



Sun Blade™ X6275 Server Module Windows Operating System Installation Guide

Sun Microsystems, Inc.
www.sun.com

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Preface

This guide contains instructions for installing the Windows Server 2008 64-bit Service Pack 2 (SP2) onto the Sun Blade X6275 Server Module.

Product Updates

For product updates that you can download for the Sun Blade™ X6275 Server Module, visit the following web site:

<http://www.sun.com/download/>

Find the Hardware Drivers section and click x64 Servers & Workstations. The Sun Blade X6275 Server Module site contains updates for firmware and drivers, as well as DVD-ROM ISO images.

Related Documentation

The documents listed in the following table are available online at:

<http://docs.sun.com/app/docs/prod/blade.X6275>

Title	Content	Part Number	Format
<i>Sun Blade X6275 Server Module Product Notes</i>	Late-breaking information about the server module	820-6853	PDF HTML
<i>Sun Blade X6275 Server Module Getting Started Guide</i>	Basic installation information for setting up the server module	820-6847	PDF Print
<i>Sun Blade X6275 Server Module Installation Guide</i>	Detailed installation information for setting up the server module	820-6977	PDF HTML Print
<i>Sun Blade X6275 Server OS Installation Guide</i>	Installation instructions for the Linux, VMware, and Solaris operating systems	820-6848	PDF HTML
<i>Sun Blade X6275 Server Module Windows Operating System Installation Guide</i>	(This document) Installation instructions for the Windows Server operating system	821-0081	PDF HTML
<i>Sun Installation Assistant for Linux and Windows User's Guide</i>	Instructions for using the Sun Installation Assistant (SIA) when installing a Windows or Linux operating system	820-3357	PDF HTML
<i>Sun Blade X6275 Server Module Service Manual</i>	Information and procedures for maintaining and upgrading the server module	820-6849	PDF HTML
<i>x64 Servers Utilities Reference Manual</i>	Information for using applications and utilities common to x64 servers and server modules	820-1120	PDF HTML
<i>Sun x64 Servers Diagnostics Guide</i>	Information about how to use the diagnostic software tools provided with x64 servers	820-6750	PDF HTML
<i>Sun Integrated Lights Out Manager 2.0 User's Guide</i>	ILOM features and tasks that are common to servers and server modules that support ILOM	820-1188	PDF HTML
<i>Sun Integrated Lights Out Manager Supplement for Sun Blade X6275 Server Module</i>	ILOM information that is specific to the server module	820-6851	PDF HTML
<i>Important Safety Information for Sun Hardware Systems</i>	Multilingual hardware safety and compliance information for all Sun hardware systems	816-7190	Print

Translated versions of some of these documents are available at the web site described above in French, Simplified Chinese, and Japanese. English documentation is revised more frequently and might be more up-to-date than the translated documentation.

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Sun Blade X6275 Server Module Windows Operating System Installation Guide, part number 821-0081-10

Overview

This chapter provides instructions for tasks you must complete before you begin installing the Windows Server 2008 64-bit operating system onto a Sun Blade X6275 server module.

This chapter includes the following topics:

- [“Installing the Windows OS onto a Sun Blade X6275 Server Module” on page 1](#)
 - [“Prerequisites” on page 2](#)
 - [“Things You Must Decide” on page 2](#)
 - [“What to Do Next” on page 2](#)
- [“Using a Remote Control Application \(RKVM\)” on page 3](#)
 - [“To Mount a DVD or Equivalent ISO Image” on page 3](#)
- [“Dongle Cable Connections” on page 4](#)
 - [“To Connect the Dongle for a Local Installation” on page 4](#)

The Sun Blade X6275 server module consists of two nodes, each with its own service processor (SP), and each capable of supporting its own operating system. These nodes are fully independent of each other, and must be managed as if they were separate servers. Therefore, for each server module, you must perform a separate operating system installation on each node.

Installing the Windows OS onto a Sun Blade X6275 Server Module

Before installing the Windows OS onto your Sun Blade X6275 server module, review the following sections for an understanding of the prerequisites and the decision-making process.

Prerequisites

Complete the following tasks before you begin the installation.

- Install the server hardware.
- (Optional) Configure the service processor.
- Gather needed information, such as IP address and netmask.

Things You Must Decide

- Where will you install the OS? You can install an OS using the flash module, which is similar to a hard drive. See the Sun Blade X6275 Server Module Service Manual for instructions to access the flash module.

Note – The Sun Blade X6275 server module supports industry-standard RKVM with devices connected to it through a USB port or the service processor. For information about setting up USB connections to your system, see [“Using a Remote Control Application \(RKVM\)” on page 3](#).

