HP System Management Homepage Installation Guide

HP-UX, Linux, and Microsoft Windows Operating Systems

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About this document

Intended audience

HP System Management Homepage (HP SMH) is a web-based interface that consolidates and simplifies single system management for HP servers on HP-UX, Linux, and Microsoft® Windows® operating systems. This installation guide is for system administrators who install HP SMH.

New and changed information in this edition

To review what is new and changed in this release of HP SMH, see the *HP System Management Homepage Release Notes* on the HP Technical Documentation website at **http://docs.hp.com**.

Typographic conventions

find(1)	HP-UX manpage. In this example, "find" is the manpage name and "1" is the manpage section.
Book Title	Title of a book or other document.
Linked Title	Title that is a hyperlink to a book or other document.
http://www.hp.com	A Web site address that is a hyperlink to the site.
`Command`	Command name or qualified command phrase.
`user input`	Commands and other text that you type.
`computer output`	Text displayed by the computer.
Enter	The name of a keyboard key. Note that **Return** and **Enter** both refer to the same key. A sequence such as **Ctrl+A** indicates that you must hold down the key labeled **Ctrl** while pressing the **A** key.
term	Defined use of an important word or phrase.
`variable`	The name of an environment variable, for example `PATH` or `errno`.
`value`	A value that you may replace in a command or function, or information in a display that represents several possible values.
`<element>`	An element used in a markup language.
`attrib=`	An attribute used in a markup language.

Related information

HP SMH documentation

For more information about HP SMH, see the following sources:

- ***HP System Management Homepage Release Notes*** The release notes provide documentation for what's new with the release, features and change notifications, system requirements, and known issues. The release notes are available on the HP Technical Documentation website at **http://docs.hp.com**.
- **HP System Management Homepage Help System** The help system provides a complete set of documentation for using, maintaining, and troubleshooting HP SMH. In HP SMH, go to the **Help** menu.
- ***HP System Management Homepage Installation Guide*** The installation guide provides information about installing and getting started using HP SMH. It includes an introduction to basic concepts, definitions, and functionality associated with HP SMH. The installation guide is available on the HP Technical Documentation website at **http://docs.hp.com**. Also, for Linux and Windows operating system releases, the installation guide is available on the Management CD and at the HP SMH web page at **http://h18013.www1.hp.com/products/servers/management/agents/documentation.html**.
- ***HP System Management Homepage User Guide*** The user guide provides a complete set of documentation for using, maintaining, and troubleshooting HP SMH. For Linux and Windows operating systems, this user guide is available under the HP SMH Help menu, and on the HP Technical Documentation website at **http://docs.hp.com**. For HP-UX, HP no longer provides a printed user guide. See the HP SMH online help content for information using, maintaining, and troubleshooting HP SMH.

- **Simplifying single-system management on HP-UX 11i – HP System Management Homepage (HP SMH)** This white paper introduces HP SMH and its various plug-ins. The use cases involving HP SMH plug-ins highlight the features provided by HP SMH. The white paper is available on the HP Technical Documentation website at **http://www.docs.hp.com/en/5991-7499/SMH_whitepaper_11iv3.pdf**.
- ***hpsmh* (1m) manpage** For HP-UX releases, the manpage is available from the command line using the `man hpsmh` command. This information is not available for Linux and Windows operating systems.
- ***smhstartconfig* (1M) manpage** For HP-UX operating system releases, the manpage is available from the CLI using the `man smhstartconfig` command. This information is not available for Linux and Windows operating systems.
- ***sam* (1M) manpage** For HP-UX operating system releases, the manpage is available from the CLI using the `man sam` command. This information is not available for Linux and Windows operating systems. Note SAM functionality changes in Chapter 4: "Installing HP SMH on HP-UX operating systems" (page 19).
- ***smh* (1m) manpage** This command is available in HP-UX 11i v3 (B.11.31) only. This is an enhanced version of the *sam* (1m) command. For HP-UX operating system releases, the manpage is available from the CLI using the `man smh` command. This information is not available for Linux and Windows operating systems.
- ***smhassist* (1m) manpage** You can use the `smhassist` command to verify the configurations of SMH and see if there are any dependent software, patches or configuration errors. For HP-UX 11i v3 (B.11.31) and HP-UX 11i v2 (B.11.23) operating system releases, the manpage is available from the CLI using the `man smhassist` command. This information is not available for HP-UX 11i v1 (B.11.11), Linux, and Windows operating systems.
- **HP System Management Homepage website** The website provides HP SMH information and product links. Go to the HP website at **http://www.hp.com** or to the Software Depot home at **http://www.hp.com/go/softwaredepot** and search for System Management Homepage.
- **HP Insight Essentials software page** This web page is at **http://www.hp.com/servers/manage**.

HP-UX documentation

For more information about using HP SMH in an HP-UX environment, see the following sources. They are available on the Instant Information DVD and on the HP Technical Documentation web site at **http://docs.hp.com**.

- **HP-UX 11i Installation and Update Guides (v1, B.11.11; v2, B.11.23; v3 B.11.31)** Provide instructions on how to install or update to HP-UX.
- **HP-UX 11i Release Notes (v1, B.11.11; v2, B.11.23; v3 B.11.31)** Describe new features and functionality changes for HP-UX 11i, including information on HP SMH.
- For HP-UX operating system release documentation, check for the latest version on **http://docs.hp.com**.

Publishing history

Table 1 Publishing history

Manufacturing part number	Supported operating systems	Supported versions	Edition number	Publication date
466305-003	Linux and Windows	Integrity updates for Windows and Linux.	19	March 2009
438862-402	HP-UX	HP-UX 11i v3 (B.11.31), HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	18	March 2009
466305-001	Linux and Windows	See "Installation requirements" (page 13).	17	January 2009

Manufacturing part number	Supported operating systems	Supported versions	Edition number	Publication date
438862-401	HP-UX	HP-UX 11i v3 (B.11.31), HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	17	September 2008
438862-009	HP-UX	HP-UX 11i v3 (B.11.31), HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	16	March 2008
438862-008	HP-UX	HP-UX 11i v3 (B.11.31), HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	15	December 2007
438862-007	Linux and Windows	See "Installation requirements" (page 13).	14	February 2008
438862-006	HP-UX	HP-UX 11i v3 (B.11.31), HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	13	September 2007
438862-005	Linux and Windows	See "Installation requirements" (page 13).	12	August 2007
438862-004	Linux and Windows	See "Installation requirements" (page 13).	11	June 2007
438862-003	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	10	June 2007
438862-002	Linux and Windows	See "Installation requirements" (page 13).	9	April 2007
381372-009	HP-UX	HP-UX 11i v3 (B.11.31)	8	February 2007
438862-001	Linux and Windows	See "Installation requirements" (page 13).	7	January 2007
381372-008	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	6	December 2006
381372-007	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	5	September 2006
381372-006-en	HP-UX, Linux, and Windows	For HP-UX: HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11). For Linux and Windows: See "Installation requirements" (page 13).	4	June 2006
381372-005	Linux and Windows	See "Installation requirements" (page 13).	4	February 2006
381372-004-en	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	3	December 2005
381372-002	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	2	September 2005
381372-002	HP-UX	HP-UX 11i v2 (B.11.23), HP-UX 11i v1 (B.11.11)	2	May 2005
381372-001	Linux and Windows	See "Installation requirements" (page 13).	1	November 2004

HP encourages your comments

HP encourages your comments concerning this document. HP is committed to providing documentation that meets your needs. Send any errors found, suggestions for improvement, or compliments to: **docsfeedback@hp.com**. Include the document title, manufacturing part number, and any comment, error found, or suggestion for improvement you have concerning this document.

1 Product overview

HP System Management Homepage (HP SMH) is a web-based interface that consolidates and simplifies single system management for HP servers running the HP-UX, Linux, and Microsoft Windows operating systems. HP SMH aggregates and displays data from Web Agents and other HP Web-enabled System Management Software that includes:

- HP Insight Diagnostics
- Array Configuration Utility
- HP Software Version Control Agents

HP SMH enables you to view in-depth hardware configuration and status data, performance metrics, system thresholds, diagnostics, and software version control information using a single intuitive interface.

Product features

HP SMH provides the following enhanced security and streamlined operations for HP servers running HP-UX, Linux, and Windows operating systems.

- Browser access using operating system-based Secure Sockets Layer (SSL)-secure authentication
- Common HTTP and HTTPS service for HP Insight Management Agents and utilities, for reduced complexity and system resource requirements
- Simplified architecture for implementing HTTP security and HP management updates
- Access control through Network Interface Card (NIC) binding and advanced configuration features for individual and groups of users
- Broad operating system and browser support

2 Installation requirements

Supported operating systems

HP ProLiant servers

- Microsoft Windows Server 2008 Standard for x86 and x64
- Microsoft Windows Server 2008 Enterprise for x86 and x64
- Microsoft Windows Server 2008 Datacenter for x86 and x64
- Microsoft Windows Server 2008 Essential Business Server
- Microsoft Windows Server HPC 2008
- Microsoft Windows Server® 2003 Standard Edition SP2 for x86 and x64
- Microsoft Windows Server 2003 R2, Standard Edition SP2 for x86 and x64
- Microsoft Windows Server 2003, Web Edition SP2
- Microsoft Windows Server 2003 Enterprise Edition SP2 x86 and x64
- Microsoft Windows Server 2003 R2 Enterprise Edition SP2 x86 and x64
- Microsoft Windows Server 2003 SBS, Standard and Premium R2
- Microsoft Windows Vista Business Edition Ultimate Edition
- Microsoft Windows Vista Enterprise Edition
- Microsoft Windows Vista Ultimate Edition
- Microsoft Windows XP SP2
- Red Hat Enterprise Linux 5 update 2 for x86 and AMD64/EMT64T
- Red Hat Enterprise Linux 4 update 6 or later for x86 and AMD64/EMT64T
- Red Hat Enterprise Linux 3 update 9 for x86, AMD64/EMT64T
- Red Hat Enterprise Linux 3 update 9 for x86 with Cisco Kernel
- Oracle Enterprise Linux
- SUSE Linux Enterprise Server (SLES) 11 for x86 and AMD64/EMT64T
- SUSE Linux Enterprise Server (SLES) 10 SP 1 or later for x86 and AMD64/EMT64T
- SUSE Linux Enterprise Server (SLES) 9 SP 4 or later for x86 and AMD64/EMT64T
- VMware ESX 3.0
- VMware ESX 3.0.1
- VMware ESX 3.0.2
- VMware ESX 3.5
- Novell Open Enterprise Server (OES)
- XEN

HP Integrity servers

- Microsoft Windows Server 2003 for Itanium-based systems, 64-bit
- Microsoft Windows Server 2008 for Itanium-based systems, 64-bit
- Red Hat Linux Advanced Server 2.1 Update 3 and later
- SUSE Linux Enterprise Server (SLES) 8 with Service Pack 3 and later
- Red Hat Enterprise Linux 5.0 Update 1
- Red Hat Enterprise Linux 4.0 Update 6

- SUSE Linux Enterprise Server (SLES) 10 Service Pack 1
- SUSE Linux Enterprise Server (SLES) 9 Service Pack 4

HP-UX

- HP-UX 11i v3 (B.11.31) for HP Integrity Servers and HP 9000 Servers
- HP-UX 11i v2 (B.11.23) for HP Integrity Servers and HP 9000 Servers
- HP-UX 11i v1 (B.11.11) for HP Servers and Workstations

NOTE: For Linux operating systems, Lightweight Directory Access Protocol (LDAP) is supported on SUSE Linux Enterprise Server 9 and SUSE Linux Enterprise Server 10.

For Windows operating systems, SmartStart CD requires that all systems have a minimum of 256 MB of RAM.

HP-UX 11i v1 (B.11.11) Operating Environments are for PA-RISC systems only. HP-UX 11i v2 (B.11.23) Operating Environments (September 2004 and later). HP-UX 11i v3 (B.11.31) Operating Environments (February 2007 and later) support both PA-RISC and Itanium-based operating systems.

Supported browsers

For HP-UX Itanium-based or PA-RISC operating systems:

- Mozilla 1.6, 1.7
- Firefox 1.0.2, 1.5, 2.0
- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0 (SMH 2.2.9 or later)

For Windows Itanium-based or x86 operating systems:

- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0 (SMH 2.1.9 or later)
- Mozilla 1.7.13
- Firefox 2.0.0.x
- Firefox 3.0
- Mozilla Firefox 1.5.0.x

For Linux Intel Itanium or x86 operating systems:

- Mozilla 1.7.13
- Firefox 2.0.0.x
- Firefox 3.0
- Mozilla Firefox 1.5.0.x

NOTE: Installation of HP SMH does not require a browser.

The HP Web-enabled System Management Software is hardware-dependent. For the installation to complete successfully, your system must support at least 256 colors.

Verifying system requirements

Before installation begins, the installation utility verifies whether:

- For HP-UX, Linux, and Windows, the operating system meets the minimum requirements. If HP SMH does not support the operating system on a system, an error message appears, indicating that an invalid operating system was found.
- For HP-UX, Linux, and Windows, the signed in user has administrator/root rights. If the user does not have these rights, an error message appears, indicating that administrator/root rights were not detected.
- For Linux, if a dependency is not met on an Itanium-based operating system, the installation does not complete.

Obtaining HP SMH software

HP media

- HP-UX 11i v3 (B.11.31) Operating Environment DVD, February 2007 or later
- HP-UX 11i v3 (B.11.31) Applications DVD, February 2007 or later
- HP-UX 11i v2 (B.11.23) Operating Environment DVD, May 2005 or later
- HP-UX 11i v2 (B.11.23) Applications DVD, September 2005 or later
- HP-UX 11i v1 (B.11.11) Operating Environment DVD, September 2005 or later
- HP-UX 11i v1 (B.11.11) Applications DVD, May 2005 or later
- HP SmartSetup CD 6.20 or later
- HP SmartStart CD 8.20 or later
- HP ProLiant Support Pack 8.20 or later
- HP Integrity Support Pack 6.20 or later

HP websites

These HP websites are accessible from any system with a web browser and access to the Internet:

- To download the latest software versions, see the HP website at **http://www.hp.com**.
- For HP-UX operating systems, you can also find the software on the Software Depot home at **http://www.hp.com/go/softwaredepot**.
- For Linux and Windows operating systems, HP SMH is available in the ProLiant Support Pack and Integrity Support Pack. To download the latest version of the ProLiant Support Pack or Integrity Support Pack, see the **Support and Troubleshooting** link at **http://www.hp.com**.

3 Preparing to install HP SMH

You can install HP System Management Homepage (HP SMH) on systems running HP-UX, Linux, and Windows operating systems.

You can install HP SMH locally using the Windows ProLiant or Integrity Support Pack or the Linux RPM (Red Hat Package Manager) or remotely with optional preconfiguration using the HP Smart Update Manager (HPSUM) on Windows or the Linux Deployment Utility on Linux.

Installation information

- For HP-UX operating systems

  HP SMH is installed or updated using the HP-UX Operating Environment (OE) media or Applications media. You do not have to configure any settings to run the product.

  For HP-UX operating systems, the configuration settings are preserved in the `/opt/hpsmh/conf.common/smhpd.xml` file.

- For Linux operating systems

  HP SMH is installed by an RPM package without asking you to configure any settings. After the installation is complete, run the `perl` script utility (`/usr/local/hp/hpSMHSetup.pl` on ProLiant or `/opt/hp/hpsmh/smhconfig/hpSMHSetup.pl` on Itanium-based operating systems) to set the security options used by all HP Web-based Agents on the system. Otherwise, these settings use default values.

  For Linux operating systems, the configuration settings are carried over from the `/opt/hp/hpsmh/conf/smhpd.xml` file.

- For Windows operating systems

  The configuration settings are carried over from the *<System Drive>*`:\hp\hpsmh\conf\smhpd.xml` file, and the wizard initiates the configuration.

NOTE: If HP SIM is installed after HP SMH is installed, the HP SMH 2048-bit key pair is replaced with the HP SIM 1024-bit key pair.

You can also install HP SMH on Integrity servers from the HP SmartSetup CD.

4 Installing HP SMH on HP-UX operating systems

System Administration Management Tool changes: SAM and HP SMH

The HP-UX System Administration Manager (SAM) is deprecated in HP-UX 11i v3. HP SMH is the system administration tool for managing HP-UX 11i. HP SMH provides web-based systems management functionality, at-a-glance monitoring of system component health, and consolidated log viewing. HP SMH also provides a Terminal User Interface (TUI). SAM continues to provide access to TUI and X-based interfaces.

Some of the key changes are:

- The SAM Functional Area Launcher (FAL) is replaced by the HP SMH web-based graphical user interface (GUI).
- The enhanced TUI offers improved look and feel, online viewing of manpages, command previews, and other improvements.
- For HP-UX 11i v3 (B.11.31) only, a new command, *smh*(1m) is introduced (`/usr/sbin/smh`). This command is an enhanced version of the *sam*(1m) command (`/usr/sbin/sam`).
- The `sam` command in `/usr/sbin/sam` is deprecated. Any invocation of `/usr/sbin/sam` will display the deprecation message and launch `/usr/sbin/smh`.

