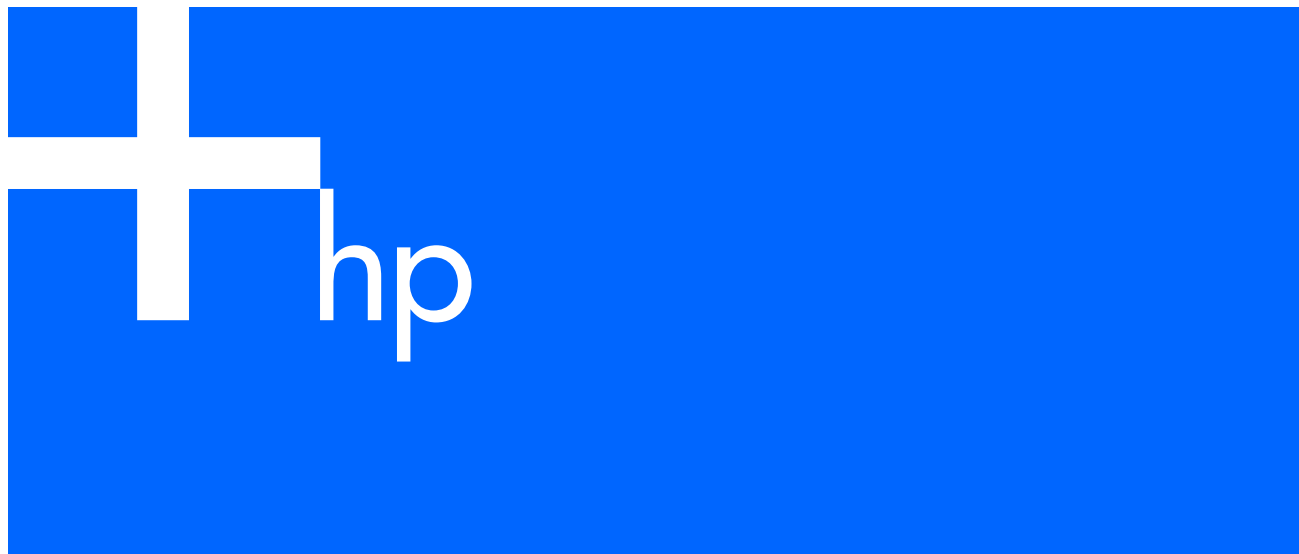


HP ProLiant Essentials Rapid Deployment Pack—Windows Edition User Guide



Part Number: 315378-009
Ninth edition: January 2007
Product version: 3.50



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1 Configuring your system prior to deployment

The following sections detail the configuration steps necessary to deploy an operating system to a server, virtual machine, or specific platform.



IMPORTANT: For your deployment, you might need to complete more than one of the procedures in this section.

Deployment configuration information is provided for the following platforms and environments:

- HP BladeSystem servers
- Virtual machines
- Direct-attached storage
- Boot from storage area network (SAN)
- SAN-attached storage

Deployment configuration information is provided for the following operating system:

- Microsoft® Windows®
- Linux
- VMware ESX Server

Configuring HP BladeSystem

The Physical Devices view in the Deployment Server Console displays the physical relationship between the racks, enclosures, and server blades using the rack name and enclosure name for each HP BladeSystem server. The display name for a new server blade is a combination of the rack name, enclosure name, and bay number. Before you connect the first server in an enclosure to the Deployment Server, assign the rack, and enclosure with unique names to prevent conflicting database entries.

If the BladeSystem servers are powered up before the rack name and enclosure name have been changed, they are recorded in the Deployment Server database and displayed in the Deployment Server Console. If the names are changed after being recorded in the Deployment Server database, then the servers must be rebooted for the new rack name and enclosure name to be discovered. In addition, the original default names for the rack and enclosure must be manually deleted from the console.

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

- 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. For details about accessing iLO to change the rack name and enclosure name, see the documentation shipped with your server blade.
- HP BladeSystem c-Class servers—To access the Onboard Administrator and change rack name and enclosure name, see the server documentation.

Configuring virtual machines

The following configuration steps are required to support virtual-machine-scripted installations.

VMware ESX Server virtual machine



NOTE: The following procedure is based on the assumption that VMware ESX Server has been initialized. For more information, see the “VMware ESX Server deployments” section in this guide.

Create a new virtual machine to ensure that the guest operating system is appropriate for the operating system to be installed on the virtual machine. For more information about creating virtual machines, see the VMware documentation located at

http://h18004.www1.hp.com/products/servers/software/vmware/index.html?jumpid=reg_R1002_USEN.

Manually creating a virtual machine

1. Power up the virtual machine.
2. At the VMware Remote Console, press **F2** to access the BIOS.
3. Set the network adapter to be first in the boot order, enabling the virtual machine to Preboot eXecution Environment (PXE) boot during the scripted installations.
4. Save the virtual machine BIOS settings and reboot the virtual machine. The virtual machine appears in the Deployment Server Console as a new computer.

Using a job to create a virtual machine

From the Deployment Server console, use the **Virtual Machine Deployment Toolbox/1 – Create Virtual Machine jobs**. This job will create the virtual machine, set the network adapter first in the boot order, and start the new virtual machine by booting to PXE. The new virtual machine will show up in the Deployment Server console in New Computers after the virtual machine has completed the boot process.

Microsoft Virtual Server 2005 R2 virtual machine

To create and power up a virtual machine:

1. From the Virtual Server Remote Console, press **Delete** to access the BIOS.
2. Set as first in the boot order the network adapter, enabling the virtual machine to PXE-boot during the scripted installations.
3. Save the virtual machine BIOS settings, and reboot the virtual machine. The virtual machine appears in the Deployment Server Console as a new computer.

For more information about creating virtual machines, see the Microsoft Virtual Server documentation located at <http://www.microsoft.com/windowsserversystem/virtualserver/default.aspx>.

Direct-attached storage environment deployments

For a scripted installation where an NTFS.IMG or GRUB.IMG file is deployed to initiate the operating system installation or for an image installation, the image file is deployed or captured to or from the drive according to the Altiris drive enumeration. If multiple storage drives are enabled on the target server, the job might install or capture the image on the secondary drives instead of the primary drives. The **Read Hardware Configuration [server specific]** job includes output from the Altiris showdisk utility. You can use this output to determine how the drives will be enumerated. This allows you to add the appropriate -d# parameters to the Create Disk Image or Distribute Disk Image task. For information on how to read data from the showdisk utility, see the Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>.



IMPORTANT: If a USB device is used as the boot media method, a scripted installation or image installation job may deploy or capture the image to or from the USB device. The drive number of the hard drive must be specified for the Create Disk Image or Distribute Disk Image tasks.

To specify which drive to use for installation:

1. From the Deployment Server Console, copy, rename, and edit the job to be used for this deployment.
2. Modify the **Create Disk Image** or **Distribute Disk Image task**.
3. Select **Advanced**, and click the **Additional Options** tab.
4. In the Additional command-line switches field, add the `-dx` switch, where `x` is an integer which represents the disk number of the first hard drive in the primary controller.



NOTE: For step 4, refer to the Red Hat Enterprise Linux section for special use of `-dx` for deployments with LVM images.

Boot from SAN environment deployments

The following configuration steps are required before installing an operating system on a server with a QLogic or Emulex Fibre Channel Host Bus Adapter (FC HBA) that boots from an HP StorageWorks SAN.

For details about SAN configurations and minimum firmware versions, see the following documents:

- *HP StorageWorks Booting Windows Systems from a Storage Area Network Application Notes*
 - *HP StorageWorks Booting Linux Systems from a Storage Area Network Application Notes*
1. Be sure the following prerequisites are met:
 - The target system is cabled in a single-path configuration (with only one channel active). You can cable both paths and zone only a single port to have access to the boot. Cabling both paths and only zoning a single port can be performed to have access to the boot logical unit number (LUN) until the server operating system install is complete and the multipathing software is installed.
 - The server has booted to PXE and is in a waiting state in the Deployment Server Console.
 2. Configure the SAN storage for the target system.

- a. Run the **Read ProLiant ML/DL/BL HBA Configuration {LinuxPE} or {WinPE}** job from the **Server Deployment Toolbox\1—Hardware Configuration\HBA** job folder on the target system. This job creates the `.\lib\hwconfig\hba\ID.ini` file, where `ID` is the target system computer ID. The following is an example of a generated file:

```
[HBA0]
WWID=500508b200713e72
HostAdapterBiosEnable=1
SelectBootEnable=1
BootDeviceWWID=
BootDeviceLUN=

[HBA1]
WWID=500508b200713e73
HostAdapterBiosEnable=0
SelectBootEnable=0
BootDeviceWWID=
BootDeviceLUN=
```



NOTE: To determine the target system computer ID, right-click the target system and select **Properties** from the **Deployment Server Console**. Click the **General** tab. The computer ID appears in the ID field.

- b. Create a LUN for the boot volume of the target system. Record the created LUN and the World Wide Identification (WWID) of the boot controller.
 - c. Using the target system HBA WWID from the file created in step 2a, configure the SAN switches for zoning or Selective Storage Presentation as needed in your environment.
3. Configure the target system HBA to boot from the configured SAN storage.
 - a. Edit the `ID.ini` file created in step 2a, adding the previously recorded boot controller WWID and LUN. The boot volume must be set up as the first visible LUN. The following is an example of an edited file:

```
[HBA0]
WWID=500508b200713e72
HostAdapterBiosEnable=1
SelectBootEnable=1
BootDeviceWWID=395442c135713a41
BootDeviceLUN=01
```

```
[HBA1]
WWID=500508b200713e73
HostAdapterBiosEnable=0
SelectBootEnable=0
BootDeviceWWID=395442c135713a42
BootDeviceLUN=01
```

- b. Run the **Write ProLiant ML/DL/BL HBA Configuration {LinuxPE} or {WinPE}** job from the Server Deployment Toolbox\1—Hardware Configuration\HBA job folder on the target system.
- c. Run the **Deploy ProLiant BL System Configuration (Boot From SAN) {LinuxPE} or {WinPE}** job from the Server Deployment Toolbox\1—Hardware Configuration\System job folder on the target system. This job disables the embedded array controller and places the HBA controller first in the boot order.
4. To deploy a Windows operating system, the system must be set up in a single-path configuration. To enable access to the LUN only from the first HBA and one array controller port, either set up only one path to the LUN or configure the SAN switch zoning to enable access to the LUN from only the first HBA and one array controller port. With two paths configured to the LUN (through both HBAs on a server blade, for example), a Windows setup failure message appears stating that a drive is unformatted, damaged, or formatted with a file system that is incompatible with Windows.
5. To deploy the Red Hat Linux operating system when multiple LUNs are presented before the operating system installation, modify the job and kickstart file to place the operating system partitions on the first LUN. By default, the deployment installs Linux partitions across the available LUNs. If only one LUN is presented during the operating system installation, no changes to the kickstart file or job are necessary.
 - a. On the Deployment Server, copy and rename the kickstart file.
 - b. 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.

