HP Operations Agent

for the Windows®, HP-UX, Solaris, Linux, and AIX operating systems

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Reference Guide

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Contents

1 Introduction

The HP Operations agent introduces many services, processes, and utilities on the system. Command-line utilities help you configure the operation and monitor the performance of the agent. Using certain command-line utilities, you can view the real-time system performance data captured by the agent. Utilities like the tracing tools help you view the diagnostic information of the agent for troubleshooting.

The HP Operations agent offers you a series of configuration variables; these variables help you control the behavior of the agent. You can use the `ovconfchg` command to assigned desired values to these variables.

This guide contains information on the command-line utilities, services, and processes introduced on the system by the HP Operations agent. The guide also provides you with a list of configuration variables that you can use while configuring the default behavior of the HP Operations agent.

2 Components of the HP Operations Agent

The HP Operations agent consists of two major operational components: Operations Monitoring Component and Performance Collection Component. The Operations Monitoring Component builds up the monitoring and messaging capabilities of the agent and the Performance Collection Component provides the data collection and storage functionality.

Table 1 HP Operations Agent Components

Component	Sub-components	Additional Information
Operations Monitoring Component	Monitor Agent	Process name: opcmona
	Action Agent	Process name: opcacta
	Message Agent	Process name: opcmsga
	Message Interceptor	Process name: opcmsgi
	Trap Interceptor	Process name: opctrapi
	WMI Interceptor	Process name: opcwbemi
	Logfile Encapsulator	Process name: opcle
	Event Correlation Agent	Process name: opceca
	Embedded Performance Component	Process name: coda
Performance Collection Component	The Scope collector	Process name: • On UNIX/Linux: `scopeux` • On Windows: `scopent`
	Measurement Interface Daemon	Process name: midaemon
	Transaction Tracking Daemon	Process name: ttd
Real-Time Metric Access (RTMA)	Multi-platform system performance metric server	Process name: perfd
Real-Time Measurement (RTM)	real-time measurement	Process name: rtmd

Processes

The HP Operations agent starts different processes on the managed node. Table 2 on page 10 lists all the processes (daemons on UNIX and Linux nodes) contributed by the Operations Monitoring Component.

Table 2 Operations Monitoring Component Processes

Process	Description
opcacta	The action agent is responsible for starting and stopping automatic actions, operator-initiated actions, and scheduled actions (that is, scripts and programs). The action agent is also used for command broadcasting and for configured applications (Input/Output).
opceca	The event correlation agent connects to the agent MSI in the same way that the ECS runtime library is integrated into the HPOM server. This connection allows access to and modification of messages from the HPOM message flow on the agent. The messages modified by this process display in the Message Details window (available from the Message Browser) with the message source “MSI: opceca”. Like all agent processes, this process is controlled by the control agent.
opcle	The logfile encapsulator scans one or more application or system-logfiles (including the Windows Eventlog) for messages or patterns specified by the HPOM administrator. The logfile encapsulator forwards the scanned and filtered messages to the message agent.
opcmona	The monitor agent monitors the following: • System parameters (for example, CPU load, disk utilization, kernel parameters) • SNMP MIBs • WMI classes • Performance counters from Windows performance monitors. • Other parameters, if specified
opcmsga	The message agent receives messages from the logfile encapsulator, monitor agent, event interceptor, and message interceptor on the local system. The messages are forwarded to the message receiver running on the management server. If the connection to the management server is lost, the messages are buffered locally. The message agent triggers local automatic actions by forwarding the task to the action agent.
opcmsgi	The message interceptor receives and processes incoming messages. The `opcmsg` command and `opcmsg` API can be used to forward messages to HPOM. Conditions can be set up to integrate or suppress chosen message types.

Table 2 Operations Monitoring Component Processes

Process	Description
opctrapi	The event interceptor is the message interface for feeding SNMP events to HPOM. Conditions can be set to integrate or suppress selected message types.
opcwbemi	The WMI interceptor enables you to process WMI classes originating from systems that are not managed nodes.
Coda	The Embedded Performance Component process, coda, handles local and remote requests for system performance data collected by the performance daemon. Coda is typically started by the HP Operations agent startup scripts.

Table 3 on page 11 lists all the processes (daemons on UNIX and Linux nodes) contributed by the Performance Collection Component.

Table 3 Performance Collection Component Processes

Process	Description
scope	Scope is a process that runs on an HP Operations agent system. It is invoked by the `ovpa` script. Scope logs performance data that is read by HP Performance Manager and other analysis software programs. The scope process can serve as a data collector. The user-controlled configuration file—the `parm` file—is used to control logging of data by scope.

Table 3 Performance Collection Component Processes

Process	Description
midaemon	The Measurement Interface daemon, `midaemon`, provides an interface between ARM transaction tracking and the Performance Collection Component. This process translates trace data into Measurement Interface counter data using a memory-based MI Performance Database to hold the counters. The database is accessed by collector programs such as glance, xglance, and scope. The midaemon process must be run as root or with the `set-user-id` bit set to root. Attempting to run the midaemon process without the root privilege results in an immediate termination. `midaemon` runs in the background mode by default.
ttd	The transaction tracking daemon, `ttd`, reads and registers transaction definitions from the following configuration file: • On UNIX: `/var/opt/perf/ttd.conf` • On Windows: *%ovdatadir%*`\ttd.conf` The `ttd` process also assigns IDs to the transaction names passed to it through the `arm_getid` calls that come from the ARM library. The `ttd` process synchronizes these transaction definitions with the `midaemon` process. You must run the registration daemon, ttd, as root or with the `set-user-id` bit set to root. `ttd` runs in the background mode by default.
perfalarm	The alarm generator server, `perfalarm`, helps in scanning the information in the `alarmdef` file and sending alerts to the destinations based on the configuration information in the `alarmdef` file.

rtmd Process

The `rtmd` process, provided by the RTM component, helps in establishing a secure communication channel to access real-time data from the node.

perfd Process

The `perfd` process, provided by the RTMA component, helps you access real-time system performance metrics, locally or remotely.

3 Using the Command-Line Utilities

The HP Operations agent introduces several command-line utilities to the node with which you can perform different configuration tasks. These utilities are present in the following directories:

- *On Windows:*
  `%ovinstalldir%\bin`
- *On HP-UX, Solaris, and Linux:*
  `/opt/OV/bin` and `/opt/perf/bin`
- *On AIX:*
  `/usr/lpp/OV/bin` and `/usr/lpp/perf/bin`

These utilities are primarily introduced by different operational components of the HP Operations agent.

Utilities Provided by the Operations Monitoring Component

This section provides information on command-line utilities presented by the Operations Monitoring Component component of the HP Operations agent.

ovbbccb

NAME

ovbbccb – Controls HTTPS communication using Communication Broker proxies on local nodes.

SYNOPSIS

```
ovbbccb -h|-help
ovbbccb -version
ovbbccb -install|-remove [-v|-verbose]
ovbbccb -daemon|-nodaemon [-debug] [-v|-verbose]
ovbbccb -start|-stop <ovrg> [<hostname>|<ip>] [-v|-verbose]
ovbbccb -kill|-reinit [<hostname>|<ip>] [-v|-verbose]
ovbbccb -listovrg [<hostname>|<ip>] [-v|-verbose]
ovbbccb -ping {[<hostname>|<ip>[:<port>]] | [<uri>} [-v|-verbose]]
ovbbccb -status {[<hostname>|<ip>[:<port>]] | [<uri>} [-v|-verbose]]
ovbbccb -retryfailedrcp -ovrg [<resource_group>]
```

DESCRIPTION

ovbbccb command is used to control HTTPS communication using Communication Broker proxies on local nodes. It controls starting of the Communication Broker as a background daemon process or in normal mode, stopping, and re-initializing of the Communication Broker. ovbbccb is also used to start and stop resource groups in the Communication Broker.

ovbbccb can also be used to list all active resource groups and all applications registered to a Communication Broker, to check whether specified communication services are alive and to display details about the current state of the server.

Parameters

The ovbbccb command incorporates the options in the following list. The syntax for the [<hostname>|<ip>][:<port>]] string, for example; in the options -registrations or -ping, can be a hostname and a port separated by a colon (:) but can also be a full URL path including protocol. for example:

https://merlin.guilford.mycom.com:383/com.hp.ov.coda

ovbbccb recognizes the following options:

-h|-help

Displays and describes the available options for the ovbbccb command.

-version

Displays the version of the communication component in use.

-install

Installs the Communications Broker program as a service on a Microsoft Windows machine.

-remove

Removes the Communications Broker program from the services on a Microsoft Windows machine.

-daemon

Starts the Communication Broker either as a background daemon process on a UNIX machine or a service on a Microsoft Windows machine.

-nodaemon

Starts the Communication Broker as a foreground process (*default*).

-debug

Disable Control-C signal handler for debugging.

-verbose

Shows more detailed output.

-start <ovrg> [<hostname>|<ip>]

Starts the resource group specified by *<ovrg>* in the Communication Broker on the host specified by *<hostname>* or *<ip>*. If the hostname or IP is not specified, ovbbccb uses the local host as the host. You must configure the resource group on a cluster node to use this option.

-stop <ovrg> [<hostname>|<ip>]

Stops the resource group specified by *<ovrg>* in the Communication Broker on the host specified by *<hostname>* or *<ip>*. If the hostname or IP is not specified, ovbbccb uses the local host as the host. You must configure the resource group on a cluster node to use this option.

`-kill [<hostname>|<ip>]`

Stops the Communication Broker on the host specified by *<hostname>* or *<ip>*. If the hostname or IP is not specified, ovbbccb used the local host as the host. You must set the LOCAL_CONTROL_ONLY parameter to false to make this option work on a remote node.

`-reinit [<hostname>|<ip>]`

The Communication Broker specified in *<hostname>* or *<ip>* reloads the configuration data and is re-initialized. If the hostname or IP is not specified, ovbbccb uses the local host as the host.

The `SIGHUP` signal may also be used on UNIX systems to re-initialize the Communication Broker process.

You must set the LOCAL_CONTROL_ONLY parameter to false to make this option work on a remote node.

`-listovrg [<hostname>|<ip>]`

Displays a list of all active resource groups for the Communication Broker on the node specified by *<hostname>* or *<ip>*. If the hostname or IP is not specified, ovbbccb uses the local host as the host. You must set the LOCAL_CONTROL_ONLY parameter to false to make this option work on a remote node.

`-ping {[<`*hostname*`>|<`*ip*`>[:<`*port*`>]] | [<`*uri*`>]}`

Pings the specified HP Software server process. A hostname or IP address with an optional port number or a URI may be given to locate the server process to ping. If a URI is given with the path of a valid process registered with the Communication Broker, the Communication Broker will automatically forward the ping to the registered process. The node may be specified with a hostname or IP address. Default for the node is "localhost". Default for the port is the HP Software Communication Broker port on the specified node.

`-status {[<`*hostname*`>|<`*ip*`>[:<`*port*`>]] | [<`*uri*`>]} [-v|-verbose]`

Displays the status of the specified HP Software server process. A hostname or IP address with an optional port number may be given to locate the server process. Default for the node is "localhost". Default for the port is the HP Software Communication Broker port on the specified node.

The status message presents the details of all the active and attempted reverse channel connections. For every connection, the following details are listed:

Source machine The details of the machine that tries to establish the reverse channel connection.

Time and date The time and date when the node started trying to connect to the Communication Broker through a reverse channel.

Time duration The time interval for which a node attempted to establish a connection to the Communication Broker through the reverse channel (in milliseconds).

The verbose option displays the following details of every failed connection:

Type of failure A connection failure can be a time-out, rejection, or a reset. This information helps you identify the true nature of the failure.

Cause of failure The cause of failure helps you diagnose the underlying problem that triggered the connection failure.

Attempts The number of attempts made by the node to reinstate the communication is presented within parenthesis.

`-retryfailedrcp [-ovrg <resource_group>]`

This option starts to restore all failed reverse channel connections to the specified resource group. If you do not specify a resource group name, the command tries to restore all failed reverse channel connections to the default resource group.

EXIT STATUS

The following exit values are returned:

`0`	ovbbccb exited normally with no error.
`1`	Command syntax error encountered. See command syntax for more details on possible values.
`2`	Command partially succeeded.
`3`	Command failed. See command output for more detailed information.
`4`	The Communications Broker start command failed because a Communications Broker process is already running
`5`	The Communications Broker failed to start because a Local Location Broker process is already running. The HP Software Communications Broker is not supported on systems running the LLB. Stop the LLB before attempting to start the Communications Broker.
`6`	The Communications Broker failed to stop because the Communications Broker process is already stopped.
`7`	The Communications Broker failed to start due to a bind exception on the Communications Broker port to be opened.
`8`	The Communications Broker could not complete the command due to an authorization error.
`100`	An exception was encountered causing the Communications Broker to exit.

Corresponding error messages are written to stderror.

EXAMPLES

The following examples show you how to use the `ovbbccb` command:

- To start the Communication Broker as a daemon process on the local system:

  ```
  ovbbccb -daemon
  ```

- To start the resource group `WebCluster1` in the Communication Broker on host `merlin`:

  ```
  ovbbccb -start WebCluster1 merlin
  ```

- To display the status of the specified HP Software server process:

  ```
  ovbbccb -status
  ```

  The following output appears:

```
Status: OK
(Namespace, Port, Bind Address, Open Sockets)
<default>    383    ANY    2HP OpenView HTTP Communication Incoming
Connections
 To machine1.example.hp.com:
    localhost:17282  76bb6662-2cd3-7531-1221-b67340fb721f  BBC 06.10.209;
ovbbccb 06.10.209


HP OpenView HTTP Communication Reverse Channel Connections
 Opened from machine1.example.hp.com:
machine31.example.hp.com:8188   BBC 06.10.143; ovbbcrcp 06.10.143   (1)  30
Jan 2009 15:38:13 GMT  317 ms
machine32.example.hp.com:8196   BBC 06.10.143; ovbbcrcp 06.10.143   (1)  30
Jan 2009 15:38:13 GMT  241 ms

 Failed from:
machine21.example.hp.com:8188   BBC 06.10.143; ovbbcrcp 06.10.143   (1)  30
Jan 2009 15:38:13 GMT  307 ms
machine22.example.hp.com:8196   BBC 06.10.143; ovbbcrcp 06.10.143   (1)  30
Jan 2009 15:38:13 GMT  291 ms

Pending from :
machine11.example.hp.com:6244 Connection Refused / remote RCProxy not
listening (1)  30 Jan 2009 15:37:58 GMT  3 ms
machine12.example.hp.com:6252 Connection Refused / remote RCProxy not
listening (1)  30 Jan 2009 15:37:58 GMT  2 ms
```

ovbbcrcp

NAME

ovbbcrcp – a tool to manage Reverse Channel Proxy (RCP) and monitor RCP connections.

SYNOPSIS

`ovbbcrcp -h|-help`

`ovbbcrcp -v|-version`

`ovbbcrcp -kill`

`ovbbcrcp -status`

DESCRIPTION

You can use the `ovbbcrcp` tool to manage RCPs and monitor RCP connections. Many HP BTO Software products that follow a client-server architecture use the Black Box Communication (BBC) component for communication. You can use a Reverse Channel Proxy (RCP) to satisfy the advanced security requirements for communication across trust zones separated by firewalls. An RCP allows you to establish a two-way communication (outbound and inbound) channel across a firewall configured to allow only outbound communication.

The RCP functions as a channel between the BBC server and the requests to the BBC server. An established RCP channel is referred to as a reverse channel. A reverse channel through which RCPs request the BBC server to initiate more reverse channels is referred to as a reverse administration channel.

You can deploy an RCP on one of the following:

- Any client systems

- A dedicated RCP server

To establish a reverse channel, you must configure the BBC server, the BBC client, and the RCP.

Configuring a BBC Server to Enable RCP Communication

To enable communication from clients to the BBC server through an RCP, you must configure each BBC server. The BBC server loads the configuration from the `bbc.<server>` namespace and establishes reverse administration channels during startup. Use the following options to configure a BBC server:

- `ENABLE_REVERSE_ADMIN_CHANNELS`- You can set this option to `true` to establish a permanent reverse administration channel with the RCPs specified in the `RC_CHANNELS` option. By default, this option is set to `false` for all BBC servers, except for the BBC Communication Broker (BBC CB). Refer to the following example for more information about this option.

  [bbc.cb]

  ENABLE_REVERSE_ADMIN_CHANNELS=true

  RC_CHANNELS=pnode:9090

  The options specified in the example instructs BBC CB on the management server to contact the RCP on the `pnode` node and port 9090 when starting up.

- `RC_CHANNELS`- Use this option to specify the list of RCPs with which you can establish reverse channels. If the OvCoreID is specified, BBC validates this ID against the core ID of the RCP. You can specify multiple RCPs by separating the RCPs using the semicolon (;). You can specify the list of RCPs in the following format.

  <RCP_hostname>:<RCP_port>[,<RCP_OvCoreID>][;<RCP2>…..], where *<RCP_hostname>* specifies the RCP host name, *<RCP_port>* specifies the RCP port number, and *<RCP_OvCoreID>* specifies the core ID of the RCP.

  You must use the `-ovrg server` option with the `ovconfchg` command if the HPOM server runs on a High Availability (HA) cluster. If the HPOM server runs as an HA resource group, then use the ovconfchg –ovrg server –ns bbc.cb –set RC_CHANNELS <value> command, where *<value>* specifies the RCPs specified in the `RC_CHANNELS` option.

- `RC_MAX_WORKER_THREADS/RC_MIN_WORKER_THREADS`- The Communication Broker uses different threads to enhance the performance of a reverse channel connection. The `RC_MAX_WORKER_THREADS` option specifies the maximum number of threads that can be used by the Communication Broker and the `RC_MIN_WORKER_THREADS` option specifies the number of threads that will always remain active. By default, `RC_MAX_WORKER_THREADS` is set to one and `RC_MIN_WORKER_THREADS` is set to zero. You can set these options to higher values to enhance the reverse channel communication.

- `RC_CHANNELS_CFG_FILES`- Use this option to specify the list of configuration files. A configuration file can contain a list of one or more RCPs with which you can establish reverse channels. You must place the specified configuration files in the `<OvDataDir>/conf.bbc` directory, where *<OvDataDir>* specifies the name of the data directory. You must use this option in place of the `RC_CHANNELS` option if you use multiple RCPs that require a frequent hostname change. You can specify a list of configuration files by separating the configuration file names using the comma (,) in the following format:

  <filename>[,<filename>….], where *<filename>* specifies the name of the configuration file.

Each line in the configuration file can contain only one RCP name. For each RCP, you must specify a port number. The OvCoreID is an optional parameter that you can specify, which must be separated from the port number by a comma as follows. <RCP_hostname>:<port>[,<RCP_OvCoreID>]

If you change only a few RCP host names inside one or more files specified in the RC_CHANNELS_CFG_FILES option, you must use the `ovconfchg` command to trigger the BBC server to refresh the configuration as follows.

ovconfchg ns bbc.cb –set ENABLE_REVERSE_ADMIN_CHANNELS true.

- `RETRY_INTERVAL`- Use this option to specify the retry interval in minutes to establish a reverse channel with an RCP.
- RC_ENABLE_FAILED_OVEVENT- Set this option to 'true' to forward the RCP connection failure messages to the HPOM message browser.

Enabling Communication Broker Connections to the RCP

The Communication Broker (ovbbccb) runs with `/var/opt/OV` as the root directory. The name service relevant configuration files that are necessary to open Transmission Control Protocol (TCP) connections are present in the `/etc directory`. This prevents ovbbccb from creating connections to the RCP. You must do as follows to resolve this problem:

- Create the directory named `etc under /var/opt/OV`
- Copy the name service relevant configuration files (for example, files such as `resolv.conf, hosts, nsswitch.conf)` from `/etc to /var/opt/OV/etc`

Alternatively, you can also disable the `ovbbccb chroot` feature by running the following command. This method resolves the problem of preventing ovbbccb from creating connections to the RCP.

```
ovconfchg -ns bbc.cb -set CHROOT_PATH /
```

Configuring a BBC Client to Enable RCP Communication

To configure a BBC client, you must specify the hosts that must be connected through an RCP. You can specify the list of RCPs in the XPL configuration database under the bbc.http namespace. Use the syntax of the normal proxy configuration to specify the RCP configuration. If you do not specify the port number of the RCP, it is assumed that BBC CB is running on the current node. If you configure the OvCoreID, BBC Client verifies the OvCoreID of the RCP. If the port number of the RCP is not specified in the configuration file or BBC CB, BBC fails to open the connection to RCP.

You can configure a BBC client using the following options:

- `PROXY`- Use this option to specify the RCP and port name for a hostname. The format to specify this option is shown in the following example:

  `PROXY=pnode.hp.com:9090-(pnode.hp.com,*.noallow.hp.com)+(*.hp.com)`

  In the example shown above, the parameters specified are as follows:

  — `pnode.hp.com` is the name of the RCP

  — `9090` is the port number

  — -(*.noallow.hp.com) specifies that the RCP must not be used to connect to all hostnames ending with `.noallow.hp.com`. You can separate multiple hostnames with commas (,) or semicolons (;).

  — +(*.hp.com) specifies that the specified RCP must be used to connect to all hostnames ending with .hp.com. You can separate multiple hostnames with commas (,)or semicolons (;).

The BBC client connects to the RCP that first matches the specified set of conditions.

In the example shown in this section, the BBC client connects to any host name that ends with `.hp.com` by using the RCP on the system `pnode` and the port `9090`.

You can also use IP addresses instead of hostnames to specify the hosts. For example, +(15.*.*.*) specifies that the RCP must be used to connect to hosts with an IP address that starts with 15. You must not configure a normal proxy server and an RCP on the same system. You must also make sure that you specify the RCP system name in the list of hostnames for which the RCP must not be used. This helps to ease the communication through the RCP.

Configuring RCP

You can use the following option in the `bbc.rcp` namespace to configure RCP.

`SERVER_PORT`- Use this option to specify the RCP port number.

Starting and Stopping RCPs

You can start or stop the RCP process by using the `ovc` command. This command registers the RCP process as `ovbbcrcp` under the `RCP` category.

By default, the `ovbbcrcp` process is not registered with HP Operations Control (OvCtrl). You must register the `ovbbcrcp` process with the `ovctrl daemon` by using the following command.

```
$OvInstallDir/bin/ovcreg –add $OvInstallDir/newconfig/DataDir/conf/bbc/
ovbbcrcp.xml
```

`$OvInstallDir` is the directory in which HP BTO Software is installed.

Refer to the following commands to start or stop an process:

- `ovc -start ovbbcrcp`- Use this command to start the RCP process.
- `ovc -stop ovbbcrcp`- Use this command to stop the RCP process.

Parameters

The `ovbbcrcp` command recognizes the following options:

`-h|-help`

Displays and describes the available options for the `ovbbcrcp` tool.

`-v|version`

Displays the version of the HP Software RCP.

`-kill`

Stops the RCP on the local node.

`-status`

Displays the RCP status.

EXIT STATUS

The following exit values are returned:

`0`	`ovbbcrcp` exited normally with no error.
`1`	Command syntax error encountered. Refer to command syntax for more details on possible values.
`2`	Command partially successful.
`3`	Command failed. See command output for additional information.

4	The command to start RCP failed due to an existing RCP process.
6	The RCP failed to start due to a bind exception on the RCP port to be opened.
100	An exception encountered resulted in an RCP exit.

Corresponding error messages are written to stderror.

EXAMPLES

The following example shows you how to use the `ovbbcrcp` tool.

To display the status of the RCP:

```
ovbbcrcp -status
Status: OK

(Namespace, Port, Bind Address, Open Sockets)

  bbc.rcp    9090    ANY    1

 Admin Reverse Channel Connections Accepted
machine.example.hp.com:383  e91b67e4-a337-750a-163c-c3bbd2c257cc  BBC
06.00.030; ovbbccb 06.00.030

 Admin Reverse Channel Connections Opened

 Normal Connections
Incoming
localhost:55464  e91b67e4-a337-750a-163c-c3bbd2c257cc  BBC 06.00.030;
ovbbcrcp 06.00.030

Outgoing

 Queued CONNECT connections
+-----------------------------------+--------------------+
|Source Address | Target Address
+-----------------------------------+--------------------

 HTTP Tunnelled Connections
+-------------------------+-------------------------+--+
| Source Address | Destination Address | Target Address|
+-------------------------+-------------------------+--+
```

bbcutil

NAME

bbcutil – a tool for debugging a BBC-based server.

SYNOPSIS

`bbcutil -h|-help`

`bbcutil -version`

`bbcutil -ovrg [<ovrg>]`

```
bbcutil -reg|-registrations [<hostname>|<ip>] [-v|-verbose]

bbcutil -deregister {<path>|*} [-force] [-v|-verbose]

bbcutil -ping {[<hostname>|<ip>[:<port>]] | [<uri>]} [count]
[-v|-verbose]

bbcutil -status {[<hostname>|<ip>[:<port>]] | [<uri>} [-v|-verbose]]

bbcutil -migrate {[<namespace>] [<appname>] [<filename>]} [-v|-verbose]

bbcutil -count|-size|-list [-p|-path <path>] [-t|-target <target>]
[-v|-verbose]

bbcutil -getcbport [<hostname>|<ip>]

bbcutil -gettarget [<hostname>|<ip>]
```

DESCRIPTION

The `bbcutil` command helps you to debug a BBC-based server. The `bbcutil` command can be used to list all applications registered to a Communication Broker, to check whether specified communication services are alive, and to display details about the current state of the server.

Parameters

The `bbcutil` command incorporates the options in the following list. The syntax for the `[<hostname>|<ip>][:<port>]]` string, for example; in the options `-registrations` or `-ping`, can be a hostname and a port separated by a colon (`:`) but can also be a full URL path (including protocol), such as:

```
https://merlin.guilford.mycom.com:383/com.hp.ov.coda
```

bbcutil recognizes the following options:

`-h|-help`

Displays and describes the available options for the `bbcutil` command.

`-version`

Displays the version of the HP Software communication in use.

-ovrg <*ovrg*>

Executes `a bbcutil` command option in the context of the resource group specified by <*ovrg*>. This is an optional command. It can be used with other `bbcutil` commands. For example, `bbcutil -ovrg testsrv -getcbport` command returns the Communications Broker port number of the resource group, testsrv.

`-reg|-registrations [<hostname>|<ip>]`

Queries a Communications Broker on the node specified by *<hostname>* or *<ip>* and displays a list of all registered applications. If the hostname or IP address is not specified, localhost is assumed.

`-deregister {<path>|*} [-force]`

Deregisters the specified path from the Communications Broker on the localhost. You can use the asterisk character '*' to denote *all* paths. The specified path will not be deregistered if the application servicing the specified path is currently running. Use the `-force` option to override this behavior and force the path to be deregistered.

`-ping {[<hostname>|<ip>][:<port>]] | [<uri>]} [count]`

Pings the specified HP Software server process. A hostname or IP address with an optional port number or a URL may be given to locate the server process to ping. If a URL is given with the path of a valid process registered with the Communications Broker, the Communications Broker will automatically forward the ping to the registered process. Count specifies the number of times to execute the ping. The node may be specified with a hostname or IP address. Default for the node is "localhost". Default for the port is the Communications Broker port on the specified node. Default count is 1.

`-status {[<hostname>|<ip>[:<port>]] | [<uri>]}`

Displays the status of the specified HP Software server process. A hostname or IP address with an optional port number or a URI may be given to locate the server process. The node may be specified with a hostname or IP address. Default for the node is localhost. Default for the port is the Communications Broker on the specified node.

`-migrate {[<namespace>] [<appname>] [<filename>]} [-v|-verbose]`

Migrates the specified BBC configuration parameters. If no command parameters are specified the BBC 2 LLB and the BBC 4 CB parameters will be migrated to the namespace `bbc.cb` in the configuration database. The BBC 2/3 DEFAULT parameters will be migrated to the namespaces `bbc.http`, `bbc.fx`, and `bbc.snf`. BBC 4 CB parameters will override BBC 2 LLB parameters. The namespace specifies the BBC 2/3/4 namespace to migrate the parameters from. The <*appname*> specifies the application name to use in determining the BBC 5 target namespace. Parameters are migrated to the `bbc.http.ext.`<*appname*>, `bbc.fx.ext.`<*appname*>, and `bbc.snf.ext.`<*appname*> namespaces. The file name parameter specifies the file to read the parameters from. Default file name is the BBC 2 standard `default.txt` file and the standard BBC 4 Communications Broker settings.ini file. The BBC 4 settings.ini parameters override the BBC 2 default.txt parameters.

`-count`

Displays the number of requests in a store-and-forward buffer for the specified target, or the entire buffer if no target is specified.

`-size`

The `-size` option displays the size of a store-and-forward buffer. If `-verbose` is specified as well, the size of each individual request is displayed. If a target is specified, only the size of the requests to this target are displayed.

`-list`

The `-list` option displays all requests in a store-and-forward buffer for the specified target or the entire buffer if no target is specified.

`-p|-path <path>`

The `-path` option defines the path to the store-and-forward buffer. This parameter is used to set the BUFFER_PATH parameter.

`-t|-target <target>`

The `-target` option specifies the target URI, whose information you want to display. If no target is specified, information for all targets in the buffer is displayed.

`-verbose`

Shows more detailed output.

`-getcbport [<hostname>|<ip>]`

Displays the configured Communications Broker port number of the node specified by *<hostname>* or *<ip>*. If the hostname or IP address is not specified, localhost is assumed. If no Communication Broker port number is configured for the node, the default value 383 is displayed.

`-gettarget [<hostname>|<ip>]`

Displays the IP address of the target node and the Communications Broker port number, or the HTTP Proxy and port number, if a proxy is configured for the specified *<hostname>* or *<ip>*.

EXIT STATUS

The following exit values are returned:

`0`	bbcutil exited normally with no error.
`1`	Command syntax error encountered. See command syntax for more details on possible values.
`2`	Command partially succeeded.
`3`	Command failed. See command output for more detailed information.
`4`	bbcutil could not complete the requested command due to an authorization error.
`100`	An exception was encountered causing the Communications Broker to exit.

Corresponding error messages are written to stderror.

EXAMPLES

The following examples show you how to use the `bbcutil` command:

- To show the status of Communication Broker on the local node:

  ```
  bbcutil -status
  ```

- To query the communication server located at `https://merlin.guilford.mycom.com:383/com.hp.ov.coda` for details about the current state of the server:

  ```
  bbcutil -ping https://merlin.guilford.mycom.com:383/com.hp.ov.coda
  ```

- To get the IP address and Communications Broker port number of a target node `node1`

  ```
  bbcutil -gettarget node1
  ```

ovc

NAME

ovc – perform actions on local components

SYNOPSIS

```
ovc  -h|-help

ovc  -start [<target> ... ] [-boot]{[-async]|[-verbose]}

ovc  -stop [<target> ... ][-nostart]{[-async]| [-verbose]}

ovc  -restart [<target> ... ]

ovc  -kill [-verbose]

ovc  -status [<target> ... ] [-level <level>]

ovc  -notify <event> [<target> ...] [-value <value>]

ovc  -version
```

DESCRIPTION

ovc controls the starting and stopping, event notification, and status reporting of all components registered with the HP Operations Control service.

A component can be a server process belonging to any of the products such as HP Operations Manager for Windows, HP Operations agents (for example, the Performance Agent or the Discovery Agent), an event interceptor, or an application delivered by an integrator. Each component must have an associated registration file providing HP Operations Manager with configuration and process information about the component. For more information about registration, *ovcreg(1)*.

A target can be either a component or a group of components, defined as a category. The ovc command first tries to initiate action on the category specified in target. If the category called *target* is not found, ovc then tries the individual component called *target*. Note that a category name must not match any component name.

The HP Operations Control daemon or service automatically restarts any component that terminates unexpectedly if the *AutoRestart* option in the registration file of the component is set to *true*. If the HP Operations Control daemon or service is stopped using the -kill option, all registered components are stopped, too.

Parameters

ovc recognizes the following options:

-h|-help

Displays *all* available options for the ovc command.

-start [<*target*> ...] [-boot]{[-async]|[verbose]}

Starts the selected components. <*target*> specifies a component or category. If <*target*> is not used, all components are started. If -boot is used, only components that start at boot time are started.

The -async option starts the components asynchronously. If you use the -verbose option, ovc command displays the progress of the command execution. You can use the -async or the -verbose option, but you must not include these options together in a command.

-stop [<*target*> ...] [-nostart]{[-async]|[verbose]}

Stops the selected components. <*target*> specifies a component or category. If <*target*> is not used, all components are stopped *except* components, which belong to the CORE component group. If you specify the -nostart option and if the control daemon is not running, the command does not perform any action. If you do not specify the -nostart option, the ovc

`-stop` command starts the control daemon and ovbbccb components if these components are not running. The `-async` option starts the components asynchronously. If you use the `-verbose` option, the `ovc` command displays the progress of the command execution. You can use the `-async` or the `-verbose` option, but you must not include these options together in a command.

`-restart [<target> ... ]`

Stops components before they are restarted. *<target>* specifies a component or category. If *<target>* is not used, all components are stopped and restarted.

`-kill [-verbose]`

Stops all components registered with the HP Operations Control service. If you use the `-verbose` option, the `ovc` command displays the progress of the command execution.

`-notify <event> [<target> ... ] [-value <value>]`

Sends notification of an event with the value of *<value>* to the component or category specified by *<target> ...* . You can specify the `<value>` to the component that generates the event (event generator) and sends the event-related information to all components that request the event information (event subscribers). If target is not used, the event notification is sent to all components. If *<value>* is not used, only the event notification is sent.

`-status [<target> ... ] [-level <level>]`

Reports the status of a component or category specified by *<target>*. The status report contains the component's label, description, category, process ID, and STATE. Components can be in state: Stopped (0 in numeric format), Starting (1), Initializing (2), Running (3), Stopping (4), N/A (5) or Aborted (6). If *<target>* is not specified, the status of *all* components is returned. *<level>* specifies the type and quantity of information to display, as follows:

`Level 0`	Status of registered components monitored by HP Operations Manager.
`Level 1`	Status of registered components whether they are monitored by HP Operations Manager or not.
`Level 2`	Status of registered components and a dump of their registration information.
`Level 3`	ID of core processes. 0 (zero) indicates root, non-zero indicates non-root ownership.
`Level 4`	Similar to level 0, but the STATE is reported in numeric format.
`Level 5`	Similar to level 1, but the STATE is reported in numeric format.
`Level 6`	Similar to level 0, but the output is not formatted
`Level 7`	Similar to level 1, but the output is not formatted
`Level 8`	Shows the detailed status of the processes with the recent history of each process.

