

HP Performance Agent

For the Windows® Operating System

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Installation and Configuration Guide

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1 Installing or Upgrading HP Performance Agent

HP Performance Agent software captures performance, resource, and transaction data from systems running Microsoft Windows. (See [Supported Architecture and Operating Systems](#) on page 10 for details on the supported Windows platform). Using minimal system resources, the software continuously collects, logs, summarizes, and time stamps data, and detects alarm conditions on current and historical data across your system. Using the Application Response Measurement (ARM) API standard, Performance Agent can log the end-to-end response times for instrumented business applications.

Performance Agent supports monitoring of Hyper-V virtualized environments. A new class of metrics BYLS on Hyper-V is introduced to capture performance and resource data on Hyper-V virtual machines.

Performance Agent supports monitoring of virtual machines hosted on VMware ESX Server 3.5 U2, ESX 3i, ESX 4.0 and ESX 4i. For more information, see [Performance Agent in a Virtualized Environment](#) on page 22.



In this document:

- The name Performance Agent for Windows refers to MeasureWare Agent (MWA) for Windows.
- The name HP Performance Manager refers only to versions 4.0 and later.
- The name HP Operations Manager refers to IT/Operations.
- The process names and software components refer to MeasureWare Agent (MWA).
- Hyper-V refers to Windows Server 2008 with Hyper-V role enabled.

Performance Agent includes the Extended Collection Builder and Manager, which allows access to Windows Registry performance counters. With the Extended Collection Builder and Manager, data available through the Windows registry can be collected and logged.

You can analyze the data using spreadsheet programs, HP analysis products such as Performance Manager, and third-party analysis products. Performance Agent provides data access to Performance Manager, HP Network Node Manager, and HP Operations Manager.

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 systems. The comprehensive data logged and stored by Performance Agent allows you to:

- Characterize the workloads in the environment.
- Analyze resource usage and load balance.
- Perform trend analysis on historical data to isolate and identify bottlenecks.
- Perform service-level management based on transaction response time.
- Facilitate capacity planning.
- Respond to alarm conditions.
- Solve system management problems before they arise.



If you have a factory integrated system, skip the rest of this chapter and go directly to [Chapter 2, Starting and Running HP Performance Agent](#)

Installation Requirements

For Performance Agent to run properly, your system must meet the requirements described in this section.

Hardware

Your Microsoft Windows system must satisfy any one of the following requirements:

- Intel Pentium processor or equivalent
- Intel Itanium2
- AMD Opteron
- Intel Pentium with EM64T
- Intel Xeon with EM64T

Supported Architecture and Operating Systems

Architecture	Operating System	Protocol
X86	<ul style="list-style-type: none"> • Windows 2000 • Windows Server 2003 editions, Windows 2003 R2 Enterprise Edition • Windows Vista Enterprise Edition, Windows Vista Business Edition • WindowsXP Standard with Service Pack 1 or later • Windows Server 2008 Enterprise Edition • Windows Server 2008 Standard Edition • Windows 2008 Server Core 	HTTP(S)
X86_64, AMD 64, EM64T	<ul style="list-style-type: none"> • Windows Server 2003 for x64 Editions • Windows XP Professional x64 Edition • Windows Vista Enterprise Edition • Windows Server 2008 Enterprise Edition • Windows Server 2008 Standard Edition • Windows 2008 Server Core 	HTTP(S)
IPF	<ul style="list-style-type: none"> • Windows 2003 Server for 64-bit Itanium-based Systems (native mode) • Windows 2008 Server for 64-bit Itanium-based Systems (native mode) 	HTTP(S)

See [Network Considerations](#) on page 12 for information on networking software requirements for Performance Agent.



Microsoft Windows Installer version 3.1 or later is required for successful installation of Performance Agent.

Communication Protocols

Performance Agent supports HTTP(S) 1.1 protocol for data communication.

Disk Space

HP Performance Agent uses 500 MB of disk space in the following areas: program files, control panel applet, data files, log files, and temporary files.

For Performance Agent applications, allow for at least 50 MB of free space on the drive you specify.

For Performance Agent log files, allow for at least 60 MB of free space on the drive you specify.

Performance Agent requires approximately 10 MB of disk space for program files that are stored in the Install directory path. Some additional space is required during installation (see “Temporary files” below).

- Control Panel Applet - The Performance Agent services program and various DLLs require 2.5 MB of disk space in the `<$windir$>\system32` directory.
- Performance Agent is installed in the `InstallDir` directory. All Performance Agent related binaries and shared libraries are installed in `<InstallDir>\bin` and `<InstallDir>\lib`, respectively. The default path for `InstallDir` is `<drive>:\Program Files\HP\HP BTO Software`.
- The data files are stored in the `DataDir` directory. The default path for `DataDir` is `<drive>:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\Data`.

If any HP Software Products are already installed, Performance Agent is installed in the same directory.

- Configuration, status, and log files by default are stored separately from program files. Status and configuration files are stored in the <DataDir> directory and require about 1 MB of disk space for the installation. As the status files accumulate data, this number could increase to 10 MB.

Log files are stored in the <DataDir>\datafiles directory. The amount of disk space used for log files varies significantly depending on the system workload and the amount of performance data you collect. Using the default configuration settings, you can expect a 60 MB maximum size to be reached within two to six months. If you are *not* tracking transactions, the maximum size is 50 MB. See Chapter 3 of the *HP Performance Agent for Windows: User's Manual* for information on how to limit and configure the data storage requirements for Performance Agent log files.