Installing HP SMH on HP-UX

To install HP SMH on HP-UX, you have several options:

- Installing from the HP-UX 11i v3 (B.11.31) OE media (February 2007 and later) and from the HP-UX 11i v3 (B.11.31) Applications media (February 2007 and later)
- Installing from the HP-UX 11i v2 (B.11.23) OE media (May 2005 and later) and from the HP-UX 11i v2 (B.11.23) Applications media (September 2005 and later)
- Installing from the HP-UX 11i v1 (B.11.11) OE media (September 2005 and later) and from the HP-UX 11i v1 (B.11.11) Applications media (May 2005 and later)
- Installing from the HP SMH website, which you can find on the Software Depot home at **http://www.hp.com/go/softwaredepot** .

NOTE: After you install HP SMH, it is configured automatically for you. To change the default configuration settings, go to "Configuring HP SMH" (page 22).

Installing HP SMH and dependent applications

HP SMH requires several applications, but some applications are optional. You might have these applications installed on your system. The following bundle information will help you identify the correct bundles to download and install.

Table 4-1 Bundle information

Product	Bundle	Path	Status	Release
HP SMH	`SysMgmtWeb`	`/opt/hpsmh` and `/var/opt/hpsmh`	Required	HP-UX 11i v1, v2, v3
HP-UX Apache-based Web Server	`hpuxwsApache`	`/opt/hpws/apache`	Required	HP-UX 11i v1, v2, v3
OpenSSL	`OpenSSL`	`/opt/openssl`	Required	HP-UX 11i v1, v2, v3
HP-UX Common System Management Enablers	`SysMgmtBase`	`usr/sam` and `/opt/hpsmh/lib`	Required	HP-UX 11i v2, v3

Product	Bundle	Path	Status	Release
HP-UX Strong Random Number Generator	KRNG11i	/usr/conf or /usr/conf/lib/libmng.a, /usr/share, /usr/include, /sbin/init.d, /sbin/rc1.d	Recommended	HP-UX 11i v1 You can find this application on the Software Depot Home at http://www.hp.com/go/softwaredepot. The KRNG11i bundle requires a system reboot.
HP-UX Tomcat-based Servlet Engine	hpuxwsTomcat	/opt/hpws/tomcat	Recommended. Certain HP SMH plug-ins, such as Partition Manager require it.	HP-UX 11i v1, v2, v3
HP WBEM Services	WBEMSvcs	/opt/wbem	Recommended. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v1, v2, v3
HP-UX System Fault Management	SysFaultMgmt	/opt/sfm/	Recommended. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v1, v2, v3
PropPlus (Property Page Plus)	SysMgmtPlus	/opt/hpsmh/data/htdocs/propplus	Recommended	HP-UX 11i v3 March 2009 Release
HP-UX Software Distributor	HPUXBaseAux for HP-UX 11i v1 and v2. SwMgmtMin for HP-UX 11i v3.	/usr/lib/sw/wbem/	Recommended. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v1, v2, v3
LAN Provider for Ethernet LAN interfaces	WBEMP-LAN-00	/opt/lanprovider/	Recommended. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v1, v2, v3
WBEM Provider for FC HBAs	FCProvider	/opt/fcprovider/	Optional. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v2, v3
WBEM Provider for SCSI HBA	SCSIProvider	/opt/scsiprovider/	Optional. Certain HP SMH plug-ins, such as Property Pages found on the Home page require it.	HP-UX 11i v2, v3
Java	Java2 1.4 SDK for HP-UX (T1456AA)	/opt/java1.4	Optional. Certain HP SMH plug-ins, such as Partition Manager require it.	HP-UX 11i v1, v2, v3
HP-UX CDE User Interface	CDE	/usr/dt/lib/, /usr/dt/lib/hpux32/, and /usr/dt/lib/hpux64/	Optional. Certain HP SMH plug-ins such as DSAU require it.	HP-UX 11i v1, v2, v3
HP-UX X Window Software	X11	/opt/atok/X11, /usr/bin/X11 , and /usr/lib/X11/	Optional. Certain HP SMH plug-ins such as fsweb require it.	HP-UX 11i v1, v2, v3

If you do not have these applications on your system, you can use the following resources to install them before or after you install HP SMH:

- If you installed or updated HP-UX 11i v3 (B.11.31) from the media, then the applications were recommended to install. If you installed or updated HP-UX 11i v1 (B.11.11) or HP-UX 11i v2 (B.11.23) from the media, then the applications were installed by default. See the *HP-UX Installation and Update Guide* on the HP Technical Documentation website at **http://docs.hp.com** for instructions on how to

install and update HP-UX, including recommended and default-installed HP application bundles. See "Installing HP SMH using the Applications media" (page 21).

- You can use `swinstall` to install or update the bundles (for example, `hpuxwsApache` and `hpuxwsTomcat`) using the HP-UX 11i v1 (B.11.11), HP-UX 11i v2 (B.11.23), and HP-UX 11i v3 (B.11.31) media. See "Installing HP SMH using the Applications media" (page 21).
- You can go to the Software Depot Home at **http://www.hp.com/go/softwaredepot** to search for and download the application bundles. You can then use `swinstall` to install the applications. See "Installing using HP SMH Software Depot" (page 21).
- You can also download the bundles to a depot on your network and use Ignite-UX and Software Distributor to install them. This process is helpful if you need to create one image to install on multiple operating systems. See the *Ignite-UX Administration Guide* and the *Software Distributor Administration Guide* on the HP Technical Documentation website at **http://docs.hp.com**.

Installing HP SMH using the Applications media

To install HP SMH and other HP Applications, you must have root privileges. These instructions assume you are installing from a DVD.

1. Mount the Applications DVD. To install software from the Applications DVD, you must mount the DVD as a file system that HP-UX 11i can access:
   a. Determine the DVD device name.

      Use the `ioscan -funC disk` command to list disk devices, including the DVD devices.

   b. If one does not exist, create a mount point for the Applications DVD.

      The mount point is a directory that HP-UX uses as an access point for the DVD. Often a `/cdrom` directory is used. If this directory does not exist, create it using the `mkdir` command.

   c. Using the mount command, specify the DVD device name and mount point. For example, the following command mounts the `/dev/dsk/c1t0d0` device as the `/cdrom` directory:

      ```
      mount /dev/dsk/c1t0d0 /cdrom
      ```

      See the *mount*(1M) manpage for details.
2. Determine which products and versions are on your system, useing the `swlist` command:
   `/usr/sbin/swlist -l product`
3. Install software from the Applications DVD useing the `swinstall`.

   The following example uses `swinstall` to install software from the source mounted at `/cdrom`:
   `/usr/sbin/swinstall -s /cdrom` *`bundlename`*

   See the *swinstall*(1M) manpage for details.
4. Select and install software from the Applications DVD.

   The `swinstall` program has an interface for selecting and installing software from the DVD.
5. Unmount and eject the Applications DVD.

   You must unmount the DVD before you can eject it from the DVD-ROM drive. The DVD automatically unmounts whenever the server reboots.

   Use the `umount` command to unmount the DVD. For example, `umount /cdrom` unmounts the `/cdrom` file system. See the *umount*(1M) manpage for details.
6. Start using HP SMH.

Installing using HP SMH Software Depot

1. Go to the Software Depot Home at **http://www.hp.com/go/softwaredepot**.
2. Find the product that you want to download. Each product has a web page with information and download links.
3. Click the **Receive for Free** link.
4. Complete the registration form.
5. Review any installation instructions.

6. Save the bundle to a local directory such as `/var/temp`.
7. Install the product to your system:

   `swinstall -s /var/temp/ depot_filename.depot bundlename`

   For example: `swinstall -s \`
   `/var/temp/SysMgmtHomepage_A2214_HP-UX_B.11.23_IA+PA.depot SysMgmtWeb`
8. Start using HP SMH.

Configuring HP SMH

The HP SMH configuration is based on environment variables and tags that are set by the `/opt/hpsmh/lbin/envvars`, `/opt/hpsmh/conf.common/smhpd.xml` and `/opt/hpsmh/conf/timeout.conf` files. To change the default configuration, you can modify the files to set the value of the following variables and tags to meet your needs.

Table 4-2 Variables and tags

Variable	Description	Script
JAVA_HOME	This variable points to the `/opt/hpsmh/lbin/envvars` directory where JDK is installed.	`/opt/hpsmh/lbin/envvars`
<session-timeout>15</session-timeout>	The <session-timeout> tag defines the HP SMH session timeout in minutes. If it is defined, then the HP SMH session stops after the time period has elapsed without any user activity. If it is not defined, then the default for the HP SMH session timeout is 15 minutes. You can define the <session-timeout> tag using any value between 6 and 120 minutes.	`/opt/hpsmh/conf.common/smhpd.xml`
TIMEOUT_SMH	The TIMEOUT_SMH environment variable defines the HP SMH server timeout in minutes. If it is defined and lower than the HP SMH session timeout, the HP SMH server stops 3 minutes after the HP SMH session timeout. If it is defined and greater than the HP SMH session timeout, then the HP SMH server stops after the time period has elapsed without any user activity. If it is not defined or equal to zero, then HP SMH starts without timeout. When the "automatic startup on boot" startup mode is in use, the timeout mechanism does not start.	`/opt/hpsmh/conf/timeout.conf`
TIMEOUT_TOMCAT	This variable defines the Tomcat timeout in minutes in the `/opt/hpsmh/conf/timeout.conf` file. If it is defined, Tomcat istops after this time period has elapsed without any request to a Java web application. By default, the timeout for the HP-UX Tomcat-based Servlet Engine is 20 minutes and the timeout for the HP-UX Apache-based Web Server is 30 minutes. If it is not defined or equal to zero, then Tomcat starts without timeout. In this case, Tomcat stops only when HP SMH is stopped.	`/opt/hpsmh/conf/timeout.conf`

Configuring the startup mode

HP SMH supports three startup modes:

- Autostart URL

  This mode is the default setting. You can start HP SMH by using a web browser and navigating to **`http://`***`hostname`***`:2301/`**. If autostart is the default, a daemon listens on http://*hostname*:2301

only (nothing listens on port 2381, so that port fails). When it contacts port 2301 (http), then the HP-UX Apache-based Web Server starts on port 2381 (https), and the page redirects.

- Automatic startup on boot

  This mode starts HP SMH automatically during system initialization. If the automatic startup on boot start mode is enabled and the system was rebooted using this configuration, you can access HP SMH using a web browser and navigating to **`https://`***`hostname`***`:2381/`**. Daemons listen on both http://*hostname*:2301/ and https://*hostname*:2381/. If you use port 2301 (http), then the HP-UX Apache-based Web Server starts on port 2381 (https), and the page automatically redirects.

NOTE: For autostart URL and automatic startup on boot, you can use http://*hostname*:2301. This is possible on an HP-UX operating system only.

- Manual startup

  You can start HP SMH from the HP-UX CLI.

  Configure the startup mode of the HP SMH server and the Tomcat instance using `/opt/hpsmh/bin/smhstartconfig` script.

  Syntax: `smhstartconfig [ -a {on|off} -b {on|off} ] [ -t {on|off} ]`

  Options:

  `-a {on|off}` Enable or disable the autostart URL mode.

  `-b {on|off}` Enable or disable the automatic startup on boot mode.

  `-t {on|off}` Set the Tomcat startup mode where:

  `on` Starts Tomcat when HP SMH starts.

  `off` Starts Tomcat on demand (default).

  If you do not specify an option, then `smhstartconfig` displays the current startup mode. The `smhstartconfig` command does not accept `-a on` and `-b on` options simultaneously.

  For more information, see the *smhstartconfig*(1M) manpage:

  `man smhstartconfig` or **`man sam`**

  After changing the autostart mode to "on boot" (with the `smhstartconfig -b on -a off` command), you can start the HP-UX Apache-based Web Server processes with the **`/opt/hpsmh/lbin/hpsmh start`** command without rebooting.

Patching or updating HP SMH software

HP might issue patches to HP SMH. You can adopt a proactive patch management strategy and regularly check the standard patch resources:

- IT Resource Center (ITRC) at **http://itrc.hp.com**
- Standard HP-UX patch bundles on the OE and Applications media, and the ITRC

For a detailed guide on how to patch your HP-UX operating system, see the *Patch Management User Guide for HP-UX 11.x Systems* on the HP Technical Documentation website at **http://docs.hp.com**.

HP might issue software updates to HP SMH. Check the following resources for any notices regarding software updates:

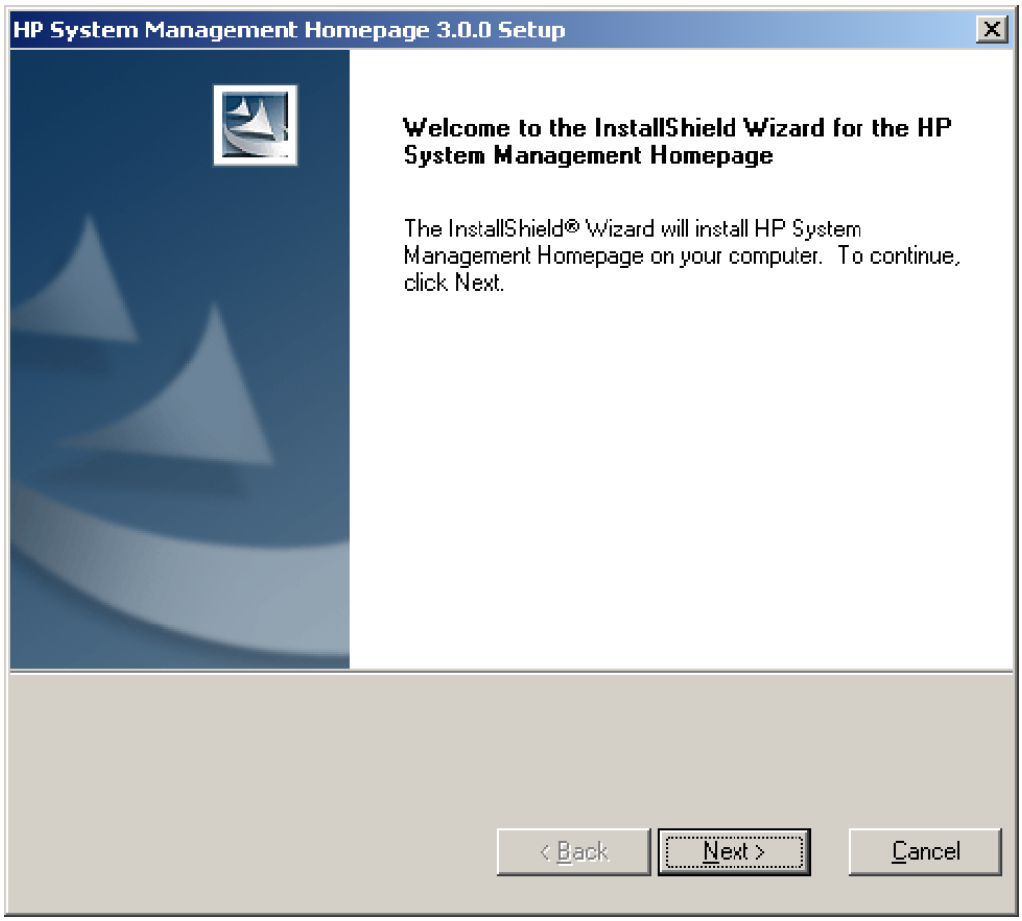
- HP-UX OE media
- HP-UX Applications media
- HP SMH web page on the Software Depot home at **http://www.hp.com/go/softwaredepot**

5 Installing HP SMH on a Windows operating system

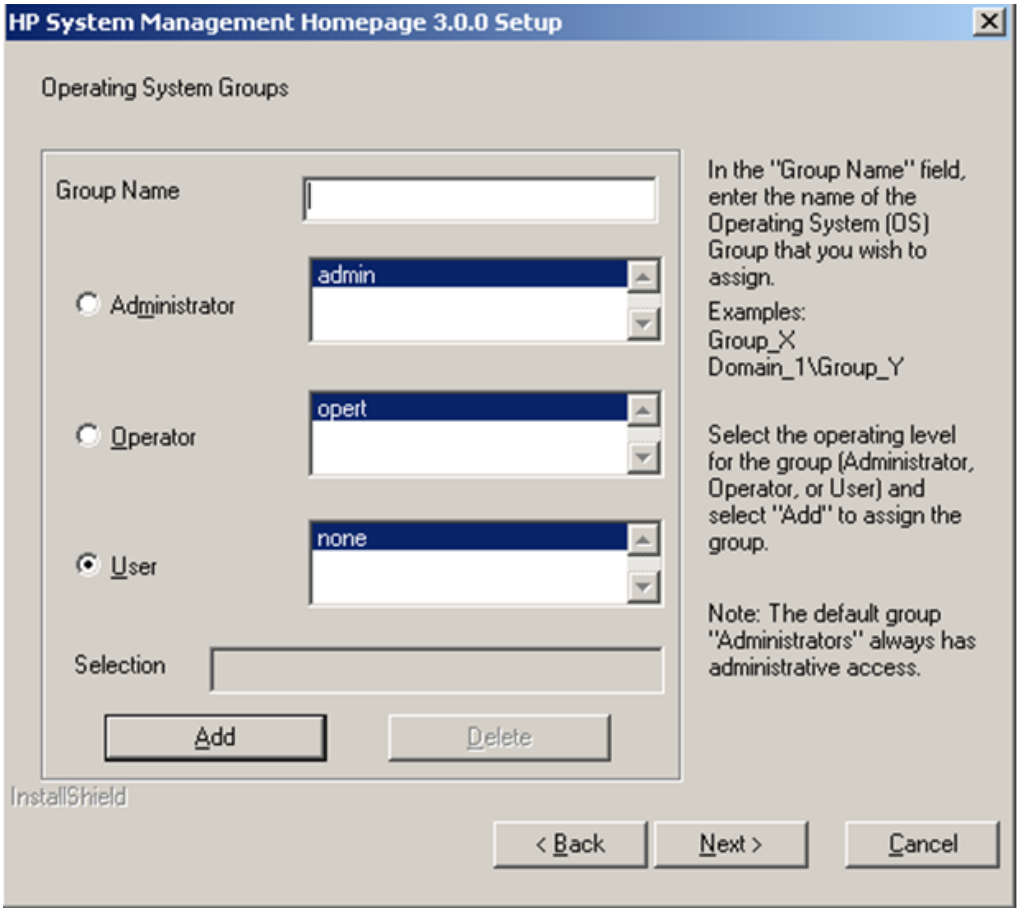
Installing HP SMH directly on Windows

Note: You can click **Cancel** at any time during configuration of HP SMH settings.

