HP ProLiant Essentials Rapid Deployment Pack User Guide

HP Part Number: 352869-403
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Legal Notices

Acknowledgments

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1 Licensing

A license enables a server, either a physical server or a virtual machine, to be deployed and managed by the Altiris Deployment Server. One license is required for each server being managed. After a license is applied to a specific server, the license cannot be removed or transferred to another server.

A license file contains licenses for a predetermined number of servers. License files are not Rapid Deployment Pack version-specific.

To view the number of licensed nodes from the console, click **Help**>**About**.

License types

- Purchased license. To obtain this license file, first follow the instructions on your license entitlement certificate to get your license registration number, then access **http://www.hp.com/servers/rdp/register**.
- 10-node, 30-day evaluation license. To obtain this license file, access **http://www.hp.com/servers/rdp/eval**.
- 10-node, 7-day evaluation license. This license is built into the Deployment Server.

Applying a license file

Applying a license file during an first-time installation or upgrade

To select the appropriate licensing option, see Chapter 3 Installing.

Adding a license file to an existing installation

1. Shut down all Deployment Server Consoles and Deployment Server Web Consoles.
2. Click **Start**>**Programs**>**Altiris**>**Deployment Solution**>**Product Licensing Utility**.
3. Enter the path to the new license file in the Activation Key File Information field, and click **Next**.
4. Follow the instructions to apply your additional licenses.

Replacing licenses in an existing installation

If you have combined or transferred licenses and have obtained a new license file, to replace your existing license file follow the steps above for adding a license file. On the third wizard step, select **Replace all existing license Activation Keys with this new Activation Key**.

2 Prerequisites

Network infrastructure requirements

If Preboot eXecution Environment (PXE) is used to perform remote deployment of servers, then Dynamic Host Configuration Protocol (DHCP) must be installed and accessible on the network before the installation.

Deployment Server requirements

- Hardware:
  - For a new install, a HP ProLiant server with at least a 2.0 GHz processor and 1 GB RAM or an equivalent virtual machine
  - The correct date and time
- Microsoft® Windows® operating system:
  - Microsoft Windows Server™ 2003 x86 (SP1, R2, SP2) Standard or Enterprise Editions

NOTE: The server must not be a domain controller.

- Available disk space:
  - 2 GB for the base installation
  - 1 GB for each Windows distribution
  - 1 GB for each VMware ESX distribution
  - 4 GB for each Linux distribution
  - Additional space for captured disk images
- A network connection configured with a static IP address

NOTE: Changing the IP address configuration after installation is difficult, therefore, set the appropriate IP address before beginning the install.

- To use the Deployment Server Web Console, IIS with ASP.NET must be installed.
- To deploy VMware ESX or Linux, an FTP server must be installed. For information on installing Microsoft IIS FTP server, see Appendix C Installing an IIS FTP server.

For more information about requirements for the Deployment Server, see the *Altiris Deployment Solution Deployment and Migration Guide* at **http://www.hp.com/servers/rdp**.

3 Installing

Getting started

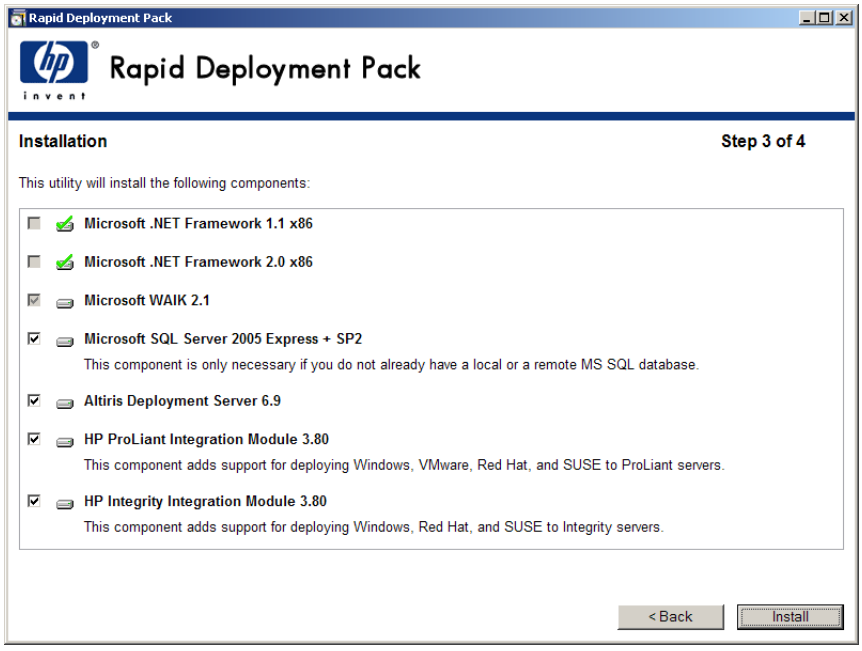
- Log into the local console. The Rapid Deployment Pack cannot be installed through Terminal Services, remote shell, or from a network share.
- Obtain a license file (either purchased or evaluation).
- Collect the applicable Windows, VMware ESX, or Linux distribution files.
- Get the applicable Windows product keys.

Before you upgrade

- If you have modified any provided jobs or batch files, make backup copies.
- Shut down all Deployment Server Consoles and Web Consoles.
- When upgrading from Rapid Deployment Pack 3.00 – 3.70, the WinPE 1.6 PXE images will be replaced with WinPE 2.1 PXE images and the WinPE 1.6 Boot Disk Creator HP drivers and support files will be removed. WinPE 1.6 is no longer supported.

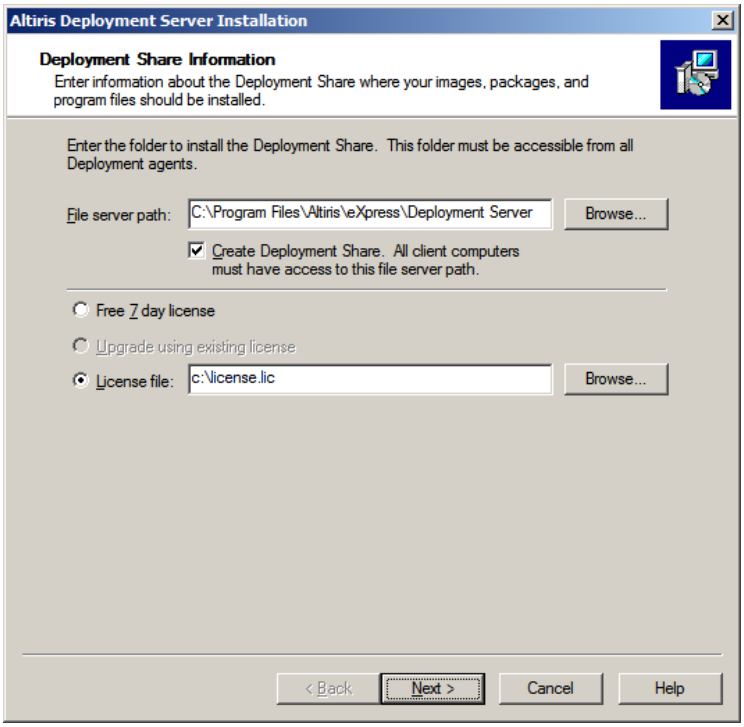
Installing

1. On the intended Deployment Server, access the Rapid Deployment Pack autorun utility using one of the following methods:
   - Insert the physical DVD into the DVD drive.
   - Extract the ISO image.
   - Mount the ISO image.
2. Read the terms of the ProLiant Essentials End User License Agreement (EULA), and click **Agree** to accept the terms.
3. On the Overview screen, click **Next**.
4. On the Pre-Installation screen, click **Next**.
5. Verify that the appropriate components are selected for installation, and click **Install**. If you plan to use an existing database, clear the **Microsoft SQL Server 2005 Express** option.



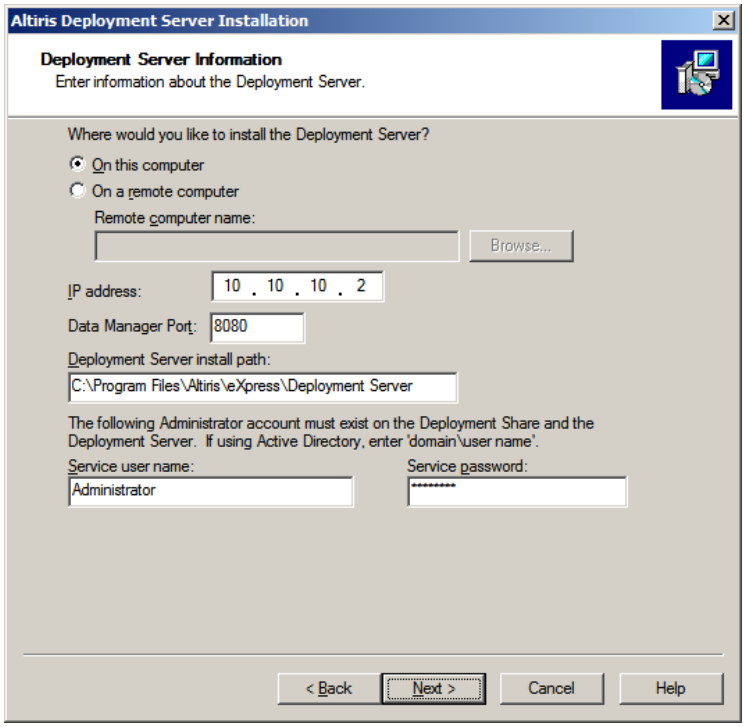
6. If selected, the Microsoft .NET Frameworks and Microsoft SQL Server will be installed silently. The Microsoft WAIK 2.1, also known as the "Automated Installation Kit (AIK) for Windows Vista SP1 and Windows Server 2008", must be manually downloaded and installed. It is available at **http://www.microsoft.com/downloads/details.aspx?familyid=94bb6e34-d890-4932-81a5-5b50c657de08&displaylang=en&tm**. After completing the WAIK install, reinsert the Rapid Deployment Pack media before clicking **Continue**.
7. If the Altiris Deployment Server was not selected for installation, proceed to step Step 23.
8. Read the Altiris EULA, and click **Yes**.
9. If the server has multiple network adapters, select the appropriate interface for the Deployment Server, and click **Select IP**.
10. Select the appropriate licensing option, and click **Next**.
    - If installing for the first-time, select **Free 7 day license,** or select **License file,** and enter the license file path and name.
    - If upgrading, verify that Upgrade using existing license is selected.