`-version`

Prints the version of ovc

EXIT STATUS

The following exit values are returned:

0	Success.
1	Not defined.
2	Ignored.
62	The UNIX daemon or Windows service is not running.
63	The Control daemon is being initialized.
64	Generic error.
65	Invalid target.
67	Operation aborted.
69	Missing prerequisite.
70	Authorization error.
71	Operation on prerequisite failed.
73	Invalid event.

EXAMPLES

The following examples show how to use the ovc command and some of its options to control and display important information about registered components.

- To start the component registered as opcle:

  ```
  ovc -start opcle
  ```

  Before opcle itself starts, all the components that opcle depends on are started.

- To start the component registered as opcle and display the progress of the command execution:

  ```
  ovc -start opcle -verbose
  ```

  Before opcle itself starts, all the components that opcle depends on are started.

- To print the status of all registered components:

  ```
  ovc -status
  ```

- To stop the component registered as opcle:

  ```
  ovc -stop opcle -verbose
  ```

  Before opcle itself stops, all the components that depend on opcle are stopped. This command starts the control daemon and ovbbccb components if these components are not running.

- To stop the component registered as opcle using the ovc -stop[<target>...] -nostart option:

  ```
  ovc -stop opcle -nostart
  ```

  Before opcle itself stops, all the components that depend on opcle are stopped. This command does not perform any action if the control daemon is not running.

- To send the event RECONFIGURE to all running components:

  ```
  ovc -notify RECONFIGURE
  ```

- To start all components (and their dependents) belonging to category SERVER and AGENT.

  ```
  ovc -start SERVER AGENT
  ```

- To print the status of the component `opcle` and display the registration details:

  ```
  ovc -status opcle -level 2
  ```

ovcreg

NAME

ovcreg – component registration tool

SYNOPSIS

`ovcreg -h|-help`

`ovcreg -check [<filename>]`

`ovcreg -add [<filename>]`

`ovcreg -del [<component>]`

`ovcreg -version`

DESCRIPTION

`ovcreg` is used to register a component with (and de-register the component from) the OvCtrl. The ovcreg command can also be used to check a component registration file for syntactical correctness.

If the OvCtrl daemon (`ovcd`) is running at the time of registration, it will be informed about the new component only if the `-add` option was applied and the component is not started. The OvCtrl shows the new component the next time the `ovc` command is called with the `-status` option.

If the OvCtrl daemon (`ovcd`) is running, the component will be stopped if the `-del`(ete) option was applied. NOTE: this option will *not* stop CORE components, which are denoted by the option *CoreProcess* in the registration file. CORE components should be stopped with `ovc` command and the `-kill` option.

Parameters

`ovcreg` recognizes the following options:

`-h|-help`

Displays *all* available options for the `ovcreg` command.

`-check [<filename>]`

Checks the syntax of `<filename>`. `<filename>` must not contain more than one component.

`-add [<filename>]`

Checks the syntax of `<filename>` and stores a copy in the configuration directory. Adding a component with a name which is already registered with the OvCtrl will overwrite the original registration with the new one. `<filename>` must not contain more than one component.

`-del [<component>]`

Stops and de-registers the specified <*component*> from the OvCtrl and deletes the specified <*component*> registration file. NOTE: the delete option does not stop CORE components.

`-version`

Displays the version of ovcreg

EXIT STATUS

The following exit values are returned:

`0`	Success - The syntax of the file is correct and the registration file is successfully added or deleted.
`1`	Wrong usage
`2`	Parsing error
`3`	Error deleting registration file
`5`	Error writing XML file
`6`	Component is not registered
`7`	Error stopping component
`8`	Error deleting component

FILES

Registration files for components registered with the OvCtrl for the supported platforms reside in the following locations:

- AIX, HP-UX, Linux, Solaris:

  `/var/opt/OV/conf/ctrl/*.xml`

- Microsoft Windows:

  `C:\Program Files\HP\HP BTO Software\conf\ctrl\*.xml`

Note that the user can change the specified default location for the registration files on machines running Microsoft Windows.

EXAMPLES

The following examples show how to use the `ovcreg` command and some of its options to control and display important information about registered components.

- To check the syntax of the component registration file: `opcle.xml`:

  ```
  ovcreg -check opcle.xml
  ```

- To check the syntax of the component registration file, `opcle.xml`, and add the component defined in the component registration file, `opcle.xml` to the OvCtrl:

  ```
  ovcreg -add opcle.xml
  ```

- To stop and de-register the component registered as `opcle`:

  ```
  ovcreg -del opcle
  ```

ovcert

NAME

ovcert – Manages certificates with the Certificate Client on an HTTPS-based node.

SYNOPSIS

```
ovcert -h|-help

ovcert -importcert -file <file> [-pass <passphrase>] [-ovrg
<ov_resource_group>]

ovcert -exportcert -file <file> [-alias <alias>] [-pass <passphrase>]
       [-ovrg <ov_resource_group>]

ovcert -importtrusted -file <file> [-ovrg <ov_resource_group>]

ovcert -exporttrusted -file <file> [-alias <alias>] [-ovrg
       <ov_resource_group>]

ovcert -certreq [-instkey <file> [-pass <passphrase>]]

ovcert -list [-ovrg <ov_resource_group>]

ovcert -remove <alias> [-f] [-ovrg <ov_resource_group>]

ovcert -certinfo <alias> [-ovrg <ov_resource_group>]

ovcert -check

ovcert -status

ovcert -updatetrusted

ovcert -version
```

DESCRIPTION

The `ovcert` command is used to manage certificates with the Certificate Client on an HTTPS-based node. You can execute tasks such as initiating a new certificate request to the Certificate Server, adding node certificates and importing the private keys, and adding certificates to the trusted root certificates.

Parameters

The `ovcert` command incorporates the following options:

`-h|-help`

Displays usage help for the `ovcert` command options.

`-importcert -file <file> [-pass <passphrase>] [-ovrg <ov_resource_group>]`

Adds the certificate located in the file *<file>* (in *PKCS12* format) as node certificate and imports the private key which must be located in the same file as the private key for the node. The pass phrase for protecting the exported data using encryption specified during creation of the data to import must be specified as parameter *<passphrase>*.

The optional *<ov_resource_group>* parameter can be specified to import an additional certificate on an HA system. As a result, the specified certificate will not be imported to the default location but to the HA default location for the specified package on the shared disk.

`-exportcert -file <file> [-alias <alias>] [-pass <passphrase>] [-ovrg <ov_resource_group>]`

Exports the currently installed node certificate together with its private key to the file system location specified as parameter *<file>* (in *PKCS12* format). The pass phrase for protecting the exported data using encryption specified during creation of the data to import must be specified as parameter *<passphrase>*.

The optional *<ov_resource_group>* parameter can be specified to export an additional certificate on an HA system. As a result, not the default node certificate but the certificate installed for the specified HA package from the shared disk will be exported.

`-importtrusted -file <file> [-ovrg <ov_resource_group>]`

Adds the certificate located in the specified file (in PEM format) to the trusted root certificates.

The optional *<ov_resource_group>* parameter can be specified to import an additional root certificate on an HA system. As a result, the specified root certificates will not be imported to the default location but to the HA default location for the specified package on the shared disk.

`-exporttrusted -file <file> [-alias <alias>] [-ovrg <ov_resource_group>`

Exports the trusted certificate to the file system location specified as parameter *<file>* (in PEM format). The pass phrase for protecting the exported data using encryption specified during creation of the data to import must be specified as parameter *<passphrase>*.

The optional *<ov_resource_group>* parameter can be specified to export an additional certificate on an HA system. As a result, not the default node certificate but the certificate installed for the specified HA package from the shared disk will be exported.

`-certreq [-instkey <file> [-pass <passphrase>]]`

Initiates a new certificate request that is sent to the Certificate Server.

The optional parameters *<file>* and *<passphrase>* can be used to initiate a certificate request that will be based on the installation key that is contained in the specified file. Such an installation key file can be generated with the `ovcm` tool on the certificate server.

The installation key can be used to authenticate the node on the certificate server. Therefore, such a request may be granted automatically without human interaction.

`-list [-ovrg <ov_resource_group>]`

Displays the aliases of the installed certificates and trusted certificates.

`-certinfo <alias> [-ovrg <ov_resource_group>]`

Displays information such as serial number, issuer, subject, and fingerprint for the certificate specified by *<alias>*.

`-remove <alias> [-ovrg <ov_resource_group>]`

Removes the certificate specified by *<alias>*.

`-check`

Checks whether all prerequisites for SSL communication are fulfilled, such as assigned OvCoreId, installed and valid certificate and private key, and installed and valid trusted certificate.

On completion, the components checked and their status along with the final result are displayed.

`-status`

Contacts the Certificate Client and displays the current certificate status, which can one of the following possible values:

- certificate installed

- no certificate

- pending certificate request

- certificate request denied

- undefined (if Certificate Client can not be contacted)

`-updatetrusted`

Retrieves the currently trusted certificates from the Certificate Server and installs them as trusted certificates on the node.

`-version`

Returns the version of the tool (the component version).

EXIT STATUS

The following exit values are returned:

`0` All steps were successful.

`1` One or more steps were not successful.

Corresponding error messages are written to stderror.

EXAMPLES

The following examples show how to use the ovcert command:

- To import the certificate, private key, and trusted certificates located in the file <*file*> to the system's keystore:

  ```
  ovcert -importcert -file <file>
  ```

- To add the certificate(s) located in <*file*> to the trusted certificates:

  ```
  ovcert -importtrusted -file <file>
  ```

ovcm

NAME

ovcm – manages certificates with the Certificate Server in an HTTPS-based environment.

SYNOPSIS

```
ovcm -h|-help

ovcm -version

ovcm -newcacert [-ni]

ovcm -importcacert -file <file> [-pass <passphrase>]

ovcm -exportcacert -file <file> [-pass <passphrase>]

ovcm -listpending [-l]

ovcm -grant <reqid>

ovcm -deny <reqid>

ovcm -remove <reqid>

ovcm -issue -file <file> -name <nodename> [-pass <passphrase>] [-coreid
<OvCoreId>] [-ca]
```

`ovcm -genInstKey -file <file> [-context <context>] [-pass <passphrase>]`

DESCRIPTION

The `ovcm` command is used to manage certificates with the Certificate Server in an HTTPS-based environment. You can execute tasks such as creating public/private key pairs for signing certificates, granting and issuing signed certificates and the corresponding private keys against certificate requests from HTTPS nodes.

Parameters

The `ovcm` command incorporates the following options:

`-h|-help`

Displays all the command-line options for the `ovcm` command.

`-version`

Returns the version of the tool (the component version).

`-newcacert [-ni]`

Creates a new public/private key pair for signing certificates. If there is already a public/private key pair in use by the certification authority, you are asked whether this should be replaced. Use this option with care! An initial public/private key pair is automatically created when the Certificate Management component is installed.

The `-ni` non-interactive option creates a new public/private key pair without operator interaction. If a public/private key pair already exists, the request is cancelled.

`-importcacert -file <file> [-pass <passphrase>]`

Imports a certificate for signing certificate requests together with its private key (both contained in one file in PKCS12 format). Use this option with care as the existing certificate and private key are replaced. This option is intended for restoring a backup of the current private key/certificate, for example, if the originals are damaged or destroyed, or for setting up a backup system.

Use *<file>* to specify the name of the file (in PKCS12 format) to import from.

Use *<passphrase>* to specify the text string you use to protect the data. If the `-pass` option is not used, you are prompted to enter the value of the pass phrase.

`-exportcacert -file <file> [-pass <passphrase>]`

Exports the certificate and the corresponding private key of the current certification authority to a file. This option is intended to be used for creating backups. The certification authority private key must be handled very carefully because of its importance to the whole communication environment. It should never be transmitted over the network or stored in an insecure place.

Use *<file>* to specify the name of the file where the certificate data should be written to (in PKCS12 format).

Use *<passphrase>* to specify the text string you use to protect the data. If the `-pass` option is not used, you are prompted to enter the value of the pass phrase.

`-listPending [-l]`

Displays the request IDs of all pending certificate requests.

With the `-l` option, detailed information on every pending request is listed.

`-grant <reqid>`

The selected certificate request is granted and a signed certificate is sent to the requesting certificate client.

The state of the pending certificate request with the request ID *<reqid>* is changed to granted.

`-deny <reqid>`

The selected certificate request is denied and a message is sent to the requesting certificate client.

The state of the pending certificate request with the request ID *<reqid>* is changed to denied.

`-remove <reqid>`

The selected certificate request is removed from the pending pool. No message is sent to the requesting certificate client.

The state of the pending certificate request with the request ID *<reqid>* is changed to removed.

`-issue -file <file> -name <nodename> [-pass <passphrase>] [-coreid <OvCoreId>] [-ca]`

Issues a signed certificate and the associated private key for a node and writes both to the file *<file>* (in PKCS12 format). The file can then be moved to a portable medium and taken to the corresponding node.

The *<nodename>* must be specified as additional information.

The optional *<OvCoreId>* parameter can be used to specify the unique ID of the certificate. If this parameter is empty, a new `OvCoreId` value is generated for the certificate.

The *<passphrase>* parameter is required to protect the generated certificate data. The pass phrase entered is used to calculate an encryption key that then is used to encrypt the generated certificate data. If the `-pass` option is not used, you are prompted to enter the value of the pass phrase.

If you use the `-ca` option, you can use the issued certificate to sign other certificates. This may be necessary if you want to set up a second Certificate Server, which creates certificates that are trusted by all nodes that trust the root Certificate Server.

`-genInstKey -file <file> [-context <context>] [-pass <passphrase>]`

Creates a new installation key, which, together with some additional information is stored in the file *<file>*. The created file should then be securely transferred to the node system.

On the target node, it can then be used to initiate a new certificate request that will be encrypted with the installation key. The certificate server will accept only one request that is encrypted with this key.

This approach offers the advantage that the certificate request (including the private key) is generated on the node system and the system can be authenticated by using the installation key.

The optional parameter *<context>* can be used to add additional (application specific) information that is contained in the certificate request.

The *<passphrase>* parameter is required to protect the generated installation key. The pass phrase entered is used to calculate an encryption key that then is used to encrypt the generated installation key. If the `-pass` option is not used, you are prompted to enter the value of the pass phrase.

EXIT STATUS

The following exit values are returned:

`0` All steps were successful.

`1` One or more steps were not successful.

Corresponding error messages are written to stderror.

EXAMPLES

The following examples show how to use the `ovcm` command:

- To create a new public/private key pair for the signing of certificates on the management-server system:

  ```
  ovcm -newcacert
  ```

- To grant the certificate request *<reqid>* and send a signed certificate to the requesting certificate client:

  ```
  ovcm -grant <reqid>
  ```

ovcoreid

NAME

ovcoreid

– Manages the unique node identifier `OvCoreId` on the local node.

SYNOPSIS

```
ovcoreid -show [-ovrg <OV_Resource_Group>]
ovcoreid -create [-force] [-ovrg <OV_Resource_Group>]
ovcoreid -set <OvCoreId> [-force] [-ovrg <OV_Resource_Group>]
ovcoreid -version
ovcoreid -h|-help
```

DESCRIPTION

The `ovcoreid` command is used to display existing `OvCoreId` values and, in addition, create and set new `OvCoreId` values on the local node.

Parameters

The `ovcoreid` command accepts the following parameters and options:

`-show [-ovrg <OV_Resource_Group>]`

Displays the current `OvCoreId` of the system (configuration setting `CORE_ID` in namespace `[sec.core]`). This is the default if no parameters are specified. If the OvCoreId you want to show belongs to an OpenView

Resource Group, use the `-ovrg` option to specify the name of the Resource Group. If an resource group is specified, the corresponding configuration settings will be read or modified as well.

If you specify a non-existent resource group, `ovcoreid` displays the local `OvCoreId`.

`-create [-force] [-ovrg <OV_Resource_Group>]`

Generates a new `OvCoreId`. If a CORE_ID value already exists, the existing OvCoreId is only overridden when `-force` is specified. If the OvCoreId you want to show belongs to an OpenView Resource Group, use the `-ovrg` option to specify the name of the Resource Group. If an resource group is specified, the corresponding configuration settings will be read or modified as well.

If you specify a non-existent resource group, `ovcoreid` displays an error.

`-set [-force] [-ovrg <OV_Resource_Group>]`

Sets a specific `OvCoreId`. The `-force` option must be used if an `OvCoreId` value has already been set. If the OvCoreId you want to show belongs to an OpenView resource group, use the `-ovrg` option to specify the name of the resource group. If an resource group is specified, the corresponding configuration settings will be read or modified as well.

`-version`

Returns the version of the tool (the component version).

`-h|-help`

Display all available command options.

EXIT STATUS

The following exit values are returned:

`0`	All steps were successful.
`1`	If `-create` or `-set` is used without `-force` and a value for `OvCoreId` already exists.
`2`	One or more steps were not successful.

Corresponding error messages are written to stderror.

NOTE Changing the `OvCoreId` of a system is analogous to giving the system a new identity and is an action that should only be executed if the consequences are fully understood. Changing the `OvCoreId` of a system requires a number of significant changes including the need for a new certificate, and having to do appropriate reconfiguration of the HP Software server(s).

EXAMPLES

The following examples show you how to use the `ovcoreid` command:

- To display the `OvCoreId` for the local node:

  ```
  ovcoreid -show
  ```

- To create and set a new `OvCoreId` on the local node:

  ```
  ovcoreid -create
  ```

- To set the specified `OvCoreId` on the local node:

  ```
  ovcoreid -set <OvCoreId>
  ```

ovconfchg

NAME

ovconfchg – manipulates settings files, updates the configuration database, and triggers notification scripts

SYNOPSIS

```
ovconfchg -h | -help

ovconfchg -version

ovconfchg [-ovrg <OVRG>] [-edit | -job {-ns namespace {-set <attr>
<value> | -clear <attr> | -clear -all} ... } ... ]
```

DESCRIPTION

Installed HP Operations Manager components have associated configuration settings files that contain one or more namespaces. A namespace is a group of configuration settings that belong to a component.

`ovconfchg` manipulates the settings in either the system-wide configuration file or the configuration file for the specified resource group, `local_settings.ini`, updates the configuration database, `settings.dat`, and triggers notification scripts. If `ovconfchg` is called without options, or only with `-ovrg`, no settings are changed but an update is triggered anyway. This is to allow updating after default settings files have been added, removed, or updated.

When `ovconfchg` runs, all configuration settings are read and merged in memory. Default definitions are used to make corresponding checks, as well as to emit and log warnings in the event of a violation. During this process, file locks are used to prevent parallel updates. A new configuration database is then created containing the merged data.

Parameters

`ovconfchg` recognizes the following options:

`-h | -help`

Displays all the options for the `ovconfchg` command.

`-version`

Displays the version of the `ovconfchg` command.

`-ovrg <OVRG>`

If the parameter you want to change belongs to an resource group, use `-ovrg` to specify the name of the resource group. Otherwise, system-wide settings files are opened.

`-edit`

Starts a text editor to edit the settings file, local_settings.ini. The text editor used is determined by the $EDITOR environment variable. If $EDITOR is not set, vi starts on UNIX and Notepad starts on Windows.

A temporary copy of the file is created for editing. After the changes are made, the file is validated for syntax errors. The syntax rule for validation is that the namespace and attribute names should contain only letters (a-z, A-Z), digits (0-9), period(.) and underscore(_) characters.

If the validation fails, the line number of the error is reported and the user will be prompted to correct the file. If Yes, the file will be reopened for making the necessary changes. If No, the original settings file remains unchanged. If the validation is successful, the changes are saved into the original settings file.

Do not configure binary values using this option. This can corrupt the file. It is also recommended to restrict the data entered using this option to US-ASCII (7-bit only) subset.

Do not open the settings file directly in a text editor and change it. This can corrupt the file.

`-job`

Create and update the job file only and do not synchronize.

`-ns | -namespace <namespace>`

Sets a namespace for the `-set` and `-clear` options.

`-set <attr> <value>`

Sets an attribute value in the namespace specified by the `-namespace` option. The local or resource settings file is updated accordingly.

`-clear <attr>`

Clears the local setting for the attribute *attr* in the namespace specified by the `-namespace` option. The local settings file is updated accordingly.

`-clear -all`

Clears all local settings. The local settings file is updated accordingly.

FILES

The `ovconfchg` command uses the following files to store local settings:

- <*DataDir*>/conf/xpl/config/local_settings.ini
- <*ShareDir*>/<*OVRG*>/conf/xpl/config/local_settings.ini

The `ovconfchg` command uses the following files to store database configuration settings:

- <*DataDir*>/datafiles/xpl/config/settings.dat
- <*ShareDir*>/<*OVRG*>/datafiles/xpl/settings.dat

EXAMPLES

The following examples show how to use the `ovconfchg` command:

- To assign the value `12` to the attribute `COUNT`, and assign the value `"red blue white"` to the attribute `COLORS` in the namespace, `tst.lib`:

  ```
  ovconfchg -ns tst.lib -set COUNT 12 -set COLORS "red blue white"
  ```

- To clear the attribute `COUNT` in the namespace `tst.lib`:

  ```
  ovconfchg -ns tst.lib -clear COUNT
  ```

- To remove all locally configured attributes from the namespace `tst.lib`:

  ```
  ovconfchg -ns tst.lib -clear '*'
  ```

- For the resource group `server`, assign the value `50` to the attribute `COUNT` in the namespace `tst.lib`:

  ```
  ovconfchg -ovrg server -ns tst.lib -set COUNT 50
  ```

ovconfget

NAME

ovconfget – returns specified attributes from the configuration database.

SYNOPSIS

```
ovconfget  -h | -help

ovconfget  -version

ovconfget  [-ovrg <OVRG>] [<namespace> [<attr>]]
```

DESCRIPTION

Installed HP Software components have associated configuration settings files that contain one or more namespaces and apply system wide or for a specified resource group. A namespace is a group of configuration settings that belong to a component. All configurations specified in the settings files are duplicated in the `settings.dat` configuration database.

For each specified namespace, `ovconfget` returns the specified attribute or attributes and writes them to stdout. Used without arguments, `ovconfget` writes all attributes in all namespaces to stdout.

Parameters

`ovconfget` recognizes the following options:

`-h | -help`

Displays the options for the `ovconfget` command

`-version`

Displays the component version

`-ovrg <OVRG>`

Specifies the named resource group <*OVRG*>.

<namespace> <attr>

Obtains the specified attribute in the specified namespace for the named resource group <*OVRG*> and writes them to stdout. If *namespace* is used without specifying an attribute, <*attr*>, `ovconfget` writes the contents of the database for the specified namespace. If neither <*attr*> nor <*namespace*> is specified, `ovconfget` writes the complete contents of the configuration database to stdout.

FILES

The `ovconfget` command uses the following files to read configuration-database settings:

- <*DataDir*>/datafiles/xpl/config/settings.dat
- <*ShareDir*>/<*OVRG*>/datafiles/xpl/settings.dat

EXAMPLES

The following examples show how to use the `ovconfget` command:

- To return the value of the `Port` attribute in the `tst.settings` namespace, for example:
  `9012`

  ```
  ovconfget tst.settings Port

  9012
  ```

- To return all attributes in the `tst.settings` namespace as multiple lines in the form of *attr*=*value*, for example:

  ```
  ovconfget tst.settings
  Port=9012
  Protocols=HTTP FTP HTTPS
  MaxFileSize=128
  ```

- To return all attributes in all namespaces on multiple lines, for example:

  ```
  ovconfget
  [tst.lib]
  LibraryPath=/opt/OV/lib:/opt/OV/lbin/tst/var/opt/OV/tmp
  [tst.settings]
  Port=9012
  Protocols=HTTP FTP HTTPS
  MaxFileSize=128
  ```

ovlogdump

NAME

ovlogdump

– dumps a specified binary log file as text in the current locale to the console

SYNOPSIS

```
ovlogdump -h|-help
ovlogdump -version
ovlogdump [<binary_logfile_name>]
ovlogdump -merge -tofile <binary_logfile_name> -fromfiles
       <binary_logfile1_name> <binary_logfile2_name>...
```

DESCRIPTION

The `ovlogdump` command dumps a binary log file as text in the current locale to the console. To view the contents of a log file, specify its location and name; else, the `system.bin` file is dumped to the console by default.

By default, all the log files are stored in the following location:

On Windows:

```
C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\log
```

On UNIX:

```
/var/opt/OV/log
```

If permissions are inadequate for the default locations, the log files are stored in the <*OvDataDir*>`/log/public` directory.

During application logging, if multiple log files are created, you can use the `-merge` option to merge these files into a single binary log file.

Parameters

ovlogdump recognizes the following options:

[<*binary_logfile_name*>]

The name and location of the binary log file to be dumped. If the log file name is not specified, system.bin file in the <*OVDataDir*>/log/ directory is displayed on the console by default.

-merge -tofile <*binary_logfile_name*> -fromfiles <*binary_logfile1_name*> <*binary_logfile2_name*>....

Merges application log files specified by <*binary_logfile1_name*>.... into a single binary log file specified by <*binary_logfile_name*>. This option is not supported for merging system log files.

-h|-help

Displays all available options for the ovlogdump command.

-version

Displays the version of the ovlogdump command.

ovtrccfg

NAME

ovtrccfg

– enables the tracing mechanism for supported applications on the local machine.

SYNOPSIS

```
ovtrccfg -app|-application <application_name> [-cm|-component
         <component_name>] [-sink <filename>]
         [-gc|-generate_configuration <filename>]

ovtrccfg -cf|-configuration <filename>

ovtrccfg -off

ovtrccfg -version

ovtrccfg -h|-help

ovtrccfg -vc
```

DESCRIPTION

The ovtrccfg command helps you enable and configure the tracing mechanism to record the state of a supported application on the system where an HP Software product is installed. By default, trace log files are placed into the application's home directory after you enable the tracing mechanism. When you configure the tracing mechanism with the gc option, all configuration details are directed to a trace configuration (.tcf) file. You can create and modify trace configuration files with the command or with a text editor.

In the trace configuration file, you can specify the location of trace log files with the sink option. When you start the tracing process without a configuration file, all available trace levels and categories are enabled. If you want to enable only select levels of tracing, you must use a trace configuration file.

The tracing mechanism provides the following different levels of tracing:

Info

Enable traces marked as information.

`Warn`

Enable traces marked as warning.

`Error`

Enable traces marked as error.

`Support`

Enable the normal tracing. The trace output includes informational notifications, warnings, and error messages. This option is recommended for troubleshooting problems. This level of tracing can be enabled for a long duration as the overhead to capture the trace output is minimal with this option.

In addition, you can use the location, stack, developer, and verbose levels when detailed trace messages are requested by HP Support.

Parameters

The `ovtrccfg` command accepts the following parameters and options:

`-app|-application <application_name>`

This option helps you enable the tracing mechanism for select HP Software applications. These applications are essentially programs, daemons, processes, and services that are used by different HP Software products.

`-cm|-component <component_name>`

You can enable tracing of select components of an application with the `cm` option. By default, all components of an application are traced by the tracing mechanism. You can use the wildcard character (`*`) with this option. For example, the `ovtrccfg -app coda -cm xpl*` command starts tracing for all the components, which belong to the coda application, with the names that begin with `xpl`.

`-cf|-configuration <filename>`

You can enable the tracing mechanism according to the rules specified in a configuration file. The configuration files are stored on the same system with the extension `.tcf`.

`-sink <filename>`

The `sink` option helps you direct the trace log files to a location of your choice on the local system. All trace log files generated with the command are placed into the location specified with the `sink` option.

`-gc|-generate_configuration <filename>`

The `gc` option creates a trace configuration file (`.tcf`) that can be edited to set the desired tracing configuration.

`-off`

The `off` option helps you disable the tracing process. If you use the `off` option without any other options, the entire tracing mechanism stops. You can use the `app` and `cm` options with the `off` option to conditionally exclude select applications and components when you enable tracing. For example, the "`ovtrccfg -app o* -off ovc*`" command enables tracing for all applications with the names that begin with "`o`," but excludes the applications with the names that begin with "`ovc`." Similarly, the "`ovtrccfg`

-app ovoadif -cm e* -off eaagt.misc" command enables the tracing mechanism for all components with the names that begin with "e," which belong to the application "ovoadif," except the component eaagt.misc.

-vc

This option displays the current tracing status of all the supported applications available on the system.

-version

This option displays the version of this command.

-h|-help

Displays all available command options.

EXAMPLE

The following examples show how to use the ovtrccfg command:

- Enable the tracing mechanism for all applications with the names that begin with o:

  ovtrccfg -app "o*"

- Enable the tracing mechanism for the coda application and direct the trace log files to the /opt/OV/support directory:

  ovtrccfg -app coda -sink /opt/OV/support/output.trc

- Enable the tracing mechanism on the local system based on the rules set in the trace configuration file config.tcf:

  ovtrccfg -cf config.tcf

ovtrcmon

NAME

ovtrcmon

– helps you view the trace messages from trace files and enables you to store the trace messages into another file on the same system.

SYNOPSIS

```
ovtrcmon [-h|-help] -fromfile <source_file> -tofile <target_file>]
         -short|-long|-verbose|[-fmt <format_name>]
```

DESCRIPTION

The ovtrcmon command helps you view the contents of a trace file and lets you store the file content into another file on the same machine. When you start the tracing mechanism with the ovtrccfg command, trace messages get captured into trace files in the binary format. To read the contents of a trace file, you can use the "ovtrcmon -fromfile <source_file> -fmt <format>" command. Alternatively, you can store the contents of a trace file into a new file in a readable format with the "ovtrcmon -fromfile <source_file> -tofile <target_file> -fmt <format>" command. With the help of the configuration file $OvDataDir/conf/xpl/trc/ovtrcmon.cfg, you can specify a customized format of your choice that you want to use while viewing and storing the contents of trace files. You can use the following keywords while configuring this file:

Severity

The trace file captures trace messages with different severity levels. This keyword helps you filter the trace messages based on the severity level. Available severity levels are: Info, Warn, Error, Support, Location, Stack, Developer, and Verbose.

`Count`

The serial number for a particular trace message.

`Tic`

A high-resolution elapsed time value.

`LocalTime`

The local equivalent date and time of the trace message.

`UTCTime`

The UTC time of the trace message.

`Pid`

The process ID of the traced application.

`Tid`

The thread ID of the traced application.

`Component`

The name of the component issuing the trace message.

`Category`

An arbitrary name assigned by the traced application or one of several categories provided by the tracing mechanism.

`Source`

The line number and file name of the source generating the trace.

`Stack`

A description of the calling stack in the traced application.

`TrcMsg`

Trace message description.

`Attribute`

Attribute of the trace message.

`Application`

Name of the traced application.

`Machine`

Name of the machine where the traced application resides.

`Formatting`

You can use one of four types of formatting on the trace output.

The Formatting keyword helps you generate the output in the following formats:

CSV — Comma separated values. This keyword presents the output in a standard delimited format with double quotes (") around the text.

formatted — A *printf*-like output format.

fixed	This keyword presents the output with fixed-width fields and white space padding. Field widths are specified after the keyword `fixed` with commas. For example, `fixed,w1,w2,..wn ]`.
xml	Presents the trace output in the XML format.

Parameters

The `ovtrcmon` command accepts the following parameters:

`-fromfile <source_file>`

With this parameter, you can specify the name of the binary trace file.

`-tofile <target_file>`

With this parameter, you can specify the name of the file where you want to direct the contents of the trace file.

`-long`

Displays or stores the following details from the trace file: Severity, Component, Category, and trace description.

`-short`

Displays or stores only the trace description from the trace file.

`-verbose`

Displays or stores all details available in the trace file.

`-fmt`

With this parameter, you can view the contents of the trace file in a pre-configured format. You must specify the format definitions in the `$OvDataDir/conf/xpl/trc/ovtrcmon.cfg` file. You must declare `<format_name>` in this configuration file.

`-h|-help`

Displays all available command options.

EXAMPLE

The following examples show how to use the `ovtrcmon` command:

- View the trace messages in the `$OvDataDir/log/example1.trc` file in the format `format1`, which is defined in the `$OvDataDir/conf/xpl/trc/ovtrcmon.cfg` file:

  `ovtrcmon -fromfile $OvDataDir/log/example1.trc -fmt format1`

- View only the descriptions of the trace messages in the `$OvDataDir/log/example1.trc` file:

  `ovtrcmon -fromfile $OvDataDir/log/example1.trc -short`

- Store the available trace messages in the `$OvDataDir/log/example1.trc` file into the `$OvDataDir/log/trace.txt` file in the format `format1`, which is defined in the `$OvDataDir/conf/xpl/trc/ovtrcmon.cfg` file.:

  `ovtrcmon -fromfile $OvDataDir/log/example1.trc -tofile $OvDataDir/log/trace.txt -fmt format1`

ovdeploy

NAME

ovdeploy

– performs tasks related to software installation on local and remote hosts.

