HP Operations Agent

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

Software Version: 11.00

Installation Guide

Legal Notices

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

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

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

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to:

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

Support

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

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http://h20230.www2.hp.com/new_access_levels.jsp

Contents

1 Introduction

The HP Operations agent helps you monitor a system by collecting metrics that indicate the health, performance, and availability of essential elements of the system. While HP Operations Manager (**HPOM**) presents you with the framework to monitor and manage multiple systems through a single, interactive console, the HP Operations agent deployed on individual nodes helps you gather vital information to facilitate the monitoring process.

You can analyze the data collected by the HP Operations agent using the spreadsheet programs, HP Performance Manager, HP Reporter, or use other third-party analysis products. The data thus collected enables you to:

- Collect system performance details

- Monitoring real-time system performance data

- Generate alerts based on rules

You can install the HP Operations agent in a distributed, client-server environment (where HPOM is available) or on a standalone server. The HP Operations agent provides a secure communication between the management server and managed nodes in the HPOM-managed environment. However, you can also install the HP Operations agent on a standalone server to monitor the system-level data that indicates the performance of the server.

Documentation Map

The documentation map presents a list of all the major documents for the HP Operations agent. You can use the map to identify the necessary document when you need assistance.

Figure 1   Documentation Map for the HP Operations Agent
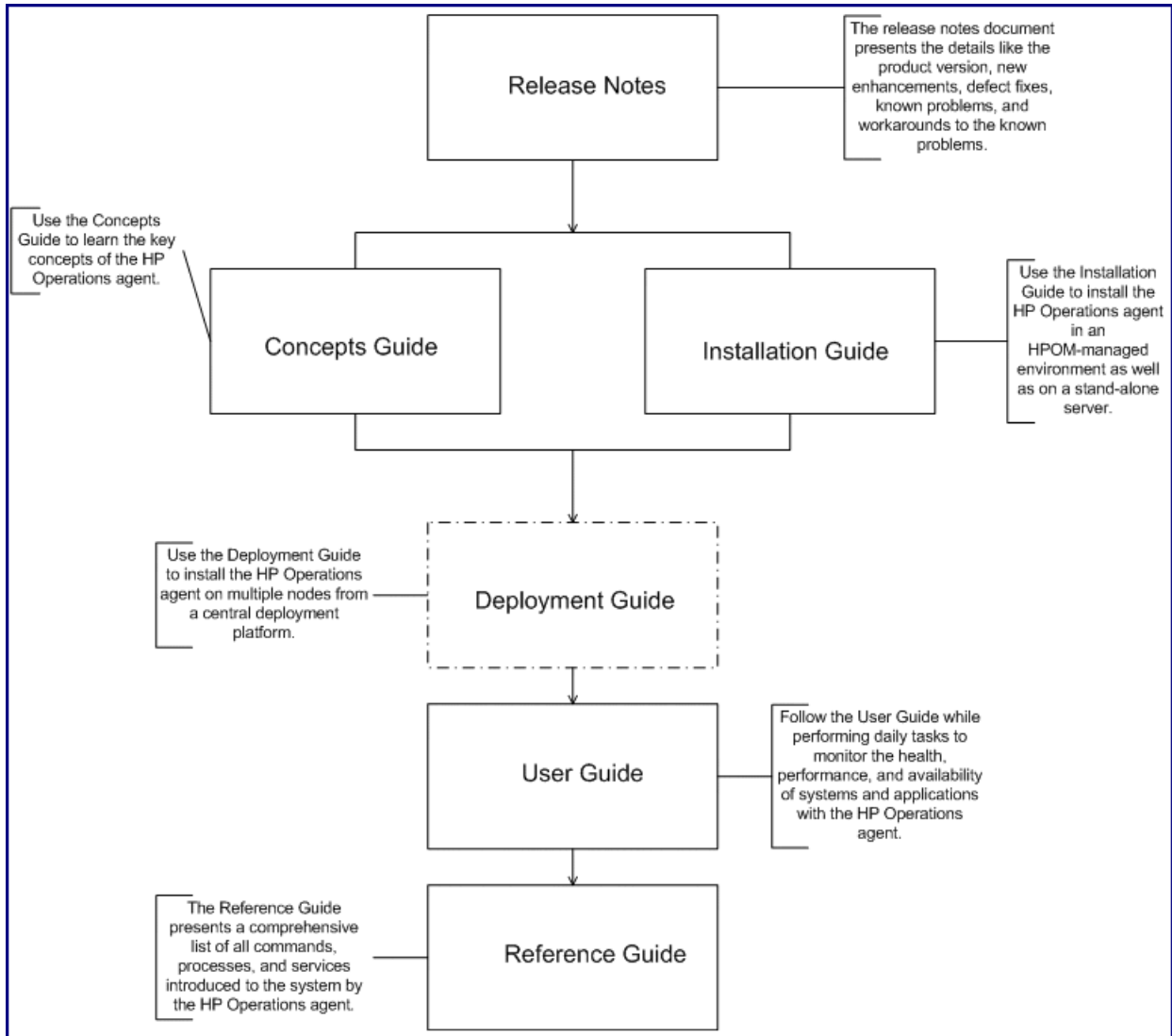
Related Documentation

You can find all the user documentation for the HP Operations agent inside the `paperdocs` directory on the product media. To check for recent updates or to verify that you are using the most recent edition of a document, go to:

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

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to:

http://h20229.www2.hp.com/passport-registration.html

Or click the **New users - please register** link on the HP Passport login page.

Table 1   User Documentation for the HP Operations Agent

Document	Use	Key Topics
Release Notes	Refer to this document for information on the product version, new features, and known problems.	• New features • Enhancements • Fixes • Known issues and limitations
Concepts Guide	The Concepts Guide helps you understand the working mechanism of the HP Operations agent in different environments.	• Introduction to the HP Operations agent • Major components of the HP Operations agent

Table 1   User Documentation for the HP Operations Agent

Document	Use	Key Topics
Deployment Guide	Use this guide to deploy the HP Operations agent in the monitoring environment from a central HPOM management server.	• Setting up a secure communication channel between the HPOM management server and HP Operations agent. • Configuring the HP Operations agent to work in a high-availability cluster environment. • Managing configuration of the HP Operations agent remotely from the HPOM console. • Integration with different HP Software products
User Guide	While performing daily tasks on the HP Operations agent, refer to this guide if you need assistance.	• Managing data collection • Generating alarms
Reference Guide	The Reference Guide presents a complete list of all commands, processes, and services available on the HP Operations agent node.	• Command-line utilities • Configuration variables

2 Planning for an HP Operations Agent Installation

You can use the HP Operations agent in the following scenarios:

- Centralized Monitoring Environment with HPOM
- Standalone Systems

Centralized Monitoring Environment with HPOM

In a centralized monitoring environment with HPOM, you can install the deployment packages for the HP Operations agent 11.00 on the management server, and then centrally deploy the agent packages on different nodes from the HPOM console. See Installing the HP Operations Agent Deployment Packages on page 15 for detailed instructions for installing the HP Operations agent 11.00 deployment packages on the management server.

To install the HP Operations agent in an HPOM-managed environment, follow these steps:

1   Collect the HP Operations agent 11.00 media.

2   Install the HP Operations agent deployment packages on the HPOM management server:

   a   See Prerequisites on page 16.

   b   Follow the instructions in Installing on the Windows Management Server on page 16 or Installing on the UNIX/Linux Management Server on page 19.

3   Install the HP Operations agent on the node; follow the instructions in Installing the HP Operations Agent in an HPOM-Managed Environment on page 36.

4   Review license types; see Types of Licenses on page 75.

5   Apply the license; follow the instructions in Applying a Permanent License on page 83.

Standalone Systems

If you do not have the HPOM software installed and configured in your monitoring environment, you can install the HP Operations agent 11.00 to monitor system performance metrics of a standalone system. See Installing the HP Operations Agent on page 27 for detailed instructions for installing the HP Operations agent 11.00 on a standalone server.

To install the HP Operations agent on a standalone system (in an HPOM-free environment), follow these steps:

1   Collect the HP Operations agent 11.00 media.

2   Install the HP Operations agent on the node; follow the instructions in Installing the HP Operations Agent on a Standalone System on page 57.

3   Review license types; see Types of Licenses on page 75.

4   Apply the license; follow the instructions in Applying a Permanent License on page 83.

3 Installing the HP Operations Agent Deployment Packages

You can install the HP Operations agent deployment packages on the management server for multiple node platforms. Subsequent to the installation, you can deploy the required platform-specific HP Operations agent 11.00 software on the nodes for which the performance needs to be constantly monitored.

The agent inventory on the management server can include deployment packages for different node platforms. While initiating the installation process, you can choose to upgrade the deployment packages only for select node platforms. As a result, the agent deployment packages for the selected platforms will be upgraded to the version 11.00. The older versions of deployment packages for the other node platforms (which you did not select during upgrade) remain on the management server and will be available for deployment.
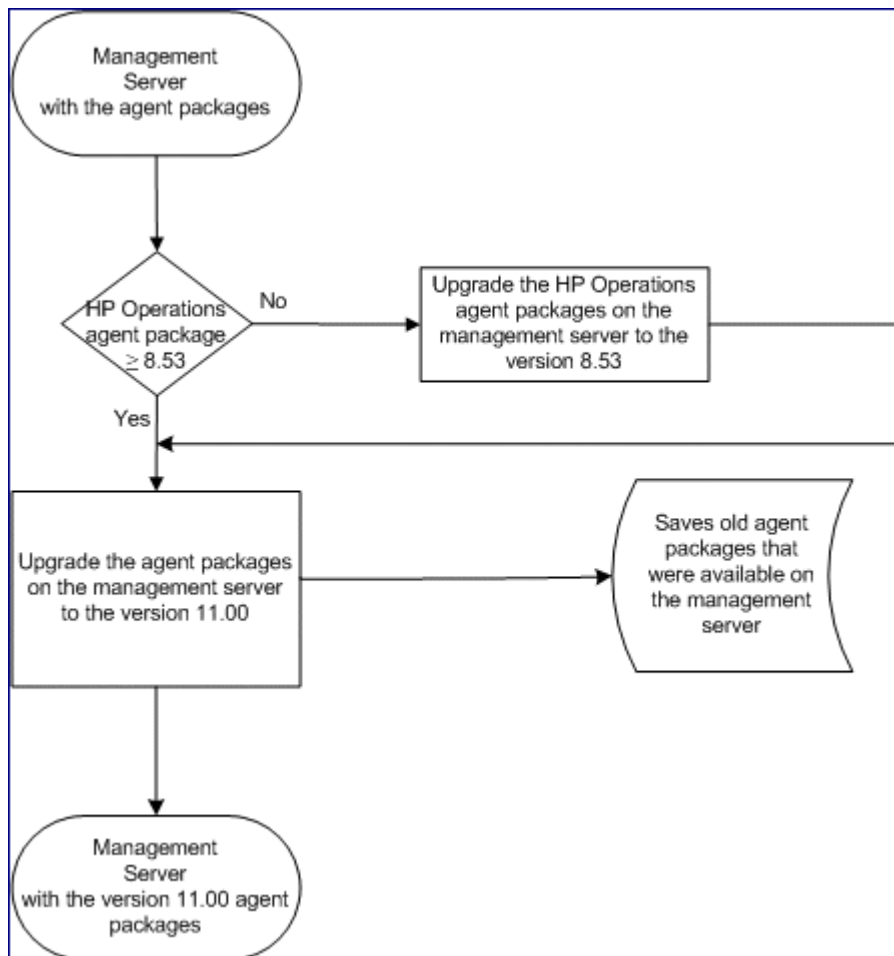
Prerequisites

On the HPOM for Windows Management Server

- **Supported HPOM version:**
  — 8.10 (with the patch `OMW_00048` or higher)
  — 8.16 (or 8.16 with the latest patch)
  — 9.00
- **Disk space:** 960 MB

  ▶ This disk space requirement applies only to the HPOM management server before installing HP Operations agent 11.00 deployment packages. Disk space requirements for managed nodes are listed in Node-Specific Requirements on page 28.

On the HPOM on UNIX/Linux Management Server

- **Supported HPOM version:**
  — HPOM for UNIX (HP-UX or Solaris) 8.35
  — HPOM on UNIX/Linux (HP-UX, Solaris, or Linux) 9.10 or higher
- **Disk space:** 960 MB

  ▶ This disk space requirement applies only to the HPOM management server before installing HP Operations agent 11.00 deployment packages. Disk space requirements for managed nodes are listed in Node-Specific Requirements on page 28.

Installing on the Windows Management Server

To install the HP Operations agent deployment packages on an HPOM for Windows management server, perform the following tasks:

Task 1: Preinstallation Check

Before you install HP Operations agent 11.00 deployment packages on the HPOM for Windows management server, follow these steps:

- If the HP Performance Agent 4.70 deployable for Windows or AIX is available on the management server, you must either install the HP Performance Agent 4.72 deployable or remove the HP Performance Agent 4.70 deployable completely before installing deployment packages for the HP Operations agent 11.00.

  ▶ Availability of the HP Performance Agent deployable on the management server is not a prerequisite for installing HP Operations agent 11.00 deployment packages.

- Before installing the agent deployment packages, make sure that deployment jobs are not running on the management server. To view the active deployment jobs, follow these steps:

> a In the console tree, expand Policy Management.
>
> b Click **Deployment Jobs**. The details pane shows the list of active deployment jobs. You must make sure that none of the deployment jobs are active at the time of installing the agent deployment packages. You must not start any deployment jobs until the agent deployment package installation is complete.

Task 2: Installation Procedure

1. Log on to the management server with the administrative privileges.

2. Review the system requirements presented in the release notes and make sure the installation server meets all the hardware and software requirements.

3. Perform one of the following tasks:

   - If you want to install with the physical media, insert the HP Operations agent DVD into the DVD-ROM drive.

   - Download the installation media from one of HP's web sites. HP's web sites present different platform-specific `.iso` files for the HP Operations agent 11.00 deployment packages. You can download a platform-specific `.iso` file or the `.iso` file that includes deployment packages for all platforms. After you download the `.iso` file, extract the contents of the file into a local directory on the management server.

4. From the media root, run the following command:

   `cscript oainstall.vbs -install -mgmt -platform ALL`

   or

   `cscript oainstall.vbs -i -m -p ALL`

   The command installs the agent deployment packages for all platforms on the management server.

   > If you like, you can choose to install the deployment packages for only select platforms.
   >
   > Run the following command to install the deployment package for only one platform:
   >
   > **`cscript oainstall.vbs -install -mgmt -platform `** *`<platform>`*
   >
   > or
   >
   > **`cscript oainstall.vbs -i -m -p `** *`<platform>`*
   >
   > In this instance, use one of the following values for *<platform>*:
   >
   > - For Windows: **`WIN`**
   > - For HP-UX: **`HP-UX`**
   > - For Linux: **`LIN`**
   > - For Solaris: **`SOL`**
   > - For AIX: **`AIX`**
   >
   > To install deployment packages of multiple node platforms with a single command, use multiple –p options separated by spaces.
   >
   > For example:
   >
   > **`oainstall.vbs -i -m -p AIX -p SOL`**

After you run the command with necessary options and arguments, the installation procedure begins. Depending on number of selected packages, the installation process may take up to 20 minutes to complete.

Task 3:   Verification

After installing the HP Operations agent deployment packages, follow these steps:

1   On the management server, go to the following location:

%ovinstalldir%`bin\OpC\agtinstall`

2   Run the following command:

cscript oainstall.vbs -inv -listall

The command shows the list of available (active) deployment packages on the management server.

3   Locate the platform for which you installed the deployment package. If the active version is displayed as 11.00, the installation is successful.

The installation log file (`oainstall.log`) is available in the directory *%OvDataDir%*`shared\server\log`.

Additional Verification

If you install deployment packages for all the node platforms on a management server where both the HP Operations agent and HP Performance Agent deployment packages were present, you can see the following results in the HPOM console:

▶   Availability of HP Performance Agent deployment packages (the HP Performance Agent deployable) on the management server is not a prerequisite for installing HP Operations agent 11.00 deployment packages.

• **Package overview**: The Package overview view does not include the Performance-agent deployable.

• **Package details**: The Package details view does not include any sections for the Performance-agent deployable. The version number for the Operations-agent deployable appears as 11.0 in all sections in the report.

If you perform the upgrade process only for select node platforms, you can see the following results in the HPOM console:

• **Package overview**: The Package overview view continues to include the Performance-agent deployable.
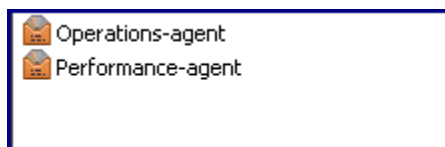
- **Package details**: The Package details view includes the Performance-agent deployable. You can see sections with the details of the old Performance-agent deployable for the node platforms that you did not select during the upgrade process.

Operations-agent	
Version	11.00
Description	The software
Binary format	x64
Operating system	Windows
OS versions	5.1 5.2 6.0
Location/ID	C:\Documen \x64\Operat

Performance-agent	
Version	5.0.0
Description	The software
Binary format	PA-RISC
Operating system	HP-UX
OS versions	11.11
Location/ID	C:\Documen risc\Perform.

Placement of Packages

When you install the HP Operations agent packages on the management server, the installer program places all necessary deployment packages into the following path:

%OvDataDir%`shared\Packages\HTTPS`

Within this path, the installer creates different directories and subdirectories based on the operating systems and architecture types of supported nodes

Installing on the UNIX/Linux Management Server

Preinstallation Task

If you are installing the HP Operations agent deployment package on an HPOM for UNIX 8.35 management server and if you have the OpenVMS agent deployment packages on the management server, you must take a backup of the OpenVMS agent deployment packages. During the registration of the HP Operations agent 11.00 deployment package, the installer partially removes the OpenVMS agent deployment packages.

Before the installation, follow these steps:

1   Log on to the management server with the root privileges.

2   Transfer the contents of the directory `/var/opt/OV/share/databases/OpC/`
    `mgd_node/vendor/hp/alpha/ovms` to the `/tmp` directory (or any directory of your
    choice).

After installing the HP Operations agent 11.00 deployment packages, you must copy the
backed-up contents of the `ovms` directory to the original location (`/var/opt/OV/share/`
`databases/OpC/mgd_node/vendor/hp/alpha/ovms`).

Installation

To install the HP Operations agent deployment packages on an HPOM for UNIX or HPOM on
UNIX/Linux management server, perform the following tasks:

Task 1:   Installation Procedure

1   Log on to the management server with the root privileges.

2   Review the system requirements presented in the release notes and make sure the
    installation server meets all the hardware and software requirements.

3   Perform one of the following tasks:

    •   If you want to install with the physical media, insert the HP Operations agent DVD
        into the DVD-ROM drive.

        ▶   While installing on the HPOM for UNIX management server with a physical
            media, make sure that the DVD-ROM drive is mounted.

    •   Download the installation media from one of HP's web sites. HP's web sites present
        different platform-specific `.iso` files for the HP Operations agent 11.00 deployment
        packages. You can download a platform-specific `.iso` file or the `.iso` file that
        includes deployment packages for all platforms. After you download the `.iso` file,
        extract the contents of the file into a local directory on the management server.

4   From the media root, run the following command:

    `./oainstall.sh -install -mgmt -platform ALL`

    or

    `./oainstall.sh -i -m -p ALL`

The command installs the agent deployment packages for all platforms on the management server.

🚩 If you like, you can choose to install the deployment packages for only select platforms.

Run the following command to install the deployment package for only one platform:

./oainstall.sh -install -mgmt -platform *<platform>*

or

./oainstall.sh -i -m -p *<platform>*

In this instance, use one of the following values for *<platform>*:

- For Windows: **WIN**
- For HP-UX: **HP-UX**
- For Linux: **LIN**
- For Solaris: **SOL**
- For AIX: **AIX**

To install deployment packages of multiple node platforms with a single command, use multiple –p options separated by spaces.

For example:

./oainstall.sh -i -m -p AIX -p SOL

After you run the command with necessary options and arguments, the installation procedure begins. Depending on the number of selected packages, the installation process may take up to 5 minutes to complete.

Task 2: Verification

After installing the HP Operations agent deployment packages, follow these steps:

1 On the management server, go to the following location:

On HP-UX, Linux, or Solaris

`/opt/OV/bin/OpC/agtinstall`

2 Run the following command:

./oainstall.sh -inv -listall

The command shows the list of available (active) deployment packages on the management server.

3 Locate the platform for which you installed the deployment package. If the active version is displayed as 11.00, the installation is successful.

The installation log file (`oainstall.log`) is available in the directory `/var/opt/OV/shared/server/log`.

Placement of Packages

When you install the HP Operations agent packages on the management server, the installer program places all the necessary deployment packages into the following path:

```
/var/opt/OV/share/databases/OpC/mgd_node/vendor
```

Within this path, the installer creates different directories and subdirectories based on the operating systems and architecture types of supported nodes.

Installing on a Management Server in a Cluster

You can install HPOM in high-availability (HA) clusters. When HPOM is installed and configured in a cluster, you need not install the HP Operations agent deployment packages on every node in the cluster. You must install the deployment packages only on the active node. In the event of failover, you must run the `oainstall_sync` script on the node where HPOM fails over.

When you install the deployment packages on the active node, the `oainstall_sync` script is placed into a directory that is shared between the nodes in the cluster. When HPOM fails over to the secondary node, follow these steps to run the `oainstall_sync` script:

1   Log on with the root or administrative privileges to the node where HPOM fails over.

2   Go to the following location:

    On Windows:

    %OvShareDir%`server\installation`

    On UNIX/Linux:

    ```
    /var/opt/OV/shared/server/installation
    ```

3   Run the following command:

    On Windows:

    cscript oainstall_sync.vbs

    On UNIX/Linux:

    ./oainstall_sync.sh

    The `oainstall_sync` script places the necessary files for the HP Operations agent 11.00 on the HPOM management server that is in effect.

Backup of Older Deployment Packages

When you upgrade the existing HP Operations agent and HP Performance Agent deployment packages on the management server to the version 11.00, the HP Operations agent installer saves a copy of the older deployment packages into a local directory.

When you remove the HP Operations agent 11.00 deployment packages, the installer program reinstates the older deployment packages on the management server.

