

HP ProLiant Essentials Software Evaluation Guide



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Abstract

The ProLiant Essentials Evaluation Kit is designed to assist with the setup, configuration, and initial usage of HP Systems Insight Manager (SIM) and the ProLiant Essential Plug-Ins. This HOWTO provides step-by-step procedures to create a Central Management Server (CMS) that can be used to evaluate SIM and the other Essentials software products. To completely evaluate the software covered in this HOWTO at least three ProLiant ML/DL/BL servers will be required. This guide is not a comprehensive product document. It is meant to be used in conjunction with the extensive documentation which is part of each product in the HP Server Management portfolio.

To ensure the most consistent evaluation experience, these procedures make several assumptions.

Assumptions

The following assumptions have been made about the test bed:

- All of the HP Management components covered in this HOWTO will be installed on a single system
- Two additional “target” ProLiant servers will be used to evaluate deployment and management functions.
- The Central Management Server (CMS) built with this HOWTO will be used for evaluation purposes only – additional procedures, configuration, and/or tuning may be required to implement the CMS in a production environment.
- HP Systems Insight Manager and the other management components will be installed on a server running the Microsoft Windows Server 2003 operating system.
- Access to the Internet will be required to evaluate the HP Vulnerability and Patch Management Pack – this can be direct access or through a proxy configuration

HP Server Management Software Overview

HP Server Management Software consists of management plug-in products integrated with HP Systems Insight Manager (HP SIM). HP Server Management Software consists of the following products:

- HP SIM 4.2 SP2
- HP BladeSystem Integrated Management
- HP ProLiant Essentials Vulnerability and Patch Management Pack (VPM)
- HP ProLiant Essentials Performance Management Pack (PMP)
- HP ProLiant Essentials Virtual Machine Management Pack (VMM)
- HP ProLiant Essentials Server Migration Pack (SMP)
- HP ProLiant Essentials Rapid Deployment Pack (RDP)
- HP ProLiant Essentials Integrated Lights-Out (iLO) Advanced Pack
- HP ProLiant Essentials Workload Management Pack (WMP)
- HP ProLiant Essentials Intelligent Networking Pack (INP)

HP Systems Insight Manager

HP Systems Insight Manager (SIM) manages HP ProLiant, Integrity, and HP 9000 systems running Microsoft® Windows®, Linux, and HP-UX. The core HP SIM software delivers the essential capabilities required to manage all HP server platforms.

HP SIM functionality for Windows can be extended with plug-in products for blade server management, performance management, and vulnerability scanning and patching technologies, among others. These applications enable you to achieve complete lifecycle management for your servers.

HP BladeSystem Integrated Management

HP BladeSystem Integrated Management provides a single view within HP SIM of your HP BladeSystem enterprise. You can view and manage blades, switches, server blade enclosures, power enclosures, and racks.

HP ProLiant Essentials Vulnerability and Patch Management Pack

The ProLiant Essentials Vulnerability and Patch Management Pack integrates comprehensive vulnerability assessment and advanced patch management functions into HP Systems Insight Manager, to identify and resolve security vulnerabilities quickly, efficiently, and reliably.

HP ProLiant Essentials Performance Management Pack

HP Performance Management Pack (PMP) detects and analyzes hardware bottlenecks on ProLiant servers and Modular Shared Array (MSA) shared storage. PMP provides the tools needed to receive proactive notification of impending bottleneck conditions and debug existing performance issues.

HP ProLiant Essentials Virtual Machine Management Pack

HP ProLiant Essentials Virtual Machine Management Pack (VMM) extends the functionality of HP SIM to provide Virtual Machine Management capability. The Virtual Machine Management Pack provides tracking, monitoring, and control functions for organizing an effective virtualized environment.

HP ProLiant Essentials Server Migration Pack Overview

The ProLiant Essentials Server Migration Pack radically simplifies server consolidation projects. Server Migration Pack (SMP), a companion product to the Virtual Machine Management Pack, automates the manual processes required for a physical server to virtual machine (P2V) migration. SMP raises the bar on P2V automation, so that a typical migration process can be completed in a matter of minutes. The SMP's advanced migration technology also provides the ability to support virtual machine to virtual machine (V2V) conversions. V2V provides the ability to convert Virtual Machines between different underlying virtualization layers including: VMware ESX / GSX and Microsoft Virtual Server.

HP ProLiant Essentials Rapid Deployment Pack

HP ProLiant Essentials Rapid Deployment Pack (RDP) is a multiserver deployment tool that enables IT administrators to easily deploy large volumes of servers in an unattended, automated fashion.

HP ProLiant Essentials Integrated Lights-Out Advanced Pack

Integrated Lights-Out (iLO) Advanced Pack gives you the ultimate remote control of system resources located in data centers and remote sites. With an iLO Advanced license key, you can activate powerful remote management features to install, configure, monitor, update, and troubleshoot remote ProLiant servers anywhere, anytime from a standard Web browser, command line or script.

HP ProLiant Essentials Workload Management Pack

The ProLiant Essentials Workload Management Pack is a software solution that controls and dynamically allocates system resources enabling application consolidation and performance optimization on Windows server platforms bringing maximum utilization, lower total cost of ownership and improved availability to IT environments.

While the Workload Management Pack makes it possible to limit the amount of resources available to processes, it also gives you the flexibility to add resources on demand wherever they are needed. With Resource Partitioning Manager's dynamic rules engine, resources can be automatically added to partitions based on utilization or time of day delivering on-demand resources to your applications.

HP ProLiant Essentials Intelligent Networking Pack

The ProLiant Essentials Intelligent Networking Pack (INP) is an innovative networking product designed and developed by HP. It allows ProLiant servers to adapt to and change the network path to achieve maximum reliability and performance. Besides keeping the network reliable, INP can reduce virus threats before they spread to the entire network.

INP resides at server nodes and is aware of the network infrastructure beyond the first tier of switches so that it improves server availability and network performance by proactively adapting to network infrastructure problems. It can detect and analyze network bottlenecks or broken network linkages and steer traffic to the optimum route based on network conditions. It is included with the networking software that currently ships with all ProLiant servers and is activated with a licensing key and can be installed with HP Systems Insight Manager.

Management Server Setup

The following setup steps will go through a typical installation of the HP SIM and the ProLiant Essentials Plug-In components to create an evaluation system capable of managing the complete server lifecycle.