SYNOPSIS

```
ovdeploy -install -pkg <package_descriptor> |-file <filename>... |-dir
<dirname> [[-sourcerootdir <symbolic_name>] [-sourcedir <dirname>]
[-targetrootdir <symbolic_name>] [-targetdir <dirname>] [-force] [-perm
<file_permissions>] [-host <name_or_ip>] [-instserv <name_or_ip>]
[-targetid <id>] [-cmd_timeout <time_in_milli_sec>]]

ovdeploy -remove -pkg <package_name> |-file <filename> |-dir <dirname>
[[-targetrootdir <symbolic_name>] [-targetdir <dirname>] [-force] [-host
<name_or_ip>] [-instserv <name_or_ip>] [targetid <id>] [-ovrg <id>]
[-cmd_timeout <time_in_milli_sec>]]

ovdeploy -upload -pkg <package_descriptor> |-file <filename> |-dir
<dirname> [[-sourcerootdir <symbolic_name>] [-sourcedir <dirname>]
[-targetrootdir <symbolic_name>] [-targetdir <dirname>] [-force] [-perm
<file_permissions>] [-host <name_or_ip>] [-instserv <name_or_ip>]
[-targetid <id>] [-cmd_timeout <time_in_milli_sec>]]

ovdeploy -download -pkg <package_descriptor> |-file <filename> |-dir
<dirname> [[-sourcerootdir <symbolic_name>] [-sourcedir <dirname>]
[-targetrootdir <symbolic_name>] [-targetdir <dirname>] [-force] [-perm
<file_permissions>] [-host <name_or_ip>] [-instserv <name_or_ip>]
[-targetid <id>] [-ovrg <id>][-cmd_timeout <time_in_milli_sec>]]

ovdeploy -inv [-host <name_or_ip>] [-invtype <inventory_type>] [-all]

ovdeploy -reg -pkg <package_descriptor>[ [-sourcerootdir
<symbolic_name>] [-sourcedir <dirname>] [-force] [-host <name_or_ip>]
[-targetid <id>] [-ovrg <id>]]

ovdeploy -unreg -pkgname <package_name> [[-force] [-host <name_or_ip>]
[-targetid <id>] [-ovrg <id>]]

ovdeploy -exec -file <filename> [[-targetrootdir <symbolic_name>]
[-targetdir <dirname>] [-shell] [-host <name_or_ip>] [-targetid <id>]
[-ovrg <id>] [-cmd_timeout <time_in_milli_sec>]]

ovdeploy -cmd -file <filename> [-host <name_or_ip>] [-par <params>]
[-cmd_timeout <time_in_milli_sec>][-targetrootdir <symbolic_name>]
[-targetdir <dirname>]]

ovdeploy -get <node_attribute> [-node <name_or_ip>]

ovdeploy -env <environment_var> [-node <name_or_ip>]
```

DESCRIPTION

`ovdeploy` manages objects on local and remote hosts. An object can be a file, a directory, or a package. A package can be a file, a group of files, a directory or group of directories or a combination of all.

You use `ovdeploy` to install, remove, up or download, and register or unregister objects on the local and remote hosts you are managing. You can also use the ovdeploy command to list package inventories and execute commands on specified files.

Parameters

`ovdeploy` recognizes the following options:

`-install <options>`

Installs the specified object.

`-remove <options>`

Removes one or more objects.

`-upload <options>`

Uploads one or more objects from a target node.

`-download <options>`

Downloads one or more objects from a target node.

`-inv <options>`

Returns a list of installed objects on a target node either to stdout or in the form of an XML file written to the local directory.

`-reg <options>`

Adds a specified package name to the list of registered package names on a target node.

`-unreg <options>`

Removes a specified package name from the list of registered package names on a target node.

`-exec <options>`

Executes a specified file on a specified host and returns the result of the action to stdout.

`-cmd <options>`

Executes a specified command or file on a different shell on the specified host and returns the results of the action on stdout.

`-get <options>`

Displays the value of an environment variable on a specified node. The environment variable can be, for example, `PATH` or `OvInstallDir`. The value of the environment variable can be obtained only if that variable is set on the specified node.

`-env <options>`

The `-list` option displays all requests in a store-and-forward buffer for the specified target or the entire buffer if no target is specified.

Options

The following options may be used in conjunction with the command parameters indicated in the Parameters section:

`-all`

Returns the complete inventory in XML format. The complete inventory comprises the package descriptors of all packages that have been installed on the node. If not used, only the name and version of each registered package is returned.

`-dir <dirname>`

The name of a directory to be installed, removed, up or downloaded, registered or unregistered. The contents of the directory will also be installed, removed, up/downloaded.

`-file <filename>...`

The name of a file to be installed, removed, up or downloaded, registered or unregistered, or executed.

With the `-install` parameter, multiple files can be specified.

`-force`

With the `-install` parameter, it installs the specified object even if an object already exists on the target node with the same or higher version. With the `-remove` parameter, it must be used with -dir, and removes all subdirectories.

`-host <target_host>`

The name or IP address of the target host. If not used, the local host is assumed.

`-instserv <name_or_ip>`

Name or IP address of an installation server. If an installation server is specified, the specified file is not copied from the local host to the target host. Instead, it is copied from the installation server to the target host.

`-invtype [depl|native]`

`depl` returns to `stdout` the inventory of objects installed using the `deploy` command. `native` returns to stdout the inventory of objects installed using the operating system's native installation program.

`-ovrg <id>`

The ID of an HP resource group, if applicable.

`-perm <nnn>`

Sets file permissions of an installed, up/downloaded, un/registered file. This parameter takes three digits. The first digit specifies the owner permission, the second digit specifies the group permission, and the third digit specifies public permissions. The allowable digits are:

`0`	No permissions.
`1`	Execute.
`2`	Write.
`3`	Execute and write.
`4`	Read.
`5`	Execute and read.
`6`	Read and write.
`7`	Read, write, and execute.

`-pkg <package_descriptor>`

The full path and name of the package descriptor file. The package descriptor file contains a list of all the files that are to be installed, removed, up or downloaded, registered or unregistered and their locations.

`-shell`

Used with the `-exec` parameter to execute in a shell the file specified by `<file>`. For UNIX systems, `/bin/sh -c` is used. For a Microsoft Windows system `%ComSpec%/cmd.exe /c` is used.

`-sourcerootdir <symbolic_name>`

The symbolic path name used to create an absolute file path for the source file.

`-sourcedir <dirname>`

Used to create an absolute file path for the source file. If a source root directory is specified, the source directory is appended to it. If no source root directory is specified, the source directory is appended to the default directory, `$OvDataDir/installation/incoming/files/`.

`-cmd_timeout <time_in_milli_sec>`

Sets the timeout (in milliseconds) for individual commands executed from ovdeploy command. If this option is not set, the value specified for COMMAND_TIMEOUT under depl namespace of configuration settings of the target system will be used for individual commands (which has a default value of 10 minutes). This option applies to package install and remove commands, `-exec`, and `-cmd` commands.

`-targetrootdir <symbolic_name>`

A symbolic path name used to create an absolute file path for the target root directory.

`-targetdir <dirname>`

The name of the directory on the target node where the object is to be installed, removed, up or downloaded, registered or unregistered.

`-targetid <id>`

The target ID of the target node.

EXAMPLES

The following examples show how to use the ovdeploy command:

- To install the package `testpackage.xml`, located in the `/tmp` directory, to the node `test.com`.

  ```
  ovdeploy -install -pkg /tmp/testpackage.xml -node test.com
  ```

- To install the file `testfile`, located in the `/tmp` directory, to the node `test.com`.

  ```
  ovdeploy -install -file /tmp/testfile -node test.com
  ```

- To deploy the file `testfile`, located in the `/tmp` directory, to the `/opt/OV/bin` directory on the node `test.com`.

  ```
  ovdeploy deploy -file /tmp/testfile -targetdir /opt/OV/bin -node test.com
  ```

- To delete the file `/opt/OV/bin/testfile` from the host `test.com`.

  ```
  ovdeploy -remove -file testfile -targetdir /opt/OV/bin -node test.com
  ```

- To delete the file `$OvDataDir/installation/incoming/files/test/testfile` from the host `test.com`. The absolute path of the file is created from the specified target directory. No target root directory was specified, so the default target root directory is used.

  ```
  ovdeploy -remove -file testfile -targetdir test -host test.com
  ```

- To delete the package `testpkg1` from the host `test.com`.

  ```
  ovdeploy -remove -pkg testpkg1 -host test.com
  ```

- To copy the file `testfile` to the default target directory on the local host. The default target directory is `$OvDataDir/installation/incoming/files/`.

  ```
  ovdeploy -upload -file /tmp/testfile
  ```

- To copy all files that are specified in the package descriptor `package1.xml` to the default package upload directory on the host `test.com`. The directory containing the specified package descriptor file and all files specified in it is the bin directory.

  ```
  ovdeploy -upload -pkg package1.xml -sourcerootdir bin -host test.com
  ```

- To copy the files in the `/tmp/testdir` directory on the host `test.com` to the directory `/opt/OV/bin` on the local host.

  ```
  ovdeploy -download -dir /tmp/testdir -targetdir /opt/OV/bin -node test.com
  ```

- If `testpackage1` and `testpackage2` have been installed on the local machine, the following is returned:

  ```
  ovdeploy -inv
  ```

  ```
  NAME          VERSION    TYPE     ARCHITECTURE
  testpackage1  05.00.050  package  windows 4.0
  testpackage2   01.00.050   package  windows 4.0
  ```

- To display the native package inventory of the local host. For example:

  ```
  ovdeploy -inv -invtype native
  ```

  ```
  HP OpenView BBC Package 5.0.50
  HP OpenView Performance Access Package 10.00.123
  ```

- To register the package `package1.xml` by copying the package descriptor to the inventory directory. If the package descriptor already exists, an error is returned to stdout.

  ```
  ovdeploy -reg -pkg /tmp/package1.xml
  ```

- To unegister the package `testpack2` from the host `test.com`.

  ```
  ovdeploy -unreg -pkgname testpack2 -host test.com
  ```

- To execute the file `run` on the local host and returns the output to stdout.

  ```
  ovdeploy -exec -file /tmp/run
  ```

- To execute the file `run.sh` with the shell on the host `test.com`.

  ```
  ovdeploy -exec -shell -file run.sh -targetrootdir bin -node test.com
  ```

- To set the timeout value for the `-exec` command for `my_exe.exe` file on host `node1`.

  ```
  ovdeploy -exec -file C:\my_exe.exe -node node1 -cmd_timeout 9000000
  ```

- To find out which operating system is running on the host `node1`.

  ```
  ovdeploy -get ostype -node node1
  ```

- To find the value set for the environment variable `OvInstallDir` on host `node1`.

  ```
  ovdeploy -env OvInstallDir -node node1
  ```

ovconfpar

NAME

ovconfpar

– set and return configuration parameters remotely

SYNOPSIS

`ovconfpar -get [-host <hostname> [-targetid [<id>]...] -ovrg <OVRG> -ns <namespace> ]`

`ovconfpar -change [-host <hostname> [-targetid [<id>]...] -ovrg <OVRG>] -ns <namespace> [ [-set <attr> <value>]... | [-clear [<attr>] ]... ]`

`ovconfpar -help`

`ovconfpar -version`

DESCRIPTION

`ovconfpar` reads and sets configuration parameters for installed HP Software components. For information about the parameters you can use with the `ovconfpar` command, see "Parameters": for information about the options you can use with the `ovconfpar` command parameters, see "Options".

Parameters

The `ovconfpar` command recognizes the following parameters:

`-get <options>`

Returns the value or values of one or more keys for the specified namespaces.

`-change <options>`

Sets different key-value pairs for multiple namespaces.

`-version`

Displays the version of the command.

`-help`

Displays the help information.

Options

You can use the following options with the `ovconfpar` command parameters:

`-host <hostname> [-targetid <id>]`

The host name and target ID of the remote machine.

`-ovrg <OVRG>`

If the parameter you want to get or change belongs to an resource group, use `-ovrg` to specify the name of the resource group.

`-ns <namespace>`

The name of the namespace, whose configuration parameters you want to get or change.

`-set <attr> <value> ...`

Set the named attribute to the specified value for the specified namespace.

`-clear [<attr>] ...`

Clear the named attribute(s) from the specified namespace. If no attribute is specified, all attributes are cleared for the specified namespace.

Return Codes

`ovconfpar` issues the following return codes:

`0` All steps were successfully.

`-1` One or more steps failed.

EXAMPLES

The following examples show how to use the `ovconfpar` command.

- To set the key `ovo_port_range` to `12345` in the namespace ovo.server:

  ```
  ovconfpar -set -ns ovo.svr01 -set ovo_port_range 12345
  ```

- To set the key `ovo_port_range` to `12345` in the namespaces `ovo.svr01` and `ovo.svr02`:

  ```
  ovconfpar -set -ns ovo.svr01 -set ovo_port_range 12345 -ns ovo.svr02 -set
  ovo_port_range 12345
  ```

- To set the key `MaxFileSize` to `128` and the key `Protocol` to `HTTP` in the namespace `ovo.svr01`:

  ```
  ovconfpar -set -ns ovo.svr01 -set MaxFileSize 128 -ns ovo.svr01 -set
  Protocol HTTP
  ```

- To display all keys and their values for all namespaces:

  ```
  ovconfpar -g
  ```

- To display the value for `MaxFileSize` in the `ovo.svr01` namespace:

  ```
  ovconfpar -g -ns ovo.svr01 MaxFileSize
  ```

- To display the values in the `ovo.svr01` namespace:

  ```
  ovconfpar -g -ns ovo.svr01
  ```

ovappinstance

NAME

ovappinstance

– return configuration parameters for application instances.

SYNOPSIS

```
ovappinstance  -h | -help

ovappinstance  -v | -version

ovappinstance  -i | -instance <instance> {-st | -state} | {-h | -host}
[-an | -appNamespace <appNamespace>]

ovappinstance  -is | -instances [-an | -appNamespace <appNamespace>]

ovappinstance  -ai | -activeInstances [-an | -appNamespace
<appNamespace> ]

ovappinstance  -vc | -verifyConfig
```

DESCRIPTION

The ovappinstance command reads and displays the information contained in the APM XML configuration files. For information about the parameters you can use with the ovappinstance command, see "Parameters": for information about the options you can use with the ovappinstance command parameters, see "Options".

Parameters

The ovappinstance command recognizes the following parameters:

`-h | -help`

Displays the command parameters and options.

`-v | -version`

Displays the version of the command.

`-i | -instance <instance>`

Returns information about the specified application instance.

`-is | -instances`

Returns information about all application instances found.

`-ai | -activeInstances`

Returns information about all application instances found to be up and running.

`-vc | -verifyConfig`

Check s and report on the validity of the APM XML configuration file(s).

Options

You can use the following options with the ovappinstance command parameters:

`-st | -state`

Displays the outage state of the instance specified in <*instance*>.

`-h | -host`

Get either the virtual IP address of the instance <*instance*>. Alternatively, if the command is executed on a node, which is not configured as part of a high-availability cluster, get the FQDN or IP address of the local host.

`-an | -appNamespace`

Specify the name of the application namespace, whose information you want to display.

Return Codes

ovappinstance issues the following return codes:

0	All steps were completed successfully.
1	One or more steps failed.

EXAMPLES

The following examples show how to use the ovappinstance command.

- To display a list of all application instances for a given application namespace:

  ovappinstance -instances -appNamespace <*appNamespace*>

- To display a list of all application instances which are active (or running) in a given application namespace:

```
ovappinstance -activeInstances -appNamespace <appNamespace>
```

ovpolicy

NAME

ovpolicy

– installs, manages, and removes both local and remote policies.

SYNOPSIS

```
ovpolicy -help
```

```
ovpolicy -version
```

```
ovpolicy -install [-host <hostname> [-targetid [<id>]...]
{-enabled|-disabled} -chkvers -add-category [<cat1>]...
{-remove-category [<cat>]...
|-remove-all-categories} -force-cat -add-attribute [<name> <value>]...
-remove-attribute [<name> <value>]...| -remove-all-attributes
-force-attr -set-owner <owner> -force-owner -no-notify]
{-file [<file>]...|-dir [<dir>]...} [-ovrg <ov_res_group>]
```

```
ovpolicy -remove [-no-notify -host <hostname> [-targetid [<id>]...]
[-ovrg <ov_res_group>] <SELECTION>
```

```
ovpolicy [-enable |-disable] [-no-notify -host <hostname> [-targetid
[<id>]...] [-ovrg <ov_res_group>] <SELECTION>
```

```
ovpolicy [-addcategory |-removecategory] <cat>... [-no-notify -host
<hostname> [-targetid [<id>] [-ovrg <ov_res_group>]] <SELECTION>
```

```
ovpolicy -removeallcategories [<cat>]... [-no-notify -host <hostname>
[-targetid [<id>]...] [-ovrg <ov_res_group>]] <SELECTION>
```

```
ovpolicy [-addattribute |-removeattribute] <name> <value>... [-no-notify
-host <hostname> [-targetid [<id>]...][-ovrg <ov_res_group>]]
<SELECTION>
```

```
ovpolicy -removeallattributes [-no-notify -host <hostname> [-targetid
[<id>]...][-ovrg <ov_res_group>]] <SELECTION>
```

```
ovpolicy [-setowner | -removeowner <owner>] [-no-notify -host <hostname>
[-targetid [<id>]...][-ovrg <ov_res_group>]] <SELECTION>
```

```
ovpolicy -notify [-host <hostname> [-targetid [<id>]...][-ovrg
<ov_res_group>]]
```

```
ovpolicy -list [-level <0|1|2|3|4> -host <hostname> [-targetid
[<id>]...][-ovrg <ov_res_group>]]
```

DESCRIPTION

ovpolicy installs, manages, and removes, local and remote policies. A policy is a set of one or more specifications rules and other information that help automate network, system, service, and process management. Policies can be deployed to managed systems, providing consistent, automated administration across the network. Policies can be grouped into categories, for example; to assign policies to a special policy group for simple enable and disable actions. Each category can have one or more policies. Policies can also have one or more attributes, an attribute being a name value pair.

You use ovpolicy to, among other functions, install, remove, enable, and disable local policies. For information about the parameters supported by the ovpolicy command, see "Parameters": for information about parameter options, see "Options".

Parameters

ovpolicy recognizes the following parameters:

-install

Installs one or more policies using a single policy file specified with -file or multiple policy files specified with -dir.

-remove

Removes one or more policies.

-enable

Enables one or more policies.

-disable

Disables one or more policies. Note that the -disable option only disables a policy, it does not remove a policy from the file system.

-addcategory

Adds all category strings to the policy. You can add multiple categories using a blank-separated list.

-removecategory

Removes the specified category strings from the policy. You can remove multiple categories using a blank-separated list.

-removeallcategories

Deletes *all* categories.

-addattribute

Adds a category attribute to the policy. You can add multiple attribute names using a blank-separated list.

-removeattribute

Removes category attribute from the policy. You can remove multiple attribute names using a blank-separated list.

-removeallattributes

Deletes *all* category attributes.

-setowner

Sets the owner of a policy.

-removeowner

Removes the owner of a policy.

-list

Lists the installed policies.

-notify

Triggers any notifications to the control service, if there are any outstanding or suppressed notifications from previous policy operations.

`-version`

Displays the version number of the command.

`-h | -help`

Displays the help information.

Options

You can use the following options with the allowed `ovpolicy` command parameters:

`-add-attribute`

Add an attribute *<name>* with the value defined in *<value>* to the specified installed policy.

`-add-category <cat1> [<cat2> ... <catN>]`

Adds all category strings to the policy. This is a blank-separated list.

`-chkvers`

Check and compares the version of the already installed policy and the policy you want to install. If `-chkvers` is used, the new policy is not installed if the current installed version is the same or higher. If `-chkvers` is not used, the new policy overwrites the current policy with the same policy_id, regardless of the version number. `-chkvers` does not overwrite the categories, owner, or status of a current policy. To overwrite the categories, owner, and status associated with a policy owner, use `-forcecat`, and `-forceowner` respectively.

`-dir <dirname>`

If you specify a directory name, all policy files from that directory are used. A line is printed to stdout for each successfully installed policy.

`-enabled|-disabled`

If either `-enabled` or `-disabled` is used, the new policy acquires the status that is defined in the policy header. If neither `-enabled` nor `-disabled` is used, the new policy acquires the status of the currently installed policy (if any).

Note that this option overwrites the status defined in the policy-header installation file. So, if the new policy is already installed on the target system, the new version assumes the status of the installed version.

`-file <filename>`

Specifies a policy file name to be used. A line is printed to stdout for the successfully installed policy.

`-force-attr`

Allows you to remove category attributes that are set on a current installed policy. By default, the attributes from current installed policies are used. If there is no current installed policy, the attributes set in the header file of the new policy are used.

`-force-cat`

Allows you to remove categories that are set on a current installed policy. By default, the categories from current installed policies are used. If there is no current installed policy, the categories set in the header file of the new policy are used.

`-force-owner`

Overwrites the policy owner regardless of the settings for the installed policy.

`-host <hostname> [-targetid <ids>]`

This option specifies the hostname of the managed node. If no hostname is specified, the local host is assumed. `-targetid` specifies one or more target IDs.

`-level`

Specifies the type of information to be returned with the `-list` parameter, as follows:

`0`	Policy type, policy name, status, policy version. This is the default setting.
`1`	Policy type, policy name, status, policy version, policy_ID.
`2`	Policy type, policy name, status, policy version, policy_ID, category.
`3`	Policy type, policy name, status, policy version, policy_ID, category, owner.
`4`	Policy type, policy name, status, policy version, policy_ID, category, owner, attributes.

`-no-notify`

When `-no-notify` is used, `ovpolicy` does not trigger any notifications.

`-remove-category <cat1> [<cat2> ... <catN>]`

Removes the specified category strings from the policy. Using the `-remove-category` option with an empty string deletes *all* categories. This is a blank-separated list.

`-remove-all-categories`

Removes the specified category strings from the policy.

`-remove-attribute`

Remove the category attribute *<name>* with the value defined in *<value>* from the specified installed policy.

`-remove-all-attributes`

Allows you to remove *all* category attributes that are set on a current installed policy. If there is no current installed policy, the attributes set in the header file of the new policy are used.

`-set-owner <owner>`

Sets the owner of a policy. `-set-owner` with an empty string deletes the owner.

`-ovrg <ovrg_res_group>`

Sets the name of the resource group.

The *<SELECTION>* option is one of the following:

<*SELECTION*>-all|-owner <*owner*>|-owner <*owner*> -polname <*name*>|-polid <*uuid*> |-polname <[*type*:]*name*>|-poltype <*typename*>|-category <*category*> |-attribute <*name*> [value]

-all

All installed policies.

-owner <*owner*>

The policy owner <*owner*>

-owner <*owner*> -*polname* <*name*>

The policy owner <*owner*> and the policy name -owner <*name*>

-polid <*id*>

The ID of the policy.

-polname [<*policy_type_name*>:]<*policy name*>

The name of the policy. If *policy_type_name* is used, the section applies to all policies of the specified type.

-poltype <*policy_type_name*>

The name of the type of policy.

-category <*category_name*>

The name of the category to be used.

-attribute <*name*> <*value*>

The name of the policy attribute and value to be used.

-targetovrg <*ovrg_res_group*>

Sets the name of the resource group.

Return Codes

ovpolicy recognizes the following return codes:

0 All steps were successful.

1 One or more steps were not successful.

EXAMPLES

The following examples show you how to use the ovpolicy command:

- To list all policies on a node.

  ovpolicy -list

- To disable the HP-UX syslog policy.

  ovpolicy -disable -polname "HPUX ovsyslog"

- To enable all trap policies.

  ovpolicy -enable -poltype ovsnmptrap

- To install all policies located in the current working directory.

  ovpolicy -install -dir

- To install all policies located in the /tmp/sap_policies directory with a status of disabled.

```
ovpolicy -install -disable -dir /tmp/sap_policies
```

- To reinstall all policies located in the `/tmp/xyz` directory, independent of the former owner.

  ```
  ovpolicy -install -forceowner -dir /tmp/xyz
  ```

- To remove all policies from the local host.

  ```
  ovpolicy -remove -all
  ```

- To remove all installed policies that are owned by the management server

  ```
  ovpolicy -remove -owner mgtsvr
  ```

ovclusterinfo

NAME

ovclusterinfo

– obtain information about clusters, cluster nodes, or high-availability (HA) resource groups.

SYNOPSIS

```
ovclusterinfo  -h | -help

ovclusterinfo  -v | -version

ovclusterinfo  -a | -all

ovclusterinfo  -c | -cluster {-ty | -type} | {-nm | -name} | {-st |
-state} | {-nds | -nodes} | {-rgs | -groups}

ovclusterinfo  -n | -node <node> {-id} | {-st | -state}

ovclusterinfo  -g | -group <group> {-id} | {-st | -state} | {-ls |
-localState} | {-nds | -nodes} | {-vip | -virtualIPAddress} | {-an |
-activeNode}
```

DESCRIPTION

The `ovclusterinfo` command obtains information about high-availability clusters, and cluster nodes, and resource groups including; the name, status, and type of the cluster and, in addition, the nodes configured in the cluster. The `ovclusterinfo` command also obtains information about high availability (HA) Resource Groups, including; the status, IP address, and the nodes, which the Resource Group contains. An HA Resource Group is a collection of resources, such as files and processes, that are available on one node in a cluster and can be switched to another cluster node as a single entity.

Parameters

The `ovclusterinfo` command accepts the following parameters:

`-h | -help`

Display all options for the `ovclusterinfo` command.

`-v | -version`

Display the version of the installed command.

`-c | -cluster`

Displays information about the named cluster.

`-a | -all`

Display all available information about the named cluster, nodes, and resource groups.

`-n | -node`

Display all available information about the named node in the cluster.

`-g | -group`

Display information about the named high-availability resource group.

Options

You can use the following options with the appropriate command parameters:

`-ty | -type`

Display the type of cluster which is installed. Possible values are:

- Microsoft Clustering Services (Windows),
- MC/ServiceGuard (HP-UX),
- VERITAS Cluster Server (Solaris),
- Sun Cluster (Solaris),
- Red Hat Advanced Server (RHAS),
- HACMP (AIX),
- Unknown.

`-nm |-name`

The name of the cluster.

`-st | -state`

The status of the cluster on the local node. This can be one of:

- Cluster is up
- Cluster is down
- State unknown

`-nds | -nodes`

Displays the names of the nodes in the cluster on separate lines. Cluster configuration determines how the node information is displayed, for example; short or long hostnames, IP address, and so on.

`-rgs | -groups`

All resource groups in the cluster.

`-status`

The status of the HA resource group, defined by *<rgname>*, on the local node.

`-virtualIPaddress`

The virtual IP address of the HA resource group, defined by *<rgname>*.

`-nodes`

The list of all nodes to which the HA resource group, defined by *<rgname>*, can fail over.

`-activeNode`

The node that currently hosts the HA resource group, defined by *<rgname>*.

EXAMPLES

The following examples show how to use the `ovclusterinfo` command:

- To display the name of the cluster:

  ```
  ovclusterinfo -cluster -name
  ```

- To display the names of all HA resource groups in the cluster:

  ```
  ovclusterinfo -cluster -groups
  ```

- To display the virtual IP address that is configured for the HA resource group haRG:

  ```
  ovclusterinfo -group haRG -virtualIPaddress
  ```

- To display the name of the node where the HA resource group haRG is currently running.

  ```
  ovclusterinfo -group haRG -activeNode
  ```

ovagtrep

NAME

ovagtrep

– Enables configuration and control of the discovery agent and agent repository.

SYNOPSIS

```
ovagtrep  [-clearAll] |
          [-run <policy name>] |
          [-publish]
```

DESCRIPTION

The discovery agent is an extension to the HTTPS agent, which runs service discovery policies that have been deployed from a management server. It stores the services that it discovers in the agent repository, which is a local data store of services that exist on the node.

The agent synchronizes the services in the agent repository with the management server. The management server receives details of new, changed, and removed services only. Details of unchanged services are not resent.

The `ovagtrep` command enables you to configure and control the discovery agent and agent repository. It has the following options:

`-clearAll` Clears all services from the agent repository. The next time that the discovery agent runs service discovery policies, it will recreate the services. The agent then synchronizes the services with the management server. This is enables you to force the agent to synchronize unchanged services with the management server.

`-run <policy name>` Runs a service discovery policy. Use this to run a policy at an unscheduled time, to discover any changes immediately. The agent sends details of changes to the management server. You can find the names of installed policies using `ovpolicy`.

`-publish` Resends details of all the services that are currently in the agent repository to the management server. Use this for troubleshooting if services fail to appear on the management server.

The discovery agent and agent repository are part of a component that is registered with the control service. You can start and stop the component with the commands `ovc -start agtrep` and `ovc -stop agtrep`.

You can use the command `ovconfchg` to modify the following settings in the `agtrep` name space:

`ACTION_TIMEOUT <minutes>` Sets the maximum number of minutes that a service discovery policy can run. If the policy runs any longer, the discovery agent stops running the policy and logs an error in the system log (`<data_dir>/log/System.txt`).

`INSTANCE_DELETION_THRESHOLD <value>` Sets the number of times that service discovery policies must fail to discover existing services before the agent deletes the services from the agent repository.

If a service discovery policy can no longer discover a service that exists in the agent repository, the discovery agent deletes the service from the agent repository only after the service discovery policy has run the number of times that you specify with this setting.

For example, to set the action timeout to five minutes with the command `ovconfchg -ns agtrep -set ACTION_TIMEOUT 5`.

After you change the action timeout or instance deletion threshold, restart the component with the command `ovc -restart agtrep`.

opcmon

NAME

`opcmon` - forwards the current value of the monitored object to the monitor agent of the HP Operations agent running on a local managed node.

SYNOPSIS

```
opcmon [ -help ] <object_name>[-<shortname>]=<value> [ -object <msg_object> ]
[ -option <variable>=<var_value> ]*
```

DESCRIPTION

The command `opcmon` forwards the current value of the monitored object to the monitor agent of the HP Operations agent running on a managed node. The monitor agent checks this value against the configured threshold. According to the monitor configuration, the event is locally logged, suppressed, or forwarded to the message agent running on the managed node if the threshold is exceeded. The message agent forwards the message to the HPOM management server, where the message can be reviewed in the message browser.

The monitor agent checks the values received from monitored objects once in every two seconds. When the `opcmon` command forwards multiple values to the monitor agent between two successive checks, the monitor agent accepts only the last value for further processing.

If a local automatic command is set up to run when the threshold is exceeded, this command is immediately started by the local HP Operations agent. The monitor agent must be configured and operating on the managed node, otherwise the `opcmon` command will fail.

Options

`-help`

Print usage message of opcmon. All other parameters are ignored.

<object_name>[-*<shortname>*]=*<value>*

Object name is the name of the measurement threshold policy. When the measurement threshold policy has been configured for multiple instance data, the short name is used to uniquely identify each instance within the policy.

-object *<msg_object>*

Value of the object text box which is part of an HP Operations message. Setting the object with the opcmon can be used for the object monitoring.

-option *<variable>*=*<var_value>*

Sets the variable $OPTION(<variable>) to *<var_value>*. Within the message conditions this variable can be used to access the value passed with the opcmon call. Special characters must be escaped with a backslash "\".

Exit Values

This command exits with value zero (0) after successful execution. If something is wrong regarding the passed parameters, opcmon exits with value 2 and explain the problem on standard error. For other errors, the exit value is set to 1 and an appropriate error message is returned on standard error.

opcmsg

NAME

opcmsg - Generates messages that are forwarded to HPOM.

SYNOPSIS

```
opcmsg [ -help ] [ -id ] application=<application> object=<object name>
msg_text="<message_text>" [ severity=<severity label> ] [
msg_grp=<message_group> ] [ node=<node Name> ] [ service_id=<service name> ] [
-option variable=<value> ]*
```

DESCRIPTION

The command opcmsg generates a message for HP Operations Manager. Before the message is submitted, it is interpreted by the Message Interceptor on the local managed node where the command is executed. Depending on how you configure the message, the message can be:

- Discarded
- Locally logged
- Forwarded to the management server
- Forwarded to the management server, with local logging.

The behavior of messages depends on the configuration of interceptors (or opcmsg policies). A message may be created, or may be suppressed. For example, you might have a suppress condition in the opcmsg policy, which for example suppresses all messages with application=Test.

For example, the message for the following call will not appear in the message browser (the generated message will be suppressed):

```
opcmsg application=Test msg_text="Test message"
```

The message interceptor must be configured with at least one Open Message interface policy and be running on the managed node, otherwise the opcmsg command will fail.

Options

`-help`

Print usage message of `opcmsg`. All other options are ignored and no message is submitted.

`-id`

Return the message ID of the submitted message to stdout. This option also sets the `OPCDATA_REMARK_FOR_ACK` flag of the message, so that the manager information of the message is held by the message agent.

`severity=`*<severity label>*

Specifies the severity of the message. Following severities are supported: normal, warning, minor, major, critical. By default severity normal is applied.

`application=`*<application name>*

Name of application (or script/program) that is affected by or has detected the event/problem.

`msg_grp=`*<message group>*

Default message group to which the message belongs. By default, no message group is assigned.

`object=`*<object name>*

Object which is affected by or has detected the event/problem.

`msg_text=`*<message text>*

Descriptive text explaining the event/problem in more detail.

`node=`*<node Name>*

System on which the event/problem is detected. By default the node name of the current system is applied.

`service_id=`*<service name>*

Name of the service (as defined in the Service Editor) to which the message is mapped.

`-option variable=`*<value>*

Sets the variable `$OPTION(variable)` to value. Within the message conditions this variable can be used to access the value passed with the opcmsg call.

Special characters must be escaped.

Exit Values

This command exits with value zero after a message is successfully generated; in case of an internal error, 1 is returned and an error message displays. If a syntax or usage error is detected, 2 is returned and an error message displays.

Restrictions

This command can be run by any user. The message group (`msg_grp`), the object, and the application parameter should not be longer than 32 bytes, because this is the maximum size HPOM can handle with these parameters.

Example

To submit a normal message issued when a user logs onto the system, you could set up the following scheduled task:

```
opcmsg appl=ScheduledTask obj=login severity=normal msg_g=Security
msg_t="%USERNAME% logged onto system %COMPUTERNAME%"
```

opcmack

NAME

`opcmack` - acknowledges messages created by the HP Operations agent.

SYNOPSIS

```
opcmack [ -help ] message_id
```

DESCRIPTION

The `opcmack` command acknowledges messages created by the message agent of the HP Operations agent.

The message commands received from the message agent on the local managed node are forwarded to the corresponding manager. If a message was previously sent to the management server, the message agent holds the information of the responsible management server in the memory.

Other operations on the message with this ID will be sent directly to this management server. After a specified time (default 1 hour), the message agent deletes this information to save memory and disk space; message operations will then be sent to all management servers.

On Windows, you must run the `opcmack` command with a user that is a member of the Local Administrators group.