During the upgrade process, the older versions of HP Operations agent and HP Performance Agent deployment packages are automatically saved into the following directories:

• *On the HPOM for Windows management server*

    — HP Performance Agent deployment packages:
      %OvShareDir%`server\installation\backup\HPOpsAgt\<OS>\<OA_Version>\`
      `<ARCH>\PerfAgt`

— HP Operations agent deployment packages:
  %OvShareDir%server`\installation\backup\HPOpsAgt\<OS>\<OA_Version>\`
  `<ARCH>`

- *On the HPOM for UNIX management server and Linux management server:*

  — HP Performance Agent deployment packages:
    `/var/opt/OV/shared/server/installation/backup/HPOpsAgt/<OS>/`
    `<OA_Version>/<ARCH>/PerfAgt`

  — HP Operations agent deployment packages:
    ` /var/opt/OV/shared/server/installation/backup/HPOpsAgt/<OS>/`
    `<OA_Version>/<ARCH>`

During the backup of older deployment packages on HPOM for UNIX 9.10 management server, the installer program saves the HP Performance Agent policies associated with the HP Performance Agent(if available).

For a Windows management server, after the backup process is complete, the installer program removes the registry keys of the older version of HP Operations agent and HP Performance Agent deployment packages. To verify this, you can open the Add or Remove Programs window. The window does not show any traces of the older version of HP Operations agent and HP Performance Agent deployment packages.

Alternative Backup Location

When the default backup location does not have sufficient space to accommodate the backed up deployment packages, you can configure the system to use an alternative backup location.

Run the following command on the management server to use a non-default location to back up the old deployment package:

ovconfchg -ovrg server -ns eaagt.server -set OPC_BACKUP_DIR *<directory>*

▶ Use the complete command. Even if the management server does not belong to a cluster, specify **-ovrg server** (just as mentioned here) in the command.

When the management server is installed in a cluster, run this command on the primary node (run the command just as specified here; with the **ovrg** option, specify **server** and not the name of the resource group).

In this instance, *<directory>* is the location on your system where you can back up the old deployment packages.

▶ The log file (`oainstall.log`), which is created during the installation of deployment packages, is placed inside the backup directory.

Viewing Package Details

With the installer program, you can view the package details, which include the platform, system type and the active version of the packages available for deployment from the HPOM console. You have an option to view the package details of the active and backed-up versions as well.

To view the details of the packages that are available for deployment, run the following command:

- *On the HPOM for Windows management server:*

```
cscript oainstall.vbs -inventory
```

or

```
cscript oainstall.vbs -inv
```

- *On the HPOM for UNIX management server and Linux management server:*

```
./oainstall.sh -inventory
```

or

```
./oainstall.sh -inv
```

You can view the output of this command in the following format:

```
<Platform> :<SystemType> :<Version> <(PerfAgt:PA Version)>
```

Some examples:

```
SOL :SPARC :08.53.000 (PerfAgt :05.00.000), or
```

```
AIX :PowerPC(32):11.00.044
```

To view the details of all the packages available on the system (active and backed-up), run the following command:

- *On the HPOM for Windows management server:*

```
cscript oainstall.vbs -inventory -listall
```

or

```
cscript oainstall.vbs -inv -listall
```

- *On the HPOM for UNIX management server and Linux management server:*

```
./oainstall.sh -inventory -listall
```

or

```
./oainstall.sh -inv -listall
```

You can view the output of this command in the following format:

```
<Platform> :<SystemType> :<Version> <(PerfAgt:PA Version)>
```

For example:

```
SOL :SPARC :11.00.012
```

```
SOL :SPARC :08.53.000 (PerfAgt :05.00.000)
```

To view the deployment packages for these platforms, you must traverse to the following path:

- On HPOM for Windows: *%OvDataDir%*`shared\Packages\HTTPS`

- On HPOM for UNIX: `/var/opt/OV/share/databases/OpC/mgd_node/vendor`

Removing the HP Operations Agent Deployment Packages from the Management Server

You can remove a specific version of platform-specific deployment packages. Removing the active version of deployment packages reinstates the highest backed-up version of deployment packages (if available) on the management server. However, if you remove the older backed-up version, the system retains the active version of the deployment packages on the management server.
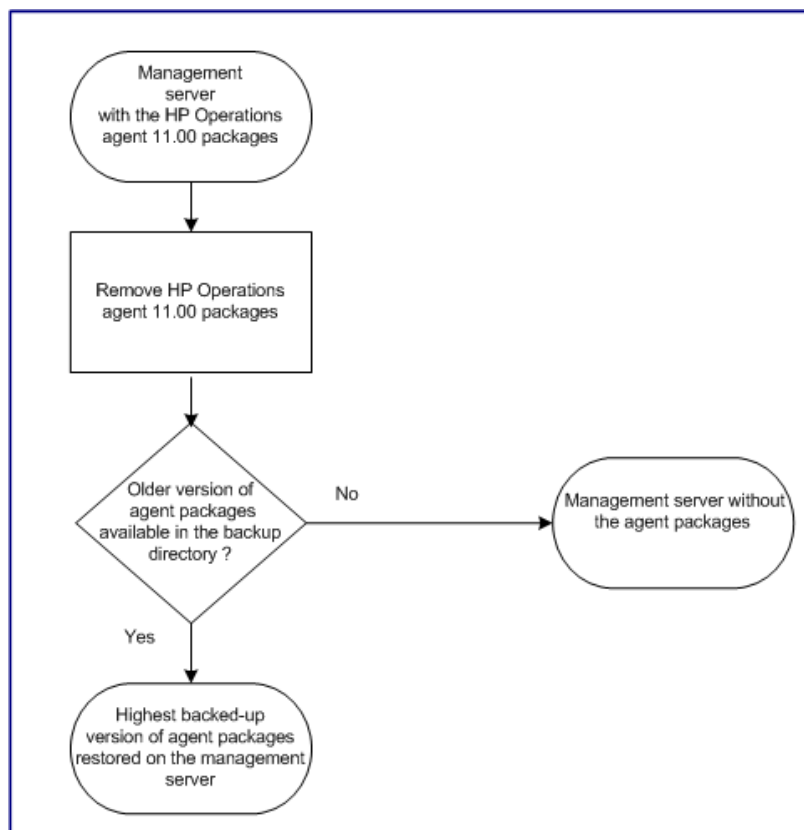
Remove Deployment Packages

To remove all the packages of the HP Operations agent from the management server, follow these steps:

1   Log on to the management server with the administrative (for Windows) or root (for UNIX) privileges.

2   Run the following command:

For the Windows management server:

cscript oainstall.vbs -remove -mgmt -version *<version>* **-platform** *<platform>*

or

cscript oainstall.vbs -r -m -v *<version>* **-p** *<platform>*

For the UNIX or Linux management server:

`./oainstall.sh -remove -mgmt -version` *<version>* `-platform` *<platform>*

or

`./oainstall.sh -r -m -v` *<version>* `-p` *<platform>*

`-v|-version`	Use this option to specify the version of the agent deployment package that you want to remove.
`-p|-platform`	Use this option to specify the platform-specific package of the HP Operations agent that you want to remove from the management server. Use the following list to specify the platform information in the form of arguments to this option:

- Linux: `LIN`

- Solaris: `SOL`

- HP-UX: `HP-UX`

- AIX: `AIX`

- Windows: `WIN`

- All platforms: `ALL`

The options arguments are case-sensitive on the UNIX (or Linux) server.

To remove deployment packages of multiple node platforms with a single command, use multiple –p options separated by spaces.

For example:

`./oainstall.sh -r -m -version 11.00.012 -p AIX -p SOL`

After you run the command with the necessary options and arguments, the installer program starts removing the specific version(s) of platform-specific deployment packages of the HP Operations agent from the management server.

▶ When you remove the HP Operations agent 11.00 deployment packages, the installer program reinstates the highest backed-up version of deployment packages (if available) on the management server.

When you remove the HP Operations agent 11.00 deployment packages from the HPOM for UNIX 9.10 management server, the installer program restores the highest backed-up version of deployment packages (if available) and the Performance Agent policies associated with the HP Performance Agent (if available). You can view the policies associated with the HP Performance Agent deployable on the management server by following these steps:

1 On the menu bar of the user interface, click **Browse** → **All Policies**. The All Policies page appears.

2 Specify the filter criteria and click the **Filter** button. You can see the list of policies associated with the HP Performance Agent deployable in the Filtered Policies page.

4 Installing the HP Operations Agent

On the existing HPOM management server available in the environment, you can install the HP Operations agent deployment packages (see Installing the HP Operations Agent Deployment Packages on page 15), and then install the HP Operations agent on the node centrally from the management server (see Install the HP Operations Agent from the HPOM Console on page 36).

Instead of installing the HP Operations agent centrally from the management server, you can also use the product media on a node to install the HP Operations agent manually. During the manual installation, you can configure an appropriate management server for the node.

When HPOM is not available in the environment, you can install the HP Operations agent on a standalone server to monitor the system-level data that indicate the health and performance of the server. After installing the product, you can start collecting and monitoring system metrics on the server. In future, if you install a version of the HPOM software in your environment that is supported by the HP Operations agent 11.00, you can add this server as a managed node and start monitoring the data collected on the server from the central HPOM console.

Prerequisites

Before you begin the installation, make sure that all the prerequisites are met. After evaluating your requirements, identify the most suitable option to install the product in your environment.

General Considerations

- If you want to deploy the agent remotely from the HPOM console, make sure firewall settings are disabled between the management server and nodes.

- If you want to install the agent manually on the node in a firewall-controlled environment, make sure that the firewall setting allows the agent to contact the management server through the port 383 on the management server.

- Before installing the product in an HPOM-managed environment, always make sure the node is added as a managed node before you begin the installation process. For multihomed nodes, you must perform additional tasks after installing the agent (see Additional Configuration Task on page 65).

- You need not upgrade the agent running on the HPOM management server to the version 11.00 to be able to install and configure the HP Operations agent 11.00 on managed nodes. Installing the **deployment packages** (Installing the HP Operations Agent Deployment Packages on page 15) for the HP Operations agent 11.00 on the management server enables you to install the agent on managed nodes from the HPOM console (Install the HP Operations Agent from the HPOM Console on page 36).

- If you want to work with the agent immediately after installation, make sure the automatic certificate requests are enabled on the management server.

In a highly-secure environment, if you disable the automatic certificate request property on HPOM, you must exchange certificate manually with the management server after the agent installation completes.

- The HP Operations agent is a cluster-aware application. However, the HP Operations agent software cannot fail over automatically to the standby node in the event of failover.

- The HP Operations agent 11.00 cannot co-exist with **HP SiteScope 11.00** and the **HP Business Service Management Integration Adapter (HP BSM Integration Adapter) 9.00**. Do not install the HP Operations agent 11.00 on a system where **HP SiteScope** 11.00 or the HP BSM Integration Adapter 9.00 is installed.

Node-Specific Requirements

The HP Operations agent may have dependencies on specific operating system patches, fixes, and libraries on certain types of node. This section lists the dependencies on operating system-related components and disk space requirements.

Windows

User

To install the HP Operations agent on a Windows node, you must use a user with the administrative privileges; the user must have access to the default system share (the disk on which the `Programs Files` folder is configured) with the following additional privileges:

- Membership of the Local Administrators group

- Write access to the admin$ share

- Read access to the registry

- Permission to log on as a service

- Permission to start and stop services

Necessary Software

- **Windows Installer 2.0 or higher:** The Windows Installer software is packaged with the Microsoft Windows operating system. The installer program of the HP Operations agent requires the version 2.0 of this software component to be present on the system. To check if the Windows Installer 2.0 or higher is present, follow these steps:

  a   Log on to the Windows system.

  b   From the Start menu, open the Run prompt.

  c   At the Run prompt, type **`regedit`**, end then press **Enter**. The Registry Editor window opens.

  d   In the Registry Editor window, expand **HKEY_LOCAL_MACHINE > SOFTWARE > Microsoft**, and then click **DataAccess**.

  e   In the right pane, double-click **FullInstallVer**. The Edit String dialog box opens.

  f   In the Edit String dialog box, check if the version string is set to 2.00 or higher.

- **Windows Script Host:** The Windows Script Host must be enabled on the system. The installer program of the HP Operations agent requires the Windows Script Host to be enabled. To check if the Windows Script Host is enabled, follow these steps:

  a   Log on to the Windows system.

b   From the Start menu, open the Run prompt.

c   At the Run prompt, type **regedit**, end then press **Enter**. The Registry Editor window opens.

d   In the Registry Editor window, expand **HKEY_LOCAL_MACHINE > SOFTWARE > Microsoft**, and then click **Windows Script Host**.

e   In the right pane, look for the key Enabled:

– If the key Enabled is present, double-click the key and make sure the Value Data is set to 1. The Windows Script Host is disabled is the Value Data for the Enabled key is set to 0.

– If the key Enabled is not present, you can safely assume that the Windows Script Host is enabled.

Necessary Services

Before installing the agent, make sure the following services are running:

- Event Log

- Remote Procedure Call

- Plug and Play

- Security Accounts Manager

- Net Logon

- Remote Registry

- Server

- Workstation

To verify that the above services are running, follow these steps:

1   Log on to the system with the administrative privileges.

2   From the Start menu, open the Run prompt.

3   At the Run prompt, type **services.msc**, and then press **Enter**. The Services window opens.

4   In the Services window, check if the status of each of the above services is Started. If the status of one of the services is found to be anything other than Started, right-click the service, and then click **Start**.

Disk Space

- For new installation

— For the installation directory:

350 MB

— For the data directory:

50 MB

- For upgrade

— For the installation directory:

100 MB

— For the data directory:

50 MB

Recommended Software and Services

- **For WMI Interceptor policies:** Required if you want to deploy the WMI Interceptor policies.or measurement threshold policies to monitor WMI events and classes or if you want to perform automatic service discovery on the node.

- **For SNMP MIB monitoring:** If you want to monitor objects in an SNMP Management Information Base (MIB) on the agent system, make sure the SNMP agent (compliant with `MIB-I` and `MIB-II`) is installed on the system.

- **For HPOM actions and tools:** For launching HPOM actions and tools on the node, the NT LM Security Support Provider service must be running.

Additional Requirements for Hyper-V on Windows Server 2008

- To be able to monitor virtual systems, apply the following hotfix:

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

- To be able to log the BYLS class of metrics, apply the following hotfix:

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

Linux

User

To install the HP Operations agent on a Linux node, you must use a user with the root privileges.

Because the HP Operations agent cannot be installed without the `root` user on a Linux node, you cannot install the agent on a vSphere Management Assistant (vMA) node (where the `root` user is disabled by default) remotely from the HPOM console. See Installing the HP Operations Agent on a vMA Node on page 59.

Necessary Software

To install the HP Operations agent, the following runtime libraries and packages are required:

- C++ runtime:
  - For systems with kernel version 2.6:
    `/usr/lib/libstdc++.so.5`
  - For systems with kernel version 2.6 on Itanium :
    `/usr/lib/libstdc++.so.6`

- Curses runtime library:
  `/usr/lib/libncurses.so.5`

- On Red Hat Enterprise Linux on Itanium:
  - ia32el-1.6-14.EL4.ia64.rpm
  - libgcc-3.4.6-8.i386.rpm
  - glibc-2.3.4-2.36.i686.rpm
  - libstdc++-3.4.6-8.i386.rpm
  - compat-libstdc++-296-2.96-132.7.2.i386.rpm
  - ncurses-5.4-13.i386.rpm
  - libtermcap-2.0.8-39.i386.rpm

— bash-3.0-19.3.i386.rpm

— zlib-1.2.1.2-1.2.i386.rpm

— freetype-2.1.9-5.el4.i386.rpm

— expat-1.95.7-4.i386.rpm

— fontconfig-2.2.3-7.i386.rpm

— xorg-x11-Mesa-libGL-6.8.2-1.EL.18.i386.rpm

▶ Use the `--force` and `--nodeps` options while installing this package.

— xorg-x11-libs-6.8.2-1.EL.18.i386.rpm

— xorg-x11-deprecated-libs-6.8.2-1.EL.18.i386.rpm

— compat-libstdc++-33-3.2.3-47.3.i386.rpm

• If you want to remotely install the agent from the HPOM for Windows console, make sure OpenSSH 5.2 or higher is installed on the system.

Disk Space

• For new installation

— For the installation directories (`/opt/OV` and `/opt/perf`):

350 MB

— For the data directories (`/var/opt/OV` and `/var/opt/perf`):

350 MB

• For upgrade

— For the installation directories (`/opt/OV` and `/opt/perf`):

100 MB

— For the data directories (`/var/opt/OV` and `/var/opt/perf`):

350 MB

▶ If you do not have sufficient space in the installation or data directory, you can symbolically link the install or data directory to another location on the same system by using the `ln -s` command.

For example, to symbolically link the `/opt/OV` directory to the `/new` directory, run the following command:

`ln -s /new /opt/OV`

Recommended Software and Services

• **For SNMP MIB monitoring:** If you want to monitor objects in an SNMP Management Information Base (MIB) on the agent system, make sure the SNMP agent (compliant with `MIB-I` and `MIB-II`) is installed on the system.

• **For xglance:** To use the xglance utility, make sure the following components are available on the system:

Open motif toolkit 2.2.3

➤ On Linux platforms other than Red Hat Enterprise Linux 5.x and SUSE Linux Enterprise Server 10.x on x86_64 and Itanium, the 32-bit version of the Open motif toolkit and associated libraries must be present.

HP-UX

User

To install the HP Operations agent on an HP-UX node, you must use a user with the root privileges.

Necessary Software

On HP-UX, make sure that the following patches are installed:

* *For HP-UX 11.23.* PHKL_36853, PHCO_38149 (or superseding patches)
* *For HP-UX 11i v1.* PHNE_27063 (or superseding patch)
* *For HP-UX 11i v1.* PHCO_24400 s700_800 11.11 libc cumulative patch (or superseding patch)
* *For HP-UX 11.11 PA-RISC.* PHCO_38226 (or superseding patch)
* *For HP-UX 11.31.* PHCO_36530 (or superseding patch)
* *For HP-UX 11i v1.* The following patches are required for the performance tools to function with VERITAS Volume Manager 3.2:
    — PHKL_26419 for HP-UX B.11.11 (11.11) (or superseding patch)
    — PHCO_26420 for HP-UX B.11.11 (11.11) (or superseding patch)
* If multiple processor sets are configured on an HP-UX 11i v1 system and you are using the `log application=prm` switch in the parm file to log `APP_` metrics by the PRM Group, you must install the following patch:

    PHKL_28052 (or superseding patch)
* On HP-UX 11i v1 and higher, the performance tools work with Instant Capacity on Demand (iCOD). The following kernel pstat patch should be installed to correctly report iCOD data:

    ➤ If iCOD is not installed on your system, do not install the kernel patch.

    PHKL_22987 for HP-UX B.11.11 (11.11) (or superseding patch)

HP GlancePlus, included in this version of the HP Operations agent, works with Process Resource Manager (PRM) version C.03.02.

HP-UX 11.11 and higher running EMC PowerPath v2.1.2 or v3.0.0 must have the latest EMC patches installed.

* For the EMC PowerPath v2.1.2 release, use the following patch: `EMCpower_patch213 HP.2.1.3_b002` (or superseding patch)
* For the EMC PowerPath v3.0.0 release, use the following patch: `EMCpower_patch301 HP.3.0.1_b002` (or superseding patch)

Disk Space

- For new installation

  — For the installation directories (`/opt/OV` and `/opt/perf`):

    400 MB

  — For the data directories (`/var/opt/OV` and `/var/opt/perf`):

    550 MB

- For upgrade

  — For the installation directories (`/opt/OV` and `/opt/perf`):

    400 MB

  — For the data directories (`/var/opt/OV` and `/var/opt/perf`):

    550 MB

➤ If you do not have sufficient space in the installation or data directory, you can symbolically link the install or data directory to another location on the same system by using the `ln -s` command.

For example, to symbolically link the `/opt/OV` directory to the `/new` directory, run the following command:

```
ln -s /new /opt/OV
```

Recommended Software and Services

For SNMP MIB monitoring: If you want to monitor objects in an SNMP Management Information Base (MIB) on the agent system, make sure the SNMP agent (compliant with `MIB-I` and `MIB-II`) is installed on the system.

Solaris

User

To install the HP Operations agent on a Solaris node, you must use a user with the root privileges.

Necessary Software

Before you install the HP Operations agent on a Solaris node, make sure to install the following or superseding patches:

Table 2   Solaris Patches

Operating System Version	Platform	Required Patches
9	64-bit (SPARC)	• 111712-12 SunOS 5.9 64-bit shared library patch for C++ • 112963-22 Linker Patch (32-bit) • 111722-04 SunOS 5.9 Math Library libm patch
10	32-bit (x86)	• 118345-03 SunOS 5.10_x86: ld & libc.so. • 119964-03 SunOS 5.10_x86 Shared library patch for C++_x86 • 120754-01 SunOS 5.10_x86 libmtsk
	64-bit (SPARC)	• 117461-04 Linker • 120753-01 libmtsk • 119963-19 SunOS 5.10: Shared library patch for C++

In addition, make sure the following packages are available:

- SUNWlibC
- SUNWlibms
- SUNWmfrun
- SUNWxwplt

Kernel Settings

Set the following minimum kernel parameter values for Solaris 9:

semsys:seminfo_semmni=30

semsys:seminfo_semmns=200

semsys:seminfo_semmsl=100

For Solaris 10, no specific kernel settings are required.

Disk Space

- For new installation
  - For the installation directories (`/opt/OV` and `/opt/perf`):
    350 MB
  - For the data directories (`/var/opt/OV` and `/var/opt/perf`):
    350 MB
- For upgrade
  - For the installation directories (`/opt/OV` and `/opt/perf`):
    100 MB
  - For the data directories (`/var/opt/OV` and `/var/opt/perf`):

350 MB

Recommended Software and Services

For SNMP MIB monitoring: If you want to monitor objects in an SNMP Management Information Base (MIB) on the agent system, make sure the SNMP agent (compliant with `MIB-I` and `MIB-II`) is installed on the system.