NOTE: When upgrading, you must select **Upgrade using existing license** to avoid losing existing licenses.

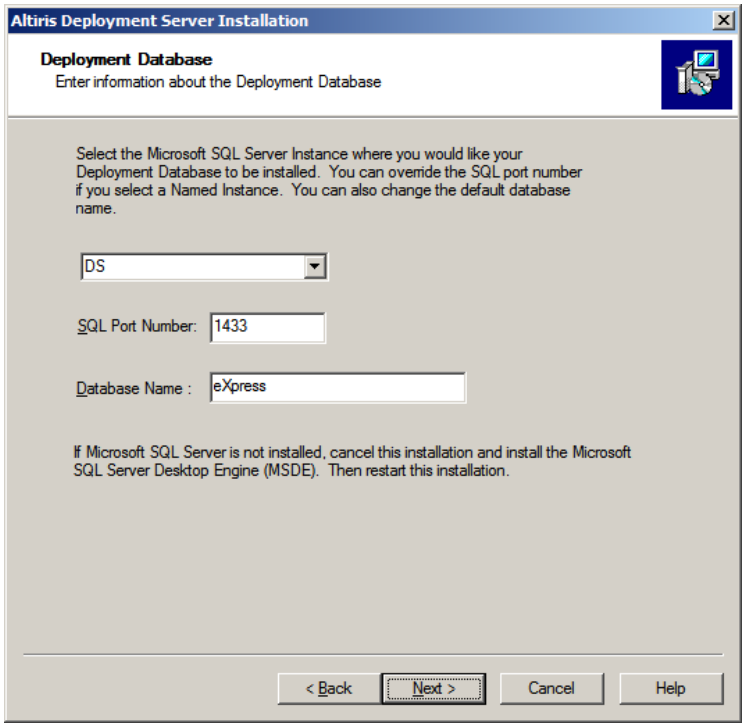


11. Enter the service credentials for the Deployment Server, and click **Next**.

NOTE: Do not install the Deployment Server component to a remote server because it will cause the Integration Module installations to fail.

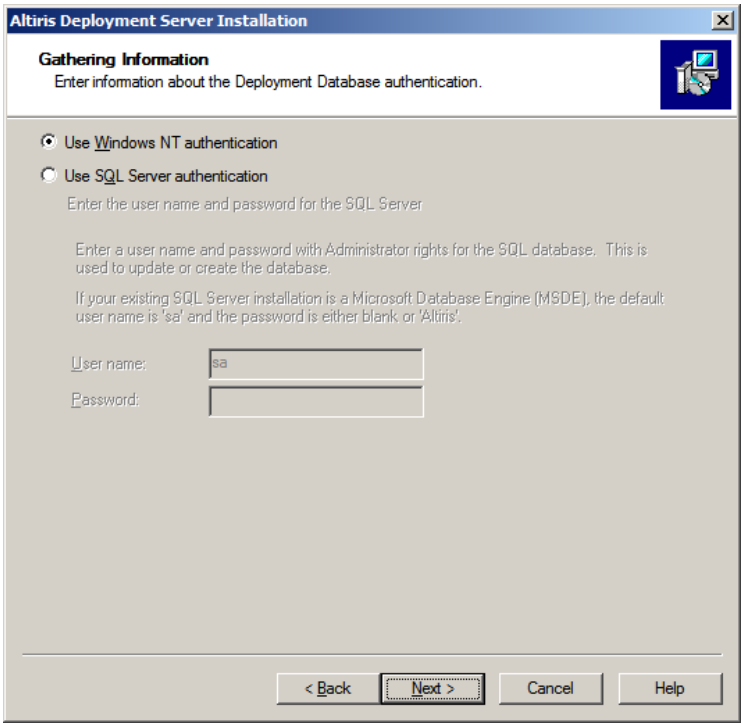


12. Select the name of the server instance where you want to install the database, and click **Next**. If the database is located on a remote server, you might be prompted for credentials. Enter a username and password with administrative rights.



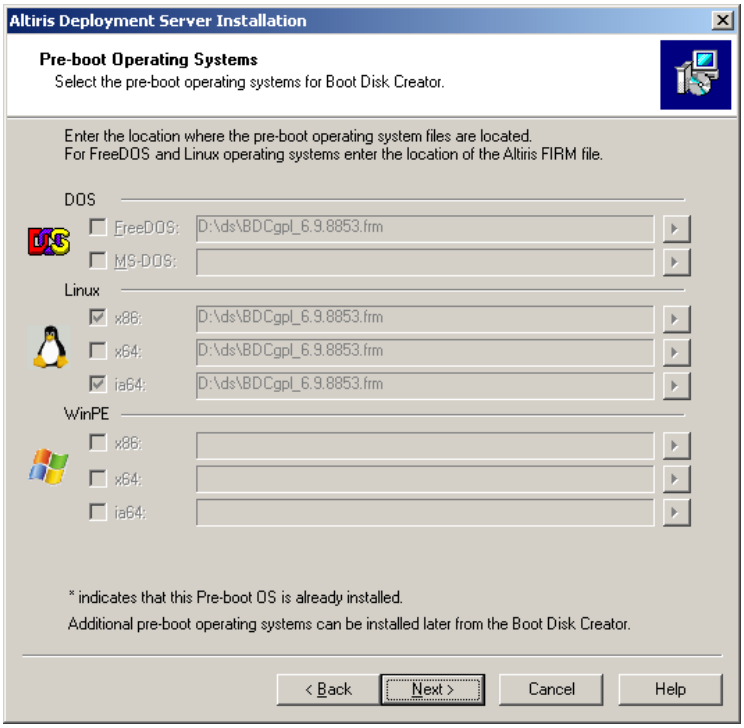
13. Enter the appropriate database authentication method, and click **Next**.

NOTE: Choosing SQL Server Authentication will cause some of the Integration Module Configuration tasks to fail.



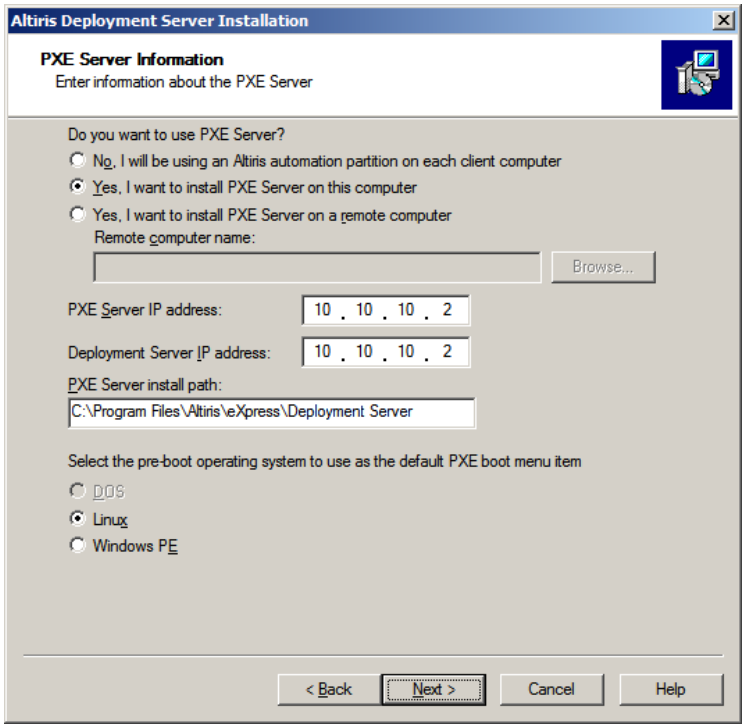
14. If upgrading, click **Yes** when prompted to retain the data in the existing database.
15. On the Pre-boot Operating Systems screen, click **Next**.

NOTE: Even though the WinPE options are not selected, they will be installed.

