Sun Blade X3-2B (formerly Sun Blade X6270 M3) Installation Guide for Oracle® VM Server

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Contents

Using This Documentation

This section describes how to get the latest firmware and software for the system, documentation and feedback, and a document change history.

Sun Blade X3–2B Model Name Change

The Sun Blade X3-2B was formerly named the Sun Blade X3-2B. This name might still appear in the software. The name change does not indicate any change in system features or functionality.

The new name identifies the following:

- X identifies an x86 product.
- The first number, 3, identifies the generation of the server.
- The second number, 2, identifies the number of processors.
- The alpha character, B, identifies the product as a blade server.

Getting the Latest Firmware and Software

Firmware, drivers, and other hardware-related software for each Oracle x86 server, server module (blade), and blade chassis are updated periodically.

You can obtain the latest version in one of three ways:

- Oracle System Assistant – This is a new factory-installed option for Sun Oracle x86 servers. It has all the tools and drivers you need and resides on a USB drive installed in most servers.
- My Oracle Support – `http://support.oracle.com`
- Physical media request

For more information, see "Getting Server Firmware and Software" on page 35.

Documentation and Feedback

Documentation	Link
All Oracle products	http://www.oracle.com/documentation
Sun Blade X3-2B	http://www.oracle.com/pls/topic/lookup?ctx=SunBladeX3-2B
Oracle Integrated Lights Out Manager (ILOM) 3.1	http://www.oracle.com/pls/topic/lookup?ctx=ilom31
Oracle Hardware Management Pack	http://www.oracle.com/pls/topic/lookup?ctx=ohmp

Provide feedback on this documentation at: http://www.oracle.com/goto/docfeedback.

About This Documentation

This documentation set is available in both PDF and HTML. The information is presented in topic-based format (similar to online help) and therefore does not include chapters, appendixes, or section numbering.

You can generate a PDF that includes all information about a particular topic subject (such as hardware installation or product notes) can be generated by clicking the PDF button in the upper left corner of the HTML page.

Support and Training

These web sites provide additional resources:

- Support: http://support.oracle.com
- Training: http://education.oracle.com

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Change History

The following lists the release history of this documentation set:

- April 2012. Initial publication.
- May 2012. Updated for SW 1.0.1. Documentation library re-released with editorial revisions.
- June 2012. Updated for SW 1.1. Revised Product Notes and Service Manual.
- July 2012. Server model name changed. All documents revised.

About the Sun Blade X3-2B Installation Guide for Oracle VM

Note – Important: The Sun Blade X3-2B was formerly named the Sun Blade X6270 M3 server module. This name might still appear in the software. The name change does not indicate any change in system features or functionality.

This document provides information about installing the Oracle VM server. It includes the following sections:

Description	Link
Learn about Oracle VM server and available installation methods.	"About Oracle VM Software Installation" on page 11
Review installation requirements and obtain Oracle VM software.	"Installing Oracle VM Server " on page 21
Complete the Oracle VM software installation.	"Completing the Oracle VM Installation" on page 31
Learn how to access server module firmware and software.	"Getting Server Firmware and Software" on page 35

About Oracle VM Software Installation

This section describes the Oracle VM software and installation options.

Description	Link
View a high-level overview of the Oracle VM installation tasks.	“Oracle VM Installation Task Table” on page 11
Learn about the Oracle VM software.	“Oracle VM Overview” on page 12
Decide which installation method to use.	“Oracle VM Installation Options” on page 13
Learn about Oracle System Assistant.	“Oracle System Assistant” on page 14

Oracle VM Installation Task Table

The following table describes the high-level procedures for installing Oracle VM software.

Step	Description	Link
1	Learn about the Oracle VM server and installation options.	“Oracle VM Overview” on page 12 “Oracle VM Installation Options” on page 13
2	Prepare the server module for Oracle VM server installation.	“Preparing for Oracle VM Server Installation” on page 17
3	Install Oracle VM software using one of the available options.	“Installing Oracle VM Server ” on page 21
4	Update Oracle VM software and manage Oracle VM services.	“Completing the Oracle VM Installation” on page 31

Oracle VM Overview

Oracle VM is a virtualization environment platform that enables users to create and manage virtual machines (VMs). These virtual machines exist on the same physical server but behave like independent physical servers. Each virtual machine created with Oracle VM has its own virtual CPUs, operating system, network interfaces, and storage.

Your server is compatible for use with Oracle VM minimum version 3.0. For the latest list of supported operating systems, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Product Notes* for your server.

Note – If you purchased a pre-installed version of Oracle VM, follow the instructions in your server's installation guide for configuring the preinstalled software.

Oracle VM includes the following components:

- **Oracle VM Server:** A lightweight, secure virtualization environment based on Xen hypervisor used to run virtual machines and the Oracle VM Agent.
- **Oracle VM Agent:** Installed on Oracle VM Server, it communicates with Oracle VM Manager and includes a Web Services API for managing the Oracle VM Server, server pools, and resources.
- **Oracle VM Manager:** A web application that acts as the user interface for creating and managing your virtual machines. This includes virtual machine creation (including templates), life cycle management (deploying, migrating, and deleting), and resource management (`.iso` files, templates, and shared storage resources).

  This document does not include instructions for installing Oracle VM Manager. For more information on Oracle VM Manager, refer to:

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`

Supported Software Versions and Updates

The most up-to-date information about your server is maintained in the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Product Notes*. The product notes document contains detailed information about any hardware or software issues for the server.

The most recent version of this document, other server-specific documents, and related documents are available online in the server module documentation library at:

`http://www.oracle.com/pls/topic/lookup?ctx=SunBladeX3-2B`

Related Information

- "Oracle VM Installation Options" on page 13
- "Installing Oracle VM Server " on page 21

Oracle VM Installation Options

You can choose to install the Oracle VM software on a single server or on multiple servers. The scope of this document is for single-server software installations.