AIX

User

To install the HP Operations agent on an AIX node, you must use a user with the root privileges.

Necessary Software

- The `libC.a` library is required for the HP GlancePlus to function correctly. The library is bundled within the `xlC.rte` package, which is available from your AIX Operating System optical media.

- The `bos.perf.libperfstat` package is required for the communication daemon.

- If you want to remotely install the agent from the HPOM for Windows console, make sure OpenSSH 5.2 or higher is installed on the system.

Disk Space

- For new installation

  — For the installation directory (`/usr/lpp/OV` and `/usr/lpp/perf`):

  350 MB

  — For the data directory (`/var/opt/OV` and `/var/opt/perf`):

  350 MB

- For upgrade

  — For the installation directory (`/usr/lpp/OV` and `/usr/lpp/perf`):

  350 MB

  — For the data directory (`/var/opt/OV` and `/var/opt/perf`):

  350 MB

If you do not have sufficient space in the installation or data directory, you can symbolically link the install or data directory to another location on the same system by using the `ln -s` command.

For example, to symbolically link the `/usr/lpp/OV` directory to the `/new` directory, run the following command:

```
ln -s /new /usr/lpp/OV
```

Recommended Software and Services

- **For SNMP MIB monitoring:** If you want to monitor objects in an SNMP Management Information Base (MIB) on the agent system, make sure the SNMP agent (compliant with `MIB-I` and `MIB-II`) is installed on the system.

- **For xglance:** To use the xglance utility, make sure the following components are available on the system:

  — Open Motif 2.1 or higher

  — X11 Revision 6 (X11R6)

  — To collect and log cross-partition metrics, the `xmservd` or `xmtopas` daemon must be available. `xmtopas` is a part of `perfagent.tools` file set and `xmservd` is bundled with the Performance Toolbox for AIX component (a licensed software program).

Installing the HP Operations Agent in an HPOM-Managed Environment

You can install the HP Operations agent in an HPOM-managed environment either remotely from the HPOM console, or locally by running the `oainstall.vbs` or `oainstall.sh` file from the HP Operations agent installation media.

Install the HP Operations Agent from the HPOM Console

From the HPOM for Windows Console

Before you install the HP Operations agent remotely, you must perform some additional tasks on the management server to ensure a smooth installation on UNIX/Linux nodes. The tasks involve configuring a secure shell (SSH) client on the management server and creating an appropriate user for installation.

Configure an SSH Client

To configure the SSH client, follow these steps:

▶ HPOM for Windows provides you with the third-party SSH client software PuTTY. This procedure guides you to set up the PuTTY SSH client.

PuTTY is not HP software. It is provided *as is* for your convenience. You assume the entire risk relating to the use or performance of PuTTY.

1 On the management server, go to the following directory:

%ovinstalldir%`contrib\OVOW\PuTTY`

2 Copy the files `PLINK.EXE`, `PSCP.EXE`, and `runplink.cmd` to any directory that is included in your `PATH` environment variable. For example, if you installed the management server into `C:\Program Files\HP\HP BTO Software`, copy the files into the following directory:

`C:\Program Files\HP\HP BTO Software\bin`

3 The default settings enables HPOM to silently approve the SSH host key of a UNIX/Linux node during remote agent installation. If you want to manually verify the SSH host key of every node while installing the agent, follow these steps:

a Log on to the management server with administrative privileges.

b On the management server, run the following command:

```
ovconfchg -edit
```

A text editor opens.

c   Locate the namespace `[depl.mechanisms.ssh]` in the text editor, and then replace the `EXEC` attribute with a call to `PLINK.EXE`. The value should then be as follows:

```
EXEC=plink -ssh -batch -2 -pw <passwd> <user>@<host> <command>
```

d   Save the file. The new configuration takes effect immediately.

Create a User

To remotely install agents, HPOM requires the credentials of a user who has administrative access to the node. The following list shows the specific permissions required, according to the node's operating system:

- Windows

  — Write access to the admin$ share (the user must be part of the local administrators group)

  — Read access to the registry

  — Permission to log on as a service (this is only required if you select User/Password in the Set Credentials list)

- UNIX/Linux

  Permission to log in to SSH on the node for file transfers and to run installation commands.

Before you begin the installation process, create users with the above privileges that can be used by HPOM while installing the agent remotely on nodes.

Install the Agent

To install the HP Operations agent remotely from the HPOM console, follow these steps:

1   From the HPOM console, open the Agent Installation window. To open the Agent Installation window, follow these steps:

    a   In the console tree, right-click **Nodes**, and then click **Configure > Nodes**. The Node Configuration wizard opens.

    b   In the Node Configuration wizard, right-click in the right pane, and then click **New Node**. The Base Settings dialog box opens.

    c   Type the fully-qualified domain name of the node, and then click **Next**. HPOM can automatically discover other details about this node if you select the User Discovery Service option.

    d   If HPOM could not retrieve system details automatically, specify the details in the OS Setup dialog box, and then click **Next**. The Advanced Settings dialog box opens.

    e   In the Advanced Setting dialog box, select or clear the Automatic Deployment of Policies and Packages option, and then click **Finish** and **OK**, the Agent Installation window opens.

2   In the list of nodes, select the Deploy check box against the nodes on which you want to install the agent. If the node is a UNIX /Linux node, a pop-up box appears prompting you for a user name and password. Specify the credentials of a user with the root privileges on the node in the pop-up box, and then click **OK**.

3   For Windows nodes, click **Credentials**, and then specify one of the following:

- **PMAD:** The management server attempts to deploy the agent as the user under which the policy management and deployment (PMAD) service runs (called HP-OVE-Deleg-User by default).

  You can only use this for nodes with a Windows operating system. The nodes can belong to the same domain as the management server, a trusted domain, or a workgroup.

- **Impersonate:** The management server attempts to deploy the agent using the credentials that you are currently logged in to Windows with.

  You cannot use impersonation for nodes in untrusted domains or workgroups.

  You can use impersonation only if the PMAD user is trusted for delegation in Active Directory, unless your console runs directly on the management server. For more details on delegation, see the Active Directory documentation that Microsoft provides.

- **User/password:** Use this option to specify the administrator credentials of the *node* where you want to install the agent.

You need not select the **Run prerequisites check automatically before deployment** option. The installation process on the node always performs prerequisite checks and the error or failure messages are annotated with the deployment job in the HPOM console. You can reduce the installation time by clearing this check box.

4   Click **OK**.

5   To view the status of the installation, click **Deployment Jobs** in the console tree, and then view the status of the installation in the details pane.

6   If you install the HP Operations agent on the HPOM for Windows management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

   vpstat -3 -r

Install with Preconfigured Settings

You can install the HP Operations agent on a node with preconfigured settings such as the communication broker port, reverse channel proxy port, and so on. You can specify settings of your choice in a configuration file and use the configuration file during installation. At the end of the installation, the agent starts its operation with the settings specified in the configuration file.

To install the agent with preconfigured settings, follow these steps:

1   Collect the sample configuration file from the following directory on the management server:

   `%ovsharedir%conf\PMAD\agent_install_defaults.cfg.sample`

2   With a text editor, specify the settings of your choice in the sample file, and then save the file as `agent_install_defaults.cfg` in the same location.

3   Install the agent on nodes using step 1 through step 6.

From the HPOM on UNIX/Linux 9.10 Console

To install the HP Operations agent remotely from the HPOM on UNIX/Linux 9.10 console, follow these steps:

▶ You cannot install the HP Operations agent remotely on a Windows node from the HPOM on UNIX/Linux 9.10 console. You can, however, install the agent manually on a Windows node, and then use the node as an installation server to install the agent on multiple Windows nodes from the HPOM on UNIX/Linux 9.10 console. If you want to install the agent on multiple Windows nodes, follow the procedure in Installation by Using a Windows Server on page 42 before you begin.

1   Log on to the HPOM on UNIX/Linux 9.10 Administration UI.

2   Click **Deployment > Agent (De)Installation**. The (De)Install Agent page opens.

3   Click **Browse > Node Bank**. The Node Bank page appears.

4   In the Choose an Action box, select Add Node, and then click ⏩ (**Submit**). The Add Node page appears.

5   On the Add Node page, select the node type, and then specify the following details in the Properties tab:

   • **Host name:** Fully-qualified domain name of the node you want to manage.

   • **Label:** A label for the node.

   • **IP Address:** Often data is automatically populated in this field. If not, manually specify the IP address of the node that you want to manage.

   • If the IP address of the node that you are trying to add is dynamic, select the System acquires IP dynamically (DHCP) option.

6   *Optional.* If you want to enable the heartbeat polling feature, specify the details in the Management tab.

7   In the Installation tab, specify the following details:

   • Select the Automatic Installation option.

   • Specify user name of a user with the root or administrative privileges on the node (the user should have privileges to install software on the node).

   • Select the Automatic Update of System Resource Files option.

   • *For UNIX/Linux nodes only.* Select the Use SSH During Installation option.

   • *For Windows nodes* only. Provide the following details in the Installation Options section:

   ▶ To install the agent remotely on Windows node, you must first manually install, configure, and run the agent on a Windows node.

      — **Install onto Drive:\directory:** Specify the target path to install the agent on the node. Specify the information in the following format: *Drive:\directory*. For example: C:\HPOM

      — **Install via Server:** Click ⬚ to select a Windows node where the agent is installed and running. You can install the agent on other Windows nodes through this node.

8   In the Communication Type tab, make sure the communication type is set to HTTPS.

9   Click **Save**. All installation details for the selected node is saved.

10 Click **Browse > All Nodes**. The All Nodes page appears.

11 Beside the newly added node, click [gear icon], and then click **Install Agent**. The Install Agent page appears.

12 Select **Installation** as the Install Type.

13 To select the node, follow these steps:

   a   Click [...]. The Selector pop-up box open.

   b   In the Selector pop-up box, specify the nodes where you want to install the agent.

14 Click **Preinstall Check**. HPOM verifies that the selected nodes meet all the requirements for the agent installation.

   If the prerequisite check is successful, the Properties page opens with the following details:

   • Nodename: Fully-qualified domain name (FQDN) of the selected node.

   • IP Address: IP address of the selected node.

   • Machine type: Architecture details of the node.

   • Network type: Type of the network.

   • Method: The installation method that will be used by HPOM. Possible values are: SSH, local, standard, or HTTPS.

   • Status: Result of the preinstallation check. If it displays `ready`, you can start the installation.

   • Password: Specify the password for the root or administrator user on the node.

15 Click **Install on Selected Nodes**. The installation process begins.

16 To view the status of the installation process, click **Deployment > Installation Jobs**.

17 If you install the HP Operations agent on the HPOM on UNIX/Linux management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

   /opt/OV/bin/OpC/opcsv -start

Install with Preconfigured Settings

You can install the HP Operations agent on a node with preconfigured settings such as the communication broker port, reverse channel proxy port, and so on. You can specify settings of your choice in a configuration file and use the configuration file during installation. At the end of the installation, the agent starts its operation with the settings specified in the configuration file.

To install the agent with preconfigured settings, follow these steps:

1   Collect the sample configuration file from the following location on the management server:

   /etc/opt/OV/share/conf/OpC/mgmt_sv/bbc_inst_defaults.sampl

2   With a text editor, specify the settings of your choice in the sample file, and then save the file as bbc_inst_defaults in the same location.

3   Install the agent on nodes using step 1 through step 17.

From the HPOM for UNIX 8.35 Console

To install the HP Operations agent remotely and automatically from the HPOM for UNIX 8.35 console, follow these steps:

▶ You cannot install the HP Operations agent remotely on a Windows node from the HPOM for UNIX 8.35 console. You can, however, install the agent manually on a Windows node, and then use the node as an installation server to install the agent on multiple Windows nodes from the HPOM for UNIX 8.35 console. If you want to install the agent on multiple Windows nodes, follow the procedure in Installation by Using a Windows Server on page 42 before you begin.

1   In the OVO Node Bank window, click **Actions: Node > Add**. The Add Node window opens.

2   In the Add Node window, specify the following details:

- Label: Add a name for the node.

- Hostname: Specify the FQDN of the node.

- If the IP address of the node that you are trying to add is dynamic, select the `System acquires IP dynamically (DHCP)` option.

- Select a system/operating system combination.

- Type of managed nodes: Select one of the available options.

- *Optional.* Heartbeat monitoring: Specify the desired setting.

- OVO Software Installation: Specify the following details:

   — Automatic (De-) Installation: Select this option.

   — As User: For a UNIX/Linux node, specify **root**. For a Windows node, specify a user with the administrative privileges.

3   In the Add Node window, click **Communication Options**. The Node Communication Options dialog box opens. In this dialog box, perform the following checks/tasks:

- Make sure that the communication type is set to HTTPS. The OvCoreID parameter is automatically displayed for your reference.

- *Only for Windows nodes.* In the Installation section, specify the following details:

   — *Optional.* Onto Drive:\Directory: You can install the HP Operations agent on a Windows system into a directory of your choice. You can set the non-default install directory for the agent in this field.

   — *Optional.* Via Server: Specify the FQDN of the Windows server through which you want to route the installation process. See Installation by Using a Windows Server on page 42 to configure a Windows node as an installation server.

4   In the Add Node window, click **OK**. The installation process begins.

5   If you install the HP Operations agent on the HPOM for UNIX management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

/opt/OV/bin/OpC/opcsv -start

Install with Preconfigured Settings

You can install the HP Operations agent on a node with preconfigured settings such as the communication broker port, reverse channel proxy port, and so on. You can specify settings of your choice in a configuration file and use the configuration file during installation. At the end of the installation, the agent starts its operation with the settings specified in the configuration file.

To install the agent with preconfigured settings, follow these steps:

1   Collect the sample configuration file from the following location on the management server:

    `/etc/opt/OV/share/conf/OpC/mgmt_sv/bbc_inst_defaults.sampl`

2   With a text editor, specify the settings of your choice in the sample file, and then save the file as `bbc_inst_defaults` in the same location.

3   Install the agent on nodes using step 1 through step 5.

Installation by Using a Windows Server

If you want to use the HPOM for Windows console, skip this section.

You cannot directly perform remote installation of agents from the HPOM for UNIX 8.35 or HPOM on UNIX/Linux management server to a Windows node. You can, however, install the HP Operations agent by using a Windows server where the agent is already installed. To prepare a Windows system for installing the agent on other nodes, follow these steps:

1   Install the HP Operations agent manually on the system and make sure the system exists in the list of managed nodes in the HPOM console.

2   Run the agent with one of the following users:

    ☛   Do not run the agent on the installation server with the default `LOCAL_SYSTEM` user. The `LOCAL_SYSTEM` user cannot access remote systems.

    •   A domain administrator

    •   A user with the following privileges:

        —   Administrative privileges on the target nodes

        —   Windows pass-through authentication is in place (identical user/password on both nodes)

        —   Networking capabilities

To configure the agent to run with a user of sufficient privileges, follow these steps:

1   Log on to the system.

2   Run the following command:

    `ovc -kill`

    The Operations Monitoring Component stops.

3   Create the desired user profile (to be used with the HP Operations agent). In addition, make sure the user has the following privileges:

    •   Privileges to change the start-up user of the Windows service

    •   Privileges to change the permissions of HP Operations agent data files.

4   Go to the following directory:

%ovinstalldir%`bin`

5   Run the following command:

   cscript ovswitchuser.vbs -existinguser *<user>* **-existinggroup** *<group>*
   -passwd *<user_pwd>*

6   From the Services window, configure the HP OpenView Ctrl Service to run with the user
   created in step 3.

7   Run the following command to start the Operations Monitoring Component.

   ovc -start

Installing the HP Operations Agent Manually on the Node

You can install the HP Operations agent on a standalone server after you log on to the server
with the administrative or root privileges. When you install the product on the standalone
server, you can use the physical DVD media, or you can download the platform-specific `.iso`
media from one of HP's web sites.

You can also transfer the HP Operations agent deployment packages manually from the
management server to the node.

On a Windows Node

To install the HP Operations agent on a Windows node, perform the following tasks:

Task 1:   Prepare for Installation

To prepare the node for installation, follow these steps:

1   Add the node under the list of managed nodes in the HPOM console.

2   Place the HP Operations agent 11.00 media or the HP Operations agent 11.00 deployment
   package on the node.

   To place the media, perform one of the following tasks:

   •   If you want to install with the physical media, insert the HP Operations agent DVD
       into the DVD-ROM drive.

   •   Download the installation media from one of HP's web sites. The web sites present
       different platform-specific `.iso` files for the HP Operations agent 11.00 installation
       packages. You can download a platform-specific `.iso` file. After you download the
       `.iso` file, extract the contents of the file into a local directory on the node.

3   Alternatively, if you want to manually transfer the deployment packages from the
   management server to the node, use one of the following procedures:

   •   **From a Windows management server**

       To transfer the deployment package from a Windows management server, perform the
       following tasks in the given sequence:

       —   Make sure the node is added as a managed node in the HPOM console.

       —   Create a directory on the management server, and then go to the directory.

       —   Run the following command:

           ovpmutil dnl pkg Operations-agent /pnn *<node_FQDN>*

           In this instance, *<node_FQDN>* is the fully-qualified domain name of the node.

The deployment package for the node is downloaded into the current directory.

— Transfer the directory from the management server into a temporary directory on the node, and then follow the instructions in Install After Manually Transferring the Deployment Package to the Node on page 46.

- **From a UNIX/Linux management server**

Log on to the management server, and then go to the following directory:

`/var/opt/OV/share/databases/OpC/mgd_node/vendor/`***`<vendor>`***`/`***`<arch>`***`/`
`<ostype>``/A.11.00.000`

In this instance:

<vendor>: Name of the operating system vendor.

<arch>: Architecture of the node.

<ostype>: Operating system of the node.

Depending on the architecture of the system and type of the operating system, you must select the correct value for the *<vendor>*/*<arch>*/*<ostype>* combination.

The following table provides a list of *<vendor>*/*<arch>*/*<ostype>* combinations that you can use.

Operating System	Architecture	Select This Combination
Windows	Itanium	ms/ipf64/win2k3
Windows	x86_64	ms/x64/win2k3
Windows	x86	ms/x86/winnt

Transfer the contents of the `RPC_BBC` (available inside the `A.11.00.000` directory) directory into a temporary directory on the node, and then follow the instructions in Install After Manually Transferring the Deployment Package to the Node on page 46. The `RPC_BBC` directory contains the necessary packages and the installer program (`oasetup`) for the agent installation.

Task 2:   Install the Agent

You have the following options to install the agent on the node:

- Install from the Media on page 44
- Install After Manually Transferring the Deployment Package to the Node on page 46

Install from the Media

To install the agent from the installation media, log on to the node with the administrative privileges, and then do one of the following:

📌 To check if the node meets the installation prerequisites, you can run just the prerequisite check before installing the product.

To run the prerequisite check, run **cscript oainstall.vbs -install -agent -precheckonly**. The command output shows a report on the prerequisite check.

- To install the agent and configure the agent with an HPOM management server, run the following command from the media root:

```
cscript oainstall.vbs -install -agent -srv <management_server>
[-cert_srv <certificate_server>][-install_dir <install_directory> -data_dir
<data_directory>]
```

or

```
cscript oainstall.vbs -i -a -s <management_server> [-cs
<certificate_server>][-install_dir <install_directory> -data_dir
<data_directory>]
```

If you do not want to use the .vbs file to install the agent, follow these steps:

a   Go to the packages\WIN directory from the media root.

b   Go to the appropriate directory based on the architecture of the node.

   — Windows_IA64 for Itanium platforms

   — Windows_X64 for x64 platforms

   — Windows_X86 for x86 platforms

c   If the Microsoft Visual C++ Redistributable Package is not installed on the system,
    run the executable file for the Microsoft Visual C++ Redistributable Package, which is
    available in this directory.

    For the Itanium platform, run both the executable files—vcredist_IA64.exe and
    vcredist_IA64_VS2008.exe.

d   Run the following command:

```
oasetup -install -management_server <management_server>
[-certificate_server <certificate_server>][-install_dir <install_directory>
-data_dir <data_directory>]
```

After you run the command with necessary options and arguments, the installation
procedure begins. At the end of the installation, agent starts its operation on the node and
all the necessary components start running.

> If you want to change the management server or certificate server for the agent,
> run the following command:
>
> ```
> cscript oainstall.vbs -activateonly -s <management_server> [-cs
> <certificate_server>]
> ```
>
> or
>
> ```
> oasetup -install -activateonly -management_server
> <management_server> [-certificate_server <certificate_server>]
> ```

• To install the agent without configuration details, run the following command:

```
cscript oainstall.vbs -install -agent -defer_configure [-install_dir
<install_directory> -data_dir <data_directory>]
```

or

```
cscript oainstall.vbs -i -a -defer_configure [-install_dir
<install_directory> -data_dir <data_directory>]
```

Alternatively, if you do not want to use the .vbs file to install the agent, follow these
steps:

a   Go to the packages\WIN directory from the media root.

b   Go to the appropriate directory based on the architecture of the node.

— `Windows_IA64` for Itanium platforms

— `Windows_X64` for x64 platforms

— `Windows_X86` for x86 platforms

c   If the Microsoft Visual C++ Redistributable Package is not installed on the system, run the executable file for the Microsoft Visual C++ Redistributable Package, which is available in this directory.

For the Itanium platform, run both the executable files—`vcredist_IA64.exe` and `vcredist_IA64_VS2008.exe`.

d   Run the following command:

oasetup -install -management_server *<management_server>*
[-certificate_server *<certificate_server>*]**[-install_dir** *<install_directory>*
-data_dir *<data_directory>*]

After you run the command, the installation procedure begins. At the end of the installation, the installer program places all the necessary files and packages on the node, but none of the components start running until you configure the agent to work with a management server.

In this instance:

- *<management_server>*: FQDN of the management server

- *<certificate_server>*: FQDN of the certificate server

- *<install_directory>*: Path to place all packages and binary files on the node.

- *<data_directory>*: Path to place all data and configuration files on the node.

> If the install and data directory names contain spaces, specify the directory names within quotation marks (" ").

> The installer may ignore the **-install_dir** and **-data_dir** options when another HP Software product is installed on the node; the installer automatically installs the HP Operations agent into the installation and data directories of the other HP Software product.