- Do you need to update the operating system and drivers?
For information on updating your software, see [Chapter 3, “Post Installation” on page 17](#).

For a full list of supported operating systems, see <http://www.sun.com/servers/blades/x6275/>

What to Do Next

The chapters in this guide provide detailed installation information.

You should also gather the installation, administration, and configuration documentation distributed with the operating system. These documents generally accompany the distribution media as printed manuals or are included as PDF files on the medium itself. In many cases, the latest versions of such documents are also downloadable from the web site of the OS vendor.

Using a Remote Control Application (RKVM)

The Sun Blade X6275 server module supports industry-standard RKVM with devices connected to it through the service processor. This ability allows you to mount and boot from a remote DVD, or an ISO file image.

▼ To Mount a DVD or Equivalent ISO Image

1. Locate your installation DVD or the equivalent ISO images.

2. To connect to the ILOM:

a. Open a web browser and use the ILOM IP address as a URL.

b. Enter an ILOM user name and password.

The Versions screen appears.

3. Click the Remote Control tab.

The Remote Control screen appears.

4. Click the Launch Redirection button.

The ILOM remote console appears.

5. On the Devices menu, select the following:

- CD-ROM if you are using a physical DVD.
- CD-ROM Image if you are using an ISO file.

Depending on your selection, a dialog directs you to select either a DVD drive or a file.

6. Select the DVD drive or the ISO file.

The distribution media (or ISO file) is now mounted. When you power on the server module, it appears in the BBS popup (boot list) menu as `Virtual DVD`.

For more information about setting up a remote RKVM connection to your server with the ILOM Remote Console application, see the *Sun Integrated Lights Out Manager 2.0 User's Guide* or *Sun Integrated Lights Out Manager 3.0 User's Guide*.

Dongle Cable Connections

If you choose to do a local installation, you must connect a dongle cable directly to the server module.

▼ To Connect the Dongle for a Local Installation

1. Connect a USB hub to one of the USB connectors on the dongle. See [FIGURE 1-1](#).
2. Connect a keyboard, mouse, and DVD drive to the USB hub or to the other USB connector.
3. Connect a monitor to the VGA port.

FIGURE 1-1 Dongle Cable Connections

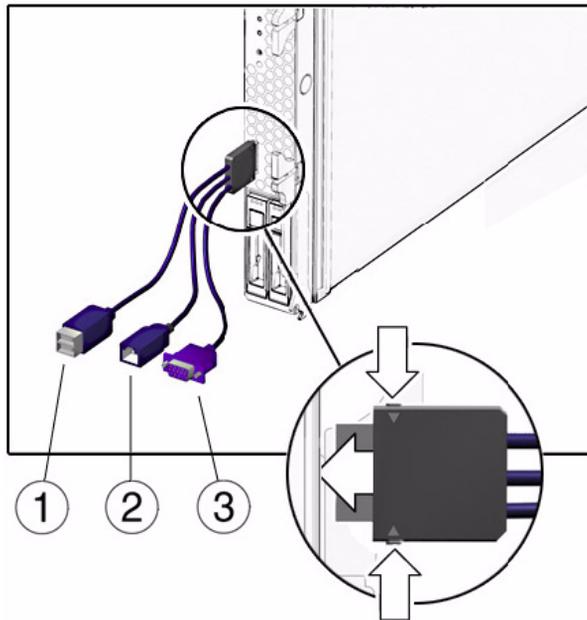


Figure Legend

- 1 Dual USB connectors.
 - 2 RJ-45 connector. This connector provides serial access to the ILOM.
 - 3 VGA video connector.
-

Installing Windows Server 2008 Operating System

This chapter provides information about installing the Windows Server 2008 Operating System (OS).

This chapter includes the following topics:

- [“Task Map for the Windows Server 2008 Installation”](#) on page 8
- [“Installing Windows Server 2008 Using Local or Remote Media”](#) on page 9
- [“Installing Windows Server 2008 Using a PXE Network”](#) on page 14

Task Map for the Windows Server 2008 Installation

Use [TABLE 2-1](#) to preview the installation process defined as a series of tasks. The table defines the required tasks, describes them, and provides pointers to the instructions for performing that task.

