

HP Performance Agent

For the Linux Operating System

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Installation and Configuration Guide

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1 Installing or Upgrading HP Performance Agent

HP Performance Agent captures performance, resource, and transaction data from your Linux system. Using minimal system resources, the software continuously collects, summarizes, time stamps, and detects alarm conditions in current and historical resource data across your system.

Performance agent is supported on virtualized environment, vMA 4.0. For more information, refer to the section titled [Performance Agent on a Virtualized Environment](#) on page 16.

You can analyze the data using local export capabilities, or complementary HP Software products such as HP Reporter and HP Performance Manager 4.00 and later. Also, Performance Agent provides data access and sends alarm notifications to HP Network Node Manager (NNM) and HP Operations Manager.



Performance Manager in this document refers only to version 4.00 and later for UNIX and Windows platforms. Performance Manager 3.xx (PerfView) does not connect to Performance Agent for Linux.

Performance Agent uses Data Source Integration (DSI) technology to receive, alarm on, and log data from external data sources such as applications, databases, networks, and other operating systems.

The comprehensive system performance data recorded and stored by Performance Agent from your system allows you to perform the following tasks:

- Characterize the workloads in the environment.
- Analyze resource usage and load balance.
- Perform trend analyses on historical data to isolate and identify bottlenecks.
- Respond to error conditions.
- Perform service-level management based on transaction response time.

- Perform capacity planning.
- Solve system management problems before they arise.

For a comprehensive description of HP Performance Agent, see the *HP Performance Agent for UNIX User's Manual*.



Before using HP Performance Agent, you must review and accept the license terms and conditions detailed in the readme file available in `/<directory>/<os>/README`, where *<directory>* is your optical media directory.



If you are installing Performance Agent on a system which has HP Software products such as HP Operations Agent, HP Operations Manager Unix Management Server, HP Performance Manager, HP Performance Insight, and OV Internet Service, it is recommended to restart them after Performance Agent installation is completed.

Installation Requirements

Before installing HP Performance Agent, make sure that your system meets the requirements described in this section.

Hardware

- System with Intel Pentium equivalent architecture (x86)
- System with AMD64 and EM64T architecture (x86_64)
- System with Itanium architecture (IA64)

Supported Architecture and Operating System Versions

The table below lists the supported architecture and operating system versions.

Architecture	Operating System
On 32-bit systems (x86)	<ul style="list-style-type: none">• RedHat Enterprise Linux (ES/AS/WS) 4, and 5• SuSE Enterprise Server 9.x and 10.x
On 64-bit systems (x86_64)	<ul style="list-style-type: none">• RedHat Enterprise Linux (ES/AS/WS) 4, and 5• SuSE Enterprise Server 9.x and 10.x vMA 4.0
On 64-bit systems (IA64)	<ul style="list-style-type: none">• RedHat Enterprise Linux (ES/AS/WS) 4 (update 4)• RedHat Enterprise Linux (ES/AS/WS) 5• SuSE Enterprise Server 10.x

Software

- HP Performance Agent is supported on RHEL5.x on x86 and x86_64 with SELinux enabled.
- On RHEL5 and above, and SLES10 and above, HP Performance Agent runs in 64bit mode.

Requirements - Linux Packages

To install HP Performance Agent successfully, the following non-HP Software runtime libraries are required:

- C++ runtime needed by multiple HP Performance Agent binaries.
 - For systems with kernel version 2.6:
`/usr/lib/libstdc++.so.5`
 - For systems with kernel version 2.6 on IA64 :
`/usr/lib/libstdc++.so.6`
- For RHEL4 U4 and above on IA64, perform the following steps:
 - 1 Install complete "Extra CD" supplied with OS. This provides Emulation Layer required for Performance Agent.
 - 2 Install complete "Portability Layer CD" supplied with OS.
- To verify if the libraries are installed on your system, run the following commands:
 - **`rpm --query --whatprovides <library-name>`**

These libraries can exist in one or more RPM packages available with the operating system media or can be downloaded from the Internet.

Disk Space

Performance Agent installs in the `/opt/perf/` and `/opt/OV/` directories and creates its log and status files in the `/var/opt/perf/` and `/var/opt/OV/` directories.

- For first time installation of Performance Agent, approximately 62 MB of disk space is required in the `/opt/perf/` and `/opt/OV/` directories.

- For Performance Agent databases and status files, allow for 143 MB of disk space in the `/var/opt/perf/` and `/var/opt/OV/` directories.
- HP Performance Agent requires 5MB of space in `/tmp` directory for installation logs.

When Performance Agent is first installed, the default `parm` file is set up to collect a maximum of approximately 60 MB of log file data.

You can modify the `parm` file and restart `scopeux` to change the size of the log files. For information about modifying the `parm` file and how it is used to limit and configure log file data storage, see Chapter 2 of the *HP Performance Agent for UNIX User's Manual*.



If you are adding new hardware or making any configuration changes, it is recommended to stop `scopeux` and restart it to make the changes take effect.

Install or Upgrade Procedures

Performance Agent is available on the DVD-ROM installation media. The size of the product is approximately 60 MB, which also includes the product documentation.

First time Installation

For instructions to install Performance Agent for the first time, refer to the section, [Installing Performance Agent](#). However, for instructions to install Performance Agent in a virtualized environment, refer to the section [Installing Performance Agent in a Virtualized Environment](#)

Upgrade

If you have previously installed Performance Agent or GlancePlus on the system, you must perform the following tasks:

- Stop any performance tools or processes that may be running. For instructions, refer to the section [Stopping Active Performance Tool Processes](#).
- Install the higher version of Performance Agent. For instructions to install Performance Agent, refer to the section, [Installing Performance Agent](#).

Stopping Active Performance Tool Processes

- 1 Log in as **root**.
- 2 Run `perfstat` to check for active performance tools by typing:

```
/opt/perf/bin/perfstat
```

If `perfstat` reports any active performance tool processes, stop them. (Make sure that you have exited these tools before doing so.)
- 3 If a previously installed version of Performance Agent is running, stop it by typing:

```
/opt/perf/bin/ovpa stop
```

▶ Customized configuration files such as the `parm`, `alarmdef`, `ttd.conf` and `datasources` as well as any customized log files will not be overwritten by the new installation. The new configuration files are installed in the `/opt/perf/newconfig/` directory.

- 4 Make sure the `midaemon` (measurement interface daemon) is not active by typing:

```
ps -ef | grep midaemon
```

If the `midaemon` is still active, type:

```
/opt/perf/bin/midaemon -T
```

- 5 Make sure the `ttd` (transaction daemon) is not active by typing:

```
ps -ef | grep ttd
```

If the `ttd` is still active, type:

```
/opt/perf/bin/ttd -k
```

▶ If you stop `ttd`, you must stop all ARM-instrumented applications that are running before you restart `ttd` and Performance Agent processes.

- 6 Run `perfstat` again to ensure that no performance tools or processes are active. When all tools or processes have been stopped and your customized configuration files are backed up, proceed with the installation.

Installing Performance Agent

- 1 Make sure you are logged in as **root**.
- 2 Insert your installation DVD-ROM into the drive.

Typically, Linux systems are configured to automatically mount the DVD-ROM. If your system is not configured to automount the DVD-ROM, then you must manually mount it in the File Manager, or enter the command:

```
mount -t <type> <device> <dir>
```

where `<type>` is the file system type, `<device>` is the DVD-ROM device and `<dir>` is where the DVD-ROM directory will be mounted. For example:

```
mount -t iso9660 /dev/dvdrom /mnt/dvdrom
```

- 3 In the terminal window, change your present working directory by typing:

```
cd /<directory>
```

where <directory> is your DVD-ROM directory.

- 4 Type **ls** to verify that you are in the correct directory. You will see the README file, the `ovpa.install` and `glance.install` scripts, and the `paperdocs`, `packages`, and `ReleaseNotes` subdirectories.
- 5 Run the installation script by typing:

```
./ovpa.install
```

The `ovpa.install` script includes command line options for more advanced installations. The syntax of the command is:

```
ovpa.install [-n] [-f] [-v]
```

The command line options have the following meaning:

- n** Do not prompt for `ovpa` start at the end of installation
- f** Force installation (`--force`, `--nodeps`)
- v** Verbose installation

Performance Agent installation is now complete.