If you install the HP Operations agent on the HPOM for Windows management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

vpstat -3 -r

Install After Manually Transferring the Deployment Package to the Node

To install the agent with the deployment package transferred on the node, log on to the node with the administrative privileges, go to the directory where you stored the agent deployment package, and then do one of the following:

> To check if the node meets the installation prerequisites, you can run just the prerequisite check before installing the product.
>
> To run the prerequisite check, run **oasetup -install -precheckonly**. The command output shows a report on the prerequisite check.

Preinstallation Steps

1   Go to the directory on the node where you stored the deployment package, and then go to the `packages\WIN` directory.

2   Go to the appropriate directory based on the architecture of the node.

- `Windows_IA64` for Itanium platforms
- `Windows_X64` for x64 platforms
- `Windows_X86` for x86 platforms

3   If the Microsoft Visual C++ Redistributable Package is not installed on the system, run the executable file for the Microsoft Visual C++ Redistributable Package, which is available in this directory.

For the Itanium platform, run both the executable files—`vcredist_IA64.exe` and `vcredist_IA64_VS2008.exe`.

Installation

> To check if the node meets the installation prerequisites, you can run just the prerequisite check before installing the product.
>
> To run the prerequisite check, run **oasetup -install -agent -precheckonly**. The command output shows a report on the prerequisite check.

- To install the agent and configure the agent with an HPOM management server, run the following command:

  oasetup -install -management_server *<management_server>* **[-certificate_server** *<certificate_server>***][-install_dir** *<install_directory>* **-data_dir** *<data_directory>***]**

  After you run the command with necessary options and arguments, the installation procedure begins. At the end of the installation, agent starts its operation on the node and all the necessary components start running.

  > If you want to change the management server or certificate server for the agent, run the following command:
  >
  > **oasetup -install -activateonly -management_server** *<management_server>* **[-certificate_server** *<certificate_server>***]**

- To install the agent without configuration details, run the following command:

  oasetup -install -defer_configure [-install_dir *<install_directory>* **-data_dir** *<data_directory>***]**

  After you run the command, the installation procedure begins. At the end of the installation, the installer program places all the necessary files and packages on the node, but none of the components start running until you configure the agent to work with a management server.

In this instance:

- *<management_server>*: FQDN of the management server
- *<certificate_server>*: FQDN of the certificate server
- *<install_directory>*: Path to place all packages and binary files on the node.
- *<data_directory>*: Path to place all data and configuration files on the node.

  > If the install and data directory names contain spaces, specify the directory names within quotation marks (" ").

▶ The installer may ignore the **-install_dir** and **-data_dir** options when another HP Software product is installed on the node; the installer automatically installs the HP Operations agent into the installation and data directories of the other HP Software product.

If you install the HP Operations agent on the HPOM for Windows management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

vpstat -3 -r

Configure the Agent

Follow this procedure if you installed the agent with the -defer_configure option.

In future, when you want to configure and start the operation of the agent, follow these steps:

1 Go to the following location on the node:

   • On Windows 64-bit nodes:

      *%ovinstalldir%*bin\win64\OpC\install

   • On other Windows nodes:

      *%ovinstalldir%*bin\OpC\install

2 Run the following command:

   cscript oainstall.vbs -a -configure -srv *<management_server>* **[-cert_srv** *<certificate_server>***]**

   or

   cscript oainstall.vbs -a -configure -s *<management_server>* **[-cs** *<certificate_server>***]**

   Alternatively, run the following command:

   oasetup -configure -management_server *<management_server>* **[-certificate_server** *<certificate_server>***]**

   In this instance:

   • *<management_server>*: FQDN of the management server

   • *<certificate_server>*: FQDN of the certificate server

   🚩 If you do not specify a certificate server with the **-cs** option, the installer assigns the management server as the certificate server.

Changing the Configuration Parameters in Future

If you like to change the configuration parameters like the management server or certificate server associated with the node, you can use the oainstall program with the -configure option.

To change the configuration parameters, follow these steps:

1 Go to the following location on the node:

   • On Windows 64-bit nodes:

      *%ovinstalldir%*bin\win64\OpC\install

   • On other Windows nodes:

```
%ovinstalldir%bin\OpC\install
```

2   Run the following command:

cscript oainstall.vbs -a -configure -srv *<management_server>* **-cert_srv**
<certificate_server>

or

cscript oainstall.vbs -a -configure -s *<management_server>* **-cs**
<certificate_server>

Alternatively, run the following command:

oasetup -configure -management_server *<management_server>*
[-certificate_server *<certificate_server>***]**

On a UNIX/Linux Node

To install the HP Operations agent on a UNIX/Linux node, perform the following tasks:

To prepare the node for installation, follow these steps:

1   Add the node under the list of managed nodes in the HPOM console.

2   Place the HP Operations agent 11.00 media or the HP Operations agent 11.00 deployment package on the node.

   To place the media, perform one of the following tasks:

   • If you want to install with the physical media, insert the HP Operations agent DVD into the DVD-ROM drive.

   • Download the installation media from one of HP's web sites. The web sites present different platform-specific .iso files for the HP Operations agent 11.00 installation packages. You can download a platform-specific .iso file. After you download the .iso file, extract the contents of the file into a local directory on the node.

   Alternatively, if you want to manually transfer the deployment packages from the management server to the node, use one of the following procedures:

   • **From a Windows management server**

      To transfer the deployment package from a Windows management server, perform the following tasks in the given sequence:

      — Make sure the node is added as a managed node in the HPOM console.

      — Create a directory on the management server, and then go to the directory.

      — Run the following command:

         ovpmutil dnl pkg Operations-agent /pnn *<node_FQDN>*

         In this instance, *<node_FQDN>* is the fully-qualified domain name of the node.

         The deployment package for the node is downloaded into the current directory.

      — Transfer the directory from the management server to the node into a temporary directory on the node, and then follow the instructions in Install After Manually Transferring the Deployment Package to the Node on page 52.

   • **From a UNIX/Linux management server**

      Log on to the management server, and then go to the following directory:

```
/var/opt/OV/share/databases/OpC/mgd_node/vendor/ <vendor>/<arch>/
<ostype>/A.11.00.000
```

In this instance:

<vendor>: Name of the operating system vendor.

<arch>: Architecture of the node.

<ostype>: Operating system of the node.

Depending on the architecture of the system and type of the operating system, you must select the correct value for the *<vendor>/<arch>/<ostype>* combination.

The following table provides a list of *<vendor>/<arch>/<ostype>* combinations that you can use.

Operating System	Architecture	Select This Combination
Linux	Itanium	linux/ipf64/linux26
Linux	x86_64	linux/x64/linux26
Linux	x86	linux/x86/linux26
Linux	PowerPC (64-bit)	linux/powerpc/linux26
HP-UX	Itanium	hp/ipf32/hpux1122
HP-UX	PA-RISC	hp/pa-risc/hpux1100
Solaris	SPARC	sun/sparc/solaris7
Solaris	x86	sun/x86/solaris10
AIX	PowerPC (32-bit)	ibm/rs6000/aix5
AIX	PowerPC (64-bit)	ibm/rs6k64/aix5

Transfer the contents of the `RPC_BBC` directory (available inside the `A.11.00.000` directory) into a temporary directory on the node, and then follow the instructions in Install After Manually Transferring the Deployment Package to the Node on page 52. The `RPC_BBC` directory contains the necessary packages and the installer program (`oasetup`) for the agent installation.

Task 2: Install the Agent

You have the following options to install the agent on the node:

*   Install from the Media on page 51

*   Install After Manually Transferring the Deployment Package to the Node on page 52

To install the agent from the installation media, log on to the node with the root privileges, and then do one of the following:

> 🚩 To check if the node meets the installation prerequisites, you can run just the prerequisite check before installing the product.
>
> To run the prerequisite check, run the following command from the media root:
>
> **./oainstall.sh -install -agent -precheckonly**
>
> The command output shows a report on the prerequisite check.

- To install the agent and configure the agent with an HPOM management server, run the following command from the media root:

  ./oainstall.sh -install -agent -srv *<management_server>* **-cert_srv** *<certificate_server>*

  or

  ./oainstall.sh -i -a -s *<management_server>* **-cs** *<certificate_server>*

  After you run the command with necessary options and arguments, the installation procedure begins. At the end of the installation, agent starts its operation on the node and all the necessary components start running.

- To install the agent without configuration details, run the following command:

  ./oainstall.sh -install -agent -defer_configure

  or

  ./oainstall.sh -i -a -defer_configure

  After you run the command, the installation procedure begins. At the end of the installation, the installer program places all the necessary files and packages on the node, but none of the components start running until you configure the agent to work with a management server.

In this instance:

- *<management_server>*: FQDN of the management server
- *<certificate_server>*: FQDN of the certificate server

  > 🚩 If you do not specify a certificate server with the **-cs** option, the installer assigns the management server as the certificate server.

> 🚩 If you want to change the management server or certificate server for the agent, run the following command:
>
> **./oainstall.sh -activateonly -s** *<management_server>* **[-cs** *<certificate_server>*]

If you install the HP Operations agent on the HPOM on UNIX/Linux management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

/opt/OV/bin/OpC/opcsv -start

Install After Manually Transferring the Deployment Package to the Node

To install the agent with the deployment package transferred on the node, log on to the node with the root privileges, go to the directory where you stored the agent deployment package, and then do one of the following:

▶ Before using the `oasetup` command, run the following command:

`chmod u+x oasetup.sh`

To check if the node meets the installation prerequisites, you can run just the prerequisite check before installing the product. To run the prerequisite check, run the following command from the media root:

`./oasetup.sh -install -agent -precheckonly`

The command output shows a report on the prerequisite check.

- To install the agent and configure the agent with an HPOM management server, run the following command:

  `./oasetup.sh -install -management_server` *<management_server>* **`[-certificate_server`** *<certificate_server>*`]`

  After you run the command with necessary options and arguments, the installation procedure begins. At the end of the installation, agent starts its operation on the node and all the necessary components start running.

  If you want to change the management server or certificate server for the agent, run the following command:

  `./oasetup.sh -activateonly -management_server` *<management_server>* **`[-certificate_server`** *<certificate_server>*`]`

- To install the agent without configuration details, run the following command:

  `./oasetup.sh -install -defer_configure`

  After you run the command, the installation procedure begins. At the end of the installation, the installer program places all the necessary files and packages on the node, but none of the components start running until you configure the agent to work with a management server.

In this instance:

- *<management_server>*: FQDN of the management server

- *<certificate_server>*: FQDN of the certificate server

  If you do not specify a certificate server with the **`-cs`** option, the installer assigns the management server as the certificate server.

If you install the HP Operations agent on the HPOM on UNIX/Linux management server (that is, if you select the management server as a managed node), you must manually restart all HPOM processes by running the following command on the management server:

`/opt/OV/bin/OpC/opcsv -start`

Configure the Agent

Follow this procedure if you installed the agent with the `-defer_configure` option.

In future, when you want to configure and start the operation of the agent, follow these steps:

1   Go to the following location:

    • On AIX: `/usr/lpp/OV/bin/OpC/install`

    • On other UNIX/Linux nodes: `/opt/OV/bin/OpC/install`

2   Run the following command:

    ./oainstall.sh -a -configure -srv *<management_server>* **-cert_srv** *<certificate_server>*

    or

    ./oainstall.sh -a -configure -s *<management_server>* **-cs** *<certificate_server>*

In this instance:

• *<management_server>*: FQDN of the management server

• *<certificate_server>*: FQDN of the certificate server

> If you do not specify a certificate server with the **-cs** option, the installer assigns the management server as the certificate server.

Changing the Configuration Parameters in Future

If you like to change the configuration parameters like the management server or certificate server associated with the node, you can use the `oainstall` program with the `-configure` option.

To change the configuration parameters, follow these steps:

1   Go to the following location:

    • On HP-UX/Linux/Solaris:

      `/opt/OV/bin/OpC/install`

    • On AIX:

      `/usr/lpp/OV/bin/OpC/install`

2   Run the following command:

    ./oainstall.sh -a -configure -srv *<management_server>* **-cert_srv** *<certificate_server>*

    or

    ./oainstall.sh -a -configure -s *<management_server>* **-cs** *<certificate_server>*

Installing the HP Operations Agent with a Profile File

After installing the HP Operations agent, you can use the `ovconfchg` command to set different configuration variables to modify the default behavior of the agent. If you create a profile file with the configuration variable settings of your choice and install the agent with the profile file, the agent starts running with the modified settings specified in the profile file.

Install from a Windows Management Server

1   Add a node to HPOM using the Node Configuration Editor, but do not deploy the agent on the node.

2   Run the following command on the management server:

ovpmutil dnl prf /fqdn *<fully qualified domain name>*

In this instance, *<fully qualified domain name>* is the fully-qualified domain name of the node that you added.

The command creates a profile file (*<node_name>*.profile) in the current directory.

3   Collect the profile file, and then open the file with a text editor.

4   Specify the settings of your choice in the following format:

set *<namespace>*: *<variable>=<value>*

In this instance,:

- *<namespace>*: Configuration variable namespace.
- *<variable>*: Configuration variable
- *<value>*: Value set for the variable.

☛   You can specify the values for any configuration variable.

5   Save the file.

6   Transfer the file to the node where you want to install the agent.

7   Run the following command from the media root of the HP Operations agent installation media:

On the Windows node

cscript oainstall.vbs -i|-install -a|-agent -agent_profile *<node_name>*.profile

On the UNIX/Linux node

./oainstall.sh -i|-install -a|-agent -agent_profile *<node_name>*.profile

☛   Specify the complete path of the *<node_name>*.profile file.

After you run the command with necessary options and arguments, the installation procedure begins. At the end of the installation, the agent starts its operation on the node and all the necessary components start running.

Install from a UNIX/Linux Management Server

1   Add a node to HPOM using the HPOM console, but do not deploy the agent on the node.

2   Run the following command on the management server:

/opt/OV/bin/OpC/opcsw -create_list_info *<fully qualified domain name>*

In this instance, *<fully qualified domain name>* is the fully-qualified domain name of the node that you added.

The command creates a profile file (*<node_ip_address>*.i) in the /var/opt/OV/share/tmp/OpC/distrib directory.

3   Collect the profile file, and then open the file with a text editor.

4   Specify the settings of your choice in the following format:

set *<namespace>*: *<variable>=<value>*

In this instance,:

- *<namespace>*: Configuration variable namespace.
- *<variable>*: Configuration variable
- *<value>*: Value set for the variable.

☛   You can specify the values for any configuration variable.

5   Save the file.

6   Transfer the file on the node where you want to install the agent.

7   Run the following command from the media root of the HP Operations agent installation media:

On the Windows node

cscript oainstall.vbs -install -agent -agent_profile *<node_ip_address>*.i

or

cscript oainstall.vbs -i -a -agent_profile *<node_ip_address>*.i

On the UNIX/Linux node

./oainstall.sh -install -agent -agent_profile *<node_ip_address>*.i

or

./oainstall.sh -i -a -agent_profile *<node_ip_address>*.i

☛   Specify the complete path of the *<node_name>*.i file.

After you run the command with necessary options and arguments, the installation procedure begins. At the end of the installation, the agent starts its operation on the node and all the necessary components start running.

Configuring the HP Operations Agent Remotely

If you install the HP Operations agent with the -defer_configure option, you must configure the agent to work with the HPOM management server—at a later time. You can either configure the agent locally on the node or remotely from the HPOM for Windows management server.

To configure the agent remotely from the HPOM for Windows management server, follow these steps:

1   Configure an SSH Client.

▶   HPOM for Windows provides you with the third-party SSH client software PuTTY. This procedure guides you to set up the PuTTY SSH client.

PuTTY is not HP software. It is provided *as is* for your convenience. You assume the entire risk relating to the use or performance of PuTTY.

On the management server, from the *%ovinstalldir%*`contrib\OVOW\PuTTY` directory on the management server, copy the files `PLINK.EXE`, `PSCP.EXE`, and `runplink.cmd` to any directory that is included in your `PATH` environment variable. For example, if you installed the management server into `C:\Program Files\HP\HP BTO Software`, copy the files into the following directory:

`C:\Program Files\HP\HP BTO Software\bin`

2   Create a User.

To remotely install agents, HPOM requires the credentials of a user who has administrative access to the node. The following list shows the specific permissions required, according to the node's operating system:

- Windows

    — Write access to the admin$ share (the user must be part of the local administrators group)

    — Read access to the registry

    — Permission to log on as a service (this is only required if you select User/Password in the Set Credentials list)

- UNIX/Linux

    Permission to log in to SSH on the node for file transfers and to execute installation commands.

3   Configure the agent.

From the management server, run the following command:

For Windows 64-bit nodes

ovdeploy -cmd "%ovinstalldir%bin\win64\OpC\install\oasetup -configure -management_server *<management_server>* **-certificate_server** *<certificate_server>*" **-node** *<node_name>* **-fem winservice -ostype Windows -user** *<node_user>* **-pw** *<node_passwd>*

For other Windows nodes

ovdeploy -cmd "%ovinstalldir%bin\OpC\install\oasetup -configure -management_server *<management_server>* **-certificate_server** *<certificate_server>*" **-node** *<node_name>* **-fem winservice -ostype Windows -user** *<node_user>* **-pw** *<node_passwd>*

For an HP-UX, Linux, or Solaris node

ovdeploy -cmd "/opt/OV/bin/OpC/install/oainstall.sh -a -configure -srv *<management_server>* **-cs** *<certificate_server>*" **-node** *<node_name>* **-fem ssh -ostype UNIX -user** *<node_user>* **-pw** *<node_passwd>*

For an AIX node

ovdeploy -cmd "/usr/lpp/OV/bin/OpC/install/oainstall.sh -a -configure -srv *<management_server>* **-cs** *<certificate_server>*" **-node** *<node_name>* **-fem ssh -ostype UNIX -user** *<node_user>* **-pw** *<node_passwd>*

In this instance:

- *<management_server>:* Fully-qualified domain name of the management server.

- *<certificate_server>*: Fully-qualified domain name of the certificate server. This parameter is optional. If you do not specify the `-cs` option, the management server becomes the certificate server for the node.

- *<node_name>:* Fully-qualified domain name of the node.
- *<node_user>:* User with which you can configure the agent on the node; the user that was created in step 2 on page 56.
- *<node_passwd>:* Password of the above user.

Installing the HP Operations Agent on a Standalone System

In an environment where HPOM is not available, you can install the HP Operations agent on a standalone system to monitor system performance metrics.

To install the HP Operations agent on a standalone system, follow these steps:

On Windows

1 Log on to the system with the administrator privileges.

2 Perform one of the following tasks:

- If you want to install with the physical media, insert the HP Operations agent DVD into the DVD-ROM drive.
- Download the installation media from one of HP's web sites. The web sites present different platform-specific `.iso` files for the HP Operations agent 11.00 installation packages. You can download a platform-specific `.iso` file. After you download the `.iso` file, extract the contents of the file into a local directory on the local machine.

3 Run the following command from the media root:

`cscript oainstall.vbs -install -agent`

or

`cscript oainstall.vbs -i -a`

If you do not want to start the agent after installation, install the agent with the following command instead:

`cscript oainstall.vbs -install -agent -defer_configure`

or

`cscript oainstall.vbs -i -a -defer_configure`

Alternatively, if you do not want to use the `.vbs` file to install the agent, follow these steps:

a Go to the `packages\WIN` directory from the media root.

b Go to the appropriate directory based on the architecture of the node.

— `Windows_IA64` for Itanium platforms

— `Windows_X64` for x64 platforms

— `Windows_X86` for x86 platforms

c If the Microsoft Visual C++ Redistributable Package is not installed on the system, run the executable file for the Microsoft Visual C++ Redistributable Package, which is available in this directory.

For the Itanium platform, run both the executable files—`vcredist_IA64.exe` and `vcredist_IA64_VS2008.exe`.

d   Run the following command:

oasetup -install [-install_dir *<install_directory>* **-data_dir**
*<data_directory>***]**

In this instance:

— *<install_directory>*: Path to place all packages and binary files on the node.

— *<data_directory>*: Path to place all data and configuration files on the node.

> If the install and data directory names contain spaces, specify the directory names within quotation marks (" ").

If you do not want to start the agent after installation, install the agent with the following command instead:

oasetup -install [-install_dir *<install_directory>* **-data_dir**
*<data_directory>***] -defer_configure**

> The installer may ignore the **-install_dir** and **-data_dir** options when another HP Software product is installed on the node; the installer automatically installs the HP Operations agent into the installation and data directories of the other HP Software product.

On UNIX/Linux

1   Log on to the system with the root privileges.

2   Review the system requirements presented in the release notes and make sure the installation server meets all the hardware and software requirements.

3   Perform one of the following tasks:

• If you want to install with the physical media, insert the HP Operations agent DVD into the DVD-ROM drive.

> While installing on a UNIX or Linux server with a physical media, make sure that the DVD-ROM drive is mounted.

• Download the installation media from one of HP's web sites. The web sites present different platform-specific .iso files for the HP Operations agent 11.00 installation packages. You can download a platform-specific .iso file. After you download the .iso file, extract the contents of the file into a local directory on the local machine.

4   Run the following command from the media root:

./oainstall.sh -install -agent

or

./oainstall.sh -i -a

If you do not want to start the agent after installation, install the agent with the following command instead:

./oainstall.sh -install -agent -defer_configure

or

./oainstall.sh -i -a -defer_configure

When you want to start the operation of the agent, run the following command:

• *On Windows 64-bit nodes:*

To use the `oainstall` script:

*%ovinstalldir%***bin\win64\OpC\install\cscript oainstall.vbs -a -configure**

To use the `oasetup` program:

*%ovinstalldir%***bin\win64\OpC\install\oasetup -configure**

- *On other Windows nodes:*

  To use the `oainstall` script:

  *%ovinstalldir%***bin\OpC\install\cscript oainstall.vbs -a -configure**

  To use the `oasetup` program:

  *%ovinstalldir%***bin\OpC\install\oasetup -configure**

- *On HP-UX, Solaris, and Linux:*

  /opt/OV/bin/OpC/install/oainstall.sh -a -configure

- On AIX:

  /usr/lpp/OV/bin/OpC/install/oainstall.sh -a -configure

Installing the HP Operations Agent on a vMA Node

By default, the root user of a vMA (Linux) node is disabled. As a result, you cannot deploy the agent remotely from the HPOM console to a vMA node. The installer program for the HP Operations agent—the `oainstall` script—also requires the root privileges. Therefore, you must use the `sudo` command to switch to the `root` user before installing the agent manually on the vMA node.

