# HP ProLiant Essentials Rapid Deployment Pack User Guide



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# Table of Contents

1	License types	7
	Applying a license file Applying a license file during an first-time installation or upgrade Adding a license file to an existing installation Replacing licenses in an existing installation	7 7 7 7
2	Prerequisites Network infrastructure requirements Deployment Server requirements.	9 9 9
3	Installing Getting started Before you upgrade Installing	<b>11</b> 11 11 11
4	Configuring scripted installs Configuring SAN-attached scripted install Configuring image installs Configuring HP BladeSystem enclosures Virtual Machine Deployment Support.	21 21 21 21 22 22
5	Understanding the Deployment Server. Jobs Job default settings Directory structure Job—Directory relationship Automation environments.	23 23 24 25 26 28
6	Using the Rapid Deployment Pack. Console basics. Connecting server blades. Deploying the first server blade. Reconfiguring the server blade. Next steps.	<b>29</b> 30 30 30 31
7	HP support and contact information. Online resources. HP contact information. HP Software Technical Support and Update Service.	<b>33</b> 33 33 33
A	Manually installing distribution files	35
B	Manually modifying configuration settings Synchronize display names with computer names option Primary lookup key option PXE initial deploy boot timeout option	<b>37</b> 37 37 37

Client/server file transfer port option Creating an IIS FTP virtual directory option	
Windows product keys	
C Installing an IIS FTP server	
D Creating and using automation boot media	41
	41
Index	43

# List of Tables

Job folders	23
Hardware configuration default settings	24
Windows default settings	24
VMware default settings	24
Linux default settings	24
Default Read /Capture and Write/Deploy jobs	25
Deployment Server directory structure	25
Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP job	
State Transitions	
Operating system directory names	35
Virtual directory information	
User Tokens table entries	
	Job folders Hardware configuration default settings Windows default settings VMware default settings Linux default settings Default Read /Capture and Write/Deploy jobs Deployment Server directory structure Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP job State Transitions Operating system directory names Virtual directory information User Tokens table entries

# 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 <a href="http://www.hp.com/servers/rdp/register">http://www.hp.com/servers/rdp/register</a>.
- 10-node, 30-day evaluation license. To obtain this license file, access <u>http://www.hp.com/servers/rdp/eval</u>.
- 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<sup>™</sup> 2003 x86 (SP1, R2, SP2) Standard or Enterprise Editions



**OTE:** 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 <u>http://www.hp.com/servers/rdp</u>.

# 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 <u>http://www.microsoft.com/downloads/</u> <u>details.aspx?familyid=94bb6e34-d890-4932-81a5-5b50c657de08&displaylang=en&tm</u>. 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.

Altiris Deployment Ser	ver Installation	×
Deployment Share Enter information ab program files should	Information out the Deployment Share where your images, packages, a be installed.	and is
Enter the folder to Deployment agent	install the Deployment Share. This folder must be accessil is.	ble from all
File server path:	C:\Program Files\Altiris\eXpress\Deployment Server	Browse
	Create Deployment Share. All client computers must have access to this file server path.	
C Free <u>7</u> day lic	ense	
C Upgrade usin	g existing license	
License file:	c:Vicense.lic	Browse
	< Back Cance	el Help

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

1	うううっん
	=//
	-2/1

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

Altiris Deployment Server Installation	×
Deployment Server Information Enter information about the Deployment Server.	18
Where would you like to install the Deployment Server?	
On this computer	
C On a remote computer	
Remote computer name:	
Browse	
<u>IP address:</u> 10 . 10 . 2	
Data Manager Port: 8080	
Deployment Server install path:	
C:\Program Files\Altiris\eXpress\Deployment Server	
The following Administrator account must exist on the Deployment Share and the Deployment Server. If using Active Directory, enter 'domain'user name'.	
Service user name: Service password:	
Administrator	
< <u>B</u> ack Next> Cancel H	elp

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.