For example for non-LVM:

```
part /boot --size 75 --ondisk=sda
part swap --recommended --ondisk=sda
part / --size 5120 --grow --ondisk=sda
```

For example for LVM:

```
part /boot --size 75 --fstype=ext3 --asprimary --ondisk=sda
part swap --recommended --asprimary --ondisk=sda

part pv.01 --size=100 --grow --ondisk=sda
volgroup myvgl pv.01

logvol / --vgname=myvgl --size=100 --grow --name=rootvol
```

- c. In the Deployment Server Console, copy and rename the scripted install job.
- d. Edit the **Run Script – Create Boot Environment** task in the new job to use the new kickstart file created in step 5a.

SAN-attached environment deployments

The following configuration steps are required to deploy an operating system on a server with a QLogic or Emulex FC HBA attached to an HP StorageWorks SAN.

For information about required firmware, drivers, and software for your SAN environment, see the *HP StorageWorks SAN Design Reference Guide*.

1. Be sure the following prerequisites are met:
 - The target system HBA BIOS is disabled before performing a SAN-attached deployment so the target server will not attempt to boot to the HBA device.
 - The server has booted to PXE and is in a waiting state in the Deployment Server Console.

If the LUNS is not present before the operating system is installed, no changes to the job is required.

Steps 2 and 3 are only required if the LUNS is presented before the operating system is installed. The following job changes might be required.

2. For a scripted installation, where an NTFS.IMG or GRUB.IMG file is deployed to initiate the operating system installation or for an image installation, the image file is deployed or captured to or from the drive according to the Altiris drive enumeration. Because the WinPE and Linux automation environments recognize the embedded drives and SAN controllers regardless of whether the HBA BIOS is disabled or enabled, the job might install or capture the image file to the SAN controller drives instead of the target server primary drives. The **Read Hardware Configuration [server specific]** job includes output from the Altiris showdisk utility. You can use this output to determine how the drives will be enumerated. This allows you to add the appropriate `-d#` parameter to the Create Disk Image or Distribute Disk Image task. For information on how to read data from the showdisk utility, see the Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>.

To specify which drive to use for installation:

- a. From the Deployment Server Console, copy, rename, and edit the job to be used for this deployment.
- b. Modify the **Create Disk Image** or **Distribute Disk Image** task.
- c. Select **Advanced**, and click the **Additional Options** tab.
- d. In the Additional command-line switches field, add the `-dx` switch, where `x` is an integer representing the disk number of the first hard drive in the embedded controller.



NOTE: For step 2 d, refer to the Red Hat Enterprise Linux section for special use of `-dx` for deployments with LVM images.

3. For a scripted installation, to deploy the Red Hat Linux operating system, modify the job and kickstart file to ensure that the operating system partitions are installed on the target system hard drive.
 - a. On the Deployment Server, copy and rename the kickstart file.
 - b. 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.

For example for non-LVM:

```
part /boot --size 75 --ondisk=cciss/c0d0
part swap --recommended --ondisk=cciss/c0d0
part / --size 5120 --grow --ondisk=cciss/c0d0
```

For example for LVM:

```
part /boot --size 75 --fstype=ext3 --asprimary --ondisk=cciss/c0d0
part swap --recommended --asprimary --ondisk=cciss/c0d0

part pv.01 --size=100 --grow --ondisk=cciss/c0d0
volgroup myvg1 pv.01

logvol / --vgname=myvg1 --size=100 --grow --name=rootvol
```

- c. In the Deployment Server Console, copy and rename the scripted install job.
- d. Edit the **Run Script – Create Boot Environment** task in the new job to use the new kickstart file created in step 3a.

Windows deployments

Depending on your deployment needs, it might be necessary to perform the following configuration steps to support Windows scripted installation:

1. Modify the Windows unattend text file located on the Deployment Server at `.\lib\osconfig\yyyy`, where `yyyy` is the Windows operating system shortcut name, with settings specific to your environment. Suggested settings to change are:
 - Domain
 - Administrator password
 - SNMP community string and trap destinations

For more information about editing a Windows scripted installation unattend text file, see the Windows 2000 online resource kit at <http://www.microsoft.com/windows2000/techinfo/reskit/en-us/default.asp>.

2. Modify the Deployment Agent for Windows (AClient) settings by selecting **Tools>Options** from the Deployment Server Console. Click the **Agent Settings** tab, select **Force new agents to take these default settings**, and click **Change Default Settings**. HP recommends the following setting:
 - a. Click the **Startup/Shutdown** tab, and select these options:
 - **Force programs to close when shutting down**
 - **Synchronize date/time with the Deployment Server**
 - b. (Optional) If you need to change the settings for the AClient is installed, modify `.\lib\osoem\altiris\aclient.txt`.
3. Modify the Microsoft Sysprep jobs located in the Server Deployment Toolbox 2C—OS Installation (Sysprep) folder, based on your image type.

For each **Capture Windows Sysprep Image** job:

- a. Select the **Create Disk Image** task.
- b. Click **Modify**.
- c. In the Sysprep Settings field, select **Add New** from the Operating System dropdown list.
- d. In the OS Product Key field, select the appropriate operating system.
- e. Click **Add** to enter a new product key.
- f. Enter the product key in the Product Key field, and click **OK>OK>Finish**.

For each **Deploy Windows Sysprep Image** job:

- a. Select the **Distribute Disk Image** task.
- b. Click **Modify**.
- c. In the Sysprep Settings field, select the appropriate operating system from the Operating System dropdown list.
- d. Select the appropriate product key from the Product key dropdown list, and click **Finish**.

The following step must be performed before deploying each server:

4. Before executing a Windows-scripted installation job, verify that the computer name in the Deployment Server Console is NETBIOS-compliant and that the right-most 15 characters are unique. Windows scripted installation jobs perform a token-replace of the computer name from the Deployment Server Console. The computer name is truncated to the right-most 15 characters and spaces are removed to comply with NETBIOS limitations.

Linux deployments

Red Hat Enterprise Linux

For imaging of a target with Red Hat Linux and LVM, the Distribute Disk Image task will need to be modified to indicate the first and last drive if the LVM volume spans multiple logical drives. The **Read Hardware Configuration [server specific]** job includes output from the Altiris showdisk utility. You can use this output to determine how the drives will be enumerated. This allows you to add the appropriate `-d#` parameter to the Distribute Disk Image task. For information on how to read data from the showdisk utility, see the Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>.

To specify which drives to use for installation:

1. From the Deployment Server Console, copy, rename, and edit the job to be used for this deployment.
2. Modify the **Distribute Disk Image** task.
3. Select **Advanced**, and click the **Additional Options** tab.
4. In the Additional command-line switches field, add the `-dy` switch, where `y` is comma separated integers representing the disk numbers that the LVM volume will span. For example, to deploy an LVM image to two drives, use `-d1,2`.

VMware ESX Server deployments

The following configuration steps are required to support VMWare ESX Server deployments. The first procedure is specifically for ESX Server 2.5.3, and the second is for ESX Server 3.0.1.

VMware ESX Server 2.5.3

In a SAN-attached environment, you must copy and rename the scripted installation job before deploying VMware ESX Server 2.5.3. After renaming the scripted installation job, edit the **Run Script – Create Boot Environment** task in the new scripted installation job by changing the `default.cfg` file reference in the `# replacetokens` statement to `sanattach.cfg`.

In a boot-from-SAN environment, you must copy and rename the scripted installation job before deploying VMware ESX Server 2.5.3. After renaming the scripted installation job, edit the **Run Script – Create Boot Environment** task in the new scripted installation job by entering `export bootfromsan=yes` before you enter `/mnt/ds/lib/bin32/linux/vmesx.sh`.

Perform the following steps after the VMware ESX Server scripted installation is complete, but before setting up virtual machines and deploying operating systems to the virtual machines. These steps can also be used if the VMware ESX Server was installed using a method other than a Rapid Deployment Pack scripted installation.

These post-deployment steps are performed manually. However, these steps can be automated during the scripted installation by modifying the kickstart files before deploying VMware ESX Server. For details, see the VMware documentation.



NOTE: For details about accessing the VMware MUI, initializing VMware, and creating virtual machines, see the VMware documentation.

After VMware ESX Server is installed on a server, browse to the VMware MUI at <http://hostname> or <http://xxx.xxx.xxx.xxx>, where `hostname` is the fully-qualified domain name or `xxx.xxx.xxx.xxx` is the IP address of the server on which VMware ESX Server is installed.



IMPORTANT: If VMware was installed using a Rapid Deployment Pack scripted installation, the default root password is “password” for the MUI.

1. For all servers, initialize VMware ESX Server.
2. To launch the VMware ESX Server MUI for the first time:
 - a. Select **Options>Licensing and Serial Numbers**.
 - b. If you agree to the terms of the license agreement, click **Agree**.
 - c. Enter the appropriate VMware serial numbers.
 - d. Reboot the VMware ESX Server when prompted.
3. Additionally, for SAN-attached environments the following VMware ESX Server MUI modifications are required. To create the core dump partition:
 - a. Click **Reconfigure** when the following warning message appears:

No core dump partition is configured or none is accessible

- b. Select the LUN on which to place the core dump partition. The core dump partition cannot be created on the local ATA drive.
- c. Set the desired size of the core dump partition. VMware recommends 100 MB for each VMware ESX Server. The partition size defaults to all remaining available LUN space.

To create the Virtual Machine File System (VMFS):

- a. Select **Storage Management**. Available storage volumes and available space is displayed. The VMFS cannot be created on a local ATA drive.
- b. Select **Create Volume/Name**.
- c. Select **Typical** or **Custom**. A typical volume allocates all remaining space to the VMFS.

VMware ESX Server 3.0.1

The following steps must be completed before a VMware ESX Server 3.0.1 scripted installation is performed.