Single-Server Installation Methods

The following table lists the available single-server installation methods. Instructions for each installation method are available in "Installing Oracle VM Server " on page 21.

Media Delivery Method	Additional Requirements
Local assisted OS installation – Uses Oracle System Assistant.	A monitor, USB keyboard and mouse, USB device, and Oracle VM distribution media. For more information, see "Oracle System Assistant" on page 14.
Remote assisted OS installation – Uses Oracle System Assistant.	Network access to Oracle ILOM to launch OSA from a remote client, Oracle VM distribution media (remote client accessible DVD or ISO image). For more information, see "Oracle System Assistant" on page 14.
Local using a CD/DVD drive – Uses a physical CD/DVD drive connected to the server.	A monitor, USB keyboard and mouse, a USB CD/DVD drive, and Oracle VM distribution media.
Remote using a CD/DVD drive or CD/DVD .iso image – Uses a redirected physical CD/DVD drive on a remote system running the Oracle ILOM Remote Console application.	A remote system with a browser, an attached physical CD/DVD drive, Oracle VM distribution media, and network access to the server's management port.
PXE image – Uses an image of the OS installed on a PXE server.	A PXE server with the OS image installed.

Multiple Server Installation Options

Oracle Enterprise Manager Ops Center can be used for multiple server software installations. For information about using Oracle Enterprise Manager Ops Center, refer to:

`http://www.oracle.com/us/products/enterprise-manager/opscenter/index.html`

Related Information

- "Oracle VM Overview" on page 12
- "Installing Oracle VM Server " on page 21

Oracle System Assistant

Oracle System Assistant Overview

Oracle System Assistant is a single-server system startup and maintenance tool for x86 Sun Fire and Sun Blade servers. It integrates Oracle's Single System Management products and a selection of related software to provide a suite of tools that allow for the quick and convenient startup and maintenance of the server. The components of Oracle System Assistant include:

- Hardware Management Pack
- User interface access to startup and maintenance provisioning tasks (including Install OS task)
- Oracle Linux command-line environment
- Operating system drivers and tools
- Server-specific firmware
- Server-related documentation

Oracle System Assistant is a new factory-installed option for Sun Oracle x86 servers. It has all the tools and drivers you need and resides on a USB drive installed in most servers.

Related Information

- "Oracle System Assistant OS Installation Task" on page 14
- "Obtaining Oracle System Assistant" on page 15

Oracle System Assistant OS Installation Task

The Oracle System Assistant Install OS task assists in the installation of a supported OS. You supply the OS installation media, and Oracle System Assistant guides you through the installation process. It then fetches the appropriate drivers based on the server hardware configuration.

The Install OS task is not available for all server-supported operating systems. However, once a server-supported OS is installed, you can use Oracle System Assistant to update the OS drivers as well as all the firmware components (BIOS, Oracle ILOM, HBAs, and expanders).

You can access Oracle System Assistant locally or remotely. If you just completed the installation of the server, then using Oracle System Assistant locally (while physically present at

the server) can be a fast and efficient method of starting up the server. Once the server is operational, you can conveniently access Oracle System Assistant remotely while still retaining full-featured functionality.

Related Information

- "Oracle System Assistant Overview" on page 14
- "Obtaining Oracle System Assistant" on page 15

Obtaining Oracle System Assistant

Oracle System Assistant might be already installed in the server. For more information about how to determine if the server has Oracle System Assistant or how to perform updates and recovery procedures, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Administration Guide*.

Related Information

- "Oracle System Assistant Overview" on page 14
- "Oracle System Assistant OS Installation Task" on page 14

Preparing for Oracle VM Server Installation

These topics describe the tasks needed to prepare the server module for Oracle VM server installation.

Description	Links
Prepare the installation environment for local, remote, or PXE installation.	"Preparing the Installation Environment" on page 17
Create a virtual disk and set a boot disk for the installation, if necessary.	"Creating a Virtual Disk and Setting the Boot Disk" on page 19
Set the BIOS mode, if necessary.	"Set the BIOS Mode" on page 19

Preparing the Installation Environment

Choose the procedure that matches the installation method that you plan to use.

- "Set Up for Local Installation" on page 17
- "Set Up for Remote or PXE Installation" on page 18

▼ Set Up for Local Installation

1 Review the product notes for the Sun Blade X3-2B and Oracle VM software.

- The Sun Blade X3-2B documentation is available at:

  `http://www.oracle.com/pls/topic/lookup?ctx=SunBladeX3-2B`

- The Oracle VM software documentation is available at:

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`

2 Make sure that the server module does not have an OS already installed.

If you have a server module with preinstalled Oracle VM, and you want to use the preinstalled version, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Installation Guide* for configuration instructions.

3. **Download Oracle VM software from `http://www.oracle.com/virtualization`.**

4. **Create a CD/DVD using the downloaded `.iso` image.**

5. **Connect the following to the server module dongle cable:**

   - DVD-ROM drive
   - USB keyboard and mouse
   - Monitor

Note – While you are configuring an operating system for a networked server, it might be necessary to provide the logical names (assigned by the OS) and the physical name (MAC address) of each network interface being used on the Oracle VM server.

Next Steps

- "Creating a Virtual Disk and Setting the Boot Disk" on page 19
- "Installing Oracle VM Server " on page 21

▼ Set Up for Remote or PXE Installation

In this procedure, *local server* describes the server on which you plan to install Oracle VM Server or Oracle VM Manager, *remote console* describes a remote client connected to the local server through the Oracle ILOM Remote Console feature, and *PXE server* describes a server on which you will install a PXE image to install to the local server.

