTYPE:`	None	The default value for `INTERVALTYPE`. Does not draw upper and lower confidence limit curves for a forecast.
	confidence	Draws the upper and lower confidence lines to display the range in which the average of the predicted values (the trend line) will fall for the given percentage of the time.
	prediction	Draws the upper and lower confidence lines to display the range in which the predicted values (all points) will fall within the given percentage of the time. The range between the prediction limits will always be larger than the confidence limits, as they apply to all points and not just their average values.
`CONFIDENCE:`	<number>	The percentage used in displaying the confidence or prediction interval. The value could be 70, 75, 80 or 90.
`SEASONHOD:`		Automatically determines if the Hour-of-the-Day seasonality will improve the forecast and includes it, if it does.
`SEASONDOW:`		Automatically determines if the Day-of-the-Week seasonality will improve the forecast and includes it, if it does.
`SEASONWOM:`		Automatically determines if the Week-of-the-Month seasonality will improve the forecast and includes it, if it does.
`SEASONMOY:`		Automatically determines if the Month-of-the-Year seasonality will improve the forecast and includes it, if it does.

You can specify the following specifications before specifying any metric, in which case these values become the default specifications. You can override these specifications on a metric-by-metric basis, if necessary.

Table 3   Default Metric Specification

Keyword	Value	Description
`DSN:`	<name>	String used to identify a Named Data Source.
`DATASOURCE:`	`PA`	HP Performance Agent formerly known as MeasureWare Agent (MWA) is the data source. In this case, the name of a system running the agent must be provided in the `SYSTEMNAME` specification.
	`EPC`	In this case, the name of a system running the Operations agent must be provided in the `SYSTEMNAME` specification.
		If no data source is provided, but one or more system names are provided, the data source will be chosen based on the agents on each system. If multiple agents are available on a system, one used will be chosen in the following order [`PA, EPC`].

Table 3   Default Metric Specification

Keyword	Value	Description
SYSTEMNAME:	<system name>	Specifies the name of the system that is running the Performance Agent or EPC. (This specification is required when **DATASOURCE** is specified as **PA** or **EPC**.) If multiple system names are entered (before any metrics are defined), the graph will be repeated for each system.
DSEXTENDED:	<datasource:systemname>	Specifies the **DATASOURCE** and **SYSTEMNAME** together. The value supplied for this parameter consists of the **DATASOURCE** value, a colon and the **SYSTEMNAME** value. If no **SYSTEMNAME** value is required, the **DATASOURCE** value alone will suffice. An example of a valid extended data source is **DSEXTENDED**: PA:**mysys.net.com**.
CLASS:	<class name>	Specifies the name of the class of a metric that is provided by the named data source. If the data source does not expose this data class, this metric will be ignored. **Note**: You need not repeat the specification for each metric, if the metric is in the same class.
YAXISTITLE:	<units string>	For the Gauge graph type, the parameter selects the Units label shown at the bottom of the gauge.

You can used the following specifications with reference to a particular metric. If the next metric does not specify them, the default values will be used.

Table 4   Metric Specifications

Keyword	Value	Description

`METRIC:`	<metricname>	Specifies the name of a metric that is provided by the data source. If this metric is not exposed inside the `CLASS`, the metric will be ignored.
		
		Calculated Metrics
		
		Calculated metrics are formed by performing calculations on other metrics. A calculated metric name consists of other metric names, constants, plus the operators +, -, *, /, (,and).
		
		The calculation on metrics is performed by mathematical precedence rules. If the calculation contains a combination of multiplication/division and addition/subtraction, parentheses must be used. For example:
		
		• 5+(2*20) = 45
		
		• 5+2*20 = 140
		
		If you are using parentheses, make sure they are well formed and balanced and do not include spaces in your calculated metric.
		
		An example of a calculated metric:
		
		`CLASS: APPLICATION`
		
		`METRIC:(APP_CPU_TOTAL_TIME*100.0)/INTERVAL`

Table 4   Metric Specifications

Keyword	Value	Description
`LABEL:`	<label string>	Specifies the label to use to identifying a metric on the graph. The label can contain literal values and references to special substitution variables. For example, `@@[SYSTEM]:@@[CLASS]:@@[METRIC]` might produce a label such as, mysys.net.com: `GLOBAL:GBL_CPU_TOTAL_UTIL` while the default `@@[LABEL]` might produce the label `CPU%`. If no label is specified, the metric will be labeled according to the default label specification. By default this is the same as `@@[LABEL]`, but can be changed by editing configuration files on the Performance Manager server system. The variable will be replaced by: • `@@[LABEL]` - The metric label specified by the data source. (Such as `CPU%`) If the data source does not provide a label, the metric name will be used. • `@@[METRIC]` - The metric name such as `GBL_CPU_TOTAL_UTIL`. • `@@[CLASS]` - The metric class such as `GLOBAL`. • `@@[SYSTEM]` - The system name supplying the metric such as `mysys.net.com` • `@@[DATASOURCE]` - The data source for this metric such as `PA`, `EPC` or `RepSys` • `@@metric` - The value of the metric from the same data source and class. For example, `@@BYDSK_DEVNAME` will label the metric with the value of the `BYDSK_DEVNAME` metric. If the `BYDSK_DEVNAME` metric value is `0`, `Disk @@BYDSK_DEVNAME` would produce a label of `Disk 0`.
`METRICFILTER`	<FILTER>	Specifies a data filter that is applied to the data. Data records that do not meet the filter specifications will not be used in the final calculation.
`COLOR:`	<color>	The color to use for a metric.
`LINEWIDTH:`	<number>	The number of pixels wide to draw the line for this metric. This specification is valid only when the `GRAPHTYPE` is line and the `LINESTYLE` is solid. The default value is 2.
`LINESTYLE:`	solid	Solid line only used when `GRAPHTYPE` is line.
	dashed	A dashed line used when `GRAPHTYPE` is line.
	dotted	A dotted line used when `GRAPHTYPE` is line.
	dash-dotted	A dash-dotted line used when `GRAPHTYPE` is line.
	dash-dot-dotted	A dash-dot-dotted line used when `GRAPHTYPE` is line.