TABLE 2-1 Task Map for the Windows 2008 Installation

Step	Task	Description	Relevant Topic(s)
1	Review installation prerequisites	Verify that all applicable requirements are met for installing an operating system to a server.	<ul style="list-style-type: none">• “Prerequisites” on page 2
2	Gather the Windows installation media	The Windows OS is shipped with the CD and DVD media and documentation that you will need to install the Windows OS.	<ul style="list-style-type: none">• You can download or order the media for Windows 2008 at http://www.microsoft.com
3	Perform the Windows 2008 OS installation	Follow the instructions in this chapter to install the Windows 2008 operating system.	<ul style="list-style-type: none">• “Installing Windows Server 2008 Using Local or Remote Media” on page 9• “Installing Windows Server 2008 Using a PXE Network” on page 14
4	Install driver(s) and supplemental software post installation, if applicable.	If necessary, install the updated server-specific drivers and the server supplemental software.	<ul style="list-style-type: none">• “Post Installation” on page 17

Note – The complete Microsoft Windows operating system installation process is not documented in this section. This section walks you through the steps for booting the Windows Server 2008 media, installing drivers (if necessary) at boot, and partitioning the drive. For additional information, consult the Microsoft’s Windows 2008 Product Documentation at

<http://www.microsoft.com/windowsserver2008/en/us/product-documentation.aspx>

Installing Windows Server 2008 Using Local or Remote Media

The following procedure describes how to boot the Windows Server 2008 operating system from local or remote media. It assumes you are booting the Windows installation media from one of the following sources:

- Windows 2008 CD or DVD (internal or external DVD)
- Windows 2008 ISO image (network repository)

Note – If you are booting the installation media from a PXE environment, refer to [“Installing Windows Server 2008 Using a PXE Network” on page 14](#) for instructions.

Before You Begin

Prior to performing the installation, the following requirements must be met:

- All applicable installation prerequisites for installing an operating system should have been met. For further information about these prerequisites, see [“Prerequisites” on page 2](#).
- An installation method (for example: console, boot media, and installation target) should have been chosen and established prior to performing the installation.

After completing this procedure, you will need to perform the post installation tasks as described in [“Post Installation” on page 17](#).

▼ To Install Windows Server 2008 Using Local or Remote Media

1. Ensure that the installation media is available to boot.

For example:

- **For distribution media.** Insert the Windows Server 2008 Distribution media (CD labeled #1 or the single DVD) into the local or remote USB DVD-ROM drive.
- **For ISO image.** Ensure that the ISO images are available and that the ILOM Remote Console application is aware of the first ISO image location.

2. Reset or power on the server.

For example:

- From the ILOM web interface, select `Reset` on the Remote Power Control tab.
- From the local server, press the Power button on the front panel of the server to power off the server, then press the Power button again to power-on server.
- From the ILOM CLI on the server SP, type: `reset /SYS`
- From the ILOM CLI on a CMM, type: `reset /CH/BLn/SYS`

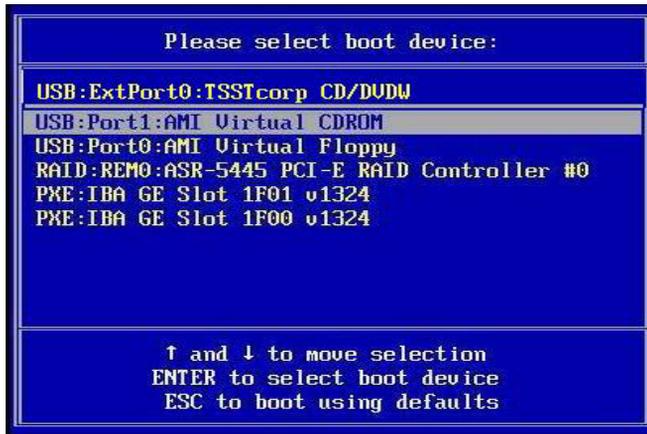
Where *n* is the number of server module in chassis.

The BIOS screen appears.

3. When the `Press F8 for BBS POPUP` message appears on the BIOS POST screen, press `F8` to select a boot device.

The Boot Device dialog appears.

Note – The dialog that appears in your installation may be different depending the type of disk controller installed in your server.



4. In the Boot Device dialog, select the menu item according to the Windows media installation method you elected to use and press `Enter`.

For example:

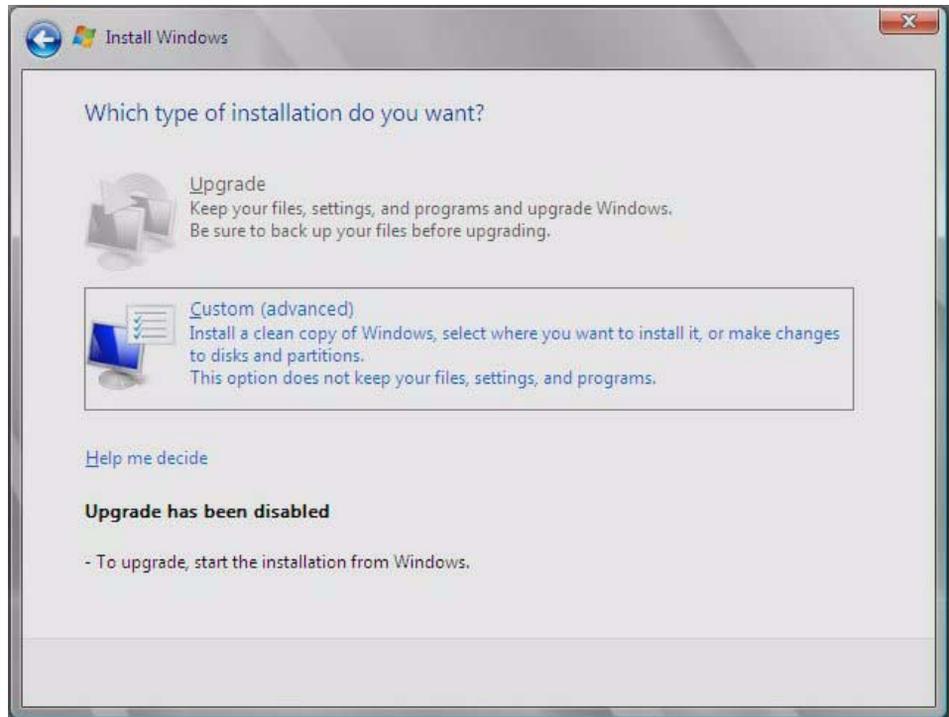
- If you elected to use the Windows Local delivery method, select `CD/DVDW`.
- If you elected to use the Sun ILOM Remote Console delivery method, select `Virtual CDRom`.

5. When prompted with `Press any key to boot from CD`, press any key.

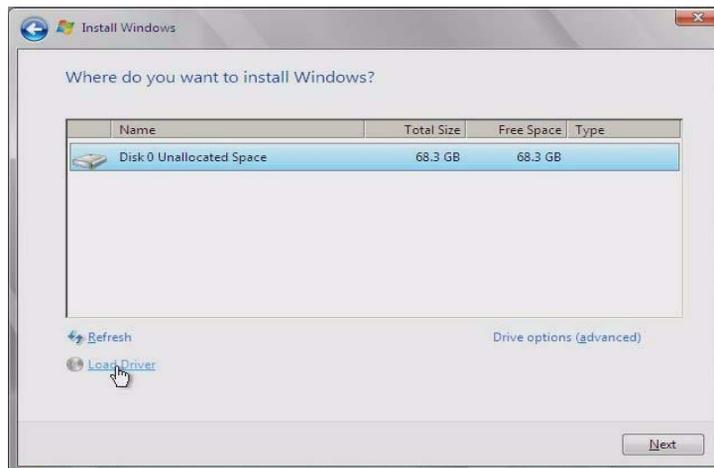
The Windows installation wizard starts.

Continue the Windows installation wizard until the Installation Type dialog appears.

6. In the Installation Type dialog, click Custom (advanced).



The Where Do You Want to Install Windows dialog appears:



7. In the Where do you want to Install Windows dialog, do one of the following:

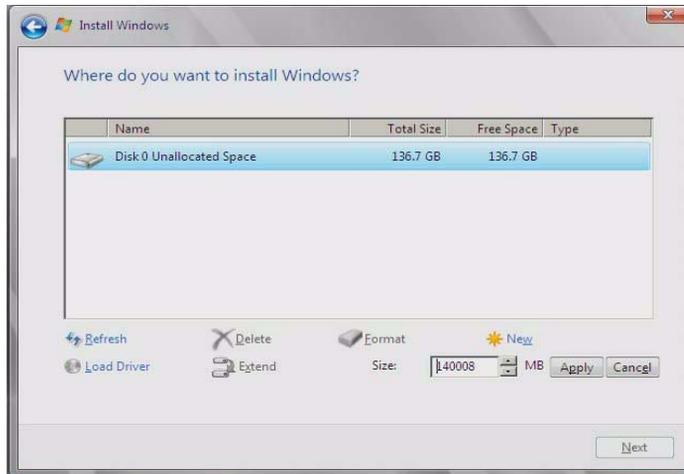
- If you *do not* want to override the Windows Default partition information, click Next then skip to Step 9.

- If you *do* want to override the Windows default partition information, click the Driver Options (advanced) option and proceed to Step 8.



Caution – Formatting or re-partitioning a pre-existing partition will destroy all data on the partition.

The Where do you want to Install Windows dialog appears:



8. **In the Where to Install Windows dialog, do the following:**
 - a. **Click Delete to delete the existing partition.**

A confirmation window appears.
 - b. **Click OK to confirm the partition deletion.**
 - c. **Click New to create the new partition.**
 - d. **Change partition size settings as needed, and then click Apply.**

The partition is created.
 - e. **Click Next and proceed to the next step.**

The Windows installation begins.