1. For SAN-attached environments, you must disconnect the SAN. The SAN can be reconnected after the deployment is complete.
2. Set the file transfer port on the Deployment Server.
 - a. In the Deployment Server Console, select **Tools>Options** and click the **Global** tab.
 - b. Select **Client/server file transfer port**, and enter 4300.
 - c. Click **OK**.

The following steps must be performed after the VMware ESX Server scripted installation is complete, but before setting up virtual machines and deploying operating systems to the virtual machines. These steps can also be used if the VMware ESX Server was already installed using a method other than an HP ProLiant Essentials Rapid Deployment Pack scripted installation.

1. Enable VMware licensing:
 - a. Install and launch the Virtual Infrastructure Client.
 - b. Log in to the new VMware ESX Server.
 - c. Click the **Configuration** tab, and click **Licensed Features**.
 - d. Click **License Sources>Edit**.
 - e. Select **Use License Server** or **Use Host License File**, and type the appropriate server address or local file path.
 - f. Click **ESX Server License Type>Edit**, and select the appropriate license type.
 - g. Select **Add-Ons** to install a Virtual Symmetric Multi-Processing (SMP) license if necessary.
2. If using the SAN as a datastore, create a VMFS datastore on the SAN.



NOTE: The VMware ESX Server scripted installation will create a local VMFS datastore called `localvmfs`.



NOTE: The VMFS cannot be created on a local ATA drive.

3. Shut down the VMware ESX Server, configure and connect the SAN, and restart the VMware ESX Server.
 - a. From the Virtual Infrastructure Client, click **Storage (SCSI, SAN, and NFS)>Add Storage**.
 - b. Configure the new datastore.
 - c. Click **Disk/LUN**.
 - d. Select the device to use for the datastore, such as a local drive or SAN LUN, and click **Next**.
 - e. Select **Use free space**, and click **Next**.
 - f. Enter a name for the datastore, and click **Next**.
 - g. Click **Next** to accept the default maximum file size and capacity.
 - h. Review the disk layout summary, and click **Finish**.

The VMware ESX Create VMFS Datastore task begins. Task status appears in the Recent Tasks pane. When the task is complete, the new datastore is ready for use.

2 Using the Rapid Deployment Pack

This section provides information about the following topics:

- Connecting server blades
- Creating a reference server and image
- Deploying a captured image to other similar servers
- Maintaining the servers with rip-and-replace

Although the processes detailed in this section are for server blades, the process can be duplicated for other supported servers. To use these processes for other servers, the hardware configuration of the target systems must be identical to the hardware configuration of the reference server when performing the image-capture and deployment. Certain functionality is available only for server blades, which is noted where applicable in the following sections.

The processes included in this section are based on the assumption that all necessary installation, post-installation, and predeployment configuration steps provided in this guide and the *HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Installation Guide* have been performed.

Connecting the 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 (do not power on the server blades).
3. Change the default rack and enclosure names.
4. Power up the server blades.
5. Open the Deployment Server Console to view target servers available for deployment and management. The following panes appear in the console:
 - Computers—This pane is located on the upper-left side of the console and displays, by default, New Computers and All Computers. Virtual Machines and Physical Devices are also displayed (if enabled).
 - Jobs—This pane is located on the lower-left side of the console and lists the jobs provided with the Rapid Deployment Pack.
 - Details—This pane is located on the right side of the console and displays details for the selections highlighted within the Computers pane or the Jobs pane.

6. Select **View>Show Physical Devices**.



NOTE: The Physical Devices view is an additional view available only for BladeSystem servers in the Computers pane. A job can be executed on a server listed in this view.

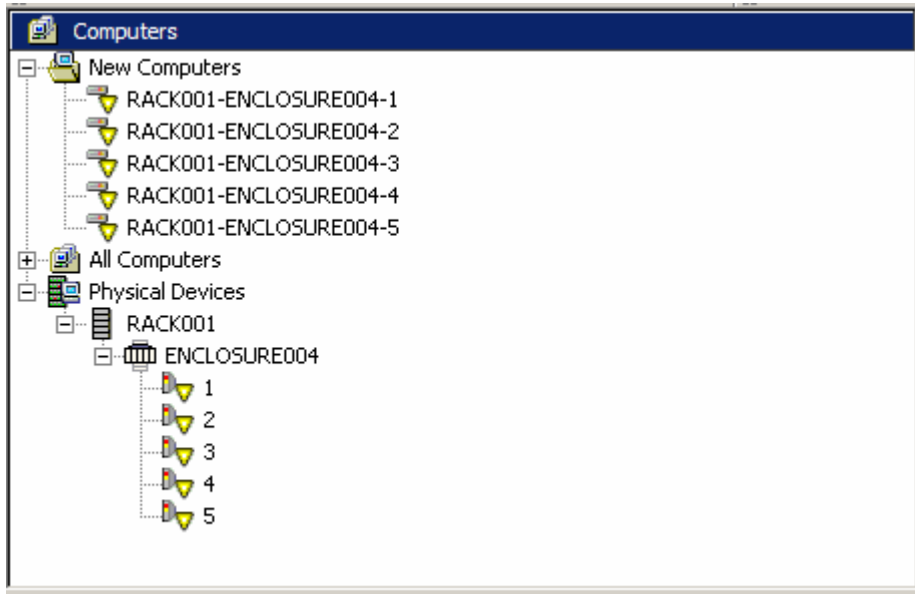


Table 1 lists the server icons displayed in the Physical Devices view of the Deployment Server Console.

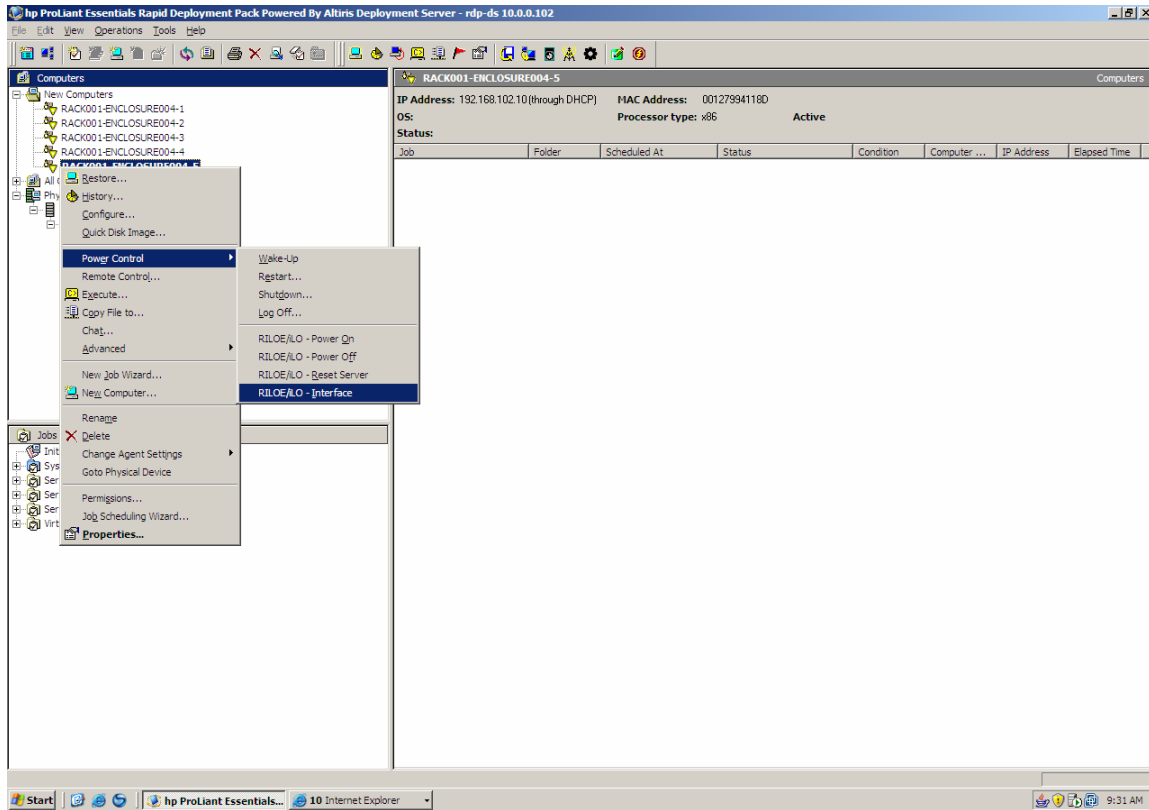
Table 1 Server icons

Icon	Description
	Indicates a grouping of physical devices
	Indicates a rack
	Indicates an enclosure
	Indicates a single server blade in a bay
	Indicates an unconfigured server blade in a waiting state designated by the user
	Indicates a virtual bay

After the server blades PXE-boot, the servers appear in the Deployment Server Console under New Computers and Physical Devices.

7. From the Computers pane, right-click the first server blade.

8. Select **Power Control>RiLOE/iLO – Interface**. This action accesses the iLO, iLO 2, or RiLOE interface to enable remote viewing of the deployment.