Table 4   Metric Specifications

Keyword	Value	Description
Marker	none	No markers are drawn on the line.
	auto	Automatically selects line markers for graphs. It is applicable only if **GRAPHTYPE** is line.
	square	Draws an open square at every valid point. It is applicable only if **GRAPHTYPE** is line.
	circle	Draws a circle at every valid point. It is applicable only if **GRAPHTYPE** is line.
	triangle	Draws a triangle at every valid point. It is applicable only if **GRAPHTYPE** is line.
	dot	Draws a sphere at every valid point.It is applicable only if **GRAPHTYPE** is line.
	cube	Draws a cube at every valid point. It is applicable only if **GRAPHTYPE** is line.
	diamond	Draws a diamond at every valid point. It is applicable only if **GRAPHTYPE** is line.
	star	Draws a star at every valid point. It is applicable only if **GRAPHTYPE** is line.
	cross	Draws a cross marker at every valid point. It is applicable only if **GRAPHTYPE** is line.
	vertical	Draws a vertical marker at every valid point. It is applicable only if **GRAPHTYPE** is line.
	horizontal	Draws a horizontal marker at every valid point. It is applicable only if **GRAPHTYPE** is line.
SUMTYPE	auto	When this parameter is specified, Performance Manager uses the summation type provided by the data source (Performance Agent and EPC). If the data sources do not provide the summation type, Performance Manager uses the "Average" sum type to summarize data.
	average	Combines the numeric values by adding and then dividing by the number of values (mean). Non-numeric data will use the last value.
	sum	Combines numeric values by adding values.
	minimum	Combines numeric values by taking the smallest value.
	maximum	Combines numeric values by taking the largest value.
	last	Combines numeric or non-numeric values by taking the last value received.
	count	Counts the number of records from the data source that were combined into each data point.

The following specifications apply only to tables. These specifications indicate special post-processing that is done to the data in the table.

Table 5   Table Specifications

Keyword	Value	Description
`TABLEFILTER:`	`TABLEFILTER:`	Filters data in the table based on the content of its cells. The `TABLEFILTER:` also allows filter conditions to be separated by the double vertical bar "`||`" to indicate either the preceding condition **OR** the next one can be true. This is in addition to the double ampersand "`&&`" indicating both the preceding condition **AND** the next one must be true. The `TABLEFILTER:` specification applies to the entire table and should precede any `METRIC:` specifications.

`TABLEHIGHLIGHT:`	`TABLEHIGHLIGHT:`	This specification can be used to change the color of an item in a table. It should follow the `METRIC:` specification to which it applies.
		
		Syntax: `Condition Value Color [&&...]`
		
		Example: `>80 Red`
		
		Multiple specifications may be specified separated by "`&&`". The last specification sets the color to be used.
		
		Example: `>5 Yellow && >10 Magenta && >80 Red normal0`
		
		 `normal for <=5`
		
		 `Yellow for >5 and <=10`
		
		 `Magenta for >10 and <= 80`
		
		 `Red for > 80`
		
		Example: `>80 Red && >10 Magenta && >5 Yellow`
		
		 `normal for <=5`
		
		 `Yellow for >5`

The following specifications carry special meanings as described in the following table:

Table 6   Special Purpose Specifications

Keyword	Value	Description
`FAMILY:`	<Family Name>	Used in a graph template file to supply a more descriptive name for the graphs it contains. Make sure that you choose a family name that uniquely identifies this set of graphs. Only one `FAMILY:` parameter should be used in each graph template file.
`CATEGORY:`	<Category Name>	Used in a graph template file to indicate a general category for graphs. Each graph will be associated with the category until a different `CATEGORY:` parameter is encountered.
`DESCRIPTION:`	<string>	Used in a graph template file to supply a descriptive string for a graph. A different `DESCRIPTION` can be provided for each graph.

Table 6   Special Purpose Specifications

Keyword	Value	Description
`GRAPHHEADER:`		This parameter may only be used in a graph template file. It begins a section of one or more text lines that will be placed above the HTML graph. You can end this with the `END_GRAPHHEADER:` parameter. The graph header can be viewed only when a drawn graph is opened in the Print View or in HTML graphs generated after batch operation.
`GRAPHTRAILER:`		This parameter may only be used in a graph template file. It begins a section of one or more text lines that will be placed below the HTML graph. You can end this with the `END_GRAPHTRAILER:` parameter. The graph trailer can be viewed only when a drawn graph is opened in the Print View or in HTML graphs generated after batch operation.

11 Performance Manager Daily Maintenance

Performance Manager performs a maintenance task on a daily basis to reclaim disk space for files and directories that are no longer needed and to close any data sources that are not accessed in the last 24 hours.

The output files that are generated after **ovpmbatch** batch operation are saved in `<INSTALL DIR>\www\webapps\OVPM\datafiles\batch` directory. These files are automatically cleaned up, if they are older than 24 hours. You can preserve the batch output files by saving those to an alternate location on your local system or by configuring Performance Manager to retain these files.