- This setup will install all of the management components on a single system
- All components will be installed on the C: drive in the default installation paths.
- All of the software will be installed using the Windows local administrator account

Required Software

To complete the evaluation of HP Systems Insight Manager and the ProLiant Essentials software you will need the following software available:

- HP Management CD 7.20 or later
- HP Rapid Deployment Pack 2.00 CD ROM
- Microsoft Windows 95 or 98 CD ROM
- Windows Server 2003 CD ROM or Windows Server 2003 I386 directory available on the network
- Microsoft iSCSI Initiator (<http://www.microsoft.com/downloads/details.aspx?FamilyID=12cb3c1a-15d6-4585-b385-befd1319f825&displaylang=en>)
- Adobe Acrobat Reader
- VMware ESX 2.5.1 CD ROM

Central Management Server - Minimum Requirements

- ProLiant server
 - 2.4 GHz Processor
 - 2 GB RAM
 - 4 GB free disk space – this includes space for several disk image files and several patches for several OS versions.
 - Internet access – access can be through a proxy server
 - SCSI Drives

Note

These procedures can be completed on a server with fewer system resources; however, performance may be impeded.

Prerequisite Software Setup

The following is a list of software that should be installed on the management server prior to starting the installation of HP SIM or any of the ProLiant Essentials Plug-Ins.

1. Install Windows Server 2003
 2. Install updates and patches from Microsoft
-

Important

Do not install Windows Server 2003 Service Pack 1 until after ProLiant Essentials Vulnerability and Patch Management Pack has been successfully installed and configured.

3. Assign a static IP address
 4. Install web applications. Use Add Windows Components option to install:
 - ASP.NET
 - IIS
 - FTP
 5. If not available elsewhere on your evaluation network, install and configure DNS and DHCP
 6. Install SNMP Service
 7. Install Adobe Acrobat Reader
 8. Install Microsoft iSCSI Initiator (<http://www.microsoft.com/downloads/details.aspx?FamilyID=12cb3c1a-15d6-4585-b385-befd1319f825&displaylang=en>)
 9. Install Java Plug-in (JPI) – 1.50 or later recommended
-

Important

For proper functionality, all of the prerequisite software must be installed before starting the installation of HP SIM or any of the ProLiant Essentials software.

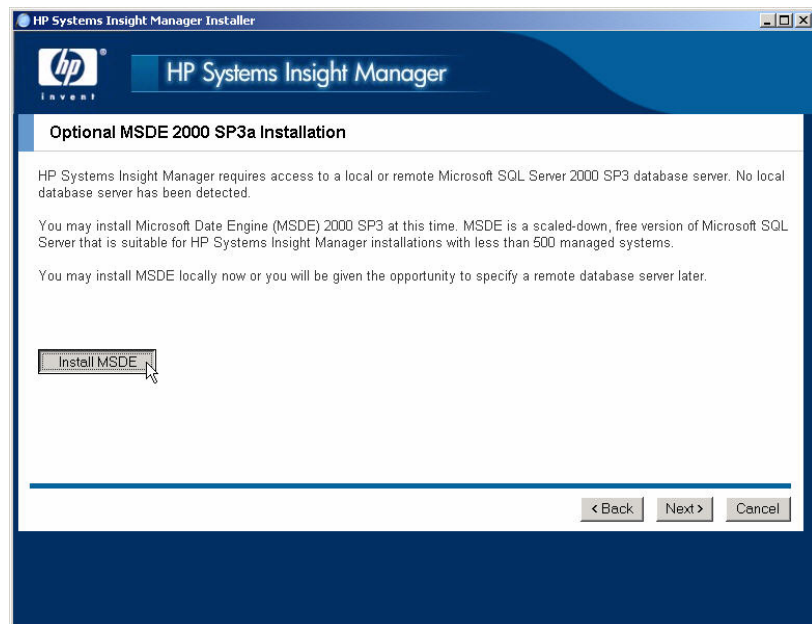
Installing HP Systems Insight Manager

To install HP SIM 4.2 from the HP Management CD for the first time:

1. Verify your system meets the configuration specifications as described in the previous section. For more information, refer to the *HP Systems Insight Manager Release Notes*.
2. Logon to the management server using the local administrator account.
3. Insert the Management CD in the CD-ROM drive.
4. Read the license agreement displayed by the autorun. If you agree to the terms of the license, click **Agree** to continue.
5. Click **Products**; then click **Install** under HP Systems Insight Manager.



6. Systems Insight Manager and the other ProLiant Essentials software require a database. Click the **Install MSDE** button to install MSDE.

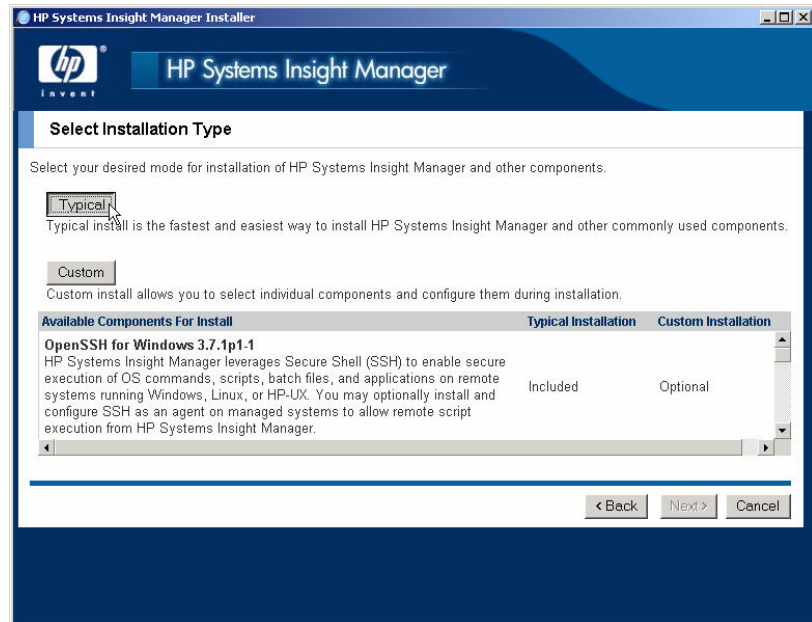


7. From the HP Systems Insight Manager Installer window, click **Install** to launch the install process.

8. At the Installation Type screen select **Typical**.

Note

Certain HP Server Management Software plug-in products use both OpenSSH and Windows Management Instrumentation (WMI) Mapper. Both OpenSSH and WMI Mapper are installed as part of a typical HP SIM installation.



9. When prompted enter the password for the local administrator account.

Important

For this evaluation installation, all of the HP Management software will be installed using the local administrator account

10. Click **Install** at the Installation Summary screen.
11. At the completion of the installation an instruction screen will provide additional information on configuring the HP 7.20 Management Agents. Click **OK** at this screen.
12. Click **Finished** at the installation status page.
13. Click **Finish** at the installation setup page, and **OK** at restart warning message.
14. After the SIM installation is complete, restart the server before installing any additional software.