- When the archived log files reach their maximum size, the oldest data is automatically rolled out to make room for more data. See Chapter 2 of the *HP Performance Agent for Windows User's Manual* for more information on Performance Agent automatic roll action and for strategies to effectively manage data collection.
- The installation program uses about 10 MB of temporary storage in the <\$TEMP\$> directory, which is released when the installation is complete. Performance Agent also uses the <\$TEMP\$> directory during normal operation for storing temporary files during Scan, Analyze, and Status operations. The exact amount of free disk space required depends on the number and size of reports that are open at same time.

Network Considerations

Performance Agent cannot install unless TCP/IP network protocol is installed and running. You can check for this by looking for the TCP/IP Service in the Services program under Administrative Tools in the Windows Control Panel.

If you are not using a Domain Name System (DNS) name server, you must have a HOSTS file present on each system where Performance Agent is installed. A HOSTS file is a locally stored text file that maps host names to IP addresses. The HOSTS file should be stored in the <\$windir\$>\system32\drivers\etc directory and have the same format as the /etc/hosts file on a UNIX system. The HOSTS file should include the name of the Performance Agent system, as well as any Performance Manager and Operations Manager system you plan to connect to in the HOSTS file.

Special Installation Instructions

- If you are downloading the HP Performance Agent installable, you receive the file in an ISO format. You need to create a DVD to convert the ISO format.
- If you are installing HP Performance Agent on a system on which one or more of the following HP Software products are installed, it is recommended to restart the following after HP Performance Agent installation:
 - HP Operations Agent
 - HP Operations Manager for Windows 8.0
 - HP Performance Manager
 - HP Reporter
 - HP Performance Insight
 - OV Internet Services
- If you are installing HP Performance Agent 5.00 and HP Operations Agent 7.xx on the same system, you must install HP Operations Agent 7.xx first and then HP Performance Agent 5.00.
- If you are installing Performance Agent for the first time in Vista/64-bit platform, disable User Access Control (UAC) in the **msconfig > tools > Disable UAC**.
- If you are adding new hardware or making any configuration changes, stop scopent and restart it to make the changes take effect.
- All the default OS daemons and services should be enabled and running.
- Upgradation to HP Performance Agent 5.00 from emulation mode to native mode on Windows 2003 and Windows 2008 Server for 64-bit Windows Systems is not supported. Hence, please uninstall previous version of HP Performance Agent before installing HP Performance Agent 5.00.
- To use 32-bit libarm binaries on Windows 64-bit platforms, install Microsoft Visual C++ 2005 SP 1 Redistributable Package (x86) on the Windows 64-bit system. Download Microsoft Visual C++ 2005 SP 1 Redistributable Package (x86) from Microsoft site or contact HP Software Support.

- If NNM and Reporter are installed and existing on a Windows x64 or IA64 system, you need to perform either of the following steps to upgrade HP Performance Agent from an older version to version 5.00 on that system:

Method 1:

- 1 Uninstall the existing version of Performance Agent retaining the Performance Agent configuration and databases.
- 2 Install Performance Agent 5.00.

Method 2:

- 1 Before you start upgrading to Performance Agent version 5.00, backup registry keys. To backup the registry keys, perform the following steps:
 - a Click **Start Menu->Run->regedit.exe** to open Registry Editor.
 - b Browse to the following location in the registry folder:
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hewlett-Packard\HP OpenView
 - c Right click, select **Export** and save to any location on the machine.
- 2 Upgrade to Performance Agent version 5.00. For steps to upgrade see the *HP Performance Agent Windows Installation and Configuration Guide*.
- 3 After upgrading to Performance Agent version 5.00, restore the required registry keys. To restore the registry keys, perform the following steps:
 - a Click **Start Menu->Run->regedit.exe** to open Registry Editor.
 - b Click **File->Import** and browse to the location where the registry keys were backed up in Step (1) and import them.



If Terminal Server is installed in Application mode, you should change the mode to INSTALL by using "Add or Remove Programs" applet or by using "change user /INSTALL" command before using the Performance Agent installer. Please refer to "Installation Guide" for more information on installing Performance Agent in a Terminal Server session.

Installing Performance Agent using Terminal Services

Performance Agent can be installed in a terminal services session either from the Control Panel or with the command prompt.

Installing Performance Agent from the Control Panel

- 1 Click **Start > Control Panel > Add or Remove Programs**.
- 2 Select **Add New Programs** and then click **CD or Floppy**.
- 3 Click **Browse** and select the **setup.exe** file.
- 4 Click **Finish**.

Installing Performance Agent from the Command Prompt

- 1 Click **Start > Run**.
- 2 Type **cmd** and click OK. The command prompt window is displayed.
- 3 Change the drive to the folder where the Performance Agent **setup.exe** file is located.
- 4 Type the following command

```
change user /install
```

The following message is displayed:

```
User session is ready to install applications
```

The following message is displayed if terminal server is installed in remote administration mode.

```
Install mode does not apply to a Terminal server configured for a remote administration.
```

- 5 Enter **setup.exe** to complete the installation.

Performance Agent on Windows Server Core

This section discusses the features supported in Windows Server Core on x86 and x64.