To retain batch output files, follow these steps:

1   Open the `OVPMconfig.ini` file available in the `<data_dir>/shared/server/conf/perf` directory.

2   Set the **RETAIN_BATCH_FILES** parameter to **TRUE**.

> ➤   By default, the **RETAIN_BATCH_FILES** parameter will not be defined in the `OVPMconfig.ini` file. You should manually enter this parameter in the file. It is recommended to set **RETAIN_BATCH_FILES** to **FALSE**. However, if you have set this parameter to **TRUE**, clean up the files in the output directory on a regular basis.

3   Save the file.

4   Restart Performance Manager.

The maintenance is scheduled to run on a nightly basis at 03:00 AM local time. You can configure the maintenance schedule by following these steps.

1   Open the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory.

2   Specify the hour and minutes at which you want to schedule the maintenance task, for the **DAILY_MAINTENANCE_TIME** parameter. The default value for this parameter is 03:00. The time you specify here should be in the 24-hour format. For example, 23:30.

3   Save the file.

4   Restart Performance Manager.

The disk space cleanup is also be done for customers and users that are no longer configured. For each customer and user, there are directories that contain the customer or user graphs. The files specific to the customer logons will be located in the following directories:

- For each customer, there is a configuration directory `<PM_data_dir>/conf/perf/VPI_CUST_<customername>`

- For the blank customer, the user directories are in `<PM_data_dir>/conf/perf/VPI_USER_<username>`

- For users for a specific customer, the user directories are in `<PM_data_dir>/conf/perf/VPI_CUST_<customername>/VPI_USER_<username>`.

The directories along with the files that are saved in those are automatically removed, if the customer or user is no longer configured. To preserve these files after deleting a customer or user, you can save it to an alternate location on your local system.

12 Managing Graph Templates

You can edit some of the advanced features of graph templates manually. Most of the graph attributes can be specified through the Performance Manager user interface. There are a few specifications that cannot be configured through the Performance Manager interface and hence require manual editing of the graph template files.

You can create graph templates by using the standard Performance Manager user interface, and manually edit the templates only for a few specifications that are not supported from the user interface.

When using the Performance Manager user interface, graphs are saved into an area that allows the user to modify or even delete them. If it is desirable to make a user-generated graph available to all users, but in a read-only mode as in the case of Performance Manager out-of-the-box graphs, you can move a user-defined graph into the permanent graph area.

A collection of parameters make up the graph definition templates and are used in the URLs and batch operation to generate graphs. For information on these parameters, see Keywords on page 55.

Editing Graph Template Files

Using the Design Wizard feature of Performance Manager, you can create new graphs and modify predefined or a user-created graphs, and save those as new graphs.

▶ It is recommended that you do not modify or delete the out-of-the-box graphs.

Performance Manager allows you to create graphs by using a text editor such as vi or notepad to configure features that are not supported by the user interface such as calculated metrics. You can configure some features by manually editing the graph definition. Although you can also create graphs manually, it is recommended that you create the basic graph definition in the user interface and modify the graph manually to add the complex features.

The graph templates are named as `VPI_Graphs*.txt` and are located in different directories on the Performance Manager server system:

Graph Type	Location
Pre-defined graphs	`<install_dir>/newconfig/OVPM`
User graphs for the blank logon	`<PM_data_dir>/conf/perf`
Users graphs for the blank customer, non-blank customer	`<PM_data_dir>/conf/perf/ VPI_USER_<username>`
Customer graphs	`<PM_data_dir>/conf/perf/ VPI_CUST_<customername>`
User graphs for users belonging to a customer	`<PM_data_dir>/conf/perf/ VPI_CUST_<customername>/ VPI_USER_<username>`

From the user interface you can view the files saved in any of these directories. Any file that you save from the user interface is saved to the `<PM_data_dir>/conf/perf` directory. All files in the data directory are named as `VPI_GraphsUser<graph_family_name>*.txt`. The graph name in the user interface appears as `User....` The graph template file name will not appear in the user interface. The graphs in the user interface are classified according to family.

Consider the following points before manually editing a graph template:

1 All graph names must begin with `VPI_Graphs` and have the`.txt` extension. Files, which do not follow the naming convention will not be recognized as graph template files. The files must reside in either the `newconfig` or the `datadir` directory.

2 If the template filename of a user defined graph template file in the data directory does not contain the user name (`VPI_Graphs*.txt,` instead of `VPI_GraphsUser*.txt`), make sure that the graph template files in the `newconfig` and the `data_dir` directories do not have the same file name.

3 Make sure that two graph template files do not contain the same family name (same string in the **FAMILY**: parameter). This can be misleading while using the graphs from the user interface.

> ⚠ Do not modify or delete the `VPI_Graphs` template files available in the `newconfig` directory. If you want to modify the default graph templates, make a copy of this by using a different file name. The default template files will be overwritten when you upgrade to a newer version of Performance Manager

4 The graph template files are in plain text format. The number of lines should be less than 2000 and terminated by a newline character. No other formatting information should be saved in the file. The contents of a template file are described in the following table:

Content	Description
Comments	Blank lines or lines starting with the number sign (`#`) are treated as comments, therefore ignored.
Single Line Keywords	Most lines contain a keyword (all upper case, ending with a colon`:`), one or more blanks and a value.

Multi Line Keywords	Some keywords allow values covering multiple lines. One keyword starts the entry (such as `GRAPHHEADER:`) and all successive lines until the terminating keyword (such as `END_GRAPHHEADER:`) are considered part of the value. The keywords must be on their own line, for example:
	
	    GRAPHHEADER:
	
	        This is my graph header
	
	    END_GRAPHHEADER:
	
	The following is incorrect:
	
	    GRAPHHEADER: My header
	
	        END_GRAPHHEADER:

The keywords that define a single graph or a table is included between the keywords `GRAPH:` and `END_GRAPH:`. Some keywords are allowed before the beginning of the first graph or table definition. These keywords apply to the graph template file as a whole (Example: `FAMILY:`). You can use the out-of-the-box graph templates as an example to see the keywords usage in creating a graph.