1. Initiate the `setup.exe` file to begin the installation wizard. After the wizard begins, the **Welcome** dialog box appears.



2. Click **Next**. The **OS Groups** dialog box appears.



3. Add HP SMH group names:
   a. In the **Group Name** field, enter a name for the operating system group.
   b. Select an operating level to include **Administrator**, **Operator**, or **User**.

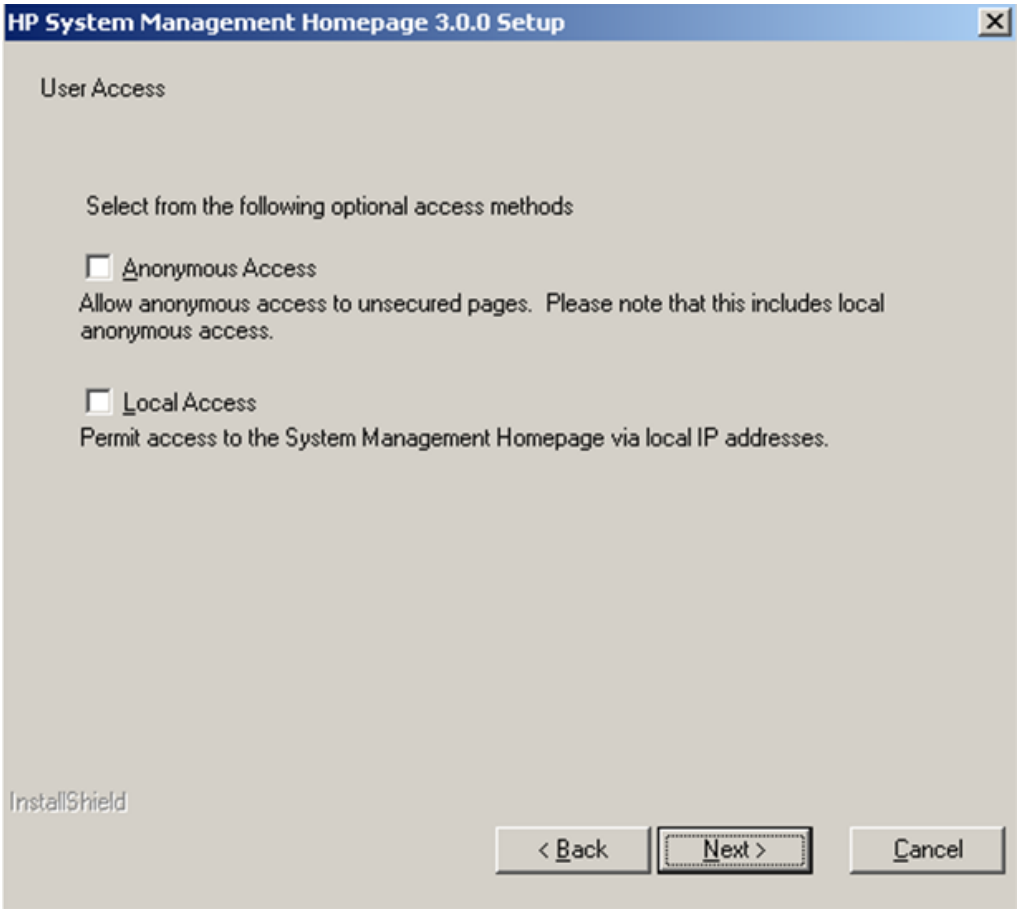
      Note: You must assign an account to an operating system user group with administrator privileges to access the Version Control Repository Manager from the Version Control Agent. Do not use the administrator account to connect from the Version Control Agent to the Version Control Repository Manager because it might lock out the administrator account. Using the administrator account, add another account with administrator privileges for Version Control Repository Manager access.

      The operating system user group must be present on the system before you can add the user group to the System Management Homepage group list.

   c. Click **Add**. The group name is added. You can add a maximum of five entries for each group level.

      Note: To delete a group name, select the group name and click **Delete**.

   d. Click **Next** to continue. The **User Access** dialog box appears.

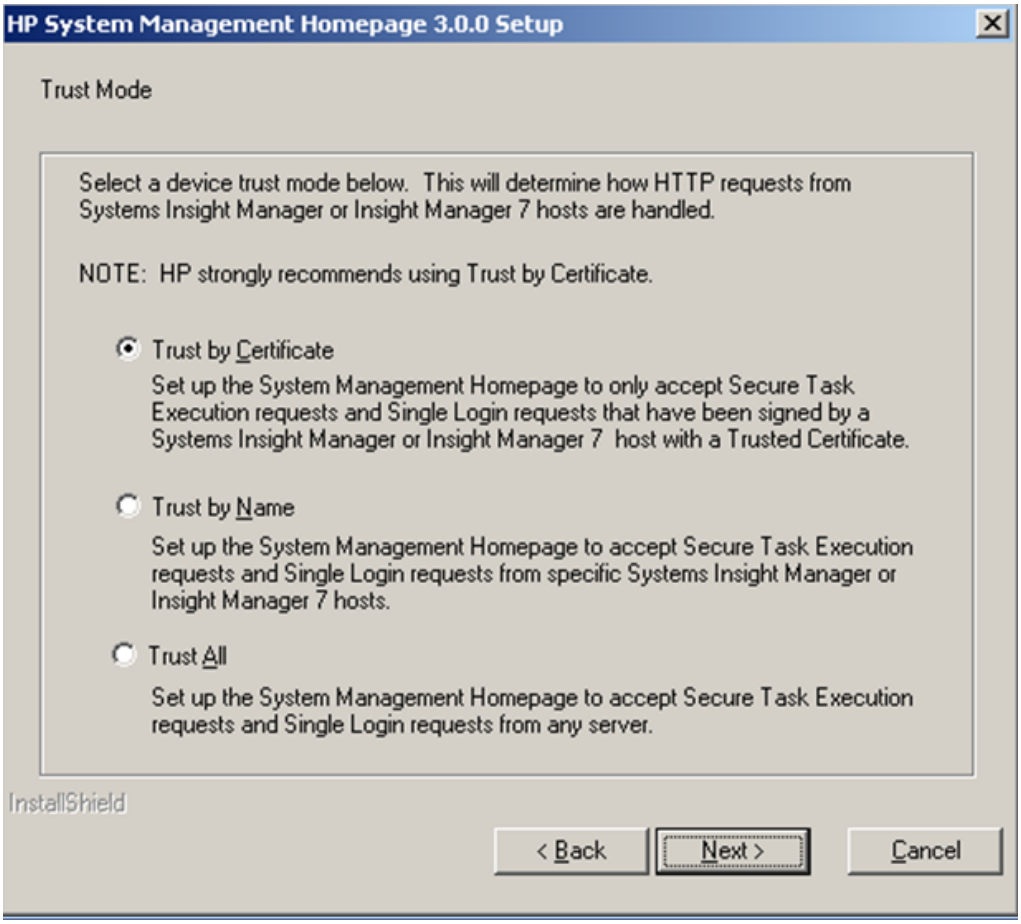


Select one of the following access types:

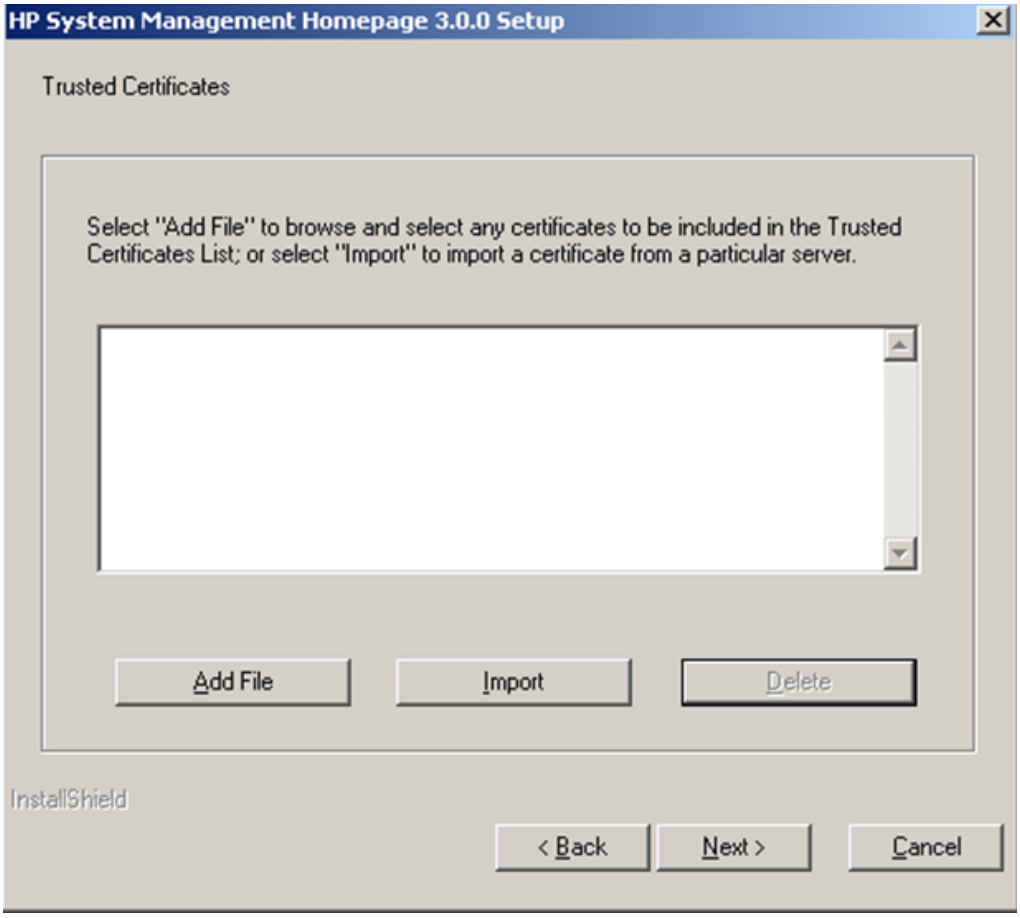
- Select **Anonymous Access** to enable anonymous access to unsecured pages.
- Select **Local Access** to automatically grant access to any user at the local console at the selected access level.

  Caution: Selecting **Local Access** with administrator privileges provides all users with access to the local console full access without prompting them for a user name or password.

4. Click **Next**. The **Trust Mode** dialog box appears.



5. Select the level of security you want to provide from one of the following trust modes:
   - Trust By Certificate
     1. Click **Next**. The **Trusted Certificates** dialog box appears. The **Trusted Certificates** dialog box allows you to add trusted certificate files to the **Trusted Certificate List**.



2. Click **Add File** to browse and select any certificates to be included in the **Trusted Certificate List**. The **Add File** dialog box appears. If you entered an invalid file name in the file name field, an error message appears indicating the file does not exist. Click **OK** to select another file, or click **Cancel** to close the dialog box. The **Trusted Certificate List** appears.

   Note: If you click **Next** without adding any certificates to the list and no certificates exist from a previous installation, a message appears indicating that if you do not specify any trusted certificates, HP SIM cannot access the HP Web-based Agents on this system. Click **OK** if you do not want HP SIM to access the HP Web-based Agents on this system, or click **Cancel** to close the dialog box and add the trusted certificates to the list.

   Note: The **Trust By Certificate** option enables the HP SMH system and the HP SIM system to establish a trust relationship using certificates. This mode is the strongest method of security because it requires certificate data and verifies the digital signature before enabling access.

3. Click **Next**. The **IP Binding** dialog box appears.

To import a certificate:

1. Click **Import**. The **Import Server Certificate** dialog box appears.
2. Enter the name or IP address of the server whose certificate you want to import.
3. Click **Get Cert**. The certificate information appears.
4. Verify the certificate information. If you want to add this certificate to the **Trusted Certificate List**, click **Accept** and the certificate is added to the **Trusted Certificate List**, or click **Cancel** if you do not want to add it to the **Trusted Certificate List**. The **Trusted Certificate List** appears.

   Note: You can add up to 128 trusted certificates.

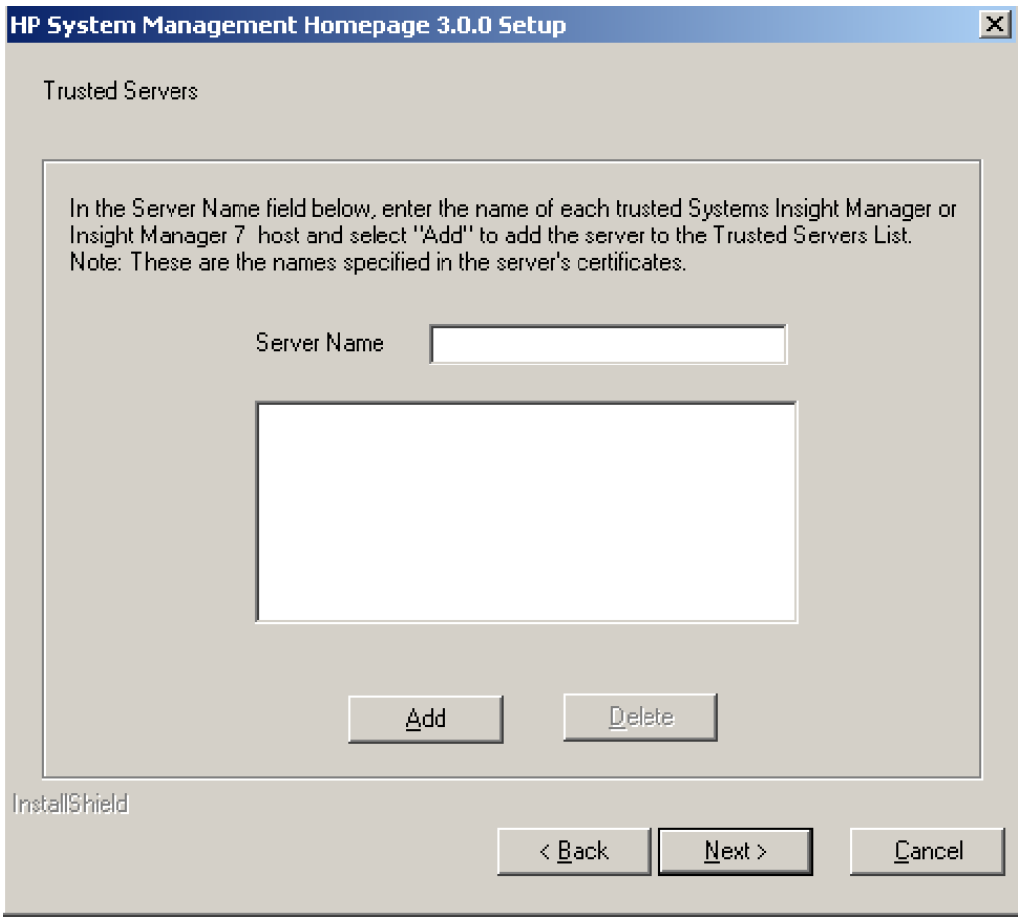
5. Click **Next**. The **IP Binding** dialog box appears.

   Note: To delete a certificate, select the certificate and click **Delete**.