Additional Prerequisites

- Make sure that the `portmap` service is started.

- Disable the floppy drive on the vMA.

- Increase the RAM size for the vMA to 1 GB.

Installation

To install the HP Operations agent on a vMA node, follow these steps:

1 Enable the communication across firewalls on the vMA node.

   The agent uses the port 383 to facilitate the communication with other systems across firewalls. You must configure the vMA node to accept communication traffic on the port 383. To achieve this, follow these steps:

   a On the vMA node, run the following command:

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

      The vMA system is configured to accept communication traffic on the port 383.

   b Run the following command:

      sudo service iptables save

      The command saves the configuration set in step a.

   c To verify the configuration settings, run the following command:

```
sudo vi /etc/sysconfig/iptables
```

The vi editor opens the `iptables` file from the `/etc/sysconfig` directory.

In the `iptables` file, verify that the following line is present:

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

2   Place the HP Operations agent media or deployment package on the vMA node.

If you are installing the agent in an HPOM-managed environment, you can transfer the deployment package to a temporary location on the vMA node from the following location on the management server:

*   From HPOM for Windows:

    %ovdatadir%`shared\Packages\HTTPS\linux\linux\2.6\x64\Operations-ag ent\11.00.000\64`

*   From HPOM for UNIX and HPOM on UNIX/Linux:

    `/var/opt/OV/share/databases/OpC/mgd_node/vendor/linux/x64/linux26/ A.11.00.000/RPC_BBC`

3   Log on to the vMA node (the default login is `vi-admin`).

4   Type the following command:

```
sudo bash
```

The command line prompts you for the password of the root user.

5   Specify the password of the root user.

6   Install the HP Operations agent. on the vMA node by following the instructions in the following section :

*   In an HPOM-managed environment: Install the Agent on page 50

*   On a standalone server: Installing the HP Operations Agent on a Standalone System on page 57.

Installing the HP Operations Agent on Shared Workload Partitions (WPARs)

If you install the HP Operations agent in the global partition on an AIX node, you can use the `syncwpar` command to install the agent on all the WPARs on the node.

To install the agent on WPARs, follow these steps:

1   Install the agent in the global partition.

2   Make sure that every shared WPAR has an IP address.

3   From the global partition, run the **`syncwpar  -A`** command.

To install the agent on a particular shared WPAR, run the **syncroot** command from the shared WPAR.

▶ After installing the agent by using the **syncwpar** or **syncroot** command, you must manually start all the processes for the Performance Collection Component if the HP Performance Agent was previously installed in WPARs. To start the Performance Collection Component processes manually, run the following command on every WPAR:

opcagt -start

To remove the agent by using the syncwpar or syncroot command, see Remove the Agent from the Shared WPARs on page 67 to remove the agent.

Installing the HP Operations Agent in High-Availability Clusters

If installed in a high-availability (HA) cluster environment, the HP Operations agent does not fail over when the active system in the cluster fails over to another system. However, the HP Operations agent can help you monitor cluster-aware applications running in a cluster.

You must install the HP Operations agent on every node that belongs to the cluster. Installing the agent in a cluster does not involve any additional steps or any special configuration. However, to install the agent on an HPOM management server that runs in a cluster requires additional configuration steps.

Install the Agent on the Windows Management Server in an HA Cluster

1 Make sure the HPOM database is up and running.

2 Log on to the active management server with the administrative privileges.

3 Stop the agent processes on the management server by running the following command:

ovc -stop

4 Set the active node to the maintenance outage mode by running the following command:

ovownodeutil -outage_node -unplanned -node_name *<FQDN_of_node>*

In this instance:

<FQDN_of_node> is the fully-qualified domain name of the active node.

5 Install the agent by following the instructions in Installing the HP Operations Agent in an HPOM-Managed Environment on page 36.

6 On each of the other nodes in the cluster (which are not active), follow these steps:

a Log on with the administrative privileges.

b Stop the agent processes on the management server by running the following command:

ovc -stop

c Set the node to the maintenance outage mode by running the following command:

ovownodeutil -outage_node -unplanned -node_name *<FQDN_of_node>*

In this instance:

<FQDN_of_node> is the fully-qualified domain name of the node.

d Install the agent by following the instructions in Installing the HP Operations Agent in an HPOM-Managed Environment on page 36.

Install the Agent on the UNIX/Linux Management Server in an HA Cluster

1   Log on to the active management server with the root privileges.

2   Disable monitoring of the HA resource group on the active node by setting the maintenance mode for the node:

    Run the following command on the active node:

    /opt/OV/lbin/ovharg -monitor *<HA_resource_group_name>* **disable**

    In this instance:

    <HA_resource_group_name> is the HA resource group for HPOM on the management server.

3   Stop both the agent and HPOM processes by running the following command:

    On HPOM for UNIX 8.35:

    ovstop opc ovoacomm

    On HPOM on UNIX/Linux 9.x:

    ovc -stop

4   Install the agent by following the instructions in Installing the HP Operations Agent in an HPOM-Managed Environment on page 36.

5   Go to each of the other nodes in the cluster (which are not active) and install the agent by following the instructions in Installing the HP Operations Agent in an HPOM-Managed Environment on page 36. Before installing the agent, make sure HPOM is not running on the node and the shared disks are not mounted. Verify this by running the following command:

    opcsv -status

6   Start the HP Operations agent and HPOM server processes on the first cluster node by running the following command:

    On HPOM for UNIX 8.35:

    ovstart opc ovoacomm

    On HPOM on UNIX/Linux 9.x:

    ovc -start

7   Enable monitoring of the HA resource group on the active node by running the following command:

    /opt/OV/lbin/ovharg -monitor *<HA_resource_group_name>* **enable**

    In this instance:

    <HA_resource_group_name> is the HA resource group for HPOM on the management server.

Tracing the Installation Process

The oainstall and oasetup programs provide you with an option to trace the installation process. If the installation of the agent fails and you are unable to detect the cause of failure, you can run the installer with the tracing option, which generates trace files. You can then send the generated trace files to HP Support for further analysis.

To run the installer with the tracing option, follow these steps:

On Windows

1   If you tried installing the agent with the `oainstall.vbs` file, run the following command:

    oainstall.vbs -i -a [**-srv** *<management_server>* [**-cert_srv** *<certificate_server>*]] **-enabletrace ALL**

    If you tried installing the agent with the `oasetup.exe` file, run the following command:

    oasetup -install [**-management_server** *<management_server>* [**-certificate_server** *<certificate_server>*]] **-enabletrace ALL**

2   Go to the following location:

    `%ovdatadir%Temp`

    The trace file is available with the extension `.trc`.

3   Send the `.trc` file to HP Support for further analysis.

On UNIX/Linux

1   If you tried installing the agent with the `oainstall.vbs` file, run the following command:

    ./oainstall.sh -i -a [**-srv** *<management_server>* [**-cert_srv** *<certificate_server>*]] **-enabletrace ALL**

2   Go to the following location:

    `/var/opt/OV/tmp`

    The trace file is available with the extension `.trc`.

3   Send the `.trc` file to HP Support for further analysis.

Upgrading the Operating System After Installing the HP Operations Agent

After installing the HP Operations agent, if you attempt to upgrade the operating system on the node:

- Make sure that the HP Operations agent 11.00 supports the operating system.

- If you installed the HP Operations agent 11.00 on a 32-bit operating system, and if you upgrade the operating system to a 64-bit version, the agent might fail to work.

- Perform this check:

  a   Check the bit size of the operating system on which you installed the 11.00.

  b   Check the bit size of the upgraded operating system.

  If both the bit sizes match, continue to use the HP Operations agent. If the bit size

The `oainstall` and `oasetup` programs provide you with an option to trace the installation process. If the installation of the agent fails and you are unable to detect the cause of failure, you can run the installer with the tracing option, which generates trace files. You can then send the generated trace files to HP Support for further analysis.

To run the installer with the tracing option, follow these steps:

Placement of Packages

When you install the HP Operations agent on the standalone server, the installer program places all necessary packages and files into the following locations:

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

Within these locations, the installer creates different directories and subdirectories based on the operating systems and architecture types of the server.

Environment Variables

As a result of the installation process, you can find new environment variables on a Windows system where you installed the HP Operations agent. Table 3 lists the environment variables created by the HP Operations agent installer.

Table 3   Environment Variables Created by the HP Operations Agent Installer

Variable Name	Platform	Default Location
%OvInstallDir%	Windows (all)	`C:\Program Files\HP\HP BTO Software`
%OvDataDir%	Windows (2008)	`C:\ProgramData\HP\HP BTO Software`
%OvDataDir%	Windows (other than 2008)	`C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software`

The HP Operations agent does not create environment variables on a UNIX/Linux system.

Installation Log Files

After you install the HP Operations agent on the standalone server, you can view the status of the installation from the following log file:

- *On Windows: %ovdatadir%*`log\oainstall.log`
- *On HP-UX, Solaris, Linux, or AIX:* `/var/opt/OV/log/oainstall.log`

Verifying the Installation

After installing the HP Operations agent on the standalone server, follow these steps:

1   Go to the following location:

- *On Windows: %ovdatadir%*`log`
- *On HP-UX, Solaris, Linux, or AIX:* `/var/opt/OV/log`

2   Open the `oainstall.log` file with a text editor.

3   Review the contents of the file. If the installation is successful, the file must be error-free and must display the message `HP Operations agent installation completed successfully` near the end of the file.

Additional Configuration Task

If you install the agent on nodes in the Network Address Translation (NAT) environment, you must configure the agent on the node to use the IP address that was used with HPOM while adding the node.

To configure the agent to use the IP address set with HPOM, follow these steps:

1   Log on to the node with the root or administrative privileges.

2   Go to the following directory:

On Windows

%ovinstalldir%`bin`

On HP-UX, Linux, or Solaris

`/opt/OV/bin`

On AIX

`/usr/lpp/OV/bin`

3   Run the following command:

```
ovconfchg -ns eaagt -set OPC_IP_ADDRESS <IP_Address>
```

In this instance, *<IP_Address>* is the IP address of the node that was configured with HPOM while adding the node to the list of managed nodes.

4   Restart the agent by running the following commands:

a   **ovc -kill**

b   **ovc -start**

Removing the HP Operations Agent

To remove the HP Operations agent, follow these steps:

1   Log on to the node with the administrative or root privileges.

2   Run the following commands from the command prompt to stop all processes related to the HP Operations agent:

a   **opcagt -stop**

b   **ttd -k**

3   From the command prompt, run the following command:

> Before running the following command on the HP-UX, Solaris, Linux, or AIX platform, run the **chmod u+x** *<InstallDir>***/bin/OpC/install/oainstall.sh** command to make sure that the removal script has the necessary permissions.

On Windows 64-bit nodes:

*%OvInstallDir%***bin\win64\OpC\install\cscript oainstall.vbs -r|-remove -a|-agent**

or
*%ovdatadir%***installation\bundles\Operations-agent\oasetup -remove**

On other Windows nodes:

*%OvInstallDir%***bin\OpC\install\cscript oainstall.vbs -r|-remove -a|-agent**

or
*%ovdatadir%***installation\bundles\Operations-agent\oasetup -remove**

On HP-UX, Solaris, and Linux:

/opt/OV/bin/OpC/install/oainstall.sh -remove|-r -agent|-a

On AIX:

/usr/lpp/OV/bin/OpC/install/oainstall.sh -remove|-r -agent|-a

4   Manually delete the following directories:

On Windows:

• *%OvInstallDir%*

• *%OvDataDir%*

On HP-UX, Solaris, and Linux:

• /opt/OV

- `/var/opt/OV`

- `/opt/perf`

- `/var/opt/perf`

On AIX:

- `/usr/lpp/OV`

- `/var/opt/OV`

- `/usr/lpp/perf`

- `/var/opt/perf`

Alternatively, on a Windows node, you can remove the HP Operations agent 11.00 with the Add/Remove Programs window.

Remove the Agent from the Shared WPARs

You can remove the HP Operations agent from shared WPARs with the help of the `syncwpar` or `syncroot` command.

If the HP Operations agent is installed on the global WPAR and all shared WPARs, follow these steps to remove the agent from the global and shared WPARs:

1 Log on to the global partition as root.

2 Remove the agent with the instructions in Removing the HP Operations Agent on page 66.

3 From the global partition, run the **syncwpar -A** command. The command removes the agent from all shared WPARs.

Alternatively, run the **syncroot** command from the shared WPAR to remove the agent only from the shared WPAR.

5 Upgrading to the HP Operations Agent 11.00

You can upgrade an older version of the HP Operations agent, HP Performance Agent, or HP GlancePlus to the HP Operations agent 11.00. The following versions can be directly upgraded to the HP Operations agent 11.00:

- HP Operations agent: 8.53, 8.60

- HP Performance Agent: 4.70, 5.00

- HP GlancePlus: 4.70, 5.00

The installation of the HP Operations agent 11.00 fails if any agent software older than the specified versions is installed. Before installing the HP Operations agent 11.00 on nodes with the HP Operations agent older than 8.53, the HP Performance Agent older than 4.70, and HP GlancePlus older than 4.70, do one of the following:

- Upgrade the agent software to the version that can be upgraded to the HP Operations agent 11.00.

  This is the preferred method of upgrade. This method ensures necessary packages and policies are retained on the node.

- Remove the agent software completely.

  This may result in removal of policies and instrumentation files from the node. After upgrading to the HP Operations agent 11.00, make sure necessary policies and instrumentation files are deployed on the node again.

Data Collection and Storage with the HP Operations Agent 11.00

The older versions of the HP Operations agent stores the system performance data in the form of about 50 metrics in the embedded performance component (**EPC**), which is also known as **coda**. The HP Performance Agent collects more than 500 system performance metrics (with the help of the **scope** collector) and uses the log file-based storage mechanism to store the data. The version 11.00 of the HP Operations agent uses the data collection and storage mechanism of the HP Performance Agent, and therefore, collects a richer set of metrics and stores the metric data into the log file-based data store. However, any references to the EPC in external programs or HPOM policies are directed to the scope collector and the log file-based data store. This ensures that all previously deployed policies and integrations work without any interruptions after upgrading to the HP Operations agent 11.00 from an older version of the HP Operations agent.

➤ The data collection mechanism of the HP Operations agent requires root/administrator privileges to collect data. You can configure only the Operations Monitoring Component to run with a non-root/non-privileged user while the Performance Collection Component continues to run with root/administrator. For more information on configuring the Operations Monitoring Component to run with a non-root/non-privileged user, see the *Configuring the Agent User* section in the *HP Operations Agent User Guide*.

Checks Before Upgrade

Before beginning the upgrade process, you must verify the versions of the agent software installed on the node.

Check the Version of the Existing Agent

To check the version of the agent software on the node, follow these steps:

On Windows

1 Log on to the node with the administrative privileges.

2 Check the version of the HP Operations agent:

    a Open a command prompt.

    b Run the following command:

       opcagt -version

       If the output of the command shows that the version is lower than A.8.53, you must upgrade to the version 8.53 or 8.60 first (or completely remove the installed version) before installing the HP Operations agent 11.00.

3 Check the version of the HP Performance Agent:

    a Open a command prompt.

    b Run the following command:

       perfstat -v

       The output of the command shows the versions of different components of the HP Performance Agent. If the version of the component ovpa.exe is listed as lower than C.04.70, you must upgrade to the version 4.70 or 5.00 first (or completely remove the installed version of the HP Performance Agent) before installing the HP Operations agent 11.00.

On UNIX/Linux

1 Log on to the node with the root privileges.

2 Check the version of the HP Operations agent:

    a Open a command prompt.

    b Run the following command:

       opcagt -version

       If the output of the command shows that the version is lower than A.8.53, you must upgrade to the version 8.53 or 8.60 first (or completely remove the installed version) before installing the HP Operations agent 11.00.

3 Check the version of the HP Performance Agent:

    a Open a command prompt.

    b Run the following command:

       perfstat -v

The output of the command shows the versions of different components of the HP Performance Agent. If the version of the component `ovpa` is listed as lower than `C.04.70`, you must upgrade to the version 4.70 or 5.00 first (or completely remove the installed version of the HP Performance Agent) before installing the HP Operations agent 11.00.

4   Check the version of HP GlancePlus:

   a   Open a command prompt.

   b   Run the following command:

     `perfstat -v`

     The output of the command shows the versions of different components of the HP Performance Agent and HP GlancePlus. If the version of the component `glance` is listed as lower than `C.04.70`, you must upgrade to the version 4.70 or 5.00 first (or completely remove the installed version of HP GlancePlus) before installing the HP Operations agent 11.00.

Check the Version of coda

If the available coda version on the system is between `10.50.215` and `10.50.245`, it is recommended to take a backup of the coda data by using data analysis tools (like HP Reporter or HP Performance Insight). Before you begin to upgrade, follow these steps:

1   Log on to the node with the root or administrative privileges.

2   Go to the following location:

   •   On Windows: *%ovinstalldir%*`bin`

   •   On HP-UX, Linux, or Solaris: `/opt/OV/bin`

   •   On AIX: `/usr/lpp/OV/bin`

3   Run the following command:

   `ovcodautil -status -verbose`

   The command output displays the version of coda.

   Alternatively, open the `coda.txt` file from the log directory (*%ovdatadir%*`log` on Windows; `/var/opt/OV/log` on UNIX/Linux), and then check the version of coda (next to the statement `Starting CODA`).

4   If the coda version is lower than `10.50.215` or higher than `10.50.245`, proceed with the upgrade. Otherwise, take a backup of the data available in coda by using data analysis tools (like HP Reporter or HP Performance Insight), and then begin the upgrade procedure.

Upgrading on a Solaris SPARC Management Server with Solaris SPARC Managed Nodes

If you use a Solaris SPARC HPOM management server, and if the HP Operations agent 8.60—with the HP Software Security Core (`HPOvSecCo`) component, version 06.20.050—is installed on the management server, you must upgrade the agent on all the Solaris SPARC managed nodes in the environment to the version 11.00, and then upgrade the agent on the

management server to the version 11.00. Otherwise, the communication between the agent on the Solaris SPARC node (with the agent 8.60) and the management server (with the agent 11.00) will fail until you upgrade the agent on the management server to the version 11.00.

In addition, you must apply the hotfix `QCCR1A97520` on the management server before upgrading the agent on any of the SPARC managed nodes in the environment to the version 11.00.

If you use the SPARC HPOM management server with SPARC nodes, follow these steps:

1 Log on to the management server with the `root` privileges.

2 Run the following command to check the version of the HP Software Security Core (`OvSecCo`) component on the management server:

   `strings /opt/OV/lib/libOvSecCore.so | grep FileV`

   If the command output shows the version of `HPOvSecCo` as 06.20.050, go to step 3. Otherwise, continue with upgrading the HP Operations agent by following the instructions in Upgrading the Agent on page 72.

3 If the version of `HPOvSecCo` is 06.20.050, apply the hotfix `QCCR1A97520` on the management server. Contact HP Support to obtain this hotfix.

   ▶ If the management server runs as a resource group on in a high availability cluster, apply the hotfix on all nodes in the cluster.

   This hotfix ensures that the SPARC nodes with the HP Operations agent 11.00 can communicate with the SPARC management server that includes the `HPOvSecCo` component, version 06.20.050.

   If you do not install this hotfix on the SPARC management server, the SPARC nodes with the HP Operations agent 11.00 cannot communicate with the SPARC management server until you upgrade the agent on the management server to the version 11.00.

4 Verify that the version of the `HPOvSecCo` component on the management server is upgraded to 06.20.077 by running the following command:

   `strings /opt/OV/lib/libOvSecCore.so | grep FileV`

   The command output shows the version of the `HPOvSecCo` component as 06.20.077.

5 Install the HP Operations agent 11.00 on all SPARC nodes in the environment.

6 Upgrade the agent on the management server to the version 11.00 by following the instructions in Upgrading the Agent on page 72.

Upgrading the Agent

After verifying that all the prerequisites are met, you can upgrade the agent to the HP Operations agent 11.00 by following the instructions in available in Installing the HP Operations Agent on page 27.

Table 4 lists possible upgrade scenarios.

Table 4   Agent Upgrade Scenarios

Upgrade Scenarios	Tasks	Additional Information
• Upgrading an HPOM-managed node with only the HP Operations agent • Upgrading an HPOM-managed node with the HP Operations agent and HP Performance Agent. • Upgrading an HPOM-managed node with the HP Operations agent, HP Performance Agent, and HP GlancePlus.	1 Make sure all node prerequisites are met. See Prerequisites on page 27. 2 Make sure all upgrade prerequisites are met. See Checks Before Upgrade on page 70. 3 Install the HP Operations agent 11.00. See Installing the HP Operations Agent in an HPOM-Managed Environment on page 36.	While using the `oainstall` or `oasetup` program, you need not specify the details of the management server or certificate server. If you want to use a management server (or certificate server) different from the original one, you can specify the FQDN of the new management server while running the `oainstall` or `oasetup` program. The new management server takes effect as soon as the upgrade is complete.
• Upgrading a standalone node with only the HP Performance Agent. • Upgrading a standalone node with only HP GlancePlus. • Upgrading a standalone node with the HP Performance Agent and HP GlancePlus.	1 Make sure all node prerequisites are met. See Prerequisites on page 27. 2 Make sure all upgrade prerequisites are met. See Checks Before Upgrade on page 70. 3 Install the HP Operations agent 11.00. See Installing the HP Operations Agent on a Standalone System on page 57.	At a later time, you can configure the node with an HPOM management server by running the `oainstall` program with the `-configure` option.

If you install the agent 11.00 on a node with only an older version of the HP Operations agent (without the HP Performance Agent), you can use the enhanced data store to log the data collected by different HP Operations Smart Plug-ins (SPIs).

To facilitate the SPIs to log the data into the log file-based data store, follow these steps:

▶ If the system is a shared WPAR where you installed the HP Operations agent by using the `syncwpar` or `syncroot` command, skip this procedure.