For more information about typical and custom installation of HP SIM, refer to the HP Systems Insight Manager Installation and User Guide on the Management CD or at the Information Library link on the HP SIM website: <http://www.hp.com/go/hpsim>.

Installing HP BladeSystem Integrated Management

HP BladeSystem Integrated Management is automatically installed and available by default with a typical or custom installation of HP SIM from the Management CD.

To access HP BladeSystem Integrated Management, select **Tools>Integrated Console>HP BladeSystem** from the HP SIM console.

Installing Performance Management Pack

PMP is automatically installed and available by default with a typical installation or by option on a custom installation of HP SIM on the Management CD. For more information about installation, licensing, and setup, refer to the *HP ProLiant Essentials Performance Management Pack Setup and Installation Guide* on the Management CD.

Installing the Vulnerability and Patch Management Pack

While HP BladeSystem Integrated Management and PMP are automatically installed and available by default with a typical and custom installation of HP SIM, Vulnerability and Patch Management must be installed manually from the Management CD.

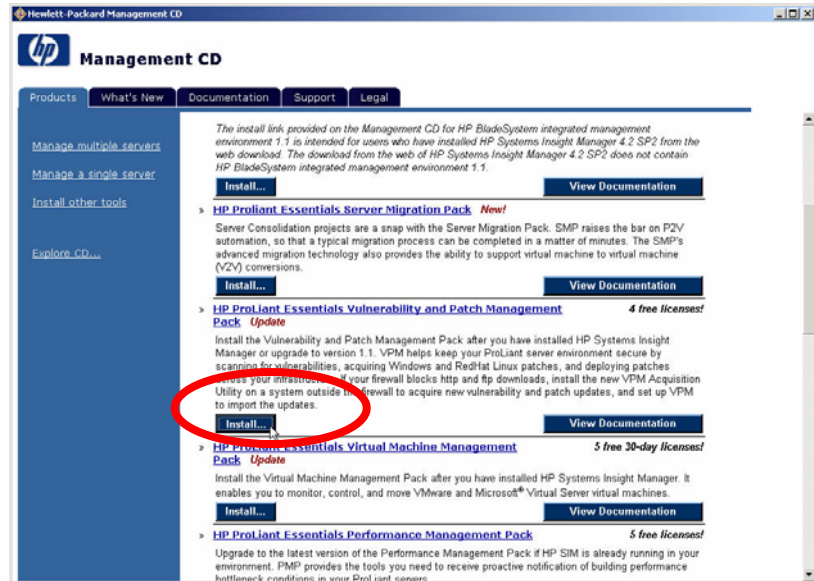
Note

HP SIM 4.2, OpenSSH, and WMI Mapper must be installed and running before installing Vulnerability and Patch Management Pack. Both OpenSSH and WMI Mapper are installed as part of a typical HP SIM installation. For more information about typical and custom installation of HP SIM, refer to the *HP Systems Insight Manager Installation and User Guide* on the Management CD.

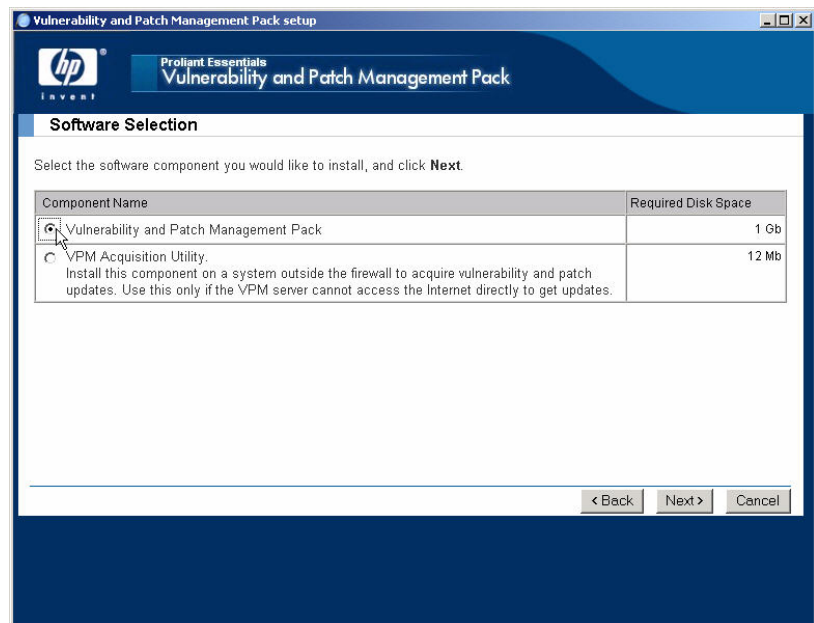
Microsoft Internet Information Services (IIS) 5.0 or later is required to successfully install and use Vulnerability and Patch Management Pack. HP strongly recommends enabling HTTPS if HP SIM and Vulnerability and Patch Management Pack are installed on separate servers. For information about configuring HTTPS service in IIS, refer to <http://support.microsoft.com/?kbid=324069>.

1. After the Central Management Server (CMS) has restarted Insert the Management CD into the CD-ROM drive of the HP SIM CMS. An autorun menu appears.

- From the **Products** page, click **Install** under ProLiant Essentials Vulnerability and Patch Management Pack.



- From the Vulnerability and Patch Management Pack setup screen select **Install**.
- Select **Vulnerability and Patch Management Pack** at the Software Selection screen, and click **Next**.



- Click **OK** at the SSL warning message.
- Ensure that all of the installation prerequisites have been met and click **Next**.
- When prompted enter the password for the local administrator account and click **Next**.

Important

When performing an installation, use the same credentials used when installing HP SIM.

8. At the completion of the installation click **Next** at the Installation Summary Screen and **Finished** at the Post installation configuration screen.

For more information about installation and setup, refer to the HP ProLiant Essentials Vulnerability and Patch Management Pack Quick Setup Poster and the HP ProLiant Essentials Vulnerability and Patch Management Pack User Guide, both on the Management CD.

Install the Virtual Machine Management Pack and Server Migration Pack

Note

You must have administrative rights in HP SIM to install and use the Virtual Machine Management Pack.