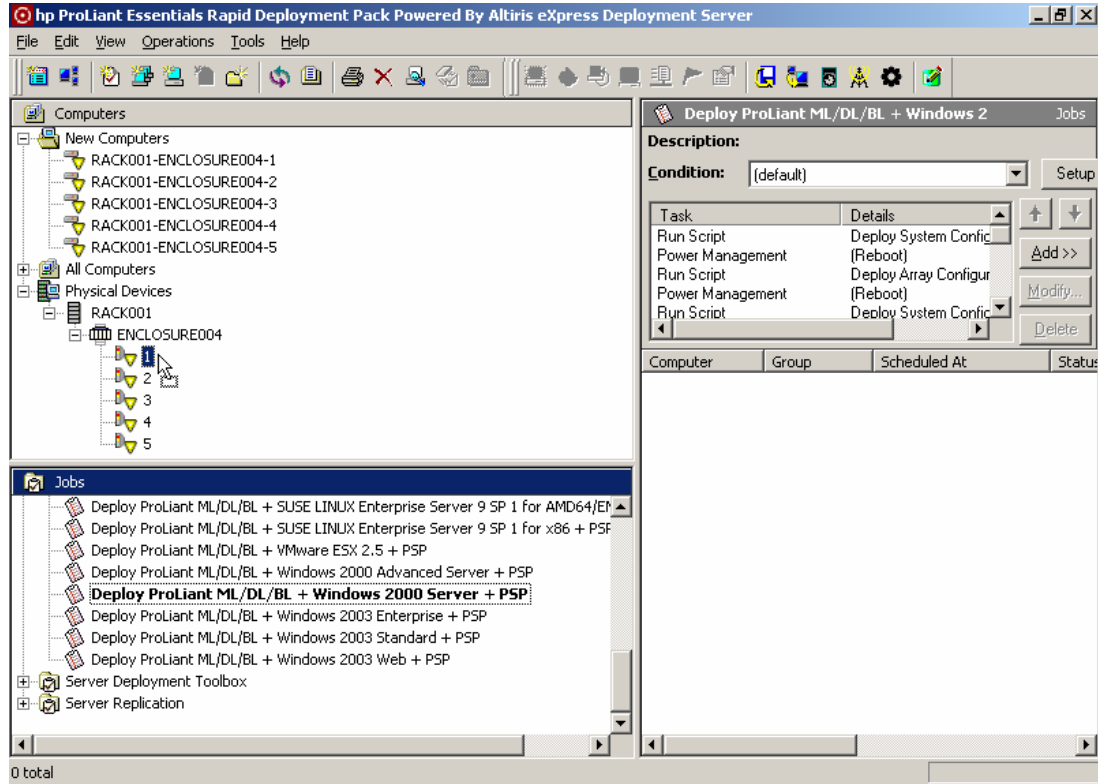


Creating a reference server and image

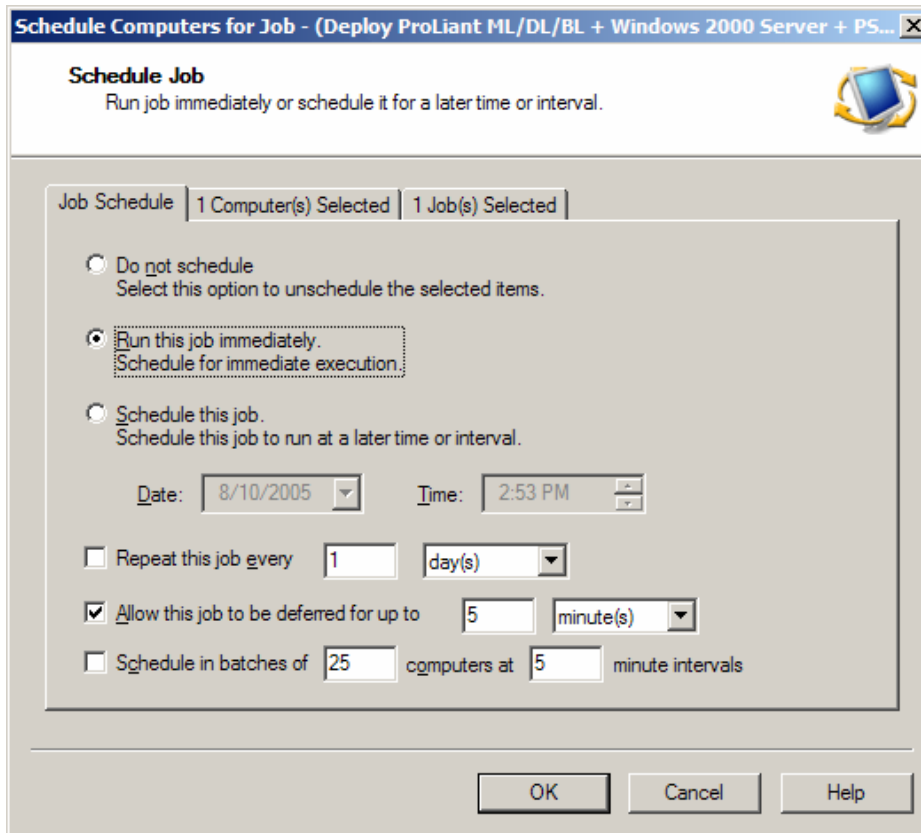
The initial server blade must be deployed using a scripted installation job. Subsequent server blades are deployed by capturing and deploying the image of the initial server blade. You can deploy all of the server blades using a scripted installation, but the operating system installation is slower than when using an image installation.

To create a reference server and image:

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



2. Select **Run this job immediately**, and click **OK**.



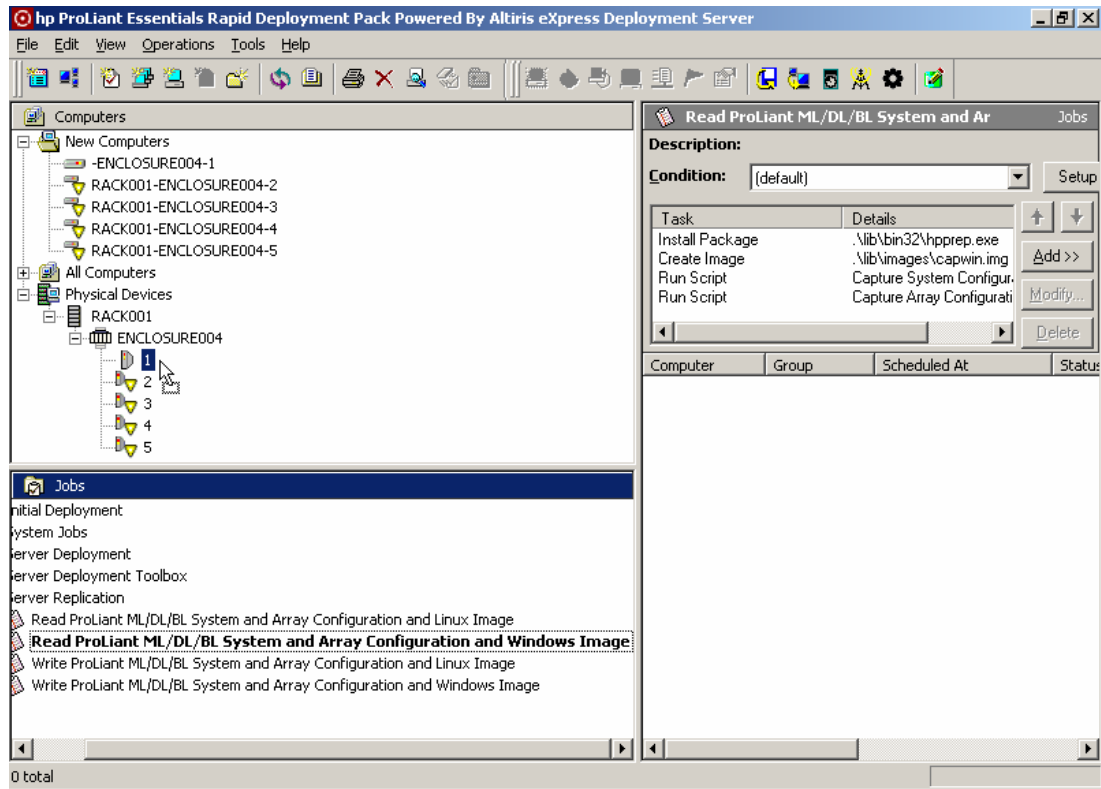
The Details pane displays the job currently running. Double-clicking the job in the Details pane shows the tasks and status. When the server deployment is complete, the server icon changes. The image-capture job runs immediately after the current job is completed.



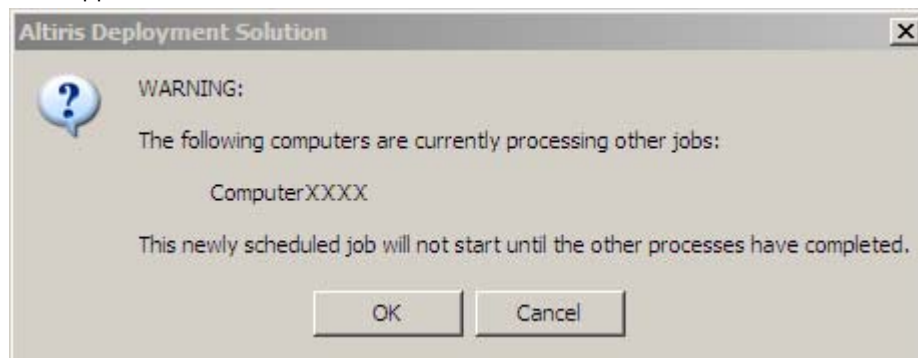
NOTE: The Windows-scripted installations perform a token-replace of the computer name from the Deployment Server Console name. This computer name is truncated to the right-most 15 characters to comply with the NETBIOS limitation. The Linux- and VMware-scripted installs use the Deployment Server Console display name as the server host name.

- In the Jobs pane, find the **Read ProLiant ML/DL/BL System and Array Configuration and Windows Image {WinPE}** job in the Server Replication folder. Drag the job onto the initial server blade in the Computers pane.

IMPORTANT: The Server Replication jobs provided with the Rapid Deployment Pack create and deploy images using an image name based on the computer model names. If you use the provided jobs without modification, each time you capture a new image on the same computer model, the previous image is overwritten. For information about job setup and image file location on the Deployment Server, see the “Understanding the Deployment Server” section in this guide.



- Select **Run this job immediately**, and click **OK**.
- If the scripted installation job is still running on the server, click **OK** when the following warning message appears:

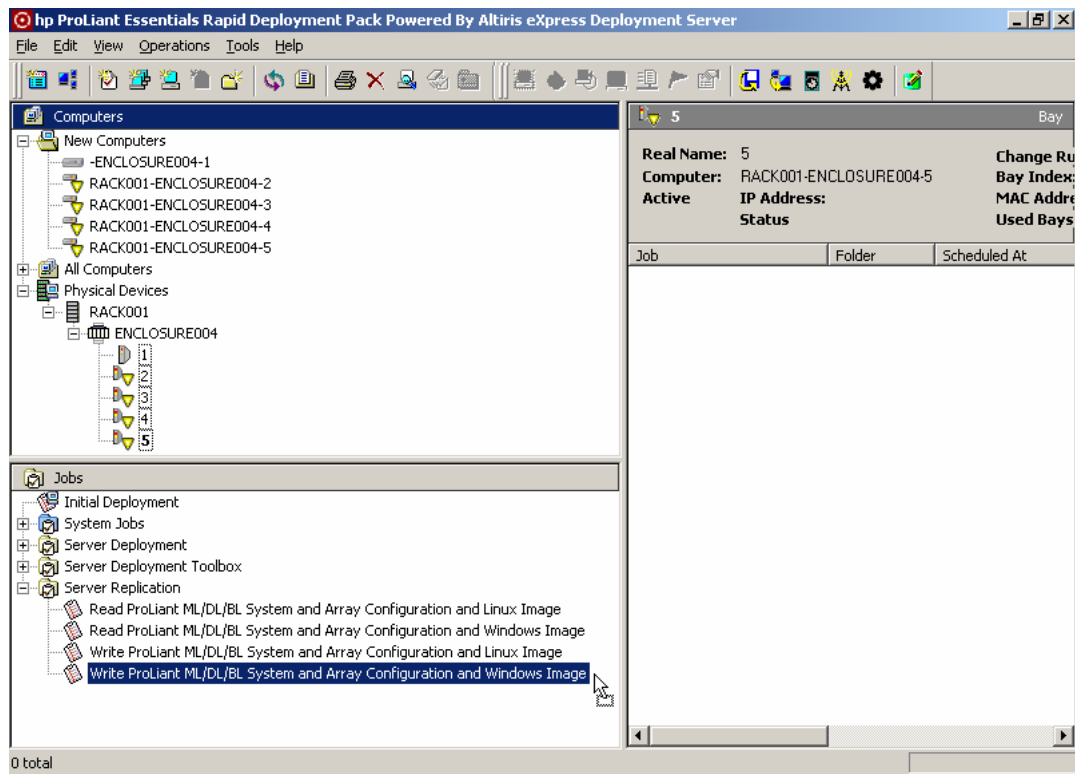


The server reboots and performs the specified tasks. When the image capture is complete, the server icon changes to indicate that the server is connected to the Deployment Server.