- Trust By Name

1. Select **Trust By Name**.
2. Click **Next**. The **Trusted Server** dialog box appears.

   Note: Although the **Trust By Name** mode is a slightly better security method than the **Trust All** mode, your system is still vulnerable to security attacks. The **Trust By Name** mode sets up HP SMH to accept only certain requests from servers with the HP SIM certificate names designated in the **Trust By Name** field. The **Trust By Name** option is easy to configure and can prevent unauthorized access. For example, you might want to use the **Trust By Name** option if you have a secure network, but your network has two groups of administrators in two separate divisions. The **Trust By Name** option would prevent one group from installing software on the wrong system. This option does not verify anything other than the HP SIM certificate name submitted.



3. Enter the names of the certificate of HP Systems Insight Manager servers you want to trust.

   Note: The HP SIM server certificate name cannot contain the following characters: ~, !, `, @, #, $, %, ^, &, *, (,), +, =, \, ", :, ', <, >, ?, ,, |, and ;.
4. Click **Add** to add the name of a certificate of HP SIM server you want to trust.

   Note: You can enter a maximum of five HP SIM server names.
5. Click **Next**. The **IP Binding** dialog box appears.

   Note: If you click **Next** without adding any HP SIM server certificate names to the list, an error message appears indicating that if you do not specify any trusted server names, HP SIM cannot access the HP Web-based Agents on this system. Click **OK** to proceed without trusting any systems, or click **Cancel** to close the dialog box and add HP SIM server certificate names to the list.

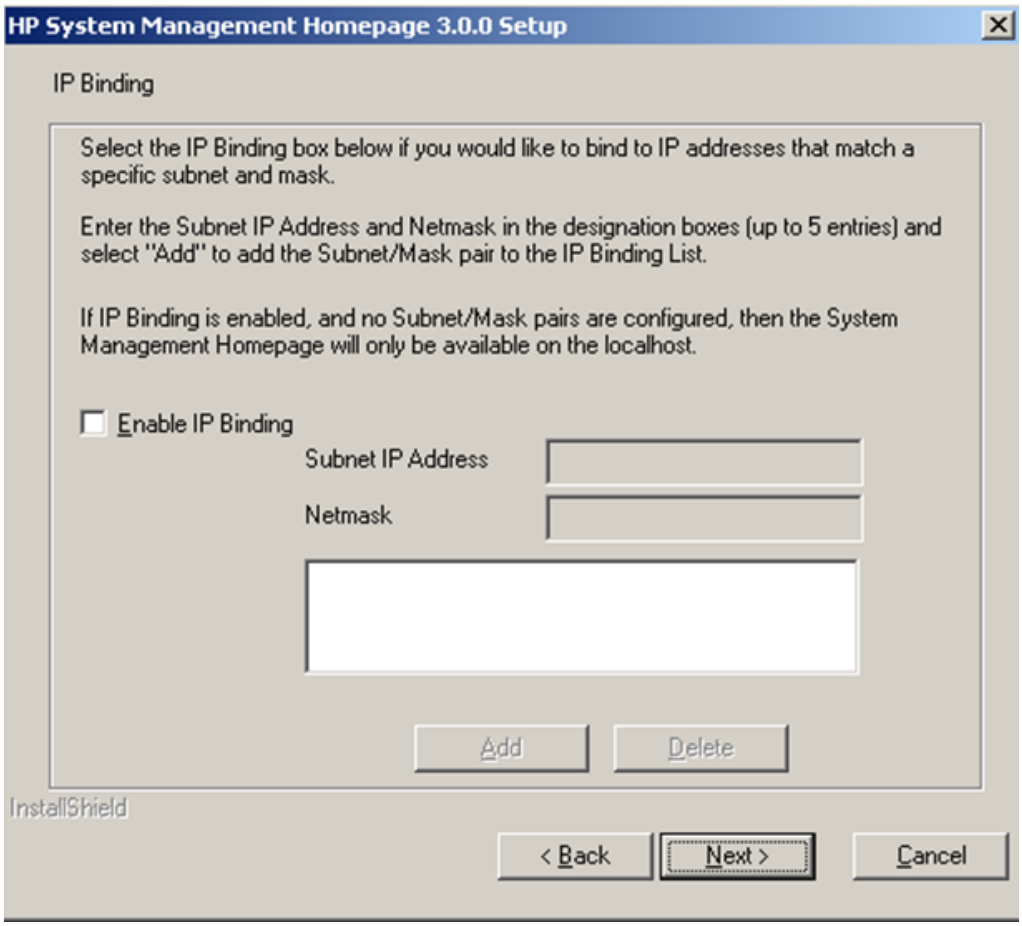
   Note: To delete a HP SIM server certificate name, select the certificate name and click **Delete**. The selected certificate name is removed.

- Trust All

1. Select **Trust All**.
2. Click **Next**. The **IP Binding** dialog box appears.

   Note: The **Trust All** option leaves your system vulnerable to security attacks and sets up HP SMH to accept certain requests from any server. For example, you might want to use **Trust All** if you have a secure network, and all users in the network are trusted.

6. Select **IP Binding** to enable the Subnet IP Address and NetMask.



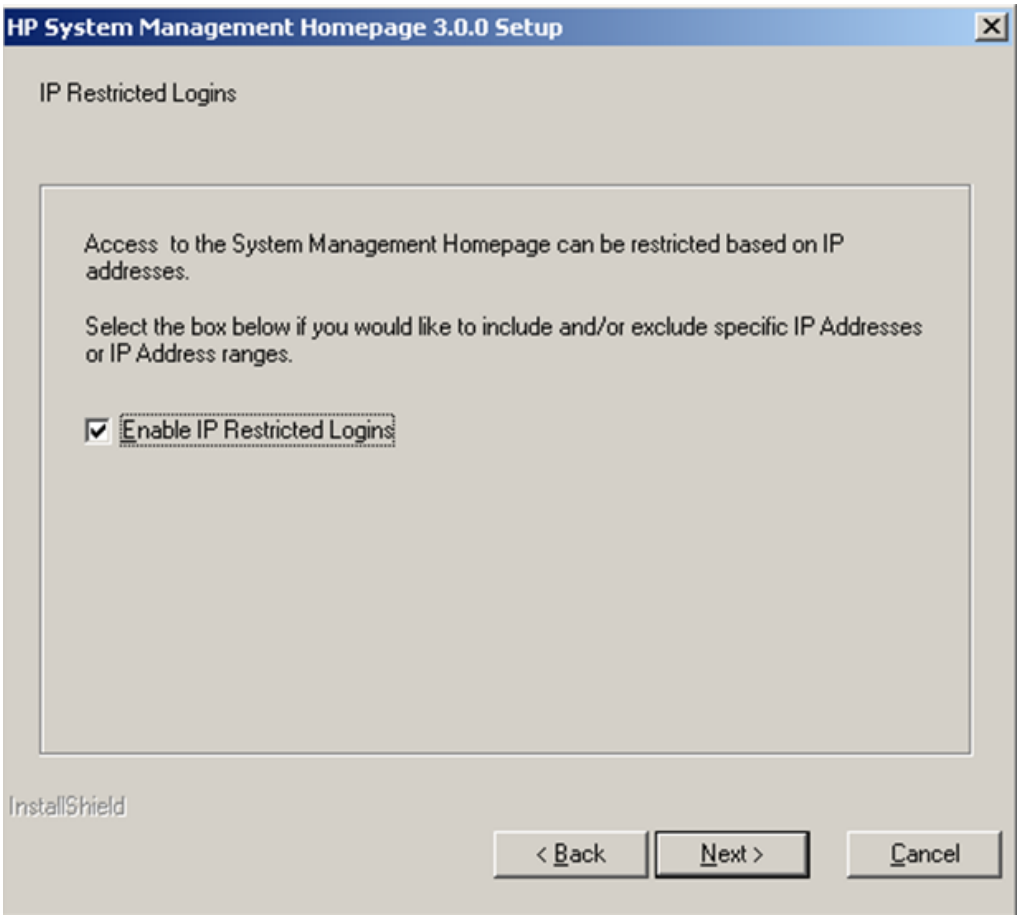
The **IP Binding** dialog box enables you to bind to specific IP addresses that match a specific Subnet IP Address or NetMask. It restricts the subnet you want to manage.

a. Enter the **Subnet IP Address** in the designated field.
b. Enter the **NetMask** in the designated field.
c. Click **Add**, and the Subnet IP Address/NetMask appears in the dialog box. To delete a Subnet IP Address/Netmask from the dialog box, select a **Subnet IP Address/NetMask**, and click **Delete**. The Subnet IP Address/Netmask is removed from the dialog box.

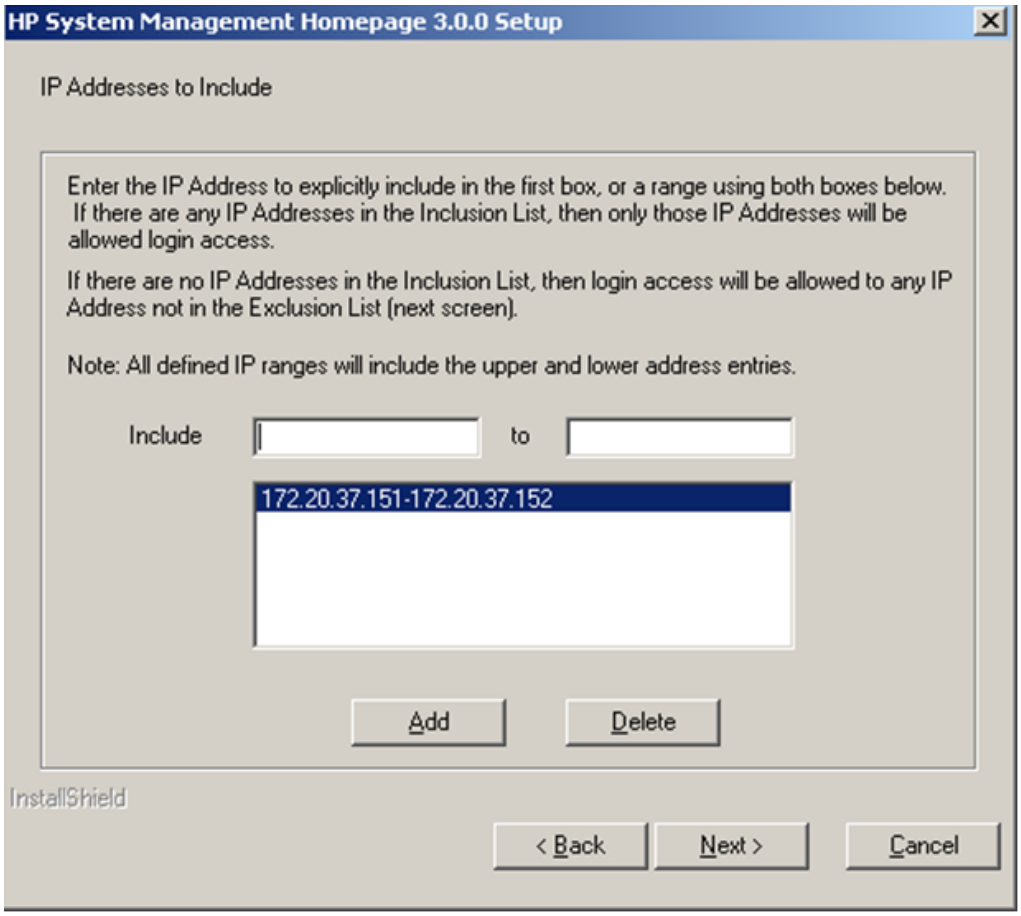
   Note: You can add up to five Subnet IP Address/NetMask pairs. If you enter an invalid Subnet IP Address/Netmask pair, an error message appears indicating the `Subnet IP address or Netmask is invalid`. Click **OK**. Enter a valid Subnet IP address/Netmask and click **Add** again.

   Note: The masking field is not required for IPv6 addresses.

7. Click **Next**. The **IP Restricted Login** dialog box appears. The **IP Restricted Login** dialog box enables you to select specific IP addresses or IP address ranges to include or exclude from gaining login access.


HP System Management Homepage 3.0.0 Setup
IP Restricted Logins
Access to the System Management Homepage can be restricted based on IP addresses.
Select the box below if you would like to include and/or exclude specific IP Addresses or IP Address ranges.
Enable IP Restricted Logins
InstallShield
< Back
Next >
Cancel

8. Select **IP Restricted Login**, and click **Next**. The **IP Address to Include** dialog box appears. This dialog box enables you to specify the IP address or IP address ranges to grant login access permission. If IP addresses are in the **Inclusion** list, then only those IP addresses have login privileges. If no IP addresses are in the Inclusion list, then all IP addresses that are not in the **Exclusion** list have login privileges.

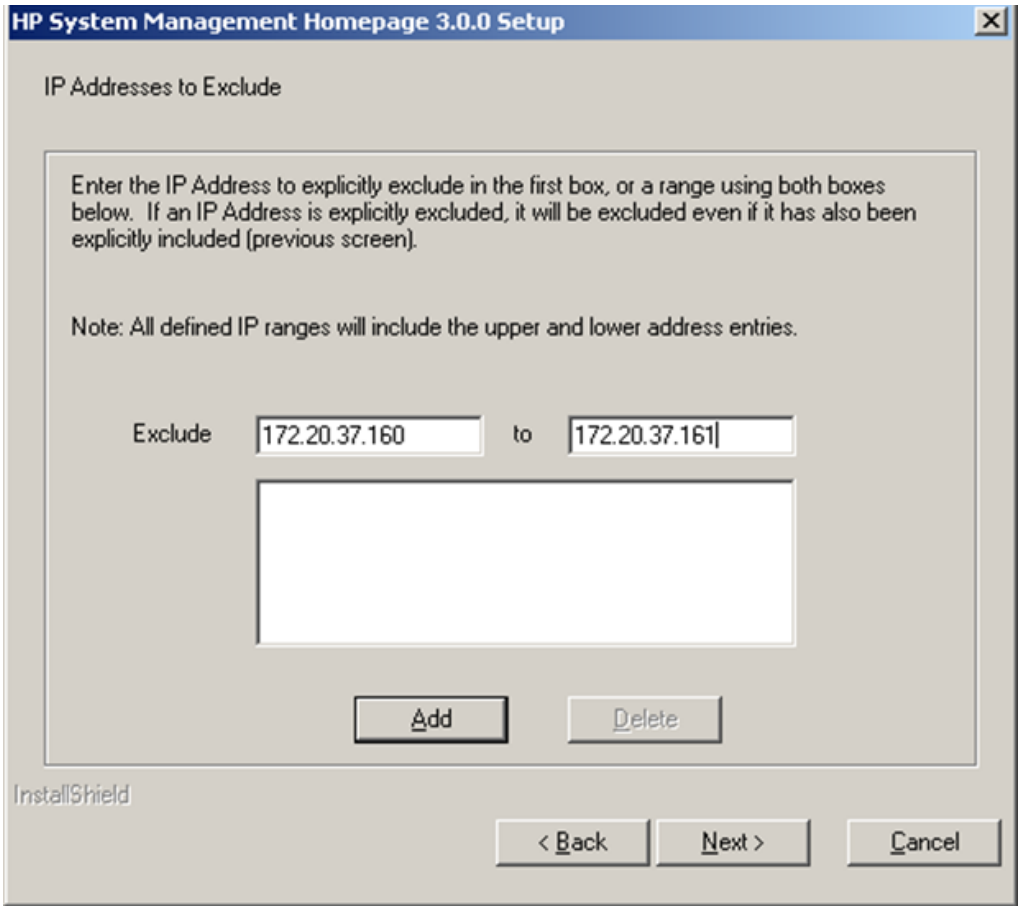


Note: You can enter single IP address and ranges of IP addresses in the **IP Restricted Login** dialog box. Enter a single address in the first box.

a. In the **Include** field, enter a beginning IP address.
b. In the **To** field, enter an ending IP address. All IP addresses that fall between the beginning and ending IP addresses have login access.
c. Click **Add**. The IP address or IP address range is added to the **Inclusion** list. To delete an IP address or IP address range, select an IP address or IP address range, and click **Delete**. The IP address or IP address range is deleted from the **Inclusion** list.

   Note: If you enter an invalid IP address or IP address range, an error message appears indicating the IP address is invalid. Click **OK**. Enter a valid IP address or IP address range, and click **Add**.