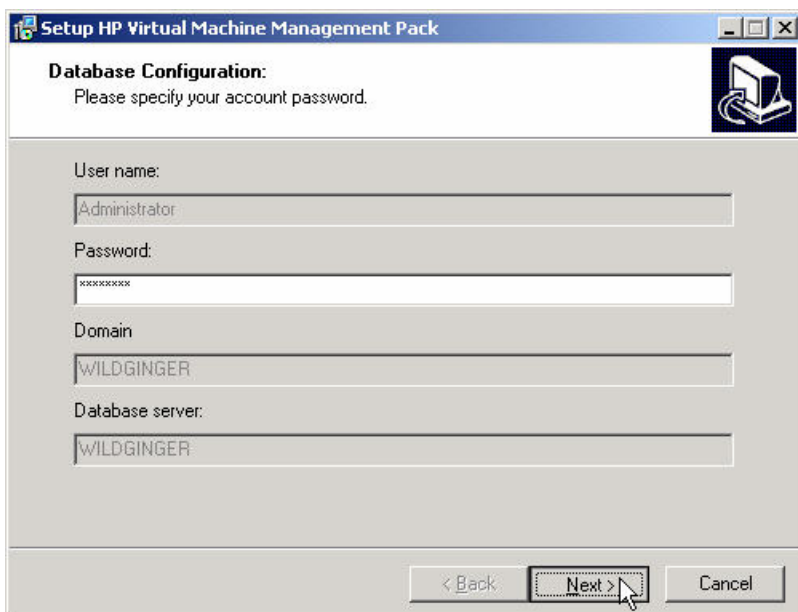
1. Return to the HP Management CD Autorun screen, click **Install** located under HP ProLiant Essentials Virtual Machine Management Pack.



2. A warning message will be displayed, click **OK** to stop the SIM service during the installation.
3. Enter the HP SIM account credentials, and click **Next**.

Important

When performing installation, use the same credentials used when installing HP SIM.



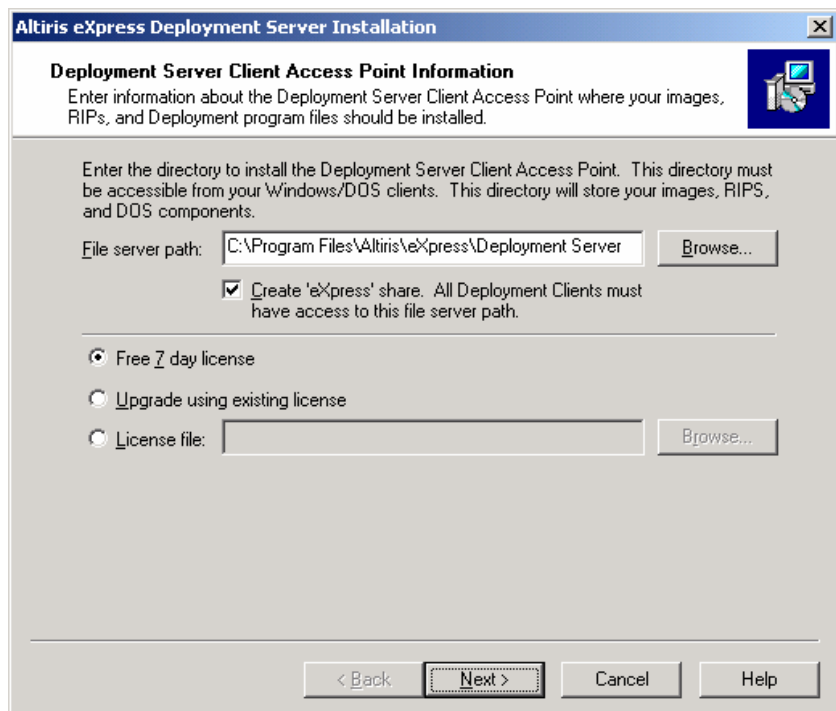
4. Click **Finished** when the Virtual Machine Management Pack installation completes. Virtual Machine Management Pack installation does not require a reboot.

Installing Rapid Deployment Pack Windows Edition

HP SIM, BladeSystem Integrated Management, PMP, Vulnerability and Patch Management, and Virtual Machine Management Pack are all on the Management CD. The Rapid Deployment Pack—Windows Edition comes on its own CD.

To install Rapid Deployment Pack—Windows Edition:

1. Log in as the local administrator on the intended deployment server.
2. Insert the Rapid Deployment Pack—Windows Edition CD into the CD-ROM drive.
3. Follow the autorun instructions, which include reading the following documentation. The documentation provides information about your network environment setup, prerequisites for the deployment server, and installation instructions. This documentation can also be found at <http://www.hp.com/servers/rdp>.
 - HP ProLiant Essentials Rapid Deployment Pack Planning Guide
 - HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Support Matrix
 - HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Installation Guide
 - HP ProLiant Essentials Rapid Deployment Pack—Windows Edition User Guide
 - HP ProLiant Essentials Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>
4. Neither Microsoft .NET Framework nor MSDE 2000 SP3a should be select since those components were already installed on the evaluation system. Click **Install**.
5. Read the license agreement and click **Yes** if you agree to the terms of the license agreement.
6. At the Deployment Server Client Access Point configuration screen keep the default installation path and choose the free 7-day license option. Click **Next**.



Altiris eXpress Deployment Server Installation

Deployment Server Client Access Point Information
Enter information about the Deployment Server Client Access Point where your images, RIPs, and Deployment program files should be installed.

Enter the directory to install the Deployment Server Client Access Point. This directory must be accessible from your Windows/DOS clients. This directory will store your images, RIPs, and DOS components.

File server path:

Create 'eXpress' share. All Deployment Clients must have access to this file server path.

Free 7 day license

Upgrade using existing license

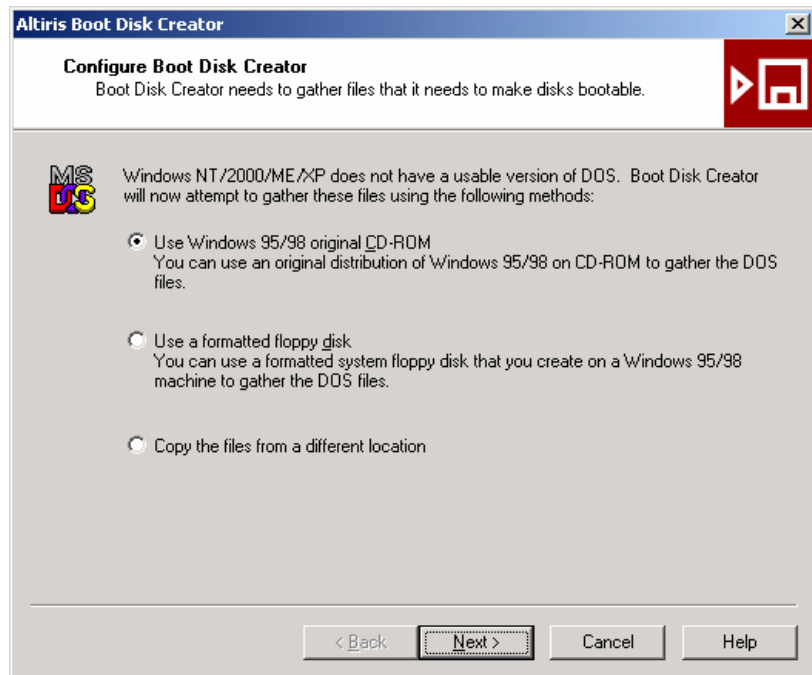
License file:

< Back

7. If the Deployment Server has multiple NICs, specify the NIC address to use as the Deployment Server interface in the Server IP address field.