By default, the Performance Agent processes are configured to start automatically upon reboot. See [Starting and Stopping Performance Agent](#) on page 29.

Chapter 2, “Starting Up and Running Performance Agent”, describes tasks you may wish to perform to configure Performance Agent to support your environment.

- ▶ For instructions to install HP Operations Agent, see the Installation Guide for HP Operations Agent available at the following URL:

<http://h20230.www2.hp.com/selfsolve/manuals>

- ▶ For more information and details about new features and changes in Performance Agent, see the Release Notes, in `/opt/perf/ReleaseNotes/OVPA`.

Special Instructions for Performance Agent on SELinux

When you install Performance Agent on a SELinux box, by default firewall is enabled and hence communication is blocked. You need to enable port 383 and configure http(s) protocol to enable communication across firewall. For instructions to configure ports and http clients, see [Communicating Across a Firewall](#) on page 33.

Optionally, you can use the admin console available on SELinux box and configure a service exception to enable communication.

The service names in SELinux are as follows:

- `rrac 5678/tcp` # Remote Replication Agent Connection
- `hp-alarm-mgr 383/tcp` # hp performance data alarm manager

Installing Performance Agent Using Operations Manager

If you are using HP Operations Manager for UNIX 8.x, HP Operations Manager for UNIX 9.0, or HP Operations Manager for Windows 8.10, you can deploy HP Performance Agent from the management server to a Windows managed node.

For details on deploying Performance Agent from the HP Operations Manager for UNIX management server see *HP Performance Agent Deployables for the HP-UX, Linux and Solaris Operating Systems for HP Operations Manager for UNIX 8.x and 9.0*.

For details on deploying Performance Agent from the HP Operations Manager for Windows management server see the HP Operations Manager for Windows *Online Help*.

Performance Agent on a Virtualized Environment

Performance Agent for Virtualization is supported only on vMA 4.0 and it supports monitoring the following in a virtualized Environment.

- Virtual Machines (VMs), Resource Pools (RPs) and Hosts on VMware ESX Server 3.5 U2, ESX 3i, ESX 4.0 and ESX 4i
- vSphere Management Assistant 4.0 (vMA)

For more information on vMA, see [Overview of vSphere Management Assistant 4.0 \(vMA\)](#).

For complete list of metrics and descriptions, refer to the *Dictionary of Performance Metrics*.

Performance Agent on a vMA 4.0

Performance Agent for Virtualization is supported only on vMA 4.0 system.

Overview of vSphere Management Assistant 4.0 (vMA)

vSphere Management Assistant 4.0 (vMA), installed with RHEL 5.2, X86_64 is a virtual machine. vMA includes prepackaged software such as a Linux distribution, the vSphere command line interface (CLI), and the vSphere JRE 1.5. Administrators can use vMA 4.0 to run scripts and agents to manage ESX/ESXi and vCenter Server systems.

Installing Performance Agent in a Virtualized Environment

To install Performance Agent in a virtualized environment, follow these steps:

- 1 Log in as **vi-admin**.



Typically, on vMA 4.0 the root user account is disabled. Follow the Step 2 to run any command with root privileges.

- 2 To run a command with root privileges:

- Type the command **sudo bash**, and then type the password. This initiates a shell with root privileges.

➤ Alternatively, you can enter all the commands for installing the Performance Agent by prefixing **sudo** before the command and typing the root password

3 Insert your installation DVD-ROM into the drive.

Typically, Linux systems are configured to automatically mount the DVD-ROM. If your system is not configured to automount the DVD-ROM, then you must manually mount it in the File Manager, or enter the command:

```
mount -t <type> <device> <dir>
```

In this instance, *<type>* is the file system type, *<device>* is the DVD-ROM device and *<dir>* is where the DVD-ROM directory will be mounted. For example:

```
mount -t iso9660 /dev/dvdrom /mnt/dvdrom
```

4 Run the installation script by typing:

```
ovpa.install
```

➤ Type **sudo ovpa.install**, and enter the root password if you ignored the Step 2 in this section

The **ovpa.install** script includes command line options for more advanced installations. The syntax of the command is:

```
ovpa.install [-n] [-f] [-v]
```

The command line options are listed below:

- n Do not prompt for `ovpa start` at the end of installation
- f Force installation (`--force`, `--nodeps`)
- v Verbose installation

A message appears to indicate the Performance Agent installation is successful.

File Placement Information

When you install the Performance Agent on a vMA 4.0 system, the *java* and the *vmware* files are automatically installed in the following directory:

```
/opt/perf/newconfig
```

Also, the default the `parm` file gets installed in the following directory:

```
/opt/perf/newconfig/vmware/parm
```

After the installation, the post install script copies the `parm` file to the following directory:

```
/var/opt/perf
```

After the installation, the post install script copies the `java` files to the following directory:

```
/opt/perf/bin
```

Configuring Ports in a Virtualized Environment

To configure ports on a vMA 4.0 system, run the following command to enable and open the BBC communication port:

```
sudo iptables -I RH-Firewall-1-INPUT 3 -p tcp -m tcp  
--dport 383 --tcp-flags SYN,RST,ACK SYN -j ACCEPT
```

► These configuration settings are not permanent and are not available if you restart the vMA4.0 system.

To make the configuration settings available on vMA4.0 system, even after you restart the system, follow these steps:

- 1 Configure the ports on the vMA 4.0 system.
- 2 Run the following command :

```
sudo service iptables save
```

The configuration settings get saved in the `iptables` file available in the following directory:

```
/etc/sysconfig
```

- 3 Verify the following contents in the `iptables` file to confirm if the configuration settings details are permanently saved:

```
-A RH-Firewall-1-INPUT -p tcp -m tcp --dport 383 --tcp-flags  
SYN,RST,ACK SYN -j ACCEPT
```

For more information on configuring ports for communication, see [Configure Performance Agent Ports](#).

viserver

viserver is the java daemon that runs on a vMA system and gets BYLS data from the vMA 4.0 system.

Prerequisites for running viserver

Before starting viserver, make sure of the following:

- The system has 1GB of physical memory
- The floppy disk drives are disabled, and
- Portmap services are up and running

Configuring viserver

You can configure viserver setting in the two configurable files `viserver.properties` and `VILog4j.xml`. These files are available in `/var/opt/perf/`.

viserver.properties

The properties of viserver are specified in the `viserver.properties` file. This file contains the following parameters:

- `port`

The `port` parameter is the loopback port through which viserver and clients communicate. The port details is non-editable and it changes everytime you restart viserver.

- `hosts`

The `hosts` parameter defines the number of hosts that viserver can support. The default value is 20.

Note that if you have more hosts in your environment, you can edit this parameter to specify your required settings. If HP Performance Agent is not able to collect data for the number of hosts that you specified, you need to reduce the entries in `vifp` targets.

- instance

The `instance` parameter defines the number of instances `viserver` can support. The default value is 200.

Note that if you have more instances in your environment, you can edit this parameter to specify your required settings. If HP Performance Agent is not able to collect data for the number of instances that you specified, you need to reduce the entries in `vifp` targets.

- `jvmArgs`

The `jvmArgs` parameter allows you to add `jvm` arguments and modify `jvm` as required in customers environment.

The default configuration for `jvmArgs` is as follows:

```
jvmArgs=-Xms256m -Xmx512m -classpath /opt/perf/bin/java/  
activation.jar:/opt/perf/bin/java/axis-ant.jar:/opt/perf/  
bin/java/axis.jar:/opt/perf/bin/java/  
commons-discovery-0.2.jar:/opt/perf/bin/java/  
commons-logging-1.0.4.jar:/opt/perf/bin/java/jaxrpc.jar:/  
opt/perf/bin/java/log4j-1.2.8.jar:/opt/perf/bin/java/  
mailapi.jar:/opt/perf/bin/java/saaj.jar:/opt/perf/bin/  
java/vifplib25.jar:/opt/perf/bin/java/vim25.jar:/opt/  
perf/bin/java/viserver.jar:/opt/perf/bin/java/  
wsdl4j-1.5.1.jar com.hp.perfagent.
```

You can add or remove the configuration settings as required.