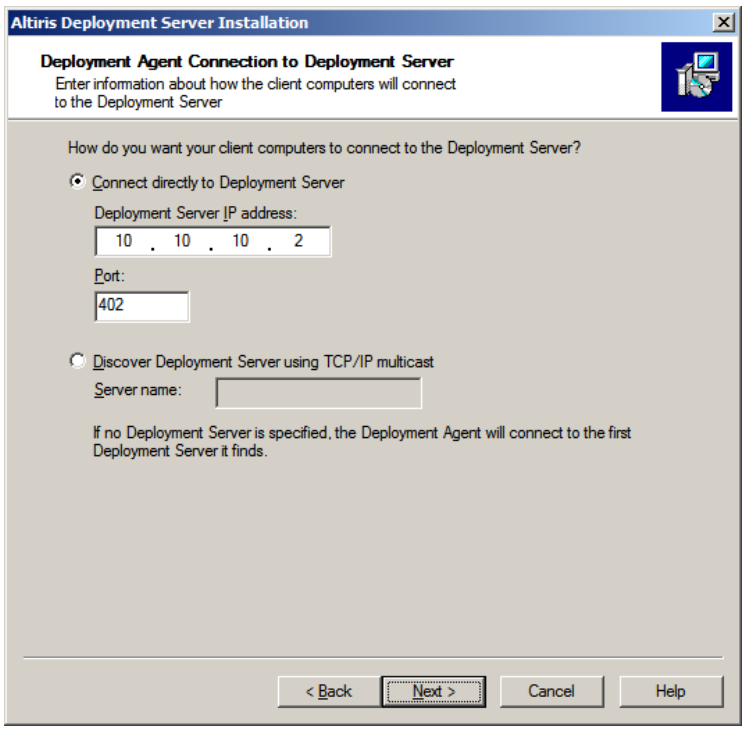


16. Specify the location where PXE Server is to be installed, and click **Next**. If DHCP is installed on a separate server, click **OK** when prompted that DHCP services are required. If you choose not to use PXE, then see Appendix D Creating and using automation boot media.

NOTE: When upgrading, you must select **No**. While unintuitive, this option will actually cause all of the PXE servers to upgrade correctly.

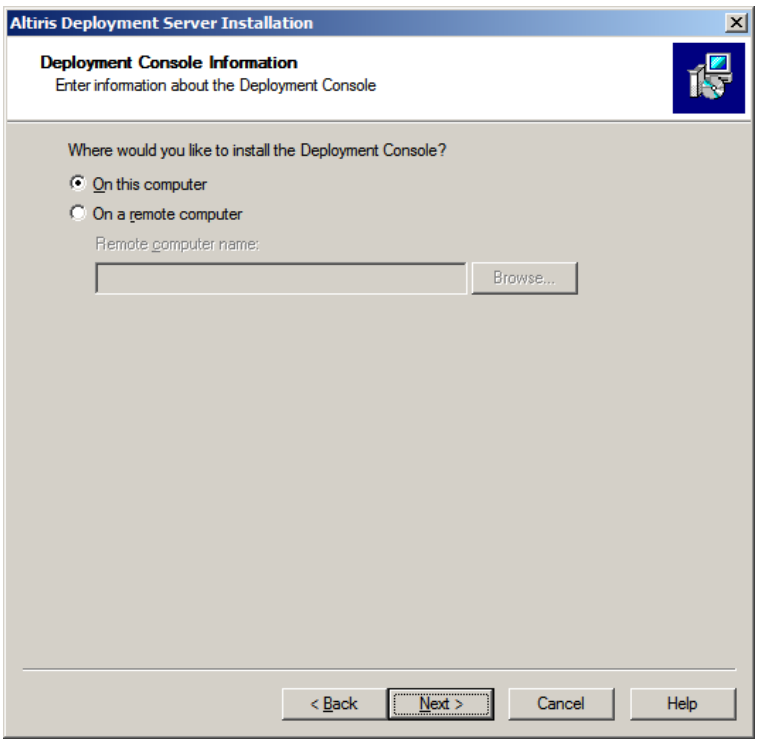


17. Specify how clients connect to the Deployment Server, and click **Next**.

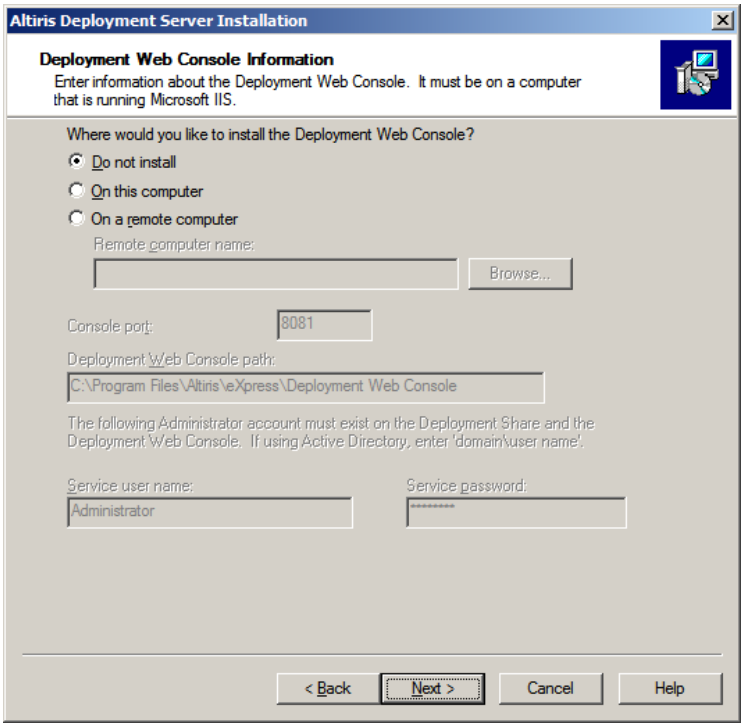


18. Specify the location where the Deployment Server Console is to be installed, and click **Next**.

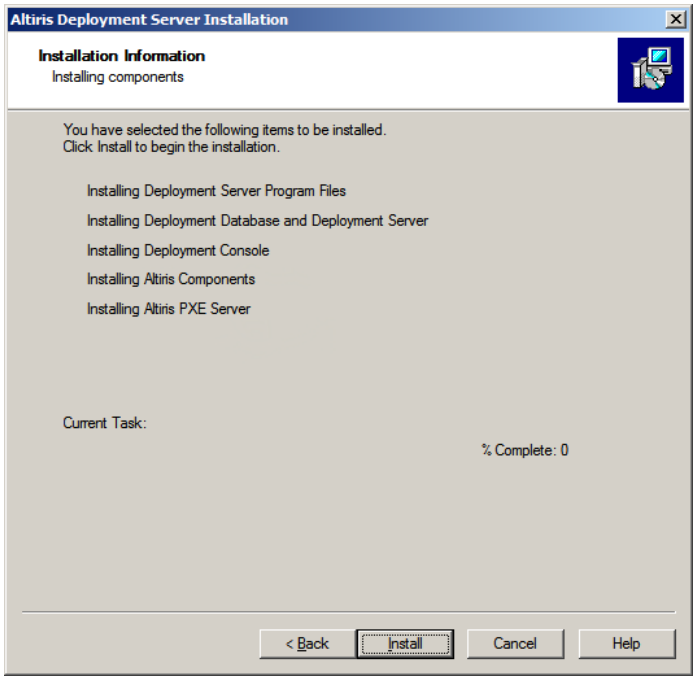
NOTE: Do not install the initial Deployment Console component to a remote server because it causes the Integration Module installations to fail.



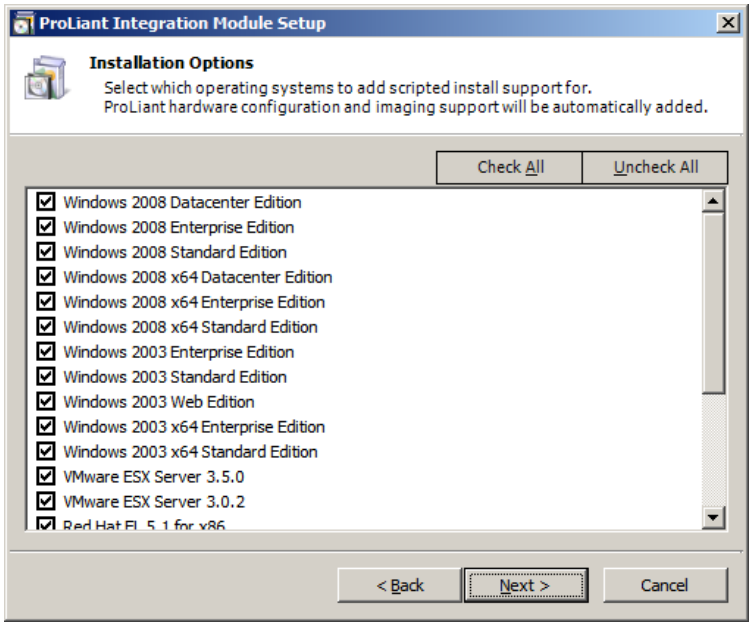
19. Specify where the Deployment Server Web Console is to be installed, and click **Next**.