Enter the local administrator username and password as the service credentials for the Deployment Server, and click **Next**.

8. The MSDE instance installed with HP SIM should be auto-detected. Choose this instance and click **Next**.
9. At the PXE Server Information screen select the **Yes, I want to Install PXE on This Computer** option.
10. Click **OK** at the DHCP informational pop-up message.
11. At the Client Connection to Deployment Server screen choose **Use TCP/IP**. Enter the IP address of the CMS (HP SIM & RDP server – the server you are installing on). Accept the default port number and click **Next**.
12. Choose to install the Deployment Server Console on this computer and click **Next**.
13. Choose to install the Deployment Server Web Console on this computer. Enter the credentials for the local administrator account, and click **Next**.
14. Click **Install** at the Installation Information screen to begin the installation.
15. The Altiris Boot Disk Creator prompts for a location to extract DOS files used for creating PXE images and boot diskettes. Choose **Use Windows 95/98 Original CD-ROM** option, and click **Next**. Follow the on-screen instructions to install the files.



16. Click **Finish** at the installation information screen.
17. To begin the installation of the latest Altiris Hotfix, click **Install**.
18. Click **OK** when a message indicates that the Altiris update is complete.
19. Upon completion of the Altiris Hotfix installation, the HP ProLiant Integration Module software installation will begin. Select the Windows and/or VMware operating systems that will be deployed, and click **Next**.
20. On the summary screen, click **Install**.
21. Specify the Windows i386 and/or VMware root directory location for the indicated distributions. The distributions can be copied from either a CD or a network location.

Click **Start** to copy files necessary for scripted installs.

22. Specify the appropriate configuration options, and click **Configure**.
23. Click **Finish** on the summary screen, and **Next** on the Autorun screen.
24. Review the post-installation step, and click **Finish** to complete the Rapid Deployment Pack—Windows Edition CD 1 installation. If you plan to deploy only Windows and/or VMware operating systems, the installation is complete.

Installing HP SIM Connector for Rapid Deployment Pack

Complete the following procedures to install the Rapid Deployment Pack SIM Integration Module.

1. Log in to the HP SIM Central Management Server (CMS) under the account that was used to install HP SIM. Normally, this account is the local administrator account.
2. Insert the Rapid Deployment Pack—Windows Edition CD 1 into the CD-ROM drive.
3. Run [CD-ROM drive:]\sim\setup.exe.
4. Enter the name and password entered during the HP SIM installation. Click **Next**.

HP SIM Integration Module Installation

Installation Options
Set installation options.

These options are needed to install the Deployment Server synchronization feature.

SIM Credentials

Enter the name and password that you entered during the HP SIM install. Normally this is the local Administrator account.

Name

Password

< Back Next > Cancel

5. Enter the IP address of both the Deployment Server and the Deployment Server Web Console, and click **Next**.

HP SIM Integration Module Installation

Installation Options
Set installation options.

These options are needed to install the SIM job scheduling feature.

Deployment Server

Enter the IP address of your "primary" Deployment Server. This will be the one that the list of computers and jobs will be retrieved from.

IP Address

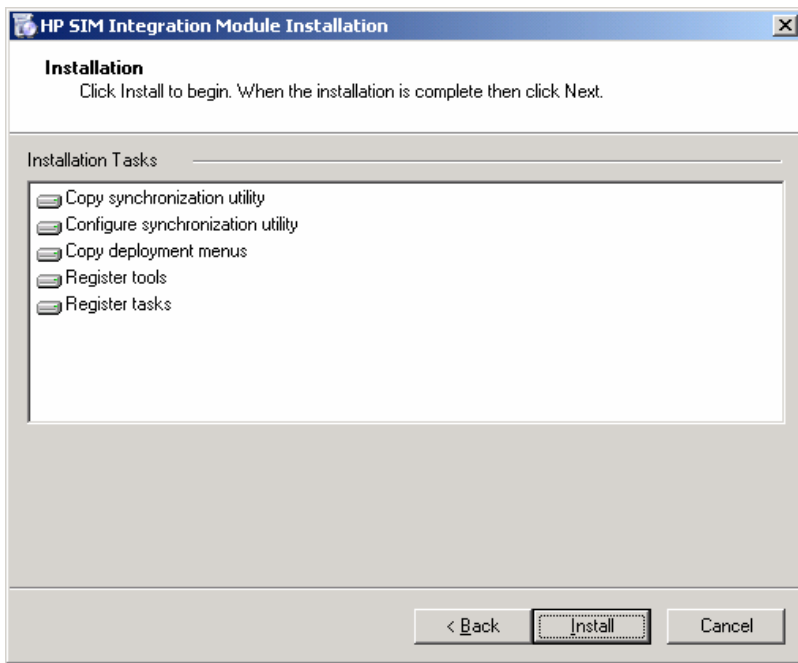
Deployment Server Web Console

Enter the IP address of your Deployment Server Web Console.

IP Address

< Back Next > Cancel

6. Click **Install** to begin the software installation.



7. When the installation is complete, click **Next**.
8. Click **Finish**.

Configuration

Prior to using HP's deployment and management tools for ProLiant servers several configuration steps must be completed.

Server Deployment and Remote Management

Configuring PXE to Automatically Process New Computers

By default, when a new computer (a computer not listed in the Deployment Server database) performs a PXE boot, the PXE server sends the computer the PXE menu and waits for manual selection of the Initial Deployment option. This behavior is designed for desktops and is not practical for servers, especially blade servers with no local keyboard, mouse, or display.

Complete the following steps to configure PXE to automatically select the Initial Deployment menu item and continue without user interaction.

1. Open the RDP console by double clicking the Deployment Server Console icon on the desktop.
2. From the Deployment Server Console menu, select **Tools>PXE Configuration**.
3. Select the PXE server from the dropdown list, and then click **OK**.
4. Select **Altiris BootWorks (Initial Deployment)>Edit** to display the Menu Item Properties screen.
5. Select Execute Immediately.
6. Click **OK** to close both windows.