- `log4jInterval`

The `log4jInterval` parameter specifies the interval at which `viserver` checks for changes in `VIlog4j.xml` file. The default value is 60000 milliseconds (1 minute). You can modify this value as required.



You need to restart `viserver` if you change the configuration settings for any of the parameters. The new settings are effective only after you restart `viserver`.

`VIlog4j.xml`

`Viserver` uses `VIlog4j.xml` file located at `/var/opt/perf/` to log status information in `status.viserver` file. The `log4j.dtd` file available in `/var/opt/perf/` defines the template for the `VIlog4j.xml` file. You can

change the configuration settings in the `VIlog4j.xml` file and the changes are effective after a specified time. The value of the specified time is defined in the parameter `log4jInterval`.



There are blocks in the XML file that are required for the logging to work properly. Do not change or delete these blocks as they interfere with other modules of the product.

The only recommended change is the level change of `com.hp.perfagent logger` (For details see [Loggers](#) on page 22).

The xml file consist of appenders and loggers.

Appenders

Appenders control the logging mechanism. By default the xml file contains two appenders `status_file` and `console`.

The `status_file` appender contains the following parameters:

- `appender name`

The `appender name` parameter indicates the name of the appender. The default name is set to "statusfile".

- `appender class`

The default configured class is set to `org.apache.log4j.RollingFileAppender`. To configure any other class, refer to the Apache documents.

- `maxFileSize`

The `maxFileSize` parameters specifies the size of a single status file of viserver. The default value is set to 10240KB (10MB).

- `File`

The `File` parameter indicates the absolute path name of the log file. The default path is set to `/var/opt/perf/status.viserver`.

- `layout class`

The default layout class is set to `org.apache.log4j.PatternLayout` and the pattern is specified.

- `Threshold`

The `Threshold` parameter defines the maximum level of details that the appender can log into the specified logger. The default value is set to "all".

- `maxBackupIndex`

The `maxBackupIndex` parameter specifies the maximum number of backup status files that need to be backed up. The moment `status.viserver` reaches the value specified in `maxFileSize`, it will be saved as `status.viserver.1` and logging continues in a new empty `status.viserver` file. When the new `status.viserver` file reaches the value specified in `maxFileSize`, the following happens:

- the `status.viserver` file will be saved as `status.viserver.1`
- the existing `status.viserver.1` will be saved as `status.viserver.2`, and
- logging continues till it reaches the value specified in `maxBackupIndex`.

When the number of the logfiles reach the maximum number as defined for backup, the first `status.viserver` that was saved is deleted, the other files are saved with new names as explained and logging continues in an empty `status.viserver` file

The `console` appender logs data on the console. Console appender is configured to log only fatal information.

Loggers

You can specify the loggers after you specify the appenders. Loggers specify the following details:

- `logger name`

The logger name is the name of the logger. It can be a specific logger like `perfragent` or a more generic logger (`root`).

- `logging level`

This can be one of `all`, `trace`, `debug`, `info`, `warn`, `error`, `fatal` and `no`.

- `logging details`

This specifies the logging details by specifying the appender.

By default the `xml` file contains the following loggers:

1. `com.hp.perfragent logger`

The `com.hp.perfagent` logger is responsible for logging `perfagent` (`viserver`) specific details in `/var/opt/perf/status.viserver` file. The `com.hp.perfagent` logger appear as follows:

Specified within the block

```
logger name = "com.hp.perfagent">
```

```
....
```

```
</logger>
```

Note that the default logging level for this logger is "info" and changing the logging level to "debug" will result in more debugging information getting logged into `status.viserver` file.

You can change the configuration for the logger only under the following scenarios:

- For very minimal logging in `status.viserver` change the level to "fatal".
- Change the level to "debug" to log debugging information into `status.viserver`.
- This is recommended only if the Support Engineer asks for it.

2. `root` logger

The `root` logger appear as follows:

Specified within the block

```
<root>
```

```
...
```

```
</root>
```

Note that the default logging level for this logger is "fatal".



It is strongly recommended NOT to change this level. If this level is changed, Glance functionality will get affected.

Viewing Status of `viserver`

When Performance Agent is installed on vMA 4.0, `viserver` records the logical data. To view the status of `viserver`, use one of the following command:

- **`ovpa status`**

or

- **perfstat** command.

Sample output of the command:

```
# ovpa status
:
:
Running VIservr          PID      Port
                        11026    12345
```


Removing Performance Agent

If you want to remove Performance Agent from a system, run the **ovpa.remove** script available in the `/opt/perf/bin/` directory. However, before removing Performance Agent, make sure you archive any log files that were created. These files contain performance data for that system and can be used to extract or view data at a later point of time. For steps to remove Performance Agent in a virtualized environment, see [Removing Performance Agent in a Virtualized Environment](#) on page 26.

To uninstall Performance Agent from a system, follow these steps:

- 1 Log in as user **root**.
- 2 Change the directory path by typing:

```
cd /opt/perf/bin/
```

- 3 Type **ls** to verify that the `ovpa.remove` script is available in this directory.

- 4 Run the uninstall script. To uninstall, type:

```
./ovpa.remove
```

Type **y** when asked for a confirmation to remove Performance Agent.

A message displays, as follows:

```
"Do you want to remove your ovpa datafiles and directories?  
[n]"
```

You need to confirm if you want to remove the Performance Agent configuration and logfiles. Answer **n** (no) if you want to keep the configuration and log files at the original location.

The **./ovpa.remove** script supports the following command line options for a more flexible product removal. The syntax of the command is as follows:

```
ovpa.remove [-f] [-h] [-r]
```

- f Force removal. Do not prompt for confirmation before removing the product (non-interactive mode).
NOTE: This option will also remove GlancePlus, if it is installed.
- h Help: Displays this usage message.
- r Remove the Performance Agent configuration, data, and product files.

Some product packages may remain installed on the system, if those packages are shared across other HP Software products and are required by other tools. Such packages will be removed only when the last tool requiring them is also removed.

- ▶ When you uninstall HP Performance Agent from a system on which HP Operations Agent is available, error messages on 'Failed dependencies' appear in the uninstallation log files. These error messages appear because HP Operations Agent is already installed on the system and you can ignore them.

Removing Performance Agent in a Virtualized Environment

To uninstall Performance Agent from a system, follow these steps:

- 1 Log in as **vi-admin**

- ▶ Typically, on vMA 4.0 the root user account is disabled. Follow the Step 2 to run any command with root privileges.

- 2 To run a command with root privileges:
 - Type the command **sudo bash**, and then type the password. This initiates a shell with root privileges.

- ▶ Alternatively, you can enter all the commands for removing the Performance Agent by prefixing **sudo** before the command and typing the root password

- 3 Change the directory path by typing:
cd /opt/perf/bin/
- 4 Type **ls** to verify that the `ovpa.remove` script is available in this directory.
- 5 Run the uninstall script. To uninstall, type:

`./ovpa.remove`

▶ Type `sudo ovpa.remove`, and enter the root password if you ignored the Step 2 in this section

Type **y** when asked for a confirmation to remove Performance Agent.

A message displays, as follows:

```
"Do you want to remove your ovpa datafiles and directories?  
[n]"
```

You need to confirm if you want to remove the Performance Agent configuration and logfiles. Answer **n** (no) if you want to keep the configuration and log files at the original location.

The `./ovpa.remove` script supports the following command line options for a more flexible product removal. The syntax of the command is as follows:

`ovpa.remove [-f] [-h] [-r]`

-f Force removal. Do not prompt for confirmation before removing the product (non-interactive mode).

NOTE: This option will also remove GlancePlus, if it is installed.

-h Help: Displays this usage message.

-r Remove the Performance Agent configuration, data, and product files.

Some product packages may remain installed on the system, if those packages are shared across other HP Software products and are required by other tools. Such packages will be removed only when the last tool requiring them is also removed.

▶ When you uninstall HP Performance Agent from a system on which HP Operations Agent is available, error messages on 'Failed dependencies' appear in the uninstallation log files. These error messages appear because HP Operations Agent is already installed on the system and you can ignore them.

2 Starting and Running HP Performance Agent

If you are planning to log data from other sources using data source integration (DSI), read the *HP Performance Agent for UNIX Data Source Integration Guide*. Performance Agent supports the HTTP data communication mechanism on Linux.