The server will reboot multiple times during the installation process. This process could take several minutes.
9. **When the Windows installation is complete, Windows starts and prompts you to change the user password.**
10. **In the user password dialog, click OK and set up the initial user login account.**

Note – Windows Server 2008 enforces stronger password schemes for user accounts. Password standards include restrictions on length, complexity and history. For more details, click the [Accessibility](#) link at the account creation page.

After the initial user account is created, the Windows Server 2008 desktop appears.

11. **Proceed to [“Post Installation”](#) on page 17.**

Installing Windows Server 2008 Using a PXE Network

This section explains the initial information you will need to install the Windows Server 2008 operating system over an established PXE-based network via a customer-provided Windows Deployment Services (WDS) image.

Topics included in this section:

- [“Before You Begin” on page 14](#)
- [“To Install Windows Server 2008 Using PXE” on page 15](#)

Note that the procedure presented in this section documents the initial steps to install Windows 2008 over the network using a Windows Deployment Services (WDS) image. Specifically, it explains the steps for selecting the server PXE network interface card that will be communicate with your WDS installation server. For further information about using a WDS image to install the Windows Server 2008 operating system, see Microsoft’s Windows Deployment Services documentation.

After completing this procedure, you will need to perform the post installation tasks as described in [“Post Installation” on page 17](#).

Before You Begin

- To use PXE to boot the installation media over the network, you must:
 - Configure the network (NFS, FTP, HTTP) server to export the installation tree.
 - Configure the files on the TFTP server that are necessary for PXE booting.
 - Configure the Sun server MAC network port address to boot from the PXE configuration.
 - Configure DHCP.
- To use a WIM image to perform the installation, you must:
 - Create the WIM installation image.
Follow the WIM installation instructions in the Windows Server 2008 documentation.
 - Add the required system device drivers to the WIM installation image.
For instructions, see [Appendix A “Incorporate Sun Blade Server Drivers Into WIM” on page 25](#).
 - Obtain the WIM Administrator password.

▼ To Install Windows Server 2008 Using PXE

1. Reset or power on the server, for example:

- From the ILOM web interface, select **Reset** on the Remote Power Control tab.
or
- Press the Power button (approximately 1 second) on the front panel of the blade to turn off the blade, then press the Power button again to turn on the blade.

The BIOS screen appears.

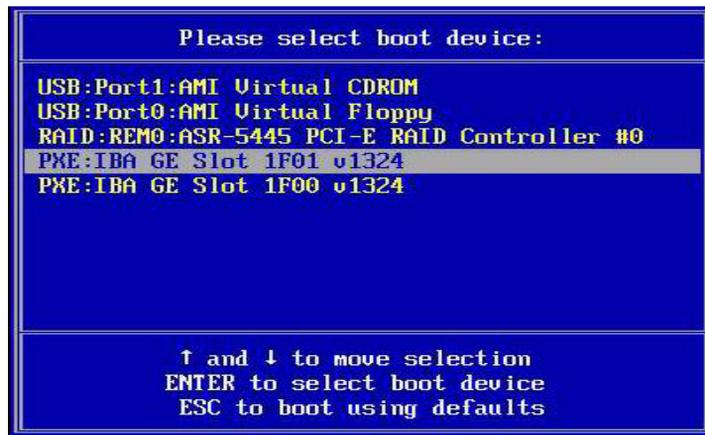
Note – The next events occur very quickly; therefore, focused attention is needed for the following steps. Watch carefully for these messages as they appear on the screen for a brief time. You might want to enlarge the size of your screen to eliminate scroll bars.

2. Press F8 to specify a temporary boot device.

The Please Select Boot Device menu appears.

3. In the Please Select Boot Device menu, select the appropriate PXE installation boot device and press Enter.

The PXE installation boot device is the physical network port configured to communicate with your network installation server.



The Boot Agent dialog appears:

```
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)
Copyright (C) 1997-2007, Intel Corporation

CLIENT MAC ADDR: 00 14 4F CA 5F 81  GUID: 000020FF FFFF FFFF FFFF 00144FCA5F82
CLIENT IP: 172.20.103.132  MASK: 255.255.255.0  DHCP IP: 172.20.103.254

Downloaded WDSNBP...

Architecture: x64
Contacting Server: 172.20.103.99.
TFTP Download: boot\x64\pxeboot.com

Press F12 for network service boot
```

4. Continue the normal Windows Server 2008 WDS network installation. For additional information, consult Microsoft's Windows Deployment Services product documentation.
5. Proceed to [“Post Installation”](#) on page 17.

Post Installation

After completing the Windows Server installation and rebooting the operating system, you should review the following post installation tasks and, if necessary, perform the tasks that are applicable to your system.