1. **Review the release notes for the Sun Blade X3-2B and Oracle VM software.**

   - The Sun Blade X3-2B documentation is available at:

     `http://www.oracle.com/pls/topic/lookup?ctx=SunBladeX3-2B`

   - The Oracle VM software documentation is available at:

     `http://download.oracle.com/docs/cd/E20065_01/index.htm`

2. **Make sure that the server module does not have an OS already installed.**

   If you have a server module with preintalled Oracle VM, and you want to use the preinstalled version, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Installation Guide* for configuration instructions.

3. **Download Oracle VM software from `http://www.oracle.com/virtualization`.**

4. **If using a remote console, connect the following to the remote client. If using a PXE server, connect the following to the local server:**

   - DVD-ROM drive (if installing from media)

- USB keyboard and mouse.
- Monitor.

Note – While you are configuring an operating system for a networked server, it might be necessary to provide the logical names (assigned by the OS) and the physical name (MAC address) of each network interface being used on the Oracle VM Server.

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5 **If using a remote console, launch an Oracle ILOM Remote Console session following the instructions in the ILOM 3.1 documentation.**

Next Steps

- "Creating a Virtual Disk and Setting the Boot Disk" on page 19
- "Installing Oracle VM Server " on page 21

Creating a Virtual Disk and Setting the Boot Disk

If you have a Sun Storage RAID 6Gb/s SAS RAID REM HBA, (SGX-SAS6-R-REM-Z) installed on the server module, you must create a virtual disk before installing the ESXi 5 software. If you have a Sun Storage 6Gb/s SAS REM HBA (SGX-SAS6-REM-Z), you do not need to do this.

For more information, refer to "Preparing the Storage Drives to Install an Operating System" in *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Installation Guide*.

Related Information

- "Installing Oracle VM Server " on page 21

▼ Set the BIOS Mode

The BIOS firmware supports both legacy BIOS and Unified Extensible Firmware Interface (UEFI); the default setting is Legacy. Oracle VM only supports Legacy BIOS mode at this time. For Oracle VM, you must make sure that BIOS is set to legacy mode before you do the OS installation.

If the BIOS mode has been set to UEFI mode, use the following procedure to set it to Legacy mode.

1 **Power on the server.**

POST messages appear on the console.

2 **Watch the messages, and, when the prompt appears, press F2 to access the BIOS Setup Utility.**

The BIOS Setup Utility main screen appears.

3. **In the BIOS Setup Utility, use the left or right arrow keys to navigate to the Boot screen.**
   The Boot Menu screen appears.
4. **Use the down arrow key to select the UEFI/BIOS Boot Mode field.**
5. **Press Enter and use the up or down arrow keys to select the Legacy BIOS option.**
6. **To save the changes, and exit the BIOS Setup Utility, press F10.**

Next Steps "Installing Oracle VM Server " on page 21

Installing Oracle VM Server

Step	Description	Link
1	Install Oracle VM Server using Oracle System Assistant.	"Install Oracle VM Server (Oracle System Assistant) " on page 21
2	Install Oracle VM Server using manual local or remote installation methods.	"Installing Oracle VM Server (Manually)" on page 25

▼ Install Oracle VM Server (Oracle System Assistant)

The Oracle System Assistant Install OS task provides assisted OS installation of a supported versions of Oracle VM Server.

Before You Begin

- Perform the steps in "Preparing for Oracle VM Server Installation" on page 17.

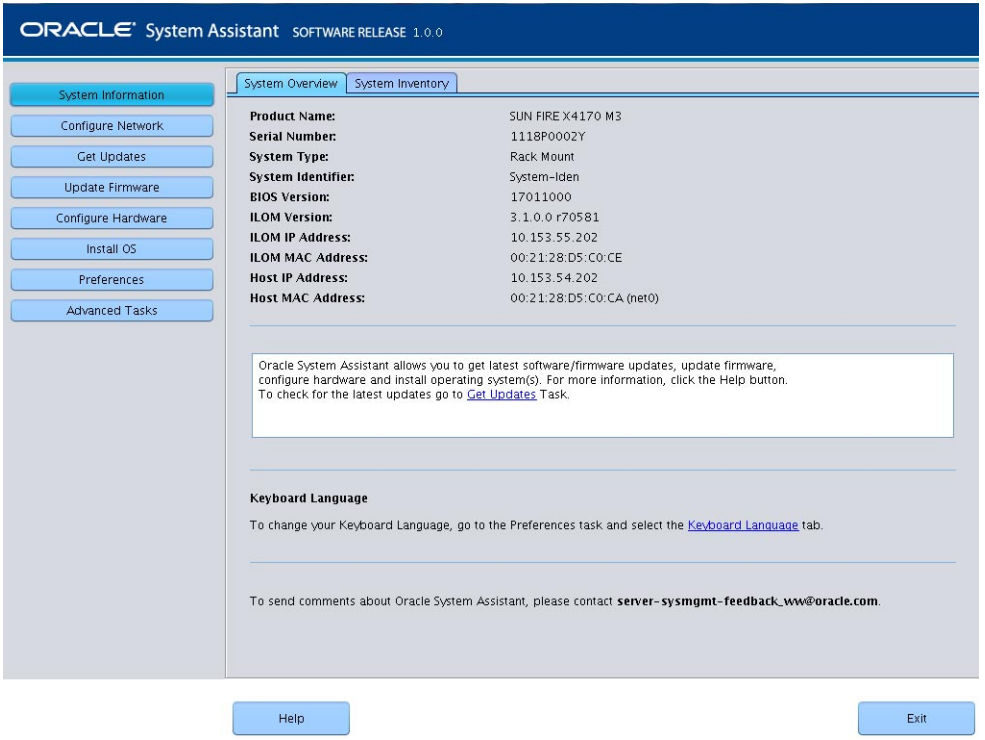
Additionally:

- For local installation, have the installation media available to insert into the attached physical CD/DVD-ROM drive when prompted.
- For remote installation, insert the installation media into the remote console system's CD/DVD-ROM drive. Make sure you have selected CD-ROM from the Oracle ILOM Remote Console Device menu.
- If you are using an ISO image, ensure that it is accessible from the remote console system. Make sure you have selected CD-ROM Image from the Oracle ILOM Remote Console Device menu.