Starting and Stopping Performance Agent

When installation is complete, Performance Agent can be started. If you ever need to stop, start, or restart Performance Agent, the `ovpa` script lets you stop or restart currently running processes.

To start Performance Agent and its processes:

- 1 Log in as **root**.
- 2 Type: **`/opt/perf/bin/ovpa start`**

The `ovpa start` script starts Performance Agent and all its processes, including the `scopeux` (data collector), `midaemon` (measurement interface daemon), `tttd` (transaction tracking daemon), `coda`, `ovc`, `ovbbccb`, and the alarm generator. As the script executes, the status of the processes that are started is displayed on the screen.

You can stop Performance Agent processes while they are running and restart them using the `ovpa` script and its appropriate options.

- `ovpa stop` stops all Performance Agent processes except `ttd` (the transaction tracking daemon), `ovc`, and `ovbbccb`. These processes must always be running. If Operations Manager agent is running on the system, `ovpa stop` does not stop the `codad` daemon.



If you must stop `ttd`, any ARM-instrumented applications that are running must also be stopped before you restart `ttd` and Performance Agent processes.

- `ovpa stop scope` stops `scope`, and the command also stops `midaemon` if no other application is attached to `midaemon`.
- `ovpa restart server` causes `codad` to stop and then start, temporarily disabling alarming and access for clients such as Performance Manager, and reread the `datasources` file. It also stops and then starts the `perfalarm` processes and rereads the `alarmdef` file.
- `ovpa restart` causes `scopeux` and the server processes to temporarily stop and then start. It reads the `parm` file as well as forces the transaction daemon `ttd` to reread its configuration file `ttd.conf`.
- `ovpa restart alarm` causes the alarm generator process to reread the `alarmdef` file so that if you have made changes to the file, the new alarm definitions will take effect without restarting all Performance Agent processes. This action does not disrupt other processes.

Starting and Stopping Automatically

The process of automatically starting Performance Agent whenever the system restarts, and of stopping whenever the system shuts down is controlled by the Performance Agent system startup and shutdown script and the Performance Agent startup configuration file, which varies according to the specific requirements of your Linux distribution as follows:

Table 1 Performance Agent Startup Scripts and Configuration Files

Linux Distribution	Performance Agent Startup and Shutdown Script	Performance Agent Startup Configuration File
Red Hat	<code>/etc/rc.d/init.d/ovpa</code>	<code>/etc/sysconfig/ovpa</code>
SuSE	<code>/etc/init.d/ovpa</code>	<code>/etc/sysconfig/ovpa</code>

The Performance Agent startup configuration file contains various environment variables that control the behavior of Performance Agent at system startup. This file is a source file for the Performance Agent system startup and shutdown script.

You can modify the following environment and shell variables to change the default behavior of Performance Agent:

- `OVPA_START` controls the auto-start of Performance Agent whenever your system restarts. The variable can have one of the following values:
 - 0 Do not start Performance Agent at system startup
 - 1 Start Performance Agent at system startup
- The `OVPA_START_COMMAND` is a variable that specifies the script options that are used to start Performance Agent whenever your system restarts. Normally, the variable is set to:

```
/opt/perf/bin/ovpa start
```



The Performance Agent startup configuration file is not overwritten when Performance Agent is patched or updated, so that any customizations you made are preserved.

Status Checking

Several status files are created in the `/var/opt/perf/` and `/var/opt/OV/` directories when Performance Agent is started. You can check the status of all or some Performance Agent processes using the `perfstat` command.

The following status files contain diagnostic information you can use to troubleshoot problems that may arise with the Performance Agent processes.

```
/var/opt/perf/status.scope  
/var/opt/perf/status.perfalarm  
/var/opt/perf/status.ttd  
/var/opt/perf/status.mi  
/var/opt/OV/log/coda.txt  
/var/opt/perf/status.viserver
```

Examples Directory

The `/opt/perf/examples/` directory contains examples of configuration, syntax, and sample program files that can be used to customize your HP Performance Tools. For example, the `/opt/perf/example/config/` subdirectory contains sample alarm definitions and examples of `parm` file application-specific parameters. For more information, see the `/opt/perf/examples/README` file.

Communicating Across a Firewall

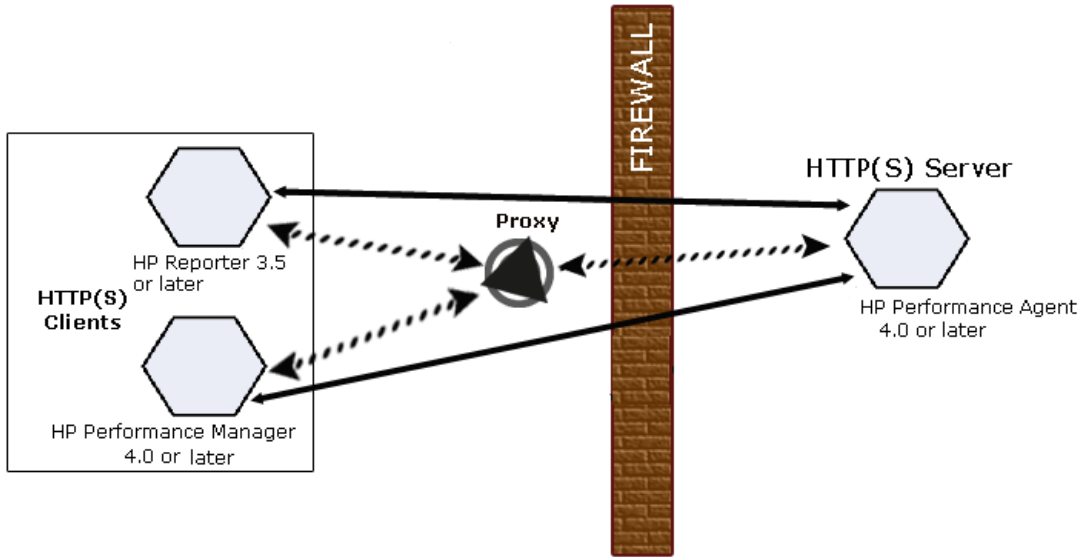
A firewall can be defined as a method for filtering the flow of data between one network and another. Performance Agent now supports HTTP based communications interface for data access between client and server applications, in addition to the previously supported communication mechanism through a packet-filtering network firewall. Performance Agent internally uses the Black Box Communication (BBC) component to implement HTTP based data communication. The BBC component provides a firewall-friendly single-port communication infrastructure based on HTTP or HTTPS (BBC5). The HTTP based interface is flexible, as it can use proxies, requires fewer ports, and is firewall friendly.

If a network firewall exists between two systems, Performance Manager and Reporter can get data from the Performance Agent system.



The name Performance Manager is used throughout this document to refer to Performance Manager versions 4.00 and later. Performance Manager 3.xx does not connect to Performance Agent for Linux systems.

Figure 1 Communicating with Performance Agent in a Firewall Environment



For firewall configuration it is important to know which system initiates the communication (client) and which receives communication requests (server), so that the firewall rules can be set up accordingly. In a typical remote communication, a client, using the source port, connects to a server that is listening on the destination port on a remote system. Understand your firewall environment including the client and server data flow. To configure communications with Performance Agent in a firewall environment, perform the following tasks:

- 1 [Configure Performance Agent Ports.](#)
- 2 [Configure HTTP Clients in a Firewall Environment.](#)
- 3 [Verify Firewall Configuration.](#)

Figure 1 on page 34 shows how Performance Agent communicates with Reporter (version 3.50 or later) and Performance Manager (Performance Manager version 4.00 or later) through a firewall. Performance Agent is an

HTTP or HTTPS server. Reporter and Performance Manager 4.xx are HTTP clients. Performance Manager 5.00 can be an HTTP or HTTPS client. If an HTTP proxy is used, Reporter and Performance Manager communicate with Performance Agent via the proxy.



For Linux users, if you cannot upgrade Performance Manager 3.xx to Performance Manager 4.00 or later, you must access the Performance Agent for Linux data locally via the `extract` program's `export` function.