Altiris Deployment Server Installation	×
Deployment Database Enter information about the Deployment Database	15
Select the Microsoft SQL Server Instance where you would like your Deployment Database to be installed. You can override the SQL port number if you select a Named Instance. You can also change the default database name.	
DS	
SQL Port Number: 1433	
Database Name : eXpress	
If Microsoft SQL Server is not installed, cancel this installation and install the Microsoft SQL Server Desktop Engine (MSDE). Then restart this installation.	
< <u>B</u> ack <u>Next</u> Cancel He	lp

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

-4

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

Use <u>W</u> indows N	Tauthentication
O Use SQL Server	authentication
Enter the user n	ame and password for the SQL Server
Enter a user na used to update	ame and password with Administrator rights for the SQL database. This is s or create the database.
If your existing user name is 's	SQL Server installation is a Microsoft Database Engine (MSDE), the default a' and the password is either blank or 'Altiris'.
User name:	sa
Password:	

- 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**.

boot Operating lect the pre-boot	<b>j Systems</b> operating systems for Boot Disk Creator.	1 State
nter the location or FreeDOS and	where the pre-boot operating system files are located. Linux operating systems enter the location of the Altiris FIRM file	
os		
FreeDOS:	U:\ds\BDUgp[_6.9.8853.frm	
<u>M</u> s-Dos:	]	
₩ ▼ x86;	D:\ds\BDCgpL_6.9.8853.frm	
□ x64:	D:\ds\BDCgpl_6.9.8853.frm	
✓ ia64:	D:\ds\BDCgpL_6.9.8853.frm	
nPE	J	
🗖 x86:		Þ
□ x64:		Þ
🗖 ia64:		<b>&gt;</b>

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.

Altiris Deployment Server Installation
PXE Server Information Enter information about the PXE Server
Do you want to use PXE Server?           Ng, I will be using an Altiris automation partition on each client computer         Yes, I want to install PXE Server on this computer         Period         Yes, I want to install PXE Server on a remote computer         Remote computer name:         PXE Server IP address:         10, 10, 10, 2         Deployment Server IP address:         10, 10, 10, 2         PXE Server install path:         C:\Program Files\Altiris\eXpress\Deployment Server         Select the pre-boot operating system to use as the default PXE boot menu item         D0S <ul> <li>Imag</li> <li>Windows PE</li> </ul>
< <u>B</u> ack <u>Next</u> Cancel Help

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

Altiris Deployment Server Installation	X
Deployment Agent Connection to Deployment Server Enter information about how the client computers will connect to the Deployment Server	15
How do you want your client computers to connect to the Deployment Server?      ① <u>C</u> onnect directly to Deployment Server	
Deployment Server IP address: 10 10 10 2 Port:	
402	
<u>D</u> iscover Deployment Server using TCP/IP multicast <u>S</u> erver name:	
If no Deployment Server is specified, the Deployment Agent will connect to the first Deployment Server it finds.	
< <u>B</u> ack <u>Next</u> Cancel	Help

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.

ltiris Deployment Server Installation	
Deployment Console Information Enter information about the Deployment Console	15
Where would you like to install the Deployment Console?	
On this computer	
O On a <u>r</u> emote computer	
Remote computer name:	
	Browse
,	
< Back Next >	Cancel Help

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

<section-header></section-header>	Altiris Deployment Server Installation	×
Where would you like to install the Deployment Web Console? <ul> <li>On to install</li> <li>On this computer</li> <li>On a genote computer</li> <li>Berowse</li> </ul> Console port:       Browse         Console port:       B081         Deployment Web Console path:       Exc.vProgram Files Attiris \eXpress \Deployment Web Console         C:\Program Files \Attiris \eXpress \Deployment Web Console       The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service password:         Administrator       Image: Service password         Administrator       Image: Service password	Deployment Web Console Information Enter information about the Deployment Web Console. It must be on a com that is running Microsoft IIS.	nputer
Ponot install         On a genote computer         Remote gomputer mame:             Browse.	Where would you like to install the Deployment Web Console?	
On a genote computer     Periode geomputer mame:     Browse      Browse      Console port:     Bost      Deployment Web Console path:     C.\Program Files \Attins \eXpress \Deployment Web Console      The following Administrator account must exist on the Deployment Share and the     Deployment Web Console. If using Active Directory, enter 'domain\user mame'.      Service user name:     Service user	<u>D</u> o not install	
Console port:       8081         Deployment Web Console path:       C:\Program Files\Attins\eXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service gassword:         Administrator       Service Loss of the Deployment web console	O On this computer	
Remote computer name:       Browse         Console port:       8081         Deployment Web Console path:       C:\Program Files\Attris\eXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service gassword:         Administrator	On a remote computer	
Browse         Console port:       8081         Deployment Web Console path:       C:\Program Files\Attins\eXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service gassword:         Administrator	Remote computer name:	
Console port:       8081         Deployment Web Console path:       C:\Program Files \Attins`keXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\'user name'.         Service user name:       Service gassword:         Administrator	Browse.	
Deployment Web Console path:         C:\Program Files\Attins\eXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service gassword:         Administrator	Console port: 8081	
C:\Program Files\Attiris\eXpress\Deployment Web Console         The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain\user name'.         Service user name:       Service gassword:         Administrator	Deployment <u>W</u> eb Console path:	
The following Administrator account must exist on the Deployment Share and the Deployment Web Console. If using Active Directory, enter 'domain'user name'.         Service user name:       Service gassword:         Administrator	C:\Program Files\Altiris\eXpress\Deployment Web Console	
Service user name: Administrator	The following Administrator account must exist on the Deployment Share Deployment Web Console. If using Active Directory, enter 'domain\user r	and the name'.
Administrator       < Back	Service user name: Service password:	
< Back Cancel Help	Administrator *******	
< Back Cancel Help	,	
< Back Cancel Help		
< Back Cancel Help		
< Back Cancel Help		
< <u>B</u> ack <u>Next</u> > Cancel Help		,
	< <u>B</u> ack <u>Next</u> > Ca	ncel Help

