Sun Blade X4-2B Installation Guide for Oracle® VM Server

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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 X4-2B Model Name " on page 5
- "Getting the Latest Firmware and Software" on page 5
- "Documentation and Feedback" on page 6
- "About This Documentation" on page 6
- "Support and Training" on page 6
- "Access to Oracle Support " on page 7
- "Contributors" on page 7
- "Change History" on page 7

Sun Blade X4-2B Model Name

The name identifies the following: Sun Blade **X4-2B** Server Module

- The alpha character, X, identifies an x86 product.
- The first number, 4, 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 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 Updates" in *Sun Blade X4-2B Installation Guide*.

Documentation and Feedback

Documentation	Link
All Oracle products	http://www.oracle.com/documentation
Sun Blade X4-2B server module	http://www.oracle.com/goto/X4-2B/docs
X4 server series system administration	Oracle x86 Administration Guide for X4 Series Servers (http://www.oracle.com/goto/x86AdminDiag/docs)
Oracle System Assistant	Oracle x86 Administration Guide for X4 Series Servers (http://www.oracle.com/goto/x86AdminDiag/docs)
Oracle Integrated Lights Out Manager (ILOM) 3.1	http://www.oracle.com/goto/ILOM/docs
Oracle Hardware Management Pack	http://www.oracle.com/goto/OHMP/docs
Chassis Sun Blade 6000 modular system	http://www.oracle.com/goto/SB6000/docs

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

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

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Change History

The following lists the release history of this documentation set:

- September 2013. Initial publication.
- November 2013. Software 1.0.1 update.
- March 2014. Software 1.1 update.

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 9
Learn about the Oracle VM software.	“Oracle VM Overview” on page 10
Learn about the Oracle VM software.	“Oracle VM Overview” on page 10
Decide which installation method to use.	“Oracle VM Installation Options” on page 11
Learn about Oracle System Assistant.	“Oracle System Assistant” on page 12

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 10
2	Learn about the Oracle VM server installation options.	“Oracle VM Installation Options” on page 11
3	Prepare the server module for Oracle VM server installation.	“Preparing for Oracle VM Server Installation” on page 15
4	Install Oracle VM software using one of the available options.	“Installing Oracle VM Server ” on page 21
5	Update Oracle VM software and manage Oracle VM services.	“Completing the Oracle VM Installation” on page 29

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.

Note – If you purchased a pre-installed version of Oracle VM, follow the instructions in *Sun Blade X4-2B 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 Oracle VM Software

The server supports the following Oracle VM operating systems.

Windows OS Version	Edition
Oracle VM	Release 3.2

For the latest list of supported operating systems, refer to:

`https://wikis.oracle.com/display/SystemsComm/Sun+Blade+Systems+Products#tab:Operating-Systems`

The most up-to-date information about your server is maintained in the *Sun Blade X4-2B Product Notes*. The *Product Notes* contains detailed information about 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/goto/X4-2B/docs

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 12.
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 12.
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/technetwork/oem/ops-center/index.html

Oracle System Assistant

- "Oracle System Asssistant Overview" on page 12
- "Oracle System Assistant Install OS Task" on page 12
- "Obtaining Oracle System Assistant" on page 13

Oracle System Asssistant Overview

Oracle System Assistant is delivered on a USB storage device embedded in the system as an integral part of your server and can be launched as soon as you apply standby power. This embedded storage device includes everything you need to start using the server with your choice of supported operating system and hardware. You provide the operating system installation media, and Oracle System Assistant provides everything else. The components of Oracle System Assistant include:

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

Related Information:

Oracle X4 Series Servers Administration Guide (`http://www.oracle.com/goto/x86AdminDiag/docs`)

Oracle System Assistant Install OS Task

The Oracle System Assistant Install OS task helps you to install Oracle VM. You supply the OS installation media, and Oracle System Assistant guides you through the installation process. It then gets the appropriate drivers based on the server hardware configuration.

Once the 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 hardware 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 Asssistant Overview" on page 12
- "Obtaining Oracle System Assistant" on page 13

Obtaining Oracle System Assistant

In most cases, Oracle System Assistant is 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 Oracle X4 Series Servers Administration Guide (`http://www.oracle.com/goto/x86AdminDiag/docs`).