Configuring Windows Deployments

The unattended answer file used during the windows scripted install must be modified with settings that align with your environment

1. Open the Windows unattend answer file located on the Deployment Server at `.\lib\osconfig\w52s\default.txt` with Notepad.
2. Under **[UserData] section** enter your environment specific information.
 - a. Remove the semicolon from the ProductKey line
 - b. Add your Windows Server 2003 product key after the equal sign. The dashes are required.
 - c. ProductKey=xxxxxx-xxxxxx-xxxxxx-xxxxxx-xxxxxx
 - d. If desired change the FullName and OrgName values
3. Under **[GuiUnattended] section** enter your environment specific information.
 - a. If desired change the AdminPassword value

Note

Any values in this file that have spaces (such as FullName or OrgName, potentially) in them must be enclosed in quotes. A common error that will occur if this practice is not followed is Windows text mode installation process erroring out with a syntax error around line 29 or 30 of its resulting unattend.txt file.

4. Additional environment specific settings can be set in this answer file. Some of the available options are:

- Domain

- Administrator password

- SNMP community string and trap destinations

- Display settings

- Time Zone

- Windows components

- Licensing Service

For more information about editing a Windows scripted install unattend text file, refer to the Windows 2000 online resource kit at

<http://www.microsoft.com/windows2000/techinfo/reskit/en-us/default.asp>.

5. After making the necessary changes, save the file and exit Notepad.

Configuring HP BladeSystem Enclosures

The Physical Devices view in the Deployment Server Console displays the physical relationship among the racks, enclosures, and blade servers using the rack name and enclosure name for each HP BladeSystem server. The default name for the server rack is "UnnamedRack," and each server enclosure has a unique default enclosure name.

HP recommends setting the rack name and enclosure name before the first server in an enclosure connects to the Deployment Server. After HP BladeSystem servers are powered up for the first time and the rack and enclosure names are recorded in the Deployment Server database, the servers must be rebooted for new rack and enclosure names to be discovered. In addition, the default-named rack and enclosure must be manually deleted from the console.

To configure all racks and the ProLiant p-Class enclosure properly, at least one blade server must be placed in each enclosure. The blade server should not be powered on until the desired rack and enclosure names are set using the Integrated Lights-Out (iLO) interface. Otherwise, the blade server will boot to PXE (if enabled), and the default rack and enclosure name will be placed in the Deployment Server database.

To change the rack and enclosure names if the iLO port is connected to the network with DHCP services available:

1. Using a Web browser, browse to the DNS name located on the tag attached to the ProLiant BL p-Class server.
2. Log on to iLO using the credentials on the tag.

Note

Users that do not have the Administrator ProLiant BL p-Class privilege can only view the settings.

3. Click the **BL p-Class** tab.
4. At the Rack Settings screen, change the information in the Rack Name and Enclosure Name fields.

Note

Do not use the same enclosure name for multiple enclosures. Using the same enclosure name results in multiple blade servers displayed in each bay for an enclosure and duplicate default server names.

5. Click Apply.
6. Log out, and log back on to iLO.

If the iLO port is not connected to a network with DHCP services available, refer to the documentation provided with your blade server for details about accessing iLO from the front panel of the blade server.

Using the Server Deployment and Management Tools

Deploying a New Server

Activating iLO Advanced Pack

To use the iLO Advanced Pack on ProLiant ML or DL servers the license key must be entered using a browser connection to the iLO. This step is not required if you will be using blade servers as targets – because blade servers are “headless” the iLO Advanced features are automatically enabled on these servers.

1. Log on to iLO through a supported Web browser.
2. Click the **Administration** tab.
3. Click **Licensing** to display the iLO Advanced license activation screen.
4. Enter the activation key in the space provided. Read the license agreement. If you agree to the terms of the agreement, click **Agree** to continue.

Attaching to iLO Remote Console

1. To monitor the progress of the server deployment, select the Remote Console tab from the iLO interface, and choose the Remote Console option.

Powering On New Server

1. From the Virtual Devices tab in the iLO interface select the Virtual Power option. Use the Virtual Power button to power on a new/unconfigured server.

Installing the Operating System

By default when the new server is powered on it will attempt to PXE boot. The Rapid Deployment Pack includes a PXE server which will recognize the server you just powered on and add an entry for the new server in the RDP console. An operating system can be deployed on the new server by using either the dedicated RDP console or by using the RDP menu options within SIM.

1. Return to the RDP console or open the console by double clicking the icon on the desktop. After the new server had powered on and loaded the PXE boot image an icon for the new server should be added under New Computers in the Computer pane (Top Left) of the RDP console.
2. Before executing a Windows scripted install job, verify the computer name in the Deployment Server console is NETBIOS compliant and the right-most 15 characters are unique. Windows scripted installs perform a token-replace of the computer name from the Deployment Server Console. The computer name is truncated to the 15 right-most characters to comply with NETBIOS limitations.
3. In the bottom left pane, open the Server Deployment folder. Click and drag the **Deploy ProLiant ML/DL/BL + Windows 2003 Server + PSP** job to the new server entry.
4. From the iLO Remote Console, you can monitor the progress of the server deployment. The process should take approximately 45 minutes.

Managing Servers with HP SIM

Note

If a suitable version of the Java Plug-in (JPI) is not running on the system used to access HP Systems Insight Manager, HP Systems Insight Manager will allow you to install the appropriate JPI using the "Install JPI" button.

When installing the JPI, select the custom installation option and deselect Internet Explorer. This will prevent the HP Systems Insight Manager JPI from becoming the browser default and minimize conflict with other applications requiring different JPI versions. Once the installation process has completed, refresh the browser to cause the login prompt to appear.

After you restart the central management server, it may take a few minutes for the HP Systems Insight Manager HTTP server to initialize.

Discovering Managed Systems

Discovery is a feature within HP Systems Insight Manager that finds and identifies all HP systems within a specified network range. You can discover devices automatically (described below) or you can configure HP Systems Insight Manager to manually discover devices. For information on manual discovery, see the HP Systems Insight Manager Help guide available online at <http://www.hp.com/go/hpsim> or on the *Management CD*.

1. In your Web browser, type **HTTP://CMSMachineName:280** to go to the HP Systems Insight Manager Home Page.
 2. Enter the user credentials that you provided during the installation
 3. Select Option > Discovery > Automatic Discovery.
 4. Enter the IP address range(s) for the systems you wish to manage and click Save and Run at the bottom of the page. Discovery times will vary based on the number of managed devices you need to discover.
-

Important

The operating system deployment, which for the evaluation was initiated using RDP in the previous section, must be complete before the system can be managed.

5. After discovery is complete return to the All Systems view by clicking to All Systems system list link in the left-hand pane of the SIM console. You should now see listing for all of the devices that SIM identified through the discovery process.