Options

`-help`

Print usage message of `opcmack`. All other options are ignored and no message will be acknowledged.

`-msg_id`

Specifies the message to acknowledge.

Utilities Provided by the Performance Collection Component

This section provides information on command-line utilities presented by the Performance Collection Component of the HP Operations agent.

agsysdb

NAME

`agsysdb` - Performance Collection Componentt alarm generator system database manipulation program

SYNOPSIS

```
agsysdb
```

DESCRIPTION

Agsysdb is a program that is used to list the contents of the Performance Collection Component alarm generator system database. The database contains information concerning all systems to which the alarm generator will send alert notifications.

Options

`-ovo off |on`	Updates the option of whether or not to send alert notifications to HPOM. If this option is set to on, and if the Operations Monitoring Component is running on the node, all alert notifications will be submitted as a message to the Operations Monitoring Component.If this option is set to off, the alert notifications will not be sent to the Operations Monitoring Component. DEFAULT: on
`-add hostname`	Adds the SNMP management node to the alarm generator database. The hostname can be either a name or IP address.
`-delete hostname`	Deletes the SNMP management node from the alarm generator database. The hostname can be either a name or IP address.
`-delpv hostname`	Removes an Performance Manager 3.X system from the alarmgen generator database. The hostname can be either a name or IP address.

`-actions off | always | on`	Updates the option of whether or not to execute local actions. If this option is set to on, then the local actions defined in the EXEC statements in the alarmdef file will be executed if: 1) The Operations Monitoring Component is not running on the node. 2) The Operations Monitoring Component is running on the node, but the `ovo` option has been set to off. If this option is set to always, local actions will always be executed even if the Operations Monitoring Component is running. If this option is set to off, local actions will not be executed. If the Operations Monitoring Component is running, the local action will be submitted as a message to the Operations Monitoring Component. DEFAULT: on
`-l`	Lists where alert notifications will be sent. The "Last Error" fields will contain the last error that occurred when an alert notification was sent. If there was an error, see the status.perfalarm file for more details about the error.

Files

`/var/opt/perf/datafiles/agdb.*`

dsilog

NAME

`dsilog` - a program that logs incoming data

SYNOPSIS

`dsilog` logfile_set class [options]

DESCRIPTION

dsilog is a program that logs incoming data. A separate logging process must be used for each class you have defined. The dsilog program expects to receive data from stdin.

Options

`logfile_set`	is the name of the logfile set where the data is to be stored. If it is not in the current directory, the name must be fully qualified.
`class`	is the name of the class to be logged.
`-c char`	is the character to be used as a string delimiter/separator. You may not use the following as separators: decimal, minus sign, ^d, \n. Since the default is blanks, if there are embedded spaces in any text metric names then you must specify a unique separator using this option.
`-s second`	is the number of seconds to summarize the data by. Zero turns off summarization, which means that all incoming data is logged. If this option is omitted, the summarization rate defaults to the RECORDS PER HOUR rate in the class specification. Conversely, this option overrides the value of RECORDS PER HOUR.
`-i fifo`	indicates that the input should come from the fifo named. If fifo is not used, input comes from stdin. If you use this method, start dsilog before starting your collection process. See man page mkfifo for more information about using a fifo.
`-f format file`	names a file that describes the data that will be input to the logging process. If this option is not specified, dsilog derives the format of the input from the class specification with the following assumptions. Each data item in an input record corresponds to a metric that has been defined in the class specification. The metrics are defined in the class specification in the order in which they appear as data items in the input record. If there are more data items in an input record than there are metric definitions, dsilog igOverstocknores all additional data items. If the class specification lists more metric definitions than there are input data items, the field will show "missing" data when the data is exported, and no data will be available for that metric when graphing data in the analysis software. There is a limit of 100 fields in the format file.
`-timestamp`	indicates that the logging process should not provide the timestamp, but use the one already provided in the input data. The timestamp in the incoming data must be in UNIX timestamp format (seconds since 1/1/70 00:00:00) and represents the local time (not Greenwich Mean Time).

`-asyn`	specifies that the data will arrive asynchronously with the RECORDS PER HOUR rate. If no data arrives during a logging interval, the data for the last logging interval is repeated. This causes a flat line to be drawn in a graphical display of the data and causes data to be repeated in each record if the data is exported.
`-t`	prints everything that is logged to stdout in ASCII format.
`-vi`	filters the input through dsilog and writes errors to stdout instead of the log file. It does not write the actual data logged to stdout just the errors. This can be used to check the validity of the input.
`-vo`	filters the input through dsilog and writes the actual data logged and errors to stdout instead of the log file. This can be used to check the validity of the data summarization.
`dsilog -vers`	displays the version of this program.
`dsilog -?`	displays options for this program. If your system interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.

Extract

NAME

`extract` - (export functionality) reads the contents of Performance Collection Component scopeux log files or previously extracted log files. The data can be reorganized or filtered as desired, and the results are exported into class specific data files in a user defined format such as ASCII, BINARY, DATAFILES or WK1 (spreadsheet). The ASCII format is primarily for human consumption, while the other formats are primarily for use by other programs and applications.

extract - (extract functionality) reads the contents of Performance Collection Component scopeux log files or previously extracted log files. The data can be reorganized or filtered as desired, and the results are combined into a single, easy to manage extracted log file or appended to a preexisting extracted log file. The format of the resulting extracted logfile has been optimized for archiving or use by other systems/applications for analysis.

SYNOPSIS

To create extracted files:

`extract -xt` [d|w|m|y -offset] [-v][-gapkdzcntuy] [-l <logfile>] [-f <outputfilename>] [-b <date> <time>] [-e <date> <time>] [-s <time1> - <time2> noweekends]

`extract -xw` [<weekno>][-v][-gapkdzcntuy] [-l <logfile>] [-s <time1> - <time2> noweekends]

`extract -xm` [<monthno>][-v][-gapkdzcntuy] [-l <logfile>] [-s <time1> - <time2> noweekends]

`extract -xy` [<yearno>][-v][-gapkdzcntuy] [-l <logfile>] [-s <time1> - <time2> noweekends]

To create exported files:

`extract -xp` [d|w|m|y] [-v][-gapkdzcntuyGADZNTUY] [-l <logfile>] [-f <outputfilename>] [-r <filename>] [-b <date> <time>] [-e <date> <time>] [-s <time1> - <time2> noweekends]

To run interactively:

`extract` [verbose] [global|appl|proc|disk|lvol|netif|tran|CPU|filesystem detail|summ] [log <logfile>] [output <outputfilename>] [report <filename>] [start <date> <time>] [stop <date> <time>] [shift <time1> - <time2> noweekends]

To select DSI data to export:

`-C classname` [DETAIL|SUMMARY|BOTH]

(NOTE: The SUMMARY and BOTH options are only functional when performing a data export. The extract functionality does not support data summarization.)

To display more details about the extract program parameters:

man extract

Or

extract ?

DESCRIPTION

The extract program reads performance measurement data from Performance Collection Component files and extracts data according to specifications set by the user. The default files to be extracted from are the raw log files in the following directories:

`/var/opt/perf/datafiles/` (logglob, logappl, logproc, logdev, logtran, logls)

Options

`-b <date> <time>`	Sets starting date and time
`-B <date> <time>`	Sets starting date and time in UNIX format
`-e <date> <time>`	Sets ending date and time
`-E <date> <time>`	Sets ending date and time in UNIX format
`-s <time>-<time> <noweekends>`	Sets shift (starttime, endtime, weekends)
`-l <logfile>`	Specifies input log file
`-r <reportfile>`	Specifies export template file for export formats
`-f <file> <fopt>`	Sends extracted data to a specific output file. If not specified, extract data goes to rxlog; export data goes to default files xfr*logfilename.ext

-C <classname><opt>	Selects DSI (data source integration) data to export or scopeux data to extract or export. <opt> = DETAIL, SUMMARY, BOTH (NOTE: The SUMMARY and BOTH options are only functional when performing a data export. The extract functionality does not support data summarization.)
-k	Exports killed processes only. NOTE: Extract will not work as expected if the PROC_INTEREST metric is not included in the reptfile
-we <1|2|....7>	Sets days of the week to exclude when exporting data; 1=Sunday
-gapkdzcntuyGADZNTUY	Selects types of data to extract/export g = global detail a = application detail p = process detail k = process (killed records only) d = disk device detail z = logical volume detail c = configuration detail n = netif detail t = transaction detail u = CPU detail y = filesystem detail i = logical system detail G = global summary (Export only) A = application summary (Export only) D = disk device summary (Export only) Z = logical volume summary (Export only) N = netif summary (Export only) I = logical system summary T = transaction summary (Export only) U = CPU summary (Export only) Y = filesystem summary (Export only)
-ut	Shows date and time in the UNIX format in exported DSI log file data.
-v	Selects verbose output
-xp <xopt>	Exports data
-xt <xopt>	Extracts data

-xw <weekno>	Extracts a calendar weeks data
-xm <monthno>	Extracts a calendar months data
-xy <yearno>	Extracts a calendar years data
?	Displays command line syntax

where:

<date>	Specifies a date in native language syntax. (The default format is MM/DD/YY, as in 12/31/03.) Or specifies one of the special keywords "TODAY", "FIRST", or "LAST" to select the current date, the first date in the log file, or the last date in the log file, respectively. Or specifies keyword "TODAY-nnn" where nnn is a number specifying the number of days before today Or specifies keyword "FIRST+nnn" where nnn is a number specifying the number of days after the first date in the log file. Or specifies keyword "LAST-nnn" where nnn is a number specifying the number of days before the last date in the log file.
<time>	Specifies a time in native language syntax. (The default format is hh:mm AM or hh:mm PM, where hh is 12-hour hours, mm is minutes)
noweekends	A literal keyword specifying that weekends, Saturday and Sunday, are not to be included in the output data
<logfile>	Names a raw or extracted log file; can be fully qualified with a path name. The default log file is /var/opt/perf/datafiles/logglob.
<reportfile>	Names an ASCII template file that defines output data fields and format for the EXPORT command. The default template file is /var/opt/perf/reptfile.
<file>	Specifies an output file name for EXTRACT and EXPORT. (See the OUTPUT command for default values.)
<fopt>	Selects program action if output file already exists. ,New Command fails; file must not exist ,Purge Removes existing file and creates a new one ,Append Appends data to the existing file

<xopt>	Optionally specifies a begin and end date in one of the following formats: D = today's data from midnight to midnight D-n = one days data, "n" days before today D n = the "n"th day of this year D yynnn = the "n"th day of year "yy" W = this weeks data from Monday AM to Sunday PM W-n = one weeks data, "n" weeks before today W n = one weeks data, the "n"th week of this year Wyynn = one weeks data, the "n"th week of year "yy" M = this calendar months data M-n = one months data, "n" months before today M n = the "n"th month of this year M yynn = the "n"th month of year "yy" Y = this calendar years data so far Y-n = one years data, "n" years before this one Y n = year "n" data Specifying an xopt will override any -b or -e options
<weekno>	Optionally specifies the week of the year to extract (1-53) or a year and the week of the year (such as 0252 for 52nd week of 2002)
<monthno>	Optionally specifies the month of the year to extract. (1-12) or a year and the month of the year (such as 0212 for 12th month of 2002).
<yearno>	Optionally specifies the year to be extracted (1971-2027) or (71-27)

EXAMPLE

The normal input and output redirection is allowed (<,>,2>). If input is redirected, or if a command line input is being processed, then the program is running in "batch mode", and any nonrecoverable error results in a program abort. Interactive input allows the user to correct any problem and reexecute the command.

Example: To export global summary data from the log file "barkley" starting on December 31, 2003 and ending at 5:00 PM yesterday, taking the default export template file, enter:

extract -G -l barkley -b 31/12/03 -e today-1 5:00 PM -xp

Example: To export yesterdays global detail data from the default log file using the "repthist" report file, enter:

extract -g -r repthist -xp d-1

Reasons to use extract:

1 Extracted log files can be reduced to a manageable size by selecting specific time periods and filtering out irrelevant data during the extraction process.

2 Extracted log files can be transferred to a PC disk for local analysis.

3 The extract program can append data to previously existing extracted files. In this way, you only need the most recent data in the raw log files and can periodically extract it, building a long-term extracted file.

Data can be extracted from raw Performance Collection Component log files or from previously created PC format files.

The extract program creates a report that can be redirected to a file by redirecting stdout.

```
extract > extract.report
```

DEPENDENCIES

Raw log files must be named logglob, logappl, logproc, logdev, logtran, and logindx and must be stored together under the same directory for extract to identify them correctly. Sets of raw log files can be stored under different directories. Extract assumes a file by any other name is a PC format file.

FILES

rxlog	PC format file.
logglob, logappl, logproc, logdev, logtran, logindx, logls	raw log files (logls is supported on AIX LPARS, Solaris, vMA, HPVM, and Hyper-V).
extract.help	help catalog
reptfile, repthist, reptall	export template files

glance

NAME

`glance` - GlancePlus system performance monitor for UNIX/Linux

SYNOPSIS

`glance` [`-j` interval] [`-p` [dest]] [`-f` dest] [-command]

[`-maxpages numpages`] [`-nice nicevalue`] [`-nosort`] [`-lock`]

[`-adviser_off`] [`-adviser_only`] [`-bootup`]

[`-iterations` count][`-align`] [`-syntax` filename]

[`-aos` filename [-noscaling]]

[`-all_trans`] [`-all_instances`] [`-no_fkeys`]

DESCRIPTION

GlancePlus is a powerful and easy-to-use online performance diagnostic tool for UNIX/Linux systems. It is distributed in two forms: "xglance", a Motif-based program, and "glance", a character mode program. The combination allows you to use the appropriate tool for your job. With `xglance` you get the power and ease-of-use a Motif-based tool. With `glance` you can run

on almost any terminal or workstation, over a serial interface and relatively slow data communication links, and with lower resource requirements. Either component provides the same rich set of performance information.

The default Process List screen provides general data on system resources and active processes. More specific data is presented via the CPU, Memory, Disk IO, Network, NFS, Swap, and System Table screens. Process workload groups, or applications can be viewed in the Application List screen. Specific per-process detail is also available via the individual process screens. Running in a terminal environment, Glance aids performance problem resolution on all Linux systems.

Definitions and descriptions of each metric are provided in GlancePlus online help.

Options

`-j interval`	This option allows you to preset the number of seconds between screen refreshes in place of the default value of 5 seconds. For example, if -j 60 is passed in, the screen update interval would be preset to 60 seconds.
`-p [dest]`	This option indicates that the continuous Print option should be enabled when the tool starts. This can be useful for printing screens automatically over a long interval. The output will be directed to the default lp device, unless the dest parameter is supplied. Once GlancePlus is running, another p command toggles the continuous print off.
`-f dest`	This option indicates that the continuous Print option should be enabled when the tool starts. This can be useful for printing screens automatically over a long interval. The output will be directed to the specified destination file. Once GlancePlus is running, another p command toggles the continuous print off.
`-maxpages numpages`	This option changes the maximum number of pages that can be printed with the p command. The default maximum is 200 pages.
`-command`	This option can be used to request a different initial screen than the Global Summary screen. This startup option corresponds to the keystroke commands that display different detail screens once the tool is run. Only one of the commands in the first section of the COMMAND SUMMARY (below) is allowed for this option.
`-nice nicevalue`	This option allows you to set the nice priority value for the GlancePlus process. The default nice value is -10.
`-nosort`	This option tells GlancePlus not to sort interesting processes listed on the Global Summary screen. This reduces Glances CPU overhead.
`-lock`	This option allows Glance to lock itself into memory. Note that response time may be enhanced by using this option, but there is the possibility that you will receive the error "Unable to allocate memory/swap space". If this happens, you must run GlancePlus without using this option.
`-adviser_off`	Allows you to run Glance without the Adviser.

-adviser_only	This option allows Glance to run with no screen displays to the terminal. Only the Adviser will run, sending its output to stdout. With this option the GlancePlus Adviser can be run in the background, with stdout output optionally redirected to a file. If you want to run GlancePlus in "Adviser only" mode at startup time, you must include the -bootup option as well.
-bootup	This option allows Glance to ignore the SIGHUP signal. Use this option along with -adviser_only or -aos when you want to run GlancePlus in "Adviser only" mode at startup time.
-iterations count	This option allows you to limit the number of intervals that Glance will run. This can be used in conjunction with the -adviser_only option which enables GlancePlus to run in the background with no terminal screen displays. Glance will execute for the number of iterations specified and then terminate.
-align	This option aligns the screen update interval to 1 minute if the glance update interval is set to more than or equal to 60 seconds. If the glance update interval is less than 60 seconds, aligns the screen update interval to the interval boundary. This option can be used only with the -adviser_only mode.
-syntax filename	Use this option to specify a file name which contains the syntax to be used by the Adviser. If no syntax file is specified, the Adviser will search for a user default file, ~/adviser.syntax. If no user syntax file is found, the system default syntax file, /var/opt/perf/adviser.syntax, will be used.
-aos filename	Use this option as an alternative to -adviser_only -syntax filename option.
-noscaling	This option is used to turn off scaling of metric value to appropriate units like kb/mb/gb. This can only be used in conjunction with adviser_only mode.
-all_trans	This option allows GlancePlus to display all transactions registered on your system. If not specified, GlancePlus only displays transactions filtered by the values specified in your threshold file.
-all_instances	This option allows GlancePlus to display the most recent 2048 instances in a transaction. If not specified, GlancePlus only displays active instances with no stop time.
-no_fkeys	This option disables the display of function key labels.

COMMAND SUMMARY

The following commands are grouped into three sections; top level screens, secondary screens, and miscellaneous commands. The top level screen commands are the only ones allowed on the command line.

Command	Screen Displayed / Description
a	CPU by Processor
c	CPU Report
d	Disk Report
g	Process List
i	File System Capacity
l	Network by Interface
m	Memory Report
t	System Tables Report
u	IO by Disk
w	Swap Space
A	Application List
F	Process Open Files
N	NFS Global Activity
R	Process Resources
M	Process Memory Regions
Z	Global Thread List
I	Thread Resources
G	Process Thread List
T	Transaction Tracking
H	Alarm History
?	Commands Menu
S	Select an Application / Transaction / Logical
V	Select a Logical System List
K	Select a Logical System Report
s	Select a single process
b	Scroll page backward
f	Scroll page forward
h	Online help
j	Adjust refresh interval
o	Adjust process threshold

Command	Screen Displayed / Description
p	Print toggle
q	Quit GlancePlus
r	Refresh the current screen
<cr>	Update current screen
y	Renice a process
z	Reset statistics to zero
>	Display next logical screen
<	Display previous screen
!	Invoke a shell

EXAMPLES

To choose the default start up options, which start glance in the Global Summary screen, updating statistics every five seconds, enter:

```
glance
```

To monitor system resource usage overnight, run glance, and print the screen once every hour until you return and exit the program, enter:

```
glance -j 3600 -p
```

To monitor and print swap utilization once every two hours, specifying the lp2 destination printer, enter:

```
glance -j 7200 -p lp2 -w
```

To execute GlancePlus at a higher than normal priority, limit the maximum number of pages output by the print command to 10, and request that the interesting processes be unsorted, enter:

```
glance -nice -19 -maxpages 10 -nosort
```

midaemon

NAME

`midaemon` - Performance Measurement Interface daemon.

SYNOPSIS

`midaemon` [options}

DESCRIPTION

The Measurement Interface daemon, midaemon, provides an interface between ARM Transaction Tracking and the Performance Collectors. This program 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 glance, xglance, gpm, and scopeux.

The Measurement Interface daemon, midaemon, must be executed as root or with the set-user-id bit set to root. Attempting to run the midaemon process without user-id of root results in an immediate termination.

The midaemon backgrounds itself when started. Status and errors are written to the file: /var/opt/perf/status.mi.

COMMAND LINE OPTIONS

midaemon recognizes the following command line options:

-?	Displays the mode dependent available options on standard error.
-bufsize <value>	The midaemon process uses bufsize buffers to communicate with ARM Transaction Tracking. This option changes the buffer default value. The default value is defined by experience and validation tests. Avoid changing this value unless the performance tools or the daemon process itself report losing buffers. If the passed value is less than 4096, the value is reset to the default value for performance reasons. DEFAULT: 131072 bytes.
-debug <level>	Enables or disables the midaemon debugging mode. Possible debugging level values are: 0 - disables all debugging levels 1 - enables the first (lowest) level of debugging 2 - enables the second (medium) level of debugging 3 - enables the third (highest) level of debugging. The debugging information is related to the midaemon activity and to the collectors requests and is printed in the status.mi file. DEFAULT: 0 [off].
-fg	Allows the midaemon process to execute in foreground. This option should only be used when debugging. DEFAULT: off.
-k	Sends a termination request to an active midaemon process. This will cause the running midaemon to release the MI Performance Database and to exit. If performance collectors are still active and attached to the MI Performance Database the active midaemon will ignore the termination flag and will continue to run. If this daemon process was in the debugging level 1, a message describing the attempt to terminate is written to the status.mi file. If an midaemon process has been killed because of a SIGKILL signal, the -k option can be used to delete the still existing MI Performance Database. DEFAULT: off.
-K	Sends the no_permanent and termination requests to an active midaemon process. This will cause the running midaemon process to become no_permanent, to release the MI Performance Database and to exit. This option is as an alias of the no_pk options. DEFAULT: off.

-mlock	Specifies the locking of the MI Shared Memory Performance Database in memory. By default, MI does not lock the database and pages in only the active memory pages, creating less intrusiveness on the system memory utilization. DEFAULT: off.
-no_mlock	Tells the midaemon process not to lock the MI Shared Memory Performance Database in physical memory. In control mode, this request can be sent to the active midaemon process to unlock the database. DEFAULT: on.
-no_p	Sends the no_permanent request to the midaemon process. This means that when the last performance tools will exit, the midaemon process will exit by releasing the MI Performance Database. DEFAULT: off.
-normal_prio	specifies that the midaemon process starts in the normal scheduling priority. DEFAULT: off. WARNING: This option must not be used if ARM instrumented data is collected. If this option is used when ARM instrumented data is collected, the transaction throughput handled by midaemon is affected. The local zones runs in normal priority. On Solaris local zones, the default value is ON and it cannot be overridden. midaemon cannot be moved to real time priority inside local zones as priocntl does not work due to privilege issues inside minimum configured local zones.
-p	Specifies that the midaemon process runs permanently, even if no performance tools are attached to the Measurement Interface. To stop this behavior, the control mode -no_p request has to be sent to the active daemon. To stop a permanent daemon, the requests -no_p, -k or -K should be used. DEFAULT: on.
-rtprio <priority>	Specifies the process real-time priority to be used for the midaemon process. The default value was chosen by experience and tests with other system daemons. DEFAULT: Real time priority. On Solaris local zones, real-time priority for midaemon is disabled.
-sizes	Specifies that the midaemon process writes the sizes of the enabled Classes of the MI Shared Memory Performance Database in the status.mi file. DEFAULT: off.
-smdvss <value>	Specifies the maximum virtual set size of the MI Shared Memory Performance Database. This option limits the amount of memory used by the database and should be used to limit the dynamic expansion of the performance Classes. The default size is kernel dependent. The -sizes option can be used to determine the MI Performance Database sizing values. DEFAULT: kernel dependent.

-timeout <value>	specifies that the midaemon process sets a specific timeout value for the kernel instrumentation interface. Do not modify the default value, unless in a debug situation. DEFAULT: 300 msecs.
-T	specifies that the active midaemon process terminates immediately without any regard to attached performance tools. This option is for use only during software installation or removal procedures. DEFAULT: off.
-udts <value>	specifies the maximum number of UDT entries for the ARM Transaction Tracking data class in the MI Performance Database. DEFAULT: 20.
-V	prints the midaemon version to standard out.

MI ERROR MESSAGES

In case of errors, midaemon was designed to use well defined exit values and to write explicit error messages in the /var/opt/perf/status.mi file. The error messages are formatted:

- name of the running midaemon program - timestamp,
- name of the routine generating the error - error message,
- error message generated by a perror(3C) call if a system call has failed. This information may be of use when reporting problems.

EXAMPLES

The standard midaemon process execution is

% midaemon

To specify the MI Shared Memory Database size up to 1 Megabyte at the MI initialization:

% midaemon -smdvss 1M

WARNINGS

The midaemon program is automatically executed by performance tools such as GlancePlus (glance or xglance) or Performance Collection Component (scopeux). However, it can be executed manually to customize the MI Performance Database or to send to the active midaemon process specific requests.

If the creation of the status.mi file failed, midaemon will use the error file /tmp/status.mi.

ovpa

NAME

ovpa - Performance Collection Component script for starting and stopping data collection and alarms

SYNOPSIS

ovpa [action] [subsystem] [parms]

DESCRIPTION

ovpa is a script that is used to start, stop, and re-initialize Performance Collection Component processes.

ACTION

`-?`	List all ovpa options. If your shell interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.
`start`	Start all or part of Performance Collection Component. (default)
`stop`	Stop all or part of Performance Collection Component.
`restart`	Reinitialize all or part of Performance Collection Component. This option causes some processes to be stopped and restarted.
`status`	List the status of all or part of Performance Collection Component processes.
`version`	List the version of all or part of the Performance Collection Component files.

SUBSYSTEM

all	Perform the selected action on all Performance Collection Component. (default)
scope	Perform the selected action on the scopeux collector. The restart operation causes the scopeux collector to stop, then restart. This causes the parm and ttd.conf files to be re-read.
server	Perform the selected action on the Performance Collection Component. This affects the coda daemon as well as the alarm generation subsystem. The restart operation causes coda to terminate and restart. This causes the datasources and alarmdef files to be re-read.
alarm	Perform the selected action on the Performance Collection Component. Restart is the only valid option and causes the alarmdef file to be reprocessed.

PARMS

`-midaemon` <*miparms*>	Provide the midaemon with parameters to initiate it with other than default parameters. If the `-midaemon` parameter is used, it must be the last parameter in the list. All remaining parameters are passed to the midaemon process.

ovtrap

NAME

ovtrap - Script which will issue an SNMP trap to a node

SYNOPSIS

ovtrap [-s severity] host alarm_message

DESCRIPTION

ovtrap Generates an SNMP V1 trap to the Event Browser. This capability may be used through a local action within the alarm syntax, but normally if you would like all alarms to automatically generate SNMP traps, you would use the appropriate option to agsysdb.

If you are not using the automatic trap option, you may call ovtrap directly from your alarmdef syntax via an EXEC statement. In this case, you must supply the options. Host is either an Internet address or a host name. The alarm_message must be no more than 128 characters. And the optional -s parameter can be one of the following: Normal, Minor, Warning, Major, or Critical.

EXAMPLE

ovtrap -s Warning monitoring_system "This is the message"

SCOPEUX

NAME

scopeux - Performance collection daemon

SYNOPSIS

scopeux [-d directory] [-nopri] [-c parmfile]

`-d`	directory Specifies where to log and look for parameter (parm) file.
`-nopri`	Turns off automatic setting of priority.
`-c parmfile`	Checks the syntax of the parm file specified then terminates.

DESCRIPTION

scopeux is a daemon process that runs on a Performance Collection Component-monitored system. It is invoked by the ovpa script. scopeux logs performance data that is read by the Performance Collection Component. scopeux can serve as a data collector. The user-controlled configuration file parm is used to control scopeux's logging. The script perfstat can be used to check the status of performance collection daemon processes.

FILES

<configuration dir> = /var/opt/perf/ (on UNIX/Linux) or *%ovdatadir%* (on Windows)

<datafiles dir> = /var/opt/perf/datafiles (on UNIX/Linux) or *%ovdatadir%*`datafiles` (on Windows)

SDLCOMP

NAME

sdlcomp - a program that checks and compiles the class specification file

SYNOPSIS

sdlcomp specification_file [logfile_set [logfile-name]] sdlcomp -max- class number specification_file logfile_set [logfile-name] sdlcomp [options]

DESCRIPTION

sdlcomp checks the class specification file for errors. If no errors are found, it adds the class and metric descriptions to the description file in the logfile set you name. It also sets up the pointers in the logfile sets root file to the logfile to be used for data storage. If either the logfile set or the logfile does not exist, the compiler creates one.

Options

`specification_file`	The name of the file containing the class specification. If it is not in the current directory, it must be fully qualified.
`logfile_set`	The name of the logfile set this class should be added to. If the logfile set does not exist, it will be created. If the logfile set name is not fully qualified, it is assumed to be in the current directory. You can keep logfile sets anywhere you choose as long as you specify the location correctly when configuring the agent. If no logfile set is named, compilation errors are written to stderr and no logfile set is created. Compile without a logfile set name first to check for compilation errors before actually creating the logfile set. You can redirect stderr to a file for later viewing. Class and metric names and numeric IDs that have been previously used in the logfile set will not cause compilation errors until you run sdlcomp with the logfile set option.
`logfile`	The logfile in the set that will contain the data for this class. If the datafile named does not exist, it is created. If a datafile with this name exists to hold other classes, the new class is added to it. If no datafile is named, a new datafile is created for the class and automatically named. Only classes with unlimited CAPACITY must be in separate datafiles.
`-maxclass`	Allows you to specify the maximum number of classes to be provided for when creating a new logfile set. This option is ignored if it is used with the name of an existing logfile set. Each additional class consumes about 500 bytes of disk space in overhead, whether the class is used or not. The default is 10 if -maxclass is not specified.
`-verbose`	Prints a detailed description of the compiler output to stdout.
`-u`	Allows you to log more than one record per second. Note: Use this option to log unsummarized data only.
`sdlcomp -vers`	displays the version of this program.
`sdlcomp -?`	displays options for this program. If your system interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.

SDLGENDATA

NAME

sdlgendata - a program that generates random data for testing the DSI logging process.

SYNOPSIS

sdlgendata logfile_set class [options]

DESCRIPTION

sdlgendata generates random data which matches your DSI class specification so you can test the logging process. Before you begin logging data, you should test the logging process by piping test data from sdlgendata to the dsilog process, invoking dsilog with the -vi option. Data and errors are written to stdout. Press CTRL C to stop data generation. You can also use the -vo option of dsilog to examine input and summarized output for your real data without actually logging it.

Use the following command to pipe data from sdlgendata to the logging process:

```
sdlgendata logfile_set class | dsilog logfile_set class -s <seconds> -vi
```

Options

`logfile_set`	is the name of a logfile set created by compiling a class specification.
`class`	is the name of the class you want to generate data for.
`-timestamp n`	provide a timestamp as described in the data class. If n is missing or negative, use the current time. If n is positive, begin with 0 time and increment by n.
`-wait n`	wait n seconds between records generated.
`-cycle n`	recycle data after n cycles.
`sdlgendata -vers`	displays the version of this program.
`sdlgendata -?`	displays options for this program. If your system interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.

SDLUTIL

NAME

`sdlutil` - a program you use to manage DSI data and class information

SYNOPSIS

`sdlutil logfile_set` [options]

DESCRIPTION

sdlutil is a program which allows you to list or view class or metric information, statistics for classes, files in a logfile set and version information. You can also remove classes and data from a logfile set and recreate a class specification from the information in the logfile set using this utility.

Options

`logfile_set`	Is the name of a logfile set created by compiling a class specification.
`-classes classlist`	provides a class description of all classes listed. If none are listed, all are provided. Items in the list must be separated by spaces.
`-stats classlist`	provides complete statistics for all classes listed. If none are listed, all are provided. Items in the list must be separated by spaces.
`-metrics metriclist`	provides metric descriptions for all metrics listed. If none are listed, all metrics in the logfile set are provided. Items in the list must be separated by spaces.
`-id`	displays the shared memory segment ID used by the logfile.
`-files`	lists all the files in the logfile set.
`-rm all`	removes all classes and data as well as their data and shared memory ID from the logfile.
`-decomp classlist`	recreates a class specification from the information in the logfile set. The results are written to stdout and should be redirected to a file if you plan to make changes to the file and re-use it. Items in the list must be separated by spaces.
`sdlutil -vers`	displays version information.
`sdlutil -?`	displays options for this program. If your system interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.

UTILITY

NAME

`utility` - is a general purpose program to manage Performance Collection Component log files.

SYNOPSIS

To scan a log file and produce a report on its contents:

```
utility -xs [<logfile>] [-v] [-dD] [-b <date> <time>] [-e <date> <time>]
[-f <filename>]
```

To check the syntax of a scopeux parameter file:

```
utility -xp <parmfile> [-v] [-f <filename>]
```

To check the syntax of an alarm definitions file:

```
utility -xc <alarmdef> [-f <filename>]
```

To analyze a log file against an alarm definitions file:

```
utility -xa [-dD] [-f <filename>]
```

To change the size of raw log files:

```
utility -xr    [glob|appl|proc|dev|tran|LS] [size=<nnn>|days=<nnn>]
[empty=<nnn>|space=<nnn>] [yes|no|maybe]
```

To run interactively:

```
utility [-v] [-dD] [-lf <filename] [-b <date> <time>][-e <date> <time>]
```

DESCRIPTION

-b <date> <time>	Sets starting date and time
-e <date> <time>	Sets ending date and time
-l <logfile>	Specifies input log file
-f <file>	Sends output to a specific output file.
-D	Enables detail for scan, analyze, and parm file checking
-d	Disables detail for scan, analyze, and parm file checking
-v	Selects verbose output
-xp <parmfile>	Syntax checks a parameter file.
-xc <alarmdef>	Syntax checks an alarm definitions file and sets the alarmdef file name.
-xa	Analyzes a log file against the alarm definitions file Note: The log file data is accessed through the coda daemon or the repository servers. You must make sure that data sources and log files are defined in the data source configuration file (datasources file).
-xs <logfile>	Scans the log files and produces a report
-xr	GLOB [SIZE=nnn] [EMPTY=nnn] [YES] Resizes a raw log file APPL [DAYS=nnn] [SPACE=nnn] [NO] PROC [MAYBE] DEV LS NOTE: LS data types are supported only on VMware ESX Server, HPVM and AIX. TRAN
?	Displays command line syntax

where:

<date>	Specifies a date in native language syntax. (The default format is MM/DD/YY, as in 12/31/02) Or specifies one of the special keywords "TODAY", "FIRST", or "LAST" to select the current date, the first date in the log file, or the last date in the log file respectively. Or specifies keyword "TODAY-nnn" where nnn is a number specifying the number of days before today Or specifies keyword "FIRST+nnn" where nnn is a number specifying the number of days after the first date in the log file. Or specifies keyword "LAST-nnn" where nnn is a number specifying the number of days before the last date in the log file.