Related Information

- "Oracle System Asssistant Overview" on page 12
- "Oracle System Assistant Install OS Task" on page 12

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.	"Selecting the Installation Method" on page 15
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 17
Provision the system BIOS.	■ "Select the BIOS Boot Mode" on page 18 ■ "Disable VT-d and SR-IOV in BIOS" on page 19

Selecting the Installation Method

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

- "Set Up the Local Console" on page 15
- "Set Up the Remote Console" on page 16

▼ Set Up the Local Console

Before You Begin You need the following to set up for local installation:

- Multiport dongle cable connected to the server UCP port.
- DVD-ROM drive
- USB keyboard and mouse
- Monitor

1 **Review the *Product Notes* for the Sun Blade X4-2B and Oracle VM software.**

- The Sun Blade X4-2B documentation is available at:

  `http://www.oracle.com/goto/X4-2B/docs`

- 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 Oracle VM preinstalled.**

If you have a server module with preinstalled Oracle VM, and you want to use the preinstalled version, refer to the *Sun Blade X4-2B Installation Guide* for configuration instructions.

3 **Download Oracle VM software ISO image from `https://edelivery.oracle.com/oraclevm`.**

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

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

- DVD-ROM drive (if installing from media)
- USB keyboard and mouse
- Monitor

Note – While you are configuring an operating system for a networked server, you might need 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 17

▼ Set Up the Remote Console

In this procedure the following terminology is used:

- *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
- *PXE server* describes a server on which you plan to install a PXE image to install to the local server

Before You Begin You need the following to set up for remote or PXE installation:

- (For PXE installation) a multiport dongle to the local server UCP port.
- DVD-ROM drive
- USB keyboard and mouse
- Monitor

1 **Review the *Product Notes* for the Sun Blade X4-2B and Oracle VM software.**

- The Sun Blade X4-2B documentation is available at:

`http://www.oracle.com/goto/X4-2B/docs`

- 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 X4-2B Installation Guide* for configuration instructions.

3. **Download Oracle VM software from `https://edelivery.oracle.com/oraclevm`.**

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.

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

Next Steps "Creating a Virtual Disk and Setting the Boot Disk" on page 17

Creating a Virtual Disk and Setting the Boot Disk

You might need to create a virtual disk, before installing Oracle VM software, depending on which REM is installed in the server:

- 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
- If you have a Sun Storage 6Gb/s SAS REM HBA (SGX-SAS6-REM-Z), you do *not* need to create the virtual disk.

For more information, refer to "6. Configure Server Module Drives for OS Installation" in *Sun Blade X4-2B Installation Guide*.

Related Information

- "Setting Up BIOS" on page 18

Setting Up BIOS

Perform the following tasks to prepare the server BIOS for OS installation:

- "Select the BIOS Boot Mode" on page 18
- "Disable VT-d and SR-IOV in BIOS" on page 19

Select the BIOS Boot Mode

The BIOS firmware supports both Legacy BIOS and Unified Extensible Firmware Interface (UEFI) boot modes; the default setting is Legacy boot mode.

Refer to: Oracle x86 Administration Guide for X4 Series Servers (`http://www.oracle.com/goto/x86AdminDiag/docs`) for more information.

Note – Oracle VM only supports Legacy boot mode at this time. Before installing Oracle VM, make sure that BIOS is set to Legacy boot mode.

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

▼ Disable VT-d and SR-IOV in BIOS

You must disable Virtualization Technology for Directed I/O (VT-d) in BIOS before you can use Oracle VM. This is necessary because input/output memory management unit (I/O MMU) is not supported in Oracle VM 3.2. You must also disable Single Root I/O Virtualization (SR-IOV) in BIOS before you can use Oracle VM.

To disable the VT-d and SR-IOV settings in BIOS, perform the following steps:

1. **Reset or power on the server.**

   For example, to reset the server.

   - From the local server, press the Power button (approximately 1 second) on the front panel of the server to power off the server, then press the Power button again to power on the server.
   - From the Oracle ILOM web interface, select Host Management > Power Control, then select Reset from the Select Action list box.
   - From the Oracle ILOM CLI, type: **`reset /System`**

     The BIOS boot screen appears.

2. **When prompted in the BIOS boot screen, press F2 to access the BIOS Setup Utility.**

   After a few moments, the BIOS Setup Utility appears.

3. **Use the right arrow key to navigate to the IO menu.**

   The IO Menu screen appears.