Enabling Performance Counters for Server Core

By default, performance counters are disabled in Server Core installations. For Performance Agent to function properly, performance counters must be enabled on the system.

To enable performance counters for Server Core, please download the Extensible Performance Counter List (exctrlst.exe) tool from the following link:

<http://www.microsoft.com/downloads/details.aspx?familyid=7ff99683-b7ec-4da6-92ab-793193604ba4&displaylang=en>

You can use the following steps to enable the performance counter when the tool is installed successfully:

- 1 Click **exctrlst.exe**. The Extensible Counter List window is displayed.
- 2 Click on each counter and select the Performance Counter Enabled check box.
- 3 Click **Refresh**.

Install or Upgrade Procedures

Performance Agent is on the DVD-ROM installation media in several file sets. The size of the product is approximately 120 MB.

If the previously installed version of Performance Agent is available on the system, stop any performance tools or processes that may be running.



If you are upgrading to Performance Agent 5.00, the default data communication protocol will automatically change to HTTP. You will not be able to use protocol to communicate with Performance Agent.

Stopping Performance Agent

Performance Agent can be stopped from the Windows command prompt or from a batch file using the following `ovpacmd (ovpacmd.exe)` command.

```
ovpacmd stop or ovpacmd stop all
```



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

Installing Performance Agent

Log on to your Windows system as Administrator or as any user that is part of the Administrators group. You can install Performance Agent using one of the following two modes:

- [Attended Installation](#)
- [Unattended Installation](#)

Attended Installation

This procedure may take several minutes to complete.

- 1 If you already have Performance Agent installed and are updating to this version, close all Performance Agent windows and programs as well as other application windows in use, including the Windows Control Panel.
- 2 Place the Performance Agent DVD in the DVD-ROM drive. The Performance Agent files in the DVD are displayed.
- 3 Select the Win folder.
- 4 Follow the instructions as they appear.



You cannot install Performance Agent on a network drive. Performance Agent must begin at startup time, before network drives are connected.

If your system disk performance counters are turned off, you will see a message indicating that no disk metrics will be collected unless the disk performance counters are turned on. Run the command **diskperf -y** to turn on both logical and physical disk performance counters. Turning on disk performance counters takes effect only after you reboot your system.

If you do not choose to start Performance Agent automatically whenever you restart your system, you must manually start Performance Agent as described in [Chapter 2, Starting and Running HP Performance Agent](#).

If applications are running on your system that have ARM technology, your system is prompted for a restart.

See the Performance Agent Release Notes for updates to Performance Agent at the HP Software Product Manuals web site at <http://h20230.www2.hp.com/selfsolve/manuals>. The Performance Agent Release Notes contain information not covered in the documentation set.

Unattended Installation

To carry out unattended installation run the command `setup.exe /s` from the Windows command prompt with command line options.

- 1 Open the Windows command prompt and change to the drive where the Performance Agent `setup.exe` file is located by typing:

`<drive> :`

In this instance, *drive* is the CD-ROM drive containing the Performance Agent files.

- 2 Follow the syntax format for the command and the available options as explained below, and type the following:

```
setup.exe /s[/z]-p1 <Install directory path> -p2 <Data directory path> -s -v -l "]"
```

- **-p1** specifies the input for the Install Directory path (the default directory path is C:\Program Files\HP\HP BTO Software).
- **-p2** specifies the input for the Data Directory path (the default directory path is C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\data).
- **-s** starts the Performance Agent services immediately after installation.
- **-v** sets the Performance Agent services start-up type to “Manual” instead of “Automatic”.
- **-l** creates the OVPAINstalllog.log installation log file in the %temp% directory.
- **/s** carries out installation in unattended mode.
- **/z** allows inputs to the installation program. Inputs must be contained within “ ”.

To get the verbose information of the installer, type the following:

```
setup.exe /verbose"<Log File Location>"
```

- **/verbose"<Log File Location>"** creates a verbose installation log file in the location specified.

Installation Results

After Performance Agent files are installed in the default or designated locations, the setup program establishes the following:

- The Performance Agent Control Panel applet is installed to control Performance Agent services. For a description of Performance Agent services, see [Chapter 2, Starting and Running HP Performance Agent](#).

- On Windows, the Performance Agent folder is added to the **Start > Programs** menu, with a submenu containing icons/commands for Performance Agent programs, online help, and the Release Notes.
- The system path variable is modified to include `<InstallDir>\bin\`.

While installing Performance Agent, Status Checking must be performed as mentioned below:

Status Checking

Several status files are created in the `DataDir` directory when Performance Agent is started.

You can check the status of all or some of the Performance Agent processes using the `perfstat` command.

The following status files contain diagnostic information that you can use to troubleshoot problems that may arise with the processes that generate the files:

```
<DataDir>\status.scope
<DataDir>\status.perfalarm
<DataDir>\status.ttd
<DataDir>\status.mi
<DataDir>\log\coda.txt
```



Whenever the Performance Agent process writes a message to its file, it checks to see if the file is larger than 1 MB. If it is, the file is renamed to `status.filename.old` and a new status file is created.

Examples Directory

The `<InstallDir>\examples\` directory contains examples of configuration files, syntax files, and sample program files that you can use to customize your HP Performance Tools. The

`<InstallDir>\example\config\` subdirectory contains sample alarm definitions and examples of `parm` file application-specific parameters. For more information, see the `<InstallDir>\examples\README` file.