20. On the Installation Information screen, click Install.

tiris Deployment Server Installation		×
Installation Information Installing components		1
You have selected the following items to be installed. Click Install to begin the installation.		
Installing Deployment Server Program Files		
Installing Deployment Database and Deployment Server		
Installing Deployment Console		
Installing Altiris Components		
Installing Altiris PXE Server		
Current Task:	% Complete: 0	
< <u>B</u> ack <u>Instal</u>	Cancel	lelp

- 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**.

ProLiant Integration Module Setup		×
Installation Options Select which operating systems to add scripte ProLiant hardware configuration and imaging	d install support for support will be auto	r. matically added.
	Check <u>A</u> ll	<u>U</u> ncheck All
<ul> <li>Windows 2008 Datacenter Edition</li> <li>Windows 2008 Enterprise Edition</li> <li>Windows 2008 Standard Edition</li> <li>Windows 2008 X64 Datacenter Edition</li> <li>Windows 2008 x64 Enterprise Edition</li> <li>Windows 2003 Enterprise Edition</li> <li>Windows 2003 Enterprise Edition</li> <li>Windows 2003 Standard Edition</li> <li>Windows 2003 Standard Edition</li> <li>Windows 2003 X64 Enterprise Edition</li> <li>Windows 2003 x64 Enterprise Edition</li> <li>Windows 2003 x64 Enterprise Edition</li> <li>Windows 2003 x64 Standard Edition</li> </ul>		
< <u>B</u> ack	Next >	Cancel

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

ProLia	nt Integration Module Setup		×	
<b>T</b>	Configuration Options Specify the following required cor	figuration options.		
🗸 Enable	"Synchronize display names with o	computer names"		
🗸 Set Pri	imary <u>L</u> ookup Key to "Serial Numbe	r + MAC Address"		
🗸 Set <u>P</u> X	E Initial Deploy Boot Option to "Us	e Default Timeout"		
🗸 Create	e IIS ETP virtual directory "DSLIB"			
🗸 Set Cli	ent/Server File <u>T</u> ransfer Port to 43	00		
🌮 Dire	ctions for additional required confi	guration options are in the User Gu	uide.	

- 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.

ProLiant Integration Module Setup	
•	Windows 2003 Standard Edition Locate the root directory of this distribution, either on a DVD drive or on a network share.
Source	Browse
Destina	tion b\osdist\w52s nually copy this distribution later, copy the entire distribution to the destination rry above.
	<u>Copy</u> <u>Skip</u>

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.

Integrity Integration Module Setup		×
Installation Options Select which operating systems to add script ProLiant hardware configuration and imaging	ed install support fo support will be auto	r. omatically added.
	Check <u>A</u> ll	<u>U</u> ncheck All
<ul> <li>Windows 2008 IA64</li> <li>Windows 2003 IA64 Enterprise Edition</li> <li>Red Hat EL 5.1 for IA64</li> <li>Red Hat EL AS 4.6 for IA64</li> <li>Red Hat EL ES 4.6 for IA64</li> <li>SUSE LINUX Enterprise Server 10 SP1 for IA64</li> </ul>		
< <u>B</u> ack	Next >	Cancel

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.