4. **Use the up and down arrow keys to navigate to the IO Virtualization menu option, and press Enter.**

   The IO Virtualization menu appears.

5. **Use the up and down arrow keys to navigate to the VT-d menu option, and press Enter.**

   The VT-d dialog box appears.

6. **In the VT-d dialog box use the up or down arrow keys to select Disabled, and press Enter.**

   The VT-d option is now disabled.

7. **Use the up or down arrow keys to navigate to the SR-IOV menu option, and press Enter.**

   The SR-IOV dialog box appears.

8. **In the SR-IOV dialog box, use the up and down arrow keys to select Disable, and press Enter.**

   SR-IOV option is now disabled.

9. **Press the ESC key to return the IO Menu top level, and then save and exit BIOS.**

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.

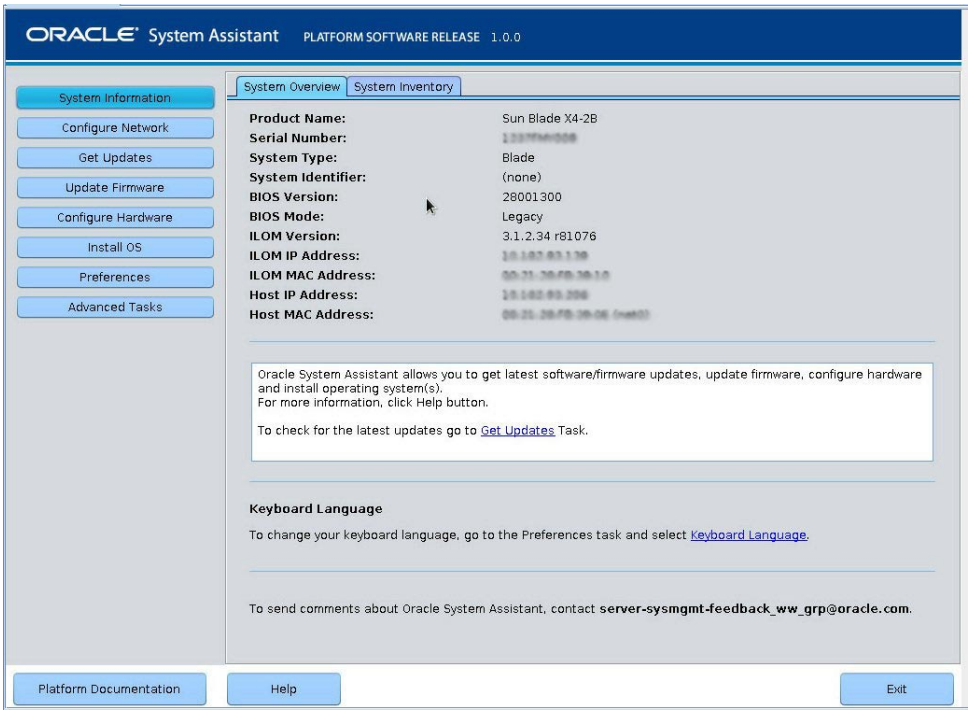
Before You Begin

- Perform the steps in "Preparing for Oracle VM Server Installation" on page 15.
- 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.**
2. **Boot the server and watch the boot screen on 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 System Information screen appears.