Directory Structure

For upgraded installations, files are automatically placed in the same directories as those of the previously installed version.

Default file locations are as follows:

- Program and other files are stored in sub-directories of the <InstallDir>\bin\ directory.
- Data files (log files and other files containing data) are stored in subdirectories of the <DataDir>\ directory.

The environment variable `windir` is used to denote the Windows directory in your system. The environment variable `TEMP` is used to denote the temporary files directory stored on your Windows system.



The Striped Disks does not enable disk performance counters for physical drives in a striped disk set. To collect data for striped disks, run **diskperf -YE** from the Windows command prompt.

Deploying 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 11i v3, Linux 2.6 (RHEL 5.3 x64) 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 in a Virtualized Environment

The Performance Agent supports monitoring of Hyper-V enabled virtualized environments on both host and guest operating systems. Performance Agent version 5.00 supports monitoring of Virtual Machines hosted on a VMware ESX Server 3.5U2, ESX 3i, ESX 4.0 and ESX 4i.

Performance Agent on the Host Operating System

The host operating system is the system where Hyper-V is installed. For installation procedures see, [Install or Upgrade Procedures](#) on page 17. When installed on the host system, Performance Agent captures the following:

- Individual virtual machine performance and resource usage data
- System-wide performance and resource usage data
- A new class of metrics, BYLS which is introduced to record performance and resource data for individual guest operating systems. Hyper-V root partition is shown as an instance of BYLS metrics.
 - ▶ By default the Hyper-V host do not collect data for the BYLS class of metrics. You need to configure the `log` parameter in the `parm` file to enable the Hyper-V host to collect data for BYLS class of metrics. For details, see the *HP Performance Agent for Windows Operating System User's Manual*.

- ▶ On Windows Server 2008, for Performance Agent to monitor virtual machines, please upgrade the Hyper-V to the release version using the update KB950050 from the following link:

<http://support.microsoft.com/kb/950050>

On Hyper-V role enabled for Windows Server 2008, for Performance Agent to log data(BYLS Class) of virtual machines, install the following hotfix on your machine.

<http://support.microsoft.com/KB/960751>

Performance Agent on the Guest Operating System

Guest operating systems are the systems that run on Hyper-V or Virtual Machines hosted on a VMware ESX Server 3.5U2, ESX 3i, ESX 4.0 and ESX 4i. For installation procedures see, [Install or Upgrade Procedures](#) on page 17.

When installed on the guest operating system, Performance Agent captures system wide performance, resource, and transaction data. All the resource utilization values captured represent the logical utilizations.

Guest Operating System hosted on VMware

- Install **VMware Tools** on the Virtual Machine. Performance Agent installed on a Virtual Machine, hosted on a VMware ESX Server 3.5 and later, requires VMware tools to recognize the virtual machine as a Guest operating system.
- On a Virtual Machine hosted on a VMware ESX Server 3.5 and later, you must enable the **VMware Guest API** on the Virtual Machine. To capture the Virtual Machine's utilization of physical resources of a system, Performance Agent uses the **VMware Guest API**. For more information about **VMware Guest API**, see the latest documentation available on **VMware Guest SDK** from VMware.

▶ For a complete list of metrics and descriptions, see the *Release Notes* and *Dictionary of Performance Metrics*.

Removing Performance Agent

Log on to your Windows system as Administrator or as any user that is part of the Administrators group.

- ▶ You need to follow the same steps as mentioned in this section to remove Performance Agent in a virtualized environment.

You can uninstall Performance Agent using one of the following two modes on your system:

- [Attended Uninstallation](#)
- [Unattended Uninstallation](#)

Attended Uninstallation

- 1 Log on to your Windows system as administrator or as a user with administrative privileges.
- 2 Close the Performance Agent program, the Performance Agent Services window, and the Windows Control Panel.
- 3 Go to **Control Panel > Add or Remove Programs**.
- 4 Select **HP Performance Agent Software**.
- 5 Click **Change/Remove**.

Unattended Uninstallation

Run `setup.exe /s /x` from the Windows command prompt with command line options and enter:

```
setup.exe /s /x [/z"-r all"]
```

- **-r all**: specifies deletion of Performance Agent created log files.
- **/s**: carries out tasks in unattended mode.
- **/x**: carries out uninstallation.
- **/z**: indicates inputs to the installation program. Inputs must be contained within “”.

Removing all Performance Agent Files

By default, the uninstall program does not remove Performance Agent configuration, status, and log files. It also does not remove `<InstallDir>\bin\` from the system path variable. You can manually remove these to clean up your system. Do not remove additional files or change the path variable if any RPM Tools application (Performance Manager or Reporter, for example) is still installed on your system.

If Performance Agent is the last RPM Tools application to be removed during an attended uninstall, a prompt appears asking to remove all files in the `<InstallDir>\bin\` and the `<DataDir>\` directories.

During an unattended uninstall, you can achieve the same result of removing all files within the `<InstallDir>\bin\` and the `<DataDir>\` directories by including the `-r` all option.



After uninstallation, the Performance Agent uninstall program might display a message stating that it was not able to remove some items. The uninstall program marks these files for deletion and removes them during the next system restart. If you get this message, restart your system before you try to reinstall Performance Agent.

Results of the Uninstallation

The uninstall program removes Performance Agent program files, except for `perfstat.exe`. If Performance Agent is the only RPM Tool installed on the system, `perfstat.exe` is also removed. The uninstall program also removes the Performance Agent services and Windows registry entries associated with Performance Agent.