1. **Ensure that the server is in standby power mode.**
2. **Boot the server and watch the video monitor or Remote Console screen for the prompt to press the F9 key.**

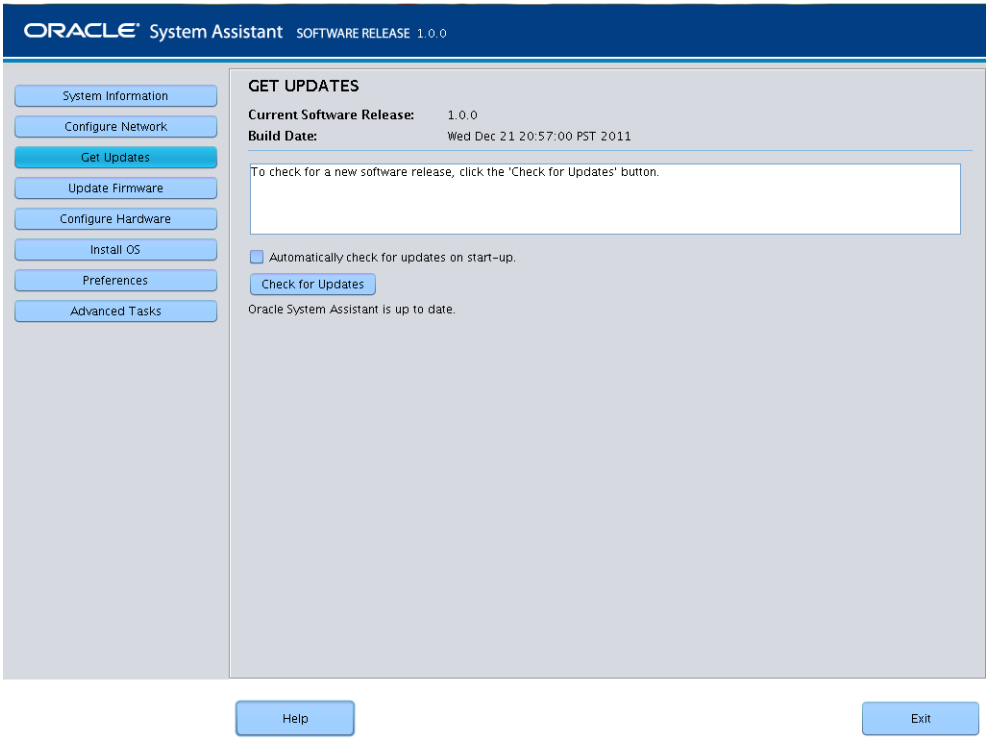
3 **When the prompt appears, press the F9 key.**

The Oracle System Assistant main screen appears.



4 **To update the Oracle System Assistant application, click the Get Updates button.**

Note – Server web access is required to update Oracle System Assistant. If you are using Oracle System Assistant for the first time, you need to set up network access. See *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Administration Guide*.

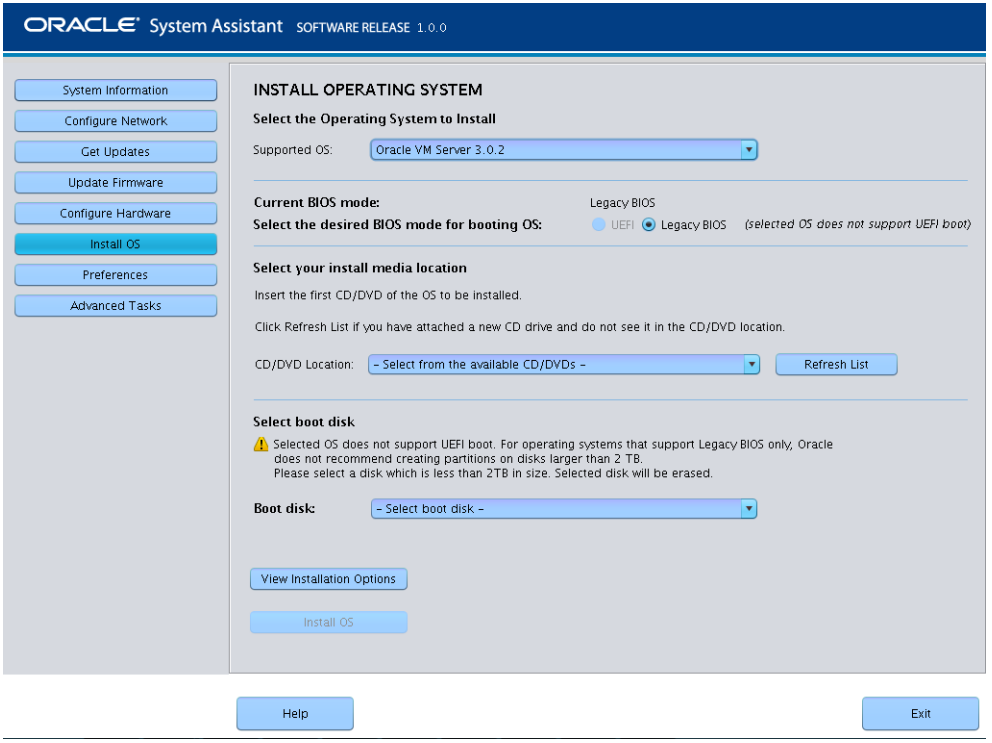


5 **Click the Check for Updates button to see if there are firmware and software updates available.**

If the system has the latest software update, a message appears, stating that Oracle System Assistant is up to date.