20. On the Installation Information screen, click **Install**.

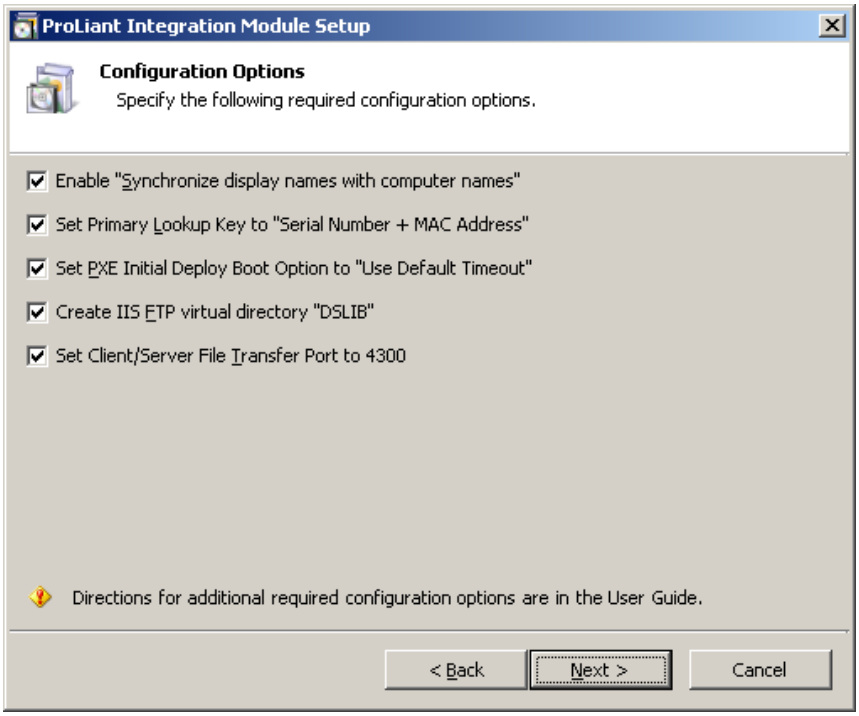


21. If upgrading, click **Yes** when prompted to replace the eXpress share.
22. When the installation is complete, click **Finish**.
23. If ProLiant Integration Module software was not selected, proceed to step Step 34.
24. On the Prerequisites screen, click **Verify**. When the process is complete, click **Next**.
25. Select the operating systems that are to be deployed to target servers, and click **Next**.

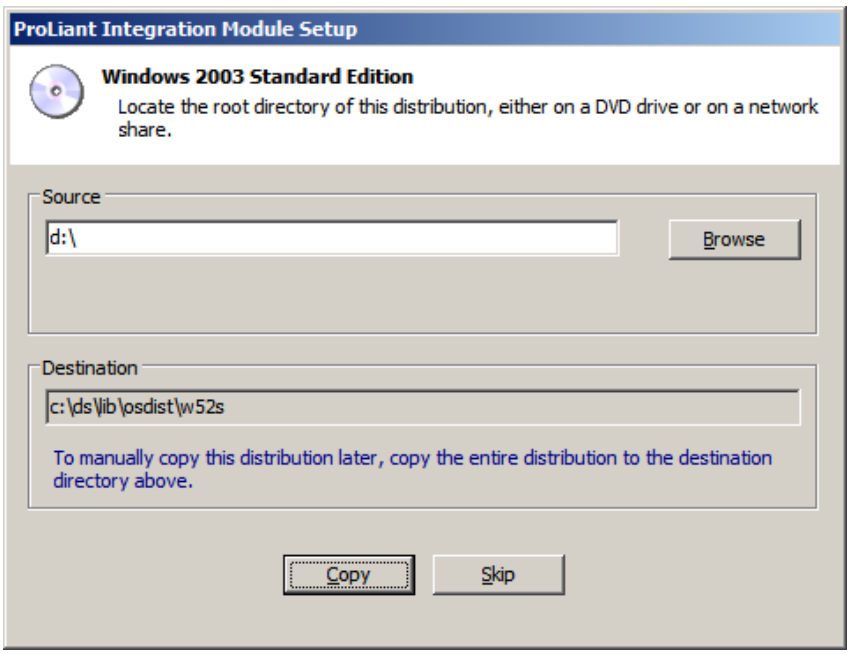


26. Specify the appropriate configuration options, and click **Next**. For more information, see Appendix B Manually modifying configuration settings.

NOTE: The MAC Address lookup value is requried for Integrity servers and new HP ProLiant servers.

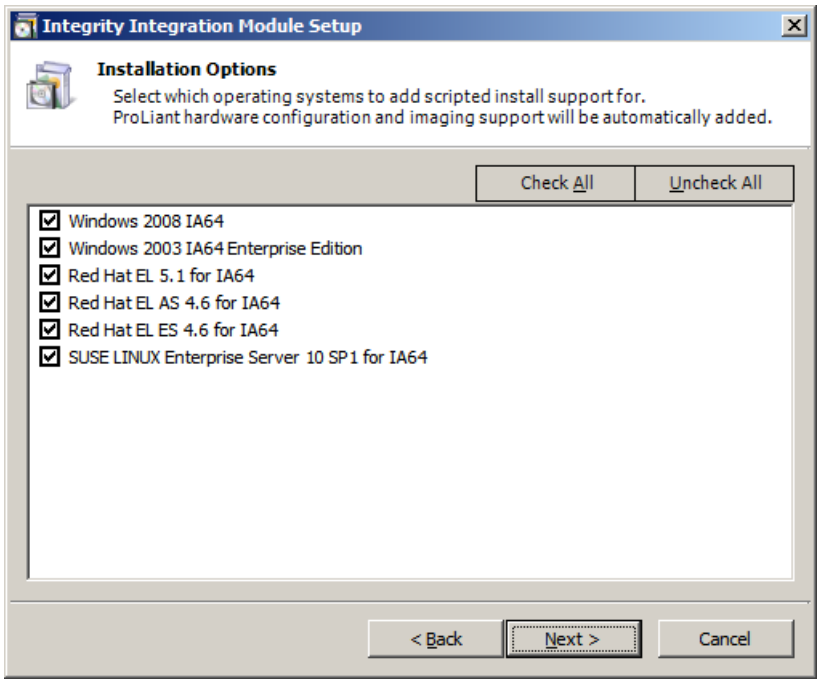


27. Specify the appropriate Windows product keys, and click **Next**.
28. On the Installation and Configuration screen, click **Install**.
29. If upgrading, click **OK** when prompted to back up and overwrite existing configuration files, and reimport existing jobs.
30. For each operating system that was selected and is not present, specify the root directory of the distribution files, and click **Copy**. If you choose to skip copying any distribution, see Appendix A Manually installing distribution files.



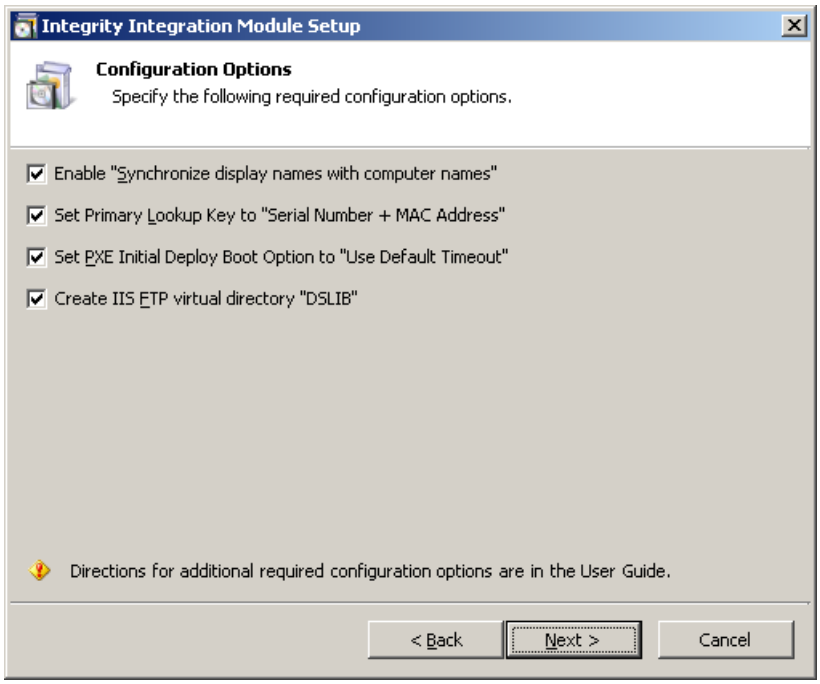
31. If prompted to reinsert the Rapid Deployment Pack media, reinsert it, and click **OK**.

32. If you skipped any distributions, click **OK** when the warning message appears.
33. On the Installation and Configuration screen, click **Finish**.
34. If Integrity Integration Module software was not selected, proceed to step Step 46.
35. On the Prerequisites screen, click **Verify**, when the verification process is complete, click **Next**.
36. Select the operating systems that are to be deployed to target servers, and click **Next**.



37. Specify the appropriate configuration options, and click **Next**. For more information, see Appendix B Manually modifying configuration settings.

NOTE: The MAC Address lookup value is requried for Integrity servers and new HP ProLiant Servers.



38. Specify the appropriate Windows product keys, and click **Next**.
39. On the Installation and Configuration screen, click **Install**.