Customizing the Design of the Graph Template

When you view a drawn graph in the Print view or after batch operation, the graph opens in the html format. You can customize the design of this report template in the html format to include information such as company logo. To modify the design of report template:

1 Open the `OVPMReportTemplate.htm` available in the `<PM_data_dir>/conf/perf` directory with an HTML editor.

2 Modify the template as required.

3 Save the file..

➤ The changes made to the `OVPMReportTemplate.htm` will be visible only in the Print View. If you are using **ovpmbatch** script to generate graphs, the changes made to the `OVPMReportTemplate.htm` will be visible in the batch output files.

Making User-Designed Graphs Permanent

Graphs created using the Performance Manager user interface is saved in the `<data_dir>` directory. Using Performance Manager user interface, any graph definitions in the `<PM_data_dir>/conf/perf` directory can be modified or deleted by any user, if the logon and password is available. A Performance Manager user cannot read, modify or save graphs that belong to a different user. The out-of-the-box graphs cannot be modified through the Performance Manager user interface. These are available in the newconfig directory that can be read, but not modified by Performance Manager interface users. You can make a user-designed graph non-modifiable by moving the graph from the `<PM_data_dir>/conf/perf` to the `newconfig` directory.

You can perform these changes only if you logon to the system on which Performance Manager is installed. You can only modify the graph templates in a text editor such as vi editor or notepad. You cannot make these changes from the user interface.

Once you move a graph template file, the changes will be applicable to all the graphs which belong to this family (identified by the string, **FAMILY**).

If you modify any of the out-of-the-box graphs, you must make another copy of the graph template with a different file name. Also the file name should follow the naming convention specified for user defined graphs, `VPI_GraphUser<graph_family_name>.txt`. The new graph name will not be displayed in the user interface, if the naming convention is not followed.

The graph template files in the newconfig directory should not be used for graph templates in the data directory. All graph template files will have a file name `VPI_GraphUser<name>.txt`, make sure you do not create any graph templates in the newconfig directory which contain the user name.

⚠ • Do not transfer any user defined graph template file from the data directory to the newconfig directory without removing the name of the user from the filename.

   • Do not use the same **FAMILY:** name in two different graph template files. This can be misleading when you view the graphs from the user interface.

1   After you create a graph and save it, open the graph template file using a text editor such as vi or notepad. By default, the graph template file is saved in the `<data_dir>` directory (based on the user logon.)

2   Copy all text including the **GRAPH:** and the **END_GRAPH:** lines.

3   Create a new file or add this text to an existing file in the predefined graphs area (newconfig). This file should be called `VPI_Graph<name>.txt`.

4   Save the file into the `<install_dir>/newconfig/OVPM` directory, not the `<PM_data_dir>/conf/perf` directory, where the user template file is located.

The changes are automatically reflected in the user interface. If you are already using the user interface, refresh your session to see the latest changes.

Configuring the Number of Rows for a Table Graph

You can configure the default value for the number of rows in a table graph using the parameter `TABLE_ROWCOUNT` under the `Web Server Configuration` section. This parameter is available in the file `OVPMconfig.ini`. The default value is 100.

If you have specified a value for "Limit Number of Points" while designing a graph using the design wizard from the user interface or by editing the graph template, this value overrides the value specified for `TABLE_ROWCOUNT` in the `OVPMconfig.ini` file available in the `<PM_data_dir>/conf/perf` directory. However the value specified for `TABLE_ROWCOUNT` is applicable to all table graphs, but the value you specify for "Limit Number of Points" while drawing a graph is applicable only to a particular graph template.

Example: To set the table row count to 500, add the following entry in `OVPMconfig.ini` under the `[WEB_SERVER]` section: `TABLE_ROWCOUNT = 500`.

Specifying very high values for the `TABLE_ROWCOUNT` parameter can impact the performance.

13 Troubleshooting Tips

Troubleshooting Data Display Errors

The tips for scenarios that require troubleshooting are as follows:

Troubleshooting Performance Manager using data collector

Performance Manager provides a data collector which you can run to collect information such as the configuration, trace and log files, version number and so on. The information collected using this collector will be used by the support engineers while troubleshooting any issue related to Performance Manager:

The collector is located in the following location:

<*install_dir*>`/support/OVGC/SelfHealing/bin`

Run this collector and by typing the following syntax from the command prompt:

collector -f <*filename*>.zip

In this instance, *filename* is the name of the zip file, which contains the all the log file files. In addition, the zip file contains a file `out.xml`. This file contains a summary of all the files collected by the collector such as the component name, version, directories and description of the log files collected.

Unable to View the Contents on Performance Manager Home Page

After logging on to Performance Manager, the Home page does not display anything except the header.

Cause

You will not be able to view the contents of Home page, if JavaScript support is not enabled in your browser.

Resolution

To view the Performance Manager home page, enable JavaScript support for the Internet Explorer (IE) or Mozilla Firefox browser by adding Performance Manager to your list of Trusted Sites.

To add Performance Manager Web server URL to a trusted site:

- In the IE browser:

    a   On the **Tools** menu of Internet Explorer, click **Internet Options**. The Internet Options pop-up appears.

    b   Click the **Security** tab.

c Select the **Trusted Sites** icon.

d Click **Sites**. The Trusted Sites pop-up appears.

e Enter the Performance Manager web server URL and click **Add**. The URL you entered appears in the list of trusted sites.

f Click Close.

g Click **OK**.

h Restart the browser.