2 Starting and Running HP Performance Agent

Performance Agent supports the HTTP data communication mechanism.



If you are upgrading to Performance Agent 5.00, the default data communication protocol will automatically change to HTTP. You will not be able to use RPC protocol to communicate with Performance Agent.

For more information, see [Communicating in the HTTP Environment](#) on page 33. Performance Agent supports secure data communication (HTTPS) only in an Operations Managers environment.



If you are planning to log data from other sources using Data Source Integration (DSI), read the *HP Performance Agent for Windows Data Source Integration Guide*.

Security Restrictions

The following security-related restrictions are applicable in controlling Performance Agent Services:

- To start or stop Performance Agent Services, you must be a member of the Administrators or Power Users group.
- To refresh Performance Agent configuration files, you must be a member of the Administrators or Power Users group.
- To configure Performance Agent Services, you must be a member of the Administrators group.

Any user can view the status of Performance Agent Services from the Services program in the Windows Control Panel or the Services program under Administrative Tools in the Windows Control Panel.

Starting and Stopping Performance Agent Services

When installation is complete, you can start Performance Agent from the Windows GUI or command prompt.

Starting and Stopping from the Windows GUI

- 1 To open Performance Agent, click **Start > Programs > HP > Performance Agent > HP Performance Agent Software**.

Or

Choose **Start/Stop** from the Agent menu on the Performance Agent main window. Or, from the Windows Control Panel, double-click **PA** to open the Performance Agent Start/Stop dialog box.

- 2 To start all Performance Agent services, click **Start Services**.
- 3 To stop all Performance Agent services, click **Stop Services**.

Starting and Stopping from the Command Prompt

You can start and stop Performance Agent services from the Windows command prompt or from a batch file using the `ovpacmd` (`ovpacmd.exe`) command as follows:

To start all Performance Agent services from the command prompt, run:

```
ovpacmd start or ovpacmd start all
```

To stop all Performance Agent services from the command prompt, run:

```
ovpacmd stop or ovpacmd stop all
```



The executable `mwacmd.exe` is still provided in this release for backward compatibility. The functionality is same as `ovpacmd.exe`.

Checking the Status of Performance Agent Services

- Select **HP > Performance Agent > Status** OR
- Click the **Agent Status** icon from the main window OR

To check the status of Performance Agent services, from the command prompt, run:

```
perfstat
```

Automatic Startup at System Restart

If you did not select the installation option to automatically start Performance Agent Services when your system is restarted, do the following.

- 1 Select **Services** from Administrative Tools in the Control Panel.
- 2 Select **PA Collector**, click **Startup** and choose **Automatic** for the Startup Type.
- 3 Repeat step 2 for Performance Agent, Performance Agent Transaction Manager, Performance Agent Extended Collector, and Performance Agent DSI Service.

Do not set the Performance Agent Measurement Interface to start automatically.

Restarting Performance Agent

To restart the Performance Agent, stop and start Performance Agent by following one of the steps explained in [Starting and Stopping Performance Agent Services](#) on page 29.

Refreshing Performance Agent Services

If you modify any of the Performance Agent configuration files (`parm.mwc`, `tttdconf.mwc`, `alarmdef.mwc`, `dsiconf.mwc`), you must refresh the corresponding service to reflect the changes made to the configuration files. To enable the **Refresh** button, select at least one Configuration Parameter from the Performance Agent Services dialog box.

Refreshing from the Windows GUI

- 1 From the Agent menu on the Performance Agent main window, choose **Start/Stop**. Or, from the Windows Control Panel, double-click **OVPA** to open the Performance Agent Start/Stop dialog box.
- 2 Select the Configuration Parameters you changed.
- 3 Click the **Refresh** button. Select at least one Configuration Parameter in the Performance Agent Services dialog box to enable the button.

Refreshing from the Command Prompt

Open the Windows command prompt and type:

```
ovpacmd refresh <config>
```

In this instance, *<config>* is:

- **COL** for parm.mwc
- **TRAN** for ttdconf.mwc
- **ALARM** for alarmdef.mwc
- **DSI** for dsiconf.mwc

Services Started with HTTP Communication Mode

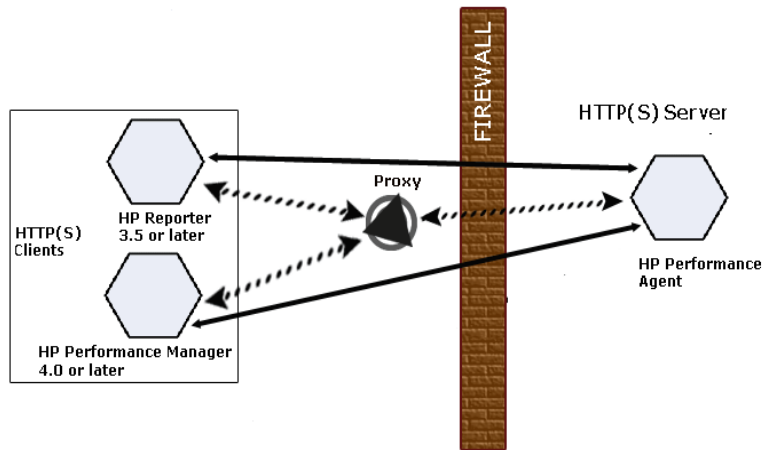
- HP OpenView Ctrl Service
- Performance Agent Collector
- Performance Agent Alarm Generator
- Performance Agent DSI Service
- Performance Agent Extend Collector
- Performance Agent Measurement Interface
- Performance Agent Transaction Manager

Communicating Across a Firewall

In general, a firewall can be defined as a method for filtering the flow of data between two networks. Performance Agent now supports HTTP 1.1-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. The HTTP-based interface is flexible, because it can use proxies, requires fewer ports, and is firewall friendly.