6 **To install the OS, click the Install OS button.**

The Install OS screen appears.



7 **From the Supported OS drop-down list, select the OS.**

8 **Indicate the location of the installation media in the Select the media location section.**

This is the location of the OS distribution media.

If you are using the Remote Console for the installation, select the location of the remote media in the Devices drop-down menu.

9 **In the Select boot disk section, select the boot device from the Boot disk list.**

This is the device on which you install the OS.

Caution – Loss of data. The OS installation erases the contents of the disk. All data on the selected disk is erased.

10 **Click Install OS.**

11 **Follow the prompts until the installation is finished.**

The server boots.

Next Steps

- Install Oracle VM Manager, if needed. See

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- "Completing the Oracle VM Installation" on page 31

Installing Oracle VM Server (Manually)

If you choose not to use Oracle System Assistant to install Oracle VM Server, see one of the following procedures for instructions on installing the software manually:

- "Install Oracle VM Server Using Local or Remote Media" on page 25
- "Installing Oracle VM Server Using a PXE Server" on page 27

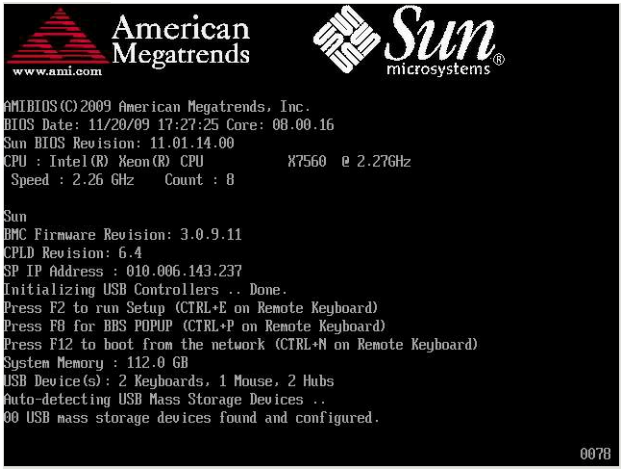
▼ Install Oracle VM Server Using Local or Remote Media

Before You Begin Follow the instructions in "Preparing for Oracle VM Server Installation" on page 17.

1 **If not done already, insert your Oracle VM Server distribution CD/DVD, or access the `.iso` image distribution media for the method you chose in "Preparing the Installation Environment" on page 17.**

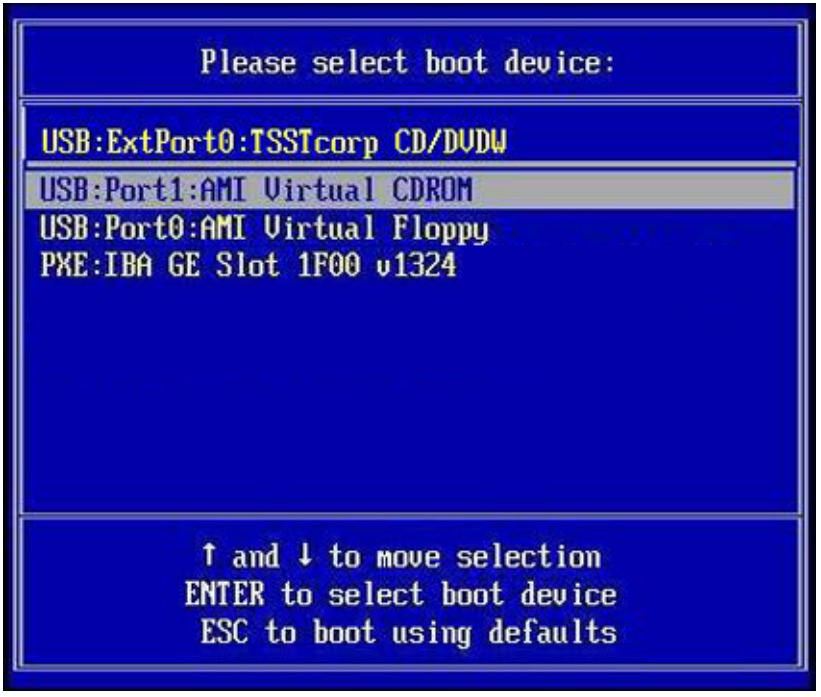
2 **Power on or reset the server.**

BIOS messages appear on the console.



3 **When you see a message offering a series of selections, press F8.**

After a delay, a menu offers a selection of boot devices (see the following example).



4. **Select a boot device from the list.**

   You can boot from a either a physical CD/DVD or from a virtual CD/DVD when using an `.iso` image.

   Control passes to the OS installation program on the media.

5. **At the boot prompt, press Enter.**

6. **Follow the prompts to install the software.**

   Oracle VM Server and Oracle VM Agent software are installed.

   For additional information refer to the Oracle VM Server installation documentation at:

   `http://download.oracle.com/docs/cd/E20065_01/index.htm`

7. **Complete the Oracle VM installation. See "Completing the Oracle VM Installation" on page 31.**

Next Steps

- Install Oracle VM Manager, if needed. See

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- "Completing the Oracle VM Installation" on page 31

Installing Oracle VM Server Using a PXE Server

This section describes how to install Oracle VM server from a PXE network environment. The following topics are covered in this section:

PXE Server Installation Requirements

The following procedures assume that you are booting the installation media from one of the following sources:

- Oracle VM software CD or DVD set (minimum version 3.0) internal or external CD/DVD
- Oracle VM software CD or DVD set (minimum version 3.0) `.iso` DVD image or KickStart image (network repository)

The following requirements must be met before you perform the Oracle VM PXE installation:

Note – KickStart is an automated installation tool. It enables a system administrator to create a single image containing the settings for some or all installation and configuration parameters that are normally provided during a typical Oracle VM installation. Typically, a KickStart image is placed on a single network server and read by multiple systems for installation.