• In the Mozilla Firefox browser:

a On the **Tools** menu click **Options**. The **Options** pop up appears.

b Click the **Privacy** tab.

c Click the **Exceptions** button.

d Enter the Performance Manager Webserver URL in the box under Address of web site.

e Click **Allow.**

f Click **Close**.

g Click **OK**.

h Restart the browser.

If the Performance Manager Home page does not appear in the IE Browser even after adding it as a trusted site, enable Javascript support for the Internet Explorer browse by performing the following steps:

1 On the **Tools** menu of Internet Explorer, click **Internet Options**. The **Internet Options** pop up appears.

2 Click the **Security** tab. Check if the security level in your browser settings is set to high.

3 Make sure the Trusted Sites icon is selected and click **Custom Level.** The **Security Settings** pop up appears.

4 Scroll down to **Scripting** section and select the **Enabled** option under **Active Scripting**.

5 Click **OK**.

6 Click **Apply**.

For Mozilla Firefox browser:

1 On the **Tools** menu, click **Options.**

2 Click **Content** (in Firefox version 1.5 and 2.0).

3 Select the **Enable JavaScript** check box.

4 Click **OK.**

Unable to View Data in Microsoft Excel and TSV Formats

Cause

You must check if option to download files in the Microsoft Excel and TSV format is enabled in the browser security settings.

To check the browser settings, perform the following tasks:

1 On the **Tools** menu of Internet Explorer, click **Internet Options**. The Internet Options pop up appears.

2 Click the **Security** tab. Check if the security level in your browser settings is set to high.

Make sure the Internet icon is selected and click Custom Level. The Security Settings pop up appears.

➤ If you are using Performance Manager as Local Intranet application, select the Local Intranet icon.

3 Scroll down to the Downloads section and select the **Enable** option under File Download.

4 Click **OK** and close the Internet Options pop up.

5 Open Control Panel and double-click **Folder** Options.

6 Click the File Types tab to display the registered file types.

7 For XLS, Select **XLS** from the from the Registered file types list. For TSV, select the **TSV** file format from the list and click the **Advanced** button. The Edit File Type pop up appears.

8 Clear the Confirm Open After Download check box.

9 Click **OK**.

➤ If TSV is not added to the list of registered file types, you need to add it first and then edit the file type settings.

No Data is Displayed if the Points Every value is set to more than 1 hour

When the Points Every value is set to more than 1 hour, Performance Manager does not display data.

Cause

Performance Manager does not display data when Points Every is set to more than 1 hour, if the agent and the Performance Manager servers are in a similar time zone, but the time settings on the systems are not synchronized.

Resolution

Check the time settings of the agent. If the agent time settings are different from those on the Performance Manager server, contact your Performance Manager administrator to synchronize the time settings.

Unable to View the Graph in Print View or ovpmbatch Output

Performance Manager does not display the graph, when a graph is opened in the Print view.

Cause

You will not be able to view the graph in the Print view or the output generated after ovpmbatch operation, if the `OVPMReportTemplate.htm` is not available in the `<PM_data_dir>`.

Resolution

Check if the `OVPMReportTemplate.htm` file is available in the `<PM_data_dir>`. If the file is not available or usable, copy the `OVPMReportTemplate.htm` file from the `<Install_Dir>newconfig/OVPM` directory to `<PM_data_dir>`.

Old Graphs Appear Although a New Session Is Started

After starting a new user session by relogging on to Performance Manager, the graphs drawn in the previous user session appear.

Cause

When you draw a graph, the browser caches the graph images and does not update when you make minor changes and redraw the graph.

Resolution

- Clear the browser cache.
- View the images in a new browser, if required.

Unable to Identify the Missing Data

Although there is no data logged for a specific interval in the agent, Performance Manager draws a line for that interval when a graph is drawn.

Cause

Unlike the previous versions, in Performance Manager 8.10, you cannot configure the representation of missing data on the graphs. When a graph is drawn, Performance Manager displays a line connecting the previous and the next data points.

Workaround

Use markers to represent the data points that are available. If data is missing for a specific time interval, Performance Manager draws only a line and no marker will be used. This helps you identify the missing data points in a specific interval.

You can also hover your mouse on the graph to check the availability of data points for a specific interval. If the data points are available for that time interval, Performance Manager displays values for those points.

Troubleshooting Performance Manager Server Issues

Performance Manager Does Not Start Automatically

Performance Manager does not start automatically after restarting the system.

Cause

Performance Manager does not start automatically after restarting the system, if the HP OpenView Ctrl Service is set to "Manual" start in Services console.

Resolution

The HP OpenView Ctrl Service is not set to "Automatic" by default. Set the HP OpenView Ctrl Service to "Automatic" start in Services console and restart the system.

▶ If you set the HP OpenView Ctrl Service to "Automatic" start, all products using this service start automatically when you restart your system. To view the components that use this service, run the following command:

```
ovc -status
```

The list and the status of all components that are controlled by this service are displayed.

Unable to Access Performance Manager

The network does not allow access to Performance Manager through the default network port settings.

Cause

- If your system has ovtomcatb configured to run with the non-root user or non-local system account privileges and you have Performance Manager 8.10 installed on such a system, you may not be able access Performance Manager.

- You cannot access Performance Manager using the default http (8081) or https (8444) ports if these ports are in use by other applications.