Deploying the image to other similar server blades

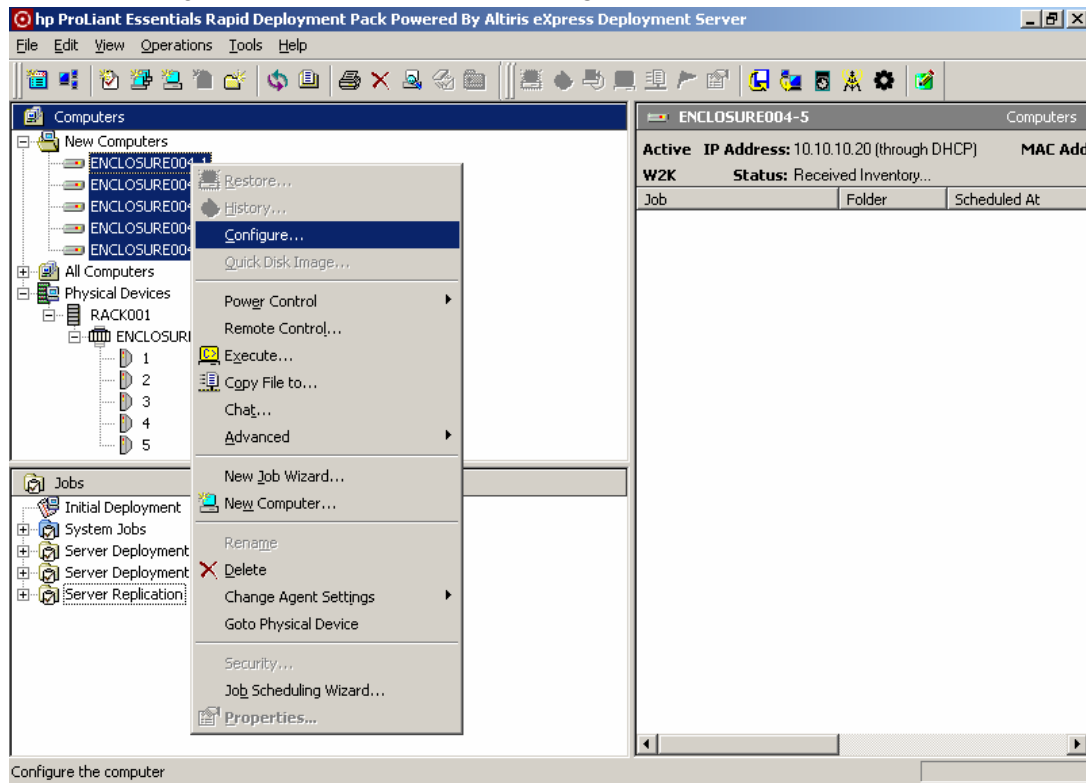
1. In the Computers pane, select all the server blades. Drag the server blades onto the Write ProLiant **ML/DL/BL System and Array Configuration and Windows Image {WinPE}** job in the Server Replication folder in the Jobs pane.

If you are deploying the image to all server blades in an enclosure, you can select the enclosure from the Physical Devices view. Redeploying the captured image to the same reference server enables you to take advantage of the speed of image installations if the reference server is ever replaced with rip-and-replace enabled.

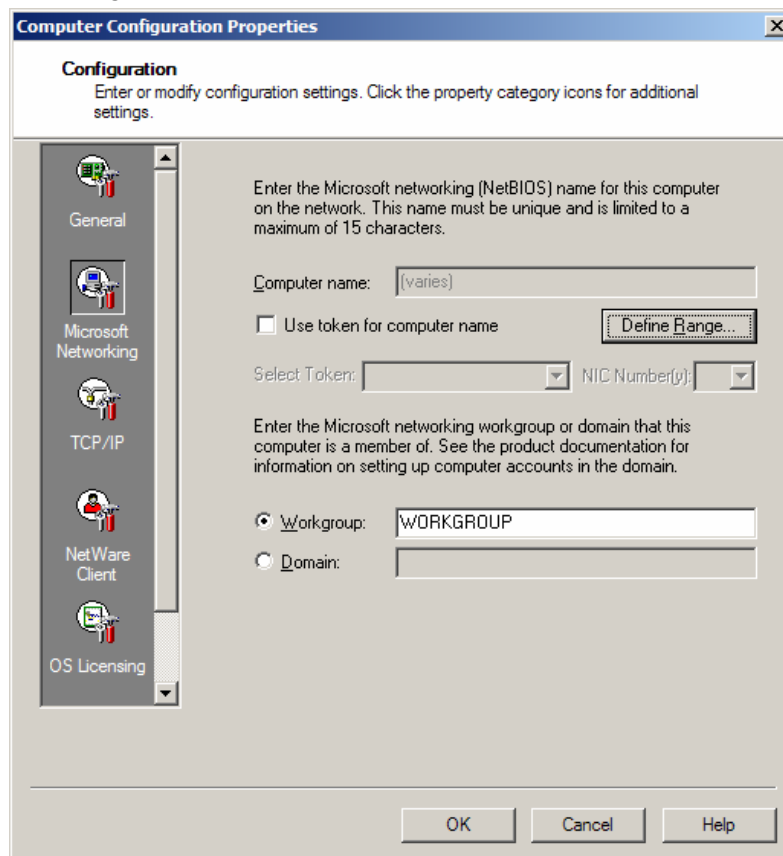


2. Select **Run this job immediately**, and click **OK**. When the server deployment is complete, the server icons change to indicate the servers are connected to the Deployment Server.

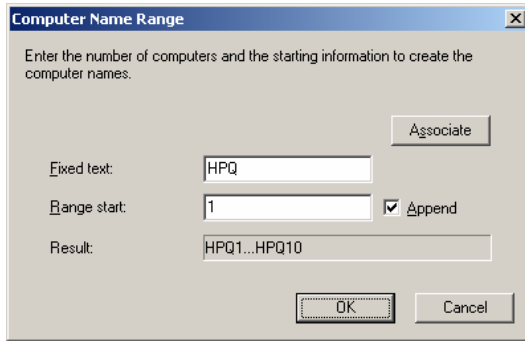
- To reconfigure the server blades after image deployment, in the Computers pane, select all the server blades, and then right-click the selection, and select **Configure**.



- Click **Microsoft Networking**, and then enter a new workgroup/domain name (if applicable) and click **Define Range**.



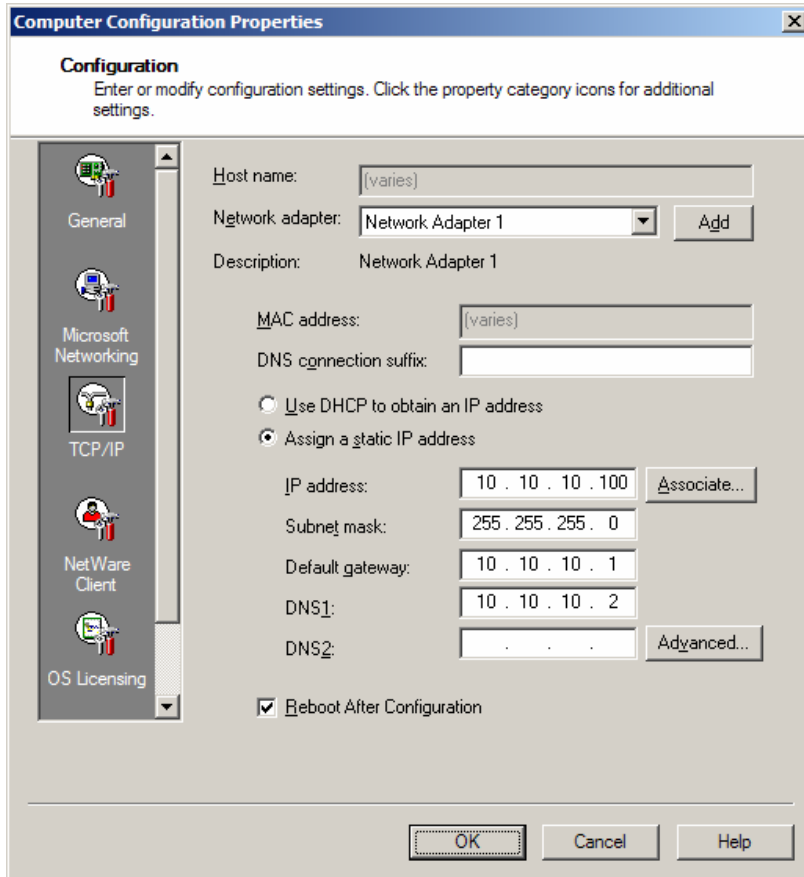
5. Enter the fixed portion of the new server names, and click **OK**.