Configure Performance Agent Ports

You can configure Performance Agent ports in a firewall environment in one of the two ways:

- [Configure Two-Port Communication](#)
- [Configure Single-Port Communication](#)
- [Verify Port Settings](#)

On the Performance Agent system using BBC5, by default, the BBC communication broker uses port 383 and `coda` uses a dynamically allocated port.

Configure Port Settings for the BBC Communication Broker

You can configure the port settings of the default port used by the BBC communication broker. Use the `ovconfchg` command to change the port settings on the Performance Agent system. You can use one of the following options:

```
— ovconfchg -ns bbc.cb -set SERVER_PORT <port>
```

(Or)

```
— ovconfchg -ns bbc.cb.ports -set PORTS <domain>:<port>
```

```
Example: ovconfchg -ns bbc.cb.ports -set PORTS  
xyz.abc.com:50383
```

The second option is the preferred way of changing ports.

Restart Performance Agent using the following command:

```
ovpa restart server
```

Configure Two-Port Communication

By default, `coda` daemon uses a dynamically chosen second port, in addition to port 383 used by the BBC communication broker. You can configure the port settings of `coda` to listen at a well known port of your choice using the `ovconfchg` command. Type the following commands:

```
ovconfchg -ns coda.comm -set SERVER_PORT <portnumber>
```

```
ovpa restart server
```

➤ Using a dynamic port when connecting to Performance Agent remotely through a firewall can be difficult, because you may not know which firewall ports to open.

Configure Single-Port Communication

On the Performance Agent system, the BBC communication broker uses port 383 and `coda` uses a port that is dynamically allocated. You can configure the port settings for `coda` to share the same port used by the communication broker using the `ovconfchg` command. You can use one of the following options:

```
ovconfchg -ns coda.com -set SERVER_BIND_ADDR localhost
```

```
ovpa restart server
```

➤ To enable two-port communication from single-port communication, type the following command:

```
ovconfchg -ns coda.comm -set SERVER_BIND_ADDR
```

Verify Port Settings

To verify the port settings, type the following command:

```
perfstat -d
```

The output displays the following information:

- port number of the port used by Coda
- port number of the port used by BBC communication broker

- the port settings configured
- indicates if secure communication is enabled
- indicates if coda metric collection is enabled

For example:

Datacomm configuration:

Coda Port	49552 (Dynamic)
	Two port Communication
BBC communication broker port	383
SSL security	NONE
Coda Metric Collection(Prospector)	Disabled

Configure HTTP Clients in a Firewall Environment

There are two ways to configure HTTP clients in a firewall environment:

- [Configuring HTTP Clients \(Reporter/Performance Manager\) with HTTP Proxy](#)
- [Configuring HTTP Clients \(Reporter/Performance Manager\) without HTTP Proxy](#)

In both cases, to access data from Performance Agent nodes, only one port needs to be opened on the HTTP server (Performance Agent) side.

Configuring HTTP Clients (Reporter/Performance Manager) with HTTP Proxy

It is recommended that you use HTTP proxies when communicating through a firewall. This simplifies the configuration by using proxies that are often already in use in your environment. The firewall must be open for exactly one port if proxies are to be used in both directions. To access data collected by Performance Agent, ports for the HTTP server (Performance Agent) and the HTTP client (Reporter and Performance Manager) must be opened.



It is recommended that you do not change the default 383 port.

When an HTTP proxy is used, Reporter and/or Performance Manager for Windows and UNIX need to be configured to specify the proxy to be used to contact Performance Agent.

To configure Performance Manager versions 5.00 and later, and Reporter 3.7x, type the following command,

```
ovconfchg -ns bbc.http -set PROXY proxy:port+(a)-(b)
```

The variables *a* and *b* are comma separated lists of hostnames, networks, and IP addresses that apply to the proxy. Multiple proxies may be defined for one PROXY key using the “;” or “,” delimiter. “-” before the list indicates that those entities do not use this proxy, “+” before the list indicates that those entities do use this proxy. The first matching proxy is used.

To configure Reporter versions 3.60 and earlier, and Performance Manager 4.xx:

Edit the `/var/opt/OV/conf/BBC/default.txt` configuration file.

In the [DEFAULT] section of the `default.txt` file, locate the lines that relate to the PROXY and set the PROXY parameter as follows.

```
PROXY web-proxy.hp.com:8088-(localhost, *.hp.com) + (*)
```

In this example, the proxy `web-proxy` will be used with port 8088 for every server (*) except requests for the local machine (`localhost`) and requests internal to HP (matching `*.hp.com`, for example **www.hp.com**).

Configuring HTTP Clients (Reporter/Performance Manager) without HTTP Proxy

If HTTP proxies are not available, additional configuration settings are required on the HTTP clients (Reporter and Performance Manager system).

If Reporter and Performance Manager for Windows are installed on the same system and both access Performance Agent in parallel, you can specify a port range as described in this section. If they are running on different systems, you can specify a single port for each. Depending on the versions of Performance Manager and Reporter you are using select from the following options:

Configure Performance Manager 5.00 and later, and Reporter 3.7x as follows:

Type the following command,

```
ovconfchg -ns bbc.http -set CLIENT_PORT <port range>
```

Where *<port range>* is the range of ports you want to use.

For example:

```
ovconfchg -ns bbc.http -set CLIENT_PORT 14000-14003
```

Configure Reporter versions 3.60 and earlier, and Performance Manager 4.xx as follows:

Edit the `/var/opt/OV/conf/BBC/default.txt` file as follows.

- 1 Locate the lines that apply to `CLIENT_PORT` and uncomment the line;`CLIENT_PORT = .`
- 2 Specify the port range for the `CLIENT_PORT` parameter. For example:

```
CLIENT_PORT = <port range>
```

Where `<port range>` is the range of ports you want to use. For example:

```
CLIENT_PORT = 14000-14003
```

Verify Firewall Configuration

To verify your configuration, use the command:

```
ovcodautl -ping -n <system name>
```

This output of this command indicate the status of your communication settings.

Configuring Systems with Multiple IP Addresses

If your environment includes systems with multiple network interfaces and IP addresses and you want to use a dedicated interface for the HTTP-based communication, then you can use the parameters `CLIENT_BIND_ADDR` and `SERVER_BIND_ADDR` to specify the IP address that should be used.

- If you have multiple network interfaces and IP addresses on the Performance Agent (Server) system, specify the `SERVER_BIND_ADDR` parameter as follows:

```
ovconfchg -ns bbc.http -set SERVER_BIND_ADDR <IP Address>
```

- If you have multiple network interfaces and IP addresses on the Performance Manager 5.00 (client) system, specify the `CLIENT_BIND_ADDR` parameter as follows:

```
ovconfchg -ns bbc.http -set CLIENT_BIND_ADDR <IP Address>
```

- If you have multiple network interfaces and IP addresses on the Reporter/ Performance Manager 4.xx system, specify the `CLIENT_BIND_ADDR` parameter.

Edit the `/var/opt/OV/conf/BBC/default.txt` file as follows:

- a Locate the lines that apply to `CLIENT_BIND_ADDR` and uncomment the line

```
;CLIENT_BIND_ADDR =
```
- b Specify the IP address for the `CLIENT_BIND_ADDR` parameter.

Configuring Secure Communication

Performance Agent supports certificate-based secure communication and client authentication based communication.

Using Certificates

Performance Agent supports certificate-based secure data communication only in the HP Operations Manager 8.xx environment.

To configure secure communication on your Operations Manager setup, refer to the *HP Operations Manager for UNIX Firewall Concepts and Configuration Guide*. For more information on Operations Manager 8.xx HTTPS agent, refer to the *HP Operations Manager HTTPS Agent Concepts and Configuration Guide*.

If you have already configured HTTPS communication in the Operations Manager 8.xx environment, make the following changes to configure secure communication between Performance Agent and Performance Manager 5.00.



Reporter and Performance Manager 4.xx do not support certificate-based secure communication.

On the Performance Agent system, set `SSL_SECURITY` to `REMOTE` for `codas`. Type the following commands:

```
ovconfchg -ns coda -set SSL_SECURITY REMOTE  
ovcodutil -config
```

Using Client Authentication

Performance Agent enables optional authentication of client connections from products such as Performance Manager or Reporter. The authentication capability allows you to specify, for a given Performance Agent instance, which hosts are allowed to make client connections to that instance.