9. Click **Next**. The **IP Address to Exclude** dialog box appears.

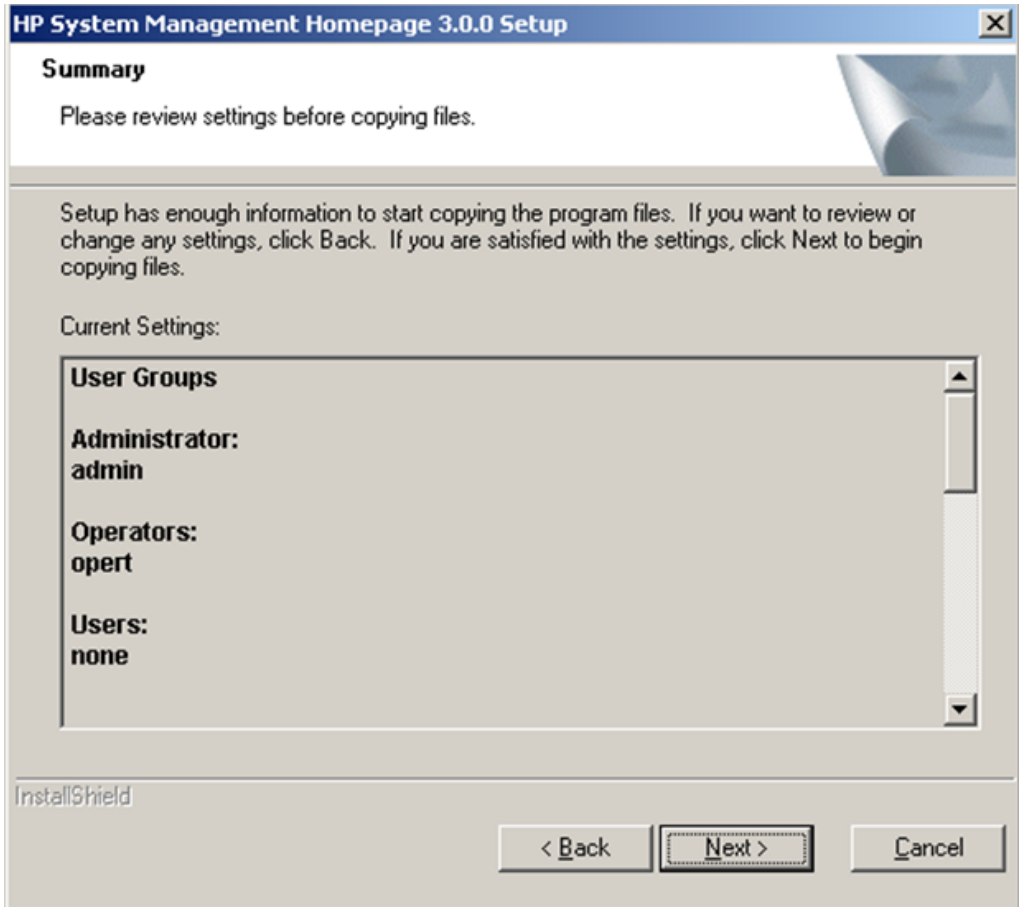


a. In the **Exclude** field, enter a beginning IP address.
b. In the **To** field, enter an ending IP address. All IP addresses that fall between the beginning and ending IP addresses do not have login access.
c. Click **Add**. The IP address or IP address range is added to the **Exclusion** list. To delete an IP address or IP address range, select an IP address or IP address range, and click **Delete**. The IP address or IP address range is deleted from the **Exclusion** list.

   Note: If you enter an invalid IP address or IP address range, an error message appears indicating the IP address is invalid. Click **OK**. Enter a valid IP address or IP address range, and click **Add** again.

   Note: If you select **Next** without adding any IP addresses to either the **Include** or **Exclude** lists, a warning message appears stating, `IP Restricted Login checkbox will be marked as disabled. Do you want to proceed without adding any IP Address restrictions?` If you select **OK**, the **IP Restricted Login** option on the **IP Restricted Login** dialog box is cleared, and the **Install Summary** dialog box appears.

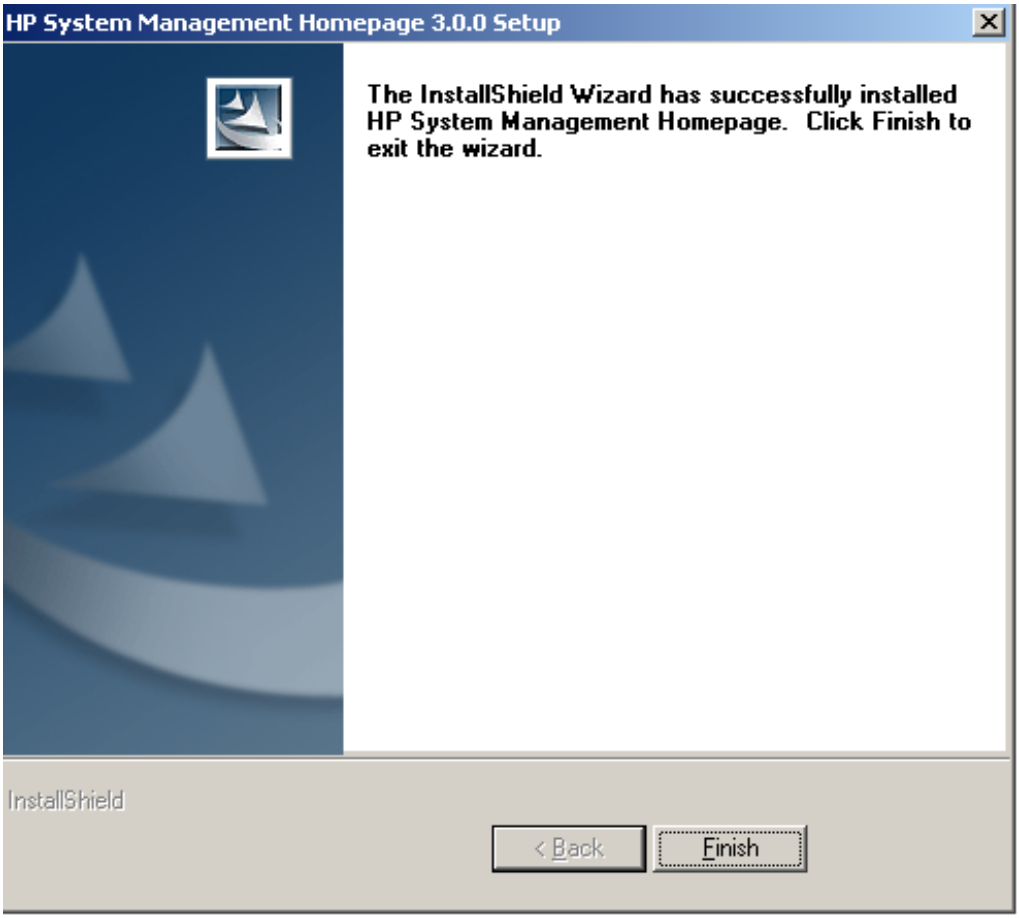
10. Click **Next**. The **Install Summary Panel** appears. The **Install Summary Panel** lists a summary of the options that you specified during the installation.



11. Click **Next**. The installation process begins.

    Note: During the installation of HP SMH, the **Cancel** button is disabled. Even if you click **X** in the upper-right corner of the box, the current operation cannot be canceled.

12. Click **Finish** to complete the installation.



Installing HP SMH for Windows silently

The HP SMH installation for Windows enables you to silently install HP SMH. After the installation is complete, you can configure HP SMH settings.

NOTE: Do not copy or import certificates when using the `setup.exe /r` option.

Generating a setup.iss file

`setup.exe /r`

The HP SMH installation interface appears and records your selections.

The `setup.iss` file is placed into the Windows directory. You can move this file to the location of your choice.

Installing silently using the CLI

To install silently using the CLI, use the following command:

`setup.exe /s /f1`*`full_path_to_setup.iss_file`*

For example, you might enter `setup.exe /s /f1c:\mydirectory\setup.iss`.

Note: There are no spaces between `f1` and the path.

Reinstalling silently using the CLI

To reinstall silently using the CLI:

`setup.exe /s /reinst /f1`*`full_path_to_setup.iss_file`*

Note: The `/s /reinst` command reinstalls the same version of HP SMH. The `/s /preserve` command preserves the existing `smhpd.xml` settings.

If perform an initial installation of HP SMH 3.x, the `/preserve` command preserves the pre-3.x settings.

If an HP SMH 2.x installation is present, you must enter `setup.exe /s /reinst /preserve /f1-full_path_to_setup.iss` . If you do not include `/preserve`, the `setup.iss` is applied.

Configuring HP SMH

The HP SMH configuration is based on environment variables and tags that are set by *SystemDrive*`\hp\hpsmh\smhpd.xml` file. To change the default configuration, you can modify the XML file to properly set the value of the tags. There are three ways to modify the XML file:

- Editing the XML file with a text editor application
- Using the CLI smhconfig.exe tool located at *SystemDrive*`\hp\hsmh\bin`
- Using HP SMH interface through a browser

NOTE: Not all configurations can be accomplished using a browser.

Table 5-1 Environment variables and tags

Variable	Description	Script
<session-timeout>15</session-timeout>	The <session-timeout> tag defines the HP SMH session timeout in minutes. If it is defined, then the HP SMH session stops after the time period has elapsed without any user activity. If it is not defined, then the default for the HP SMH session timeout is 15 minutes. You can define the <session-timeout> tag using any value between 1 and 60 minutes.	*SystemDrive*:\hp\hpsmh\conf\smhpd.xml
<ui-timeout>20</ui-timeout>	The <ui-timeout> tag defines the HP SMH GUI timeout in seconds. If it is defined, then HP SMH limits the loading time of the webapps. If it is not defined, then the default for the HP SMH GUI timeout is 20 seconds. You can define the <ui-timeout> tag using any value between 10 and 3600 seconds.	*SystemDrive*:\hp\hpsmh\conf\smhpd.xml
<rotate-logs-size>N</rotate-logs-size>	The <rotate-logs-size> tag defines the HP SMH Rotate Logs file size. To change the Rotate Logs file size, edit the configuration file smhpd.xml. You can define the <rotate-logs-size> tag using any value between 1 and 9, which represents the log size in megabytes.	*SystemDrive*:\hp\hpsmh\conf\smhpd.xml
<log-base-dir>path</log-base-dir>	The log-base-dir tag defines the path for Error_log and Access_log. By default, Error_log and Access_log are located in *SystemDrive*:\hp\hpsmh\logs (/var/spool/opt/hp/hpsmh/logs in Linux) folder. You can change the path by giving the required path in the tag and creating the logs folder under that path.	*SystemDrive*:\hp\hpsmh\conf\smhpd.xml (/opt/hp/hpsmh/conf/smhpd.xml in Linux).
<max-threads>value</max-threads>	The max-threads tag configures the number of threads used by Apache using the smhpd.xml file. • Default value - Windows: 250 • Max value - Windows: 512 • Min value - Windows: 64 **Note:** Max-thread is applicable only in the Windows environment.	

6 Installing HP SMH using HPSUM

The HP Smart Update Manager (HPSUM) utility enables you to deploy ProLiant or Integrity Support Pack software and firmware components from a single, easy-to-use graphical user interface. The utility enables you to deploy and maintain ProLiant or Integrity Support Pack and Smart Components on a local server or one or more remote servers. This utility enables legacy support of existing software and firmware components while simplifying the overall deployment process. The utility also provides installation logic and version control that automatically check for dependencies, installing only the correct updates for optimal configuration.

ProLiant or Integrity Support Pack contains numerous files. All files must be present in the same directory as the HPSUM.EXE program for the PSP or ISP to be properly installed. You can install HP SMH as a part of the complete ProLiant or Integrity Support Pack, or you can install the HP SMH component individually. The HP SMH component also provides support for preconfiguration, which enables you to configure and save the configuration as part of the component itself before installing on target machines.

NOTE: Installation of a preconfigured component overwrites the configuration settings of an existing HP SMH installation. If you want to retain existing settings, do not preconfigure the component.

Installing HP SMH remotely on a Windows operating system using HPSUM

1. To start the deployment, run HPSUM.EXE. The **Inventory Progress** screen appears while the HPSUM builds an inventory of available updates. The **Select Installation Host(s)** screen appears when the inventory process is complete.
2. If you want to install HP SMH on the local server, check the **Local Host** checkbox and click **Next**.
3. If you want to install HP SMH on remote servers:
   a. Select the **Remote Host or Group** checkbox and click **Manage Host**. The **Manage Host** panel appears.
   b. Click **Add Host**. You can add new hosts by DNS name or IP address, or you can add a range of IP addresses.
   c. You can also create a group of systems on which you want to install HP SMH by selecting **Manage Groups**.

      Note: If you chose to **Manage Groups**, you will need to give the Windows credentials for each remote server.

4. Select the target server and click **Next**. A **Discovery Progress** screen appears while the system checks for installed items. Then, the **Select Bundle Filter** page appears.
5. From the **Select Bundle Filter** page, select the appropriate PSP or ISP bundle, according to the target server operating system architecture (either x86 or x64), and select the appropriate option for the bundle filter. These options appear:
   - **Allow Non-Bundle Version** Shows other versions of the product that are in the bundle. This enables you to include updates newer than those released in the bundle.
   - **Allow Non-Bundle Products** Shows updates for products that are not part of the bundle. This option enables you to update other items on your system at the same time as applying the bundle (as a convenience or because updates in the bundle might depend on them).
   - **Force All Bundle Updates** Automatically sets the **force** flag for updates in the bundle. This option enables you to update the installation as long as the supported hardware is present and installation conditions are met.

   Note: You do not need to select the bundle filter option when you install the HP SMH component alone.
6. Click **Next**. The **Select Items to be installed** panel appears. This panel shows the components to be installed or displays **Installation not needed** or **Excluded by filtering**.
7. Check the HP SMH component, and you can preconfigure the HP SMH component by selecting **Configure Now**.

   Note: If PSP or ISP contains an older version of HP SMH than what is installed on the target server, the HP SMH component is listed under the **Installation not needed** section. In this case, click **Installation**

Options for HP SMH component and select the **For Install** checkbox. The HP SMH component is listed under **Updates to be Installed**.

8. After selecting the HP SMH component, click **Install**. A screen appears showing the installation progress.
9. After installation is finished, the **Installation Result** panel appears.

   In the **Installation Result** panel, the **Reboot Now** and **Exit** buttons appear.
10. To reboot the system, select **Reboot Now**. To exit the program, select **Exit**. The HP Smart Update Manager program is complete.

Preconfiguring the HP SMH component

1. From the **Welcome to the Configuration Wizard for the HP System Management Homepage Component** page, click **Next**. The **Operating Systems Groups** page appears.
2. In the **Group Name** field, enter the name of an operating system group that you want to assign (for example, `vcadmin`).
3. In the **Operating Level** field, select the appropriate level for the new group from the dropdown list.

   Note: The default Administrator and any account under **Administrators Group** always have administrative access.
4. Click **Add** to assign the group. The new group appears under the operating system group to which it is assigned.

   Note: You can add up to five entries for each operating system group.
5. Click **Next**. You can click **Save** to save your changes up to this point or click **Cancel** to discard the changes and close the wizard.
6. Select one of the following options:

   - **Anonymous Access** Anonymous Access is disabled by default. **Anonymous Access** enables a user to access HP SMH without logging in. Select this option to allow anonymous access.

     CAUTION: HP does not recommend the use of anonymous access.

   - **Local Access** Local Access is disabled by default. Local Access enables a user to locally gain access to the HP SMH without being challenged for authentication. If you select **Administrator** any user with access to the local console is granted full access. If you select **Anonymous**, any local user has access limited to unsecured pages without being challenged for a user name and password.

     CAUTION: HP does not recommend the use of local access unless your management server software enables it.
7. Click **Next**. You can click **Save** to save your changes up to this point, or click **Cancel** to discard the changes and close the wizard.
8. Select one of the following Trust Mode security options:

   - **Trust by Certificate** Sets the HP SMH to accept configuration changes only from HP SIM servers with trusted certificates. This mode requires the submitted server to provide authentication by means of certificates. This mode is the strongest method of security because it requires certificate data and verifies the digital signature before allowing access. If you do not want to enable any remote configuration changes, leave **Trust by Certificate** selected and leave the list of trusted systems empty to avoid importing any certificates.

     NOTE: HP strongly recommends using this option because the other options are less secure.

     To trust by certificate:

     1. Select **Trust by Certificate**, and click **Next**.
     2. In the **Certificate Name** field, click **Browse** to select the certificate file. After you select the certificate file, the certificate data appears on the screen.

3. Click **Add**. The certificate appears under **Certificate Files**. You can click **Save** to save your changes up to this point or click **Cancel** to discard the changes and close the wizard.
4. Click **Next**. The **IP Binding** page appears.

- **Trust by Name** Sets HP SMH to accept certain configuration changes only from servers with the HP SIM certificate names designated in the **Trust By Name** field. The **Trust By Name** option is easy to configure. For example, you might use the **Trust By Name** option if you have a secure network with two separate groups of administrators in two separate divisions. This option prevents one group from installing software to the wrong system. This option verifies only the HP SIM server certificate name submitted.

CAUTION: HP strongly recommends using the **Trust by Certificate** option because the other options are less secure.

The server name option must meet the following criteria:

- Each server certificate name must be less than 64 characters.
- Special characters must not be included as part of the *server certificate name*: ~ ' ! @ # $ % ^ & * ( ) + = \ ": ' < > ? , | .