1 Log on to the node with the root or administrative privileges.

2 Go to the following location:
   • On Windows: *%ovdatadir%*`dsi2ddf`
   • On UNIX/Linux: `/var/opt/OV/dsi2ddf`

3 Remove the `nocoda.opt` file.

4 Go to the following location:

- On Windows: *%ovinstalldir%*`bin`

- On HP-UX, Linux, or Solaris: `/opt/OV/bin`

- On AIX: `/usr/lpp/OV/bin`

5 Restart the agent by running the following commands:

a **opcagt -stop**

b **opcagt -start**

If the node is monitored by multiple SPIs, and if you want different SPIs to log data into different data stores (log file-based data store and coda), see the SPI documentation.

On Shared WPAR

If you install the agent on a shared WPAR by using `syncwpar` or `syncroot`, the `nocoda.opt` file is not automatically created. Therefore, if only an older version of the HP Operations agent (8.53 or 8.60) existed on the shared WPAR, data logging mechanism for SPIs on the shared WPAR automatically switches to the log file-based data store. If you do not want the SPIs on the shared WPAR to use the new data store, manually create a file (without any content), and then save the file as `nocoda.opt` into the `/var/opt/OV/dsi2ddf` directory.

6 Applying Licenses

Based on the type of installation, an evaluation license (available for 60 days) or a permanent license is enabled on the HP Operations agent node. In an environment where HPOM is not present, the HP Operations agent installation on a standalone server enables the evaluation license. A remote installation using the HPOM console enables a permanent license on the node.

The `oalicense` utility helps you enable a permanent license. You can migrate from one type of license to another with the help of the `oalicense` utility.

Types of Licenses

You can use the HP Operations agent with one of the following types of licenses:

- Evaluation License
- Extended License
- Permanent License

Evaluation License

If you install the product on a standalone node, the HP Operations agent installation places an evaluation license on the node. This license enables all the modules and components of the HP Operations agent for 60 days. The evaluation license takes effect when the HP Operations agent is started after installation. After 60 days, the evaluation license expires and disables the product. To continue using the product, apply for a permanent license or an extension of the evaluation license.

Extended License

You can use the HP Operations agent in the evaluation mode for a longer period by extending the validity period of the evaluation license. After extending the evaluation license, you can use the features provided with the LTU for 60 more days. You cannot extend an evaluation license more than twice. When you try to extend an evaluation license for a third time, an error message appears indicating that the license has reached its maximum extension limit.

Permanent License

The HP Operations agent permanent license does not expire after any specific duration. Based on your requirement, this license enables you to choose from the available **Licenses to Use** (**LTUs**).

The HP Operations agent 11.00 provides you with the real-time diagnostic and monitoring capabilities with the following add-in modules:

- Real-Time Metric Access (RTMA)—enables you to access system performance metrics on a real-time basis. You can monitor the real-time performance metrics of remote machines by using the `cpsh` utility, which is presented by the RTMA component.

- Real-Time Measurement (RTM)—enables you to monitor the real-time system performance metrics from the rich interface provided by the Diagnostic View tab of HP Performance Manager 9.00.

- GlancePlus Software—enables you to monitor your system's performance in real time, with the help of graphical and tabular representation of data.

You can use all or a combination of the above modules with different LTUs. See LTUs for the HP Operations Agent 11.00 on page 76 for more information on LTUs.

LTUs for the HP Operations Agent 11.00

The evaluation license enables temporarily all the features of the HP Operations agent including the RTM component, RTMA component, and the GlancePlus software for a 60-day trial period. After the evaluation license expires, you can apply one of the following **licenses to use** (**LTUs**) for the HP Operations agent product:

- HP Operations OS Inst Adv SW LTU

- HP Operations OS Inst Performance LTU

- HP Ops OS Inst to Realtime Inst LTU

- HP Ops OS Inst Perf to OS Inst Adv LTU

- Glance Software LTU

- Glance Pak Software LTU

HP Operations OS Inst Adv SW LTU

This LTU enables you to use all the components of the HP Operations agent except the following components: RTM, RTMA, and GlancePlus.

Figure 2 highlights the components enabled by the HP Operations OS Inst Adv SW LTU.

Figure 2   Components Enabled with the HP Operations OS Inst Adv SW LTU
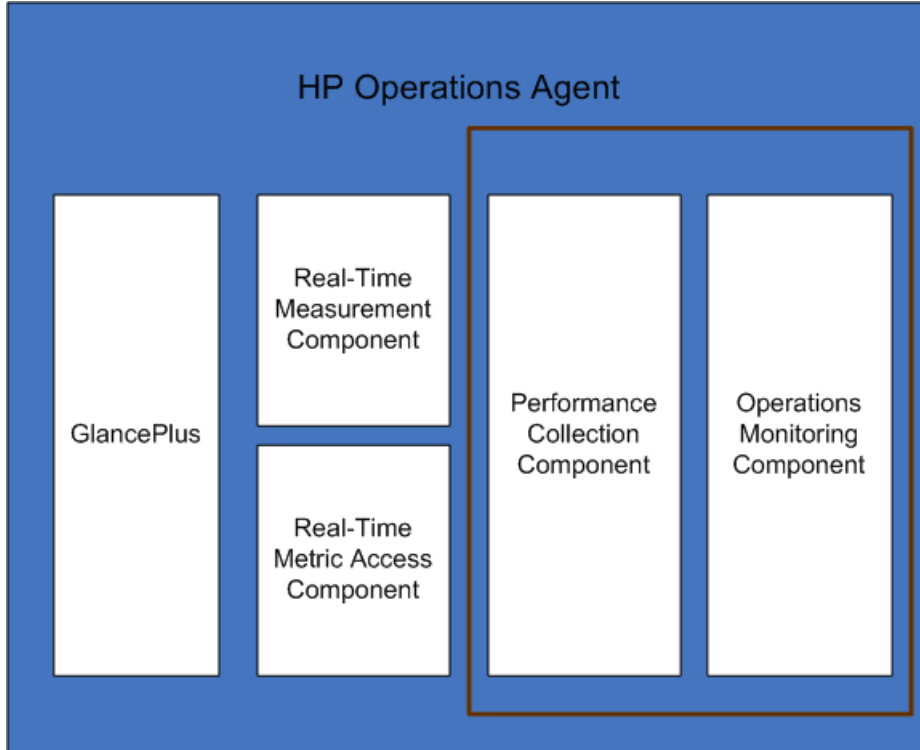
Additional Versions

The HP Operations OS Inst Adv SW LTU is available in the following additional versions:

- **HP Operations OS Inst Adv NP FO SW LTU**: If you want to monitor systems that are running in a failover cluster setup, you must install the HP Operations agent on all the nodes in the cluster. You can use the HP Operations OS Inst Adv NP FO SW LTU on nodes in the cluster that are not active. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

- **HP Operations OS Inst Adv NP DV SW LTU**: If you want to install the HP Operations agent on test systems (for the planning and evaluation purpose), use the HP Operations OS Inst Adv NP DV SW LTU. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

HP Operations OS Inst Performance LTU

This LTU enables you to use only the Performance Collection Component component of the HP Operations agent. This LTU enables you to monitor the performance of a standalone system.

Figure 3 highlights the components enabled by the HP Operations OS Inst Performance LTU.

Figure 3   Components Enabled by the HP Operations OS Inst Performance LTU

HP Ops OS Inst to Realtime Inst LTU

This LTU enables you to use all the features of the HP Operations agent with the RTM and RTMA components, but does not include the GlancePlus software. After applying this LTU, you can integrate the HP Operations agent 11.00 with HP Performance Manager 9.00 and view the real-time system data collected by the HP Operations agent from multiple nodes in the Diagnostic View tab of HP Performance Manager 9.00. In addition, you can use the cpsh utility to view the real-time system data collected by the HP Operations agent from different nodes.

Before you apply this LTU, make sure that the HP Operations OS Inst Adv SW LTU is already applied on the node.

Figure 4 highlights the components enabled by the HP Ops OS Inst to Realtime Inst LTU.

Figure 4   Components Enabled by the HP Ops OS Inst to Realtime Inst LTU
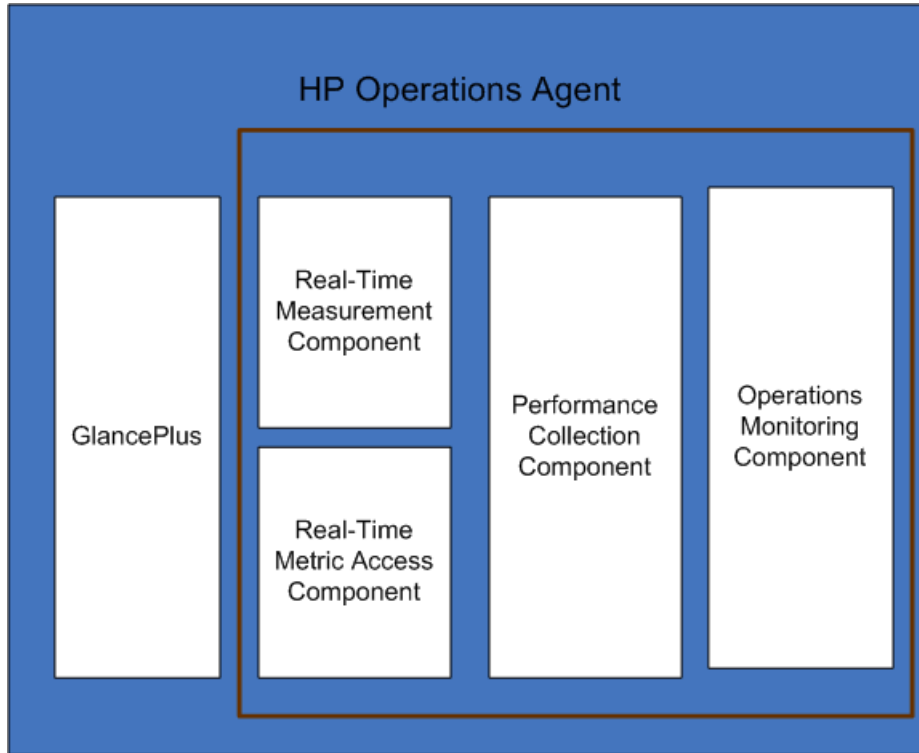
Additional Versions

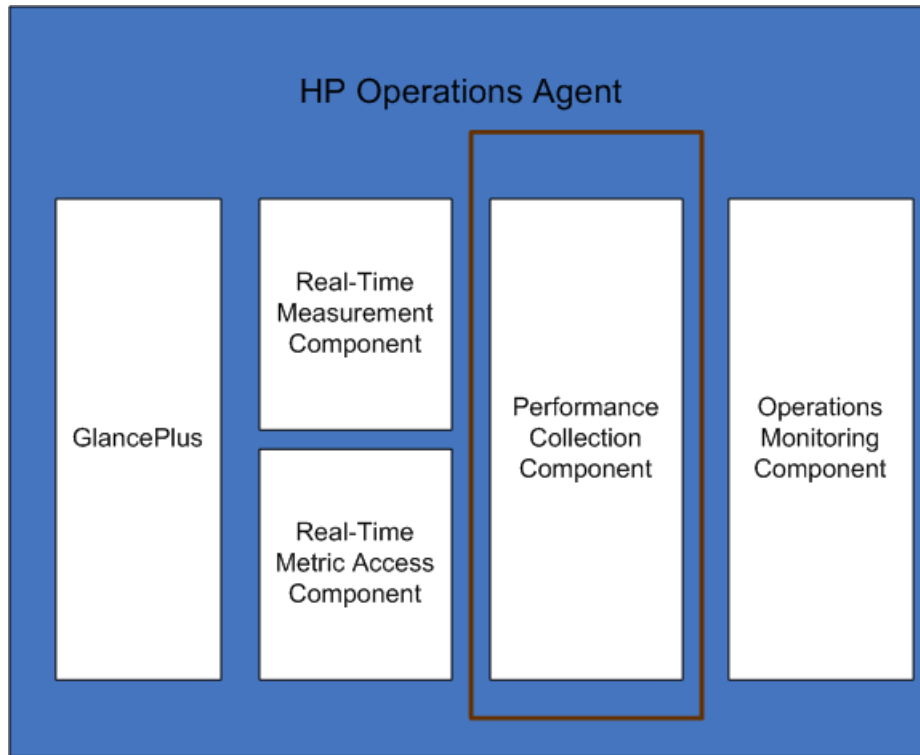The HP Ops OS Inst to Realtime Inst LTU is available in the following additional versions:

- **HP Ops OS Inst to Realtime Inst NP FO LTU**: If you want to monitor systems that are running in a failover cluster setup, you must install the HP Operations agent on all the nodes in the cluster. You can use the HP Ops OS Inst to Realtime Inst NP FO LTU on nodes in the cluster that are not active. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

- **HP Ops OS Inst to Realtime Inst NP DV LTU** : If you want to install the HP Operations agent on test systems (for the planning and evaluation purpose), use the HP Ops OS Inst to Realtime Inst NP DV LTU . This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

HP Ops OS Inst Perf to OS Inst Adv LTU

This LTU enables you to upgrade the existing HP Operations OS Inst Performance LTU on a standalone server to HP Operations OS Inst Adv SW LTU, to use the features of the HP Operations agent except the following components: RTM, RTMA, and GlancePlus. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

Additional Versions

The HP Ops OS Inst Perf to OS Inst Adv LTU is available in the following additional versions:

- **HP Perf to OS Inst Adv Upg Software NP FO SW LTU**: If you want to monitor systems that are running in a failover cluster setup, you must install the HP Operations agent on all the nodes in the cluster. You can use the HP Perf to OS Inst Adv Upg Software NP FO SW LTU on nodes in the cluster that are not active. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

- **HP Perf to OS Inst Adv Upg Software NP DV SW LTU**: If you want to install the HP Operations agent on test systems (for the planning and evaluation purpose), use the HP Perf to OS Inst Adv Upg Software NP DV SW LTU. This LTU can be used only in the permanent mode; you cannot use this LTU for evaluation.

► Because the GlancePlus software is supported only on UNIX/Linux platforms, you can apply this LTU only on UNIX/Linux nodes.

This LTU enables only the GlancePlus software and the RTMA component on the node. If you enable only this LTU on a node, you can use only the GlancePlus software with the RTMA component on the node. With this LTU, you can use the `cpsh` utility to view the real-time system data collected by the HP Operations agent from different nodes. You cannot use other standard features offered by the HP Operations agent.

Figure 5 highlights the components enabled by the Glance Software LTU.

Figure 5   Components Enabled by the Glance Software LTU
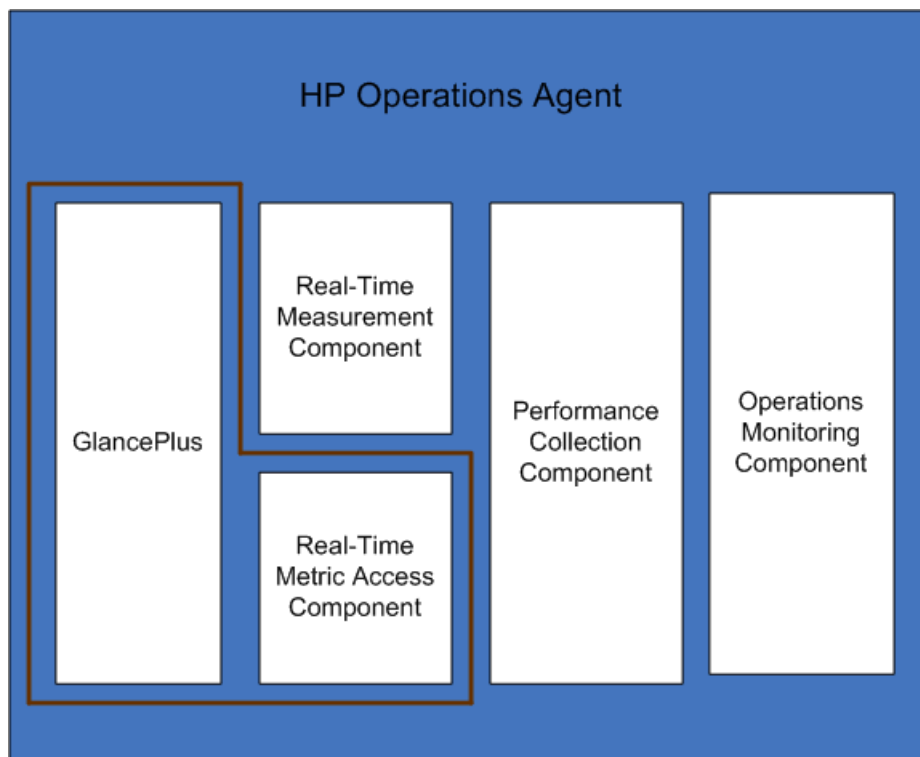
► Because the GlancePlus software is supported only on UNIX/Linux platforms, you can apply this LTU only on UNIX/Linux nodes.

This LTU enables you to use only the Performance Collection Component component of the HP Operations agent along with the GlancePlus software and the RTMA component. With this LTU, you can use the `cpsh` utility to view the real-time system data collected by the HP Operations agent from different nodes.

Figure 6 highlights the components enabled by the Glance Pak Software LTU.

Figure 6   Components Enabled by the Glance Pak Software LTU
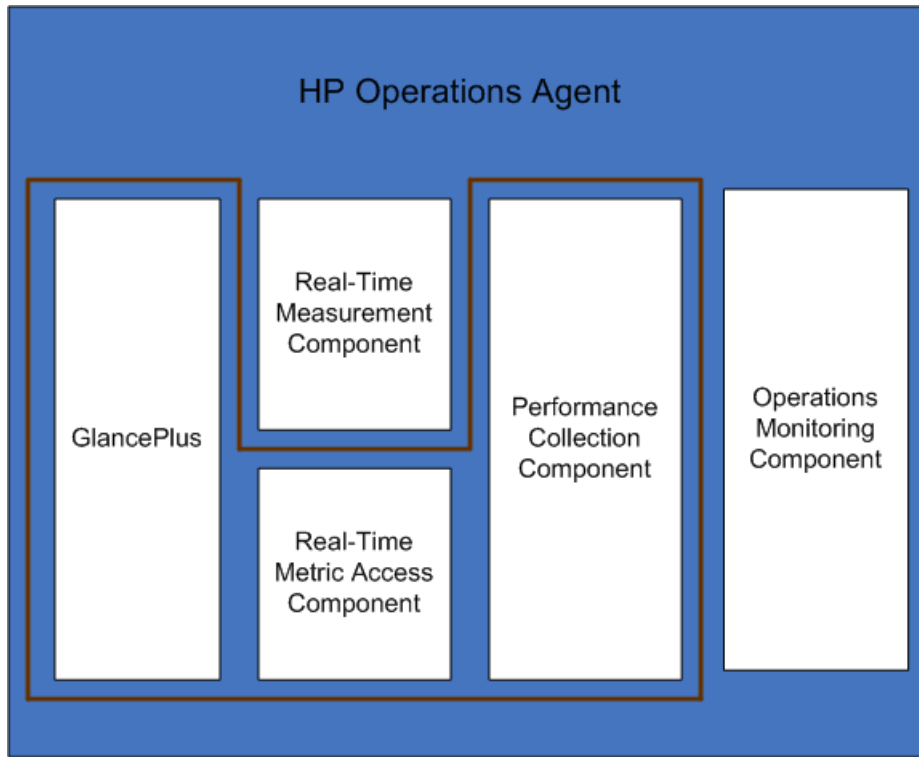
Comparison Matrix for LTUs

Table 5 lists the HP Operations agent components presented by different LTUs.

Table 5   LTU Comparison Matrix

LTU vs. Components	Operations Monitoring Component	Performance Collection Component	RTM	RTMA	Glance Plus
HP Operations OS Inst Adv SW LTU	✓	✓	X	X	X
HP Ops OS Inst to Realtime Inst LTU	✓	✓	✓	✓	X
HP Operations OS Inst Performance LTU	X	✓	X	X	X

Table 5   LTU Comparison Matrix

LTU vs. Components	Operations Monitoring Component	Performance Collection Component	RTM	RTMA	Glance Plus
HP Ops OS Inst Perf to OS Inst Adv LTU	✓	✓	X	X	X
On UNIX/Linux nodes only. Glance Software LTU	X	X	X	✓	✓
On UNIX/Linux nodes only. Glance Pak Software LTU	X	✓	X	✓	✓

Availability of Add-in Modules with Different LTUs

The evaluation license enables the HP Operations agent with the RTM and RTMA components and the GlancePlus software on the node. However, if you do not apply a permanent license within 60 days after installation (or extend the evaluation license), the HP Operations agent (with RTM, RTMA, and GlancePlus) will be rendered ineffective. You can make a selection from six different LTUs. You can enable the HP Operations agent with a combination of the add-in modules (RTM, RTMA, or GlancePlus) on the node by using one of these LTUs.

Table 6 lists the availability of the add-in modules for different LTUs for the HP Operations agent.

Table 6   Add-in Modules with Different LTUs

LTU	GlancePlus Software	RTM	RTMA
HP Operations OS Inst Adv SW LTU	No	No	No
a HP Operations OS Inst Performance LTU	No	No	No
HP Ops OS Inst Perf to OS Inst Adv LTU	No	No	No
HP Ops OS Inst to Realtime Inst LTU	No	Yes	Yes
b Glance Pak Software LTU	Yes	No	Yes
c Glance Software LTU	Yes	No	Yes

a) If you enable only the HP Operations OS Inst Performance LTU, you cannot use any standard feature of the HP Operations agent other than the Performance Collection Component component.

b) If you enable only the Glance Pak Software LTU, you cannot use any standard feature of the HP Operations agent other than the Performance Collection Component, GlancePlus software, and the RTMA component.

c) If you enable only the Glance Software LTU, you cannot use any standard feature of the HP Operations agent other than the GlancePlus software with the RTMA component.

Applying a Permanent License

Based on the type of installation, the evaluation license or the permanent license for HP Operations OS Inst Adv SW LTU is enabled on the node. The evaluation license remains in effect for 60 days after installation, and then the product (with all add-in modules) stops working on the node. To continue working with the product, you must enable a permanent license on the node.