Applying Operating System Patches

HP ProLiant Essentials Vulnerability and Patch Management Pack (VPM) extends the functionality of HP Systems Insight Manager (HP SIM) to provide vulnerability and patch management for systems. For detailed infrastructure, installation, configuration, and usage information, refer to the *HP ProLiant Essentials Vulnerability and Patch Management Pack User Guide*.

Post-Installation Configuration Steps

After Vulnerability and Patch Management Pack is installed for the first time, complete the following procedures to update Vulnerability and Patch Management Pack with the latest vulnerability updates.

1. Configure global Web Based Enterprise Management (WBEM) credentials to enable access to target systems.

Important

This configuration step must be completed for Vulnerability and Patch Management Pack to function properly.

Select Options>Protocol Settings>Global Protocol Settings.

Configure the WBEM credentials for the \user account if Vulnerability and Patch Management Pack is located on the HP SIM server, or for the DOMAIN\user account if Vulnerability and Patch Management Pack is on a separate server.

Enter Windows administrator account credentials in the Default 1 field and Red Hat administrator group credentials in the Default 2 field.

Click OK.

Note

If some target system use individual administrator credentials, refer to the user guide for information about configuring WBEM credentials using System Protocol Settings.

2. From within HP SIM, perform an Automatic Discovery to enable Vulnerability and Patch Management Pack to access target systems in the network. Refer to the *HP Systems Insight Manager Installation and User Guide* for information.
3. Configure your Vulnerability and Patch Management Pack settings:
 - Select Options>Vulnerability and Patch Management>Settings.
 - Specify your proxy information as appropriate, and click Apply. Only basic (not encrypted) authentication is supported.

4. Acquire the latest Vulnerability and Patch Management Pack updates:
 1. Select Options>Vulnerability and Patch Management>Acquire Updates.
 2. Follow the on-screen instructions, selecting the appropriate update information for your server environment as prompted.
-

Note

HP updates and vulnerability scan definition files are always automatically downloaded.

3. Click **Schedule**, and select a suitable time to acquire daily Vulnerability and Patch Management Pack updates. Updates might not be available daily, but scheduling the event daily ensures that critical updates are obtained promptly.
4. Select the **Run Now** checkbox to run the initial patch acquisition, and click **Done**. The first update process after the initial software installation can take a long time, depending on the number of patch sources selected and the quantity of updates available from each source.

Licensing Systems

Vulnerability and Patch Management Pack requires one license for each target system being managed.

Important

After a license is applied to a specific system, the license cannot be removed or transferred to another system.

Two fully functional non-expiring licenses are provided with Vulnerability and Patch Management Pack for evaluation purposes. These licenses are available after Vulnerability and Patch Management Pack is installed and can be applied to systems from the License Manager or from the task wizard when systems are selected for scanning or patching.

To purchase additional licenses, refer to the Vulnerability and Patch Management Pack website at <http://www.hp.com/servers/proliantessentials/vpm>. For additional information about licensing, refer to the user guide.

Scanning for Vulnerabilities

To perform a vulnerability scan:

1. Select Diagnose>Vulnerability and Patch Management>Scan>Scan for Vulnerabilities.
2. Select either All systems in the list, selecting a parameter for selecting systems, or Individual systems in the list, select the checkbox next to the systems to scan, and then click Apply Selections.
3. Verify the selected target systems, click Change Targets if you need to go back and reselect target systems, and then click Next.
4. If any selected systems are unlicensed, available licenses can be applied by selecting the systems and clicking Apply License>Next.
5. Enter a name for the scan and select a scan definition.
6. To run the scan immediately, click Run Now.
7. View scan results after the task completes either by clicking the system status icon or viewing the VPM Events list.

For additional information about vulnerability scanning and creating customized scans, refer to the user guide.

Deploying Patches

To deploy patches and configuration fixes after a vulnerability scan is complete:

1. Select Deploy>Vulnerability and Patch Management>Patch-Fix Based on a Scan.
2. Select the scan, and click Next.
3. Select the vulnerabilities to patch or fix, and click Next.
4. Select the systems on which to apply patches or fixes.
5. To deploy patches immediately, click Run Now.
6. View task results in the VPM Events list after the task completes.

For additional information about deploying patches, refer to the user guide.

Performance Management Pack Licensing

Before licensing servers for PMP, verify that the servers have a supported operating system and version of Management Agents installed. Also, verify that HP SIM reports the correct hardware and software for each server.

For more information about discovering and updating the server list in HP SIM, refer to the *HP ProLiant Essentials Performance Management Pack Setup and Installation Guide* on the Management CD. For more information about supported operating systems and Management Agent versions, refer to the *HP ProLiant Essentials Performance Management Pack Support Matrix* on the Management CD.

Licenses are applied to servers and network storage enclosures. One license is required for each server or network storage enclosure being monitored by PMP. After a license is applied to a specific server, the license cannot be removed or transferred to another server. A permanent free license is automatically applied to the middle-tier (analysis) server with the PMP installation, as well as any supported pre-ML/DL ProLiant servers in the server environment.

For information about purchasing licenses for PMP, refer to <http://www.hp.com/products/pmp>. PMP stores volume licenses for use on servers. After an existing supply of licenses has been exhausted, you must add licenses for each additional server to be monitored.

Add PMP licenses

1. From the HP SIM console toolbar, select **Options>Performance Management Pack Options>Licensing** to launch the License Administration page, then click **Add License Key**. The Add License window appears.

Important

The license key is case-sensitive. Only numerals and uppercase letters are acceptable entries.

2. Enter an available license key. License keys are located on the license key card inside the product kit.
3. Click **Apply**.

Apply PMP licenses

1. From the HP SIM console toolbar, select **Options>Performance Management Pack Options>Licensing**.
2. Verify that server licenses are available in the Available Licenses field at the top of the License Administration page.
3. Select All Devices available for Licensing from the dropdown list next to View.
4. Select the checkbox next to the server, or use the checkbox at the top of the column to select or deselect all the servers listed on the page.

Note

Only servers with the correct operating system (including service packs) and the correct version of the Management Agents are supported. For a list of supported PMP servers, refer to the HP ProLiant Essentials Performance Management Pack Support Matrix on the Management CD.

5. Click **License Selected Servers** to apply the licenses.

If PMP has available licenses, they are applied to the selected servers. For more information about PMP, refer to <http://www.hp.com/products/pmp>.

Managing Virtual Servers

The following set of procedures describe how to:

- Use the HP Rapid Deployment Pack to install and configure VMware ESX
- Use the HP Virtual Machine Management Pack to manage both virtual machine hosts and virtual guests.