To trust by name:

1. Select **Trust by Name**, and click **Next**.
2. In the **Trusted Server Name** field, enter the HP SIM server certificate name to be trusted.
3. Click **Add**. The trusted HP SIM server certificate name appears under the **Trusted Servers** list. You can click **Save** to save your changes up to this point or click **Cancel** to discard the changes and close the wizard.
4. Click **Next**. The **IP Binding** page appears.

- **Trust All** Sets HP SMH to accept certain changes from any server.

CAUTION: HP strongly recommends using the **Trust by Certificate** option because the other options are less secure.

To trust all servers:

1. Select **Trust All**. You can click **Save** to save your changes or click **Cancel** to discard the changes and close the wizard.
2. Click **Next**. The **IP Binding** page appears.

9. IP Binding specifies from which IP addresses HP SMH accepts requests and provides control over which nets and subnets requests are processed.

   Administrators can configure HP SMH to bind only to addresses specified in the **IP Binding** page. You can define a maximum of five subnet IP addresses and netmasks.

   An IP address on the server is bound if it matches one of the entered IP Binding addresses after the mask is applied.

NOTE: HP SMH always binds to 127.0.0.1. If IP Binding is enabled and no subnet/mask pairs are configured, then the HP SMH is available only to 127.0.0.1. If IP Binding is not enabled, HP SMH binds to all addresses.

To configure IP binding:

1. Select **IP Binding**. The **IP Binding** page appears.
2. Enter the IP address.
3. Enter the netmask.

   Note: The masking field is not required for IPv6 addresses.

4. Click **Add**. The IP binding configuration is saved and appears under the **IP Binding List**.
5. Click **Next**. The **IP Restricted Login** page appears.

10. The IP Restricted Login enables the HP SMH to restrict login access based on the IP address of a system.

    You can set address restriction at installation time, or administrators can set address restriction from the **IP Restricted Login** page

    - If an IP address is excluded, it is excluded even if it is also listed in the **Included** box.
    - If there are IP addresses in the **Included** box, then only those IP addresses are allowed login access with the exception of *localhost*.
    - If no IP addresses are in the inclusion list, then login access is allowed to any IP addresses not in the exclusion list.

    To include or exclude IP addresses:

    1. In the **From** field, enter the IP addresses to include or exclude. You can enter an IP address range to be included or excluded by entering a beginning IP address in the **From** field and an ending IP address in the **To** field.
    2. From the **Type** field, select **Include** or **Exclude**.
    3. Click **Add** to add the IP address or IP address range to the **Inclusion List** or **Exclusion List**.
    4. Click **Save**.

The HP SMH component is configured successfully and is ready for installation.

7 Installing HP SMH directly on Linux operating systems

Installation for Linux on x86 and x86_64 operating systems

The HP SMH installation for Linux enables you to silently install HP SMH on x86 and x86_64 operating systems. After the installation is complete, you can configure the HP SMH settings.

NOTE: To install HP SMH, you must log in as root user.

Installing HP SMH on Linux x86 operating systems

To install HP SMH on x86 operating systems, your system must meet the minimum requirements. In addition, you must have the `hpsmh-3.x.x-y.i386.rpm`.

Note: The general 32-bit RPM List is not installed by default.

To install HP SMH, enter the following command line:

```
rpm –ivh hpsmh-3.x.x-y.i386.rpm
```

A message appears indicating that HP SMH installed successfully with default configuration values.

For more information regarding minimum requirements, see Chapter 2 “Installation requirements”.

Installing HP SMH on x86_64 operating systems

To install HP SMH on x86_64 operating systems, your system must meet the minimum requirements. In addition, you must have the `hpsmh-3.x.x-y.x86_64.rpm`

```
rpm –ivh hpsmh-3.x.x-y.x86_64.rpm
```

Configuring HP SMH

After HP SMH is installed, you can configure the settings. If you are migrating from a version of HP SMH prior to 3.0, the previous settings are retained. However, the retained settings are configurable.

To configure HP SMH settings:

1. Use the CLI smhconfig tool located at `/opt/hp/hpsmh/sbin`.
2. Enter the following command to start the configuration:

   ```
   perl /usr/local/hp/hpSMHSetup.pl
   ```

   The **Welcome** screen indicates that you can configure security and access parameters for HP SMH and related HP web-based management tools.
3. Press **Enter**. The **Operating System Groups** screen appears.

   The **Operating System Groups** screen enables you to add or delete operating system groups in HP SMH. The following options are available:

   - To add a group:
     1. At the prompt, enter `1` to add a group. The **Add Operating System Groups** screen displays the operating system group lists.

        Note: You can add up to five existing operating system group entries for each group.

Enter one of the following options to assign the operating system group to the Administrator Group List:

- Enter `1` for Administrator.

  For example, to add **admin1** to the **Administrator** operating system group:

  1. Enter `1` for Administrator.
  2. At the prompt, `Enter the name of the operating system group:` enter **admin1**.
  3. Press **Enter**. **admin1** appears in the **Administrator Group List**.
  4. Enter `n` to go to the next screen.
- Enter `2` for Operator.
- Enter `3` for User.

2. Enter **n** to go to the next screen.

- To delete a group:
  1. Enter `2` to delete a group.

     The following options are available:

     - Enter `1` for Administrator. The **Administrator Group List** appears.
     - Enter `2` for Operator. The **Operator Group List** appears.
     - Enter `3` for User. The **User Group List** appears.
  2. At the prompt, enter `1`, `2`, or `3`.
  3. Enter the number next to the group name you want deleted. The group is deleted from the group list.

     Note: You can delete as many groups as you want by repeating this step.
  4. Press **Enter** when you are finished deleting groups.
  5. Enter `n` to go to the next screen. The **Operating System Groups** screen appears.
  6. Enter `n` to go to the next screen. The **User Access** screen appears.

4. Configure Local and Anonymous Access. The following options are available:
   - Enter `1` to enable **Anonymous Access**.

     CAUTION: HP does not recommend using anonymous access.
   - Enter `2` to disable **Anonymous Access**.
   - Enter `3` to disable **Local Access**.
   - Enter `4` to enable **Local Access - Anonymous**. **Local Access - Anonymous** enables you to locally gain access to HP SMH without authentication. Any local user has access limited to unsecured pages without being challenged for a username and password.

     CAUTION: HP does not recommend the use of local access unless your management server software enables it.
   - Enter `5` to enable **Local Access - Administrator**. This option grants full access to secure and unsecure pages. Any user with access to the local console is granted full access.
5. Enter `n` to go to the next screen or enter `p` to go to the previous screen.
6. Enter `n` to go to the next screen. The **Trust Mode** screen appears.
7. Configure the HP SMH trust mode.

   Enter `1` for **Trust by Certificate**. `Trust Mode: Trust by Certificate` appears.

   The following options are available: Trust by Certificate, Trust by Name, Trust All, and Modify Certificate List.

   - Trust by Certificate

1. Enter `1`. You are prompted for the certificate location.
2. Enter the file path of the trusted certificates to be added to the **Trusted Certificates List**. Press **Enter** when you are finished.

   For example:

   A. Enter `File: /home/ServerName/cert1.pem` .

   B. Press **Enter**. The `cert1.pem` is added to the **Trusted Certificates List**.

   If the certificate file does not exist, a message appears indicating that `/home/ServerName/cert1.pem` does not exist.

   C. Add as many certificates as you want by repeating these steps. Press **Enter** when you finish.

- To import a certificate:
  1. Enter `2`. You are prompted for the server name.
  2. Enter the name or IP address of the HP SIM server and press **Enter**. The certificate appears.

     The following options are available:

     - Enter `1` to accept the certificate. The file is saved.
     - Enter `2` to reject the certificate. The file is not imported.
  3. Press **Enter** when you finish. The imported certificates appear in the **Trusted Certificates List**. You can import additional certificates by repeating these steps.
  4. Press **Enter** when you finish importing certificate files.
- To delete a certificate:
  1. Enter `3`. You are prompted to enter the certificate file number.
  2. Enter the certificate file number.
  3. Press **Enter** when you finish. You can delete additional certificate files by repeating these steps.
  4. Press **Enter** when you finish.
- Trust by Name
  1. Enter `2` to **Trust by Name**. `Trust Mode: Trust by Name` appears.
  2. Enter `4` to **Modify Server Name** list.

     To add an HP SIM server certificate name:

     A. Enter `1`. You are prompted to add an HP SIM server certificate name.

     B. Enter the name of the certificate of HP SIM server to be trusted and press **Enter**. The certificate name appears in the **Trusted Server Names** list.

     Note: You can add a maximum of five server certificate names.

     To delete a certificate name:

     A. From the **Server Name** list, enter `2`.

     B. Enter the number associated with the HP SIM server certificate name. The HP SIM server certificate name is removed from the **Server Name** list.
  3. Enter `n` for next. The **Trust Mode Settings** screen appears.
- Trust All
  1. Enter `3` to **Trust All**. `Trust Mode: Trust All` appears.
  2. Enter `n` for next. The **IP Binding** screen appears.
- Modify Certificate List

  Enter `4` to **Modify Certificate List**.

8. Bind IP addresses that match a subnet and netmask.

   The following options are available:

   - Enable IP Binding

1. Enter `1` to enable the IP Binding, which sets it to **ON**. `IP Binding: ON` appears.
2. Enter `n` to go to the next screen.

   The following options are available:

   To add an IP address:

   A. Enter `1` to add an IP address. You are prompted for the IP address.

   B. Enter the IP address to be added. `IP Address: YourIPAddress` appears. You are prompted for the netmask.

   C. Enter the netmask. `netmask: YourNetmask` appears.

   Note: You can add or delete as many IP addresses as you want.

   To delete an IP address:

   A. Enter `2`.

   B. Enter the number of the IP address or netmask to be deleted. The IP address or netmask is removed from the IP address or netmask list.

   Note: The masking field is not required for IPv6 addresses.

3. Enter `n` to go to the next screen. The **IP Restricted Login** screen appears.

- Disable IP Binding
  1. Enter `2` to disable the IP Binding, which sets it to **OFF**. `IP Binding: OFF` appears.
  2. Enter `n` to go to the next screen or enter `p` to go to the previous screen. The **IP Restricted Login** screen appears.

9. Configure HP SMH to restrict login access based on the IP address of the system from which the login is attempted.

   The following options are available:

   - Enter `1` to enable an IP Restricted Login, which sets it to **ON**. `IP Restricted Login:ON` appears.

     To enable the IP Restricted Login:

     1. Enter `1`. **IP Restricted Login** is set to **ON**.
     2. Enter `n` for next. The **Set IP Address Restrictions** screen appears.

        To add IP addresses to the Inclusion List:

        A. Enter `1` for **Include Login Restriction IP Address**.

        B. Enter `1` for **Add**.

        C. Enter the IP address or IP address range you want to add to the **Inclusion List**. The IP address or IP address range appears under the **IP Address Inclusion List**.

        Note: You can add or delete as many IP addresses or IP address ranges as you want.

        To delete an IP address or IP address range from the Inclusion list:

        A. Enter `2`.

        B. Enter the number associated with the IP address or IP address range you want to delete and press **Enter**. The IP address or IP address range is deleted from the **Inclusion List**.

        To add an IP address or IP address range to the **Exclusion list**:

        A. Enter `2` for Exclude Login Restriction IP Address

        B. Enter `1` to add an IP address to the **Exclusion list**.

        C. Enter the IP address or IP address range to be added to the **Exclusion list**. The IP address or IP address range is added in the **IP Address Exclusion List**.

        D. Press **Enter**. The **IP Address Exclusion List** screen appears.

        E. Enter `n` for next. The **IP Address Inclusion List** and **IP Address Exclusion List** appears.

        To delete an IP address or IP address range from the Exclusion list:

        A. Enter `2` to delete an IP address from the **Exclusion** list.

        B. Enter the number associated with the IP address or IP address range to be deleted.

C. Press **Enter**. The IP address is deleted from the **IP Address Exclusion List**.
D. Press **Enter**. The **IP Address Exclusion List** screen appears.
E. Enter `n` for next. The **IP Address Inclusion** list and **IP Address Exclusion** list appears.

Note: You can add or delete as many IP addresses or IP address ranges as you want.

3. Enter `n` for next.

- To disable IP Restricted Login:

  Enter `2` to disable IP Restricted Login, which sets it to **OFF**. `IP Restricted Login: OFF` appears.

10. Enter `n` to go to the next screen. The configuration completes, and a message appears indicating that HP SMH is successfully set up. The HP SMH service stops and starts automatically.
11. Verify HP SMH is configured and working properly by navigating to it and verifying that it appears as you configured HP SMH during installation.

8 Installing HP SMH directly on Itanium-based Linux operating systems

Installation for Itanium-based Linux operating systems

The HP SMH installation for Linux enables you to silently install HP SMH on Itanium-based operating systems. After the installation is complete, you can configure the HP SMH settings.

NOTE: To install HP SMH, you must log in as root user.

Installing HP SMH on Itanium-based Linux operating systems

To install HP SMH on Itanium-based operating systems, your system must meet the minimum requirements. In addition, you must have the `hpsmh-3.x.x.-y.ia64.rpm`.

To install HP SMH, enter the following command line:

```
rpm –ivh hpsmh-3.x.x-y.ia64.rpm
```

A message appears indicating that HP SMH installed successfully with default configuration values.

For more information regarding minimum requirements, see Chapter 2 “Installation requirements”.

Configuring HP SMH

After HP SMH is installed, you can configure the settings. If you are migrating from a version of HP SMH prior to 3.0, the previous settings are retained. However, the retained settings are configurable.

To configure HP SMH settings:

1. Enter the following command to start the configuration:

   ```
   /opt/hp/hpsmh/smhconfig/hpSMHSetup.pl
   ```

   The **Welcome** screen indicates that you can configure security and access parameters for HP SMH and related HP web-based management tools.

2. Press **Enter**. The **Operating System Groups** screen appears.

   The **Operating System Groups** screen enables you to add or delete operating system groups in HP SMH. The following options are available:

   - To add a group:
     1. At the prompt, enter `1` to add a group. The **Add Operating System Groups** screen displays the operating system group lists.

        Note: You can add up to five existing operating system group entries for each group.

        Enter one of the following options to assign the operating system group to the Administrator Group List:

        - Enter `1` for Administrator.

          For example, to add **admin1** to the **Administrator** operating system group:

          1. Enter `1` for Administrator.
          2. At the prompt, `Enter the name of the operating system group:` enter **admin1**.

3. Press **Enter**. **admin1** appears in the **Administrator Group List**.
4. Enter **n** to go to the next screen.

- Enter 2 for Operator.
- Enter 3 for User.

2. Enter **n** to go to the next screen.

- To delete a group:
  1. Enter 2 to delete a group.

     The following options are available:

     - Enter 1 for Administrator. The **Administrator Group List** appears.
     - Enter 2 for Operator. The **Operator Group List** appears.
     - Enter 3 for User. The **User Group List** appears.

  2. At the prompt, enter 1, 2, or 3.
  3. Enter the number next to the group name you want deleted. The group is deleted from the group list.

     Note: You can delete as many groups as you want by repeating this step.

  4. Press **Enter** when you are finished deleting groups.
  5. Enter **n** to go to the next screen. The **Operating System Groups** screen appears.
  6. Enter **n** to go to the next screen. The **User Access** screen appears.

3. Configure Local and Anonymous Access. The following options are available:
   - Enter 1 to enable **Anonymous Access**.

CAUTION: HP does not recommend using anonymous access.

   - Enter 2 to disable **Anonymous Access**.
   - Enter 3 to disable **Local Access**.
   - Enter 4 to enable **Local Access - Anonymous**. **Local Access - Anonymous** enables you to locally gain access to HP SMH without authentication. Any local user has access limited to unsecured pages without being challenged for a username and password.

CAUTION: HP does not recommend the use of local access unless your management server software enables it.

   - Enter 5 to enable **Local Access - Administrator**. This option grants full access to secure and unsecure pages. Any user with access to the local console is granted full access.
4. Enter **n** to go to the next screen or enter **p** to go to the previous screen.
5. Bind IP addresses that match a subnet and netmask.

   The following options are available:

   - Enable IP Binding
     1. Enter 1 to enable the IP Binding, which sets it to **ON**. `IP Binding: ON` appears.
     2. Enter **n** to go to the next screen.

        The following options are available:

        To add an IP address:

        A. Enter 1 to add an IP address. You are prompted for the IP address.

        B. Enter the IP address to be added. `IP Address: YourIPAddress` appears. You are prompted for the netmask.

        C. Enter the netmask. `netmask: YourNetmask` appears.

        Note: You can add or delete as many IP addresses as you want.

        To delete an IP address:

A. Enter `2`.

B. Enter the number of the IP address or netmask to be deleted. The IP address or netmask is removed from the IP address or netmask list.

Note: The masking field is not required for IPv6 addresses.

3. Enter `n` to go to the next screen. The **IP Restricted Login** screen appears.

- Disable IP Binding
  1. Enter `2` to disable the IP Binding, which sets it to **OFF**. `IP Binding: OFF` appears.
  2. Enter `n` to go to the next screen or enter `p` to go to the previous screen. The **IP Restricted Login** screen appears.