🗑 Integrity Integration Module Setup	×
<b>Configuration Options</b> Specify the following required configuration options.	
Enable "Synchronize display names with computer names"	
Set Primary Lookup Key to "Serial Number + MAC Address"	
Set PXE Initial Deploy Boot Option to "Use Default Timeout"	
Create IIS ETP virtual directory "DSLIB"	
Directions for additional required configuration options are in the User Gui	de.
< Back	Cancel

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

F/

- 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 <u>http://www.hp.com/servers/rdp/kb</u>.

# 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
```

 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 <u>http://www.hp.com/servers/rdp/kb</u>.

# 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.

🏹 Jobs
🖓 Initial Deployment
🗄 🗑 System Jobs
🗄 🖓 Server Deployment
🚊 🖓 Server Deployment Toolbox
🗄 💮 👩 1 - Hardware Configuration
🗄 🖓 2A - OS Installation (Imaged)
🗄 🖓 2B - OS Installation (Scripted)
🗄 🖓 2C - OS Installation (Sysprep)
🗄 🖓 3 - Post-OS Configuration
🗄 🖓 Server Imaging

#### 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.

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 5-2 Hardware configuration default settings

### Table 5-3 Windows default settings

Component	Default setting
Windows administrator password	The administrator password is <b>password</b> . 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 <b>password</b> . 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
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Component	Default setting
Linux root password	The root password is <b>password</b> . 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.

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		

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

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 <b>Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP</b> 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

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<u>File Edit View Operations Tools H</u> elp		
🛯 📽 🖄 🍱 🙁 🖀 🗳 🕼 🕼 🖉 🗶 🚳	🏯 🔶 弓 三 旦 片 🖆 🖳 வ 🕺 🌣 🧉	
Computers	👸 Server Deployment	Jobs
New Computers	Job	Next Assigned
🛱 🕮 All Computers	Deploy Integrity RX/BL + Red Hat EL 5.1 for IA64 + ISP {LinuxPE}	
RACK1-ENCL001-2	Deploy Integrity RX/BL + Red Hat EL AS 4.6 for IA64 + ISP {LinuxPE}	
RACK1-ENCL001-3	Deploy Integrity RX/BL + Red Hat EL ES 4.6 for IA64 + ISP {LinuxPE}	
RACKI-ENCLOUI-4	Deploy Integrity RX/BL + SUSE LINUX Enterprise Server 10 SP1 for IA64 + ISP {LinuxPE}	
E BACK1	Deploy Integrity RX/BL + Windows 2003 IA64 Enterprise + ISP {LinuxPE}	
	Deploy Integrity RX/BL + Windows 2008 IA64 + ISP {WinPE}	
2	Deploy ProLiant ML/DL/BL + Red Hat EL 5.1 for AMD64/EM64T + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + Red Hat EL 5.1 for x86 + PSP {LinuxPE}	
4	Deploy ProLiant ML/DL/BL + Red Hat EL AS 4.6 for AMD64/EM64T + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + Red Hat EL AS 4.6 for x86 + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + Red Hat EL ES 4.6 for AMD64/EM64T + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + Red Hat EL ES 4.6 for x86 + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + SUSE LINUX Enterprise Server 10 SP1 for AMD64/EM64T + PSP {LinuxPE}	
	Deploy ProLiant ML/DL/BL + SUSE LINUX Enterprise Server 10 SP1 for x86 + PSP {LinuxPE}	
Dobs	Deploy ProLiant ML/DL/BL + VMware ESX 3.0.2 Update 1 + PSP {LinuxPE}	
Initial Deployment	Deploy ProLiant ML/DL/BL + VMware ESX 3.5.0 + PSP {LinuxPE}	
E System Jobs	Deploy ProLiant ML/DL/BL + Windows 2003 Enterprise + PSP {WinPE}	
🗉 🕅 Server Deployment	Deploy ProLiant ML/DL/BL + Windows 2003 Standard + PSP {WinPE}	
🗄 👰 Server Deployment Toolbox	Deploy ProLlant ML/DL/BL + Windows 2003 web + PSP {WinPE}	
🗄 💮 Server Imaging	Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP {WinPE}	
	Deploy ProLiant ML/DL/BL + Windows 2003 X64 Standard + PSP (WinPE)     Deploy ProLiant ML/DL/BL + Windows 2009 Detector + DCD (WinPE)	
	Deploy ProLiant ML/DL/DL + Windows 2008 Externing + PSP (WIIPE)	
	Deploy ProLiant ML/DL/BL + Windows 2008 Charderd + DSP (WINE)	
	Deploy ProLiant Mc/DC/BL + Windows 2008 standard + PSP {WinPC}	
	Deploy ProLant Mc/DC/BL + Windows 2008 x64 Enterprise + PSP (WinPE)	