The screenshot shows the "Computer Name Range" dialog box. It contains the following fields and controls:

- Fixed text: HPQ
- Range start: 1
- Append:
- Result: HPQ1...HPQ10
- Buttons: Associate, OK, Cancel

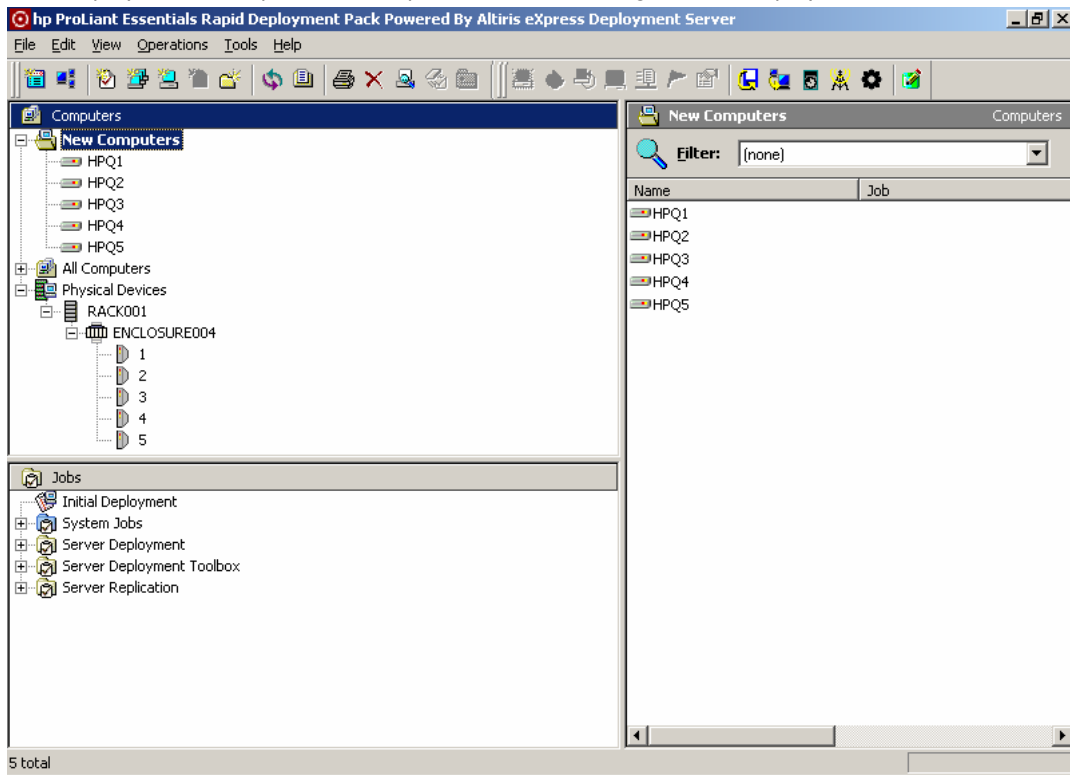
6. Click **TCP/IP**, and enter the IP information for the first server blade. Click **OK**. Subsequent server blades are assigned the same information, except that the IP address increases incrementally for each server blade.



The screenshot shows the "Computer Configuration Properties" dialog box, specifically the "TCP/IP" tab. The configuration is as follows:

- Host name: [varies]
- Network adapter: Network Adapter 1
- Description: Network Adapter 1
- MAC address: [varies]
- DNS connection suffix: [empty]
- Use DHCP to obtain an IP address:
- Assign a static IP address:
- IP address: 10 . 10 . 10 . 100
- Subnet mask: 255 . 255 . 255 . 0
- Default gateway: 10 . 10 . 10 . 1
- DNS1: 10 . 10 . 10 . 2
- DNS2: . . .
- Reboot After Configuration:
- Buttons: OK, Cancel, Help

7. Select **Run this job immediately**, and click **OK** to start the reconfiguration deployment. When the reconfiguration deployment is complete, the computer names are changed in the Deployment Server Console.



Maintaining the servers with rip-and-replace

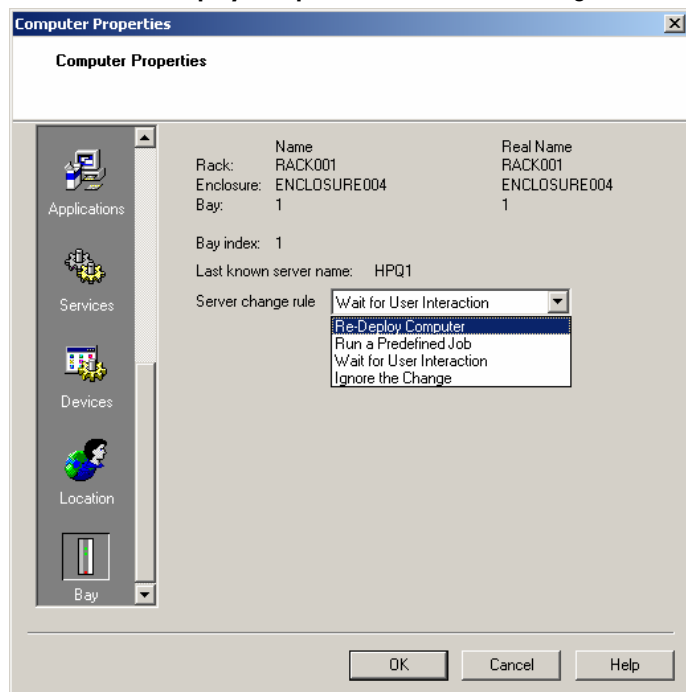
When a failed server blade is replaced, the Deployment Server Console can automatically replay the job history of the failed server blade on the new server blade. This feature is available only for BladeSystem servers.



IMPORTANT: The new server blade requires a new license. The existing license cannot be transferred to the new server blade.

To enable rip-and-replace, perform the following steps for each server blade:

1. In the Computers pane, right-click a single server and select **Properties**.
2. Scroll down and click **Bay**.
3. Select **Re-Deploy Computer** from the Server change rule list.



4. Click **OK**.

The following server change rule options are available:

- **Re-Deploy Computer**—Takes the job history of the previous server blade and replays it on the new server blade. The replay starts from the last deployment type job. This option is available only after the server blade is deployed or a virtual bay has been created.
- **Run Predefined Job**—Processes any job specified by the user, including the Initial Deployment job.
- **Wait for User Interaction**—Performs no job. The Deployment Agent on the server blade is instructed to wait and the icon in the console is changed to reflect a waiting server.
- **Ignore the Change**—Ignores the new server blade, meaning that no jobs are initiated. If the new server blade existed in a previous bay, the history and parameters for the server are moved or associated with the new bay. If the server blade is not listed in the database, its properties are associated with the bay, and the normal process defined for new servers (if any) is followed.

3 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. For more information on how a job is executed on a target server, see the "Automation Environment" section in this guide.

Jobs

The Rapid Deployment Packs adds 4 root folders into the Jobs pane.

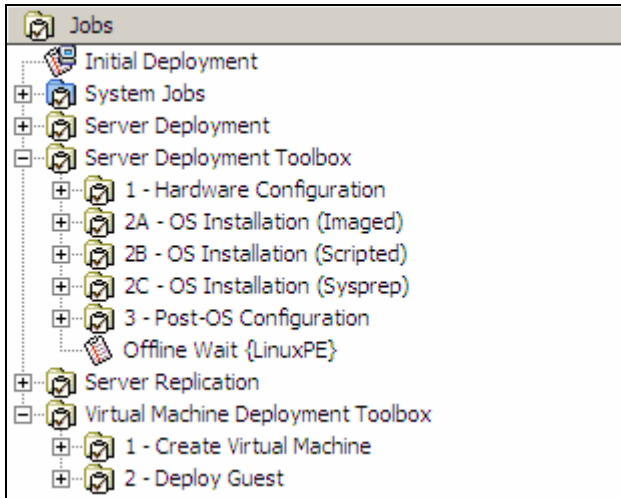


Table 2 Job Folders

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 Replication	The jobs in this folder perform replication from a reference server to a target system that is of the same server model with the same hardware configuration.
Virtual Machine Deployment Toolbox	The jobs in this folder provide the ability to create an VMware ESX virtual machine and to deploy an operating system to a virtual machine.

Job Default Settings

Unless otherwise indicated in the job name, the job uses the following default settings. For details about how to customize these default settings, see the “Customizing the ProLiant and Integrity Integration Modules” section in this guide.

Hardware configuration settings

Table 3 Hardware default settings

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

Operating system scripted install settings

The provided Windows scripted install jobs use the default configuration parameters listed in Table 4 Windows default settings.

Table 4 Windows default settings

Component	Default setting
Windows administrator password	The administrator password is <code>password</code> . This password is stored as clear text in the unattend answer file. HP recommends changing the default administrator password within the unattend answer file located in the <code>.\lib\osconfig\yyyy</code> directory in the Deployment Server default installation directory, where <code>yyyy</code> is the operating system shortcut name.
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 display name shown in the Deployment Server Console.

The provided VMware scripted install jobs use the default configuration parameters listed in Table 5 VMware default settings.

Table 5 VMware default settings

Component	Default setting
VMware root password	The root password is <code>password</code> . This password is stored as clear text in the kickstart file. HP recommends that you change the root password to your own password and in encrypted form within the kickstart file.
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 display name that appears in the Deployment Server Console.
Packages	VMware ESX Server specific packages are installed. Do not change this setting.
Firewall	Firewall settings are disabled.

The provided Red Hat Linux and SUSE Linux scripted install jobs use the default configuration parameters listed in Table 6 Linux default settings.

Table 6 Linux default settings

Component	Default setting
Linux root password	The root password is <code>password</code> . This password is stored as clear text in the <code>kickstart/control</code> file. HP recommends that you change the root password to your own password and in encrypted form within the <code>kickstart/control</code> file. For information about editing the kickstart files, see the Red Hat Linux Customization Guide located at http://www.redhat.com . For SUSE instructions, see the AutoYast2 documentation located in the <code>/usr/share/doc/packages/autoyast2/html/</code> directory after installing the AutoYast2 package.
Drive configuration	The disk space is partitioned according to Red Hat or SUSE Linux default specifications. Red Hat Enterprise Linux 4 installs Logical Volume Manager (LVM) by default.
Host name	The Linux host name uses the display name that appears in the Deployment Server Console.
Packages	Basic Linux server packages are installed. The GNOME and KDE packages are not installed. For SUSE, the GCC compiler and kernel source packages are also installed.
Firewall	Firewall settings are disabled.
Linux root password	The root password is <code>password</code> . This password is stored as clear text in the <code>kickstart/control</code> file. HP recommends that you change the root password to your own password and in encrypted form within the <code>kickstart/control</code> file. For information about editing the kickstart files, see the Red Hat Linux Customization Guide located at http://www.redhat.com . For SUSE instructions, see the AutoYast2 documentation located in the <code>/usr/share/doc/packages/autoyast2/html/</code> directory after installing the AutoYast2 package.