Workaround

- Check if ovtomcatb is configured to run with the non-root user or non-local system account privileges. If so, modify the settings to run ovtomcatb with the administrator or root user privileges.

- Try accessing Performance Manager by using the **http://*<systemname>*:*<portnumber>*/ OVPM** URL. If the Performance Manager Home page does not appear, check if the default ports are in use.

  ▶ You can also check for the availability of the port number you want to use by running the following commands at the command prompt:

  On Windows systems:

  `cd <install_dir>\bin`

  `cscript OvTomcatBCtl.vbs -checkport <portnumber>`

  On UNIX systems:

  `cd <install_dir>\bin`

  `OvTomcatBCtl -checkport <portnumber>`

  A message indicating if the port is available or in use appears.

- To change the port settings, follow these steps:

  a Run the following command at the command prompt to change the port numbers for **HTTP**, **HTTPS** and **ShutdownPorts**:

  `cd <Tomcat_dir>\b\bin`

  `ovconfchg -ns NONOV.TomcatB -Set HTTPPort` *<port number>*

  `ovconfchg -ns NONOV.TomcatB -Set HTTPSPort` *<port number>*

  `ovconfchg -ns NONOV.TomcatB -Set ShutdownPort` *<port number>*

  b Restart Performance Manager.

Out of Memory Error While Drawing a Graph

While drawing a graph, Performance Manager displays the Out of Memory error message.

Cause

The Out of Memory error message appears, when the Java Virtual Machine (JVM) memory on the Performance Manager server is insufficient. JVM on the Performance Manager server runs out of memory, if there are too many requests to process simultaneously or if a huge amount of data is being retrieved while drawing or previewing graphs.

Workaround

1 Check the typical load on Performance Manager server and modify the JVM settings accordingly to handle such loads. For more information, see Configuring Java Virtual Machine Memory on page 30.

2 Select a shorter duration and then try drawing a graph.

Unable to See the Favorites Graph Family

Although the graphs are added as favorites, the Favorites graph family does appear in the Graphlist pane.

Cause

You will not be able to see the Favorites graph family if the `VPI_GraphsUserFavorites.txt` is not available in the in the respective customer or user directory.

Resolution

Check if the `VPI_GraphsUserFavorites.txt` file, which is created when a user or customer is created, exists in the respective customer or user directory. If it is not available, copy the `VPI_GraphsUserFavorites.txt.bkp` file from the `<install_dir>/newconfig/OVPM` directory and save it as `VPI_GraphsUserFavorites.txt` in the respective customer or user directory.

Unable to See the User-defined Graphs

After upgrading to Performance Manager 8.10, the user-defined graph templates saved on the OpenView Performance Manager server are not available.

Cause

You will not be able to see the user-defined graphs saved on the OpenView Performance Manager server if these graph templates are not copied to the new data directory while upgrading to Performance Manager 8.10.

Resolution

Check if the graph templates are copied from the old data directory to the new data directory. If the templates are not available in the new data directory, contact the Performance Manager Support team.

Unable to See the Performance Manager Nodelist

The Performance Manager nodelist does not appear in the nodelist pane. However, the nodes imported from Operations Manager for Windows appear in the nodelist.

Cause

If Performance Manager is installed on a system that has Operations Manager for Windows installed, the **IMPORT_OVPM_NODELIST** parameter in the `OVPMconfig.ini` file is set to "False" by default and **IMPORT_OVOW_NODELIST** is set to "True". For more information, see Configuring for Importing Nodelist from HP Operations Manager on page 43.

Resolution

To use the Performance Manager nodelist, set the **IMPORT_OVPM_NODELIST** parameter to "True".

The Use of This Program is No Longer Authorized Error

Although Performance Manager installation is successful, the "The use of this program is no longer authorized. Call your support team for assistance." error message appears while accessing Performance Manager.

Cause

The error message appears if the Performance Manager license you are using is expired.

Resolution

Check if the license is expired. If so, install the Performance Manager License key. For more information, see Installing the Performance Manager License Key on page 25.

HTTP Status 404 - /OVPM Error

The following error message appears while trying to access Performance Manager through the browser.

```
HTTP Status 404 - /OVPM Error

----------------------------------------------------------------------------
---

type Status report

message /OVPM/

description The requested resource (/OVPM/) is not available.

----------------------------------------------------------------------------
---

Apache Tomcat/5.5.20
```

Cause

The error message appears if the `<INSTALLDIR>/www/webapps/OVPM` directory is empty.

Resolution

- Check if a hotfix file is extracted to the wrong directory.
- Extract the `OvPMWeb.war` file again from the `<Install_Dir>/newconfig/OVPM` to `<Install_dir>/www/webapps/OVPM`.

Unable to See Nodes Uploaded in the Batch Mode

The nodes uploaded in the batch do not appear in the nodelist

Cause

If there is an exception while uploading nodes in batch, the nodes uploaded in the batch mode do not appear in the nodelist.

Resolution

Performance Manager automatically backs up the data in existing `OVPMSystems.xml` as `OVPMSystems_bkp.xml` before starting the upload. In case of an exception, the corrupted file will be replaced with the file that is backed up. If the uploading process fails again, you can rename the `OVPMSystems_bkp.xml` as `OVPMSystems.xml`. The nodelist, which is uploaded already will be restored.

Unable to Send More than Two Simultaneous Requests for Drawing Graphs in Internet Explorer

While drawing a graph, the user cannot send more than two simultaneous requests.

Cause

You will not be able to send more than two simultaneous 'Draw Graph' requests in Internet Explorer. This is because an HTTP client is not allowed to keep more than two simultaneous connections open in a web server as per the HTTP specifications. The third request will be sent to the server after sending the first two requests.