6. Configure HP SMH to restrict login access based on the IP address of the system from which the login is attempted.

   The following options are available:

   - Enter `1` to enable an IP Restricted Login, which sets it to **ON**. `IP Restricted Login:ON` appears.

     To enable the IP Restricted Login:

     1. Enter `1`. **IP Restricted Login** is set to **ON**.
     2. Enter `n` for next. The **Set IP Address Restrictions** screen appears.

        To add IP addresses to the Inclusion List:

        A. Enter `1` for **Include Login Restriction IP Address**.

        B. Enter `1` for **Add**.

        C. Enter the IP address or IP address range you want to add to the **Inclusion List**. The IP address or IP address range appears under the **IP Address Inclusion List**.

        Note: You can add or delete as many IP addresses or IP address ranges as you want.

        To delete an IP address or IP address range from the Inclusion list:

        A. Enter `2`.

        B. Enter the number associated with the IP address or IP address range you want to delete and press **Enter**. The IP address or IP address range is deleted from the **Inclusion List**.

        To add an IP address or IP address range to the **Exclusion list**:

        A. Enter `2` for Exclude Login Restriction IP Address

        B. Enter `1` to add an IP address to the **Exclusion list**.

        C. Enter the IP address or IP address range to be added to the **Exclusion list**. The IP address or IP address range is added in the **IP Address Exclusion List**.

        D. Press **Enter**. The **IP Address Exclusion List** screen appears.

        E. Enter `n` for next. The **IP Address Inclusion List** and **IP Address Exclusion List** appears.

        To delete an IP address or IP address range from the Exclusion list:

        A. Enter `2` to delete an IP address from the **Exclusion** list.

        B. Enter the number associated with the IP address or IP address range to be deleted.

        C. Press **Enter**. The IP address is deleted from the **IP Address Exclusion List**.

        D. Press **Enter**. The **IP Address Exclusion List** screen appears.

        E. Enter `n` for next. The **IP Address Inclusion** list and **IP Address Exclusion** list appears.

        Note: You can add or delete as many IP addresses or IP address ranges as you want.

     3. Enter `n` for next.

   - To disable IP Restricted Login:

     Enter `2` to disable IP Restricted Login, which sets it to **OFF**. `IP Restricted Login: OFF` appears.

7. Enter `n` to go to the next screen. The configuration completes, and a message appears indicating that HP SMH is successfully set up. The HP SMH service stops and starts automatically.
8. Verify HP SMH is configured and working properly by navigating to it and verifying that it appears as you configured HP SMH during installation.

9 Installing HP SMH directly on Linux using Linux Deployment Utility

Installing HP SMH with preconfiguration

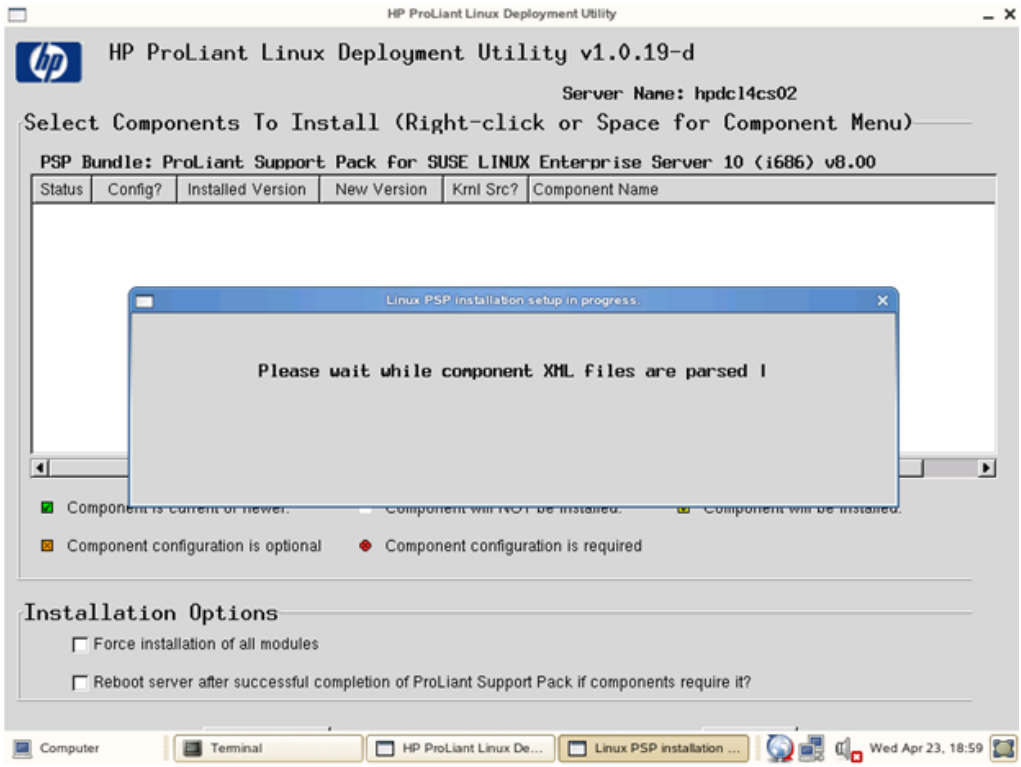
The Linux Deployment Utility enables you to easily upgrade and manage system software. The utility enables you to deploy and maintain ProLiant Support Pack software on local servers through the terminal window or ssh (secure shell) utility. The Linux Deployment Utility is shipped with the Linux ProLiant Support Pack, which is available on the HP SmartSetup CD. The Linux Deployment Utility enables you to install components or ProLiant Support Packs directly, but not remotely.

The Linux Deployment Utility parses the .XML files associated with each component and verifies whether the installation of those components is supported on the specific environment. The supported components are listed with a status icon indicating whether the component must be installed and configured. Configuring or preconfiguring the HP SMH component is optional.

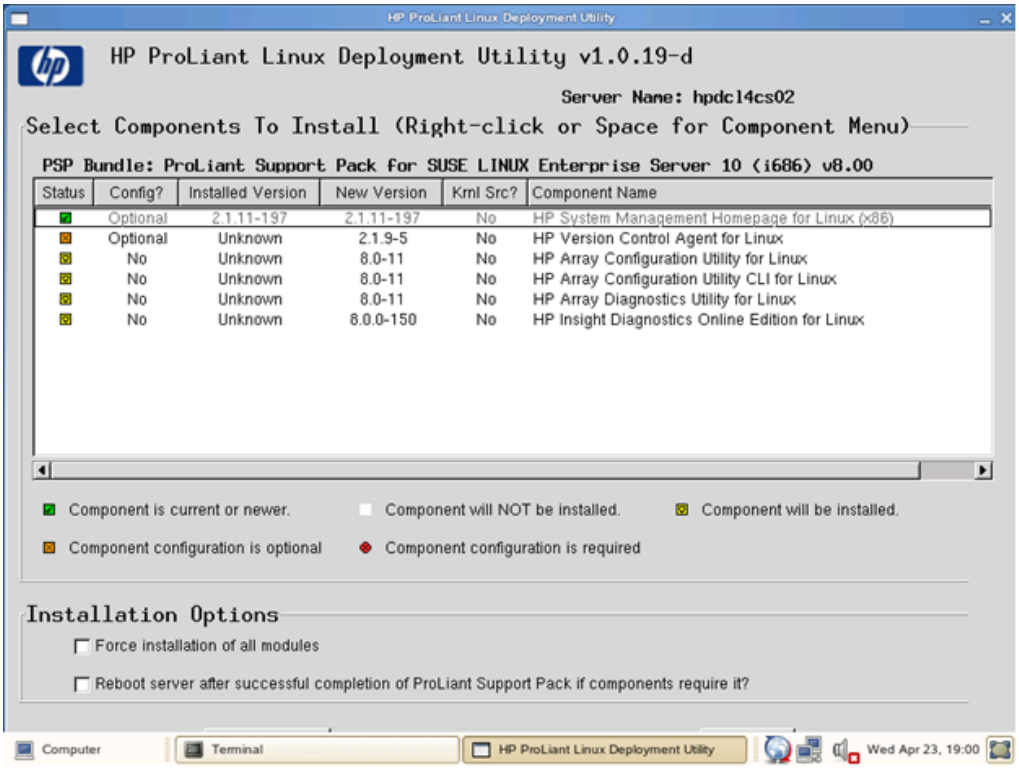
Preconfiguring HP SMH components

Note: All preconfiguration settings are saved in the components XML file.

1. Run the `install###.sh` script. The **HP ProLiant Linux Deployment Utility** screen appears indicating for you to wait while component XML files are parsed.

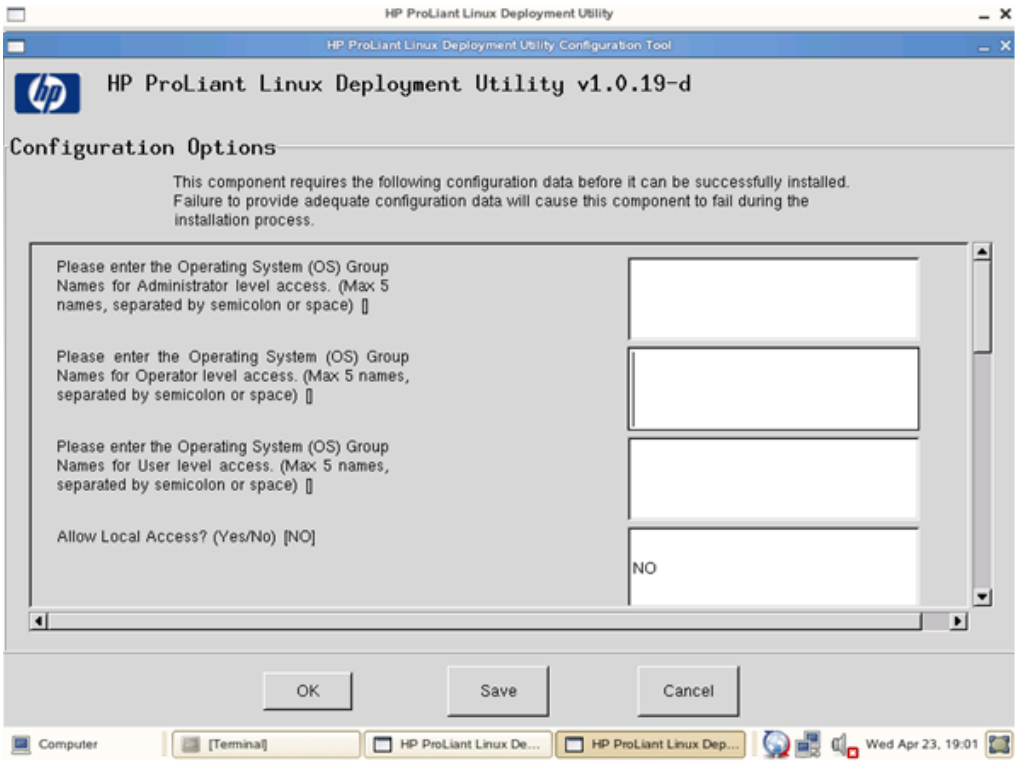


2. Under **Component Name**, select **HP System Management Homepage for Linux**.



3. Right-click **HP System Management Homepage for Linux** and select **Configure Component**. The **Configuration Option** screen appears.
4. In the **Please enter the Operating System (OS) Group Names for Administrator level access** field, enter the operating system group name for administrator-level access.

   Note: You can enter up to five operating system group names for administrator-level access. Separate the group names with a semicolon (;) or space.



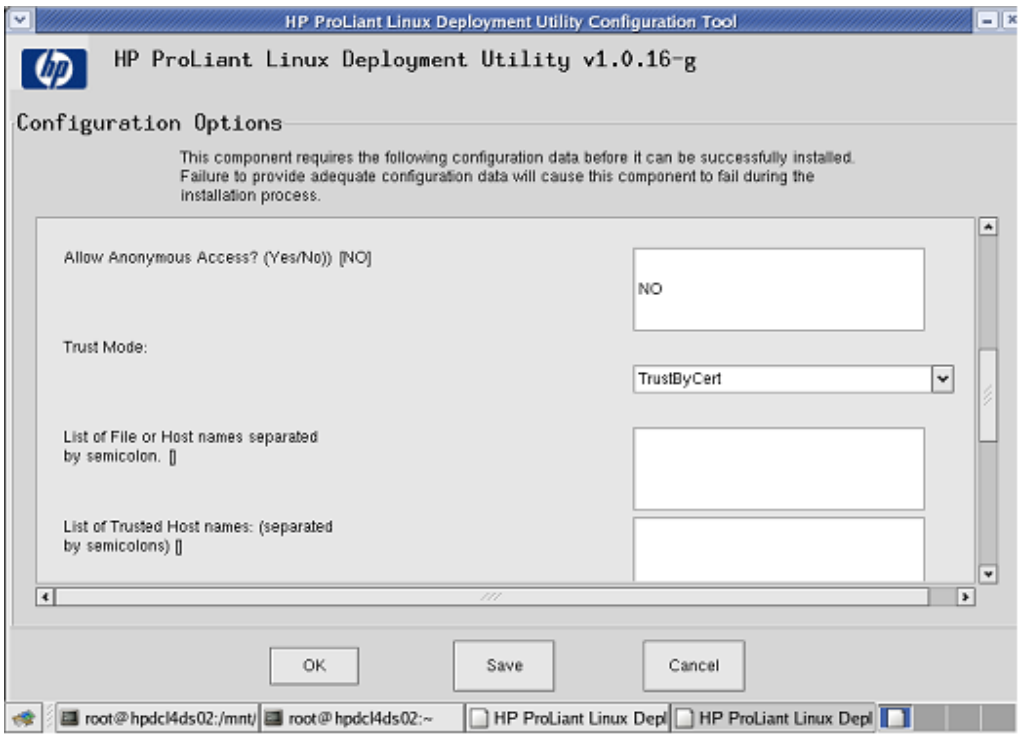
5. In the **Please enter the Operating System (OS) Group Names for operator-level access** field, enter the operating system group name for operator-level access.

   Note: You can enter up to five operating system group names for operator-level access. Separate the group names with a semicolon (;) or space.

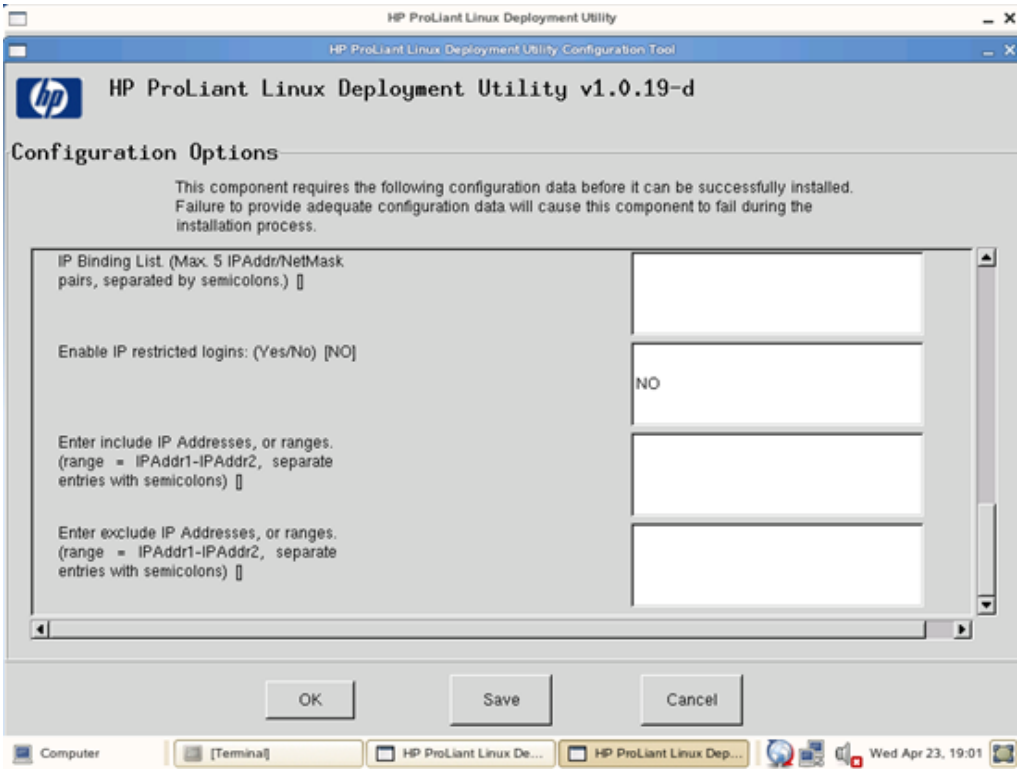
6. In the **Please enter the Operating System (OS) Group Names for user-level access** field, enter the operating system group name for user-level access.

   Note: You can enter up to five operating system group names for user-level access. Separate the group names with a semicolon (;) or space.