- ▶ Performance Agent supports certificate based, secure (HTTPS) data communication only in the Operations Manager environment. For more information, see [Using Certificates](#) on page 40.

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



The previous figure shows how Performance Agent communicates with Reporter (version 3.5 or later) and 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 through the proxy.

Communicating in the HTTP 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 properly. 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. To configure communications with Performance Agent in a firewall environment, perform the following tasks.

Task 1: Configure Performance Agent Ports

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

On a 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, as follows:

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

(Or)

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

For 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, as follows:

```
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. Type the following commands:

```
ovconfchg -ns coda.comm -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
- Secure communication is enabled
- 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

Task 2: Configure HTTP Clients in a Firewall Environment

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

Whichever way is selected requires that only one port be open 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 or Performance Manager for Windows and UNIX needs 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 3.7, type the following:

```
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 can be defined for one PROXY key using the “;” or “,” delimiter. The delimiter “-” before the list

indicates that those entities do not use this proxy, and “+” before the list indicates that those entities do use this proxy. The first matching proxy is used.

To configure Reporter versions 3.6 and earlier, and Performance Manager 4.xx, edit the `/var/opt/OV/conf/BBC/default.txt` configuration file.

For example, 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) + (*)
```

Here, 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 3.7 by typing the following command:

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

In this instance *<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 3.6 and earlier, and Performance Manager 4.xx by editing 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>
```

In this instance, *<port range>* is the range of ports you want to use. For example:

```
CLIENT_PORT = 14000-14003
```

Task 3: Verify Firewall Configuration

To verify your configuration, run the following command:

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

The output of this command indicates 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, 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.

Tables for Configuring the Firewall

Determining the destination and source variables for the firewall will depend on which application resides within the firewall and which operating system the application is running on.

Table 1 Performance Manager 3.xx and later (PV) for Windows, Reporter (OVR) for Windows, Performance Agent for Windows

Source	#Ports / Protocol	Destination	Ports / Protocol
PV, OVR	382/TCP	Performance Agent	382/TCP
PV, OVR	1024-65535/UDP	Performance Agent	1024-65535/UDP
Performance Agent	1024-65535/UDP	Performance Manager	1024-65535/UDP

Table 2 Performance Manager 3.xx and later on UNIX, Performance Agent for Windows

Source	#Ports/Protocol	Destination	Ports / Protocol
Performance Manager/ UNIX	382/TCP	Performance Agent/WIN	382/TCP
Performance Manager/ UNIX	OVRPM_RANGE/ UDP	Performance Agent/WIN	1024-65535/UDP
Performance Agent/WIN	1024-65535/UDP	Performance Manager/ UNIX	OVRPM_RANGE/UDP

OVRPM_RANGE is the range of ports that were calculated for the Performance Manager.

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 Operations Manager 8.xx environment.

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

If you 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.



Performance Manager 4.xx does not support certificate based secure communication.

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

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

Using Client Authentication

Performance Agent enables optional authentication of client connections; for example, by Performance Manager 3.xx 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`. For HTTP-based communication, the `authip` file exists in the `<DataDir>\data\conf\perf` directory. The `authip` file lists hosts from which client connections are to be permitted.

- If the `authip` file exists in the default 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 in the default directory, no authentication is performed and any client is allowed to connect, as was the case with prior Performance Agent versions.

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



An existing authorized client session can continue its current connection despite a subsequent change in the server's `authip` file that would otherwise disqualify it, until the client takes an action that requires reregistration with Performance Agent. To ensure that `authip` changes are enforced, stop and restart all Performance Agent services. If there is an attempt to reopen the data source, the `authip` file will be reread and the connection denied.

In the case of Performance Manager 3.xx registration for alarms, a previously authorized client will continue to receive alarms until the data source has been removed (not just closed) by the client. To add or delete entries into the `agdb` file use the `agsysdb` utility program, see the *HP Performance Agent for Windows User's Manual*. You can also use Performance Manager 3.xx to enable or disable alarms.

The Performance Agent client authentication capability requires that your network be able to resolve the client entries in the `authip` file. Depending on the nature of the entries, this may require name services such as those

provided by DNS, NIS, or `<%windir%>\system32\drivers\etc\hosts` files. A good test is to make sure that you can successfully "ping" each authip entry from the Performance Agent host. Client authentication will work through a firewall, if the client entries in the authip file are pingable from the Performance Agent host.

Formatting the authip File

The authip file must conform to the following format:

- Only one client host may be listed per line.
- Client entries must be in any one of the following formats:
 - Fully qualified domain name
 - Alias
 - IP address in IPv4 dotted quad format
- 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 leading zeros; that is, the IP address 23.10.10.10 cannot be represented as 023.10.10.10.
- Client entries may have spaces or tabs preceding them.
- Client entries on a line are terminated by spaces, tabs, new lines, or the # sign.

For example, in given an `<%windir%>\system32\drivers\etc\hosts` entry of: `123.456.789.1 testbox testbox.group1.thecompany.com` any one of the following entries in the authip file will 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 =====
```



To use the authentication capability (aliases or hostnames in the `authip` file), the Domain Name System (DNS) on your local system must be configured properly. For further information on how to configure your DNS, see the Microsoft Windows online help.