- [“Downloading Server-Specific Drivers” on page 18](#)
- [“Installing Server-Specific Device Drivers” on page 19](#)
- [“Installing Supplemental Software” on page 22](#)

Downloading Server-Specific Drivers

This section describes how to download the server-specific driver packages needed for Windows Server installations.

Note – The Sun Blade X6275 Tools and Drivers DVD contains all of the server-specific drivers required for Windows Server installations. If you are using the Tools and Drivers DVD, you can skip this section and proceed to “[Installing Server-Specific Device Drivers](#)” on page 19. You can also obtain the latest version of the Tools and Drivers DVD for the Sun Blade X6275 Server Module by downloading the updated Tools and Driver DVD image at:

<http://www.sun.com/servers/blades/downloads.jsp>

▼ To Download the Server-Specific Drivers

1. Download the drivers for the Sun Blade X6275 Server Module at:

<http://www.sun.com/servers/blades/downloads.jsp>

2. Choose one of the following download options:

- **If you are installing the server-specific drivers using media, download `Sun_Blade_X6275_Windows_SWx.x.x_build#.zip` to a hard drive location or media that will be accessible during the installation. Extract the following sub-packages contained in `Windows.zip`:**
 - `InstallPack_x_x_x.exe` for Windows Server 2008 installations — Contains a program to install all server-specific device drivers after installing Windows Server 2008. You will use this file to install all post installation server-specific drivers.
 - `DriverPack_x_x_x.zip` for expert Windows Server WIM users only — Contains server-specific driver archive for Windows Server, English. You can use the contents of this zip file if you want to incorporate Sun server drivers into a Windows Imaging Format (WIM) image. For instructions, see [Appendix A](#).
 - `OptPack_x_x_x.zip` for PXE expert users only — Contains supplemental software archive. Download this zip file if you want to incorporate the supplemental software into a PXE installation.
- **If you are installing server-specific drivers using a PXE server (advanced installation), extract the contents of the `DriverPack_x_x_x.zip` file on to the PXE server.**

Note – The `_x_x_x` number identifies the version of the package (for example, `FloppyPack_1_1_4.zip`).

3. Proceed to [“Installing Server-Specific Device Drivers”](#) on page 19.

Installing Server-Specific Device Drivers

Sun provides a wizard to install Sun server-specific device drivers and supplemental software.

The Sun Server Installation Package wizard may be started from one of the following locations:

- The main menu of your server’s Tools and Drivers DVD.
- The `InstallPack_x_x_x.exe` executable file.

Note – Using a recently downloaded `InstallPack_x_x_x.exe` to update the drivers ensures that you update the server-specific drivers with the latest versions available.

▼ To Install the Server-Specific Device Drivers

1. Start the Sun Installation Package software using one of the following methods:

- Access the Tools and Drivers DVD or ISO using RKVM, remote DVD drive, or a USB DVD drive.

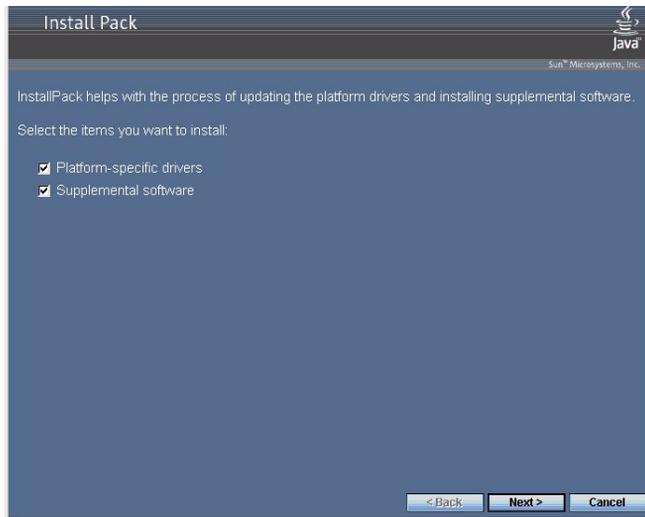
The DVD will automatically start.

At the main menu, select Install Drivers and Supplemental Software.

Or

- If you downloaded the `InstallPack_x_x_x.exe` file from the Sun download site, ensure that it has been copied to a local drive on the server, and then run the `InstallPack_x_x_x.exe` application.