7. In the **Allow Local Access** field, enter `YES` to allow local access or `NO` to prohibit local access.
8. From the **Local Access Type** dropdown menu, select the local access type, **Anonymous** or **Administrator**.
9. In the **Allow Anonymous Access** field, enter `YES` to allow anonymous access or `NO` to disallow anonymous access.

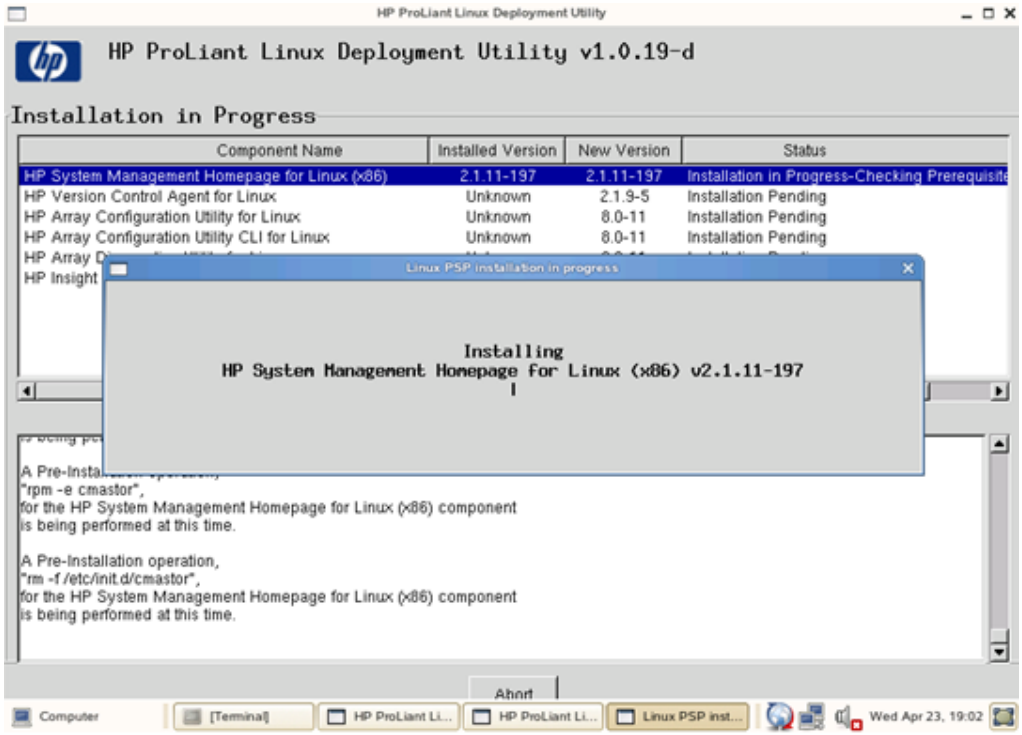


10. Select the trust mode from the **Trust Mode** dropdown menu.
    - If you select **TrustByCert** from the **Trust Mode** dropdown menu, enter the names of the certificate files and separate multiple entries with a semicolon in the **List of File or Host names separated by semicolon** field. For example, `cert.pem;cert2.pem;`*`ServerName`* .
    - If you select **TrustByName** from the **Trust Mode** dropdown menu, enter the names of the trusted HP SIM server certificate and separate multiple entries with a semicolon in the list of trusted **Host Names** field. For example, *`Server1;Server2`*.



11. In the **IP Binding** field, enter `YES` to enable IP Binding or `NO` to disable IP Binding.
12. In the **IP Binding List** field, enter the IP address and netmask pairs separated by semicolons. For example, *`IPAddress1/Netmask1;IPAddress2/Netmask2`*.

    The masking field is not required for IPv6 addresses.
13. In the **Enable IP Restricted Login** field, enter `YES` to enable IP restricted logins or `NO` to disable IP restricted logins.
14. In the **Enter include IP Addresses, or ranges** field, enter the IP addresses or range of IP address to be included.
15. In the **Enter exclude IP Addresses, or ranges** field, enter the IP addresses or range of IP address to be excluded.
16. Click **Save** to save your configuration, or click **Cancel** to discard your configuration.
17. Click **OK** to close the **HP ProLiant Linux Deployment Utility** screen.



18. After preconfiguration is complete, you can begin installation through the Linux Deployment Utility as part of the complete ProLiant Support Pack or the single component can be installed independent.

Installing HP SMH as a single component

You can install HP SMH independent of other components included in the ProLiant Support Pack.

1. Select all components *except* the HP SMH component.
2. Right-click all other components and select **Do Not Install component**.

   Installs the HP SMH component with the configurations that are provided through the Linux Deployment Utility.

   For more information about using the Linux Deployment Utility, see the *HP ProLiant Support Pack and Deployment Utilities User Guide*.

   The HP SMH component can also be installed by invoking the following command from the shell prompt: `./install###.sh -c hpsmhversion xxx.rpm`.

Installing HP SMH without preconfiguration

You can install the HP SMH component without any configurations by clicking **Install**. You can configure HP SMH settings at any time by logging in to HP SMH with root privileges.

10 Initializing the software for the first time

After you have installed and configured HP SMH for the first time, a process to create a private key and corresponding self-signed Base64-encoded certificate is initiated. This certificate is a Base64-encoded PEM file.

Key and certificate information

- In HP-UX operating systems, both public and private keys for HP SMH are stored in the `/var/opt/hpsmh/sslshare` directory. The files are called `file.pem` (private key) and `cert.pem` (server certificate).
- In Linux operating systems, both public and private keys for HP SMH are stored in the `/etc/opt/hp/sslshare` directory. The files are called `file.pem` and `cert.pem`.
- In Windows operating systems, public and private keys are stored in the *<System Drive>*`:\hp\sslshare` directory of the system drive.

  To protect the keys, this subdirectory is only accessible to administrators if the file system allows such security. For private key security reasons, HP recommends that you install Windows installations of HP SMH on New Technology File System (NTFS).

IMPORTANT: For Windows operating systems, the file system must use NTFS for the private key to have administrator only access through the file.

If the private key is compromised, you can delete the *<System Drive>*`:\hp\sslshare\cert.pem` file and restart the server. This action causes HP SMH to generate a new certificate and private key.

NOTE: Certificate and private key generation occurs only the first time HP SMH starts or when no certificate and key pair exists.

A certificate from a certificate authority (CA), such as Verisign or Entrust, can replace self-generated certificates. These certificate and key files are shared with other HP Management software, such as HP SIM.

11 Signing in and signing out of HP SMH

Signing in with Microsoft Windows XP

If HP SMH is installed on a Microsoft Windows XP® system, you must enable the following security option to sign in to HP SMH:

1. Select **Control Panel** ⇒ **Administrative Tools** ⇒ **Local Security Policy**. The **Local Security Settings** dialog box appears.
2. Select **Local Policies**.
3. Select **Security Options**.
4. Right-click **Network Access: Sharing and security model for local accounts** and select **Properties**. The **Local Security Policy Setting** dialog box appears.

   Note: The **Network Access** item may be worded differently, depending on your environment.
5. Select **Classic - local users authenticate as themselves**.
6. Click **OK** to close the **Local Security Policy Setting** dialog box.

Signing in with Microsoft Internet Explorer

1. Navigate to **`https://`***`hostname`***`:2381/`**.

   To avoid an active scripting error, HP recommends that you add the HP SMH web address to Internet Explorer Trusted Sites.

   To add HP SMH to Internet Explorer trusted sites:

   a. From Internet Explorer, click **Tools** ⇒ **Internet Options**.
   b. Click the **Security** tab. The Security tab appears.
   c. Select the **Trusted sites** icon.
   d. Click **Sites...**. The **Trusted sites** dialog box appears.
   e. In the **Add this website to the zone** field, enter **`https://`***`hostname`***`:2381/`** and click **Add**.
   f. Click **OK** to save your changes and close the Trusted sites dialog box.
   g. Click **OK** to close the Internet Options dialog box.

   If you use Internet Explorer to browse to an HP-UX system, then you can use port 2381 if you changed the default configuration to have `autostart` disabled and `start on boot` enabled. If you keep the default-installed configuration, you can use the following URL: **`http://`***`hostname`***`:2301/`**

   By default, HP-UX is installed with the `autostart` feature enabled. A daemon listens on port 2301 and only starts HP SMH on port 2381 when requested, then stops it again after a timeout period. See the *smhstartconfig*(1M) command for more information.

   The first time you browse to this link, the **Security Alert** dialog box appears, asking you to indicate whether to trust the server. If you do not import the certificate, the **Security Alert** appears every time you browse to HP SMH.

   If you want to implement your own Public Key Infrastructure (PKI) or install your own generated certificates into each managed system, you can install a certificate authority root certificate into each browser to be used for management. If this is implemented, the **Security Alert** dialog box does not appear. If the alert appears when you do not expect it, you might have browsed to the wrong system. You can refer to the online help in your browser for more information about installing the **certificate authority root certificate**.

   If you are accessing this page through a link from HP SIM and the **Trust By Certificate** option is enabled in HP SMH, the **Automatically Import Management Server Certificate** option appears if trust has not been previously configured. For more information regarding automatically importing the HP SIM certificate, see the *HP System Management Homepage Online Help*.
2. Click **Yes**. The **Sign In** page appears unless you have enabled **Anonymous** access, then the **HP System Management Homepage** appears.

3. Enter a user name.

   If you have not yet added user groups into HP SMH security settings, then users must log in with an operating system account in the **Administrators** group for Windows or the operating system group **root** (which in turn contains the user root by default) for HP-UX and Linux. If the credentials cannot be authenticated, the user is denied access. **Administrator** on Windows and **root** on HP-UX or Linux have administrator access on HP SMH.

4. Enter a password.
5. Click **Sign In**. HP SMH appears.

Signing in with Mozilla and Firefox

1. Navigate to **`https://`***`hostname`***`:2381/`**.

   If you use Mozilla or Firefox to browse to an HP-UX system, then you can use port 2381 if you changed the default configuration to have `autostart` disabled and `start on boot` enabled. If you keep the default-installed configuration, you can use the following URL: **`http://`***`hostname`***`:2301/`**

   By default, HP-UX is installed with the `autostart` feature enabled. A daemon listens on port 2301 and only starts HP SMH on port 2381 when requested, then stops it again after a timeout period. See the *smhstartconfig*(1M) command for more information.

   The first time you browse to the HP SMH URL, the **Website Certified by an Unknown Authority** dialog box appears, asking you to indicate whether to trust the server. If you do not select **Accept this certificate permanently**, the **Website Certified by an Unknown Authority** dialog box appears every time you use a browser.

2. Click **OK**. The **Sign In** page appears unless you have enabled **Anonymous** access, then the **HP System Management Homepage** appears.
3. Enter the user name that is recognized by the operating system.

   If you have not yet added user groups into HP SMH security settings, then users must log in with an operating system account in the **Administrators** group for Windows or the operating system group **root** (which in turn contains the user root by default) for HP-UX and Linux. If the credentials cannot be authenticated, the user is denied access. **Administrator** on Windows and **root** on HP-UX and Linux have administrator access on HP SMH.

4. Enter the password that is recognized by the operating system.
5. Click **Sign In**. HP SMH appears.

Signing in from the HP-UX CLI

You can verify whether the autostart daemon is running with the following command:

```
$ ps -ef | grep smh
root  1789     1  0  Mar 31  ?     0:00 /opt/hpsmh/lbin/smhstartd
```

If the daemon is not running, you can start it from the HP-UX command line using **`/opt/hpsmh/lbin/hpsmh autostart`**, then use a web browser to navigate to **`http://`***`hostname`***`:2301`**.

You can also use the `samweb` command to automatically start the default browser in the main HP SMH page.

After the daemon is running and the HP-UX Apache-based Web Server is started with autostart, you can sign in to HP SMH with either http://*hostname*:2301 or https://*hostname*:2381.

NOTE: If the autostart daemon is not configured (see the `smhstartconfig -a off -b on`), use the command `/opt/hpsmh/lbin/hpsmh start` instead to start the HP-UX Apache-based Web Server on ports 2301 (http) and 2381 (https).

Signing out

Select one of the following options:

- In the System Management Homepage banner, click **Sign Out**.
- Close every instance of the web browser that you use to sign in to HP SMH.
- You can stop HP SMH from the HP-UX command line: **`/opt/hpsmh/lbin/hpsmh stop`**

  This will not stop the mini-daemon `smhstartd`, but will stop the HP-UX Apache-based web server. The next time you contact HP SMH through http://*`hostname`*:2301, the HP-UX Apache-based web server will again start on port 2381 (https). If autostart is configured, the HP-UX Apache-based web server times out automatically after 30 minutes (default setting).

  For more information, go to the *hpsmh*(1m) manpage: **`man hpsmh`**.

12 Uninstalling HP SMH

Uninstalling from an HP-UX operating system

To uninstall HP SMH on an HP-UX operating system, use the following `swremove` command:

```
swremove -x enforce_dependencies=false SysMgmtHomepage
```

This method is recommended for uninstalling HP SMH.

Uninstalling from a Itanium-based Linux, x86 or x86_64 operating system

To uninstall HP SMH:

Run the following command:

```
rpm -e hpsmh
```

Uninstalling from a Windows operating system

Use the **Add/Remove Programs** feature in Windows, and complete the following steps to remove HP SMH:

1. Select **Start** ⇒ **Control Panel** ⇒ **Add or Remove Programs**.
2. Select **HP System Management Homepage**.
3. Click **Remove**. HP SMH is uninstalled.

Uninstalling from a Windows 2008 operating system

Use the **Programs and Features** feature in Windows 2008, and complete the following steps to remove HP SMH:

1. Select **Start** ⇒ **Control Panel** ⇒ **Programs and Features**.
2. Right-click **HP System Management Homepage**.
3. Select **Uninstall**. HP SMH is uninstalled.

Uninstalling manually for Windows and Linux operating systems

Uninstalling manually duplicates the actions of the HP SMH uninstaller, which can be accessed through **Add/Remove Programs** in the **Control Panel**. Use this procedure if you want to completely uninstall HP SMH, and the uninstaller has been inadvertently removed or corrupted.

Note: The `_jvm` directory is present if there is an existing HP SMH 2.0.1 or 2.0.2 installation and can be removed.

CAUTION: All HP SMH configuration settings are lost after uninstalling manually!

To manually uninstall HP SMH:

1. Stop the HP SMH service.
2. Remove the following directories and files on the system drive:
   - \hp\hpsmh\csicon.ico
   - \hp\hpsmh_jvm (if present)
   - \hp\hpsmh\certs
   - \hp\hpsmh\conf
   - \hp\hpsmh\data

     Important: Do not remove this file from a system that uses the Linux OS. You will lose certificates stored in this file if it is deleted.
   - \hp\hpsmh\lib
   - \hp\hpsmh\logs
   - \hp\hpsmh\modules
   - \hp\hpsmh\namazu
   - \hp\hpsmh\session\
   - \hp\sslshare\

     For **Linux**, sslshare is located in `/etc/opt/hp/sslshare`

     Important: Do not remove this file from a system that uses the Linux OS. You will lose certificates stored in this file if it is deleted.

     For **Windows**, sslshare is located in *`SystemDrive`*`:\hp\sslshare`
   - For Linux, remove the following additional files:

     `/usr/local/hp`

     `/var/spool/opt/hp`

     `/var/spool/compaq/wbem`
   - If the HP Version Control Agent, or the HP Version Control Repository Manager, or both is installed on the operating system, remove all files and directories under `\hp\hpsmh\bin`, except `libeay32.dll` and `ssleay32.dll`.
   - If the Version Control Agent, Version Control Repository Manager, or both are not installed on the system, remove the entire `\hp\hpsmh\bin` directory.
3. Delete the following registry keys:
   - `\HKEY_LOCAL_MACHINE\SOFTWARE\Hewlett-Packard\System Management Homepage`
   - `\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\System Management Homepage` (if present)
   - `\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{3C4DF0FD-95CF-4F7B-A816-97CEF616948F}`

- \HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Eventlog\System\HP System Management Homepage
- \HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SysMgmtHP

Uninstalling manually for HP-UX operating systems

CAUTION: Manually uninstalling HP-UX SMH is not recommended.

When you must uninstall HP-UX SMH, HP recommends using the `swremove` command, as described in "Uninstalling from an HP-UX operating system" (page 65).

The following procedure manually uninstalls HP SMH on an HP-UX system.

1. Stop the HP SMH service.
2. Remove (using `rm -rf`) the following directories:
   - /var/opt/hpsmh
   - /opt/hpsmh/session
   - /opt/hpsmh/certs
   - /opt/hpsmh/cookies
   - /opt/hpsmh/sslshare
   - /opt/hpsmh/tmp

CAUTION: On HP-UX operating systems, do not remove all files under the `/opt/hpsmh` directory because files for SMH HP-UX web applications also are stored there. Remove only the directories listed above.

On HP-UX operating systems, the `/etc/opt/hp/sslshare` directory is used by HP SIM. Do not remove the directory.

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