<time>	Specifies a time in native language syntax. (The default format is hh:mm AM or hh:mm PM, where hh is 12-hour hours, mm is minutes.)
<logfile>	Names a raw or extracted log file; can be fully qualified with a path name. The default log file is /var/opt/perf/datafiles/logglob.
<parmfile>	Names a scopeux parameter file; can be fully qualified with a path name. (The default parm file is parm.)
<alarmdef>	Names an alarm definitions file; can be fully qualified with a path name. (The default alarm definitions file is alarmdef.)
GLOB	Specifies resizing the raw global log file (logglob).
APPL	Specifies resizing the raw application log file (logappl).
PROC	Specifies resizing the raw process log file (logproc).
DEV	Specifies resizing the raw device log file (logdev).
TRAN	Specifies resizing the raw transaction log file (logtran).
LS	Specifies resizing the raw logical system log file(logls). (Supported only on VMware, HPVM and AIX) (For a discussion on the remaining options in the -xr argument, see the online help topic "RESIZE".)

EXAMPLES

The normal input and output redirection is allowed (<,>,2>). If input is redirected or if a command line input is being processed, the program is running in "batch" mode, and any nonrecoverable error results in a program abort. Interactive input allows the user to correct any problem and reexecute the command.

Example: To scan the log file "barkley" starting on December 31, 2002 and ending at 5:00 PM yesterday, producing a detailed report, enter:

```
utility -l barkley -b 12/31/02 -e today-1 5:00 PM -D -xs
```

DEPENDENCIES

Raw log files must be named logglob, logappl, logproc, logdev, logtran, and logindx and must be stored together under the same directory. Sets of raw log files can be kept under different directories. Utility assumes that a file by any other name is a PC format file.

FILES

rxlog	PC format file
logglob, logappl, logproc, logdev, logtran, logindx	raw log files.
utility.help	help catalog
parm	scopeux parameter file
alarmdef	alarm definitions file
utilengine	process that performs the work for analyze and checkdef commands

xglance

NAME

`xglance` - GlancePlus system performance monitor for UNIX/Linux

SYNOPSIS

`xglance` [-nosave] [-rpt [reportname]] [-sharedclr] [-nice nicevalue] [-lock] [Xoptions]

DESCRIPTION

GlancePlus is a powerful and easy-to-use online performance diagnostic tool for UNIX/Linux systems. The xglance program provides both graphical and textual information for system administrators and others who need help troubleshooting a performance problem. Advanced alarm and adviser capabilities make it an effective monitoring tool as well.

Options

<table>
<tr><td>-nosave</td><td>This option overrides xglances default of saving a users configuration at the next exit. If you would like to ensure that a particular user enters xglance in the same state at each start up, include the -nosave option in a xglance startup script.</td></tr>
<tr><td>-rpt reportname</td><td>This option allows you to specify one or more additional report windows to be displayed when you start xglance. By default, GlancePlus displays the windows that were open at the last xglance exit. Following are the various report names that may be used for reportname:
<table>
<tr><td>AlarmHistory</td><td>ApplicationCPUGraphs</td><td>ApplicationList</td></tr>
<tr><td>CPUByProcessor</td><td>CPUGraph</td><td>CPUReport</td></tr>
<tr><td>DiskGraph</td><td>DiskQueueGraphs</td><td>DiskReport</td></tr>
<tr><td>FileSystemCapacity</td><td>IOByDisk</td><td>Main</td></tr>
<tr><td>MemoryGraph</td><td>MemoryReport</td><td>MemoryUsageGraph</td></tr>
<tr><td>NetworkByCardGraph</td><td>NetworkByInterface</td><td>NetworkGraph</td></tr>
<tr><td>NfsByOperation</td><td>NfsGlobalActivity</td><td>ProcessList</td></tr>
<tr><td>ResourceHistory</td><td>SwapSpace</td><td>SymptomHistory</td></tr>
<tr><td>SymptomStatus</td><td>SystemAttributes</td><td>SystemTablesGraph</td></tr>
<tr><td>SystemTablesReport</td><td>TransactionTracking</td><td>ThreadList</td></tr>
</table></td></tr>
<tr><td>-sharedclr</td><td>This option causes xglance to use a shared color scheme. While it disables the ability to configure colors within xglance, it allows xglances colors to be configured along with other applications from a central point and leaves private color cells available to other applications. Even without this option, xglance will use a shared color scheme if it fails to obtain private color cells.</td></tr>
</table>

`-nice nicevalue`	This option allows you to set the nice priority value for the xglance process. The default nice value is -10.
`-lock`	This option causes xglance to lock both its text and data segments into memory. Note that response time may be enhanced with this option, but there is also the possibility that you will receive the error "Unable to allocate memory/swap space". If this happens, you must run GlancePlus without using this option.
`Xoptions`	The xglance program accepts the standard X Toolkit options. Examples of commonly used options are "-iconic" (start up iconified), "-bg color" (use specified background color), and "-display xdisplay" (display on specified X server). Note that "-fg color" is not accepted, since the window foreground color is computed by xglance from the background color. Also note that since help text defaults to black via a resource set in /var/opt/perf/Gpm, a dark background should not be used unless the help text resource is also set to a light color so it will be readable.

EXAMPLES

To run xglance on a display named "sparc10a", enter:

```
xglance -display sparc10a:0.0
```

To run xglance so that it does not automatically save configuration changes on exit, enter:

```
xglance -nosave
```

To require shared color usage and add the DiskReport window to those displayed by xglance at startup, enter:

```
xglance -sharedclr -rpt DiskReport
```

SDLEXPT

NAME

sdlexpt - A program that exports data from a logfile to an ASCII file on the agent system

SYNOPSIS

sdlexpt logfile_set class [options]

DESCRIPTION

`sdlexpt` is an obsoleted program. The sdlexpt program's functionality has been included in the MWA extract program. With this release you can still run sdlexpt, but this will result in the sdlexpt command line options being translated into extract syntax and the extract program run to do the exporting. If you run sdlexpt with a -v option at the end it will show you the translation. If you run sdlexpt with -V at the end it will translate and execute the extract command. The sdlexpt options are still documented in this topic to help you in migrating to the extract command line syntax.

Options

-v	The -v option at the end of the sdlexpt command line will show you the translation to extract syntax.
-V	The -V option at the end of the sdlexpt command line will translate the syntax and execute the extract commands. NOTE: the old sdlexpt options are still documented below to help you in migrating to the extract command line syntax. But you should discontinue using sdlexpt as soon as possible as it will no longer be supported in the next release.
logfile_set	Is the name of the logfile set where the data you want to export is stored. If it is not in the current directory, it must be fully qualified.
class	Is the class you want to export.
-b start date today [start-time]	Is the first interval to export in the UNIX date format set for this system and hh:mm format (24 hour time). You can substitute the keyword today. Or you can substitute the start date in mm/dd/yy format. If the time is not specified, it is assumed to be midnight. If no start or end options are included, all the data for the class is exported.
-B UNIX start-time	Is the first interval to export in UNIX time (seconds since 1/1/70 00:00:00).You must use this option if you are exporting data with the PT_START variable in a ROLL BY ACTION statement in the class specification.
-e end date today [end-time]	Is the last interval to export in the UNIX date format set for this system and hh:mm format (24 hour time). You can substitute the keyword today. Or you can substitute the start date in mm/dd/yy format. If the time is not included, it is assumed to be midnight. If no start or end options are included, all the data for the class is exported.
-E UNIX end-time	Is the last interval to export in UNIX time (seconds since 1/1/70 00:00:00). Use this option if you are exporting data with the PT_END variable in a ROLL BY ACTION statement in the class specification.
-f output-file	Is the filename to write exported data to instead of stdout. If the name is not fully qualified, the file is placed in the current directory. By default, headings and blank records for intervals when no data arrived are included if you export to a file and suppressed if you export to stdout. Use the -h option to suppress headings and blank records for intervals when no data arrived. Blank records are indicated by a -1 for the record.
-h	Indicates that headings and blank records for intervals when no data arrived should not be printed with exported data. This is the default if you are exporting to stdout.
-H	Is the character to put between metrics. Enclose the character in quotes. If you also want spaces between metrics you should include spaces around the character. A space is the default.

`-c separation-char`	Is the character to put between metrics. Enclose the character in quotes. If you also want spaces between metrics you should include spaces around the character. A space is the default.
`-sum seconds`	Summarizes the data in the logfile as it is exported. The summarization is in addition to the summarization that was performed as the data was logged.
`-shift hh:mm/ hh:mm`	Allows you to specify in 24-hour time export of data only between certain times (shifts). If the start time is later than the end time, the shift is assumed to span midnight. For example, -s 08:00/17:00 would indicate data from 8 a.m. to 5 p.m., -s 17:00/8:00 would include data from 5 p.m. to 8 a.m.
`-we days`	Allows you to exclude data from certain days of the week. This option assumes the week starts with Sunday. For example, -we 1 would exclude Sunday,and -we 17 would exclude Sunday and Saturday.
`sdlexpt -vers`	Displays the version of this program.
`sdlexpt -?`	Displays options for this program. If your system interprets ? as a wildcard character, use an invalid option such as -xxx instead of -?.

ttd

NAME

ttd - transaction tracking registration daemon.

SYNOPSIS

ttd [options]

DESCRIPTION

The transaction tracking daemon, ttd, reads and registers transaction definitions from the configuration file /var/opt/perf/ttd.conf. The ttd also assigns IDs to the transaction names passed to it via arm_getid calls that come from the ARM library. The ttd synchronizes these transaction definitions with the HP Measurement Interface daemon process, midaemon.

You must execute the registration daemon, ttd, as root or with the set-user-id bit set to root. ttd runs in background mode when dispatched, and errors are written to the error file: `/var/opt/perf/status.ttd`.

COMMAND LINE OPTIONS

ttd recognizes the following command line options:

-?	Displays the available options on standard error.
-hup	Tells a running ttd process to reread the configuration file without explicitly killing and restarting. The -hup option should be used in conjunction with the -mi option to synchronize the midaemon with the ttd. To have the changes synchronized with the midaemon, specify -mi after -hup.
-fc	Disables the processing of the ttd.conf configuration file during the start of ttd daemon.
-fg	Starts ttd as a foreground process instead of running in background.
-k	Kills the ttd process. The ttd process should only be killed if the midaemon process is likewise killed. Killing and restarting the ttd process without stopping the midaemon can result in unsynchronized TT data in the midaemon process.
-mi	Tells a running ttd process to synchronize its entries with the midaemon without explicitly killing and restarting. This option is typically used after ttd -hup to reread the ttd.conf file and synchronize any changes with the midaemon.

ERROR MESSAGES

ttd was designed to use exit values and to write explicit error messages in the status.ttd file. The error messages are formatted using these conventions:

- name of the running ttd program - timestamp,

- name of the routine generating the error - error message,

- error message generated by a perror(3C) call if a system call has failed.

DEPENDENCIES

The ARM library registration calls arm_init(), arm_getid() and the control call arm_stop (...,ARM_ABORT,...) fail if the ttd daemon is not running. However, ARM operations arm_start() or arm_stop() can execute successfully without the ttd daemon process if arm_getid was successfully called before ttd was stopped.

The Measurement Interface processing daemon midaemon must also be running to process the user-defined transactions and to measure performance metrics associated with these transactions.

The localhost loopback interface must be configured in order for ttd to receive the client RPC connection requests. Client applications connect to ttd via RPC connections when the arm_getid() function is called.

The number of active client processes that can register transactions with ttd via the arm_getid() call is limited to the maxfiles kernel parameter. This parameter controls the number of open files per process. Each client registration request results in ttd opening a socket (an open file) for the RPC connection. The socket is closed when the client application terminates; therefore, this limit affects only the number of active clients that have registered a transaction via the arm_getid call. Once this limit is reached, ttd will return TT_TTD-NOTRUNNING to a clients arm_getid() request. The maxfiles kernel parameter can be increased to raise this limit above the number of active applications that will register transactions with ttd.

EXAMPLES

The standard ttd process execution is

% ttd

To signal an active ttd daemon process to reread the configuration file and synchronize with the midaemon process:

% ttd -hup -mi

To stop an active ttd daemon process:

% ttd -k

EXTENSIONS

An active ttd daemon process stores its pid in the file: ttd.pid located in the same directory as the status.ttd file.

Utilities Provided by the RTMA Component

This section provides information on command-line utilities presented by the RTMA component of the HP Operations agent. You can access real-time system performance data from the monitored system by using these commands.

perfd

NAME

Multi-platform system performance metric server.

SYNOPSIS

`perfd [options]`

DESCRIPTION

`perfd` is a system performance daemon that provides real-time access to system performance metrics, locally or remotely. For all but the global metric class, perfd provides data for the last interval only. For global data, perfd can provide average, minimum, maximum values as well as standard deviation, based on a configurable collection depth.

COMMAND LINE OPTIONS

The options are:

`-c directory`	This option specifies an alternate configuration directory. perfd will change its working directory to the specified location and attempt to load additional configuration options from perfd.ini. If a parm file is not present in the specified directory, perfd will use the system-wide file in the official configuration directory. The default configuration directory is platform dependent.
`-C`	Check the configuration file and exit. If the `-c` option is specified, the configuration in that directory is checked.
`-d depth`	This option specifies the number of intervals for which global metric values are kept. By default, perfd keeps 5-minute historical data for all global (single-instance) metrics.
`-f`	This option is intended for debug purposes only and will cause perfd to run in the foreground instead of backgrounding itself.
`-i interval`	This option specifies the data collection frequency. The default is 10 seconds.
`-l`	If this option is present, perfd will not collect data for processes, application, NFS operations, logical systems, or ARM. Additionally, on HP-UX, HBA and LVM data will not be collected either.
`-p port`	This option specifies an alternate port. The default registered port number for perfd is 5227.
`-r maxrps`	This option specifies the maximum number of requests that a given thread is allowed to send per second. If the limit is exceeded, the server will pause for one second and perfd will log this information in the log file. The default limit is 20.
`-s`	This option causes the server to deny all requests except those coming from the host system through the loopback interface (localhost). Denied connection requests are logged.
`-t maxtpc`	This option specifies the maximum number of threads per client system. The default number is 30. If the number is exceeded, the connection request is denied. Denied connection requests are logged.
`-x maxcps`	This option specifies the maximum number of connections the server will handle per second. The default is 2. If the number of connection requests exceeds this value, the server will pause for 3 seconds before establishing the connection.
`-4`	This option causes perfd to accept only IPv4 connections. Note that, by default, perfd will automatically switch to IPv4-only if it is unable to create an IPv6 socket so this option should only be used if explicitly disabling IPv6 if desired.
`-?`	Print option list.

FILES

All options that can be specified at run-time can also be placed in the configuration file:

On Windows: %ovdatadir%`\perfd.ini`

On UNIX/Linux: `/var/opt/perf/perfd.ini`

Options specified on the command line take precedence over the options specified in the configuration file. Each line in the file specifies a run-time option. Characters after the pound sign (#) are ignored.

cpsh

NAME

Cross-platform performance shell.

SYNOPSIS

cpsh [options]

DESCRIPTION

This program allows a performance expert to display glance metrics from any system where the perfd daemon is running. If no options (with exceptions mentioned below) are present, cpsh will run in the interactive mode, otherwise it will run in the batch mode.

COMMAND LINE OPTIONS

The options are:

`-c class`	This option specifies the metric class (category) being requested. The default class is gbl, also known as GLOBAL in the Performance Collection Component. Short names or Performance Collection Component class names (like DISK, APPLICATION, and so on) are allowed. See the classes command in the EXAMPLES of the interactive mode below.
`-C subclass`	This option must be used with the -c option above and specifies the metric subclass (subcategory) being requested with that class.
`-d`	This option causes the metric class tree and the full metrics dictionary (all available metric classes and the metric names within the classes) to be printed.
`-f filter`	This option is used to specify a filter for a given metric class. A filter has the form "<metric> <operator> <value>". See EXAMPLES below.
`-h header`	This option specifies the header type. The argument can be 0 (no header), 1 (two-line header) or 2 (two-line header with interval spacing). The default is one. See the `-s` and `-t` options also. This option will not turn off the interactive mode.

`-H`	This option causes cpsh to print the metric help text for the specified metric(s) in the specified class and optional subclass, and then exit. If no metric/class/subclass are specified, the default global metric list is used. If a class and optional subclass are specified, the default metric list for that class/subclass is used (see FILES below). Options other than metric class(es) and lists do not affect the output. These options, if present, are validated but ignored.
`-i iterations`	This option specifies the number of iterations to be performed. The default is one iteration. A zero iteration count can be used to request an unlimited number of iterations.
`-I instance`	This option is used together with the `-c` and `-C` options to specify an instance when requesting data for a metric subclass.
`-m metrics`	This option specifies the list of metrics being displayed. If this option is not present, the default list is taken from configuration files .
`-n system`	This specifies which system to get performance data from. The system name may be in the form `system:port` where port is the port perfd is listening on. This is one of the options that will not cause cpsh to start in the batch mode; it can be used to start an interactive session on a remote system.
`-N`	This option is only meaningful when used with one of the summarization options. By default, when requesting summarized data, the interval is aligned on the appropriate minute/second boundary. If this option is specified, the alignment will not be performed.
`-o optfile`	This option enables you to specify an option file. All the options mentioned in this topic can be entered in an option file to facilitate simpler preset batch runs.
`-r`	This option is used to request the raw data. This only applies to a small subset of metrics.
`-s`	This option enables you to specify field separators. By default, fields are horizontally separated by a space, vertically with spaces (if a header type one or two is specified using the -h option above). Special characters must be quoted or escaped (with a backslash). If the argument is the default CSV separator, the output will be CSV (Comma-Separated Values) with the metric names as headers (single-line headers). If CSV is requested, -h 2 is ignored.
`-t`	This option specifies that the output should be printed using a table format combining multi-line header and special separators. It is equivalent to specifying a header type 2 and |+- field separators (vertical separator is |, horizontal separator is - and cross-line separator is +). This option will not turn off the interactive mode.
`-v`	Verbose mode. This option will cause cpsh to print the system type and perfd server information when running in the batch mode.

-W	Normally, when running in the batch mode, cpsh will remove trailing spaces. If this option is present, spaces at the end of the lines will not be removed.
-z summinterval	This option specifies the summarization interval to be used when displaying summarized data. By default, the maximum summarization configured on the perfd server is used. The -v option can be used to obtain information about the server configuration. Note that summarization is only available for the global (single-instance) data.
-Z summtype	This option specifies the summarization type desired. The argument may be one of AVG (average), MIN (minimum), MAX (maximum), STDDEV (standard deviation), or ALL (all values). The argument can be upper- or lower-case (case is ignored).
-?	Print the option list and defaults.

OPTION FILE

The following list of options can be specified in a cpsh option file:

```
class=<valid class string>
subclass=<valid subclass string>
filter=<valid filter string>
header=<valid numerical header value>
iterations=<valid numerical iterations value>
instance=<valid numerical instance value>
metrics=<valid metrics string>
system=<valid system string>
noalign=<true/false>
optfile=<valid optfile string>
raw=<true/false>
nostrip=<true/false>
separator=<valid separator string>
fancy=<true/false>
ipv4=<true/false>
verbose=<true/false>
summinterval=<valid numerical summinterval value>
summtype=<valid summtype string>
```

This list will be printed if an invalid option is specified in the option file and if the -v flag is present.

FILES

Default metrics can be specified for each metric class. If a metric list is not specified at the command line (or in the option file), cpsh will attempt to find a default using the following search order:

<InstallDir>/perfd/system/*<system name>*/*<metric class>*

<InstallDir>/perfd/os/*<os type>*/*<metric class>*

<InstallDir>/perfd/default/*<metric class>*

<DataDir>/perfd/os/<os type>/*<metric class>*

<DataDir>//perfd/default/*<metric class>*

On HP-UX, Linux, Solaris, and AIX, *<DataDir>* is /var/opt/perf.

On Windows, the default *<DataDir>* is *%ovdatadir%*.

<system name> is the name of the system, *<os type>* is the operating system type as returned by glance (available only on UNIX/Linux) in the metric GBL_OSNAME.

METRIC LISTS

The perfd server enables clients to combine metrics when appropriate: global (gbl) and table (tbl) metrics may be added to any metric list, and parent class metrics may be added to subclass metrics. To add metrics from a different class, the appropriate metric prefix must be used. For example, the following command will print the global node and operating system name metrics, all application-level utilizations for application index number 3, then process IDs and all the process-level 'name' metrics for each process that is currently alive in application number 3:

cpsh -c app -C proc -I 3 -m 'gbl*name app*util proc_proc_id proc*name'

The following command will print the time, the application name for application index number 3, then the process IDs, names, and cpu utilizations for all processes currently alive in application number 3:

cpsh -n itill -c app -C proc -I 3 -m "gbl_stattime app_name proc_proc_id proc_proc_name proc_cpu_total_util"

The metric lists for base classes and subclasses are different. For instance, the list of process metrics is different for a full process list (such as in the 'proc' command) and a process list for an application (such as in the 'app 1 proc' command). The same configuration file is used in both cases, and unavailable metrics are silently ignored. For example, specifying the list proc*name proc_proc_id app*util in *<InstallDir>*/perfd/default/proc will cause the 'proc' command to display all process names and the process ID, but the 'app 1 proc' command will additionally display the application's utilization metrics. When running in the interactive mode, modifying a class metric list does not affect the subclass, and modifying a subclass metric list does not affect the class metric list.

RAW METRICS

By default, all metrics are displayed in the same format as in glance: time stamps show date/time, rates can show Kb, Mb, and so on. If the -r option is specified, some metrics, like the ones just mentioned, will be displayed in the raw format. Interpreting the raw data requires knowledge about the metric types and is not recommended for general use.

EXAMPLES

The following are examples of the batch mode invocations.

Print all global metrics whose names match the pattern:

cpsh -c gbl -m "gbl_nodename *cpu*util" -n test123

```
Node          CPU    Idle Intrpt   Nice  Phys  System          User   Wait
 Name       Entl %  CPU %  CPU %  CPU %  CPU %  CPU %  CPU %  CPU %  CPU %
 test123       4.8   95.4    0.2    0.0    4.8    2.2    4.8    2.6    0.0
```

Print open files for init process on the system test123:

```
cpsh -n test123 -c proc -C pfile -I 1
```

```
      Open   File     File
        PID Mode   Type     Name
          1 rd/wr  fifo     /dev/initctl
```

Print default global metrics on current system in the table format:

```
cpsh -c gbl -t
```

```
+----------------+--------+--------+------+------+------+------+------+
|Node            |    Time| CSwitch|      |  Load|  Peak|Pg Req|      |
|Name            |   Stamp|    Rate| CPU %|   Avg|Disk %|  Rate|Swap %|
+----------------+--------+--------+------+------+------+------+------+
|system1           |09:18:15|   260.7|   5.3|   0.0|   0.9|  30.1|  40.0|
+----------------+--------+--------+------+------+------+------+------+
```

INTERACTIVE MODE

If no arguments are present (except for the exceptions noted above), cpsh will run in the interactive mode. In that mode, the user can connect to any system where perfd is running and request metrics from that system.

Typing a question mark and a carriage return will print a list of the available commands as well as a few examples.

Note that all interactive commands may be piped through any UNIX command (for instance, more, grep, and so on).

The main commands are:

system [name]

Without arguments, this command displays information about the current system. If an argument is provided, it is the name of a system that cpsh will attempt to connect to or switch to if a connection has already been established. Note that just entering the system name will switch to an already active system as well.

Note that any given system can be connected to in multiple ways, using its simple name, its fully qualified name, its IP address, the loopback, and so on. cpsh will attempt to create a single connection for a unique system:port combination. If an alternate name is provided, that name will be shown in parenthesis. For example, if system1 was first used, then localhost, the systems command shows:

```
system1 (localhost) - 1-way 9000/800 64-bit HP-UX B.11.11, up 29 days 07:04
```

systems

This command takes no arguments. It will print a list of the systems cpsh is currently connected to with an asterisk to the left of the system currently active.

server

This command is similar to the system command above, but it prints configuration information for the perfd server instead of system information.

servers

Also similar to systems, but prints information about the perfd servers.

class [metric class] [metric subclass]

Without argument, this command prints the current metric class. If valid class/subclass names are provided as argument, cpsh will switch to that class/subclass.

classes

This command takes no arguments. It will display the full list of classes and subclasses available from the perfd server currently active.

<metric class> [instance ID] [<metric subclass>]

Typing any base metric class (for instance, gbl or bydsk or proc) will display the values for the list of chosen (or default) metrics. If the metric class is multi-instance (like bydsk or proc), data for all the instances will be displayed.

If the class is multi-instance, you can use an optional instance ID and, in this case, only data for the specified instance is printed. For instance, **`proc 1`** will print data for process 1 only. It will also select instance 1 as the default instance.

If a metric subclass is specified, the data for that subclass will be printed. For instance, **`proc 1 pfile`** will print the open files for process 1. If an instance has been established as the default, the instance ID can be skipped in further requests. So, after typing **`proc 1`**, the **`proc byregion`** command will print the memory regions for process 1.

init, add, del[ete]

These commands initialize, add to, or delete from the metric list for the selected class and the selected system. The arguments are a list of metric names or matching patterns. The modified metric list is preserved until you exit the cpsh prompt.

list [all]

This command prints a list of the metrics currently selected. If the optional `all` argument is provided, all the available metrics for the current class are printed.

push

Once the system, metric class, and metric list are all established, this command will instruct cpsh to print new metric values as soon as they become available in perfd. The push process can be interrupted using the configured interrupt key (typically control-C).

help

If no arguments are present, this command is equivalent to the **`?`** command and prints a summary of the commands and some examples. If you specify an argument (which is a metric name in the current metric class or in the global class), cpsh will print the help text associated with the metric. perfd servers can only provide help text for the metrics that are enabled on the server.

mdict

Print the entire metric dictionary. Similar to the batched **`cpsh -d`** command.

filter [<filter value> or "disable"]

Without argument, this command will print the current filter for the current metric class on the current system. If the argument is the keyword `disable`, the current filter is disabled; otherwise, the arguments should be a valid filter expression.

summ [seconds]

If the current metric class supports summarization, this command will print the summarized data for the established metric set. If an additional argument is present, it is a number of seconds to be used instead of the default summarization configured in the perfd server. If a non-numeric `seconds` argument is provided, it is silently ignored.

wait

This command will cause cpsh to pause until new data is available from the currently selected perfd server.

exit

You can exit the cpsh prompt by typing this command.

padv

NAME

perfd adviser

SYNOPSIS

padv [options]

DESCRIPTION

This program allows a performance expert to run glance adviser scripts on remote systems where the perfd daemon is running.

COMMAND LINE OPTIONS

The options are:

`-h`	This option tells padv to run the adviser script on the historical data before using the real time data (by default, the perfd server keeps 5 minutes of historical data for global metrics). Messages resulting from exceeded threshold or alerts in the historical data will be terminated with "minus N seconds" where N is the number of seconds before the current time stamp. If the script issues print statements, padv will print a delimiter after the print statements resulting from historical data, to indicate that it is switching to real time data. For all other statements, historical data can be easily identified by the "minus" terminators. Adviser scripts referencing non-global data are not allowed and will result in an error.
`-i iterations`	This option limits the number of iterations to be performed. By default, that value is 0 (zero), which means a continuous run. This count specifies the number of iterations on the real time data (iterations based on historical data, if -h is present, are not included).
`-n system`	This specifies which system to run the adviser script on. The system name may be in the form `system:port` where port is the port perfd is listening on.
`-s script`	This option specifies which script to run.
`-S`	If this option is present, each symptom defined in the script is displayed along with its value (probability) at each pass.
`-?`	Print option list and defaults.

FILES

If a script is not specified, padv will use the appropriate default script if one is present. The default script name is adv and the search order is:

<Install_Dir>/perfd/system/*<system name>*/adv

<Install_Dir>/perfd/os/*<os type>*/adv

<Install_Dir>/perfd/default/adv

<Data_Dir>/perfd/os/*<os type>*/adv

<Data_Dir>/perfd/default/adv

<system name> is the name of the system, *<os type>* is the OS type as returned by `glance` in the metric GBL_OSNAME (currently one of the following: AIX, HP-UX, Linux, NT, or SunOS).

EXAMPLES

The **`padv -S -i1`** command will return the current values for the default 4 bottlenecks on the current system:

```
Symptom 0: CPU bottleneck     = 0.00%
Symptom 1: Disk bottleneck    = 0.60%
Symptom 2: Memory bottleneck  = 0.00%
Symptom 3: Network bottleneck = 0.00%
```

The **`padv -S -i 1 -n system1`** command will return the current values for the same default 4 bottlenecks on the system system1:

```
Symptom 0: CPU bottleneck     = 0.00%
Symptom 1: Disk bottleneck    = 0.00%
Symptom 2: Memory bottleneck  = 0.00%
Symptom 3: Network bottleneck = 0.00%
```

CAVEATS

Running complex scripts involving nested loops (for instance summing up all the virtual sizes of all memory regions in all processes) may provide inconsistent data if the requests cannot be completed in a single perfd interval and may even result in script termination. For such scripts, using glance is recommended. Scripts with one level of loop (or no loops) are guaranteed to return data for the same interval.

Process-level system calls are not supported in remote adviser scripts. For such scripts, glance should also be used.

mpadv

NAME

perfd multi-system adviser

SYNOPSIS

mpadv [options]

DESCRIPTION

This program allows a performance expert to run glance adviser scripts on multiple systems where the perfd daemon is running at the same time. Note that, in order to limit the potentially high amount of output, mpadv ignores all print statements from the adviser syntax file. It is recommended that remote scripts that rely on print statements be run on a single system using padv.

COMMAND LINE OPTIONS

The options are:

`-c`	If this option is present, time stamps will reflect the time on the system where mpadv is running, not the remote systems.
`-h`	This option tells mpadv to run the adviser script on the historical data before using the real time data (by default, the perfd server keeps 5 minutes of historical data for global metrics). Messages resulting from exceeded threshold or alerts in the historical data will be terminated with "minus N seconds" where N is the number of seconds before the current time stamp. Adviser scripts referencing non-global data are not allowed and will result in an error.
`-i iterations`	This option limits the number of iterations to be performed. By default that value is 0 (zero), meaning a continuous run. This count specifies the number of iterations on the real time data (iterations based on historical data, if -h is present, are not included).
`-l list`	This specifies a file name containing a list of systems to run the adviser script(s) on. The system names may be in the form system:port where port is the port perfd is listening on, one system per line with optional comments after a pound sign.
`-r`	This option tells mpadv to keep trying if a system is not available when the program is invoked or if a system goes down as the program is running.
`-s script`	This option specifies which script to run. See the FILES section in the padv topic for default script and locations. If the list of system include multiple platforms (operating systems) and if a script is specified, the script must contain metrics that are common to all platforms.
`-t threshold`	This option specifies a threshold value above which bottleneck probabilities will be printed even if the values do not result in an alert. The default threshold is 70, meaning that any bottleneck probability equal or above 70% will be printed. If a threshold above 100 is provided, only alerts contained in the adviser script(s) will be printed.
`-v`	This option causes mpadv to produce more verbose output, such as connection information.
`-?`	Print option list.

FILES

See the padv topic for default file name and locations. If a script is not provided (with the -s option) and if the list of systems contains multiple platforms, the appropriate OS default file applies to each system.

EXAMPLE

The **`mpadv -l ~/stage/config/systems -v -r -t 101`** command will print all alerts on all the systems in the 'systems' list, connection and dropped connection messages.

```
Starting to monitor system1, Fri Feb  8 10:21:48 2008
Starting to monitor system2, Fri Feb  8 10:21:48 2008
Starting to monitor system3, Fri Feb  8 10:21:48 2008
Starting to monitor system4, Fri Feb  8 10:21:48 2008
Starting to monitor system6, Fri Feb  8 10:21:48 2008
Starting to monitor system7, Fri Feb  8 10:21:48 2008
Starting to monitor test-system2, Fri Feb  8 10:21:49 2008
Starting to monitor test-system3, Fri Feb  8 10:21:49 2008
Starting to monitor test-system4, Fri Feb  8 10:21:49 2008
Starting to monitor test-system1, Fri Feb  8 10:21:49 2008
Starting to monitor test-system5, Fri Feb  8 10:21:49 2008
Starting to monitor test-system6, Fri Feb  8 10:21:49 2008
Starting to monitor test-system7, Fri Feb  8 10:21:49 2008
Starting to monitor test124, Fri Feb  8 10:21:50 2008
Connection to system7 lost: Connection reset by peer, Fri Feb  8 10:43:18 2008
Starting to monitor system7, Fri Feb  8 10:43:29 2008
Connection to system1 lost: Connection reset by peer, Fri Feb  8 11:49:52 2008
Connection to system4 lost: Connection reset by peer, Fri Feb  8 11:50:06 2008
Starting to monitor system1, Fri Feb  8 11:50:53 2008
Starting to monitor system4, Fri Feb  8 11:50:57 2008
test124  : YELLOW  Disk Bottleneck probability=    78.60%, 02/09/08 01:15:55
test124  : END     End of Disk Bottleneck Alert, 02/09/08 01:17:55
test124  : YELLOW  Disk Bottleneck probability=    71.40%, 02/09/08 01:30:30
test124  : END     End of Disk Bottleneck Alert, 02/09/08 01:30:50
system7  : RED     Disk Bottleneck probability=    95.20%, 02/11/08 01:02:05
system7  : END     End of Disk Bottleneck Alert, 02/11/08 01:03:15
system7  : YELLOW  Memory Bottleneck probability=    85.00%, 02/12/08 05:39:25
system7  : END     End of Memory Bottleneck Alert, 02/12/08 05:39:45
system3  : YELLOW  CPU Bottleneck probability=    82.00%, 02/12/08 14:08:35
system3  : END     End of CPU Bottleneck Alert, 02/12/08 14:10:45
```

4 Configuration Variables of the HP Operations Agent

You can modify the default behavior of the HP Operations agent by configuring different variables available with the components of the HP Operations agent. You must perform the configuration steps to modify the default settings of these variable only with the `ovconfchg` command.