Apply Manually on a Node

To apply a permanent license on a standalone HP Operations agent node, follow these steps:

1   Install the HP Operations agent on the node.

The HP Operations agent is installed with the evaluation licenses for all LTUs.

> If the node resides in an HPOM-managed environment, you can install the HP Operations agent using the -s and -cs options to configure a management server for the node (see Installing the HP Operations Agent Manually on the Node on page 43). Use of these options invokes the licensing tool to enable the HP Operations OS Inst Adv SW LTU.

2   To apply a permanent license, go to the command prompt (shell).

3   To enable the appropriate license for an LTU of your choice, do the following:

- To enable the license for the HP Operations OS Inst Adv SW LTU, run the following command:

  `oalicense -set -type PERMANENT "HP Operations OS Inst Adv SW LTU"`

  This command applies the permanent license for the Operations Monitoring Component and Performance Collection Component of the HP Operations agent. The add-in modules stop functioning after the validity period of the evaluation license expires.

- To use the RTM and RTMA components with the Operations Monitoring Component and Performance Collection Component, run the following command:

  `oalicense -set -type PERMANENT "HP Ops OS Inst to Realtime Inst LTU"`

  This command upgrades the permanent license for all the HP Operations OS Inst Adv SW LTU to HP Ops OS Inst to Realtime Inst LTU and enables the RTM and RTMA components on the node. The other add-in module (GlancePlus) stops functioning after the validity period of the evaluation license expires.

- To enable the license for the HP Operations OS Inst Performance LTU, run the following command:

  `oalicense -set -type PERMANENT "HP Operations OS Inst Performance LTU"`

This command applies the permanent license for the Performance Collection Component of the HP Operations agent. The Operations Monitoring Component and other add-in modules stop functioning after the validity period of the evaluation license expires.

- *On UNIX/Linux nodes only*. To enable the license for the Glance Pak Software LTU, run the following command:

  `oalicense -set -type PERMANENT "Glance Pak Software LTU"`

  This command applies the permanent license only to the Performance Collection Component, GlancePlus software, and RTMA component.

- *On UNIX/Linux nodes only*. To enable the license for the Glance Software LTU, run the following command:

  `oalicense -set -type PERMANENT "Glance Software LTU"`

  This command applies the permanent license only to the GlancePlus software and the RTMA component on the node.

4   To check the details of LTUs on the node, run the following command:

`oalicense -get -all`

The command shows the LTU details in the following format:

LICENSE NAME	TYPE	ACTIVATION	EXPIRY	EXTN

The command presents the following details:

- **LICENSE NAME:** Name of the LTU
- **TYPE:** Type of the LTU (permanent, evaluation, or extended)
- **ACTIVATION:** Date when the LTU was enabled (in the `mm/dd/yyyy` format)
- **EXPIRY:** Validity period of the license (when the type is not permanent)
- **EXTN:** Count of extending the evaluation license

5   Start all the processes on the node with the following command:

`opcagt -start`

If required, you can enable an evaluation license instead of the permanent license on the node in an HPOM-managed environment. To enable an evaluation license on the node, do *one* of the following:

- Log on to the node locally and run the following command:

  `oalicense -set -type EVALUATION "<LTU_name>"`

- To enable the evaluation license using a tool on multiple nodes, follow these steps:

  a   Log on to the HPOM management server.

  b   Create a new tool with the following details:

  –   Set the command or tool call to `oalicense`.

  –   Set the parameters to

  `-set -type EVALUATION "<LTU_name>"`

  –   Set the target to the selected node.

  c   Run the tool on the nodes of your choice.

You can use the `-get` option with the `oalicense` command to view the details of LTUs on a node. You can use the `-all` option with the `-get` option to view the details of all LTUs on a node. Alternatively, you can specify an LTU name as an argument to view the details of a particular LTU on the node.

When you run the command **`oalicense -get "HP Operations OS Inst Adv SW LTU"`** where the HP Operations OS Inst Adv SW LTU is enabled with the permanent type, the following message appears:

LICENSE NAME	TYPE	ACTIVATION	EXPIRY	EXTN
HP Operations OS Inst Adv SW LTU	PERMANENT	09/08/2009	11/08/2009	N/A

Apply Centrally from a Management Server

If you install the HP Operations agent remotely on a node from the HPOM management server or manually on the node with the management server details, automatically the HP Operations OS Inst Adv SW LTU gets enabled permanently on the node. In addition, the HP Ops OS Inst to Realtime Inst LTU and Glance Software LTU are set with the evaluation type (which expire after 60 days). If you want to enable a different type of license on the node, you must perform additional steps.

Apply from the HPOM for Windows Console

To enable an LTU other than the default LTUs on the node, follow these steps:

1   Log on to the HPOM management server.

2   In the console tree, expand **Tools**, and then click **HP Operations Agent**. The list of tools available with the HP Operations agent 11.00 deployment package appears in the details pane.

3   Launch the Set Realtime Permanent License tool on the nodes where you want to enable the permanent license for the HP Ops OS Inst to Realtime Inst LTU.

4   Launch the Set Glance Permanent License tool on the nodes where you want to enable the permanent license for the Glance Software LTU.

5   After you launch the tools to apply licenses, you must launch the Restart Agent tool to start the necessary processes on all nodes.

Apply from the HPOM on UNIX/Linux 9.xx Console

To enable an LTU other than the default LTUs on the node, you must create a tool to run the `oalicense` command on a node (or a group of nodes). To create a new tool, follow these steps:

1   Log on to the HPOM Operational UI.

2   In the left pane, select the node or node group where you want to apply the license.

3   To enable the permanent license for the HP Ops OS Inst to Realtime Inst LTU, right-click and click **Start > HP Operations-agent > Set Realtime Permanent License**.

4   To enable the permanent license for the Glance Software LTU, right-click and click **Start > HP Operations-agent > Set Glance Permanent License**.

5   Launch the Restart Agent tool to start the necessary processes on all nodes.

To enable an LTU other than the default LTUs on the node, you must create an application (tool) to run the `oalicense` command on a node (or a group of nodes). To create a new tool, follow these steps:

1   Log on to the HPOM for UNIX server.

2   Log on to the HPOM for UNIX console.

3   Go to the OVO Application Bank window.

4   Click **Actions > Application > Add OVO Application**. The Add OVO Application dialog box opens.

5   In the Add OVO Application dialog box, specify the following details:

   • Specify a name in the Application Name box.

   • Type **oalicense** in the Application Call box.

   • In the Additional Parameters box, type **-set -type PERMANENT "HP Ops OS Inst to Realtime Inst LTU"** to enable the HP Ops OS Inst to Realtime Inst LTU. Type **-set -type PERMANENT "Glance Software LTU"** to enable the Glance Software LTU.

   • Select the **Start on Target Node(s) selected by Operator** option.

   • In the Execute as User section, specify the user name and password of the user with which the HP Operations agent is running on the node.

   • Set Presentation to **Window (Output only)**.

6   Click **OK**.

You can now launch the application from the HPOM for UNIX console. After running the application on nodes, you must run the **opcagt -start** command to start the necessary processes on all nodes.

Extend the Validity Period of the Evaluation License

You can extend the validity period of the evaluation license by 60 more days. You can extend the validity period of the evaluation license twice, which enables you to evaluate the product for up to 180 days.

To extend the validity period of the evaluation license, follow these steps:

1   Log on with the administrative or root privileges.

2   Perform one of the following steps:

   • *On Windows*

      Go to the location *%ovinstalldir%*`bin`.

   • *On HP-UX, Linux, and Solaris*

      Go to the location `/opt/OV/bin`.

   • *On AIX*

      Go to the location `/usr/lpp/OV/bin`.

3   Check the status of the evaluation LTUs by running the following command:

   On Windows

oalicense -get -all

On UNIX/Linux

./oalicense -get -all

The command displays the details of all the LTUs that are enabled on the system—including the status of all evaluation licenses. The command shows the details in the following format:

```
LICENSE NAME        TYPE         ACTIVATION         EXPIRY          EXTN
------------------  -----------  -----------------  --------------  -----
<LTU_Name>          EVALUATION   <Installation_Date> <Expiry_Date>   0
```

Note down the evaluation LTUs that you want to use beyond the validity period.

4 *Optional.* Review the output of the command and make sure that the evaluation LTUs (which you are going to extend) were in use for nearly 60 days.

> ▶ If you extend the validity period of an evaluation LTU sooner than 60 days from installation, you will forfeit the use of the LTU for the remaining days before the original 60-day long validity period actually expires. You will be able to use the LTU only for 60 more days without interruptions from the day you extend the evaluation LTU. However, you can extend the validity period of the evaluation LTU for a second time, which will enable you to use the evaluation LTU for another 60 days.

5 Run the following command:

On Windows

oalicense -extend -type EVALUATION "*<LTU_Name>*"

On UNIX/Linux

./oalicense -extend -type EVALUATION "*<LTU_Name>*"

In this instance:

<LTU_Name> is the name of the LTU.

6 Check the status of the LTUs by running the following command:

On Windows

oalicense -get -all

On UNIX/Linux

./oalicense -get -all

The command shows the details in the following format:

```
LICENSE NAME        TYPE         ACTIVATION         EXPIRY          EXTN
------------------  -----------  -----------------  --------------  -----
<LTU_Name>          EVALUATION   <Installation_Date> <Expiry_Date>   1
```

You will notice that the expiry date of the LTU is shifted by 60 days ahead of the original expiry date. The EXTN columns indicates the extension count of the LTU.

Example

After installation, the list of enabled LTUs appear in the following format when you run the `oalicense -get -all` command:

```
LICENSE NAME                   TYPE         ACTIVATION   EXPIRY      EXTN

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

HP Operations OS Instance      EVALUATION   03/Jun/2010  02/Aug/2010 0
Software LTU

HP Glance OS Instance LTU      EVALUATION   03/Jun/2010  02/Aug/2010 0

HP Operations Real-Time UpG OS EVALUATION   03/Jun/2010  02/Aug/2010 0
Instance Software LTU
```

After you extend the HP Operations OS Instance Software LTU for 60 more days, the following output appears when you run the `oalicense -get -all` command:

```
LICENSE NAME                   TYPE         ACTIVATION   EXPIRY      EXTN

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

HP Operations OS Instance      EVALUATION   03/Jun/2010  02/Oct/2010 1
Software LTU

HP Glance OS Instance LTU      EVALUATION   03/Jun/2010  02/Aug/2010 0

HP Operations Real-Time UpG OS EVALUATION   03/Jun/2010  02/Aug/2010 0
Instance Software LTU
```

Generate Alerts

You can use the -expiryAlerts option with the oalicense command to view the number of days for which the evaluation license will remain valid.

With the help of the ALERT_LTU_EXPIRY_DAYS 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.

By default, this variable is set to 7, 4, 1.

Upgrading to the HP Operations Agent 11.00

You can upgrade to the HP Operations agent 11.00 from one product or a combination of the following products:

- HP Operations agent
- HP Performance Agent
- HP GlancePlus

After you perform the upgrade, the old LTU is automatically upgraded to an HP Operations agent LTU. The licensing mechanism automatically detects the old LTU that was in use with the old product, and then upgrades to a new LTU.

The Table 7 provides a mapping of the old LTUs against the new LTUs.

Table 7   Automatic LTU Upgrade

Old LTU	Available Products/Features	New LTU	Available Products/Features
GlancePlus LTU	HP GlancePlus	Glance Software LTU	• HP GlancePlus • RTMA
Performance Agent LTU	HP Performance Agent	HP Operations OS Inst Performance LTU	Performance Collection Component
Glance Pak Software LTU	• HP Performance Agent • HP GlancePlus	Glance Pak Software LTU	• Performance Collection Component • RTMA • HP GlancePlus
Operations Agent LTU	HP Operations agent	HP Operations OS Inst Adv SW LTU	• Operations Monitoring Component • Performance Collection Component
OpsPerf Combo LTU	• HP Operations agent • HP Performance Agent	HP Operations OS Inst Adv SW LTU	• Operations Monitoring Component • Performance Collection Component

After automatic upgrade of LTUs, you can use the `oalicense` tool to apply a different LTU on the node.

► If you upgrade to the HP Operations agent 11.00 by installing the agent remotely from the HPOM console, the HP Operations OS Inst Adv SW LTU (permanent) is enabled on the node.

Removing a Permanent License

To remove a permanent license from a node, follow these steps:

1   Log on to a node where the permanent license is enabled.

2   Open a command prompt (shell).

3   Run the following command:

```
oalicense -remove -type PERMANENT <LTU>
```

In this instance, *<LTU>* is the name of the LTU.

The command disables the permanent license for the specified LTUs on the node. To use the components enabled by the LTU again, you must enable the evaluation or permanent license of the LTU on the node by using the `oalicense` command.

Alternatively, to remove all permanent LTUs, run the following command:

```
oalicense -remove -type PERMANENT -all
```

4   Run the following command to start all agent processes:

```
opcagt -start
```

Changing the Existing LTU

With the help of the `oalicense` command, you can change an existing LTU to another one. You can apply more than one LTU on the same node. When you upgrade a node to the HP Operations agent 11.00, the upgrade process automatically upgrades the LTU. However, you must use the `oalicense` tool to enable the RTM and RTMA components on the node in this case.

Example 1

Changing from the HP Operations OS Inst Adv SW LTU to the HP Ops OS Inst to Realtime Inst LTU

If you install the HP Operations agent 11.00 from the HPOM console, automatically the HP Operations OS Inst Adv SW LTU gets enabled. If you want to use the RTM and RTMA components, you must change the HP Operations OS Inst Adv SW LTU to the HP Ops OS Inst to Realtime Inst LTU. To change to the HP Ops OS Inst to Realtime Inst LTU, follow these steps:

1   After installing the HP Operations agent, view the existing LTU with the following command on the node:

```
oalicense -get -all
```

2   Apply the HP Ops OS Inst to Realtime Inst LTU with the following command:

```
oalicense -set -type PERMANENT "HP Ops OS Inst to Realtime Inst LTU"
```

The command upgrades the LTU to the HP Ops OS Inst to Realtime Inst LTU. As a result, you can use the RTM and RTMA components with the HP Operations agent.

Example 2

Changing from the Glance Software LTU to Glance Pak Software LTU

On UNIX/Linux nodes only. If you upgrade an older version of HP GlancePlus to the HP Operations agent 11.00, the LTU gets automatically upgraded to the Glance Software LTU. If you want to use the features of the HP Operations agent 11.00 along with HP GlancePlus 11.00, follow these steps:

1   After upgrading to the HP Operations agent 11.00, view the existing LTU with the following command on the node:

```
oalicense -get -all
```

The command lists only the Glance Software LTU.

2 Apply the Glance Pak Software LTU with the following command:

```
oalicense -set -type PERMANENT "Glance Pak Software LTU"
```

The command enables the Glance Pak Software LTU.

3 View the list of LTUs with the following command:

```
oalicense -get -all
```

The command lists the following LTUs: Glance Software LTU and Glance Pak Software LTU.

4 Since the Glance Pak Software LTU combines the features of HP GlancePlus 11.00 with the Performance Collection Component, you can remove the Glance Software LTU. To remove the Glance Software LTU, run the following command:

```
oalicense -remove -type PERMANENT "Glance Software LTU"
```

7 Getting Started with the HP Operations Agent

By default, all the necessary processes and services of the HP Operations agent start after installation. Follow this chapter for the information on starting and stopping the agent processes manually.

Starting the HP Operations Agent

To start the HP Operations agent, follow these steps:

1 Log on to the HP Operations agent node with the root (UNIX) or administrative (Windows) privileges.

2 Go to the command prompt (shell).

3 Run the following command:

   opcagt -start

   The command starts all the processes of the HP Operations agent.

4 To see the status of the processes, run the following command:

   opcagt

Stopping the HP Operations Agent

To stop the HP Operations agent, follow these steps:

1 Log on to the HP Operations agent node with the root (UNIX) or administrative (Windows) privileges.

2 Go to the command prompt (shell).

3 Run the following commands:

   a   **opcagt -stop**

   b   **ttd -k**

   The commands stop all the processes of the HP Operations agent.

   📢   To see the status of the processes, run the **opcagt** command.

However, if you did not install the agent with the `manual_start_on_reboot` option, the HP Operations agent starts running automatically when you restart the system.

To prevent the agent from starting all its processes automatically in the event of system restart, follow these steps:

> Skip this procedure if you already installed the agent with the `manual_start_on_reboot` option.

a   Go to the following location:

On Windows

%ovinstalldir%`bin\OpC\install`

On HP-UX, Linux, or Solaris

`/opt/OV/bin/OpC/install`

On AIX

`/usr/lpp/OV/bin/OpC/install`

b   Run the following command:

On Windows

cscript oainstall.vbs -configure manual_start_on_reboot

Or

oasetup -configure manual_start_on_reboot

On HP-UX, Linux, Solaris, or AIX

./oainstall.sh -configure manual_start_on_reboot

Stopping Unnecessary Processes

If you do not want to use all the components of the HP Operations agent, you can run specific commands to stop unnecessary processes. Stopping unnecessary processes is useful when you are upgrading only from the HP Operations agent, HP Performance Agent, or HP GlancePlus and you do not want to use the other components of the HP Operations agent 11.00.

- **When you are upgrading from the HP Operations agent only**

In this scenario, you can stop the `rtmd` process if you do not want to use the Performance Collection Component and RTM.

The simplest way to stop the `rtmd` process is running the **ovc -stop rtmd** command. However, the `rtmd` process starts running again when you restart the system. Therefore, it is important to unregister the process from the `control` component instead of just stopping its operation.

Perform the following steps to unregister the `rtmd` process:

a   Log on to the node as root or administrator.

b   Go to the following directory:

On Windows

`%ovinstalldir%bin`

On HP-UX, Linux, or Solaris

`/opt/OV/bin`

On AIX

`/usr/lpp/OV/bin`

c   Run the following command:

`ovcreg -del rtmd`

The command stops the `rtmd` process and unregisters the `rtmd` process from the `control` component.

> The Performance Collection Component processes (such as `midaemon`, `ttd`, and so on) still continue to run on the node. Even when you do not want to use the Performance Collection Component, it is recommended that you do not stop those processes.

- **When you are upgrading from the HP Performance Agent only**

In this scenario, you can stop the `rtmd` process if you do not want to use RTM.

The simplest way to stop the `rtmd` process is running the **`ovc -stop rtmd`** command. However, the `rtmd` process starts running again when you restart the system. Therefore, it is important to unregister the process from the `control` component instead of just stopping its operation.

Perform the following steps to unregister the `rtmd` process:

a   Log on to the node as root or administrator.

b   Go to the following directory:

On Windows

`%ovinstalldir%bin`

On HP-UX, Linux, or Solaris

`/opt/OV/bin`

On AIX

`/usr/lpp/OV/bin`

c   Run the following command:

`ovcreg -del rtmd`

The command stops the `rtmd` process and unregisters the `rtmd` process from the `control` component.

- **When you are upgrading from HP GlancePlus only**

HP GlancePlus does no require the `ovc` process. When you want to run only HP GlancePlus (and no other components of the HP Operations agent 11.00), follow these steps:

a   Log on to the node as root.

b   Go to the following directory:

On HP-UX, Linux, or Solaris

`/opt/OV/bin`

On AIX

`/usr/lpp/OV/bin`

c Run the following command stop all agent processes (including processes for the Performance Collection Component):

opcagt -kill

This command stops all HP Operations agent processes.

d Run the following command to restart the `midaemon` process:

On HP-UX, Linux, or Solaris

/opt/perf/bin/midaemon

On AIX

/usr/lpp/perf/bin/midaemon

e Run the following command to restart the `perfd` process:

On HP-UX, Linux, or Solaris

/opt/perf/bin/perfd

On AIX

/usr/lpp/perf/bin/perfd

f The `ovc` process is already stopped by the command that was run in step c on page 96. However, the `ovc` process starts running again when you restart the system.

Run the following command to stop the `ovc` process from starting its operation when the system is restarted:

On HP-UX, Linux, or Solaris

/opt/OV/bin/ovconfchg -ns ctrl -set START_ON_BOOT false

On AIX

/usr/lpp/OV/bin/ovconfchg -ns ctrl -set START_ON_BOOT false

The `ovc` process does not start anymore after you restart the system.

Perform step g through step i to stop the Performance Collection Component component from starting its operation when the system is restarted

g Go to the following location:

On Linux

`/etc/sysconfig`

On HP-UX

`/etc/rc.config.d`

On Solaris and AIX

`/etc/default`

h Open the `ovpa` file with a text editor.

i   Set the variable OVPA_START to 0, and then save the ovpa file.

▶   If the ttd process does not start after you restart the system, run the following command:

On HP-UX, Linux, or Solaris

/opt/perf/bin/ttd

On AIX

/usr/lpp/perf/bin/ttd

A Installation Troubleshooting

This section helps you troubleshoot installation problems and provides you with information to help you avoid problems from occurring.

Areas covered in this section include:

- Installing the HP Operations agent deployment packages on the management server.
- Removing the HP Operations agent deployment packages from the management server.
- Installing the HP Operations agent on a node.

Installing HP Operations Agent Deployment Packages

- After you run the `oainstall` command to install HP Operations agent 11.00 deployment packages, the installation process terminates without proceeding further.

Possible Causes:

- — Cause 1: Insufficient disk space
- — Cause 2: The user does not have the administrative or root privileges
- — Cause 3: The selected platform is not supported by the HP Operations agent 11.00
- — Cause 4: HPOM is not running

Solutions:

- — Solution 1: Make sure that the system has enough disk space (as specified in Prerequisites on page 16).
- — Solution 2: Log on with a user with the administrative or root privileges
- — Solution 3: Check if the selected platform is supported by the HP Operations agent 11.00.
- — Solution 4: Make sure that HPOM is running.

- Installation of deployment packages fails with one of the following error messages:

```
ERROR:    Pre-requisite patch for PA windows is not installed.
INFO:     Please install the latest PA deployable patch for windows
```

or

```
ERROR:    Pre-requisite patch for PA AIX is not installed.
INFO:     Please install the latest PA deployable patch for AIX
```

Possible Causes:

On the management server, HP Performance Agent 4.70 deployable for Windows or AIX is installed. The HP Operations agent 11.00 installer cannot install deployment packages on the management server if the HP Performance Agent 4.70 deployable for Windows or AIX is present (see Prerequisites on page 16).