The Client Authentication feature enables or disables connections from any version of the Performance Manager and Reporter clients. Your client software does not need to be updated for you to take advantage of this feature.

For authorized clients the authentication process is transparent — their client connection proceeds as it has with previous versions of Performance Agent. Unauthorized clients receive a message indicating denial of service.

Enabling Authentication with the `authip` File

Authentication is enabled by the presence of a file called `authip`. On systems where HTTP communication is enabled, the `authip` file exists in the `/var/opt/OV/conf/perf/` directory. The `authip` file lists hosts from which client connections are to be permitted.

- If the `authip` file exists in the `/var/opt/OV/conf/perf/` directory, its contents determine which hosts are permitted client connections. Clients running on the same host as the Performance Agent instance are automatically authenticated, which means the clients do not need an entry. A zero-length `authip` file dictates that only clients running on the Performance Agent host can connect.
- If the `authip` file does not exist (the default) in the `/var/opt/OV/conf/perf/` directory, then no authentication is performed and any client will be allowed to connect, as was the case with prior Performance Agent versions.

The `authip` file is checked each time a client attempts to connect for service with Performance Agent. Performance Agent does not need to be restarted for changes to the `authip` file to become effective.

The Performance Agent client authentication capability requires that your network be able to resolve the client entries in the `authip` file. Depending upon the nature of the entries, this may require name services such as those provided by DNS, NIS, or `/etc/hosts/` files.

A good test is to ensure that you can successfully ping each `authip` entry from the Performance Agent host. Client authentication works through a firewall with the same provision that the client entries in the `authip` file be pinged from the Performance Agent host.

Formatting the `authip` File

The `authip` file must conform to the following format:

- One client host may be listed per line.
- Client entries can be in any one of the following formats:

- Fully qualified domain name
- Alias
- IP address (must be in IPv4 dotted quad format)
- Client entries can have no embedded spaces.
- A line containing a # in the first column is taken as a comment, and is ignored.
- Blank or zero-length lines are ignored.
- The IP address may not have a leading zero. For example, the IP address 23.10.10.10 cannot be represented as 023.10.10.10.

Thus, given an `/etc/hosts` entry as follows:

```
123.456.789.1 testbox testbox.group1.thecompany.com
```

any one of the following entries in the `authip` file would enable clients from the `testbox` host to connect:

```
#===== Examples of authip file entries =====
#
# Use of an IP address
123.456.789.1
#
# Use of an alias
testbox
#
# Use of a fully qualified domain name
testbox.group1.thecompany.com
#===== End of examples of authip file entries =====
```

Configuring Data Sources

Performance Agent uses the `coda` daemon to provide collected data to the alarm generator and analysis product. Each data source consists of a single log file set. The data source list that `coda` will access is maintained in the `datasources` configuration file that resides in the `/var/opt/OV/conf/perf/` directory. When you first start up Performance Agent after installation, a default data source named `SCOPE` is already configured and provides access to the active `scopeux` log file set.

If you want to add other data sources, you configure them in the `datasources` file. Then, when you restart Performance Agent, the `coda` daemon reads the `datasources` file and makes the data available over `datacomm` linkages to analysis tools for each data source it finds.

Datasources Configuration File Format

Each entry you place into the `datasources` configuration file represents a data source consisting of a single log file set. The entry specifies the data source name and location. Fields are case-insensitive except for the log file path name. The syntax is:

```
datasource=datasource_name logfile=logfile_set
```

- **datasource** is a keyword. **datasource_name** is the name used to identify the data source. For example, the data source name used in alarm definitions or by analysis software. Data source names must be unique. They are translated into upper case. The maximum length for a data source name is 64 characters.
- **logfile** is a keyword. **logfile_set** is the fully-qualified name identifying the log file (created by the `dsilog` or `scope` process, ending in `.log`), and is case-sensitive.

Following are two examples of the `datasources` file's data source entries:

```
datasource=SCOPE logfile=/var/opt/perf/datafiles/logglob
datasource=ASTEX logfile=/tmp/dsidemo/log/astex/ASTEX_SDL
```

After updating `datasources`, use the `ovpa restart server` command to restart the `coda` daemon. First, `ovpa restart server` stops all `coda` processes. It then starts the `coda` daemon that rereads the `datasources` file and picks up any changes made to it.

Note that stopping the `cod`a daemon processes results in any current connection in Performance Manager being lost. For example, if you are drawing a graph on a data source and try to draw another graph, you must reselect the data source in Performance Manager and re-establish the connection once the `cod`a daemon is started again.

Examine the contents of the `/var/opt/OV/log/coda.txt` file to check if the `cod`a daemon was activated or for error messages.

Deleting Data Sources

If you no longer want to view the log file data from Performance Manager or process alarms for the log file, you can modify the `datasources` file in the Performance Agent configuration directory, `/var/opt/OV/conf/perf/` to remove the data source and path to the log file set. Then run the `ovpa` program to restart the `cod`a daemon as described in [Configuring Data Sources](#) above.

You can also remove the log file set if you no longer need the data. If you remove the log file set but do not remove the data source from `datasources`, `cod`a will skip the data source.

You might also choose to stop logging data to a log file set but keep the `cod`a daemon open so you can view the historical data in Performance Manager. In this case, stop the `dsilog` process but don't delete the data source from the `datasources` file.

Parm File

The `parm` file is a text file that specifies configuration of the `scopeux` data collector including log file maximum sizes, interesting process threshold definitions, and application definitions. Comments in the file provide an overview of the various settings.

The `parm` file is provided with Performance Agent in the `/opt/perf/newconfig/` directory and is copied into the `/var/opt/perf/` directory during installation. For a complete description of the `parm` file and its parameters, see the “Parm File” section in Chapter 2 of the *HP Performance Agent for UNIX User's Manual*.

Defining Alarms

If you plan to use alarms to monitor performance, you must specify the conditions that generate alarms in a set of alarm definitions in the Performance Agent `alarmdef` file which is a text file. When Performance Agent is first installed, the `alarmdef` file contains a set of default alarm definitions. You can use these default definitions or customize them to suit your needs.

For instructions on defining alarms, see the “Performance Alarms” chapter in the *HP Performance Agent for UNIX User’s Manual*. This chapter also describes the alarm definition syntax, how alarms work, and how alarms can be used to monitor performance.

3 Documentation

Performance Agent software includes the standard Performance Agent documentation set in viewable and printable file formats. You can view the Adobe Acrobat format (*.pdf) documents online and print as needed. ASCII text (*.txt) documents are also printable. However, you can view a text file on your screen using any UNIX text editor such as vi. The documents are listed in the following table along with their file names and online locations.

Table 2 Performance Agent Documentation Set

Document	File Name	Location
<i>HP Performance Agent for Linux Systems Installation and Configuration Guide</i>	ovpainst.pdf	/opt/perf/ paperdocs/ovpa/C
<i>HP Performance Agent for UNIX User's Manual</i>	ovpausers.pdf	/opt/perf/ paperdocs/ovpa/C
<i>HP Performance Agent for UNIX Data Source Integration Guide</i>	ovpadsi.pdf	/opt/perf/ paperdocs/ovpa/C
<i>HP Performance Agent for UNIX and GlancePlus Tracking Your Transactions</i>	tyt.pdf	/opt/perf/ paperdocs/arm/C
<i>Application Response Measurement (ARM) API Guide</i>	arm2api.pdf	/opt/perf/ paperdocs/arm/C
<i>HP Performance Agent for Linux Metrics Definitions</i>	metlinux.txt	/opt/perf/ paperdocs/ovpa/C
<i>HP Performance Agent metrics list by Data Class for all operating systems</i>	mettable.txt	/opt/perf/ paperdocs/ovpa/C

Viewing Documents on the Web

The listed .pdf and .htm documents can also be viewed on the HP Software Product Manuals web site at:

<http://h20230.www2.hp.com/selfsolve/manuals>

Select **Performance Agent** from the product list box, select the release version, select the OS, and select the manual title. Click **[Open]** to view the document online, or click **[Download]** to place the file on your computer.