To begin the evaluation of virtual server management:

1. Log on to the iLO of the second target server.
2. Use the iLO power control features to power on the target server
3. Use the iLO to open a remote console session to the remote server.
4. Return to the Rapid Deployment Pack Console. Once the second target server boots and loads the PXE pre-boot image, an entry will be added under the New Computers heading in the upper left pane of the RDP console.
5. To deploy VMWare ESX to the server, in the lower left pane of the RDP console, expand the Server Deployment folder. Drag the **Deploy ProLiant ML/DL/BL + VMware ESX 2.5.1 + PSP** job to the new server icon under the New Computers heading.

Configuring SSH Credentials

1. After the OS deployment is complete, configure OpenSSH on the VMware ESX server by using the MxAgentConfig command. From the CMS open a command prompt and enter:

```
mxagentconfig -a -n <hostname> -u <username> -p <password>
```

Installing VMM Agent

The VMM agent must be deployed to a virtual machine host before the host can be licensed.

Important

OpenSSH must be configured properly and running on both the CMS and the selected target virtual machine hosts to deploy the VMM agent.

1. Discover the new VMware ESX server with HP SIM
2. To deploy the VMM agent to VMware ESX Server hosts select the target virtual machine hosts to license by selecting the checkbox next to the system name in the All Systems page.
3. From the SIM console select: **Deploy>Virtual Machine Management Pack>Deploy Linux Agent.**

Note

The VMware ESX Server host uses the VMM Linux agent.

4. Select the **Run Now** button.

Applying Agent License

Five fully functional 30-day trial licenses are provided with the Virtual Machine Management Pack for evaluation purposes. These licenses are available after the Virtual Machine Management Pack is installed and can be applied to systems from the Virtual Machine Management Pack License Wizard.

1. To apply licenses to virtual machine hosts select the target virtual machine hosts to license by selecting the checkbox next to the system name in the All Systems page.
2. From the SIM console select: **Deploy>License Manager>Virtual Machine Host License Wizard.**

Important

After a license is applied to a specific server, the license cannot be removed or transferred to another server.

Only HP SIM-identified virtual machine hosts can be selected for licensing.

Note

For a list of supported Virtual Machine Management Pack servers, refer to the *HP ProLiant Essentials Virtual Machine Management Pack Support Matrix* at

<http://www.hp.com/servers/proliantessentials/vmm>.

Deploying Virtual Machines

The HP Rapid Deployment Pack can be used to install the operating system onto individual virtual machines. The following configuration steps are required to support virtual machine scripted install jobs.

Note

For details about accessing the VMware Management Interface, initializing VMware, and creating virtual machines, refer to the VMware documentation.

-
1. Browse to the VMware Management Interface at <http://hostname> or <http://xxx.xxx.xxx.xxx>, where *hostname* is the fully qualified domain name or *xxx.xxx.xxx.xxx* is the IP address of the server on which VMware ESX Server is installed.
 2. Log in to the VMware Management Interface with the root account.

Important

If VMware was installed using a Rapid Deployment Pack scripted installation, the default root password is "password."

-
3. Select Options>Licensing and Serial Numbers.
 4. Read the license agreement. If you agree to the terms of the license agreement, click Agree.
 5. Enter the appropriate VMware serial numbers.
 6. Reboot the VMware ESX Server when prompted.
 7. Complete the configuration for swap space and the Ethernet switch.

The following steps must be performed before deploying each virtual machine.

8. Create a new virtual machine, ensuring that the guest operating system is appropriate for the operating system you plan to install on the virtual machine.

Important

For a SUSE LINUX installation, a minimum of 256 MB RAM must be installed.

9. Power on the virtual machine.
10. At the VMware Remote Console, press the **F2** key to access the BIOS.
11. Set the network adapter first in the boot order, allowing the virtual machine to PXE-boot during the scripted installs.
12. Save the virtual machine BIOS settings, and reboot the virtual machine. The virtual machine appears in the Deployment Server Console as a new computer.
13. If performing a Windows scripted install on the virtual machine, modify the Deployment Server Console name to a NETBIOS compliant name without spaces. The Windows scripted installs perform a token-replace of the computer name from the Deployment Server Console, which truncates the name to the 15 right-most characters to abide by NETBIOS limitations.
14. From the RDP console, open the **Server Deployment Toolbox > 2B-OS Installation - Scripted** folder. Drag the "Deploy Windows 2003 Standard (VM)" job to the new VM listed under New Computers.
15. After the installation is complete, install VMtools on the guest system.

Managing Virtual Machines

The HP Virtual Machine Management Pack can be used to monitor and control virtual machine guests.

To begin using VMM:

1. Open the SIM console.
2. Select **Tools > Integrated Consoles > Virtual Machine Management Pack**
3. Expand the tree in the left pane
4. Select the VMware ESX host server and view the control capabilities and monitoring information
5. Select the VM guest listed under the host server. Use the VMM controls to monitor, power on/off, and copy the guest virtual machine.

Additional resources

For HP support and software updates, refer to <http://www.hp.com/servers/proliantessentials>. HP Customer Support provides 90 days of phone-based support with Monday through Friday, 9-to-5 service coverage hours in your local time zone. For information:

- In the United States and Canada, call 1-800-HP-INVENT (1-800-474-6836). For continuous quality improvement, calls may be recorded or monitored.
- Outside the United States and Canada, go to the HP website for additional support information at <http://www.hp.com/support>.

Recommended Documentation

- HP Server Management Software Installation and Configuration Guide – <http://h200002.www2.hp.com/bc/docs/support/SupportManual/c00277251/c00277251.pdf>
- HP Systems Insight Manager 4.2 Installation and User Guide — <http://docs.hp.com/en/5991-0710/5991-0710.pdf>
- HP ProLiant Essentials Vulnerability and Patch Management Pack User Guide — <http://h200002.www2.hp.com/bc/docs/support/SupportManual/c00267883/c00267883.pdf>
- HP ProLiant Essentials Virtual Machine Management Pack User Guide – <http://h200002.www2.hp.com/bc/docs/support/SupportManual/c00306246/c00306246.pdf>
- HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Installation Guide – <http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00294271/c00294271.pdf>
- HP ProLiant Essentials Rapid Deployment Pack—Windows Edition User Guide <http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00294285/c00294285.pdf>
- HP ProLiant Essentials Rapid Deployment Pack Planning Guide – <http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00294273/c00294273.pdf>
- HP Integrated Lights-Out 1.70 User Guide — <http://h200007.www2.hp.com/bc/docs/support/SupportManual/c00209014/c00209014.pdf>
- HP ProLiant Essentials Intelligent Networking Pack User Guide — <http://h200007.www2.hp.com/bc/docs/support/SupportManual/c00287087/c00287087.pdf>

For more information

www.hp.com/go/hpsim

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