Solutions:

— Solution 1: Install the HP Performance Agent **4.72** deployable for Windows or AIX on the management server before installing HP Operations agent 11.00 deployment packages.

— Solution 2: Remove the HP Performance Agent 4.70 deployable completely from the management server. Availability of the HP Performance Agent deployable on the management server is not a prerequisite for installing HP Operations agent 11.00 deployment packages.

Removing the HP Operations Agent Deployment Packages

After you run the **oainstall** command to remove the HP Operations agent deployment packages, the removal process terminates without proceeding further.

Possible Causes:

— Cause 1: The user does not have the administrative or root privileges.

— Cause 2: The specified version of the HP Operations agent deployment package is not found.

Solutions:

— Solution 1: Log on with a user with the administrative or root privileges.

— Solution 2: Make sure the specified version of the HP Operations agent deployment package is available on the management server. To view the details of all the packages available on the system (active and backed-up), run the following command:

> *On the HPOM for Windows management server:*
>
> *%OvInstallDir%***bin\OpC\agtinstall\cscript oainstall.vbs -inv -listall**
>
> *On the HPOM for UNIX or Linux management server:*
>
> **/opt/OV/bin/OpC/agtinstall/oainstall.sh -inv -listall**

Installing the HP Operations Agent

• After you run the **oainstall** command on the node, the installation process terminates without proceeding further.

Possible Causes:

— Cause 1: Insufficient disk space

— Cause 2: The user does not have the administrative or root privileges

— Cause 3: The management server or the certificate server specified is invalid

Solutions:

- — Solution 1: Ensure that the system has enough disk space (as specified in Prerequisites on page 27).

- — Solution 2: Log on as administrator or root.

- — Solution 3: Check that the management server or certificate server specified is valid.

- Installation of the HP Operations agent stops with the following error message:

  `The service "lanmanserver" is not running on the system. This service is required to run this tool.`

  Cause:

  The `lanmanserver` service is not running on the system. The `oainstall` and `oasetup` programs depend on this service.

  Solution:

  To resolve this issue, open the Services window by typing **services.msc** at the Run prompt, and then start the **Server** service.

- On HP-UX nodes, prerequisite check fails although adequate disk space is available for the installation and data directories. One of the following error messages appears in the command-line console:

  - — `Not enough disk space on /opt`

  - — `Not enough disk space on /var`

  Cause:

  If the name of the file system for the `/opt` or `/var` directory is too long, the installer cannot perform the disk space check correctly.

  Solution:

  Apply the hotfix `QCCR1A123980`. Contact HP Support to obtain this hotfix.

- Installation of the HP Operations agent is stopped abruptly.

  Cause:

  The `oainstall` program had been stopped accidentally before the agent could be completely installed on the system, or the remote installation of the agent was stopped from the HPOM console before completion.

  Solution:

  You must remove the agent that was installed incompletely. To remove the agent, use the `-clean` option with the `oainstall` program. For example: **oainstall.sh -r -a -clean**. The option cleans the contents of the installation and data directories.

  After removing the agent with the `-clean` option, you can start installing the agent again.

- Installation of the HP Operations agent fails with the following error:

  `ERROR:   Configuration failed for the component package HPOvSecCo`

  Cause:

  This error appears if the IP address of the system is not mapped to the hostname.

  Solution:

  Before installation, make sure that the IP address of the system is mapped to the system's hostname.

Post-Installation Problems

- After installing the HP Operations agent on cluster nodes, several messages appear in the HPOM message browser with the following messages:

  (conf-268) ClusterException in monitor thread

  (conf-335) Exception during execution:

  (conf-334) Execute command failed. Child returned '256'.

  Cause:

  When the HP Operations agent installer detects a cluster setup, the configuration variable MONITOR_MODE on the node is automatically set to TRUE. If the cluster is not configured correctly, the agent sends several error messages immediately after installation.

  Solution:

  If you do not want to configure the cluster, run the following command on the node to suppress those messages:

  ovconfchg -ns conf.cluster -set MONITOR_MODE FALSE

  To prevent those messages from appearing in the HPOM console, make sure the cluster is configured before you install the agent.

  Alternatively, you can install the agent with a profile file (see Installing the HP Operations Agent with a Profile File on page 53) with the following line included in the file:

  set conf.cluster: MONITOR_MODE=FALSE

B   Command-Line Utilities

oainstall.vbs

NAME

The installer program for the HP Operations agent on Windows.

SYNOPSIS

```
cscript oainstall.vbs -i|-install -m|-mgmt  [-p|-platform <platform>]
```

```
cscript oainstall.vbs -i|-install -a|-agent [-minprecheck] [-s|-srv
<mgmt_srv_name> [-cs|-cert_srv <cert_srv_name>]] [-install_dir <path>]
[-data_dir <path>] [manual_start_on_reboot]
```

```
cscript oainstall.vbs -i|-install -a|-agent [-minprecheck] [-defer_configure]
```

```
cscript oainstall.vbs -i|-install -a|-agent [-minprecheck] -agent_profile
<file_name>
```

```
cscript oainstall.vbs -i|-install -a|-agent -precheckonly
```

```
cscript oainstall.vbs -i|-install -a|-agent -enabletrace ALL
```

```
cscript oainstall.vbs -a -configure -s|-srv <mgmt_srv_name> [-cs|-cert_srv
<cert_srv_name>]
```

```
cscript oainstall.vbs -a -configure -agent_profile <file_name>
```

```
cscript oainstall.vbs -a -configure -enabletrace <application_name>
```

```
cscript oainstall.vbs -a -configure -activateonly
```

```
cscript oainstall.vbs -r|-remove -m|-mgmt -v|-version <version> -p|-platform
<platform>
```

```
cscript oainstall.vbs -r|-remove -a|-agent [-clean]
```

```
cscript oainstall.vbs -inv|-inventory [-listall]
```

```
cscript oainstall.vbs [-h|-help]
```

DESCRIPTION

The `oainstall.vbs` utility helps you install the HP Operations agent product or deployment packages on a Windows system.

PARAMETERS

`-i|-install`

Installs the HP Operations agent on the system or uploads the HP Operations agent deployment packages to the agent inventory on the management server.

`-r|-remove`

Removes the HP Operations agent from the system or removes the HP Operations agent deployment packages from the agent inventory on the management server.

`-clean`

Removes the contents of the installation and data directories while removing the agent. Empty directories are present on the system after the script removes the agent.

`-inv|inventory`

Enables you to view the active version of deployment packages available on the management server

`-listall`

Enables you to view the active and backed-up versions of deployment packages available on the management server

`-m|-mgmt`

Uploads the HP Operations agent deployment packages to the agent inventory on the management server when used with the '-install' option. Removes the HP Operations agent deployment packages from the agent inventory on the management server when used with the `-remove` option.

`-a|-agent`

Installs the HP Operations agent on the system when used with the `-install` option. Removes the HP Operations agent from the system when used with the `-remove` option.

`-v|-version`

Specifies the active or backed-up version of the platform-specific packages to be removed from the agent inventory on the management server

`-p|-platform <platform>`

Specifies the platform-specific packages to be uploaded to or removed from the agent inventory on the management server. Possible values are:

HP-UX   Upload or remove packages for the HP-UX nodes.

SOL   Upload or remove packages for the Solaris nodes.

AIX   Upload or remove packages for the AIX nodes.

LIN   Upload or remove packages for the Linux nodes.

WIN   Upload or remove packages for the Windows nodes.

ALL   Upload or remove packages for all types of nodes.

 You can specify multiple platform-specific packages with the command. For example: **cscript oainstall.vbs -install -mgmt -p LIN -p SOL**.

`-s| -srv <mgmt_srv_name >`

Configures the system specified with this option as the primary management server while installing the HP Operations agent on the system. If you specify the details of multiple management servers, the command accepts only the management server that appears last in the command.

`-cs|-cert_srv <cert_srv_name >`

Configures the system specified with this option as the certificate server while installing the HP Operations agent on the system. After installation, a certificate request is automatically sent to the certificate server. If you specify the details of multiple certificate servers, the command accepts only the certificate server that appears last in the command.

`-install_dir`

Sets the installation directory of the HP Operations agent on the node.

`-data_dir`

Sets the data directory of the HP Operations agent on the node.

`-defer_configure`

Installs the agent on the node without setting the management server, certificate server, or any other configuration parameter for the agent.

`-configure`

Configures an already installed agent.

`-activateonly`

Configures the agent to work with a different management server or certificate server.

`-agent_profile`

Installs or configures the agent with the details available in the specified profile file.

`-manual_start_on_reboot`

Configures the agent to not start automatically in the event of system restart.

`-precheckonly`

Performs only the prerequisite checks on the node. This option checks the operating system, architecture type, available patches, required libraries, and software that might be necessary during the operation of the product.

`-minprecheck`

Skips the major portion of the prerequisite check and checks only the operating system and architecture type on the node during installation.

`-enabletrace ALL`

Enables the tracing utility during installation and generates trace files in the location `C:\Temp`.

`-h|-help`

Shows the help message.

AUTHOR

`oainstall.vbs` was developed by Hewlett-Packard Company.

oainstall.sh

NAME

The installer program for the HP Operations agent on UNIX/Linux.

SYNOPSIS

`oainstall.sh -i|-install -m|-mgmt  [-p|-platform <platform>]`

`oainstall.sh -i|-install -a|-agent [-minprecheck] [-s|-srv <mgmt_srv_name> [-cs|-cert_srv <cert_srv_name>]] [-manual_start_on_reboot]`

`oainstall.sh -i|-install -a|-agent [-minprecheck] [-defer_configure]`

```
oainstall.sh -i|-install -a|-agent [-minprecheck] -agent_profile <file_name>

oainstall.sh -i|-install -a|-agent -enabletrace ALL

oainstall.sh -i|-install -a|-agent -precheckonly

oainstall.sh -a -configure -s|-srv <mgmt_srv_name> [-cs|-cert_srv
<cert_srv_name>]

oainstall.sh -a -configure -agent_profile <file_name>

oainstall.sh -a -configure -enabletrace ALL

oainstall.sh -a -configure -activateonly

oainstall.sh -r|-remove -m|-mgmt -v|-version <version> -p|-platform
<platform>

oainstall.sh -r|-remove -a|-agent [-clean]

oainstall.sh -inv|-inventory [-listall]

oainstall.sh [-h|-help]
```

DESCRIPTION

The `oainstall.sh` utility helps you install the HP Operations agent product or deployment packages on a UNIX/Linux system.

PARAMETERS

`-i|-install`

Installs the HP Operations agent on the system or uploads the HP Operations agent deployment packages to the agent inventory on the management server.

`-r|-remove`

Removes the HP Operations agent from the system or removes the HP Operations agent deployment packages from the agent inventory on the management server.

`-clean`

Removes the contents of the installation and data directories while removing the agent. Empty directories are present on the system after the script removes the agent.

`-inv|inventory`

Enables you to view the active version of deployment packages available on the management server

`-listall`

Enables you to view the active and backed-up versions of deployment packages available on the management server

`-m|-mgmt`

Uploads the HP Operations agent deployment packages to the agent inventory on the management server when used with the '-install' option. Removes the HP Operations agent deployment packages from the agent inventory on the management server when used with the '-remove' option.

`-a|-agent`

Installs the HP Operations agent on the system when used with the `-install` option. Removes the HP Operations agent from the system when used with the `-remove` option.

`-v|-version`

Specifies the active or backed-up version of the platform-specific packages to be removed from the agent inventory on the management server

`-p|-platform <platform>`

Specifies the platform-specific packages to be uploaded to or removed from the agent inventory on the management server. Possible values are:

HP-UX   Upload or remove packages for the HP-UX nodes.

SOL   Upload or remove packages for the Solaris nodes.

AIX   Upload or remove packages for the AIX nodes.

LIN   Upload or remove packages for the Linux nodes.

WIN   Upload or remove packages for the Windows nodes.

ALL   Upload or remove packages for all types of nodes.

 You can specify multiple platform-specific packages with the command. For example:
`oainstall.sh -install -mgmt -p LIN -p SOL`

`-s| -srv <mgmt_srv_name >`

Configures the system specified with this option as the primary management server while installing the HP Operations agent on the system. If you specify the details of multiple management servers, the command accepts only the management server that appears last in the command.

`-cs|-cert_srv <cert_srv_name >`

Configures the system specified with this option as the certificate server while installing the HP Operations agent on the system. After installation, a certificate request is automatically sent to the certificate server. If you specify the details of multiple certificate servers, the command accepts only the certificate server that appears last in the command.

`-defer_configure`

Installs the agent on the node without setting the management server, certificate server, or any other configuration parameter for the agent.

`-configure`

Configures an already installed agent.

`-activateonly`

Configures the agent to work with a different management server or certificate server.

`-agent_profile`

Installs or configures the agent with the details available in the specified profile file.

`-manual_start_on_reboot`

Configures the agent to not start automatically in the event of system restart.

`-precheckonly`

Performs only the prerequisite checks on the node. This option checks the operating system, architecture type, available patches, required libraries, and software that might be necessary during the operation of the product.

`-minprecheck`

Skips the major portion of the prerequisite check and checks only the operating system and architecture type on the node during installation.

```
-enabletrace ALL
```

Enables the tracing utility during installation and generates trace files in the location `/var/opt/OV/tmp`.

```
-h|-help
```

Shows the help message.

AUTHOR

`oainstall.sh` was developed by Hewlett-Packard Company

oalicense

NAME

oalicense – the licensing utility for the HP Operations agent.

SYNOPSIS

```
oalicense -set -type PERMANENT|EVAL <ltu>
```

```
oalicense -extend -type EVALUATION <ltu>
```

```
oalicense -get -all|<ltu>
```

```
oalicense -describe -type <TYPE> <LTU>
```

```
oalicense -listdefinedlicenses|-ld
```

```
oalicense  -check <ENTITY>
```

```
oalicense  -resolve
```

```
oalicense -remove -type <TYPE> <ltu>
```

```
oalicense -remove -type PERMANENT -all
```

```
oalicense -expiryAlerts
```

DESCRIPTION

The `oalicense` utility helps you enable a permanent license for the HP Operations agent product.

Parameters

`oalicense` recognizes the following options:

```
-h|-help
```

> Displays and describes the available options for the `oalicense` command.

```
-v|-version
```

> Displays the version of the `oalicense` utility.

```
-set
```

Sets the permanent or evaluation license for the HP Operations agent on the node. To enable a license, specify the license to use (LTU) as an argument with the necessary options. If the LTU name contains spaces, specify the name within quotation marks (""). If you run the command only with the "-set" option, the oalicense utility permanently enables the LTU specified with the command. To enable an LTU in the evaluation mode, run the command with the "-eval" option.

`-extend EVALUATION`

Use the `EVALUATION` parameter in conjunction with the `-extend` and `-type` parameters to extend the evaluation license for another 60 days.

`-get`

Shows the details of all LTUs when used with the "-all" option. When you specify an LTU as an argument of the "-get" option, the oalicense utility shows the details of the specified LTU only.

`-check` *<ENTITY>*

Shows the licensing status of the component of the HP Operations agent. You can enable the following components of the HP Operations agent with the licensing utility: Operations Monitoring Component, Performance Collection Component, Real-Time Measurement, Real-Time Metric Access, and GlancePlus.

In the command line, with this utility, always use the following arguments:

- For Operations Monitoring Component: OA
- For Performance Collection Component: PA
- For Real-Time Metric Access: RTMA
- For Real-Time Measurement: RTM
- For GlancePlus: Glance

`-resolve`

While enabling LTUs, if you inadvertently activate the same component twice (by enabling different LTUs), the -resolve parameter helps you set a resulting LTU (or a combination of LTUs) that gives you the required functionality.

`-describe`

Shows the details of the specified LTU (including the list of components that are enabled by the LTU).

`-listdefinedlicenses`

Lists all the available LTUs.

`-remove`

Disables the features provided by the selected LTU.

`-expiryAlerts`

Prints the number of days for which the evaluation license will remain valid.

AUTHOR

`oalicense` was developed by Hewlett-Packard Company.

EXAMPLES

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

- To enable the permanent license for the HP Operations OS Inst Adv SW LTU on the node:

  `oalicense -set -type PERMANENT "HP Operations OS Inst Adv SW LTU"`

- To enable the evaluation license for the Glance Software LTU on the node:

  `oalicense -set -type EVAL "Glance Software LTU" -eval`

- To view the details of the HP Operations OS Inst Adv SW LTU on the node:

  `oalicense -get "HP Operations OS Inst Adv SW LTU"`

  The command displays the details of the LTU in the following format:

LTU NAME	TYPE	ACTIVATED DATE	VALID TILL	EXTEND COUNT
HP Operations OS Inst Adv SW LTU	Extended	09/08/2009	11/08/2009	1

C Installer Comparison

The HP Operations agent 11.00 combines the capabilities of its predecessor, the HP Operations agent 8.60, with the HP Performance Agent 5.00. The installer program for the HP Operations agent, `oainstall`, enables you to upgrade the HP Operations agent 8.53 and 8.60 to the version 11.00. Because the HP Operations agent 11.00 includes the functionality of the HP Performance Agent, you can use the `oainstall` program to upgrade the HP Performance Agent 4.70 or 5.00 to the HP Operations agent 11.00, which results in introduction of the HP Operations agent components on the HP Performance Agent node.

The behavior of the `oainstall` program is, however, different from the `opc_inst` (installer for the HP Operations agent 8.x) and `ovpa.install` (installer for the HP Performance Agent) programs. This chapter describes the key differences between the `oainstall`, `opc_inst`, and `ovpa.install` programs.

Comparison with the Installer Program of the HP Operations Agent 8.x

Like the `opc_inst` script of the HP Operations agent 8.x, the `oainstall` script for the HP Operations agent 11.00 is available in two flavors—`oainstall.vbs` for the Windows platforms and `oainstall.sh` for the UNIX platforms. The `oainstall.vbs` and `oainstall.sh` scripts are present at the root location on the HP Operations agent 11.00 media. After installing the agent on a node, you can find the script in the following location on the node:

- *On Windows 64-bit nodes:*

  %ovinstalldir%`bin\win64\OpC\install`

- *On other Windows nodes:*

  %ovinstalldir%`bin\OpC\install`

- *On HP-UX, Linux, or Solaris:*

  `/opt/OV/bin/OpC/install`

- *On AIX:*

  `/usr/lpp/OV/bin/OpC/install`

Table 8   Comparison with the opc_inst Script

Description	HP Operations Agent 11.00	HP Operations Agent 8.x
Install the HP Operations agent on the node.	`-i|-install -a|-agent -srv <> -cert_srv <>`; the `oainstall` program installs the components on the node if you use the `-i` option in conjunction with the `-a` option.	None; the HP Operations agent 8.x does not provide the `opc_inst` script with an exclusive option for installation. When you run the script with the `-srv` option, the installation begins.
Install the HP Operations agent on the node with a profile file.	`-agent_profile`; this option enables you to install and start the agent with the configuration settings specified in the profile file.	`-configure`; the `-configure` option of the `opc_inst` script enables you to install and start the agent with the configuration settings specified in the profile file.
Configure the HP Operations agent.	`-configure`; this option enables you to configure the agent available on the node with the following details: • Management server • Certificate server After running the agent with a specific set of management and certificate servers, if you want to use a different set of servers, you can use this option.	The `-configure` option of the `opc_inst` script had a completely different purpose (to install the agent with a profile file); however, the HP Operations agent 8.x provided you with the `opcactivate` script, which can help you change the management or certificate server of an already installed agent.

Table 8   Comparison with the opc_inst Script

Description	HP Operations Agent 11.00	HP Operations Agent 8.x
Change the configuration parameters (like the management server) of the agent.	Use the `-configure` option of the `oainstall` program to change the configuration parameters like the management server and certificate server on a node where the HP Operations agent 11.00 is already installed. You need not use the `-f` option for this task.	The `-configure` option of the `opcactivate` script helps you change these parameters on a node with the HP Operations agent 8.x. You must use the `-f` option in conjunction with the `-configure` option in this case.
Install the agent but do not start.	`-defer_configure`; this option places the necessary packages on the node, but does not start any agent processes or services. If you use this option, you must use the `-configure` option to start the agent's operation at a later time.	`-no_start`; this option places the necessary packages on the node, but does not start any agent processes or services.
Remove the HP Operations agent from the node.	`-r|-remove -a|-agent`; the `oainstall` program removes the agent components from the node if you use this combination of the `-r` and `-a` options.	`-r`; the `opc_inst` program removes the agent components from the node if you use the `-r` option.

Comparison with the Installer Program of the HP Performance Agent

The HP Performance Agent uses different installation mechanisms for different platforms. On Windows, the HP Performance Agent media provides a `setup.exe` file to install the product with a wizard. On HP-UX, the HP Performance Agent is installed with the `swinstall` utility available with the HP-UX operating system. On the other UNIX/Linux platforms, the HP Performance Agent media provides the `ovpa.install` script, which helps you install the product on a node.

Table 9   Comparison with the ovpa.install Script

Description	HP Operations Agent 11.00	HP Performance Agent
Install the HP Operations agent on the node.	`-i|-install -a|-agent`; the `oainstall` program installs the components on the node if you use the `-i` option in conjunction with the `-a` option.	None; the HP Performance Agent does not provide the `ovpa.install` script with an exclusive option for installation.
Install the HP Operations agent on the node with a profile file.	`-agent_profile`; this option enables you to install and start the agent with the configuration settings specified in the profile file.	None.
Install the agent but do not start.	`-defer_configure`; this option places the necessary packages on the node, but does not start any agent processes or services. If you use this option, you must use the `-configure` option to start the agent's operation at a later time.	`-n` for `ovpa.install` on Linux, `-r` for `ovpa.install` on Solaris and AIX; this option places the necessary packages on the node, but does not start any processes or services.
Remove the HP Operations agent from the node.	`-r|-remove`; the `oainstall` program removes the agent components from the node if you use the `-r` option.	The HP Performance Agent provides the `ovpa.remove` script to remove the product.

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Product name and version: HP Operations agent, 11.00

Document title: Installation Guide

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