For more information, visit the following website

http://www.w3.org/Protocols/rfc2616/rfc2616-sec8.html#sec8.1.4

Integration with Reporter 3.80 is Not Successful

Although the Performance Manager is configured for integration with Reporter 3.80, the user is unable to use Reporter as the data source or import nodelist from Reporter.

Cause

If Reporter is installed in the Windows authentication mode, you will not be able to integrate with Reporter successfully.

Workaround

- Set the registry key to mixed mode. For more information, see Integrating with HP Reporter on page 40

- Check if the port number specified for integration with Reporter in the OVPMconfig.ini file is correct. For more information, see Integrating with HP Reporter on page 40.

OutOfMemoryException

After installing Performance Manager 8.10 on a HP-UX system, the error "OutOfMemoryException" appears while trying to access Performance Manager Web interface. The same error appears in the Trace log file.

Cause

The "OutOfMemoryException" error occurs if Java Out-of-Box (JOOB), which is required for any java application to work effectively in HP-UX, is not installed on the Performance Manager system.

Resolution

Check if Java Out-of-Box is installed on the system. If JOOB is not installed on the Performance Manager system, install it and try accessing Performance Manager.

Connecting to Systems for the First Time is Very Slow

While viewing information about a node or drawing a graph, connecting to the nodes for the first time is slow.

Cause

The default data communication protocol is **HTTP(S);** therefore, communicating with an agent through RPC protocol for the first time will be comparatively slower. Similarly, if the default protocol is set to RPC, connecting to an agent through HTTP(S) protocol for the first time will be comparatively slower.

Resolution

Check the default data communication protocol used to connect to the nodes in the deployed environment. If RPC is used for most of the nodes, change the default data communication in the OVPMconfig.ini file to RPC. If HTTP is used for most of the nodes, change the default data communication to HTTP.

However, it is recommended to use HTTP as default data communication protocol for the Performance Agent data source and as the mode of communication between Performance Manager and agents.

The Manage Nodes Option is Not Available

Although the user has logged on to Performance Manager as blank customer, the "Manage Nodes" menu option is not available.

Cause

The "Manage Nodes" menu option is not available if Performance Manager is configured not to use its own nodelist.

Resolution

To enable Performance Manager to use its own nodelist, set the **IMPORT_OVPM_NODELIST** parameter in the OVPMconfig.ini file to "True". For more information, see Configuring for Importing Nodelist from HP Operations Manager on page 43.

Unable to Check if a Hotfix for Performance Manager is Deployed Successfully

After deploying a hotfix for Performance Manager, the user is unable to check if the hotfix is deployed successfully

Resolution

- Run the following command at the command prompt.

  ovpm version

  This command displays the version of OvPMWeb.war file deployed on the Performance Manager system.

- On the **Help** menu of the Performance Manager user interface, click **About Performance Manager**.

Troubleshooting Integration Related Issues

Integration with HP Operations Manager (HPOM)

Problem

While designing a graph from the Operations Manager console, if a user session is inactive for more than an hour, the session expires and the system logs out the user. As soon as the user resumes activity, the logon window appears.

Cause

While sending the initial request to access Performance Manager, HPOM is configured to accept the blank customer's password, so the HPOM user does not require the password. By default, if a user session is inactive for more than an hour, the session expires and the system logs out the user. But once the session times out, the user has to login.

Resolution

You can set the expiration time or time out interval for a user session using the parameter `SESSION_TIMEOUT` in file `OVPMconfig.ini`.

For example: You can set this to 24 hours or 48 hours. For more information about this parameter, see Configuring Session Timeout Interval on page 29.

After Installing Performance Manager, other applications or products hosted on Tomcat5.0 (OvTomcatA) cannot be accessed

When you run the command **ovc -start**, both OvTomcatA and OvTomcatB start simultaneously. The log files for both OvTomcatA and OvTomcatB are also generated. But the applications hosted on OvTomcatA cannot be accessed, even if both OvTomcatA and OvTomcatB are running.

Cause

You can use the command **ovc -status** to check the status of tomcat. Even if the status indicates that OvTomcatA is running, the http port is disabled after OvTomcatB is installed. This is because when you run the command ovc -start, the http port for OvTomcatA is not enabled.

Workaround:

You need to manually enable http port for OvTomcatA, and then restart OvTomcatA to access the applications hosted on OvTomcatA. To run both OvTomcatA and OvTomcatB simultaneously, run the following syntax at the command prompt:

```
ovc -start

ovtomcatctl -enablehttp

ovc -restart ovtomcatA
```

By default, OvTomcatA listens on port 8080 and OvTomcatB listens on port 8081. To verify if OvTomcatA is installed on the system, run the following command:

HP-UX	- swlist -l fileset | grep -i HPOvTomcatA
Solaris	- pkginfo | grep -i HPOvTomcatA
Windows	To verify on windows, perform the following tasks: • Click **Start** -> **Run**. • Enter `services.msc.` Verify if "HP OpenView Tomcat(A) Servlet Container Service" appears on the Services console.

Troubleshoot Upgrade Related Issues

Filters do not work after upgrading to Performance Manager 8.10

Graph filters created for graphs designed in OVPM 5.00 and 6.00 do not work after upgrading to Performance Manager 8.10.

Cause

OVPM version 5.00 and version 6.00 support wild card expressions. Performance Manager 8.10 supports regular expressions.

Workaround

You need to manually convert the format of the filters to regular expressions.

After upgrading to Performance Manager, the graphs designed for Performance Agent as Data source changes to EPC

Any custom graph created with "Performance Agent (PA)" as data source using HTTP data communication protocol in OVPM 6.00, is saved with "CODA" as data source in the graph template after upgrading to Performance Manager 8.10.