Adobe Acrobat Files

The Adobe Acrobat files were created with Acrobat 7.0 and are viewed with the Adobe Acrobat Reader versions 4.0 and later. If the Acrobat Reader is not in your Web browser, you can download it from Adobe's web site:

<http://www.adobe.com>

While viewing a document in the Acrobat Reader, you can print a single page, a group of pages, or the entire document.

From Linux, you can read a .PDF file by entering:

acroread filename.pdf

Configuring Coda

Introduction

Coda is a light weight data collection agent for HP Operations Agent. It is a subset of Performance Agent and acts as a communication conduit for Performance Agent. All the configuration parameters are configured under the namespace `coda` and `coda.comm` using the command `ovconfchg`.

Coda namespace

The following table lists the configuration parameters for the namespace `coda`:

Parameters in coda namespace	Description	Default Value
DISABLE_PROSPECTOR	Used to disable data collection from coda datasource in a coexistence environment of HP Operations Agent and Performance Agent	false
ENABLE_PROSPECTOR	Used to enable data collection from coda datasource in a standalone environment of Performance Agent	false
SSL_SECURITY	Used to enable secure communication from coda	NONE
RESPONSE_SIZE_LIMIT	Used to specify the maximum amount of memory allocated by coda	104857600 (100 megabytes)

DISABLE_PROSPECTOR

Use this option to specify the data collection preferences through coda, when both the HP Operations Agent and Performance Agent are installed. The default value is false. The format is as follows:

ovconfchg -namespace coda -set DISABLE_PROSPECTOR <value>

- true: coda will not collect data for the Coda datasource
- false: coda will collect the data for the Coda datasource

ENABLE_PROSPECTOR

Use this option to specify the data collection preferences through coda, when only Performance Agent is installed. The default value is `false`. This parameter will be ignored in a coexistence scenario. The format is as follows:

```
ovconfchg -namespace coda -set ENABLE_PROSPECTOR <value>
```

- `true`: coda will collect data for the Coda datasource
- `false`: coda will not collect data for the Coda datasource



To verify if coda prospector is enabled, type the following command:

```
ovcodautl -dumpds coda
```

SSL_SECURITY

Use this option to enable secure communication through coda. The default value is `NONE`. The format is as follows:

```
ovconfchg -namespace coda -set SSL_SECURITY <value>
```

- `NONE`: coda does not require SSL connections for either the local or remote clients
- `REMOTE`: coda requires all remote connections to use SSL
- `ALL`: coda requires all connections (both local and remote) to use SSL



Use this parameter only when certificates are present on the system. Certificates will be installed only if HP Operations Agent 8.xx is present on the system.

RESPONSE_SIZE_LIMIT

Use this command to specify the maximum amount of memory allocated by the coda daemon for a query response. The default value is `104857600` (100megabytes). The format is as follows:

```
ovconfchg -namespace coda -set RESPONSE_SIZE_LIMIT <value>
```



If the specified limit is exceeded the following error message appears:

Response exceeds memory limits, use several smaller requests

Coda Communication namespace (coda.comm)

The following table lists the configuration parameters for the namespace `coda.comm`:

Parameters in coda.comm namespace	Description	Default Value
<code>SERVER_PORT</code>	Used to configure port settings	0
<code>SERVER_BIND_ADDR</code>	Used to specify bind address for the server port	<code>INADDR_ANY</code>
<code>LOG_SERVER_ACCESS</code>	If set to 'true', coda logs every access to the server providing the information about sender's IP address, requested HTTP address, requested HTTP method, and response status.	false

SERVER_PORT

You can configure the port settings of the default port used by the coda. The default value for this port is 0. If the port is set to 0, the operating system will assign the first available port number. Use the `ovconfchg` tool to change the port settings on the Performance Agent system. Type the command:

```
ovconfchg -namespace coda.comm -set SERVER_PORT <port no>
```

SERVER_BIND_ADDR

Use this option to specify the bind address for the server port. When the value is set to `localhost`, all the communication to coda server happen through `ovbbccb`. The format is as follows:

```
ovconfchg -namespace coda.comm -set SERVER_BIND_ADDR <Bind address>
```

LOG_SERVER_ACCESS

You can enable or disable the access to server using this option. If this option is set to `true`, coda records every access to the server, providing information about the senders IP address, requested HTTP address, requested HTTP method, and response status. This value typically will not be changed.

```
ovconfchg -namespace coda.comm -set LOG_SERVER_ACCESS <value>
```

Single Port Communication

This is the default communication method with Performance Agent. Use the following options to enable single port communication in coda:

```
ovconfchg -ns coda -set SSL_SECURITY REMOTE/ALL
ovconfchg -ns coda.comm -set SERVER_BIND_ADDR localhost
```

Multi Port Communication

Use the following option to enable multi port communication in coda:

```
ovconfchg -ns coda.comm -set SERVER_BIND_ADDR ""
```

There are two methods to find out single port and multi port communication in coda:

- 1 You can use this option to verify if the port is used for single port or multi port communication from the local host machine:

```
bbcutil -reg
```

For single port communication,

```
BasePath=/Hewlett-Packard/OpenView/Coda/
Protocol=HTTPS
BindAddress=localhost
Port=59814
Authentication=NONE
```

If the value returned is `local host` or `127.0.0.1`, then it is single port communication.

For multi port communication,

```
BasePath=/Hewlett-Packard/OpenView/Coda/
Protocol=HTTPS
BindAddress=ANY
Port=381
Authentication=NONE
```

If the value returned is any other value other than `local host`, then it is multi port communication.



bbcutil will be present in the `<Install Dir>/bin` directory.

- 2 You can use this option to verify if the port used is for single port or multi port communication from a system other than local host:

```
ovcodauti1 -n <hostname> -ping
```

For example,

```
ovcodauti1 -n ovphpt4 -ping
```

For single port communication,

```
Ping of 'OvBbcCb' at: 'http://ovphpt4:383/Hewlett-Packard/
OpenView/BBC/ping' successful
```

```
Ping of 'Coda' at: 'http://ovphpt4:383/Hewlett-Packard/OpenView/
Coda/' successful
```

For multi port communication,

```
ovcodauti1 -n ovphpt4 -ping
```

```
Ping of 'OvBbcCb' at: 'http://ovphpt4:383/Hewlett-Packard/
OpenView/BBC/ping' successful
```

```
Ping of 'Coda' at: 'http://ovphpt4:62581/Hewlett-Packard/OpenView/
Coda/' successful
```

The port numbers are different in the two outputs.



For the Coda clients, all the parameters in the `coda.com` namespace override the parameters defined in the `bbc.http` namespace.

Communication Broker namespace (bbc.cb)

The following table lists the configuration parameters for the namespace `bbc.cb`:

Parameters in <code>bbc.cb</code> namespace	Description	Default Value
<code>SERVER_PORT</code>	Used to configure port settings	383
<code>SERVER_BIND_ADDR</code>	Used to specify bind address for the server port	<code>INADDR_ANY</code>

`SERVER_PORT`

You can configure the port settings of the default port used by the communication broker. The default value for this port is 383. Use the `ovconfchg` tool to change the port settings on the Performance Agent system. The format is as follows:

```
ovconfchg -namespace bbc.cb -set SERVER_PORT <port no>
```



If a port is already defined in the communication broker port namespace (`bbc.cb.ports`), the operating system assigns it as the default port and overrides the `SERVER_PORT` value.

`SERVER_BIND_ADDR`

Use this option to specify the bind address for the server port. The format is as follows:

```
ovconfchg -namespace bbc.cb -set SERVER_BIND_ADDR <Bind address>
```

Communication Broker Port namespace (bbc.cb.ports)

The following table lists the configuration parameter for the namespace `bbc.cb.ports`:

Parameter in <code>bbc.cb.ports</code> namespace	Description	Default Value
<code>PORTS</code>	<p>Used to define the list of ports for all the communication brokers in the network that may be contacted by the applications on this host.</p> <p>The client applications use this as target port to communicate with the communication broker in the network. If the host name matches with one of the entries in this port settings, then the local communication broker port will be set to the port specified here.</p>	The value of ports is not set by default.

PORTS

This configuration parameter must be same on all the nodes. To change the port number of a communication broker on a particular host, the hostname must be added to the parameter.