40. If upgrading, click **OK** when prompted to back up and overwrite existing configuration files and reimport existing jobs.
41. For each operating system that was selected and is not present, specify the root directory of the distribution files, and click **Copy**. If you choose to skip copying any distribution, see Appendix A Manually installing distribution files.
42. If prompted to reinsert the Rapid Deployment Pack media, reinsert it, and click **OK**.
43. If you skipped any distribution, click **OK** when the warning message appears.
44. On the Installation and Configuration screen, click **Finish**.
45. On the Installation screen, click **Next**.
46. On the Post-Installation screen, click **Finish**.
47. Click **Yes** when prompted to reboot the server.

The installation is complete.

4 Configuring

IMPORTANT: By default, the **Create Disk Image** and **Distribute Disk Image** tasks operate on the "first" disk. The disks are enumerated using a proprietary algorithm. The "first" disk might not be the system boot disk. The Altiris showdisk utility can be used to generate human-readable disk enumeration output. This utility is called in the provided **Read Hardware Configuration** jobs. For more information on reading the showdisk output, see the Rapid Deployment Pack Knowledge Base at **http://www.hp.com/servers/rdp/kb**.

Configuring scripted installs

The scripted install jobs use a small image to partition and format the disk. When deploying to a server with multiple disks, either DAS or SAN, you might have to specify the system boot disk in the job for the NTFS.img or GRUB.img images.

To specify a particular disk:

1. In the Deployment Server Console, copy, rename, and edit the job.
2. Modify the Distribute Disk Image task.
3. In the **Additional Parameters** box, add the -dx switch, where `x` is an integer that represents the appropriate disk number.

Additionally, for Red Hat Linux in a multiple disk configuration, the kickstart file must specify the system boot disk.

1. On the Deployment Server, copy and rename the kickstart file.
2. Modify the new kickstart file by replacing the **`autopart`** command with separate part command lines and adding the `--ondisk=XXX` option to each where `XXX` is the device label.

   Example for non-LVM:

   ```
   part /boot --size=75 --ondisk=cciss/c0d0part swap –size=1000
   --ondisk=cciss/c0d0part / --size 5120 --grow --ondisk=cciss/c0d0
   ```

   Example for LVM:

   ```
   part /boot --size=100 --fstype=ext3 --ondisk=cciss/c0d0part pv.01 --size=100
   --grow --ondisk=cciss/c0d0volgroup VolGroup00 --pesize=32768 pv.01
   ```

3. Edit the **Run Script – Create Boot Environment** task in the job created above to use the new kickstart file created in step 2.

Configuring SAN-attached scripted install

In addition to the steps in the Configuring-scripted-installs section, some further steps might be necessary.

For VMware ESX Server 3.x, disconnect the SAN. After the operating system install is complete, reconnect the SAN and create a VMFS datastore on it.

Configuring image installs

When capturing or deploying an image to a server with multiple disks, either DAS or SAN, you might have to specify the system boot disk in the job.

To specify a particular disk:

1. In the Deployment Server Console, copy, rename, and edit the job.
2. Modify the **Create Disk Image** or **Distribute Disk Image** task.
3. In the **Additional Parameters** box, add the -dx switch, where `x` is an integer that represents the appropriate disk number.

When deploying Linux with LVM, `x` must be a comma-separated list of integers representing all of the disk numbers that the LVM volume will span. For example, to deploy an LVM image that spans the first three disks, use `-d1,2,3`.

Configuring HP BladeSystem enclosures

The console display name for a new server blade is a combination of the rack name, enclosure name, and bay number. Before you connect the first blade in an enclosure to the Deployment Server, assign unique names to the rack and enclosure to prevent conflicting database entries.

To change the rack and enclosure names, follow the procedure specific to each server type:

- HP BladeSystem c-Class servers—Access the Onboard Administrator and change the rack name and the enclosure name. See the server documentation for complete details.
- ProLiant BL p-Class servers—Place at least one server blade in each enclosure, and before powering up the server blade, change the rack and enclosure information using the Integrated Lights-Out (iLO) interface. See the server documentation for complete details.

If the rack and enclosure names are changed after the blades have appeared in the console, then the blades must be rebooted for the new rack and enclosure names to be discovered and the original rack and enclosure names must be manually deleted from the Physical Devices View in the console.

Virtual Machine Deployment Support

Deployment to virtual machines requires manual intervention. Refer to the Rapid Deployment Pack Knowledge Base “Virtual Machine Deployment Support”, Article #193, at **http://www.hp.com/servers/rdp/kb**.

5 Understanding the Deployment Server

The Rapid Deployment Pack populates the Deployment Server Console with jobs and the Deployment Server directory with tools, scripts, configuration files, software drivers, and documentation files. This section explains these provided jobs and files, and the directory structure.

Jobs

The Rapid Deployment Pack adds three root folders into the Jobs pane.

Table 5-1 Job folders

Folder	Description
Server Deployment	The jobs in this folder perform a complete server deployment. They deploy a default hardware configuration, execute a scripted operating system installation, and install the appropriate ProLiant or Integrity Support Pack.
Server Deployment Toolbox	The jobs in this folder provide more granular control over the server deployment process. By providing jobs that perform only hardware configuration, operating system installation, and value-add software installation, you can easily combine various jobs together to suit your needs.
Server Imaging	The jobs in this folder perform a complete server deployment. They deploy a default hardware configuration and a captured disk image.

NOTE: When performing Linux imaging or non-sysprep Windows imaging, the reference server and the target server must have an identical hardware configuration.

Job default settings

Unless otherwise indicated in the job name, the job uses the following default settings.

Table 5-2 Hardware configuration default settings

Component	Default setting
System ROM	Factory defaults
Smart Array	RAID level based on the number of attached drives
iLO	Not configured in the standard jobs
SAN HBA	Not configured in the standard jobs

Table 5-3 Windows default settings

Component	Default setting
Windows administrator password	The administrator password is **password**. This password is stored as clear text in the unattend answer file. HP recommends changing the default administrator password.
Drive configuration	A single partition is created automatically that expands to the full drive size.
Computer name	The Windows computer name uses the 15 right-most characters of the console display name.
Firewall	Firewall settings are disabled

Table 5-4 VMware default settings

Component	Default setting
VMware root password	The root password is **password**. This password is stored as clear text in the kickstart file. HP recommends changing the default root password.
Drive configuration	When configuring the disk partition for a scripted operating system installation, various VMware ESX Server specific partitions are created. These are the default settings and must not be changed.
Host name	The VMware ESX Server host name uses the console display name.
Packages	VMware ESX Server specific packages are installed. Do not change this setting.
Firewall	Firewall settings are enabled with only some ports open.

Table 5-5 Linux default settings

Component	Default setting
Linux root password	The root password is **password**. This password is stored as clear text in the kickstart/control file. HP recommends changing the default root password.
Drive configuration	The disk space is partitioned according to Red Hat or SUSE default specifications. Red Hat Enterprise Linux installs Logical Volume Manager (LVM) by default.
Host name	The Linux host name uses the console display.
Packages	Basic Linux server packages are installed.
Firewall	Firewall settings are disabled.

Table 5-6 Default Read /Capture and Write/Deploy jobs

Read(Capture)/Write Job Pair	Filename
Server Deployment Toolbox > 1 – Hardware Configuration	
ProLiant ML/DL/BL System Configuration	.\lib\hwconfig\system\pl-capture.xml
ProLiant ML/DL/BL Array Configuration	.\lib\hwconfig\array\pl-capture.ini
ProLiant ML/DL/BL HBA Configuration [server specific]	.\lib\hwconfig\hba\ID.ini where ID is the console computer
Integrity RX/BL System Configuration	.\lib\hwconfig\system\i-capture.xml
Integrity RX/BL Array Configuration	.\lib\hwconfig\array\i-capture.ini
Server Deployment Toolbox > 2A – OS Installation (Imaged)	
Windows Image	.\lib\images\capture-windows.img
Linux Image	.\lib\images\capture-linux.img
Server Deployment Toolbox > 2C – OS Installation (SysPrep)	
Windows xxxx Sysprep Image	.\lib\images\xxxx-sysprep.img where xxxx is the operating system shortcut name
Server Imaging	
Linux Image	\lib\images\yyyy-linux.img where yyyy is the computer model name, for example ProLiant DL360 G4.
Windows xxxx Sysprep Image	.\lib\images\xxxx-sysprep.img where xxxx is the operating system shortcut name

Directory structure

The following table provides an overview of the Deployment Server directory as populated by the Rapid Deployment Pack. The '.' in the directory paths below represents the Deployment Server installation directory.