Read/Write job filenames

The provided Read (Capture)/Write jobs use the default input/output filenames listed in Table 7 Default Read/Write jobs.

Table 7 Default Read/Write jobs

Read(Capture)/Write Job Pair	Filename
Server Deployment Toolbox > 1 – Hardware Configuration	
ProLiant ML/DL/BL System Configuration	<code>.\lib\hwconfig\system\pl-capture.xml</code>
ProLiant ML/DL/BL Array Configuration	<code>.\lib\hwconfig\array\pl-capture.ini</code>
ProLiant ML/DL/BL HBA Configuration [server specific]	<code>.\lib\hwconfig\hba\ID.ini</code> where <i>ID</i> is the server ID number as given by Deployment Server
Integrity RX/BL System Configuration	<code>.\lib\hwconfig\system\i-capture.xml</code>
Integrity RX/BL Array Configuration	<code>.\lib\hwconfig\array\i-capture.ini</code>
Server Deployment Toolbox > 2A – OS Installation (Imaged)	
Windows Image	<code>.\lib\images\capture-windows.img</code>
Linux Image	<code>.\lib\images\capture-linux.img</code>
Server Deployment Toolbox > 2C – OS Installation (SysPrep)	
Windows xxxx Sysprep Image	<code>.\lib\images\xxxx-sysprep.img</code> where <i>xxxx</i> is the operating system name and shortcut name
Server Replication	
ProLiant ML/DL/BL System and Array Configuration and Windows Image	<code>.\lib\hwconfig\system\yyyy-windows.xml</code> <code>.\lib\hwconfig\array\yyyy-windows.ini</code> <code>.\lib\images\yyyy-windows.img</code> Where <i>yyyy</i> is the computer model name, for example <code>bl20pg2</code> .

Table 7 Default Read/Write jobs

Read(Capture)/Write Job Pair	Filename
ProLiant ML/DL/BL System and Array Configuration and Linux Image	.\\lib\\hwconfig\\system\\yyyy-linux.xml .\\lib\\hwconfig\\array\\yyyy-linux.ini .\\lib\\images\\yyyy-linux.img Where yyyy is the computer model name, for example bl20pg2.
Integrity RX/BL System and Array Configuration and Linux Image	.\\lib\\hwconfig\\system\\yyyy-linux.xml .\\lib\\hwconfig\\array\\yyyy-linux.ini .\\lib\\images\\yyyy-linux.img Where yyyy is the computer model name, for example bl20pg2.

How a Job is run on a target

This section provides a walkthrough of how a job is executed on a target server. The table within each step lists the state of the target server and the job action during that execution step.

The terminology, automation environment, is used throughout this section. It 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 operating system. The target can boot the automation environment either from a CD-ROM, USB key, or through PXE. The Rapid Deployment Packs supports two automation environments: Linux x86 and ia64 (hereafter LinuxPE) and WinPE 1.6 x86 and x64. Each automation environment consists of the necessary base files, additional HP drivers, and the appropriate Altiris Deployment Agent.



IMPORTANT: A CD-ROM or USB key can only hold one automation environment. Many of the jobs use multiple automation environments. This means that as the job progresses, the boot media must be swapped accordingly.

The Run Script, Create Disk Image, and Distribute Disk Image tasks allow 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.

Automation Environment

1. Power up the bare-metal target server. Since the target does not have a bootable hard drive, the boot order attempts a PXE boot. The PXE Server sends it the **Initial Deploy boot option** image. By default, this is Linux Managed (auto-select). The Deployment Agent connects to the Deployment Server. Since this is the initial connection and no pending job exists, the Deployment Server tells the Deployment Agent to wait.

Table 8 Step 1

Target Server	LinuxPE, waiting
---------------	------------------

2. Schedule the "Deploy ProLiant ML/DL/BL + Windows 2003 x64 Enterprise + PSP" job on the target.

Table 9 Step 2

Target Server	LinuxPE, waiting
Job	Task 1 – Deploy System Configuration {WinPE 32-bit}, pending

3. The Deployment Server determines that the target is in the incorrect automation environment. It tells the Deployment Agent to set the one-time boot EV to PXE and then reboot. When the targets reboots to PXE, the PXE Server sends it the WinPE 32-bit image.

Table 10 Step 3

Target Server	rebooting to WinPE Managed 32-bit
Job	Task 1 – Deploy System Configuration {WinPE 32-bit}, pending

4. When the Deployment Agent connects to the Deployment Server, the first task of the job begins to execute.

Table 11 Step 4

Target Server	WinPE Managed 32-bit, executing task
Job	Task 1 – Deploy System Configuration {WinPE 32-bit} set inputfile=pl.xml call %altiris_share%\lib\bin32\winpe\conrep.cmd -I %inputfile%

5. The second task in the job is a Reboot. By looking ahead at the third task, the Deployment Server tells the Deployment Agent to set the One-Time Boot EV to PXE and then reboot. When the targets reboots to PXE, the PXE Server sends it the WinPE Managed 32-bit image.

This reboot is necessary in case any Smart Array controllers are disabled in the conrep file.

Table 12 Step 5

Target Server	rebooting to WinPE 32-bit
Job	Task 2 – Reboot

6. When the Deployment Agent connects to the Deployment Server, the third task of the job begins to execute.

Table 13 Step 6

Target Server	WinPE 32-bit, executing task
Job	Task 3 – Deploy Array Configuration {WinPE 32-bit} set inputfile=pl-acu-d.ini call %altiris_share%\lib\bin32\winpe\acu.cmd -I %inputfile%

7. The fourth task in the job is a Reboot. By looking ahead at the fifth task, the Deployment Server tells the Deployment Agent to set the One-Time Boot EV to PXE and then reboot. When the targets reboots to PXE, the PXE Server sends it the WinPE Managed 32-bit image.

This reboot is mandatory so that the subsequent imaging task is able to see the new hard drive.

Table 14 Step 7

Target Server	rebooting to WinPE 32-bit
Job	Task 4 – Reboot

8. When the Deployment Agent connects to the Deployment Server, the fifth task of the job begins to execute.

Table 15 Step 8

Target Server	WinPE 32-bit, executing task
Job	Task 5 – Deploy System Configuration {WinPE 32-bit} set inputfile=pl-win.xml call %altiris_share%\lib\bin32\winpe\conrep.cmd -I %inputfile%

9. The Deployment Agent begins executing the sixth task of the job.

Table 16 Step 9

Target Server	WinPE 32-bit, executing task
Job	Task 6 – Distribute Disk Image {WinPE 32-bit} .\lib\images\NTFS.IMG

10. The seventh task in the job is a Reboot. By looking ahead at the eighth task, the Deployment Server tells the Deployment Agent to set the one-time boot EV to PXE and then reboot. When the targets reboots to PXE, the PXE Server sends it the WinPE 64-bit image.

This reboot is mandatory so that the subsequent file copy tasks are able to use the new hard drive.

Table 17 Step 10

Target Server	rebooting to WinPE 64-bit
Job	Task 7 – Reboot

11. When the Deployment Agent connects to the Deployment Server, the eighth task of the job begins to execute. Since tasks eight through twelve all run in WinPE 64-bit and there is no Reboot task, they execute sequentially while in WinPE 64-bit.

Table 18 Task 11

Target Server	WinPE 64-bit, executing tasks
Job	<p>Task 8 – Copy ProLiant Files {WinPE 64-bit}</p> <pre>set oem=proliant.zzz\w52e.64 call %altiris_share%\lib\bin64\winpe\osoem1.cmd</pre> <hr/> <p>Task 9 – Copy Altiris Files {WinPE 64-bit}</p> <pre>rem replacetokens .\lib\osoem\altiris\aclient.txt .\lib\osoem\altiris\%ID%.inp set configfile=%ID%.inp call %altiris_share%\lib\bin64\winpe\osoem2.cmd</pre> <hr/> <p>Task 10 – Copy Unattend.txt {WinPE 64-bit}</p> <pre>rem replacetokens .\lib\osconfig\w52e.64\default.txt .\lib\osconfig\w52e.64\%ID%.txt set unattendfile=w52e.64\%ID%.txt call %ALTIRIS_SHARE%\lib\bin64\winpe\osconfig1.cmd</pre> <hr/> <p>Task 11 – Copy Distribution Files {WinPE 64-bit}</p> <pre>set dist=w52e.64 call %altiris_share%\lib\bin64\winpe\osdist1.cmd</pre> <hr/> <p>Task 12 – Start Install {WinPE 64-bit}</p> <pre>set HD=c for %%i in (c d e f g h i j k l m) do if exist %%i:\rdpimage set HD=%%i %HD%:\amd64\winnt32.exe /s:%HD%\amd64 /unattend:%HD%\unattend.txt /syspart:%HD%: /tempdrive:%HD%:</pre>

12. After completing the twelfth task, the Deployment Server looks ahead at the thirteenth task. That task runs in production Windows. Therefore, the Deployment Server tells the Deployment Agent to reboot. When the target reboots, it boots to the hard drive since the hard drive is bootable and before PXE in the default boot order.

Table 19 Step 12

Target Server	executing Windows scripted install
Job	Task 13 – Install Package {Windows}, pending

13. The Deployment Agent for Windows is installed as part of the Windows scripted install. The Deployment Agent loads upon the first real Windows production boot. When it connects to the Deployment Server, the thirteenth task of the job begins to execute.

Table 20 Step 13

Target Server	Windows, executing task
Job	<p>Task 13 – Install Package {Windows}</p> <pre>.\lib\software\ProLiant Support Pack Z.ZZ for Windows 2003 x64\setupex.exe</pre>

14. The last task in the job is a Reboot. The Deployment Server tells the Deployment Agent to reboot. This reboot is mandatory so that the new and updated drivers installed by the ProLiant Support Pack get loaded properly.

Table 21 Step 14

Target Server	rebooting to Windows
Job	Task 14 – Reboot

Deployment Server Directory Structure

The following table provides an overview of the Deployment Server directory as populated by the Rapid Deployment Pack.