Cause

In Performance Manager 8.10, "CODA" data source in graph template is automatically converted to "EPC" as data source in the graph template and instead of "PA". Hence, if EPC data source is available, data will be retrieved from "EPC" data source.

Workaround

If you had chosen metrics specific to PA data source (such as, Process, Application), then the data source must be changed to "PA" in the graph template in PM 8.10. Edit the graph using the design wizard and change the data source to "PA" and save the graph. For instructions to edit a graph, see *HP Performance Manager 8.10 Tutorials*.

A OVPMConfig.ini Parameters

The following table lists the parameters, which must be specified in the OVPMConfig.ini file to configure Performance Manager:

Parameter	Description
IMPORT_OVOW_NODELIST	You can set this parameter to "True" or "False". When you set this parameter to "True", Performance Manager imports the nodelist from Operations Manager for Windows. For more information, see Configuring for Importing Nodelist from HP Operations Manager on page 43.
IMPORT_OVPM_NODELIST	You can set this parameter to "True" or "False". When you set this parameter to "True", Performance Manager uses its own nodelist. For more information, see Configuring for Importing Nodelist from HP Operations Manager on page 43.
TRACELEVEL	You can use this parameter to turn on or turn off tracing. When you set this parameter to "1", tracing is turned on and the trace log files are generated. Setting this to "0" turn off tracing. It is recommended to turn on or turn off tracing by using the **ovpm trace** command.
DEFAULT_DATACOMM	You can set this parameter to HTTP, HTTPS or RPC. When set to HTTP, Performance Manager uses HTTP as the default protocol to connect to the systems running agents. For more information, see Communication Protocols on page 34.
DATACOMM_RETRY_TIMEOUT	While connecting to the systems running agents, Performance Manager uses the default data communication protocol, for example HTTP. If the connection is established successfully through HTTP, it tries to connect through the RPC protocol. If there is another request to the same agent system, Performance Manager uses the RPC protocol to connect to the system, as the attempt to connect through HTTP protocol was not successful in the earlier instance. If you specify a value, for example 60 minutes for the **DATACOMM_RETRY_TIMEOUT** parameter, Performance Manager again tries to connect to the systems through the default data communication protocol after 60 minutes. This value is specified in minutes.

Parameter	Description
GRAPH_AUTOREFRESH_RATE	You can use this parameter to specify the interval at which Performance Manager refreshes the graphs automatically. The value you specify for this parameter is in seconds; for example, if you specify the value as 120, the graph will be refreshed at every two minutes. For more information, see Configuring Auto Refresh Interval on page 30.
SESSION_TIMEOUT	You can use this parameter to set the expiration time or timeout interval for a user session. The value you specify for this parameter is in minutes. For more information, see Configuring Session Timeout Interval on page 29.
JVM_MIN_MEMORY	You can use this parameter to avoid out of memory exceptions caused due to insufficient memory in the Java Virtual Machine (JVM) and configure Performance Manager to stop accepting requests. For more information, see Configuring Java Virtual Machine Memory on page 30.
MANAGE_DEFAULT_NODEGROUP	You can set this parameter to "True" or "False". When you set this parameter to "True", Performance Manager add a node automatically to the default node group "All" whenever you add a node to a node group in Performance Manager. For more information, see Managing the Default Node Group on page 43.
RETAIN_BATCH_FILES	You can set this parameter to "True" or "False". When you set this parameter to "True", all files generated after the ovpmbatch batch operation are retained. For more information, see Performance Manager Daily Maintenance on page 67.
DAILY_MAINTENANCE_TIME	You can use this parameter to schedule the maintenance task at a time. The value you specify here is in HH:MM format. For more information, see Performance Manager Daily Maintenance on page 67.
[REPORTER] SYSTEM DSN TYPE USER PASSWORD PORT MINCONN MAXCONN CONNEXPIRE SLEEPTIME MAXRETRY	You can use this section of the OVPMConfig.ini file to enable integration of Reporter with Performance Manager. For more information, see Integrating with HP Reporter on page 40.

Parameter	Description
`SORTBY_MAX_GRAPH_COUNT`	You can set this parameter to limit the number of graphs drawn for an instance comparison graph when Metric Data Display Order on the Performance Manager user interface is specified as "average value" or "reverse average value". Setting this parameter to a specific number, for example 25, draws only 25 graphs. The default value for this parameter is 20.
`TABLE_ROW_COUNT`	You can use this parameter to configure the default value for the number of rows in a table graph. This parameter is available in the file `OVPMconfig.ini` available in the `<PM_data_dir>/conf/perf` directory. The default value is 100. For more information, see Configuring the Number of Rows for a Table Graph.
`DISABLE_TEMP_NODE_ADDITION`	You can enable or disable the **Add Node** option which allows you to add a node from the **Node Selection** screen on the **Home page** and **Design Wizard** by configuring this parameter. By default, this parameter will not be present in the `OVPMconfig.ini` file and the **Add Node** option will be enabled and available to all users.
	You can disable the **Add Node** option by setting the parameter `DISABLE_TEMP_NODE_ADDITION` to **TRUE**. You need to restart Performance Manager for the configuration changes to take effect.
	This setting will remove the temporary **Add Node** option for all the users (read only, display only and blank/Admin). However, the blank user can add nodes permanently through the **Manage Nodes** screen.
	This option can be reset by either setting it to "FALSE" or by removing the parameter `DISABLE_TEMP_NODE_ADDITION` from the `OVPMconfig.ini` file.