For example,

```
name.hp.com:8000
```

You can use an asterisk as a wild card to denote the entire network

```
*.hp.com:8001
```

You can use a comma or a semicolon to separate entries in a list of hostnames.

For example,

```
name.hp.com:8000, *.hp.com:8001
```

In this example, all the hostnames ending with hp.com will configure their BBC communication broker to use port 8001 except the host “name”, which will use port 8000. All the other ports uses the default port 383.

You can also use the IP addresses and asterisk (*) to specify the hosts.

For example,

```
15.0.0.1:8002, 15.*.*.*:8003
```

Run the following command to set ports

```
ovconfchg -namespace bbc.cb.ports -set PORTS <port no>
```

HTTP namespace (bbc.http)

The following table lists the configuration parameter for the namespace `bbc.http`:

Parameters in <code>bbc.http</code> namespace	Description	Default Value
<code>RESPONSE_TIMEOUT</code>	Used to specify the maximum number of seconds to wait for a response	300
<code>CLIENT_PORT</code>	Used to specify bind port for the client requests	0
<code>PROXY</code>	Used to specify the proxy and port to be used for the specified hostname	The value of proxy is not set by default.

`RESPONSE_TIMEOUT`

Use this option to specify the maximum number of seconds to wait for a response. The default value is 300. The format is as follows:

```
ovconfchg -namespace bbc.http -set RESPONSE_TIMEOUT <value>
```

`CLIENT_PORT`

Use this option to specify the bind port for the client requests. The default value is `port 0`. The operating system assigns the first available port. This parameter is ignored for the requests to the localhost.



On the Windows system, this parameter should be defined on a large value because Windows system does not immediately release ports for reuse.

PROXY

Used to specify the proxy and port to be used for the specified hostname.

The format is as follows:

proxy:port+(a)-(b);proxy2:port2+(a)-(b); ...;

In this instance, the variables *a* and *b* are comma or semicolon separated lists of hostnames that apply to the proxy.

a: for which the proxy shall be used

b: for which the proxy shall not be used

The first matching proxy is chosen.

You can also use the IP addresses instead of hostnames. For example, 15.*.*.* is also valid, provided correct number of dots and colons are specified.

Glossary

alarm

An indication of a period of time in which performance meets or exceeds user-specified alarm criteria. Alarm information can be sent to an analysis system (such as Performance Manager) and to Operations Manager. Alarms can be identified in historical data log files using the `utility` program.

alarm generator

Handles the communication of alarm information. It consists of `perfalarm` and the `agdb` database. The `agdb` database contains a list of Performance Agent analysis nodes (if any) to which alarms are communicated, and various on/off flags that you set to define when and where the alarm information is sent.

alarmdef file

The file containing the alarm definitions in which alarm conditions are specified.

application

A user-defined group of related processes or program files. Applications are defined so that performance software can collect performance metrics for and report on the combined activities of the processes and programs.

application log file

See `logappl`.

coda daemon

A daemon that provides collected data to the alarm generator and analysis product data sources including `scopeux` log files or DSI log files. `coda` reads the data from the data sources listed in the `datasources` configuration file.

data source

Consists of one or more classes of data in a single `scopeux` or DSI log file set. For example, the Performance Agent SCOPE data source is a `scopeux` log file set consisting of global data. See also **datasources file**.

datasources file

A configuration file residing in the `/var/opt/OV/conf/perf/` directory. Each entry in the file represents a `scopeux` or DSI data source consisting of a single log file set. See also **perflbd.rc**, **coda** and **data source**.

datasources configuration file

A configuration file residing in the `/var/opt/OV/conf/perf/` directory. Each entry in the file represents a `scopeux` or DSI data source consisting of a single log file set.

data source integration (DSI)

The technology that enables Performance Agent to receive, log, and detect alarms on data from external sources such as applications, databases, networks, and other operating systems.

default.txt

A communications configuration file used to customize communication parameters for HP Software applications.

device

A device is an input and/or output device connected to a system. Common devices include disk drives, tape drives, DVD-ROM drives, printers, and user terminals.

device log file

See **logdev**.

DSI

See **data source integration**.

DSI log files

Log files containing self-describing data that are created by Performance Agent's DSI programs.

extract

A Performance Agent program that allows you to extract (copy) data from raw or previously extracted log files and write it to extracted log files. It also lets you export data for use by analysis programs.

extracted log file

A log file created by the `extract` program. It contains user-selected data ranges and types of data. An extracted log file is formatted for optimal access by the workstation analysis tool, Performance Agent. This file format is suitable for input to the `extract` and utility programs and is the preferred method for archiving performance data.

Glance

Glance (or GlancePlus) is an online diagnostic tool that displays current performance data directly to a user terminal or workstation. It is designed to assist you in identifying and troubleshooting system performance problems as they occur.

global

A qualifier that implies the whole system.

global log file

*See **logglob**.*

interesting process

A process becomes interesting when it is first created, when it ends, and when it exceeds user-defined thresholds for CPU use, disk use, response time, and so on.

log file set

A collection of files that contain data collected from one source.

logappl

The raw log file that contains measurements of the processes in each user-defined application.

logdev

The raw log file that contains measurements of individual device (such as disk and `netif`) performance.

logglob

The raw log file that contains measurements of the system-wide, or global, workload.

logindx

The raw log file that contains additional information required for accessing data in the other log files.

logproc

The raw log file that contains measurements of selected “interesting” processes. A process becomes interesting when it is first created, when it ends, and when it exceeds user-defined thresholds for CPU use, disk use, response time, and so on.

logtran

The raw log file that contains measurements of transaction data.

midaemon

A Performance Agent program that translates trace data into Measurement Interface counter data using a memory based MI Performance Database to hold the counters. This database is accessed by collector programs such as `scopeux`.

ovbbccb

The Operations Manager Communication Broker for HTTP(S) based communication controlled by `ovc`. See also `cod`a and `ovc`.

ovc

The Operations Manager controlling and monitoring process. In a standalone Performance Agent installation, `ovc` monitors and controls `cod`a and `ovbbccb`. If Performance Agent is installed on a system with Operations Manager for UNIX 8.x agent installed, `ovc` also monitors and controls Operations Manager for UNIX 8.x processes. See also `cod`a and `ovbbccb`.

ovpa script

The Performance Agent script that has options for starting, stopping and restarting Performance Agent processes such as the `scopeux` data collector, alarm generator, `ttd`, `midaemon`, and `coda`. See also the `ovpa man` page.

Performance Manager

Provides integrated performance management for multi-vendor distributed networks. It uses a single workstation to monitor environment performance on networks that range in size from tens to thousands of nodes.

parm file

A Performance Agent file containing the parameters used by `scopeux` to customize data collection.

perflbd.rc

A configuration file residing in the `/var/opt/perf/` directory. This file is maintained as a symbolic link to the `datasources` file. See also **datasources file**.

perfstat

A program that displays the status of all performance processes in your system.

process

Execution of a program file. It can represent an interactive user (processes running at normal, nice, or real-time priorities) or an operating system processes.

process log file

See **logproc**.

raw log file

Summarized measurements of system data collected by `scopeux`. See **logappl**, **logproc**, **logdev**, **logtran**, and **logindx**.

real time

The actual time in which an event takes place.

resize

Changes the overall size of a log file using the utility program's `resize` command.

run file

Created by the `scopeux` collector to indicate that the `scopeux` process is running. Removing the run file causes `scopeux` to terminate.

scopeux

The Performance Agent data collector program that collects performance data and writes (logs) it to raw log files for later analysis or archiving. *See also* **raw log files**.

scopeux log files

See **raw log files**.

status.scope file

Created by the `scopeux` collector to record status, data inconsistencies, and errors.

system ID

The string of characters that identifies your system. The default is the host name as returned by `uname -n`.

transaction log file

See **logtran**.

transaction tracking

The technology used in Performance Agent that allows information technology (IT) resource managers to measure end-to-end response time of business application transactions.

ttd.conf

The transaction configuration file where you define each transaction and the information to be tracked, such as transaction name, performance distribution range, and service level objective.

utility

A Performance Agent program that allows you to open, resize, scan, and generate reports on raw and extracted log files. You can also use it to check `parm` file and `alarmdef` file syntax, and obtain alarm information from historical log file data.

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