Table 22 Deployment Server directory structure

Directory	Description
.\docs	<ul style="list-style-type: none"> Rapid Deployment Pack and SmartStart Scripting Toolkit documentation in Portable Document Format (.pdf)
.\jobs	<ul style="list-style-type: none"> The .bin files for the provided jobs
.\lib\bin32	<ul style="list-style-type: none"> Various Windows x86 and Linux x86 tools and scripts Windows SmartStart Scripting Toolkit Linux SmartStart Scripting Toolkit
.\lib\bin64	<ul style="list-style-type: none"> Various Windows x64 tools and scripts
.\lib\binia64	<ul style="list-style-type: none"> Various Windows ia64 and Linux ia64 tools and scripts Smart Setup Scripting Toolkit for Integrity
.\lib\hwconfig	<ul style="list-style-type: none"> Presupplied and captured hardware configuration files.
.\lib\images	<ul style="list-style-type: none"> Presupplied and captured image files.
.\lib\osconfig	<ul style="list-style-type: none"> Operating system scripted install answer files separated into subdirectories per OS.
.\lib\osdist	<ul style="list-style-type: none"> Operating system distribution files separated into subdirectories per OS. Each subdirectory contains the entire contents of the source DVD or CD-ROM(s).
.\lib\osoem	<ul style="list-style-type: none"> ProLiant Drivers for Windows Scripted Installs Altiris Deployment Agents Integrity Support Packs The proliant.xxx or integrity.xxx 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 scripted install jobs.
.\lib\ossysprep	<ul style="list-style-type: none"> Operating system sysprep imaging answer files.
.\lib\software	<ul style="list-style-type: none"> ProLiant Support Packs ProLiant Firmware Updates Integrity Support Packs The Support Pack x.xx 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 scripted install jobs.

4 Customizing the ProLiant and Integrity Integration Modules

Preparing the Integration Modules for customization


Before modifying the provided jobs, folders, and files, make a copy of the job, files, or both and use this copy for your custom work. Keeping the original job and files ensures that a working version exists. If you encounter a problem or if you select to overwrite the jobs or files during an upgrade or reinstallation of the Rapid Deployment Pack, your customized job or file is not overwritten.

Jobs

This section explains how to copy, paste, rename, and edit a job in the Deployment Server Console Jobs pane. For additional information about the customization features of the Deployment Server Console, see the *Altiris Deployment Solution 6.8 Deployment and Migration Guide* at <http://www.hp.com/servers/rdp>.

To copy, paste, rename, and edit a job:


1. Right-click the job and select **Copy**.
2. Right-click another location in the Jobs pane, and select **Paste**.

 **IMPORTANT:** The jobs in the Rapid Deployment Pack use long names to be descriptive. When attempting to copy these jobs to the same directory as the original job, the name might be truncated by Altiris because it places the text "**Copy of**" in front of the job causing it to exceed the 128-character limit of the Deployment Server Console.

3. Right-click the new job, select **Rename**, or select the new job and press **F2**.
4. Enter a descriptive name for the job, and press **Enter**.
5. Press **Enter**.
6. Select the new job.
7. In the Details pane, double-click a task to edit its contents.

Export or import a job from a file as a method of backing up a job or a job folder. To export a job or folder:

1. Right-click the job or folder.
2. Select **Export**.
3. In the Export Selected Job(s)/Folder(s) dialog box, click **Browse** to designate a directory and job file, or enter the path and file name in the Export to File Name field. Select **Export subfolders** if you want to export the subfolders of a folder.

 **NOTE:** Job files are usually denoted with the .bin extension.


4. Click **OK**.

To import a job or folder:

1. Right-click within the Jobs pane.
2. Select **Import**.
3. In the Import Job dialog box, click **Browse** to locate the directory and job file, or enter the path and file name in the Job file to import field. Job files are usually denoted with the .bin extension.
4. Select the appropriate checkboxes, and then click **OK**.

Files

On the Deployment Server, copy, paste, rename, and edit the file using the appropriate operating system commands. After the new file is created, modify the job as described in the previous section to use the new file name.

 **IMPORTANT:** If editing Linux or VMware ESX files on the Deployment Server, a text editor must be used that saves the file in Linux format without adding extra characters.

Reasons to customize the Integration Modules

The following sections provide information about why you might want to customize the ProLiant Integration Module or Integrity Integration Module. For additional information about customizing your installations, see the Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>.

All operating systems

You might want to customize the provided unattend text files to perform the following tasks:

- Change the array configuration
- Use a specific version of ProLiant Support Pack or Integrity Support Pack
- Modify the Altiris Deployment Agent settings (aclient or adlagent)

Windows unattend text files

You might want to customize the provided unattend text files to perform the following tasks:

- Specify the SNMP community string and trap destinations
- Change the administrator password
- Specify a domain

For more information about editing a Windows-scripted installation unattend text file, see the *Windows 2000 Online Resource Kit* at <http://www.microsoft.com/windows2000/techno/reskit/en-us/default.asp>.

Red Hat Linux kickstart files

You might want to customize the provided kickstart files to perform the following tasks:

- Change the default root password
- Add a grub bootloader password
- Change the partitions, types, and sizes
- Change the Linux packages that are installed
- Change the firewall settings
- Add additional post installation commands

For information about editing the kickstart files, see the *Red Hat Linux Customization Guide* located at <http://www.redhat.com>.

SUSE Linux control files

You might want to customize the provided control files to perform the following tasks:

- Change the default root password
- Add a grub bootloader password
- Change the partitions, types, and sizes
- Change the Linux packages that are installed
- Change the firewall settings
- Add additional post install commands

For more information about editing the control files, see the AutoYast2 documentation located in the `/usr/share/doc/packages/autoyast2/html/` directory after installing the AutoYast2 package.

VMware ESX Server kickstart files

You might want to customize the provided kickstart files to change the default root password.

HP recommends that you do not modify the VMware ESX Server kickstart file with other modifications. For supported VMware kickstart options, see <http://www.vmware.com>.

Virtual Machine jobs

You might want to customize the provided virtual machine jobs to perform the following tasks:

- Create a Create Virtual Machine job for another operating system
- Change the virtual disk size
- Change the virtual memory size

Customization examples

This section provides specific examples of modifying a few of the ProLiant Integration Module components. To make copies of the jobs and files, see the “Preparing the Integration Modules for customization” section in this guide. For information about job structure and file locations, see the “Understanding the Deployment Server” section in this guide.

Example 1—Using a specific ProLiant Support Pack version

For a specific operating system, you might want to use a newer ProLiant Support Pack version that was downloaded from the Web and is supported by the current operating system versions, or an older version that was previously installed before a Rapid Deployment Pack upgrade.

To change to a specific ProLiant Support Pack version:

1. If downloading a new ProLiant Support Pack version, perform the following steps on the Deployment Server:
 - a. Create the appropriate `.\lib\software\ProLiant Support Pack yyyy` directory, where `yyyy` is the operating system name and support pack version. Copy support pack files to this location.
 - b. For Linux or VMware versions, copy the Rapid Deployment Pack ProLiant Support Pack installation files, `rdpinstall.sh` and `rdpinstall.dat`, from a similar operating system version to this directory.
2. After creating a copy of the job, perform one of the following tasks:
 - For Windows, edit the **Install Package** task to install the files from the chosen directory.
 - For VMware or Linux, edit the **Copy File to** task to copy the files from the chosen directory.

Example 2—Modifying the Windows unattend text file

The Windows unattend text files have many components that can be customized for a Windows-scripted installation. To change a Windows unattend text file:

1. On the Deployment Server, modify the copy of the unattend text file for your operating system version.
2. After creating a copy of the job, edit the **Run Script - Create Boot Environment** task in this job and the **rem replacetokens** line to use this new unattend text file.

Example 3—Modifying the Red Hat Linux kickstart files

The Red Hat Linux kickstart files have several components that can be customized for a Linux-scripted installation. To change a Red Hat Linux kickstart file:

1. On the Deployment server, modify the copy of the kickstart file for your distribution version.
2. After creating a copy of the job, edit the **Run Script - Create Boot Environment** task in this job and the **set unattendfile=** line to use this new kickstart file.

Example 4—Modifying the Altiris Deployment Agent for Linux

The Altiris Deployment Agent for Linux, `adlagent`, uses an `adlagent.conf` configuration file to read its settings. This file can be modified and then deployed during the Linux installation for `adlagent` to read at startup. All Linux deployments use this custom `adlagent` configuration file. To change the `adlagent` settings:

1. Using an `adlagent.conf` file from a working target, modify the file for your specific settings.
2. Name this file `adlagent.conf.custom`, and place this file on the Deployment Server in the `.\lib\osoem\altiris` directory.

Example 5—Creating a Create Virtual Machine job for other operating systems

The Virtual Machine Deployment Toolbox / 1- Create Virtual Machine folder provides a few virtual machine creation jobs for specific operating systems. These jobs can be copied and used to create virtual machines on other operating systems. To create a Virtual Machine job:

1. In the Deployment Server Console, copy and rename a **Create Virtual Machine** job.
2. Edit the new job and the **Run Script - Create Virtual Machine** task, changing the `VMOS=` value to a new value representing the target operating system. Some possible values are listed in the comments of this task. For more information, see the *VMware Virtual Infrastructure SDK Reference Guide* at <https://www.vmware.com/pdf/SDKReferenceGuide.pdf>.

Example 6—Modifying a Create Virtual Machine job for custom virtual values

To change the Create Virtual Machine job to use different virtual-disk-size or virtual-memory-size values:

1. In the Deployment Server Console, copy and rename a **Create Virtual Machine** job.
2. Edit the new job and the **Run Script – Create Virtual Machine** task, changing the `VMDISKSIZE=` and/or `VMMEMSIZE=` values to new values. Some possible values are listed in the comments of this task. For more information, see the *VMware Virtual Infrastructure SDK Reference Guide* at <https://www.vmware.com/pdf/SDKReferenceGuide.pdf>.

5 HP support and contact information

Related documents

HP recommends reviewing the following documentation before reading this guide:

- *HP ProLiant Essentials Rapid Deployment Pack Planning Guide*
- *HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Release Notes*
- *HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Support Matrix*
- *HP ProLiant Essentials Rapid Deployment Pack—Windows Edition Installation Guide*

All of the documents can be found in PDF format at <http://www.hp.com/servers/rdp>, from the Rapid Deployment Pack DVD autorun utility, at \docs on the product DVD, and at .\docs on the Deployment Server.

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 professions are available in the IT Resource Center (ITRC) User Forum "ProLiant Deployment & Provisioning." This forum is accessible from the Management Software and System Tools link at <http://forums.itrc.hp.com>.
- Information and resources about the Altiris Deployment Solution is 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.
 - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, see the HP website at <http://www.hp.com>.
- In other locations, see the Contact HP worldwide webpage at <http://welcome.hp.com/country/us/en/wwcontact.html>.

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