Configuring Data Sources

Performance Agent uses a set of repository servers that provide previously collected data to the alarm generator and the Performance Manager analysis product. There is a repository server for each specific data source such as scopeux log files or DSI log files. Each data source consists of a single log file set. The data source is configured in the `datasources` file that resides in the `<DataDir>\conf\perf` directory. When you first start up Performance Agent after installation, a default data source named SCOPE is already configured and provides a scopeux log file set.

To add other data sources, configure them in the `datasources` file. When you restart Performance Agent, the `coda` daemon reads the `datasources` file, and is ready to serve any requests in the data source.

Configuring Data Sources for Performance Manager 3.xx and Reporter

Performance Agent data is automatically configured for accessibility and alarm generation in Performance Manager 3.xx and Reporter. You can configure additional data sources in the `datasources` file (or `perflbd.mwc` file) as described in Chapter 3 of the *HP Performance Agent for Windows: User's Manual* and the *HP Performance Agent for Windows: Data Source Integration Guide*. Additional data sources can include raw log files, extracted log files, or log files created with Performance Agent's Data Source Integration (DSI) technology or from data collections you create using the Extended Collection Builder and Manager.

IP Addresses

After you configure the Performance Agent system as a data source for Performance Manager 3.xx, avoid changing the IP address of either the Performance Agent system or the Performance Manager 3.xx system.

However, if you must change the IP address of one or more systems, follow these steps to avoid problems.

- 1 On the Performance Manager 3.xx system, select **Manage** from the **Data Sources** menu on the Performance Manager 3.xx dialog box.
- 2 Delete the Performance Agent system from the list of known systems.

- 3 Change the IP address of the Performance Agent system.
- 4 Add the Performance Agent system back as a data source to Performance Manager 3.xx.

To change the IP address of a Performance Manager 3.xx system, see the Performance Manager 3.xx documentation.

Configuration Options

Performance Agent includes default configuration files that allow you to quickly start monitoring the performance of systems across your organization. You can change the default settings to suit the conditions in your particular computing environment.

Collection Parameters File (`parm.mwc`)

By default, Performance Agent is set up to monitor global, process, application, transaction, and disk data with a maximum log file size of 60 MB (50 MB if you are *not* tracking transactions).

You use the `parm.mwc` file to customize various data collection parameters, such as specifying the types of data to monitor, setting up groups of processes to be monitored together as one application, and changing the maximum size of the log file. See Chapter 2 of the *HP Performance Agent for Windows User's Manual* for more information.

Transaction Configuration File (`ttdconf.mwc`)

You can monitor transaction data for applications that were instrumented with Application Response Measurement (ARM) API calls. The `ttdconf.mwc` file allows you to define transaction and application names, performance distribution ranges, and the service level objectives to be met by each transaction. See the *HP Performance Agent for Windows: Tracking Your Transactions* manual for more information on transaction tracking.

Customized Data Collection

With the Extended Collection Builder and Manager, you can configure customized data collections of Windows registry counters. See the Extended Collection Builder and Manager online help for details on how to build and manage Windows registry counter collections. The Online Help is available by choosing **Extended Collections** from the Configure menu in the Performance Agent main window. Then click the **Help** button from the Extended Collection Builder and Manager dialog box.

Using Data Source Integration (DSI) technology, you have another means for customizing data collections. Once you have your data collection method implemented, you can feed data into Performance Agent using DSI. See the *HP Performance Agent for Windows Data Source Integration Guide* for information about using DSI.

Defining Alarms

If you plan to use alarms to monitor performance, you need to 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 detailed information about defining alarms, see Chapter 7, “Performance Alarms,” in the *HP Performance Agent for Windows User's Guide*. This chapter describes the alarm definitions syntax, how alarms work, and how alarms can be used to monitor performance.

Controlling Performance Agent Services from the Command Prompt

Performance Agent services can be started and stopped from the Windows command prompt or from a batch file using the `ovpacmd` (`ovpacmd.exe`) command as described below.

You must be a member of the Administrators or Power Users group to run these commands.

- **ovpacmd stop** - stops the OV Performance Collector and Performance Agent services.
- **ovpacmd start** - starts the OV Performance Collector, Performance Agent, Transaction Manager, Extended Collection services.
- **ovpacmd start dsi** - starts the Data Source Integration service that allows for continual logging for data feeds configured in the `dsiconf.mwc` file.
- **ovpacmd stop dsi** - stops the Data Source Integration service that allows for continual logging for data feeds configured in the `dsiconf.mwc` file.

For example, you could use the command prompt to restart Performance Agent services from a batch file to refresh Performance Agent configuration files to automatically shift to a different set of alarm definitions during off hours. You would include a command in the batch file to copy an alternate `alarmdef.mwc` file into the `<DataDir>\data` directory.

Backup Considerations

Keep the following in mind when backing up a Windows system on which Performance Agent is installed and running.