- If you are using a KickStart image to perform the installation, you must:
  - Create a KickStart file.
  - Create the boot media with the KickStart file or make the KickStart file available on the network.
- 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 necessary for PXE booting.
  - Configure the server MAC network port address to boot from the PXE configuration.
  - Configure the Dynamic Host Configuration Protocol (DHCP).

▼ Install Oracle VM Server Using a PXE Server

1. **Ensure that the PXE network environment is properly set up and the Oracle VM installation media is available for PXE boot.**

2. **Reset the server. For example:**

   - From the Oracle ILOM web interface, click Host Management > Power Control, and then from the Action list, select Reset.
   - From the Oracle local server, press the Power button (approximately one second) on the front panel of the server to power off the server, and then press the Power button again to power on the server.
   - From the Oracle ILOM CLI on the server SP, type: **`reset /System`**. 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.

3. **In the BIOS screen, press F8 to specify a temporary boot device.**

   The Please select boot device menu appears listing the available boot devices.

4. **In the boot device menu, select the network port that is configured to communicate with your PXE network install server.**

   The network bootloader loads, and a boot prompt appears to allow you to choose the PXE server to install from. After a few seconds the installation kernel begins to load.

5. **Follow the prompts to install the software.**

   Oracle VM server is installed.

   For additional information refer to the Oracle VM Server installation documentation at:

   `http://download.oracle.com/docs/cd/E20065_01/index.htm`

6. **Update the Oracle VM drivers. See "Install All Oracle VM Drivers" on page 32.**

Next Steps

- Install Oracle VM Manager, if needed. See
  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- "Completing the Oracle VM Installation" on page 31

Completing the Oracle VM Installation

The following topics describe how to complete the Oracle VM software installation:

Taak	Link
Install server system tools.	"Access Server System Tools" on page 31
Update all drivers manually.	"Install All Oracle VM Drivers" on page 32
Update specific drivers manually.	"Install Specific Oracle VM Drivers" on page 33
Learn about creating and managing Oracle VM resources.	"Creating and Managing Oracle VM Resources" on page 34

▼ Access Server System Tools

Use this procedure to access the server system tools (supplemental software) from the Oracle System Assistant USB device or the Oracle support site.

Before You Begin If you have Oracle System Assistant installed on your system, perform the Oracle System Assistant Get Updates task to make sure that the latest tools are available.

1. **Do one of the following:**

   - **If your system has Oracle System Assistant installed, navigate to the Oracle System Assistant USB device on your server.**

     The USB device is named: `ORACLE_SSM`.

   - **If your system does not have Oracle System Assistant installed:**

     a. **Download or copy the latest server system tools and drivers from the My Oracle Support site to the server.**

        See "Getting Server Firmware and Software" on page 35 for information on how to access the system tools and drivers.

     b. **Unzip the package to extract the files.**

2. **Navigate to the following directory:**

   OracleVM/*version*/Tools/hmp-tools

   where *version* is the version of the installed Oracle VM.

3. **To install Hardware Management Pack, refer to the Oracle Hardware Management Pack documentation at:**

   `http://www.oracle.com/pls/topic/lookup?ctx=ohmp`

Next Steps "Creating and Managing Oracle VM Resources" on page 34

▼ Install All Oracle VM Drivers

Use this procedure to update all the server system drivers if you did not install Oracle VM using Oracle System Assistant. If you want to install specific drivers, see "Install Specific Oracle VM Drivers" on page 33.

1. **Do one of the following:**

   - **If your system has Oracle System Assistant installed, navigate to the Oracle System Assistant USB device.**

     The USB device is named: `ORACLE_SSM`.

   - **If your system does not have Oracle System Assistant installed:**

     a. **Download or copy the latest server system tools and drivers from the My Oracle Support site to the server.**

        See "Getting Server Firmware and Software" on page 35 for information on how to access the system tools and drivers.

     b. **Unzip the package to extract the files.**

2. **Navigate to the OVM Install Pack directory:**

   `OracleVM/`*version*`/InstallPack`

   where *version* is the version of the installed Oracle VM.

3. **Run the install pack application: `InstallPack.py`.**

4. **Continue through the installation pack application until the driver installation is finished.**

5. **Restart the server.**

Next Steps "Creating and Managing Oracle VM Resources" on page 34

Install Specific Oracle VM Drivers

Use this procedure to update the server system drivers if have the Sun Blade 6000 Virtualized 40 GbE Network Express Module *or* Sun Blade 6000 Virtualized Multi-Fabric 10GbE M2 Network Express Module installed in the chassis, and you only want to install the drivers for one NEM.

If you want to install all the drivers for Oracle VM, see "Install All Oracle VM Drivers" on page 32.

1. **Do one of the following:**

   - **If your system has Oracle System Assistant installed, navigate to the Oracle System Assistant USB device.**

     The USB device is named: `ORACLE_SSM`.

   - **If your system does not have Oracle System Assistant installed:**

     a. **Download or copy the latest server system tools and drivers from the My Oracle Support site to the server.**

        See "Getting Server Firmware and Software" on page 35 for information on how to access the system tools and drivers.

     b. **Unzip the package to extract the files.**

2. **Navigate to the OVM Install Pack directory:**

   `OracleVM/`*`version`*`/Drivers`

   where *version* is the version of the installed Oracle VM.

3. **Access the directory that corresponds to the drivers that you want to install:**

   `NEM-SOL`: For the Sun Blade 6000 Virtualized 40 GbE Network Express Module drivers

   `hxge`: For the Sun Blade 6000 Virtualized Multi-Fabric 10GbE M2 Network Express Module drivers

   Each directory contains instructions for installing the drivers.