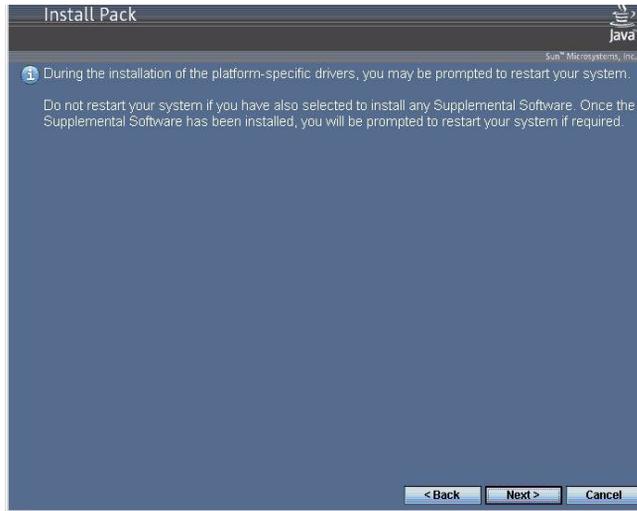
The Sun Server Installation Package dialog box (shown below) appears.



2. In the Install Pack dialog box, click Next to accept the default installable items.

Note – You should always accept the “platform-specific drivers” to ensure that the most recent versions of the drivers are installed.

The Install Pack notice dialog box appears.



3. In the Install Pack notice dialog box, read the message then click Next.

4. In the End User License Agreement page, select “I accept this agreement”, and then click Next.

The platform-specific drivers are installed. A green check mark verifies that each driver has been successfully installed.



5. In the Driver Installation Pack dialog box, click Finish.

The System Settings Change dialog box appears.



Note – If you plan on installing Supplemental Software (highly recommended), do not restart your system at this time. Once the Supplemental Software has been installed, you will be prompted to restart the system.

6. Perform one of the following:

- If you accepted the default installable settings in [Step 2](#), click No to proceed to “[Installing Supplemental Software](#)” on page 22.
- If you are not installing the Supplemental Software, click Yes to restart your computer.

Installing Supplemental Software

During the supplemental software installation wizard, you can choose to install all the supplemental software on your system by choosing a **Typical** installation; or, you can individually select the supplemental software to install by choosing a **Custom** installation. For instructions for installing the supplemental software, see “[Install the Supplemental Software](#)” on page 22.

▼ Install the Supplemental Software

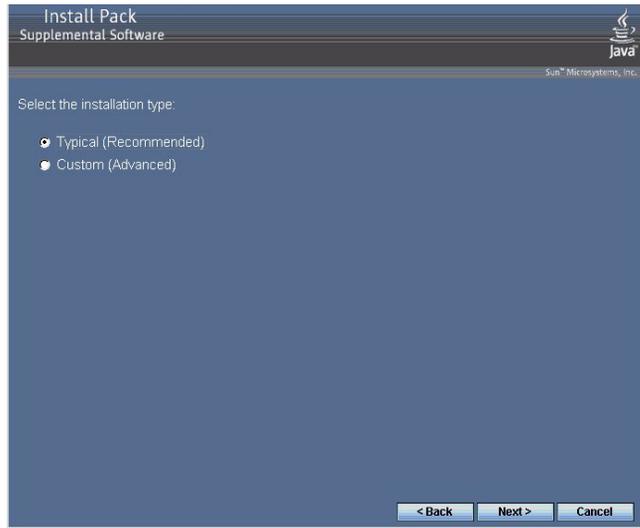
Note – If you have already installed the supplemental software, running the installation again will not necessarily reinstall the supplemental software. It may result in the components being removed. Carefully review the dialog boxes during supplemental software installation to ensure that the results are as expected.

1. Do one of the following:

- If you did *not* select the **Supplemental Software** when you ran the procedure “[Installing Server-Specific Device Drivers](#)” on page 19, refer back to that procedure and run it again, but this time accept the default settings in [Step 2](#) (the default is to install the supplemental software), and select **No** in [Step 6](#).

The Supplemental Software dialog box appears. Proceed the next step.

- If you did select **Supplemental Software** at the Sun Server Installation Package dialog box in **Step 2** of “Installing Server-Specific Device Drivers” on page 19, and selected **No** in **Step 6**, the supplemental software dialog box appears. Proceed to the next step.



2. In the **Install Pack Supplement Software** dialog box, click **Next** to accept the **Typical settings**, or select **Custom** to choose the options to install.

The Component installation wizard will guide you through the installation of each of the selected supplemental software components.

3. After the supplemental software has been installed, click **Finish**.
4. Click **Yes** at the **System Setting Change** dialog box to restart your system.

If you ran the Sun Server Installation Package software from the Tools and Drivers DVD, remove the DVD from your system now.

Incorporate Sun Blade Server Drivers Into WIM

This appendix is intended for advanced system administrators who need to incorporate the server-specific drivers into a Windows Imaging Format (WIM) image.

- WIM files are installed using Windows Deployment Services (WDS).