- You need not stop Performance Agent services to back up the system.
- If Performance Agent services are running at the time of the backup, the following files are not included in the backup. Additional files might also be excluded in the backup if the Performance Agent program is open. If the backup program you use has the option to back up open files, you could set this option so that these files are included in the backup.

```
<DataDir>\status.dsi  
<DataDir>\status.ecb  
<DataDir>\status.scope  
<DataDir>\status.mi  
<DataDir>\status.perfalarm  
<DataDir>\status.ttd  
<DataDir>\datafiles\classinfo.db  
<DataDir>\datafiles\coda.db  
<DataDir>\datafiles\coda000*.*  
<DataDir>\datafiles\logindx  
<DataDir>\datafiles\logglob  
<DataDir>\datafiles\logappl  
<DataDir>\datafiles\logproc  
<DataDir>\datafiles\logdev  
<DataDir>\datafiles\logtran  
<DataDir>\datafiles\logls  
<DataDir>\datafiles\agdb  
<DataDir>\datafiles\agdb.lk
```

- If Performance Agent log files are backed up while Performance Agent is running, each raw log file (logglob, logappl, logproc, logdev, and logtran) could contain a slightly different amount of data. This happens because each individual file is backed up at a slightly different time. This behavior may make the data more difficult to interpret if you ever have to restore the log files from the backup tape.

- To stop Performance Agent services prior to backing up your system, select **Start/Stop** from the Agent menu of the Performance Agent main window. (You can also use the Windows Control Panel, Windows command prompt, or a batch file for [Stopping Performance Agent](#) as described earlier in this chapter).
- Restart the Performance Agent services after the backup is complete.



Stopping and starting Performance Agent services causes a gap in your log files for the period during which data collection is stopped.

Unattended Backups

Control Performance Agent services from a batch file to stop Performance Agent prior to an unattended backup. You can then restart it automatically when the backup is finished.

Performance Agent Documentation

Performance Agent software includes the following documents. You can view the Adobe Acrobat format (*.pdf) documents online and print them as needed. The ASCII text (*.txt) documents are printable. You can view a text file on your screen using any text editor.

Document	File Name	Windows Location
<i>HP Performance Agent for Windows Installation & Configuration Guide</i>	ovpainst.pdf	<i>InstallDir</i> \paperdocs\ovpa\C
<i>HP Performance Agent for Windows User's Manual</i>	ovpausers.pdf	<i>InstallDir</i> \paperdocs\ovpa\C
<i>HP Performance Agent for Windows Data Source Integration Guide</i>	ovpadsi.pdf	<i>InstallDir</i> \paperdocs\ovpa\C
<i>HP Performance Agent for Windows: Tracking Your Transactions</i>	tytnt.pdf	<i>InstallDir</i> \paperdocs\ovpa\C
<i>Application Response Measurement (ARM) API Guide</i>	arm2api.pdf	<i>InstallDir</i> \paperdocs\ovpa\C
<i>HP Performance Agent for Windows Dictionary of Operating System of Performance Metrics</i>	metwin.txt	<i>InstallDir</i> \paperdocs\ovpa\C

Release Notes

See the Performance Agent Release Notes for additional information that you might not find in the Performance Agent manuals and online help. The Release Notes list new features and explain fixes to previous problems and current known problems, and how to deal with them. You can read the Release Notes at the end of the installation. You can access the release notes from the HP Software Product Manuals web site at <http://h20230.www2.hp.com/selfsolve/manuals>.

Online Help

Refer to the Performance Agent online help, accessible from the HP Software program folder or from the Performance Agent main window. Metrics online help is also available at the same location.

A Configuring Coda

Coda is a lightweight 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 namespaces `coda` and `coda.comm` using the command `ovconfchg`.

Coda Namespace Configuration Parameters

Parameters in coda namespace	Description	Default Value
<code>DISABLE_PROSPECTOR</code>	Used to disable data collection from coda datasource in a coexistence environment of HP Operations Agent and Performance Agent	false

Parameters in coda namespace	Description	Default Value
<code>ENABLE_PROSPECTOR</code>	Used to enable data collection from coda datasource in a standalone environment of Performance Agent	false
<code>SSL_SECURITY</code>	Used to enable secure communication from coda	NONE
<code>RESPONSE_SIZE_LIMIT</code>	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 is 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 is 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) Configuration Parameters

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 coda. The default value for this port is 0. If the port is set to 0, the operating system assigns 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 takes place 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 sender's IP address, requested HTTP address, requested HTTP method, and response status. This value typically is not changed.

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

Single-Port Communication

This is the default communication method with Performance Agent 4.70. 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:

- 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 enter the following:

```
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`, it is single-port communication.

For multi-port communication enter the following:

```
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`, it is multi-port communication.



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

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

```
ovcodautil -n <hostname> -ping
```

Here is an example:

```
ovcodautil -n ovphpt4 -ping
```

For single-port communication enter the following:

```
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 enter the following:

```
ovcodautil -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.comm` namespace override the parameters defined in the `bbc.http` namespace.

Communication Broker Namespace (bbc.cb) Configuration Parameters

Parameters in bbc.cb 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	INADDR_ANY

`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) Configuration Parameters

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 use 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) Configuration Parameters

Parameters in bbc.http 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 a Windows system, this parameter should be defined on a large value because Windows system does not immediately release ports for reuse.

PROXY

Use this option 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 the correct number of dots and colons is specified.

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