To modify the default setting of a variable, follow these steps:

1. Log on to the HP Operations agent node with necessary privileges.
2. Run the following command:

   `ovconfchg -ns` <*namespace*> **`-set`** <*variable*> <*value*>

   In this instance:

   <*namespace*>: The namespace information of the variable (see Table 4 on page 108).

   <*variable*>: The name of the variable.

   <*value*>: The value that you want to assign to the variable.
3. If necessary, restart the agent processes for the changes to take effect. See Table 4 on page 108 to identify the variables that do not need a manual restart of agent processes after modification. To restart the agent processes, run the following commands:

   a. **`ovc -kill`**

   b. **`ovc -start`**

To switch back to the default setting of a variable, follow these steps:

1. Log on to the HP Operations agent node with necessary privileges.
2. Run the following command:

   `ovconfchg -ns` <*namespace*> **`-clear`** <*variable*>

   In this instance:

   <*namespace*>: The namespace information of the variable.

   <*variable*>: The name of the variable.

   Alternatively, to bring all the variables back to their default settings, run the following command:

   `ovconfchg -ns` <*namespace*> **`-clear -all`**

Configuration Variables for the Operations Monitoring Component

The HP Operations agent presents a vast set of variables that you can configure using the ovconfchg command to change the default behavior.

Table 4 on page 108 presents a list of configuration variables provided by the Operations Monitoring Component of the HP Operations agent.

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
FAILED_COLLECTION_RETRIES S *Introduced with the HP Operations agent 7.26*	eaagt	Specifies whether startup of a failed collection should be restarted for an Advanced Monitor Policy. Possible values: integers. *Special values* **0:** No retries **-1**: The failure is ignored by the agent and the policy does not go into the failed state	YES	3	Integer
FAILED_POLICY_TIME_TO_REACTIVATE *Introduced with the HP Operations agent 7.26*	eaagt	The wait time before the policy restarts its operation after a failure can be specified with this variable. The time is specified in hours. Use 0, if no policy restart is required.	YES	24	Integer
IPADDR_CHECK_INTERVAL *Introduced with the HP Operations agent 8.00*	eaagt	Time (in seconds) between two consecutive checks for IP address change (for DHCP).	YES	1800 (30 minutes)	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
LIMIT_NBR_PARALLEL_ACTIONS *Introduced with the HP Operations agent 8.51*	eaagt	If the value of LIMIT_NBR_PARALLEL_ACTIONS is TRUE, the action agent will consider the value specified for MAX_NBR_PARALLEL_ACTIONS. If the number of running actions reaches the value specified for MAX_NBR_PARALLEL_ACTIONS, the action agent will wait for any of those running actions to complete before scheduling the remaining actions. Note that you have to set a suitable value for MAX_NBR_PARALLEL_ACTIONS depending on the number and interval of policies and execution time of scripts if you are using this variable.	YES	FALSE	Integer
MAX_NBR_PARALLEL_ACTIONS *Introduced with the HP Operations agent 1.00*	eaagt	The maximum number of automatic actions that can run on the node simultaneously. The Windows operating system restricts the number simultaneous actions (any type of actions: automatic or manual) on a system. Therefore, on a Windows agent node, the number of simultaneous automatic actions is either the number of available free slots for actions, or MAX_NBR_PARALLEL_ACTIONS, whichever is smaller.	YES	25	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
MAX_RETRIES_UNTIL_POLICY_FAILED *Introduced with the HP Operations agent 7.26*	eaagt	This number specifies how often a policy should try to collect data. This is important for usage with external program sources. If the external program has a problem, the policy should not stop operating immediately. Therefore, a policy can stop and retry the external data collection process when the it fails to collect data from the external source. With this variable, you can specify the number of retries to be attempted by a policy. Use 1 if no retries should be made.	YES	3	Integer
OPC_ACTAGT_LOGGING *Introduced with the HP Operations agent1.00*	eaagt	Enable the action agent to log data on the agent node. By default, output is written into the file opcaalog in the agent log directory.	YES	FALSE	Boolean
OPCMONA_ERRORMSG_ONLY_OPCERROR	eaagt	If set to TRUE, error messages ranging from OpC30-3400 to OpC30-3409 are not sent to the HPOM console but logged in the agent trace.	YES	FALSE	Boolean
OPC_ACTION_CHARSET *Introduced with the HP Operations agent 8.51*	eaagt	To let the opcacta automatically get the system charset, set this variable to SYSTEM. To set to a specific charset, say acp1252 , set this variable to acp1252.	YES	_	String
OPC_AGENT_ID	eaagt	Managed node identifier, which is known on agent and server; used to identify messages and action requests. Introduced to support DHCP environments.	YES	""	String

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_AGTKILL_ TIMEOUT	eaagt	*UNIX only.* Time for a complete agent shutdown (opcagt -kill); after the specified time, agent processes are killed with -9.	YES	120	Integer
OPC_AGTSTOP_ TIMEOUT	eaagt	Time for an interceptor process to shut down.	YES	4	Integer , second ,
OPC_AGT_PROCESS_ PRIORITY *Introduced with the HP Operations agent 7.20*	eaagt	*Windows only.* Change the priority of the agent processes. This now defaults to "Below Normal" (Windows 2000). Possible settings: ABOVE NORMAL BELOW IDLE	YES	BELOW	String
OPC_AGTMSI_ ALLOW_AA *Introduced with the HP Operations agent 2.00*	eaagt	Allows an MSI instance to create or modify messages with automatic actions.	YES	FALSE	Boolean
OPC_AGTMSI_ALLOW_ OA *Introduced with the HP Operations agent 2.00*	eaagt	Allows an MSI instance to create or modify messages with operator-initiated actions.	YES	FALSE	Boolean
OPC_AGTMSI_ENABLE *Introduced with the HP Operations agent 2.00*	eaagt	Allows an MSI instance to access HPOM data streams.	YES	FALSE	Boolean
OPC_AVOID_SEGMENT _NAMES *Introduced with the HP Operations agent 5.33*	eaagt	If the variable is set, segment names (any name ending with .Segment<*number*>) will not be resolved, but the name service cache returns NULL.	YES	FALSE	Boolean
OPC_BUFLIMIT_ ENABLE *Introduced with the HP Operations agent 6.00*	eaagt	Enable/disable checking of the buffer file limit on the agent node. Checks are applied on the msgagtdf file.	YES	FALSE	Boolean

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_COMPRESSION_DISABLE *Introduced with the HP Operations agent 4.00*	eaagt	Enable/disable HPOM data compression for network transfer.	YES	FALSE	Boolean
OPC_COND_FIELD_ICASE *Introduced with the HP Operations agent 6.10*	eaagt	Comparison for the object, application and message group fields are not case sensitive when this variable is set to TRUE.	YES	TRUE	Boolean
OPC_CONNECT_SRV_ONLY_IF_DATA *Introduced with the HP Operations agent 5.00*	eaagt	If this variable is set to TRUE, the managed node connects to its management server(s) after agent startup only if data is present.	YES	FLASE	Boolean
OPC_DISABLE_MSGGRP_OVERRIDE *Introduced with the HP Operations agent 8.14*	eaagt	If this variable is set to TRUE, the category/ message group in the message will not get replaced with that of the SNMP/CMIP events received.	YES	FALSE	Boolean
OPC_DISABLE_NODE_OVERRIDE *Introduced with the HP Operations agent 5.33*	eaagt	If TRUE, the node override variable of a trap is not evaluated. This may avoid name service accesses for unresolvable names.	YES	FALSE	Boolean
OPC_DISABLE_SEVERITY_OVERRIDE *Introduced with the HP Operations agent 8.14*	eaagt	If this variable is set to TRUE, the severity level in the message will not be replaced with that of the SNMP/CMIP events received.	YES	FALSE	Boolean
OPC_DYNAMIC_LOGFILE_ONCE *Introduced with the HP Operations agent 7.00*	eaagt	If this is set to TRUE, dynamic evaluation of logpaths in the logfile encapsulator is done only after startup or policy distribution.	YES	FALSE	Boolean

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_EVENT_RETRY_OLDEST *Introduced with the HP Operations agent 7.20*	eaagt	Set the number of retries attempted by the logfile encapsulator to read an event when EventLog fills up very fast. When EventLog fills up very fast, the recent Events can be overwritten before the opcle can process them. To keep up with the fill rate of EventLog, opcle must skip the overwritten Events and start at the current end of EventLog. Opcle does retry this for the configured number of times.	YES	30	integer
OPC_EC_STREAM_POLICY *Introduced with the HP Operations agent 5.00*	eaagt	ECS event handling policy. The ECS engine creates output if ALL or if ANY circuits create output for an event. Values: OUTPUT,UNSPECIFIED, DISCARD	YES	OUTPUT	string
OPC_ENFORCE_PASSWORD_CHECK *Introduced with the HP Operations agent 6.06*	eaagt	Enforces a switch user for each user running a command on the managed node through the action agent. This covers tools and scheduled task policies.	YES	FALSE	Boolean
OPC_EVENT_RUNTIME_ONLY *Introduced with the HP Operations agent 7.25*	eaagt	Set this to TRUE to configure the Windows Event Log monitoring to read only events that come in during the agent runtime. All events that come in during the system restart or when the agent is stopped are ignored.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_EVENT_RETRY_OLDEST *Introduced with the HP Operations agent 7.28*	eaagt	Set the number of attempts by opcle to read an event if the EventLog fills up very fast. If the EventLog fills up very fast, it is possible that the recent events are overwritten before opcle can process them. To keep up with the fill rate of the EventLog, opcle must skip the overwritten events and starts at the current end of the EventLog.	YES	30	Integer
OPC_INCLUDE_VIRTUAL_IP_ADDRS_FOR_LOCAL_NODE_MAPPING *Introduced with the HP Operations agent 8.16*	eaagt	Before 8.16, messages from a node in an HA cluster were marked as local (not-proxied), and were added to the physical node in the DB. As a result, the messages were ignored for the service tree of the virtual host, which used to result in incorrect status calculation. Since 8.16, the OPC_SET_PROXY_FLAG_FOR_IP_ADDRESSES setting is no longer needed. The OPC_INCLUDE_VIRTUAL_IP_ADDRS_FOR_LOCAL_NODE_MAPPING switches back to the old behavior if set to TRUE.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_INT_MSG_FLT_AWS *Introduced with the HP Operations agent 7.26*	eaagt	With this variable set to TRUE, HPOM internal messages will always be filtered by the message interceptor even when the process does not run. Internal messages will arrive, in this case, at the next startup of the message interceptor. If you set this variable to TRUE, no internal messages will be sent unfiltered to the management server anymore. Note: OPC_INT_MSG_FLT must be set to TRUE in order to use OPC_INT_MSG_FLT_AWS !	NO	FALSE	Boolean
OPC_INT_MSG_FLT *Introduced with the HP Operations agent 7.26*	eaagt	If set to TRUE, HPOM-internal messages (message-group OpC or OpenView; mainly HPOM-internal status- and error-messages) are passed to the agent and can be filtered through message interceptor templates. Note: This is also possible on the HPOM management server. However, the local HPOM management server's agent must run and it must use the same character set as the server.	YES	FALSE	bool
OPC_KEEP_PERL_PATH *Introduced with the HP Operations agent 8.12*	eaagt	If set to TRUE, the monitor agent removes the HP Software perl directory from the PATH environment variable before running a program.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_KILL_AUTO_ACTION *Introduced with the HP Operations agent 7.21*	eaagt	When set to TRUE, the kill operation for automatic actions is enabled. Every time an action should be started the action agent checks if its action queue contains already 10 actions. If so, it checks if the action running for the longest time runs longer than the predefined time out. If this is the case it kills this action. This works only when the OPC_NO_SHELL_TO_EXEC_ACTION variable is set to TRUE on UNIX platforms.	YES	TRUE	Boolean
OPC_KILL_AUTO_ACTION_TIMEOUT *Introduced with the HP Operations agent 7.21*	eaagt	This variable defines the timeout value of an action in the action queue. If an action, present in the action queue, fails to start within the time period specified with this variable, the action agent assumes that the action is a hanging and proceeds to kill it. (See also OPC_KILL_AUTO_ACTION)	YES	590	Integer
EXT_INTERVAL	eaagt	The frequency of checking the monitor queue if external monitors are configured.	NO	15 (sec)	Integer
ECA_ANNO_NODE *Introduced with the HP Operations agent 7.00*	eaagt	To add ECS annotate nodes on HPOM managed nodes.	YES	""	String
ECA_INSTANCE *Introduced with the HP Operations agent 7.00*	eaagt	Instance number of the ECS subagent on the managed node (opceca).	YES	12	Integer

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ECA_PERLFILE *Introduced with the HP Operations agent 8.53*	eaagt	Name of Perl script that should be loaded into the ECS engine for the managed node and should reside in the AGENT_CONFIG_DIR directory.	YES	Empty	String
ECENG_CLOCK_INTERVAL *Introduced with the HP Operations agent 3.00*	eaagt	The global setting for the ECS engine clocking time.	YES	1000	Integer (millisecconds)
ECENG_LOG_LEVEL *Introduced with the HP Operations agent 4.00*	eaagt	The ECS tracing level setting. Possible settings: NONE, SEVERE, ERROR, WARN, and FULL.	YES	FULL	String
ECENG_TRACEFILE *Introduced with the HP Operations agent 3.00*	eaagt	Name of the ECS trace file.	YES	ecengtr	String
ECENG_TRACE_LEVEL *Introduced with the HP Operations agent 3.00*	eaagt	ECS tracing level setting. Possible values: NONE, FULL.	YES	NONE	String
ECENG_TRACE_RSIZE *Introduced with the HP Operations agent 3.00*	eaagt	The 'relative' file size for the ECS trace file configuration.	YES	100	Integer
ECEVI_LOG_RSIZE *Introduced with the HP Operations agent 3.00*	eaagt	'Relative' file size of ECS event-input log configuration.	YES	100	Integer
ECEVO_LOG_RSIZE *Introduced with the HP Operations agent 3.00*	eaagt	'Relative' file size of ECS event-output log configuration.	YES	100	string
EC_MAX_AS_WAIT *Introduced with the HP Operations agent 7.00*	eaagt	The total wait time of the ECS engine to connect to the annotate server: a) at startup, b) at the time of re-configuration.	YES	10 (sec)	Integer
EC_MAX_ESOK_TRY *Introduced with the HP Operations agent 7.00*	eaagt	Max. number of retries done by the ECS engine to connect to the EC annotate server socket stack.	YES	20	Integer

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_KILL_SCHEDULE *Introduced with the HP Operations agent 7.22*	`eaagt`	On Windows, processes started for scheduled actions from the action agent sometimes hang. The older versions of the agent used to wait until a process finishes. The default behavior was changed to do the following: If a new request to start a process for a scheduled action arrives at the action agent, the agent first checks that the process is started from the same policy. If yes, then the agent checks that the process has already run longer than a configured time-out (default: 55 seconds). If yes, the old process is killed, and then the new process is started. If the new process is not started, a message is sent to the management server. The OPC_KILL_SCHEDULE variable can be used to disable the new functionality. If this variable is set to FALSE the action agent behaves like it did before.	YES	TRUE	Boolean
OPC_KILL_SCHEDULE_TIMEOUT *Introduced with the HP Operations agent 7.22*	`eaagt`	Defines the time-out that is used to check that the old process is killed or the new one is not started. (See also OPC_KILL_SCHEDULE).	YES	55	Integer

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_IP_ADDRESS *Introduced with the HP Operations agent 7.22*	eaagt	The value of this variable specifies the IP addresses of the managed node. If the agent is installed on a node in a Network Address Translation (NAT) environment, make sure the value of this variable on the node is identical with the IP address used in the HPOM console while adding the node.	YES		String
OPC_LE_CHECK_ INODE	eaagt	Sets the interval for the logfile encapsulator to register a file name change.	YES	20	Integer
OPC_LE_CLOSE_MSG_ DLL	eaagt	If this is set to TRUE, the NT msg DLL for EventLog messages gets closed after every read. This might cause a higher CPU usage of the logfile encapsulator process, but it does not lock DLLs.	YES	FALSE	Boolean
OPC_LE_IGN_TEMP_ UNAVAIL *Introduced with the HP Operations agent 7.25*	eaagt	If set to TRUE, temporarily unavailable log files (for example, NFS mounted) will not be treated as recreated or truncated log files. Once the log file is available, it is read from the last read position.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_LE_KEEP_DSCONNECTION	eaagt	On the Windows node, opcle locks the 1025 and 1026 ports toward the primary domain controller (PDC) emulator. If set to TRUE, the connection is kept open as long as opcle runs. If set to FALSE, the connection is closed after each request to unlock the port. Note : The logfile encapsulator will consider the file le_state as obsolete if it is older than 24 hours.	YES	FALSE	Boolean
OPC_LE_MAX_LINES_READ *Introduced with the HP Operations agent 7.22*	eaagt	Specifies the number of lines read by the logfile encapsulator at every interval. If you do not want to set a limit, set this variable to 0.	YES	50	Integer
OPC_LE_SAVE_STATE *Introduced with the HP Operations agent 7.32*	eaagt	With this flag set to TRUE, opcle can save the information about the monitored files into the file /var/opt/OV/tmp/OpC/le_state. If the logfile encaposulator resumes its operation after an interruption and if the le_state file exists, the logfile encapsulator will start operating after gathering the information preserved in this file. Therefore, you can monitor the messages that were written into the monitored log files even when the logfile encapsulator was down.	NO	FALSE	Boolean
OPC_LE_STATE_FILE	eaagt	Configure this property to set a non-default location of the le_state file.	NO	var/opt/OV/tmp/OpC/	String

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_MGMTSV_ CHARSET	eaagt	Character set of management server	YES	iso88591	string
OPC_MONA_MSG_PER_ STATE *Introduced with the HP Operations agent 7.23*	eaagt	A message is sent each time a state/threshold is reached (rather than just the first time). This applies only to Advanced Monitoring in opcmona.	YES	TRUE	Boolean
OPC_NAMESRV_ BUFFER_SIZE *Introduced with the HP Operations agent 7.28*	eaagt	Provides the initial value for the buffer size to retrieve the host data from an IP address. An insufficient buffer size is incremented repeatedly by the specified value until the host data is retrieved successfully.	YES	512	Integer
OPC_NEW_LOGFILE_ FROM_BEGIN *Introduced with the HP Operations agent 7.22*	eaagt	If set to TRUE, the logfile encapsulator reads the newly discovered log files from the beginning of the files. A script is used to dynamically list the log files to be monitored and the logfile policies that have already run once. If set to FALSE (default), the newly discovered log files will be read from the last file position.	YES	FALSE	Boolean
OPC_NODE_CHARSET	eaagt	Character set of managed node.	YES	roman8	string
OPC_NO_MSG_FLT_FO R_BUFFER_MSG	eaagt	When the internal message filtering is enabled, all internal messages are passed on to the message interceptor by default. If this flag is set to TRUE, messages regarding the message agent's buffering (OpC40-1410 and OpC40-1411) are excluded. They will be forwarded to the HPOM console directly.	NO	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_MSI_CREATE_NEW_MSGID	eaagt	Controls the behavior of MSI-users in terms of message-id Creation You can use the following values: • 1: Create a new message-id each time a message attribute is changed or the copy operator is called. • 2: Set no new message-id when attributes are changed and if this message is sent to only one instance. To set no new message-id, the message must be 'diverted' and not 'copied' so that the HPOM management server (an MSI API user group also retains a copy of it). If you apply the API copy-operator to a message, the copied message is no longer 'diverted.' Subsequently, attribute changes result in a new message id. Note that the message->orig_msgid attribute, which is accessible for API-users, contains the original message-id if it was changed (otherwise it contains a null-id). • 3: As 2, except that the copy-operator immediately creates a new message-id for the copy. • 4: Message-ids are not modified at all. API-user is responsible for it.	NO	2	Integer, 1 <= n <= 4

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_OPCMON_OVERRIDE_THRESHOLD	eaagt	If set to TRUE, the threshold/reset override feature for monitor policies in the monitor agent is enabled.	YES	FALSE	Integer
OPC_OPCMSG_API_CHECK_MSGI_RUNNING	eaagt	If set to TRUE, opcmsg() and opcagtmsg_send() will not write messages to queue if the message interceptor does not run and the APIs will return an error.	YES	FALSE	Boolean
OPC_OPCMSG_CLI_CHECK_MSGI_RUNNING	eaagt	If set to FALSE, the opcmsg CLI will write messages to queue even if the message interceptor is not running.	YES	TRUE	Boolean
OPC_PRIMARY_MGR	eaagt	Defines the primary manager for messages. For example: [eaagt] OPC_MGMT_SERVER=servername.hp.com	YES	_	string
OPC_Q_SYNC_WRITES	eaagt	If set to TRUE, updates to the queue will be synchronized to the disk at critical places. This drastically reduces the queue performance, but also reduces the chance of queue file corruption.	YES	FALSE	Boolean
OPC_RESOLVE_IP	eaagt	Specifies the IP address that should be used for a managed node to contact its primary manager	YES	_	string , a.b.c.d (e.g. 15.136. 120.1)
OPC_RESOLVE_TRAP_LOCALHOST	eaagt	If set to TRUE, the event interceptor will replace the source address 127.0.0.1 in a trap with the agent IP address.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_RESTART_COUNT	eaagt	Defines how many times an aborted subagent process should be restarted. (See OPC_RESTART_SUBAGENT)	YES	5	integer
OPC_RPC_SHORT_TIMEOUT	eaagt	Specifies the communication time-out for local RPCs (called and executed on the same machine). LOCAL_ONLY sets the time-out to 5 seconds, ALWAYS sets the time-out to 5 seconds for local and remote, NEVER sets the time-out to 30 seconds.	YES	LOCAL_ONLY	string , LOCAL_ONLY, ALWAYS,NEVER
OPC_SEND_MAX_ONE_MSG_PER_TRAP	eaagt	Can disable processing of additional trap templates if there was already a message generated from one template. This speeds up the processing, but may prevent some templates from accepting the trap. As a result, fewer messages might reach the server and the behavior of duplicate message suppression for 'Suppress Messages Matching Condition' may change.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_SET_PROXY_FLAG_FOR_IP_ADDRESSES	`eaagt`	Specifies a list of local IP addresses that will not be replaced by the node name as known on the server while sending messages. This is useful for agents with the HPOM for Windows management server. When messages are sent with the sender address of the list, the `is_proxied` flag of the message will be set as if the message was sent for a different node - even if that address is local (currently). You must not include the OPC_IP_ADDRESS in this list.	NO	""	string (comma separated list of IP addresses, e.g.
OPC_TEMPL_STATUS	`eaagt`	If set to TRUE, the logfile encapsulator and monitor agent will maintain the `le.status` and `monitor.status` files in the agent's `tmp` directory containing the current (internal) status of their sources.	YES	FALSE	Boolean
OPC_TRACE_CHILD	`eaagt`	If set to TURE, tracing will be enabled between fork and exec for the child process (which can lead to mutex deadlock on multiprocessor machines)	YES	FALSE	Boolean
OPC_TRAP_CHARSET	`eaagt`	Charset of incoming snmp traps is converted to OPC_NODE_CHARSET. If this flag is not set, no conversion takes place. NOTE: Only available with the Windows agent.	YES	_	string

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_TRUNCATE_ORIG_TEXT	eaagt	Truncates the original message text to a maximum length. -1: no truncation done (Default) 0: no original message sent at all <n> : truncation done after the <n>-th character.	NO	-1	integer
OPC_USE_PROTECTTOLS	eaagt	The HP ProtectTools offer enhanced security features on Windows. One of them is password tagging/ salting/preprocessing. If those tools are active, the agent needs to preprocess passwords to be able to perform a switch user operation. Setting this variable to TRUE enables the agent to preprocess passwords.	YES	FALSE	Boolean
OPC_USE_UDP_AS_TRAP_SOURCE	eaagt	To match the post master daemon's -u option, this variable can be set to TRUE. As a result, agent_addr (source of the trap) will be overwritten by the UDP packet header's source IP address (works only when pmd is running with -u).	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_WBEMI_BUF_SIZE	`eaagt`	The WMI/WBEM interceptor uses an internal queue to buffer incoming objects until they can be checked. The default size of this queue is 10000 objects, but this size can be changed by using the variable OPC_WBEMI_BUF_SIZE. If too many objects arrive at the buffer queue, older objects are deleted from the queue and not handled. There are some possibilities to avoid such an buffer overflow: • Check why so many objects arrived. • Check that it is possible to limit the number of objects the WMI/WBEM interceptor has to handle by using a `global WQL filter` for the policy. • Check that it is possible to use rules to suppress objects.	YES	_	_
OPC_WIN_UAC_ ENABLE *Introduced with the HP Operations agent 8.60*	`eaagt`	If the value of OPC_WIN_UAC_ENABLE is TRUE, agent will elevate the user and assign the administrative token with complete access if the user is part of administrative group. This will enable the user to launch processes with administrative privileges like launching a process on a node using HPOM tools. This flag should be set to TRUE only if UAC is enabled on the system.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_WIN_DONT_USE_PATH_NWDRIVE *Introduced with the HP Operations agent 7.20*	eaagt	By setting this variable to TRUE, you can force the Windows agent to scan the currently used environment PATH to remove all mapped network paths referenced in the PATH to avoid log-on errors on the systems providing the network share. This also removes relative PATH entries like ""."" or "".."" ."	YES	FALSE	Boolean
POLICY_MIN_INTERVALS_WAIT	eaagt	The minimum number of wait intervals before stopping a policy when the policy does not receive any data. This is important while using the agent with program sources where the execution time of an external program depends on the current system performance. If the system is very busy, the execution might take longer than the configured interval. To configure how long the monitor agent should wait for the external programs to complete, this variable can be used. Use -1 if POLICY_MIN_TIME_WAIT should be used. Use 0 if the policy should not wait.	YES	-1	Integer
SNMP_COMMUNITY	eaagt	Standard SNMP community to be used in monitoring MIB objects with the Measurement Threshold policies.	NO	public	string

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SNMP_COMMUNITY_LIST	eaagt	List of SNMP communities to be used in monitoring MIB objects with the Measurement Threshold policies. By using this variable, specify a list of community strings separated by commas. The HP Operations agent attempts to collect the MIB objects by using the first community string specified in the string. If the operation fails, the HP Operations agent performs the same operation with the second community string in the list, and so on. If all the community strings fail to aid the HP Operations agent to gather data, the community string specified with the variable SNMP_COMMUNITY takes effect.	NO		string
SNMP_REFUSE_FORWD	eaagt	Whether the trap interceptor accepts events forwarded from another pmd on a remote NNM management station.	YES	FALSE	Boolean
SNMP_REMOTE_PMD	eaagt	Host where the trap interceptor tries to connect to pmd on a remote NNM management station.	YES	"" (local host)	string , any host name
SNMP_REMOTE_PORT	eaagt	Port number to which opcmona establishes a connection while monitoring SNMP variables.	YES	161	integer, values: > 0

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SNMP_SESSION_MODE	eaagt	The trap interceptor opens a session based on this setting. *On Windows* • NETSNMP: The opctrapi process uses the Net-SNMP APIs to bind to the port 162 • WIN_SNMP: The opctrapi process subscribes to the Microsoft Trap Service • NNM_LIBS: The opctrapi process uses the OVSNMP API and binds to the port 162 • TRY_BOTH: The opctrapi process first tries to subscribe to the PMD daemon of Network Node Manager (NNM); if the attempt fails, it uses the OVSNMP API and binds to the port 162 *On UNIX/Linux* • NETSNMP: The opctrapi process uses the Net-SNMP APIs to bind to the port 162 • NO_TRAPD/ NNM_LIBS: The opctrapi process uses the OVSNMP API and binds to the port 162 • NNM_PMD: The opctrapi process subscribes to the PMD daemon of Network Node Manager (NNM) • TRY_BOTH: The opctrapi process first tries to subscribe to the PMD daemon of NNM; if the attempt fails, it uses the OVSNMP API and binds to the port 162	NO	NETSNMP	string

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SNMP_SESSION_TRY_FOREVER	eaagt	If this variable is set to TRUE, the opctrapi process will try to connect to pmd every 300 second until the connection is established.	YES	FALSE	Boolean
SNMP_TRAP_PORT	eaagt	opctrapi listens to the port number specified with this variable when NNM 7.x (pmd) is not in use.	NO	162	integer, values: > 0
SNMP_TRAP_FORWARD_ENABLE	eaagt	By setting this property to TRUE, you can enable the event interceptor to forward the SNMP traps available on the node to remote systems or management stations.	YES	FALSE	Boolean
SNMP_TRAP_FORWARD_DEST_LIST	eaagt	With this property, you can set the address of the remote management station where you want to forward all the available SNMP traps. You can specify multiple system names separated by commas.	YES	“”	String
SNMP_TRAP_FORWARD_COMMUNITY	eaagt	With this property, you can specify the necessary community string for the target system where you want to forward the SNMP traps. If you want to configure multiple target systems, specify the appropriate community strings separated by commas.	YES	“”	String

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SNMP_TRAP_ FORWARD_FILTER	eaagt	With this property, you can filter the available SNMP traps by their OIDs and forward only select traps to the remote system. The filtering mechanism takes effect with the wildcard (*) character. For example, if you set this property to 1.2.3.*.*.*, the event interceptor will forward all the SNMP traps with the OIDs that begin with 1.2.3. By default, all the available traps are forwarded when you enable the event interceptor to forward traps.	YES	""	String
OPC_COND_FIELD_ ICASE	eaagt	Comparison mechanisms for the object, application, and message group fields are not case sensitive when this variable is set to TRUE.	YES	TRUE	Boolean
OPC_LE_MAX_LINES_R EAD	eaagt (>=OVO8)	Determines how many lines the logfile encapsulator reads per specified time period. A value of 0 means that there is no limit.		50	Integer
OPC_LIMIT_MSG_WAIT _FOR_AA	eaagt	Wait time for a message to receive an action response.	YES	3600	Integer
OPC_MAX_ERROR_ HANDLING	eaagt	If set to TRUE, errors are always sent as HPOM messages to the management server. **Note:** Only the opcmon command uses this feature.	YES	FALSE	Boolean
OPC_MAX_IP_PER_ INTERFACE	eaagt	Buffer size for storing IP addresses per interface.	YES	128	Integer

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_MON_MSGOBJ_COND_FIRST	eaagt	<$MSG_OBJECT> of a monitor policy is replaced with the object that was set in the policy condition window. <$MSG_OBJECT> in a threshold monitor policy is replaced according to the following priority: 1. If OPC_MON_MSGOBJ_COND_FIRST is TRUE 2. Object from opcmon 3. Template Default 4. Empty String	YES	FALSE	Boolean
OPC_MON_SAVE_STATE	eaagt	If you set this variable to TRUE, the monitor agent starts preserving the values of monitored objects and session variables.	YES	FALSE	Boolean
OPC_MSGA_PING_SERVER_INTERVAL	eaagt	Interval in which unreachable HPOM servers are pinged by the communication component of the agent node.	YES	60	Integer
OPC_NAMESRV_BUFFER_SIZE	eaagt	Provides initial value for the buffer size to get the host data from IP address; if buffer size is insufficient, then the size is incremented repeatedly by the provided value until host data is retrieved successfully.	YES	512	Integer

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_NAMESRV_LOCAL_NAME	eaagt	Fully-qualified long hostname of a node. Will be used if OPC_IP_ADDRESS is unresolvable. (Usually used in NAT environments) The same can be achieved by adding an entry to the hosts file: <NAT IP> <name> on UX: /etc/hosts; on Windows: %SYSTEMROOT%/system32/drivers/etc/hosts	YES		String
OPC_NO_PORTS_DELAY	eaagt	When all ports of the port range specified for an RPC client (for example: ovoareqsdr, opcragt, opcmsga) are occupied, the next communication attempt is made after the time delay specified with this variable.	YES	1	Integer, in seconds
OPC_NODE_TYPE	eaagt	Node type of managed node; Values: CONTROLLED,MONITORED,MESSAGES_ALLOWED,UNMANAGED	YES	CONTROLLED	string
OPC_NO_SHELL_TO_EXEC_ACTION	eaagt	By default, HPOM runs automatic and operator-initiated actions on UNIX in a shell. With this flag set, all actions are performed directly with the fork() or exec() system calls. Alternatively, you can prefix any action- or application call with the string `_NO_SHELL:`. This allows execution of single tasks without using a shell.	YES	FALSE	Boolean

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Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_OPCLE_POLICY_EXCLUDE_INFO	eaagt	Comma-separated list of policy-name prefixes. All policies, with names that begin with such prefixes, are not processed by the normal opcle. Example: "abc,bcd" -> policies "abcd500" and "bcde600" are not processed. This variable is only useful in conjunction with the "multiple parallel opcle" feature.	YES		string; comma-separated list, no blanks in between.
OPC_PERL_INCLUDE_INSTR_DIR *Introduced with the HP Operations agent 8.60*	eaagt	If set to TRUE, Perl modules available in the instrumentation directory will be made available for embedded Perl policies processed by the monitor agent.	YES	TRUE	boolean
OPC_PERL_PROG_BIN	eaagt	Path to the Perl executable installed by HPOM.	YES	platform dependent directory under CSM_OVBIN_DIR()	String
OPC_STORE_TIME_FOR_MGR_INFO	eaagt	Maximum time a message operation info block is held in the message agent.	YES	24	Integer, hour
OPC_TEMPL_STATUS	eaagt	Log file encapsulator and monitor agent maintain the files le.status and monitor.status in the tmp directory of the managed node. These files contain the current (internal) status of their sources if this variable is set to TRUE.	YES	FALSE	bool