4. **Install the drivers.**

5. **Restart the server.**

Next Steps "Creating and Managing Oracle VM Resources" on page 34

Creating and Managing Oracle VM Resources

After installing Oracle VM Server (with Oracle VM Agent) and Oracle VM Manager, you can create and manage virtual resources.

- Create a shared storage repository. For fault tolerance, multiple virtual machines using this storage can be set up in a clustered configuration. Options for your shared storage include:
  - OCFS2 (Oracle Cluster File System) using the iSCSI (Internet SCSI) network protocol
  - OCFS2 using SAN (storage area network)
  - NFS (network file system)
  - Partition with multipath failover
- Create a server pool for your virtual machines.
- Create your virtual machines in the server pool.

For detailed information, refer to the Oracle VM installation documentation at:

`http://download.oracle.com/docs/cd/E20065_01/index.htm`

Related Information

- Oracle VM documentation at:

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- “Installing Oracle VM Server ” on page 21

Getting Server Firmware and Software

This section explains the options for accessing server firmware and software.

Description	Links
Learn about server firmware and software updates.	"Firmware and Software Updates " on page 35
Learn about the options for accessing firmware and software.	"Firmware and Software Access Options" on page 36
View the available firmware and software packages.	"Available Software Release Packages" on page 36
Access the firmware and software packages through Oracle System Assistant, My Oracle Support, or a physical media request.	"Accessing Firmware and Software" on page 37
Install firmware and software updates.	"Installing Updates" on page 41

Firmware and Software Updates

Firmware and software, such as hardware drivers and tools for the server, are updated periodically. Updates are made available as a software release. The software release is a set of downloads (patches) that include all available firmware, hardware drivers, and utilities for the server. All these have been tested together. The Read Me document that is included with the download explains what has changed and what has not changed from the prior software release.

You should update your server firmware and software as soon as possible after the software release becomes available. Software releases often include bug fixes, and updating ensures that your server module software is compatible with the latest chassis firmware and other chassis component firmware and software.

A Read Me file in the download package and the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Product Notes* contain information about the updated files in the download package, as well as bugs that are fixed with the current release. The product notes also provide information about which server module software versions are supported with the latest chassis firmware.

Firmware and Software Access Options

Use one of the following options to obtain the latest set of firmware and software for your server:

- **Oracle System Assistant** – Oracle System Assistant is a new factory-installed option for Oracle servers that allows you to easily download and install server firmware and software.

  For more information about using Oracle System Assistant, refer to Access Oracle System Assistant From Oracle ILOM Web Interface.

- **My Oracle Support** – All system firmware and software are available from My Oracle Support at `http://support.oracle.com`.

  For more information about what is available on the My Oracle Support, see "Available Software Release Packages" on page 36.

  For instructions on how to download software releases from My Oracle Support, see: "Download Firmware and Software Using My Oracle Support" on page 38.

- **Physical media request (PMR)** – You can request a DVD that contains any of the downloads (patches) available from My Oracle Support.

  For information see: "Request Physical Media (Online)" on page 39.

Available Software Release Packages

Downloads on My Oracle Support are grouped by product family, then product, then version. The version contains one or more downloads (patches).

For servers and blades, the pattern is similar. The product is the server. Each server contains a set of releases. These releases are not true software product releases, but releases of updates for the server. These updates are called software releases and comprise several downloads, all tested together. Each download contains firmware, drivers, or utilities.

My Oracle Support has the same set of download types for this server family as shown in the following table. These can also be requested through a physical media request (PMR). The same firmware and software can also be downloaded using Oracle System Assistant.

Package Name	Description	When to Download This Package
X3-2B SW*version* – Firmware Pack	All the system firmware, including Oracle ILOM, BIOS, and option card firmware.	You need the latest firmware.

Package Name	Description	When to Download This Package
X3-2B SW*version* – OS Pack	An OS pack is available for each supported operating system version. Each OS pack includes a package of all tools, drivers, and utilities for that version of the OS. Software includes Oracle Hardware Management Pack and LSI MegaRAID software.	You need to update OS-specific drivers, tools, or utilities.
X3-2B SW*version* – All packs	Includes the Firmware Pack, all OS Packs, and all documents. This pack does not include SunVTS or the Oracle System Assistant image.	You need to update a combination of system firmware and OS-specific software.
X3-2B SW*version* – Diagnostics	SunVTS diagnostics image.	You need the SunVTS diagnostics image.
X3-2B SW*version* – Oracle System Assistant Updater	Oracle System Assistant updater and ISO update image.	You need to manually recover or update Oracle System Assistant.

Each of the downloads is a zip file that contains a Read Me and a set of subdirectories containing firmware or software files. The Read Me file contains details on the components that have changed since the prior software release and the bugs that have been fixed. For more details on the directory structure of these downloads, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Administration Guide*.

Accessing Firmware and Software

This section covers instructions for downloading or requesting software release files.

Note – You can also use Oracle System Assistant to easily download and use the latest software release. For further information, refer to the *Sun Blade X3-2B (formerly Sun Blade X6270 M3) Administration Guide*.

There are two other methods for obtaining updated firmware and software.