Table 5-7 Deployment Server directory structure

Directory	Directory contents
.\docs	Rapid Deployment Pack documentation
.\jobs	The .bin files for the provided jobs
.\lib\bin32	Windows SmartStart Scripting Toolkit , Linux SmartStart Scripting Toolkit , and various tools and scripts
.\lib\bin64	Various tools and scripts
.\lib\binia64	Smart Setup Scripting Toolkit for Integrity, and various tools and scripts
.\lib\hwconfig	Presupplied and captured hardware configuration files
.\lib\images	Presupplied and captured image files
.\lib\osconfig	Operating system scripted install answer files separated into subdirectories per OS
.\lib\osdist	Operating system distribution files separated into subdirectories per OS
.\lib\osoem	ProLiant Drivers for Windows, Integrity Drivers for Windows, and Altiris Deployment Agents The driver subdirectories are either a specific version number, such as 770 or ZZZ which is a copy of the latest version subfolder. The ZZZ subfolder is used by the provided jobs.
.\lib\ossysprep	Operating system sysprep imaging answer files separated into subdirectories per OS.
.\lib\software	ProLiant Support Packs, ProLiant Firmware Maintenance, and Integrity Support Packs The support pack subdirectories are either a specific version number such as 7.70 or Z.ZZ which is a copy of the latest version subfolder. The Z.ZZ subfolder is used by the provided jobs.

NOTE: If editing ESX or Linux files on the Deployment Server, use a text editor that saves the file in Linux compatible format without adding extra characters.

Job—Directory relationship

The provided jobs follow a common design consisting of a sequence of Run Script, image capture or deploy, and reboot tasks. Most important of these are the Run Script tasks. The embedded script in the Run Script tasks, reference files or directories using environment variables and then pass those variables to external wrapper scripts. The wrapper scripts perform one well-defined function, for example, calling a single utility like conrep. Using external scripts enables detailed error reporting to the Deployment Server.

It should only be necessary to edit the embedded Run Script code, for example to reference a different file or directory. However, be aware that the wrapper scripts do not accept arbitrary file paths. They are hard-coded to specific locations in the .\lib tree.

The following table shows a condensed listing of the **Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP** job. The bold lines represent each task in the job. Each task is followed by its contents, for example for Run Script tasks; this is the embedded script code. Additionally, the indented lines represent code called by the embedded Run Script code.

Table 5-8 Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP job

Run Script Deploy System Configuration {WinPE Managed (32-bit)}
set inputfile=pl.xml
call f:\lib\bin32\winpe\conrep.cmd –l %inputfile%
f:\lib\bin32\winpe\conrep.exe –l –ff:\lib\hwconfig\system\pl.xml
Power Control (Reboot)
Run Script Deploy Array Configuration {WinPE Managed (32-bit)}
set inputfile=pl-acu-rd.ini
call f:\lib\bin32\winpe\acu.cmd -i %inputfile% -internal -reset
f:\lib\bin32\winpe\acu\hpacubin.exe -i f:\lib\hwconfig\array\pl-acu-rd.ini –internal -reset
Power Control (Reboot)
Run Script Deploy System Configuration {WinPE Managed (32-bit)}
set inputfile=pl-win.xml
call f:\lib\bin32\winpe\conrep.cmd –l %inputfile%
f:\lib\bin32\winpe\conrep.exe –l –ff:\lib\hwconfig\system\pl.xml
Distribute Disk Image {WinPE Managed (32-bit)}
f:\lib\images\ntfs.img
Run Script Copy ProLiant Files {WinPE Manged (64-bit)}
set oem=proliant.zzz\w52
call f:\lib\bin64\winpe\osoem1.cmd
copy f:\lib\osoem\proliant.zzz\w52*.* c:\
Run Script Copy Altiris Files {WinPE Manged (64-bit)}
rem replacetokens .\lib\osoem\altiris\aclient.txt .\lib\osoem\altiris\%ID%.tmp
set configfile=%ID%.inp
call f:\lib\bin64\winpe\osoem2.cmd
copy f:\lib\osoem\altiris\%ID%.inp c:\oem\aclient\aclient.inp
copy f:\lib\osoem\altiris\altiris-aclient*.exe c:\oem\aclient\aclient.exe
Run Script Copy Unatted.txt {WinPE Manged (64-bit)}
rem replacetokens .\lib\osconfig\w52e.64\default.txt .\lib\osoem\w52e.64\%ID%.txt
set unattendfile=w52e.64\%ID%.txt
call f:\lib\bin64\winpe\osconfig1.cmd

Run Script Deploy System Configuration {WinPE Managed (32-bit)}
copy f:\lib\osoem\w52e.64\%ID%.txt c:\unattend.txt
Run Script Copy Distribution Files {WinPE Manged (64-bit)}
set dist=w52e
call f:\lib\bin64\winpe\osdist1.cmd
copy f:\lib\osdist\w52e\i386*.* c:\i386
copy f:\lib\osdist\w52e\amd64*.* c:\amd64
Run Script Start Install {WinPE Manged (64-bit)}
c:\amd64\winnt32.exe /s:c:\amd64 /unattend:c:\unattend.txt
Install Package
f:\lib\software\ProLiant Support Pack Z.ZZ for Windows 2003 x64\hpsum.exe –silent
Power Control (Reboot)

Automation environments

An “automation environment” is an operating system in which scripts can be run on the target independent of the target’s production operating system or the Deployment Server’s operating system. The target can boot the automation environment either from a CD-ROM, USB key, or through PXE. Each automation environment consists of the necessary base files, additional HP drivers, and the appropriate Altiris Deployment Agent.

The Run Script, Create Disk Image, and Distribute Disk Image tasks enable the user to specify which automation environment to run in. The Rapid Deployment Pack jobs specify a specific automation environment to avoid ambiguity and to ensure that the utilities run in the correct and tested environment.

The following illustration and table provide a view of how the **Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP** scripted install job uses the various automation environments.

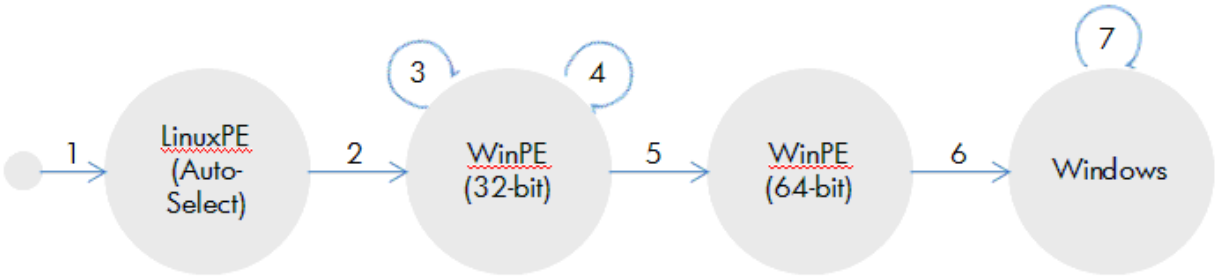
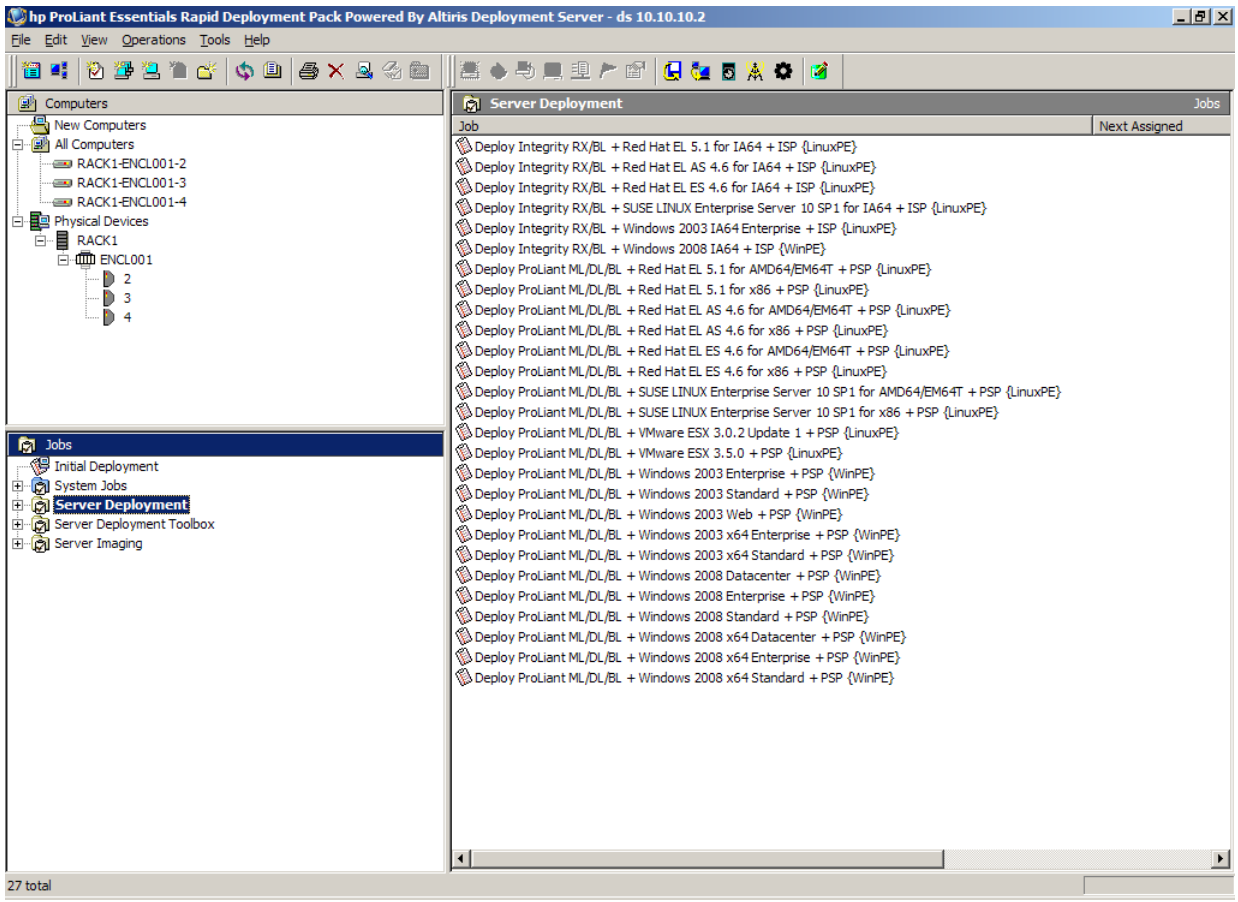