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_TRAP_CHARSET	eaagt	Character set of incoming snmp traps. If possible, this character set is converted to OPC_NODE_CHARSET. If this flag is not set, the character is not converted. NOTE: Only available on Windows nodes.	YES		string
POLICY_MIN_TIME_WAIT	eaagt	Minimum time to wait before stopping a policy if it does not receive any data. The time is specified in minutes. Important for program sources where the execution time of an external program depends on the current system performance. If the system is very busy, it is possible that the execution takes longer than the configured interval. Reconfiguring the time interval that the monitor agent waits for external programs to finish can be helpful.	YES	2	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
POLICY_MIN_ INTERVALS_WAIT	eaagt	Minimum number of wait intervals before stopping a policy if it does not receive any data. Important for program sources where the execution time of an external program depends on the current system performance. If the system is very busy, it is possible that the execution takes longer than the configured interval.Reconfiguringthe time interval that the monitor agent waits for the external programs to finish can be helpful. Use -1 if POLICY_MIN_TIME_WAIT should be used. Use 0 if the policy should not wait.	YES	-1	Integer
SNMP_CONFIG	eaagt	Name of trap interceptor configuration file	YES	trapi	string
SNMP_EVENT_FLOW	eaagt	Specify the events that will be forwarded from NNM pmd to opctrapi. Values: CORR - NNM's correlated events. RAW - As if no event correlation took place ALL - Correlated events and raw events.	YES	CORR	string
SNMP_EVENT_LIST	eaagt	Specify a filter which is given to NNM pmd. The filter defines which events are forwarded to opctrapi.	YES	.*	string

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SNMP_SESSION_TRY_FOREVER	eaagt	If this variable is set to TRUE, trap interceptor process will try to connect to NNM pmd every 300 second until connection is established.	YES	FALSE	bool
SNMP_STREAM_NAME	eaagt	Specify which event streams are forwarded from NNM pmd to opctrapi. See	YES	(not set; registers to default-stream)	string
MSGSRC_WITH_POLICY_VERSION *Introduces with the HP Operations agent 8.60*	eaagt	If the value of MSGSRC_WITH_POLICY_VERSION is TRUE, then policy version will be appended to MSGSRC variable. If the value of MSGSRC_WITH_POLICY_VERSION is FALSE, then policy version will not be appended to MSGSRC variable.	YES	TRUE	bool
OPC_LE_CMD_WAIT_TIME *Introduced with the HP Operations agent 8.60*	eaagt	Maximum wait time for opcle to wait for the child processes to complete the task and get the status back. By default, opcle waits for 15 seconds. If the child doesn't return by this time, opcle kills the child process. This variable is applicable only in the UNIX/Linux environments.	YES	15	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_LE_CALC_HASH *Introduced with the HP Operations agent 8.60*	eaagt	If the value of OPC_LE_CALC_HASH is TRUE, opcle detects the file is appended or overwritten by calculating hash of last line and verifying some random check points.If opcle detects the file is overwritten, then it reads the file from beginning.	YES	FALSE	bool
OPC_IGNORE_DEFAULT_MSG_CORRELATION *Introduced with the HP Operations agent 8.60*	eaagt	If the value of OPC_IGNORE_DEFAULT_MSG_CORRELATION is TRUE, when the agent converts the loaded configuration to the internal data structure, default message correlation values are not merged to the condition correlation values. If the value of OPC_IGNORE_DEFAULT_MSG_CORRELATION is FALSE, when the agent converts the loaded configuration to the internal data structure, default message correlation values are merged to the condition correlation values.	YES	FALSE	bool

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_ADVMON_POLICY_VERSION_CHECK	eaagt	This variable helps the HP Operations agent verify and compare the versions of monitor policies that use system performance metrics. These policies are brought to effect on the node only when the HP Operation agent determines that the versions of redeployed policies are higher than the existing versions. If you continue with the default value of this variable in an HPOM for UNIX 8.x environment, you must restart the agent every time you redeploy these policies.	YES	TRUE	boolean
OPC_INSTALLED_VERSION	eaagt	The version of the installed agent.	YES	Not set	string , values: A.VV.FF
OPC_MSG_FLT_EXCLUDE_SVC	eaagt	If set to TRUE, the Service Name field is not carried forward from the original HPOM-internal messages. The Service Name field for the message in the message browser is then left empty.	YES	FALSE	boolean
OPC_MAX_MSG_LEN	eaagt	Limit for the size of a message. Some sanity checks are made on incoming messages. OPC_MAX_MSG_LEN defines the accepted limit in bytes. If a message arrives that is bigger than the specified limit, the message is discarded or truncated.	YES	1048576 (1 MB)	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_RESOLVE_MAC_ADDRESS	eaagt	If set to TRUE, MAC addresses (0x<6 hex bytes>) are resolved. Otherwise, the name service cache returns NULL. This can be set on both the agent and server.	YES	FALSE	bool
OPC_Q_MAX_SIZE	eaagt	Newly created queue files have this size limit imposed. If the queue is within the limit, a queue element may be appended, resulting in a queue that is possibly slightly beyond the limit. If the queue file is larger than this limit, writing to the queue is not possible, and the same actions as if the disk was full are performed (shift queue and/or sleep up to OPC_Q_MAX_RETRY_TIME seconds, then fail). Has no effect on the reader of a queue.	YES	0 (unlimited)	Integer, kbytes
OPC_MGMT_SERVER	eaagt	Fully qualified hostname of the HPOM management server.	YES	unknown (set at installation time)	string
OPC_MSI_CONF	eaagt	Name of config-file for serial MSIs (message stream interface)	YES	msiconf	string
OPC_NAMESRV_RETRIES	eaagt	Number of retries of gethostbyname and gethostbyaddr calls.	YES	3	Integer

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OPC_SUPPRESS_ERROR_LIST	eaagt	A comma-separated list of <msgset>-<msgnbr> values to suppress error messages (OpC<msgset>-<msgnbr>) output to all error message output targets. Set the setting on a by process basis as some binaries may output the same error message on error condition and suppressing the message would alter the normal output. Do not insert any whitespaces. Example: to suppress error messages OpC50-10 and OpC50-202 for opcmsgm process: ovconfchg -ovrg server -ns opc.opcmsgm \ -set OPC_SUPPRESS_ERROR_LIST \ "50-10,50-202"	YES		string
OPC_NAMESRV_CACHE_SIZE	eaagt	HPOM uses a name-resolution cache in all processes to improve performance. If the cache is full, least frequently used entries are replaced by new ones. For large environments, it is recommended to enlarge the cache size. (See also OPC_NAMESRV_*).	YES	100	Integer
OPC_NAMESRV_DISABLE_CACHE	eaagt	Enable and disable HPOM name-service cache.	YES	FALSE	bool

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ECEVO_LOG_RSIZE	eaagt	'Relative' file size of ECS event-output log configuration.	YES	100	String
OPC_NAMESRV_MAX_TIME	eaagt	Allowed resolution time for one node in milliseconds. You get a WARNING in the trace and opcerror file if the configured limit is exceeded: Name resolution for node 'hostname.at.domain'took xxx milliseconds (exceeded the configured threshold of yyy) (OpC20-2212) Note, that this is only for reporting, the nameservice call will NOT be terminated if the max time is reached. You will need to use name service client settings for that (e.g. via the retry and retrans keywords in /etc/resolv.conf for DNS). The details depend on OS and used name service.	YES	200	Integer (millise conds)

Table 4 List of Configuration Variables for the Operations Monitoring Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ALERT_LTU_EXPIRY_ DAYS	`eaagt`	With the help of this variable, you can configure the HP Operations agent to send alert messages to the HPOM message browser to notify you about the expiry details of the evaluation agent LTUs that are in effect on the node. While setting this variable, you must specify three comma separated integer values in the descending order. For example: **`ovconfchg -ns eaagt -set ALERT_LTU_EXPIRY_ DAYS`** *DAY1,DAY2,DAY3* The alert messages will arrive in the HPOM console on DAY1, DAY2, and DAY3 days before the evaluation LTU expires.	YES	7,3,1	String

Configuration Variables for the Communication Component

The communication component of the HP Operations agent enables you to establish communication with the agent node in a highly secure environment. You can use a group of configuration variable to modify the default behavior of the communication component.

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CHROOT_ PATH	bbc.cb	*This variable is in effect only on UNIX/Linux nodes.* The chroot path for the ovbbccb process. This variable provides a way to protect the Communication Broker port. If this parameter is set, the ovbbccb process performs the chroot operation to this path. As a result, the file system above the <*OvDataDir*> directory becomes invisible to the ovbbccb process. Therefore, all files in the /etc directory become inaccessible. For example: /etc/hosts, /etc/resolv.conf, and /etc/nsswitch.conf. Communication Broker parameters such as SERVER_BIND_ADDR must therefore use IP addresses instead of hostnames when the CHROOT_PATH parameter is active.	YES	<OvDataDir>	String
SSL_ REQUIRED	bbc.cb	If this parameter is set to true, the communication broker component will require SSL authentication for all administration connections to the communication broker on other machines. Otherwise, non-SSL administration connections will be allowed to the communication broker itself. See also the ENFORCE_CLIENT_PROTOCOL and ENFORCE_SERVER_SSL parameters in the [bbc.http] namespace.	YES	TRUE	Boolean

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SERVER_ PORT	bbc.cb	Use this variable to use a non-default port for the communication broker. By default, the communication broker uses the port 383. If the port 383 is not free on the agent node, set this variable to a port that is available for use.	YES	383	Integer
LOCAL_ CONTROL_ ONLY	bbc.cb	If this parameter is set to true, the communication broker will only allow local connections to run administrative commands such as start, stop, kill, or reinit.	YES	TRUE	Boolean
LOCAL_ INFO_ ONLY	bbc.cb	If this parameter is true, the communication broker will only allow local connections to retrieve details like status information, registered services, or started resource groups.	YES	FALSE	Boolean
RESTRICT_ REG	bbc.cb	This variable helps you restrict programs from registering with the communication broker. If the variable is set to true, only the programs with the write access to the following folder can register with the communication broker: *On Windows* *%ovdatadir%*`temp\bbc` *On UNIX/Linux* `/var/opt/OV/tmp/bbc`	YES	FALSE	Boolean
REQUEST_ TIMEOUT	bbc.cb	Specifies the number of seconds the ovbbccb server (system where the communication broker is running) waits for data on an incoming request. If the data is not received within the specified number of seconds, the request is requeued.	YES	1	Integer

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
LOCAL_ CONTROL_ ONLY	bbc.cb	If this parameter is true, the CB will only allow local connections to execute administrative commands such as start and stop, reinit or kill.	Y	true	bool
ENABLE_ REVERSE_ ADMIN_ CHANNELS	bbc.cb	Whether RAC should be enabled or not on server CB. True means enable RAC false means Disable RAC.	Y	None	bool
RC_CHANNE LS_CFG_ FILES	bbc.cb.	This is alternative to config variable RC_CHANNELS where details like Reverse Channel Proxy Name and port are stored in File instead of XPL config settings.	N	NULL	string
RC_MAX_ WORKER_ THREADS	bbc.cb	The maximum number of threads that can be used by the Communication Broker component while establishing a Reverse Admin Channel.	N	1	Integer
RC_MIN_ WORKER_ THREADS	bbc.cb.	The minimum number of threads that will always remain active on the node while the Communication Broker component establishes a Reverse Admin Channel.	N	0	Integer
RETRY_RC_ FAILED_ CONNECTIO N	bbc.cb.	Use this option to enable the Communication Broker component to retry a failed attempt to connect to a reverse channel proxy (RCP).	N	FALSE	bool
GENERATE_ OVEVENT_ FOR_ FAILED_RC_ NODES	bbc.cb	This option enables you to send messages to the HPOM message browser when the status of an RCP node is FAILED.	N	FALSE	bool
CB_PORTS_C FG_ FILE	bbc.cb. ports.	This is an alternative to the variable CB_PORTS where the entries information is stored in File instead of configuration settings.	N	NULL	string

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
AUTO_ CONNECTIO N_ CLOSE_ INTERVAL *Introduced with the HP Operations agent 8.53*	`bbc.http, bbc.http.ext.*.`	This defines the interval after which an application with inactive connections from connection pool will be closed. This setting will affect applications using the HTTPS communication APIs.	N	-1(inactive)	Integer
LOCAL_ INFO_ ONLY	`bbc.cb , bbc.http`	Boolean parameter that specifies whether the CB may answer requests for informations from remote hosts. If this parameter is true, no informations will be sent (only a ping gets answered). Affected are requests for the status of the server, registered services, running resource groups.	Y	false	bool

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
PORTS	`bbc.cb.ports`	This variable defines the list of ports for all communication brokers on the network that may be contacted by applications on this host. This configuration parameter must be the same on all managed nodes and the associated management server. If multiple systems in the HPOM-managed environment use non-default `bbc.cb` ports, you can set this variable to the list of ports, separated by commas, in the following fashion: <*system1*>:<*port1*>, <*system2*>:<*port 2*>,... For example, if the nodes `system1.domain.com` and `system2.domain.com` use the ports 400 and 401, respectively, for the communication broker, set the `PORTS` variable on all agent nodes and the management server to **`system1.domain.com:400, system2.domain.com:401`**. You can use IP addresses instead of the fully-qualified domain names. You can also use the wildcard character (*) when you want to specify a group of systems. For example, **`*.domain.com:400`** indicates all the systems with the domain "`domain.com`" use 400 as the `bbc.cb` port.	YES	""	String

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SERVER_ PORT	bbc.http	By default, this port is set to 0. If set to 0, the operating system will assign the first available port number. This is the port where the application will wait for requests. NOTE: It is recommended to explicitly set this parameter in the bbc.http.ext.<*appName*> namespace.	YES	0	Integer
SERVER_ BIND_ADDR	bbc.http	Bind address for the server port.	YES	localhost	String
MAX_CONNE CTIONS	bbc.http	Specifies the maximum number of connections a node can accept. The default value on UNIX is the maximum number of file descriptors per process minus 30%. The default on Windows is 2000. If it is set to 0, the default values are used.	YES	0	Integer
CLIENT_ PORT	bbc.http	The bind port for the client requests. This may also be a range of ports, for example, 10000-10020. The bind port belongs to the node from where the request originates. Default is the port '0'. The operating system will assign the first available port. NOTE: Windows systems do not immediately release ports for reuse. This parameter should be set to a large range on Windows systems.	YES	0	String
CLIENT_ BIND_ADDR	bbc.http	Bind address for the client requests.	YES	INADDR_ANY	String
LOG_SERVER _ACCESS	bbc.http	If set to true, the HP Operations agent logs every access to the server providing information about sender's IP, requested HTTP address, requested HTTP method, and the response status.	YES	FALSE	Boolean

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ENFORCE_ CLIENT_ PROTOCOL	bbc.http	This parameter enables you to set the communication protocols for client requests. This parameter may be set to one of the following values: HTTP: All client requests will use the HTTP protocol. HTTPS: All client requests will use the HTTPS protocol. This parameter is ignored if set to any other value. The HTTP client will then use the protocol specified by the application when creating HTTP requests. The parameter is case insensitive. NOTE: Use caution when setting this parameter as it will disable security features if set to 'HTTP'.	YES	HTTPS	Boolean

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ENFORCE_ SERVER_SSL	bbc.http	This parameter controls the connections allowed at the HTTP server. This parameter may be set to one of the following values: NONE: Both SSL and non-SSL connections will be accepted by the HTTP server. REMOTE: All remote connections to the HTTP server must use SSL. Remote connections that do not use SSL will be automatically rejected. Local connections may use SSL or non-SSL. ALL: All connections to the HTTP server must use SSL. Connections that do not use SSL will be rejected automatically. This parameter is ignored if set to any other value. The HTTP server will then use the authentication specified by the application that created the HTTP server. This parameter is not case sensitive. NOTE: Use caution when setting this parameter as it will disable security features if set to 'NONE' or 'REMOTE'.	YES	ALL	String
LOCAL_INFO _ ONLY	bbc.http	If this parameter is set to true, the HTTP server will only allow local connections to get information like the current server status.	YES	FALSE	Boolean

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
PROXY	`bbc.http`	Defines which proxy and port to use for a specified hostname. Format: proxy:port +(a)-(b);proxy2:port2+(a)-(b); ... a: Comma- or semicolon-divided list of hostnames for which this proxy can be used. b: Comma- or semicolon-divided list of hostnames for which the proxy cannot be used. The HP Operations agent chooses the first matching proxy. Example: PROXY=web-proxy:8088-(*.hp.com)+(*.domain.hp.com;*) The proxy 'web-proxy' will be used with the port 8088 for every server (*) except hosts that match *.hp.com (for example, www.hp.com). If the hostname matches *.domain.hp.com (for example, machine1.domain.hp.com), the proxy server will be used. It is also possible to use IP addresses instead of hostnames. Therefore, 15.*.*.* or 15:*:*:*:*:*:*:* will be valid.	YES	“”	String

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
PROXY_ CFG_ FILE	bbc.http	Instead of specifying large expressions for the PROXY variable, you can use an external configuration file to specify all the proxy server-related details and set the PROXY_CFG_FILE variable to the location of the configuration file. You must create the external configuration file in the XML format. For more information on the structure of this XML file, see the *PROXY_CFG_FILE Parameter Syntax* section in the *HP Operations Agent (11.02) Deployment Guide*. This variable takes precedence over the PROXY variable.	Yes		String
DOMAIN	bbc.http	Default DNS domain to use if no domain is specified for a target host. This domain name will be appended to hostnames without a DNS domain name if a match for the hostname alone cannot be found. This can be done for PROXY lookups and lookups in the [cb.ports] table. For example, if the hostname `machine` is specified and if the DOMAIN is `domain.hp.com`, the [cb.ports] entries will first be searched for the match of `machine`. If there is no match found for the hostname `machine`, a search will be made for `machine.domain.hp.com`, `*.domain.hp.com`,`*.hp.com`, `*.com`, and `*` in the given order.	YES	“”	String
FX_MAX_ RETRIES	bbc.fx	The maximum number of retries to be attempted for the successful transfer of the object.	YES	3	Integer
FX_BASE_ DIRECTORY	bbc.fx	The base directory for which files may be uploaded or downloaded.	YES	<OvDataDir>	String

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
FX_TEMP_ DIRECTORY	bbc.fx	The temporary directory where uploaded files will be placed while the upload process is in progress. When the upload process is complete, the file will be moved to the FX_UPLOAD_DIRECTORY directory.	YES	<OvDataDir>/ tmp/bbc/fx	String
FX_UPLOAD_ DIRECTORY	bbc.fx	The target directory for uploaded files. The upload target directory may be overridden with this configuration parameter.	YES	FX_BASE_DIR ECTORY	String
BUFFER_ PATH	bbc.snf	Specifies the SNF path where the buffered requests are stored.	YES	<OvDataDir>/ datafiles/bbc/ snf/<appName>	String
CLEANUP_ INTERVAL	bbc.snf	This variable specifies the interval (in seconds) at which the HP Operations agent cleans up the unnecessary buffer files on the system.	YES	100	Integer
MAX_FILE_ BUFFER_ SIZE	bbc.snf	Specifies the maximum amount of disk space available for the buffer to consume on the hard disk. By default, this parameter is set to 0, which means no disk space limit is set to the buffer.	YES	0	Integer
DELIVERY_ INTERVAL	bbc.snf	Defines the interval in which the component tries to deliver the requests that are stored in the buffer Default: 1000 msecs	YES	1000	Integer
MAX_DELIVE RY_THREADS	bbc.snf	Defines the maximum number of threads that are started simultaneously to deliver the messages.	YES	5	Integer
KEEP_CONN ECTIONS_ OPEN	bbc.snf	If set to "true," the Snf Client does not close the connections after a queue has been processed. The connections will stay alive until you call CloseUnusedConnections() on the Snf Client.	YES	false	bool

Table 5 Configuration Variables for the Communication Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
MAX_INPUT_BUFFER_SIZE	bbc.snf	Defines the size of the internal message buffer of an SnfOutputRequest object. Up to this size, the component tries to deliver a message directly. Default: 100 KB	YES	100	Integer
DELIVERY_QUEUE_METHOD	bbc.snf	Defines the order in which the requests are delivered; two possibilities are offered: FIFO: Messages are delivered in the temporal order. PRIORITY: Messages with the high priority are sent first.	YES	FIFO.	string
SNF_CONTENT_TYPE	bbc.snf	Use this parameter to specify a content type other than application/octetstream for ALL the requests sent by the Snf Client.	YES	none	Integer
RC_HEALTH_CHECK_INTERVAL	bbc.rcp	After a Reverse Administration Channel (RAC) is established, the HP Operations agent continuously performs checks to monitor the health of the RAC. This variable defines the interval (in seconds) at which the agent performs this check. If you set this variable to -1, no health check is performed.	YES	60	Integer

Configuration Variables for the Security Component

The HP Operations agent includes a certificate client and keystore to enable secure communication between the HPOM management server and nodes. You can use a group of configuration variable to modify the default behavior of the security components.

Table 6 Configuration Variables for the Security Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CERTIFICATE_SERVER	`sec.cm.client`	The certificate server configured for the node. A certificate server is the system that receives certificate requests from the node and issues certificates to nodes. It could be the management server that manages the node, or a dedicated server that can grant certificates to the node to facilitate secure communication between the node and the management server.	YES	When you remotely install the agent on the node from the HPOM console, the variable is automatically set to the FQDN of the management server. When you install the agent manually on a node and do not configure a management server with it, the variable is not set to any value.	String
CERTIFICATE_DEPLOYMENT_TYPE	`sec.cm.client`	The type of certificate deployment to the node. Possible values are: **Automatic:** When set to `automatic`, the node automatically requests the certificate server to issue a new certificate when required. **Manual:** When set to `manual`, the certificate must be installed on the node manually.	YES	If you install the agent in an HPOM-managed environment, the variable is set to `automatic` or `manual` based on the settings on the HPOM management server that was configured with the node. If you do not configure the agent with an HPOM management server, the variable is not set to any value.	String
MANAGER	`sec.core.auth`	Name (FQDN) of the management server configured for the node.	YES		String

Table 6 Configuration Variables for the Security Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ENCRYPTION_LEVEL	`sec.core.ssl`	Data encryption level for the data exchanged between the node and the management server. Possible values are: • Full • Best • Export • None	YES	Full	String
CLIENT_VERIFICATION_MODE	`sec.core.ssl`	The SSL client verification mode. Possible values are: Anonymous RequireCertificate If set to `Anonymous`, the node will receive messages that are not encrypted from different sources.	YES	RequireCertificate	String
SESSION_CACHING	`sec.core.ssl`	When a node starts communicating with a management server or another node in the secure mode, a session is created. This variable helps you retain a session for some time. Possible values are: • Enabled • Disabled Setting the variable to `Enabled` helps you retain a session for some time. Setting the variable to `Disabled` will cause the session to break after one cycle of data communication.	YES	Enabled	String

Table 6 Configuration Variables for the Security Components

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SESSION_TIME_OUT	sec.core.ssl	Valid only if you set SESSION_CACHING to enabled. This variable helps you set the duration (in seconds) for which a session cache can survive.	YES		Integer
SESSION_CACHE_SIZE	sec.core.ssl	Valid only if you set SESSION_CACHING to enabled. When you enable SESSION_CACHING, multiple sessions are stored in the cache until they exceed the SESSION_TIME_OUT value. This variable helps you set the upper limit of the number of sessions to be stored in the cache.	YES		Integer
RANDOM_FILE NAME	sec.core.ssl	Setting to configure a file that will be used to feed the random number generator (absolute path name).	YES		String
RANDOM_FILE_BYTES_TO_READ	sec.core.ssl	Setting to configure how many bytes are seeded from the file specified with RANDOM_FILENAME.	YES	1024	Integer

Configuration for the Embedded Performance Component

You can use the variables listed in Table 7 to configure the default behavior of the embedded performance component (also known as coda).

The embedded performance component does not collect system performance metrics anymore, but data analysis tools (such as HP Performance Manager and HP Reporter) use interfaces provided by the embedded performance component to access the data available in the data store of the HP Operations agent.

Table 7 Variables for the Embedded Performance Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
DATAMATRIX_VERSION	coda	When the variable is set to 1, the agent breaks the data into chunks of five records, and then sends the data to the client program (such as HP Performance Manager). Breaking the data into chunks enhances the performance of data transfer process.	Yes	0	Integer
DATAMATRIX_ROWCOUNT	coda	If the DATAMATRIX_VERSION variable is already set to 1, you can control the number of records that the agent can transfer to the client with every chunk with the help of this variable.	Yes	5	Integer

Configuration Variables for the rtmd Process

You can use the variables listed in Table 8 to configure the default behavior of the `rtmd` process provided by the Performance Collection Component.

Table 8 Variables for the rtmd Process

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
SERVER_PORT	`bbc.http.ext.rtmd`	The `rtmd` process uses this port to receive incoming messages.	No	0 (When set to 0, the operating system of the node automatically assigns the first available port number)	Integer
SERVER_BIND_ADDR	`bbc.http.ext.rtmd`	The BIND address for the server port.	No	INADDR_ANY	String

Table 8 Variables for the rtmd Process

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CLIENT_PORT	`bbc.http.ext.rtmd`	The BIND port used by the `rtmd` process to send data to RTV. This must be set to a range of ports, for example: 10000-10020. This parameter is ignored for requests to localhost. Since Windows systems do not immediately release ports for reuse, this parameter must be set to a large range on Windows systems.	No		String
CLIENT_BIND_ADDR	`bbc.http.ext.rtmd`	The BIND address for the client port.	No	INADDR_ANY	String
PROXY	`bbc.http.ext.rtmd`	Use this variable if you want to use a proxy server for `rtmd`-related communication. Set this variable to a value in the following format: `proxy:port;proxy2:port2;...`	No		String

Configuration Variables for the Cross-Platform Component

You can use the variables listed in Table 9 to configure the default behavior of the cross-platform component.

Table 9 Variables for the Cross-Platform Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
filecount	`xpl.log.OvLogFileHandler`	The maximum number of log files to be created for any given logging entity.	Y	10	Integer
filesize	`xpl.log.OvLogFileHandler`	The file size limit for any log file in millions of bytes. Whenever a log entry is written causing the log file to exceed this value, a new log file is created	Y	1	Integer
IsBindAny	`xpl.trc.server`	This attribute represents the trace server bind address (INADDR_ANY or localhost). If the value is NO, the bind address is localhost. If the value is YES, the bind address is INADDR_ANY	Y	Y	String
server	`xpl.dir.shares`	Defines base directories for resource groups	Y		string
SocketPoll	`xpl.net`	Flag indicating whether to use poll() or select() system call	Y	false	bool

Configuration Variables for the Configuration Component

You can use the variables listed in Table 10 to configure the default behavior of the configuration component.

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CLUSTER_TYPE	conf.cluster	The runtime cluster solution determined during the ovconfd startup is set with this variable	Y	Depending on the type of cluster solution installed, one of the following strings will be set: • VERITAS Cluster Server (VCS) • Sun Cluster (SC) • MC/ServiceGuard (MC/SG) • AIX Cluster (HACMP) • Red Hat Advanced Server (RHAS) • Microsoft Cluster Server (MSCS)	string
MONITOR_MODE	conf.cluster	Cluster monitoring will be enabled based on the value set with this configuration variable	Y	TRUE	bool
POLLING_INTERVAL	conf.cluster	The status of the cluster will be checked for every polling interval specified with this variable.	Y	10000	Integer

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CLUSTER_ LOCAL_ NODENAME	conf. cluster	For an agent node that belongs to a high availability cluster, the node hostname in the agent configuration can be different from the node hostname in the cluster configuration. In that case, set this variable to the hostname of the node that is used in the cluster configuration.	Y	NULL	string
MAX_ RETRIES_ FOR_ CLUSTERUP	conf. cluster	The value set in this variable is the number of times cluster is being checked for availability when ovconfd is being started either during boot-time or regular agent start with a 35 seconds gap between each try.	Y	1	Integer
MERGED_ POLICY_ LIST_ FILENAME	conf.core	The file name used for writing a list of all installed policies (ovpolicy -dump)	Y	ov_policies.t xt	string
FORMAT_ POLICY_ LIST	conf.core	Format the policy list (ovpolicy -list) if the policy name is not displayed correctly (for example, the name is too long).	Y	FALSE	bool

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
ASYNC_ CONTROL_ NOTIFY	conf.core	Defines if the notification trigger from the control service should be executed asynchronously. If set to true, no status or error messages will be reported to config.	Y	FALSE	bool
CACHE_CON FIGSETTING S_POLICIES	conf.core	Specifies if the policies for 'configsettings' policy type are cached in memory	Y	TRUE	bool
AUDIT_ LOGGING	conf.server	Toggles security audit logging for policy and configuration settings	Y	FALSE	bool
AUDIT_LOG_ MODE	conf.server	Toggles the audit log level ; FAILURE = log security failures only, ALL = log all (this is the default and fallback value)	Y	ALL	string
LOCATE_SE RVER	conf.server	Number of retries for the startup check	Y	5	Integer
PING_ SERVER	conf. server	The ovconfd process pings itself at the time of startup. This variable sets the number of pings performed by ovconfd for the startup check.	YES	15	Integer

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
WAIT_TIME	conf.server	Time (in seconds) between retries for the startup check by ovconfd.	YES	3	Integer
NOMULTIPLEPOLICIES	conf.server	The policy types mentioned in NOMULTIPLEPOLICIES will be allowed to have only one policy (of that type) to be installed on the node. The value of NOMULTIPLEPOLICIES can be a comma-separated list of policy types.	Y	NULL	string
ONLINE	conf.cluster.RGState.VCS	Resource group online state setting for Veritas Cluster	Y	online	string
OFFLINE	conf.cluster.RGState.VCS	Resource group offline state setting for Veritas Cluster	Y	offline	string
PARTIAL	conf.cluster.RGState.VCS	Resource group partial state setting for Veritas Cluster	Y	unknown	string
UNKNOWN	conf.cluster.RGState.VCS	Resource group unknown state setting for Veritas Cluster	Y	unknown	string
up	conf.cluster.RGState.MCSG	Resource group Up state setting for MCSG Cluster	Y	online	string
down	conf.cluster.RGState.MCSG	Resource group Down state setting for MCSG Cluster	Y	offline	string

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
starting	`conf.cluster.RGState.MCSG`	Resource group `Starting` state setting for MCSG Cluster	Y	unknown	string
halting	`conf.cluster.RGState.MCSG`	Resource group `Halting` state setting for MCSG Cluster	Y	unknown	string
ClusterGroup StateUnknown	`conf.cluster.RGState.MSCS`	Resource group `Unknown` state setting for Microsoft cluster	Y	unknown	string
ClusterGroup Online	`conf.cluster.RGState.MSCS`	Resource group `Online` state setting for Microsoft cluster	Y	online	string
ClusterGroup Offline	`conf.cluster.RGState.MSCS`	Resource group `Offline` state setting for Microsoft cluster	Y	offline	string
ClusterGroup Failed	`conf.cluster.RGState.MSCS`	Resource group `Failed` state setting for Microsoft cluster	Y	offline	string
ClusterGroup PartialOnline	`conf.cluster.RGState.MSCS`	Resource group `Partial Online` state setting for Microsoft cluster	Y	offline	string
UNMANAGED	`conf.cluster.RGState.SC`	Resource group `Unmanaged` state setting for Sun Cluster	Y	unknown	string
ONLINE	`conf.cluster.RGState.SC`	Resource group `Online` state setting for Sun Cluster	Y	online	string
OFFLINE	`conf.cluster.RGState.SC`	Resource group `Offline` state setting for Sun Cluster	Y	offline	string

Table 10 Variables for the Configuration Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
PENDING_ONLINE	`conf.cluster.RGState.SC`	Resource group `Pending Online` state setting for Sun Cluster	Y	unknown	string
PENDING_OFFLINE	`conf.cluster.RGState.SC`	Resource group `Pending Offline` state setting for Sun Cluster	Y	unknown	string
ERROR_STOP_FAILED	`conf.cluster.RGState.SC`	Resource group `error stop failed` state setting for Sun Cluster	Y	unknown	string
started	`conf.cluster.RGState.RHAS`	Resource group `error stop failed` state setting For Red Hat (Linux)	Y	online	string

Configuration Variables for the Control Component

You can use Table 11 to change the variable settings of the control component.

Table 11 Variables for the Control Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
RUN_PROFILE	`ctrl`	If set to true, the profile of the user, which runs Ctrl, is also executed.	Y	false	bool
START_ON_BOOT	`ctrl`	If the value is true, the Ctrl service gets started at reboot.	Y	false	bool
ACTION_TIMEOUT	`ctrl.ovcd`	This is the time-out period (in seconds) for an action that is initiated by the `ovcd` process.	YES	60	Integer
PROCESS_TIMEPUT	`ctrl.ovcd`	The time period (in seconds) within which every process must establish a particular state. During state transitions, if a process does not reach a state within this time period, `ovcd` reports the process as an aborted or abnormal process.	YES	120	Integer
KILL_TIMEOUT	`ctrl.ovcd`	The time-out period in seconds before killing a monitored process forcefully in case the process does not exit normally.	Y	15	Integer

Table 11 Variables for the Control Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
MONITOR_CHECK_INTERVAL	`ctrl.ovcd`	The interval in milliseconds in which Ctrl will scan the OS to monitor an already monitored process.	Y	2000	Integer
MONITOR_TIMEOUT	`ctrl.ovcd`	The interval in milliseconds within which Ctrl scans the OS whether any registered process got newly started.	Y	30000	Integer
BBC_INIT_CHECK_RETRY	`ctrl.ovcd`	The number of attempts that ovc makes to start ovcd.	Y	3	Integer
WIN_COMPAT_VARS	ctrl.ovcd	*Applicable only on Windows.* For actions executed by Ctrl, slashes within environment variables like %OvInstallDir% get reversed ('\' gets reversed to '/').	Y	false	bool

Table 11 Variables for the Control Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
OV_SUDO	ctrl.sudo	The OV_SUDO variable can be specified to define a sudo-like program to run Ctrl Service in the non-root environment.	Y		string
OV_SUDO_ GROUP	ctrl.sudo	The preferred sudo group can be specified using the variable OV_SUDO_GROUP <sudo group>	Y		string
OV_SUDO_ USER	ctrl.sudo	The preferred sudo user can be specified using the variable OV_SUDO_USER <sudo user>	Y		string

Configuration Variables for the Deploy Component

You can use Table 12 to change the variable settings of the deploy component.