- "Download Firmware and Software Using My Oracle Support" on page 38
- "Requesting Physical Media" on page 38

▼ Download Firmware and Software Using My Oracle Support

1. **Go to: `http://support.oracle.com`**
2. **Sign in to My Oracle Support.**
3. **At the top of the page, click the Patches and Updates tab.**
   The Patches and Updates screen appears.
4. **In the Search screen, click Product or Family (Advanced Search).**
   The screen appears with search fields.
5. **In the Product field, select the product from the drop-down list.**
   Alternatively, type a full or partial product name (for example, Sun Blade X3-2B) until a match appears.
6. **In the Release field, select a software release from the drop-down list.**
   Expand the folders to see all available software releases.
7. **Click Search.**
   The software release comprises a set of downloads (patches) .
   See "Available Software Release Packages" on page 36 for a description of the available downloads.
8. **To select a patch, click the check box next to the patch name (you can select more than one patch).**
   A pop-up action panel appears. The panel contains several action options.
9. **To download the update, click Download in the pop-up panel.**
   The download begins automatically.

Requesting Physical Media

If your processes do not allow downloads from Oracle web sites, you can access the latest software release through a physical media request (PMR).

The following table describes the high-level tasks for making a physical media request and provides links for further information.

Description	Link
Gather information you will need to provide for the request.	"Gathering Information for the Physical Media Request" on page 39
Make the physical media request either online or by calling Oracle Support.	"Request Physical Media (Online)" on page 39 "Request Physical Media (by Phone)" on page 40

Gathering Information for the Physical Media Request

You must have a warranty or support contract for your server in order to make a physical media request (PMR).

Before you make the PMR, gather the following information:

- **Obtain product name, software release version, and patches required**. It will be easier to make the request if you know the latest software release and the name of the download packages (patches) that you are requesting.
  - *If you have access to My Oracle Support* – Follow the instructions in "Download Firmware and Software Using My Oracle Support" on page 38 to determine the latest software release and view available downloads (patches). After viewing the list of patches, you can navigate away from Patch Search Results page, if you do not want to continue with the download steps.
  - *If you do not have access to My Oracle Support* – Use the information in "Available Software Release Packages" on page 36 to determine which packages you want, then request these packages for the latest software release.
- **Have the shipping information ready**. You will need to provide a contact, phone number, email address, company name and shipping address for the request.

▼ Request Physical Media (Online)

Before You Begin Gather the information described in "Gathering Information for the Physical Media Request" on page 39 before making the request.

1. **Go to `http://support.oracle.com` and sign in.**
2. **Click on the Contact Us link in the upper right corner of the page.**
3. **In the Request Description section, fill in the following:**
   a. **In the Request Category drop-down list, select the following:**
      Physical Media Request (Legacy Oracle Products, Primavera, BEA, Sun Products)

b. **In the Request Summary field, type: .**

   `PMR for latest software release for Sun Blade Sun Blade X3-2B`

4 **In the Request Details section, answer the questions shown in the following table:**

Question	Your Answer
Is this a physical software media shipment request?	Yes
Which product line does the media request involve?	Sun Products
Are you requesting a required password for a patch download?	No
Are you requesting a patch on CD/DVD?	Yes
If requesting a patch on CD/DVD, please provide the patch number and OS/platform?	Enter the patch number for each download that you want from the software release.
List the product name and version requested for the physical media shipment?	*Product Name*: Sun Blade X3-2B *Version*: Latest software release number.
What is the OS/platform for the requested media?	If you are requesting OS-specific downloads, specify the OS here. If you are requesting system firmware only, enter Generic.
Are any languages required for this shipment?	No

5 **Fill in the Ship-To contact, phone number, email address, company name, and shipping address information.**

6 **Click Next.**

7 **Under Relevant Files, type: `Knowledge Article 1361144.1`**

8 **Click Submit.**

▼ Request Physical Media (by Phone)

Before You Begin Gather the information described in "Gathering Information for the Physical Media Request" on page 39 before making the request.

1 **Call Oracle support, using the appropriate number from the Oracle Global Customer Support Contacts Directory:**

   `http://www.oracle.com/us/support/contact-068555.html`

2 **Tell Oracle support that you want to make a physical media request (PMR) for the Sun Blade X3-2B.**

- **If you are able to access the specific software release and patch number information from My Oracle Support, provide this information to the support representative.**
- **If you are not able to access the software release information, request the latest software release for the Sun Blade X3-2B.**

Installing Updates

The following topics provide information about installing firmware and software updates:

- "Installing Firmware" on page 41
- "Installing Hardware Drivers and OS Tools" on page 41

Installing Firmware

Updated firmware can be installed using one of the following:

- **Oracle Enterprise Manager Ops Center** – Ops Center Enterprise Controller can automatically download the latest firmware from Oracle, or firmware can be loaded manually into the Enterprise Controller. In either case, Ops Center can install the firmware onto one or more servers, blades, or blade chassis.

  For more information, go to:

  `http://www.oracle.com/us/products/enterprise-manager/opscenter/index.html`
- **Oracle System Assistant** – Oracle System Assistant can download and install the latest firmware from Oracle.

  For more information, refer to Using Oracle System Assistant for Server Configuration.
- **Oracle Hardware Management Pack** – The `fwupdate` CLI tool within the Oracle Hardware Management Pack can be used to update firmware within the system.

  For more information, go to:`http://www.oracle.com/pls/topic/lookup?ctx=ohmp`.
- **Oracle ILOM** – Oracle ILOM and BIOS firmware are the only firmware that can be updated using the Oracle ILOM web interface and Oracle ILOM CLI.

  For more information, go to: `http://www.oracle.com/pls/topic/lookup?ctx=ilom31`.

Installing Hardware Drivers and OS Tools

Updated hardware drivers and operating system (OS)-related tools, such as the Oracle Hardware Management Pack, can be installed using one of the following:

- **Oracle Enterprise Manager Ops Center** – For more information, go to:

  `http://www.oracle.com/us/products/enterprise-manager/opscenter/index.html`
- **Oracle System Assistant** – For more information, refer to Setting Up the Server With Oracle System Assistant.
- Other deployment mechanisms such as JumpStart, Kickstart or third-party tools.

  For more information, refer to your OS documentation.

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