Table 5-9 State Transitions

Transition	Description
1	Power up a bare-metal target server. Since the target does not have a bootable hard drive, it PXE boots. The PXE Server sends it the default Linux Managed (Auto-Select) image. Once the image is loaded, the agent connects to the Deployment Server. Since this is the initial connection and no pending job exists, the Deployment Server directs the agent to wait.
2	Schedule the **Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP** job on the target. The Deployment Server determines that the target is in the incorrect automation environment. It directs the agent to set the one-time boot EV to PXE and then reboot. When the target PXE boots, the PXE Server sends it the WinPE Managed 32-bit image. Once the image is loaded, the agent connects to the Deployment Server and begins to execute task 1.
3	Task 2 in the job is a Reboot. The Deployment Server directs the agent to set the one-time boot EV to PXE and then reboot. When the target PXE boots, the PXE Server sends it the WinPE Managed 32-bit image. Once the image is loaded, the agent connects to the Deployment Server and executes task 3.
4	Task 4 in the job is a Reboot. The Deployment Server directs the agent to set the one-time boot EV to PXE and then reboot. When the target PXE boots, the PXE Server sends it the WinPE Managed 32-bit image. Once the image is loaded, the agent connects to the Deployment Server and executes tasks 5 and 6.
5	Task 7 in the job runs under a different automation environments. The Deployment Server directs the agent to set the one-time boot EV to PXE and then reboot. When the target PXE boots, the PXE Server sends it the WinPE Managed 64-bit image. Once the image is loaded, the agent connects to the Deployment Server and executes tasks 8 thru 12.
6	Task 12 starts the Windows installation process. It performs the first part of setup and reboots the target. Now that the target has a bootable hard drive, the Window setup kernel boots and completes the install. As part of the install, the Deployment Agent for Windows gets installed. While the Windows installation process is in progress, the Deployment Server is waiting for the agent to get installed and connected. Once the agent connects to the Deployment Server, it executes task 13.
7	The last task in the job is a Reboot. The Deployment Server directs the agent to reboot.

6 Using the Rapid Deployment Pack

Console basics



Computers Pane—This pane shows the managed computers. The New Computers group shows computers that have connected to the Deployment Server for the first time using the automation environment agent. Click **View**>**Show Physical Devices** to add the Physical Devices group.

Jobs Pane—This pane shows the provided jobs.

Executing a job is a simple as dragging-and-dropping one or more computers onto a job, or vice-versa.

Details Pane—The right-hand side of the console displays information about the currently selected computer or job. For a computer, basic properties and job history are displayed. For a job, tasks and computer history are displayed.

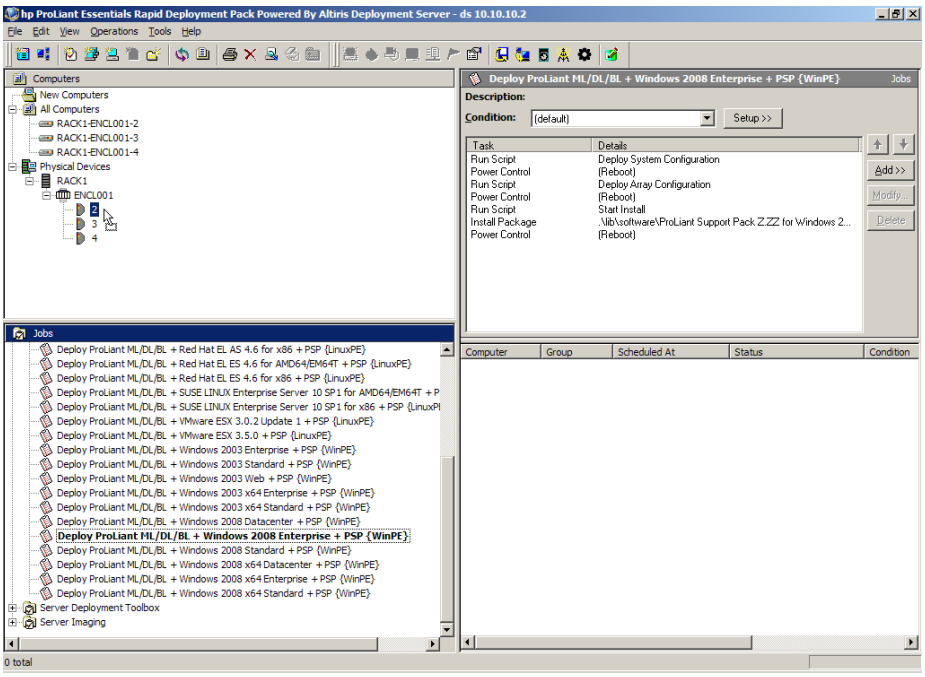
Double-clicking an item in the job history or computer history, brings up the **Job Schedule Information** dialog. This dialog shows the status of each task in the schedule. Clicking **Status Details** brings up the **Schedule Status Detail** dialog, which displays detailed return codes and status messages.

Connecting server blades

1. Connect the enclosure to the network that contains your Deployment Server, and power up the enclosure.
2. Insert the server blades into the enclosure, but do not power up the server blades.
3. Change the default rack and enclosure names.
4. Power up the server blades.
5. From the Computer pane, right click on a server blade and select **Power Control>iLO – Interface**. This action accesses the iLO homepage, from which you can bring up the remote console and watch what is happening on the server blade.

Deploying the first server blade

1. In the Jobs pane, in the Server Deployment folder, select a Windows scripted install job. Drag the job onto the server blade in the Computers pane.



2. Select **Run this job immediately**, and click **OK**.
3. Double-click the computer in the job's computer history to view the progress of the job.

Reconfiguring the server blade

By default the Windows scripted install job will configure the computer name as the console display name and network as DHCP. This is probably not sufficient for a server. To reconfigure the server:

1. In the Computers pane, right-click on the blade and click **Configure**.
2. Click **Microsoft Networking** , and enter a new computer name and a new workgroup or domain name.
3. Click **TCP/IP**, and enter the appropriate IP information.
4. Click **OK**.
5. Select **Run this job immediately**, and click **OK**.
6. If the Windows scripted install job is still running, click **OK** when the warning message appears.

Next steps

Now that you have seen how easy it easy to deploy an operating system to a server, you will need to:

- Learn how to adapt and customize the Rapid Deployment Pack for your environment. The provided jobs and files are generic and will work out of the box; however, they are probably not sufficient for a complex server environment. For example, you might want to change the default password in the various unattend and kickstart files.
- Define roles, processes, and best practices. Spending some upfront time detailing people and processes will enable you to take full advantage of the Rapid Deployment Pack as a powerful tool for simplifying server deployment.

7 HP support and contact information

Online resources

- Information about the Rapid Deployment Pack and the latest updates are available from the HP ProLiant Essentials Rapid Deployment Pack website at **http://www.hp.com/servers/rdp**.
- Regularly updated troubleshooting information, frequently asked questions, and specific how-to procedures are available at the HP ProLiant Essentials Rapid Deployment Pack Knowledge Base at **http://www.hp.com/servers/rdp/kb**.
- Problem-solving information and ideas from other IT professionals are available in the IT Resource Center (ITRC) User Forum "ProLiant Deployment & Provisioning." You can access this forum from the Management Software and System Tools link at **http://forums.itrc.hp.com**.
- Information and resources about the Altiris Deployment Solution are available from the Altiris website at **http://www.altiris.com**.

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see the HP U.S. service locator webpage at **http://www.hp.com/service_locator**.
- In other locations, see the Contact HP worldwide webpage at **http://welcome.hp.com/country/us/en/wwcontact.html**.

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage at **http://welcome.hp.com/country/us/en/contact_us.html**. To contact HP by phone: Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored. For U.S. customers, say "Insight Manager" when prompted for the product name.
- In other locations, see the Contact HP worldwide webpage at **http://welcome.hp.com/country/us/en/wwcontact.html**.

HP Software Technical Support and Update Service

HP offers a number of software support services, many of which are provided to our customers at no additional charge.

Software Technical Support and Update Service - Insight Control suites and select ProLiant Essentials software products include one year of 24 x 7 HP Software Technical Support and Update Service. This service provides access to HP technical resources for assistance in resolving software implementation or operations problems. The service also provides access to software updates and reference manuals either in electronic form or on physical media as they are made available from HP. (Customers who purchase an electronic license to use are eligible for electronic updates only.) With this service, Insight Control and ProLiant Essentials customers will benefit from expedited problem resolution as well as proactive notification and delivery of software updates. For more information about this service, see **http://www.hp.com/services/insight**.