	Deploy ProLant ML/DL/BL + Windows 2008 x64 Standard + PSP (WinPF)	
	(a beploy in ociant mejbejbe in windows 2000 x 0 i Standard in Sir (winney)	
	<u> ا</u>	Þ
27 total		

**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 <u>http://www.hp.com/servers/rdp</u>.
- 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 <a href="http://www.hp.com/servers/rdp/kb">http://www.hp.com/servers/rdp/kb</a>.
- 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 <u>http://forums.itrc.hp.com</u>.
- Information and resources about the Altiris Deployment Solution are available from the Altiris website at <a href="http://www.altiris.com">http://www.altiris.com</a>.

## 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 <a href="http://www.hp.com/service\_locator">http://www.hp.com/service\_locator</a>.
- In other locations, see the Contact HP worldwide webpage at <u>http://welcome.hp.com/country/us/en/wwcontact.html</u>.

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage at
   <u>http://welcome.hp.com/country/us/en/contact\_us.html</u>. 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 <u>http://welcome.hp.com/country/us/en/wwcontact.html</u>.

## 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 <a href="http://www.hp.com/services/insight">http://www.hp.com/services/insight</a>.

#### 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** (<u>http://www.hp.com/servers/manage/security</u>) – 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** (<u>http://www.hp.com/servers/smartstart</u>) – 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 <u>http://www.hp.com/go/subscriberschoice</u>.

HP Worldwide Customer Service contact numbers are available at

<u>http://www.hp.com/country/us/en/wwcontact.html</u>. 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.

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

Table A-1 Operating system directory names

# 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 directory="" installation="">\lib</altiris>
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.

# Index

### A

Altiris Product Licensing Utility, 7

### С

changing enclosure names, 22 configuring HP BladeSystem servers, 22, 30 image installs, 21 options, 37 Preboot eXecution Environment, 37 scripted installation, 21 creating FTP virtual directory, 37 image, 30 reference server, 30

### D

Deployment Server configuration, 37 directory structure, 23 requirements, 9 Deployment Server directory structure, 25 directory relationship, job, 26 display names synchronizing, 37

### E

enclosure, changing names, 22

### F

FTP service installing, 39, 41 FTP service, installing, 39, 41

### G

getting started, 11

### Η

how a job is run on a target automation environment, 26, 28 HP authorized reseller, 33 HP BladeSystem servers configuring, 22, 30 HP contact information, 33 HP Software Technical Support and Update Service, 33 HP Support and Contact information, 33

### I

imaging, creating, 30 installing, 11 Deployment Server, 11 FTP server, 39, 41 operating system CDs/DVDs, 35 software, 11

## J

jobs default settings, 24 server deployment, 23 server replication, 23 virtual machine deployment toolbox, 23

### L

licenses, 7 Linux scripted installation, 23

### Μ

Microsoft Internet Information Services creating an FTP virtual directory, 37 installing an FTP server, 39, 41

### Ν

network requirements, 9

### Ο

obtaining licenses, 7 online resources, 33 options, configuring, 37

### Ρ

Preboot eXecution Environment booting, 29 configuring, 37 PXE Configuration Utility, 37 prerequisites, installing, 9 primary lookup key, setting, 37 product keys, 38

### R

Red Hat Linux, scripted installation, 23 reference server, creating, 30 requirements Deployment Server, 9 network, 9

### S

scripted installation, customizing, 23 setting primary lookup key, 37 setting PXE initial deploy boot option, 37 software installing, 11 support, 33 SUSE Linux, scripted installation, 23 synchronizing display names, 37

### U

understanding the Deployment Server, 23 upgrade, 11 usage scenario, 29

### V

virtual directory, creating, 37 VMware installing operating system CDs/DVDs, 35 scripted installation, 23

### W

Windows entering product keys, 38 installing operating system CDs/DVDs, 35 synchronizing name, 37