For more information on WDS, refer to Microsoft documentation.

Adding Drivers to a WIM Image

The procedures in the section assume the Windows Deployment Services are running on Windows Server 2008.

Before you Begin

Before creating your WIM image, you need to do the following:

- Locate `DriverPack_x_x_x.zip`

You can obtain the `DriverPack_x_x_x.zip` from the Tools & Drivers DVD or you can download it from the Sun download site. For download instructions, see [“Downloading Server-Specific Drivers” on page 18](#).

▼ To Add Drivers to the WIM Image

1. Extract the contents of Windows Server 2008 `DriverPack_x_x_x.zip` to a network share (for example: `\\yourshare\share\DriverPack`), making sure to maintain the directory structure.
2. Select the service image to update and export the image.
 - a. Click Start, click Administrative Tools, and then click Windows Deployment Services.
 - b. Find the image to service. Right-click the image and then click Disable.
 - c. Right-click the image and select Export Image. Follow the Wizard directions to export the image to the location of your choice.

3. Mount the Windows image you just exported. For example,

```
imagex /mount /w C:\windows_distribution\sources\install.wim 1  
C:\win_mount
```

The first Windows image in the `Install.wim` file is mounted to `C:\win_mount`.

4. Use Windows System Image Manager (Windows SIM) to create an answer file that contains the paths to the device drivers that you intend to install.

See the Microsoft documentation for the Windows Automated Installation Kit (AIK) for the details of starting the Windows SIM application.

5. Add the `Microsoft-Windows-PnpCustomizationsNonWinPE` component to your answer file in the `offlineServicing` pass.
6. Expand the `Microsoft-Windows-PnpCustomizationsNonWinPE` node in the answer file. Right-click `DevicePaths`, and then select **Insert New PathAndCredentials**.

A new `PathAndCredentials` list item appears.

7. In the `Microsoft-Windows-PnpCustomizationsNonWinPE` component, specify the path to the architecture folder in the `DriverPack` folder on the network share, and the credentials used to access the network share.

For example, the path and credentials for a 64-bit image might be:

```
<Path>\\yourshare\share\DriverPack\amd64</Path>
```

```
<Credentials>
```

```
  <Domain>MyDomain</Domain>
```

```
  <Username>MyUserName</Username>
```

```
  <Password>MyPassword</Password>
```

```
</Credentials>
```

8. Save the answer file and exit Windows SIM. The answer file must be similar to the following sample. The sample assumes the architecture is 64-bit.

```
<?xml version="1.0" ?>
<unattend xmlns="urn:schemas-microsoft-com:asm.v3" xmlns:wcm=
"http://schemas.microsoft.com/WMIConfig/2002/State">
  <settings pass="offlineServicing">
    <component name="Microsoft-Windows-PnpCustomizationsNonWinPE"
processorArchitecture="amd64" publicKeyToken="31bf3856ad364e35"
language="neutral" versionScope="nonSxS">
      <DriverPaths>
        <PathAndCredentials wcm:keyValue="1">
          <Path>\\yourshare\share\DriverPack\amd64</Path>
          <Credentials>
            <Domain>MyDomain</Domain>
            <Username>MyUserName</Username>
            <Password>MyPassword</Password>
          </Credentials>
        </PathAndCredentials>
      </DriverPaths>
    </component>
  </settings>
</unattend>
```

9. Use Package Manager to apply the unattended installation answer file to the mounted Windows image. Specify a location for the log file to create. For example:

```
pkgmgr /o:"C:\wim_mount\;C:\wim_mount\Windows" /n:"C:\
unattend.xml" /l:"C:\pkgmgrlogs\logfile.txt"
```

The .inf files referenced in the path in the answer file are added to the Windows image. A log file is created in the directory C:\Pkgmgrlogs\.

For more information about using Package Manager, see the Microsoft Windows AIK documentation.

10. Review the contents of the %WINDIR%\Inf\ directory in the mounted Windows image to ensure that the .inf files were installed.

Drivers added to the Windows image are named oem*.inf. This is to ensure unique naming for new drivers added to the computer. For example, the files MyDriver1.inf and MyDriver2.inf are renamed oem0.inf and oem1.inf.

11. Unmount the .wim file and commit the changes. For example:

```
imagex /unmount /commit C:\wim_mount
```

12. Replace the service image and enable the image.

- a. If the Windows Deployment Services snap-in is not running, click Start, click Administrative Tools, and then click Windows Deployment Services.
- b. Locate the image to service. Right-click the image and select Replace Image. Follow the Wizard directions to replace the service image with the Windows image that was updated.
- c. Right-click the service image and select Enable.

The service image is now available and all the server-specific drivers are added to the image.

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