Registration for Software Technical Support and Update Service:

There are two methods for registering:

- If you received a license entitlement certificate, automated registration for this service will take place upon online redemption of the license certificate/key.
- If the license information you received for your product instructs you to register for Software Technical Support and Update Service, follow the instructions so that you will be eligible for telephone support and product updates.

How to Use Your Software Technical Support and Update Service:

Once registered, you will receive a service contract in the mail containing the Customer Service phone number and your Service Agreement Identifier (SAID). You will need your SAID when calling for technical

support. Using your SAID, you can also go to the Software Update Manager (SUM) web page to view your contract online and elect electronic delivery for product updates.

Warranty – HP will replace defective delivery media for a period of 90 days from the date of purchase. This warranty applies to all Insight Control Management, HP Systems Insight Manager, and ProLiant Essentials products.

Join the discussion – The HP Support Forum is a community-based, user-supported tool for HP customers to participate in discussions amongst the customer community about HP products. For discussions related to Insight Control and ProLiant Essentials software, see the "Management Software and System Tools" area.

Software and Drivers download pages – provides latest software and drivers for your ProLiant products.

Management Security (**http://www.hp.com/servers/manage/security**) – HP is proactive in its approach to the quality and security of all its management software. Be sure to check this website often for the latest down loadable security updates.

Obtain the latest SmartStart Release (**http://www.hp.com/servers/smartstart**) – The SmartStart, Management, and Firmware CDs are now freely available for download following a simple registration from the SmartStart web site. If you wish to receive physical kits with each release, you can order single release kits from the SmartStart web site. To receive proactive notification when SmartStart releases are available, subscribe to Subscriber's Choice at **http://www.hp.com/go/subscriberschoice**.

HP Worldwide Customer Service contact numbers are available at **http://www.hp.com/country/us/en/wwcontact.html**. For U.S. customers, say "Insight Manager" when prompted for the product name.

A Manually installing distribution files

If you did not copy the Windows, ESX, or Linux distribution files during the installation, you must manually copy the files for the scripted install jobs to function properly. Manually copying the distribution files produces the same results as copying the files during the installation.

To manually copy the distribution files, copy the entire contents of each distribution CD or DVD to the appropriate .\lib\osdist\yyyy directory, where yyyy indicates the operating system shortcut name.

Table A-1 Operating system directory names

Operating system	Directory name
Windows 2003 - Enterprise Edition	w52e
Windows 2003 - Standard Edition	w52s
Windows 2003 - Web Edition	w52w
Windows 2003 x64 - Enterprise Edition	w52e.64
Windows 2003 x64 - Standard Edition	w52s.64
Windows 2003 IA64 - Enterprise Edition	w52e.ia64
Windows 2008	w61
Windows 2008 x64	w61.64
Windows 2008 IA64	w61.ia64
VMware ESX Server 3.0.2	vmesx302
VMware ESX Server 3.5.0	vmesx350
Red Hat Enterprise Linux AS 4.6 for x86	rhas46
Red Hat Enterprise Linux ES 4.6 for x86	rhes46
Red Hat Enterprise Linux AS 4.6 for AMD64 and Intel® EM64T	rhas46.64
Red Hat Enterprise Linux ES 4.6 for AMD64 and Intel EM64T	rhes46.64
Red Hat Enterprise Linux AS 4.6 for Intel Integrity	rhas46.ia64
Red Hat Enterprise Linux ES 4.6 for Intel Integrity	rhes46.ia64
Red Hat Enterprise Linux 5.1 for x86	rhel51
Red Hat Enterprise Linux 5.1 for AMD64 and Intel EM64T	rhel51.64
Red Hat Enterprise Linux 5.1 for Intel Integrity	rhel51.ia64
SUSE Linux Enterprise Server 10 Service Pack 1 for x86	sles10sp1
SUSE Linux Enterprise Server 10 Service Pack 1 for AMD64 and Intel EM64T	sles10sp1.64
SUSE Linux Enterprise Server 10 Service Pack 1 for Intel Integrity	sles10sp1.ia64

B Manually modifying configuration settings

Synchronize display names with computer names option

The Deployment Server can use a console display name that is different from the actual computer name. However, the console can always reflect the same name as the computer name.

To manually enable synchronization of the display and computer names:

1. In the Deployment Server Console, click **Tools**>**Options**.
2. Click the **Global** tab.
3. Select the **Synchronize display names with computer names**.
4. Click **OK**.

Primary lookup key option

The Deployment Server uses the primary lookup key to determine if a server is already in the database. HP recommends setting the primary lookup key as the server serial number and MAC address.

To manually set the primary lookup key to serial number and MAC address:

1. In the Deployment Server Console, click **Tools**>**Options**.
2. Click the **Global tab**.
3. Select **Serial Number and MAC Address** as the Primary lookup keys.
4. Click **OK**.

PXE initial deploy boot timeout option

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 process is not practical for servers, especially server blades with no local keyboard, mouse, or monitor.

To manually change the Initial Deploy boot option:

1. In the Deployment Server Console, click **Tools**>**PXE Configuration**.
2. Click the **DS** tab.
3. Select **Enable response to request from computers not in the DS Database**.
4. Select **Wait for Boot Menu default timeout before continuing with the PXE process**.
5. Click **Save**, and then click **OK**.

Client/server file transfer port option

For adlagent to properly transfer files under VMware ESX 3.x, the client/server file transfer port must be set to match the value in the supplied ESX kickstart files.

To manually set the client/server file transfer port to 4300:

1. In the Deployment Server Console, click **Tools**>**Options**.
2. Click the **Global** tab.
3. Select **Client/server file transfer port**, and enter `4300`.
4. Click **OK**.

Creating an IIS FTP virtual directory option

For VMware ESX and Linux scripted installation deployments, a virtual directory must be configured on an FTP server, such as IIS.

If you use an FTP server other than IIS, use the same entry settings.

To manually configure IIS FTP:

1. Launch the Internet Information Services (IIS) Manager.
2. Expand the directory in the left pane, and select **Default FTP Site** or another existing FTP site.
3. Right-click the **FTP site**, and click **New**>**Virtual Directory**.

4. Complete the Virtual Directory wizard, entering the following information when prompted.

Table B-1 Virtual directory information

Field	Entry
Virtual Directory Alias	DSLIB
FTP Site Content Directory	*<Altiris Installation Directory>\lib*
Virtual Directory Access Permissions	Read

5. Right-click the FTP site, and click **Properties**.
6. Click the **Security Accounts** tab.
7. Select **Allow Anonymous Connections**, and click **OK**.
8. If the FTP site name is followed by "(Stopped)," right-click the site name, and click **Start**.

Windows product keys

For Windows scripted installation deployments, a Windows product key must be provided.

To manually configure the Windows product keys:

1. In the Deployment Server Console, click **Tools**>**Integration Module**>**User Tokens Editor**.
2. Add or edit the appropriate entry.
3. Click the **Save** button.

Table B-2 User Tokens table entries

Operating system	Token name
Windows 2003 x86	w52productkey
Windows 2003 x64	w52.64productkey
Windows 2003 IA64	w52.ia64productkey
Windows 2008 x86 Datacenter	w61dcproductkey
Windows 2008 x86 Enterprise	w61eproductkey
Windows 2008 x86 Standard	w61sproductkey
Windows 2008 x64 Datacenter	w61dc.64productkey
Windows 2008 x64 Enterprise	w61e.64productkey
Windows 2008 x64 Standard	w61s.64productkey
Windows 2008 IA64 Standard	w61.ia64productkey

C Installing an IIS FTP server

To install an IIS FTP server:

1. Log in to the Deployment Server as a user with administrator rights.
2. Click **Start**>**Control Panel**>**Add/Remove Programs**.
3. Click **Add/Remove Windows Components**.
4. Select **Application Server**, and click **Details**.
5. Select **Internet Information Services (IIS)**, and click **Details**.
6. Select **File Transfer Protocol (FTP) Server**, and click **OK**.
7. Click **OK** again.
8. Click **Next**.

D Creating and using automation boot media

If you choose not to use PXE in your deployment infrastructure, you must create automation boot media for each automation environment that you will be using. The boot media boots a target server to automation without leaving any files on the server, and can be installed to DVDs, CDs, or USB keys. Using the Boot Disk Creator utility to create boot media is a straightforward process. However, remember:

- On the Create Configuration step, from the OEM Extensions dropdown, select **<all>** to include the latest HP drivers.
- On the Network Adapters step, for WinPE select **Auto-detect all network adapters**, and click **Next**. For LinuxPE, do not select any drivers, just click **Next**.
- On the Create Automation Boot Disk step, when creating a WinPE Bootable ISO CD Image, select **Boot Windows PE into RAM disk**.
- When creating USB keys, select **Detect as last disk**.
- When using USB keys for Integrity target servers, after the USB key has been created, insert the key into the target server, and create an EFI boot entry for it using the name 'Altiris Automation'.

Other considerations when using boot media:

- If a job uses multiple automation environments, on the target server, you must swap automation boot media at the appropriate time during the execution of the job.
- After an upgrade, you must re-create all of your boot media to pick up the latest HP support.

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