Table 12 Variables for the Deploy Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
CMD_TIMEOUT	`depl`	Deploy uses CMD_TIMEOUT seconds to wait for the completion of deploy commands	Y	60000 secs	Integer
INSTALLATION_TIME	`depl`	Deploy uses INSTALLATION_TIME seconds to install bundles and packages.	Y	60000 secs	Integer
MAX_BLOCK_SIZE	`depl`	File Transfer Block Size for transferring files.	Y	4096	long
DEPLOY_MECHANISMS	`depl`	Deploy uses the specified mechanism (like ssh) to deploy packages on remote nodes.	Y		string
COPY	`[depl].mechanism.***`	Deploy uses the specified mechanism specified under DEPLOY_MECHANISMS to deploy packages on remotenodes. For a particular deploy mechanism, the **`copy`** command to be used should be specified here.	Y		string

Table 12 Variables for the Deploy Component

Variable	Namespace	Description	Modification Needs a Manual Restart	Default Value	Type
EXEC	`[depl].mechanism.***`	Deploy uses the mechanism specified under DEPLOY_MECHANISMS to deploy packages on remote nodes. For a particular deploy mechanism, the **`execute`** command to be used should be specified here.	Y		string
BUNDLE_DIR	`depl.bootstrap`	Deploy uses this as the source directory for bundles for bootstrap.	Y		string
BUNDLE_NAME	`depl.bootstrap`	Deploy uses this as the bundle name for bootstrap.	Y		string
BUNDLE_VERSION	`depl.bootstrap`	Deploy uses this as the bundle version for bootstrap.	Y		string

5 Agent Application Programming Interface

The agent Application Programming Interface (API) enables you to integrate your own applications and programs with HPOM. The HP Operations agent 11.02 includes the following APIs:

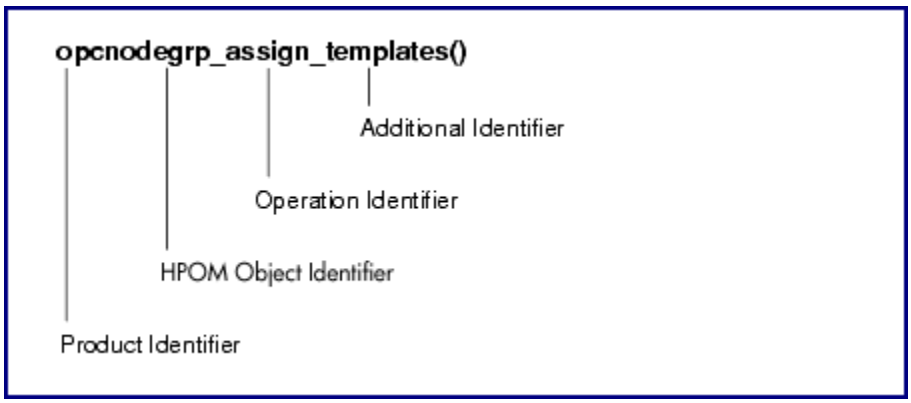
- Agent message API
- Agent monitor API
- Java API

The HP Operations agent API includes support for C/C++ and Java, as well as for every language that supports DCOM automation (for example, VB, VBScript, JScript, and so on). However, the agent message stream interface supports C APIs only. All of the APIs are built using Microsoft Visual Studio 2005.

Function-Naming Conventions

The functions of the HPOM APIs have consistent names which reflect the operation they perform and the HPOM object on which they perform it. See Figure 1 for an example of how the HPOM API functions are named.

Figure 1 Naming the HPOM API Functions



The function names consist of the following parts:

- product identifier: Identifies the product, in HPOM this is always opc.
- HPOM object identifier: Identifies the HPOM object on which the function performs the operation.
- operation identifier ift: Identifies the operation which the function performs.
- additional identifier: Additional description to identify what the function does or expects.

Table 13 gives an overview of all available identifiers.

Not all operations are available on all HPOM objects and not every addition is available for each operation.

Table 13 Overview of Function-name Combinations

Product Identifier	HPOM Object Identifier	Operation Identifier	Additional Identifier	Additional Identifier
opc	appl	_add	_all	_layoutgrps
	applgrp	_modify	_list	_nodes
	data	_delete	_node	
	if	_get	_nodes	
	msg	_assign	_nodegrps	
	msggrp	_deassign	_templates	
	msgregrp	_move	_templgrps	
	node		_nodehier	
	nodegrp		_layoutgrp	
	nodehier		_layoutgrps	
	profile		_appls	
	reg		_applgrps	
	sync		_parentusers	
	templ		_profiles	
	templfile		_resps	
	templgrp		_defaults	
	transact			
	user			

Table 14 gives an overview of all available HPOM objects which can be manipulated with the APIs. The opcdata type must be used to describe the objects when using the APIs.

Table 14 HPOM Objects

HPOM Object	Description	opcdata Type
Action Request	Action request to start an action on a managed node. Used by the Legacy Link Interface.	OPCDTYPE_ACTION_REQUEST
Action Response	Action response from a previously started action on a managed node. Used by the Legacy Link Interface.	OPCDTYPE_ACTION_RESPONSE
Annotation	Message annotation.	OPCDTYPE_ANNOTATION
Application	Application used in HPOM	OPCDTYPE_APPLIC
Application Configuration	Configuration of an HPOM application. This object type is used to configure HPOM applications.	OPCDTYPE_APPL_CONFIG
Application Group	Application group; an application group is a container of applications and other application groups.	OPCDTYPE_APPL_GROUP
Application Response	An application response is the response of a previously started HPOM application. Application responses can be received using the Application Response Interface.	OPCDTYPE_APPLIC_RESPONSE
Container	A container contains a list of objects of one type.	OPCDTYPE_CONTAINER
Layout Group	A layout group contains a list of layout elements in a node hierarchy.	OPCDTYPE_LAYOUT_GROUP
Message	A message is the central management information element of the managed nodes.	OPCDTYPE_MESSAGE
Message Event	A message event is sent when a message was changed.	OPCDTYPE_MESSAGE_EVENT
Message Group	A message group is a grouping criteria of incoming messages.	OPCDTYPE_MESSAGE_GROUP
Message ID	A message ID contains the unique identifier of a message.	OPCDTYPE_MESSAGE_ID
Monitor Message	A monitor message is a monitor value which can be sent using the Agent Monitor API	OPCDTYPE_MONITOR_MESSAGE
Node	A node is an HPOM managed node.	OPCDTYPE_NODE

Table 14 HPOM Objects

HPOM Object	Description	opcdata Type
Node Configuration	A node configuration is the configuration of an HPOM managed node. It contains all necessary parameters to specify a node with all its characteristics.	`OPCDTYPE_NODE_CONFIG`
Node Group	A node group collects several nodes.	`OPCDTYPE_NODE_GROUP`
Node Hierarchy	A node hierarchy is a tree structure containing node layout elements and nodes as its leaves.	`OPCDTYPE_NODEHIER`
Regroup Condition	A regroup condition regroups messages matching the specified condition.	`OPCDTYPE_REGROUP_COND`
Template	A template is used to configure message conditions on managed nodes.	`OPCDTYPE_TEMPLATE_INFO`
Template Group	A template group collects several templates and other template groups. Template groups are handled like templates.	`OPCDTYPE_TEMPLATE_INFO`
Template File	A template file contains the complete configuration of a template including its conditions. Template files are only used by the template file API.	`[char *]`
Template Info	A template info object contains the name, description, and type of a template. It can be used to get a list of all available templates instead of the complete template configuration.	`OPCDTYPE_TEMPLATE_INFO`
User Configuration	A user configuration contains the properties of an HPOM user.	`OPCDTYPE_USER_CONFIG`
User Profile	A user profile contains the properties of users and is assigned to users so that the user takes over the properties defined in the profile.	`OPCDTYPE_USER_PROFILE`

Libraries on the Managed Nodes

Instrumentation programs which use the HP Operations agent APIs must be developed on a system with an HP Operations agent installed, so that the HPOM shared libraries and `opcapi.h` header files are both available.

Platforms that support multi-threaded environments must also supply reentrant system calls that work in this environment. Some platforms only supply reentrant libraries which also work for single-threaded applications. Some have separate libraries-a standard library and a reentrant library; for example, `libc` and `libc_r`, or `libsocket` and `libsocket_r`.

On platforms with two sets of libraries, it is important to link the application using the standard library to the `crt0` object file, and the reentrant library using the `crt0_r` object file. `crt0` and `crt0_r` contain code that is executed before `main()` and is responsible for setting up or initializing the environment before calling any of the library APIs. Mixing reentrant and non-reentrant `crt0` and libraries is not allowed.

Lightweight Libraries for the HP Operations Agent

HTTPS agents version 8.53 or higher provide lightweight libraries, which use less memory and provide better performance than previous libraries. Link the lightweight libraries if you develop new applications that use HP Operations agent APIs.

The lightweight libraries provide the same interfaces as the previous libraries. Therefore, you can recompile existing applications to link the lightweight libraries.

Examples of how to use the lightweight libraries are available in the following folder on nodes that have the agent version 8.53 or higher:

`<OvInstallDir>/examples/copcagtapi`

Table 15

Operating system	**Libraries**	
Windows [a.]	32 bit	`%OvInstallDir%\bin\libopcagtapi.dll`
	64 bit	`%OvInstallDir%\bin\win64\libopcagtapi.dll`
HP-UX PA-RISC[b.]	`/opt/OV/lib/libopcagtapi.sl`	
HP-UX Itanium	`/opt/OV/lib/hpux32/libopcagtapi.so`	
Linux[a. b.]	32 bit	`/opt/OV/lib/libopcagtapi.so`
	64 bit[c.]	`/opt/OV/lib64/libopcagtapi.so`
Solarisb.	32 bit	`/opt/OV/lib/libopcagtapi.so`
	64 bit [d.]	`/opt/OV/lib64/libopcagtapi.so`
AIX[b.]	32 bit	`/usr/lpp/OV/lib/libopcagtapi.a`
	64 bit [d.]	`/usr/lpp/OV/lib64/libopcagtapi.a`

a.

On operating systems for which the agent provides both 64 bit and 32 bit lightweight libraries, link the appropriate library for your program (for example, link the 32 bit libraries to a 32 bit program, even if the program runs on a 64 bit operating system).

b.

To use the lightweight library on UNIX and Linux operating systems, you must also link the following HP BTO Software shared library:

Operating system	Libraries	
HPUX PA-RISC	`/opt/OV/lib/libOvXpl.sl`	
HPUX Itanium	`/opt/OV/lib/libOvXpl.so`	
Linux	32 bit	`/opt/OV/lib/libOvXpl.so`
	64 bit	`/opt/OV/lib64/libOvXpl.so`
Solaris	32 bit	`/opt/OV/lib/libOvXpl.so`
	64 bit[c.]	`/opt/OV/lib64/libOvXpl.so`
AIX	32 bit	`/usr/lpp/OV/lib/libOvXpl.so`
	64 bit[d.]	`/usr/lpp/OV/lib64/libOvXpl.so`

c.

The 64 bit libraries that are included with 32 bit Linux agents do not support message stream interface functions. To compile a 64 bit application that uses message stream interface functions, link the 64 bit libraries from a 64 bit Linux agent.

d.

Available in HTTPS agents version 8.60 or higher.

Compiler Versions and Options for Agent APIs

To use the HP Operations agent APIs, you must use the correct compiler version and options. The following tables list the compiler versions and options for each platform.

Microsoft Windows Server 2003 on x86 (32 bit)

Compiler	Microsoft Visual Studio 2005 Team Edition plus VS2005 Service Pack 1
Required compiler options	• **/GR** enable RTTI • **/MD** Mutithreaded DLL (Use for release version) • **/MDd** Debug Multithreaded DLL (use for debug versions) • **/EHa** enable C++ exception handling • **/W3** Warning level 3 • **/Wp64** Detect 64-bit portability issues • **/GF** Enable string pooling • **/J** Default unsigned char • **/Zc:wchar_t** wchar_t is a native type • **/Gd** Use __cdecl calling convention. • **/analyze** Enterprise code analysis
Other requirements	Embed the manifest for all DLLs, loadable modules, and executables into the binary using mt.exe.

Microsoft Windows Server 2003 on x64 (64 bit)

Compiler	Microsoft Visual Studio 2005 Team Edition plus VS2005 Service Pack 1
Required compiler options	• **/GR** enable RTTI • **/MD** Mutithreaded DLL (Use for release version) • **/MDd** Debug Multithreaded DLL (use for debug versions) • **/EHa** enable C++ exception handling • **/W3** Warning level 3 • **/Wp64** Detect 64-bit portability issues • **/GF** Enable string pooling • **/J** Default unsigned char • **/Zc:wchar_t** wchar_t is a native type • **/Gd** Use __cdecl calling convention. • **/analyze** Enterprise code analysis
Other requirements	Embed the manifest for all DLLs, loadable modules, and executables into the binary using mt.exe.

Microsoft Windows Itanium (64 bit)

Compiler	Microsoft Visual Studio 2005 Team Edition. Itanium cross-compiler with VS2005 SP 1
Required compiler options	• **/GR** enable RTTI • **/MD** Mutithreaded DLL (Use for release version) • **/MDd** Debug Multithreaded DLL (use for debug versions) • **/EHa** enable C++ exception handling • **/W3** Warning level 3 • **/Wp64** Detect 64-bit portability issues • **/GF** Enable string pooling • **/J** Default unsigned char • **/Zc:wchar_t** wchar_t is a native type • **/Gd** Use __cdecl calling convention. • **/analyze** Enterprise code analysis
Other requirements	• Build Windows Server 2003 Itanium binaries on an x86 system using a cross compiler. • Embed the manifest for all DLLs, loadable modules, and executables into the binary using mt.exe.

HP-UX 11.11, 11.23 PA (32 bit API)

Compiler	aCC A.03.80
Required compiler options	• **-AP** use older C++ runtime libraries (Note: this is the default) • **-mt** for thread-safe code
Recommended options	• **-Aa** enables newly supported ANSI C++ standard features • **-D__HPACC_STRICTER_ANSI__** enables additional ANSI compliance of STL • **+hpxstd98** enables new, standards compliant compilation mode
Other requirements	Runtime patch PHSS_33945

HP-UX 11.23 IA64 (in native IPF mode) (32 Bit API)

Compiler	HP aC++ Compiler (Version: A.06.05)
Required compiler options	• **-AA** use ANSI-standard STL and IOStreams (this is the default) • **-mt** for thread-safe code • **+DD64** create 64 bit mode binaries (only for HPUX11.23_IPF64 executables)
Recommended options	• **-Aa** enable newly supported ANSI C++ standard features (this is only necessary if –AA is not used explicitly) • **+DSitanium2** optimize code for Itanium 2 CPU (also runs on Itanium 1)
Other requirements	• Build patch PHSS_33350 11.23 aC++ Runtime (IA: A.06.05) • Build patch PHSS_33352 11.23 Integrity Unwind Library

SuSE Linux ES 9, SuSE 9.1, 9.2, 9.3, RedHat Enterprise Linux 4.0 (32 or 64 bit API)

Compiler	gcc version 3.3.3-43 (Standard compiler of SuSE Linux ES 9)
Required compiler options	**-lpthread** Executables must be linked with the pthread library if any directly or indirectly used shared library is dependent on the pthread library, even if the executable itself is a single-threaded application.
Other requirements	To compile 32 bit binaries on a 64 bit system, use the **–m32** compiler switch.

SuSE Linux ES 10, RedHat Enterprise Linux 5.0 (64 bit CPU required) (64 Bit API)

Compiler	gcc version 4.1.0 (Standard compiler of SuSE Linux ES 10)
Required compiler options	**-lpthread** Executables must be linked with the pthread library if any directly or indirectly used shared library is dependent on the pthread library, even if the executable itself is a single-threaded application.
Other requirements	To compile 32 bit binaries on a 64 bit system, use the **–m32** compiler switch.

SuSE Linux ES 10, RedHat Enterprise Linux 5.0 (Itanium) (64 bit API)

Compiler	gcc version 4.1.0 (Standard compiler of SuSE Linux ES 10)
Required compiler options	**-lpthread** Executables must be linked with the pthread library if any directly or indirectly used shared library is dependent on the pthread library, even if the executable itself is a single-threaded application.

SuSE Linux ES 10, RedHat Enterprise Linux 5.0 (x64 or Itanium) (32 Bit API)

Compiler	gcc version 3.3.3-43 (Standard compiler of SuSE Linux ES 9)
Required compiler options	**-lpthread** Executables must be linked with the pthread library if any directly or indirectly used shared library is dependent on the pthread library, even if the executable itself is a single-threaded application.
Other requirements	To compile 32 bit binaries on a 64 bit system, use the –m32 compiler switch.

Solaris 10 (SPARC) (32 and 64 bit API)

Compiler	Sun Studio 11
Required compiler options	**-mt** for thread-safe code
Other requirements	Build patches:

- 122149 Update checking binary
- 124862 Debuginfo handling
- 120760 Compilers Back-End
- 121017 C++
- 121019 Fortran 95
- 121021 Fortran 95 Libraries
- 121015 C 5.8 compiler
- 121023 dbx
- 120761 Performance Analyzer
- 122135 Sun Performance Library
- 122142 Sun Studio IDE

Runtime patches:

- 117557 OpenMP support libmtsk
- 108434 32-bit shared library patch for C++
- 108435 64-bit shared library patch for C++
- 111721 SunOS 5.8 Math Library libm patch
- 109147 Linker patch
- 111697 SCCS and make
- 114802 Assembler
- 108652 X11 Xsun

For Solaris 8:

- 108434-08 SunOS 5.8: 32-Bit Shared library patch for C++
- 108993-25 LDAP2 client, libc, libthread, libnsl libraries patch
- 109147-15 SunOS 5.8: Linker catch

Solaris 10 (x86/x64 – 32 bit)

Compiler

Sun Workshop Compiler 11

Required compiler options options

- **-mt** for thread-safe code
- **-fast –xtarget=pentium**

(option sequence is important)

Compiler patches:

- 122148 Update checking binary
- 124859 Debug info handling
- 120759 Compilers Back-End
- 121018 C++
- 121020 Fortran 95
- 121022 Fortran Libraries
- 121016 C 5.8 compiler
- 121616 dbx
- 120762 Performance Analyzer
- 122136 Sun Performance Library
- 122143 Sun Studio IDE

Operating system patches:

- 118677 SunOS 5.10_x86: SCCS and make utilities
- 118345 SunOS 5.10_x86: ld & libc.so.1
- 119961 SunOS 5.10_x86: Assembler
- 119964 SunOS 5.10_x86 Shared library patch for C++_x86
- 120754 SunOS 5.10_x86 libmtsk
- 121621 MediaLib

AIX 6.1 (64 bit)

Compiler

IBM Visual Age C++ Professional / C for AIX Compiler, Version 9.0.

Required compiler options

- **xlC_r** compile thread-safe code
- **-qrtti=all** enable RTTI

Other requirements

- Runtime : AIX 6.1 TL2
- xlC.aix61.rte 10.1.0.2 C F XL C/C++ Runtime for AIX 6.1
- xlC.rte 10.1.0.2 C F XL C/C++ Runtime

AIX 5.3 (32 bit)

Compiler	IBM Visual Age C++ Professional / C for AIX Compiler, Version 5.0.
Required compiler options	• **xlC_r** compile thread-safe code • **-qrtti=all** enable RTTI

AIX 5.3 (64 bit API)

Compiler	IBM Visual Age C++ Professional / C for AIX Compiler, Version 9.0.
Required compiler options	• **xlC_r** compile thread-safe code • **-qrtti=all** enable RTTI

Java

Compiler	Sun JDK 1.5_14
Other requirements	Required Java runtime for AIX 6.1 is JRE 1.6 minimum

Using APIs in Internationalized Environments

All HPOM API functions are internationalized. This means that they will initialize the language setting, check the codeset for compatibility, and convert codesets if necessary, provided your API programs support Native Language Support (NLS) environments.

When writing API programs for internationalized environments, you must ensure that your programs do select the appropriate locale. In C programs, you do this by calling the function setlocale() at the beginning of your program.

It is recommended to use **`setlocale(LC_ALL,"")`**. The category **`LC_ALL`** names the program's entire locale. `""` adopts the setting of the current shell.

Agent Message API

HPOM provides a set of APIs to handle messages on managed nodes. These functions enable you, for example, to send messages and acknowledge them at a later time. See Agent Monitor API on page 194 for functions to send monitor values.

Data Structures

- OPCDTYPE_MESSAGE_ID
- OPCDTYPE_MESSAGE

Usage

The managed node processes must be running. To use the functions, include the header file `opcapi.h` in your application.

Prerequisites

Each opdata structure must be allocated using opcdata_create() before it can be used in any of these functions. After the execution of your program, each opcdata structure must be freed using opcdata_free().

Multithread Usage

All function of the Agent Message API are safe to be called by multithreaded applications, and are thread-safe for both POSIX Thread and DCE User Threads. They are neither async-cancel, async-signal, nor fork-safe, and cannot be safely called in kernel threads.

Agent Configuration

Operations on messages out of managed nodes require to send these message operations to the manager. Unfortunately it is not possible to deliver the responsible manager of a message from the message ID. Additionally, the configuration could be changed since the message was sent so that it is necessary to send the message operation to all managers. This can produce a lot of network load.

To prevent this, the message agent holds information about the manager to which the messages were sent. After a defined time, the information is deleted to save memory, disk space, and processing time. This time is configurable with a nodeinfo policy using the parameter OPC_STORE_TIME_FOR_MGR_INFO. The specified value is the time in hours, with a default setting of one hour if this parameter is not changed.

The storage of the manager information must be enabled for each message to be sent by setting the message parameter OPCDATA_DATA_INFO to OPC_REMARK_FOR_ACK.

opcdata_set_long(message, OPCDATA_DATA_INFO, OPC_REMARK_FOR_ACK);

opcmsg()

opcagtmsg_send()

opcagtmsg_ack()

opcagtmsg_ack()

```
#include opcapi.h

int opcagtmsg_ack (

      opcdata     message_id     /* in */

      );
```

Parameters

`message_id`

Message ID of type OPCDTYPE_MESSAGE_ID.

Description

Use the function opcagtmsg_ack() to acknowledge a message out from a managed node. A message operation will be sent to the message agent.

If the message attribute OPCDATA_DATA_INFO of a previously sent message was set to OPC_REMARK_FOR_ACK, the message agent holds the information about the responsible manager in its memory. If this attribute was not set, the message operation will be sent to all managers.

Return Values

OPC_ERR_OK:

OK

OPC_ERR_INVALID_INPARAM:

message_id is NULL

OPC_ERR_INVALID_OPCDATA_TYPE:

message_id is not of type OPCDTYPE_MESSAGE_ID

OPC_ERR_INCOMPLETE_PARAM:

message ID is not set

OPC_ERR_NO_MEMORY:

memory allocation failed

opcagtmsg_send()

```
#include opcapi.h

int opcagtmsg_send (

      opcdata     message     /* in/out */
      );
```

Parameters

message

Message of type OPCDTYPE_MESSAGE.

Description

Use the function opcagtmsg_send() to send a message, created on the managed node, to its responsible manager. The message must be of type OPCDTYPE_MESSAGE. The message ID can be retrieved from the message object using opcdata_get_str() immediately after the send call was executed.

Only the message attributes Severity, Application, Message Group, Object, Message Text, Option Strings and Node are used in `opcagtmsg_send()`.

If you want to save the information about the responsible manager, remark the message to be acknowledged later. To do this, set `OPCDATA_DATA_INFO` to `OPC_REMARK_FOR_ACK`.

After `opcagtmsg_send()` was called with `OPC_REMARK_FOR_ACK` it is possible to get the ID of the sent message using:

opcdata_get_str()(`message, OPCDATA_MSGID`)

Return Values

`OPC_ERR_OK`:

OK

`OPC_ERR_APPL_REQUIRED`:

attribute `OPCDATA_APPLICATION` not set

`OPC_ERR_OBJ_REQUIRED`:

attribute `OPCDATA_OBJECT` not set

`OPC_ERR_TEXT_REQUIRED`:

attribute `OPCDATA_MSGTEXT` not set

`OPC_ERR_INVAL_SEVERITY`:

set severity invalid

`OPC_ERR_MISC_NOT_ALLOWED`:

message group 'misc' not allowed

`OPC_ERR_INVALID_INPARAM`:

`message` is NULL

`message` is not of type `OPCDTYPE_MESSAGE`

`OPC_ERR_WRONG_OPTION_VARS`:

The field OPCDATA_OPTION_VAR of the message has an incorrect format. It can only contain assignments separated by spaces.

`OPC_ERR_NO_MEMORY`:

memory allocation failed

opcmsg()

```
#include opcapi.h

int opcmsg (
      const int      severity,      /* in */
      const char *   application,   /* in */
      const char *   object,        /* in */
      const char *   msg_text,      /* in */
      const char *   msg_group,     /* in */
      const char *   nodename,      /* in */
      );
```

Parameters

`severity`

Severity level of the new message.

The following severities are supported:

OPC_SEV_NORMAL

OPC_SEV_WARNING

OPC_SEV_MINOR

OPC_SEV_MAJOR

OPC_SEV_CRITICAL.

`application`

Application of the message source.

`object`

Object of the message source.

`msg_text`

Message text.

`msg_group`

Message group.

`nodename`

Name of the node originating the message.

Description

Use the function `opcmsg()` to send a message, created on the managed node, to the management server. This function does not return the message ID so that it is not possible to acknowledge the message later, on the managed node.

Return Values

`OPC_ERR_OK`:

OK

`OPC_ERR_APPL_REQUIRED`:

The application parameter is not set.

`OPC_ERR_OBJ_REQUIRED`:

The object parameter is not set.

`OPC_ERR_TEXT_REQUIRED`:

The msg_text parameter is not set.

`OPC_ERR_INVAL_SEVERITY`:

The severity parameter value is invalid

`OPC_ERR_MISC_NOT_ALLOWED`:

message group 'misc' is not allowed

`OPC_ERR_NO_MEMORY`:

out of memory

Agent Monitor API

HPOM provides a set of functions to send monitor values to the monitor agent.

Data Structures

OPCDTYPE_MONITOR_MESSAGE

Usage

To use these functions, the managed node processes must be running. To use the functions, include the header file opcapi.h in your application.

Prerequisites

Each opdata structure must be allocated using opcdata_create() before it can be used in any of these functions.

Multithread Usage

All functions of the Agent Monitor API are safe to be called by multithreaded applications, and are thread-safe for both POSIX Threads and DCE User Threads. They are neither async-cancel, async-signal, nor fork-safe, and cannot be safely called in kernel threads.

opcmon()

opcagtmon_send()

opcagtmon_send()

```
#include opcapi.h

int opcagtmon_send (
      opcdata     mon_msg     /* in */
      );
```

Parameters

`mon_msg`

Monitor message/value of type: OPCDTYPE_MONITOR_MESSAGE.

Description

Use the function `opcagtmon_send()` to send a monitor value, created on the managed node, to the monitor agent. The mon_msg must be of type OPCDTYPE_MONITOR_MESSAGE.

Only the message attributes Monitor Name, Monitor Value, Object and Option String are used in `opcagtmon_send()`.

Return Values

`OPC_ERR_OK:`

OK

`OPC_ERR_INVALID_INPARAM:`

`mon_msg` is NULL

`mon_msg` is not of type OPCDTYPE_MONITOR_MESSAGE

OPC_ERR_OBJNAME_REQUIRED:

attribute OPCDATA_MON_VAR not set

OPC_ERR_NO_AGENT:

agent is not running

OPC_ERR_NO_MEMORY:

out of memory

OPC_ERR_WRONG_OPTION_VARS:

attribute OPCDATA_OPTION_VAR not set correctly

opcmon()

```
#include opcapi.h

int opcmon (
      const char     *objname,     /* in */
      const double   monval        /* in */
      );
```

Parameters

objname

Name of the monitored object.

monval

Actual value of the monitored object.

Description

Use the function opcmon() to send a monitor value, created on the managed node, to its responsible management server.

Return Values

OPC_ERR_OK:

OK

`OPC_ERR_OBJNAME_REQUIRED`:

`objname` is NULL

`OPC_ERR_NO_AGENT`:

agent is not running

`OPC_ERR_NO_MEMORY`:

out of memory

Agent Message Stream Interface (MSI)

The Agent Message Stream Interface allows you to tap the message flow of an HPOM managed node to enable additional message processing by external applications before a message is sent to the management server. This can help to reduce the amount of network traffic considerably. A typical external application might be an event correlation engine, for example ECS.

The HP Operations agent API includes support for C/C++ and Java, as well as for every language that supports DCOM automation (for example, VB, VBScript, JScript, and so on). However, the agent message stream interface supports C APIs only. All of the APIs are built using Microsoft Visual Studio 2005.

Enable the Agent Message Stream Interface

The Agent Message Stream interface is disabled per default on the managed nodes. To allow external programs to use the MSI on the agent, you must first enable it. To enable it, create a nodeinfo policy containing `OPC_AGTMSI_ENABLE TRUE` on the management server, and then deploy it to the managed nodes on which the MSI should be enabled.

Per default, it is also not allowed to write messages containing automatic or operator initiated command to the MSI. The message agent discards the actions in the messages.

To allow the definition of automatic actions add the following to the nodeinfo policy:

```
OPC_AGTMSI_ALLOW_AA TRUE
```

To allow the definition of operator initiated actions add the following to the nodeinfo policy:

```
OPC_AGTMSI_ALLOW_OA TRUE
```

Configure messages to be sent to the Agent Message Stream Interface

Even if the Agent MSI is enabled and an application is registered for messages, you need to specify that a message should be sent to the agent MSI. You can do so in the policy editors on the Message stream interface and external services tab of the window Outgoing Message.

To define that a message should be sent to the agent MSI, select Agent Message Stream Interface and choose whether message are copied or diverted.

msiconf()

Name

msiconf is the configuration file for the HPOM for Windows message manager

Synopsis

Server MSI

<*SERVER_COFIG_DIR*>`/msiconf`

For example:

`/etc/opt/OV/share/conf/OpC/mgmt_sv/msiconf`

Agent MSI

<*AGENT_CONFIG_DIR*>`/msiconf`

For example:

`/var/opt/OV/conf/OpC/msiconf` on HP-UX

Description

The file msiconf is an ASCII file containing a list of entries consisting of an HPOM Message Stream Interface (MSI) instance name followed by an order number. Each field is separated by a space, several spaces, or a tab. Each entry is separated from the next by a new line.

The MSI instance name may be a string up to 13 alphanumeric characters. The order number may be an integer value between -127 and 127. Lines or portions of lines beginning with # are assumed to be comments and are ignored. Blank lines are also ignored.

The MSI instance name corresponds to the name of a server MSI application that registers with the HPOM message manager. The order number specifies the order in which the registered MSI application will receive a message from the message manager (lowest to highest). Registered MSI applications that are not listed in the msiconf file are given an order number of 0.

The msiconf file is read by the message manager or message agent whenever an MSI instance opens or closes a connection to the MSI.

Example

counter -10

opcecm 0

proca 10

proca 10

enhtt 20

It is possible for a registered MSI instance to alter or completely suppress a message before writing back to the message stream. The proca and procb entries in the above example demonstrate a parallel MSI configuration, where one message entering the message stream may result in two messages exiting the message stream.

Java API

HPOM provides a set of Java classes on the HP Operations agent to

- create and send a message to the HPOM management server
- acknowledge a previously sent message

- send a monitor value to the HPOM monitor agent

The HP Operations agent API includes support for C/C++ and Java, as well as for every language that supports DCOM automation (for example, VB, VBScript, JScript, and so on). However, the agent message stream interface supports C APIs only. All of the APIs are built using Microsoft Visual Studio 2005.

JAR files

The JAR files `jopcagtbase.jar` and `jopcagtmsg.jar` that are necessary to use the APIs are installed together with the agent on the managed node.

On Windows

To use the Java HPOM classes:

- the `-classpath` parameter used for the `javac` and `java` commands must include the `jopcagtbase.jar` and `jopcagtmsg.jar` files
- the `PATH` system variable must include the directory where the shared library files reside. The agent installation does this automatically.

See *%OvInstallDir%*`www/htdocs/jdoc_agent/index.html` for a javadoc style class documentation.

To compile and run the example code:

1. Go to the *%OvInstallDir%*`\examples\OVOW\DevelopmentKit\Agent\Java` directory
2. Compile the example code with `javac -classpath "%OvInstallDir%/java/jopcagtbase.jar:%OvInstallDir%/java/jopcagtmsg.jar"` *<java source code file>*
3. Run the example code with `java -classpath ".:%OvAgentDir%/java/jopcagtbase.jar:%OvAgentDir%/java/jopcagtmsg.jar"` *<java class>*

   where *<java source code file>* could be `JOpcAgtMsgTest.java` or `JOpcMonValueTest.java`; *<java class>* would then be `JOpcAgtMsgTest` or `JOpcMonValueTest`

On UNIX

To build the managed node sample program you have to copy the source files to the managed node. The HP Operations agent software must be installed on the managed node; otherwise, the HPOM JAR files will not be present. Copy the sample programs to any location (for example, /tmp).

To use the Java HPOM API wrapper classes:

- the `-classpath` parameter used for the `javac` and `java` commands must include the `jopcagtbase.jar` and `jopcagtmsg.jar` files
- the `PATH` system variable must include the directory where the shared library files reside. The agent installation does this automatically.

See `/opt/OV/www/htdocs/jdoc_agent/index.html` for a javadoc style class documentation.

To compile and run the example code:

1. Copy the source code to the managed node into a temporary directory and cd to the directory.
2. Compile the example code with `javac -classpath "/opt/jar/jopcagtbase.jar:/opt/jar/jopcagtmsg.jar"` *<java source code file>* .

3 Run the example code with `java -classpath ".:/opt/jar/jopcagtbase.jar:/opt/jar/jopcagtmsg.jar" <java class>`

where <*java source code file*> could be `JOpcAgtMsgTest.java` or `JOpcMonValueTest.java`; <*java class*> would then be `JOpcAgtMsgTest` or `JOpcMonValueTest`

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