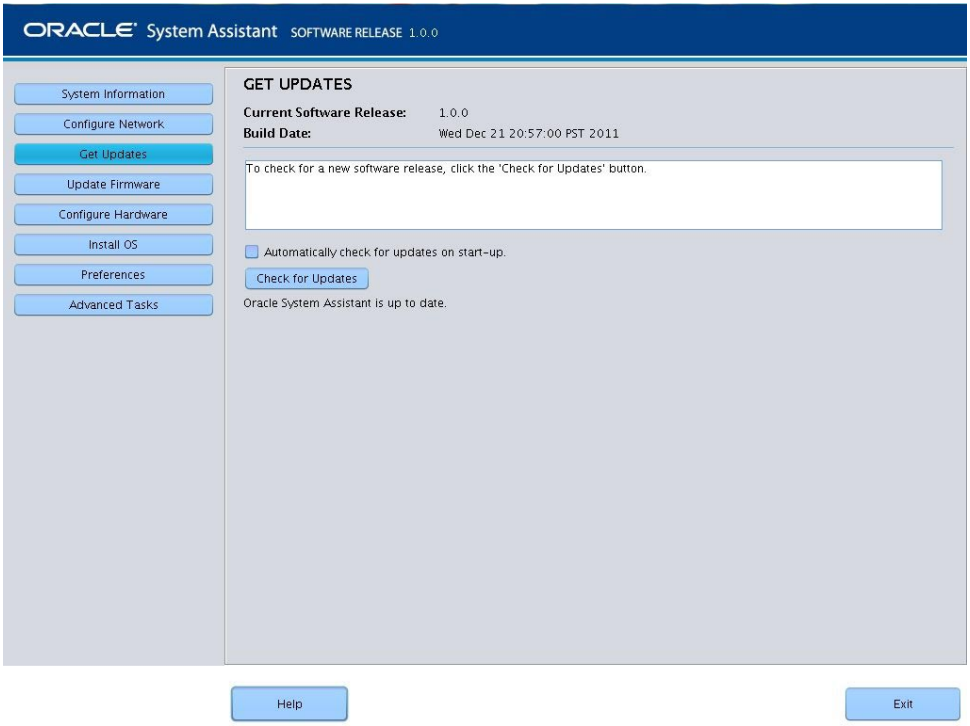
Note – It might take a while for Oracle System Assistant to boot, especially if you are accessing the server remotely.



4 **To make sure that you have the latest software pack, click the Get Updates button.**

The Oracle System Assistant Get Updates screen appears.

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 Oracle X4 Series Servers Administration Guide (`http://www.oracle.com/goto/x86AdminDiag/docs`) .



5 **To check for a new software release, click the Check for Updates button.**

If an update is available, the update's readme file appears.

6 **To get the update, click the Download and Apply Updates button.**

The Get Updates Sign-In screen appears.

7 **Provide your MOS credentials. Enter your MOS username and password.**

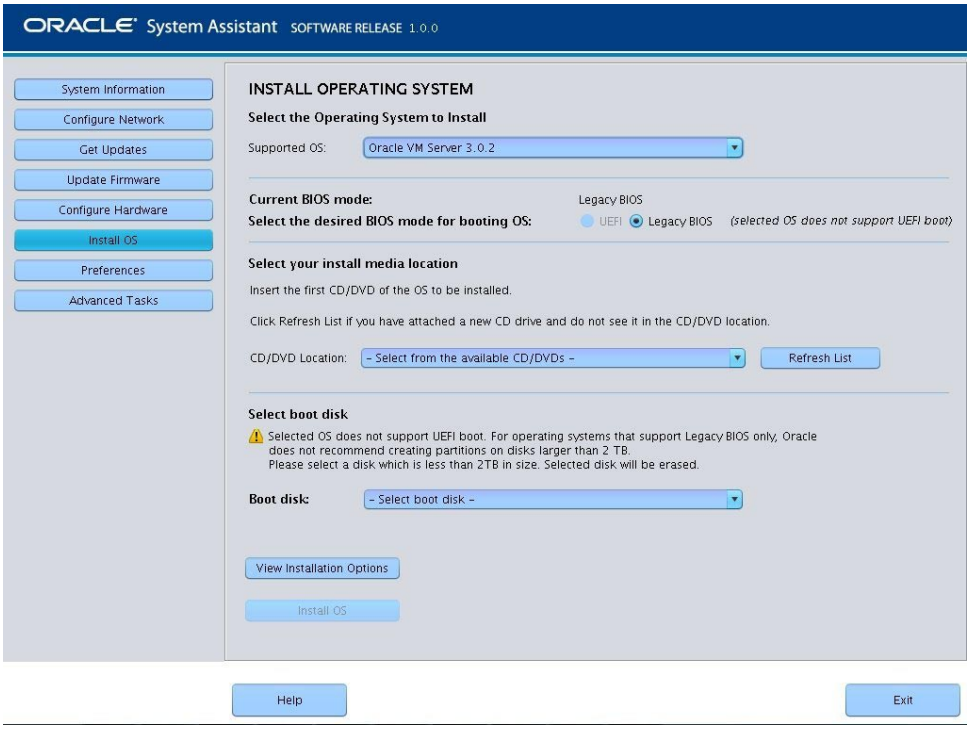
The server downloads the updates then displays a popup asking to reboot the server.

8 **Select OK.**

The server reboots and restarts Oracle System Assistant.

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

The Install OS screen appears.



10 **From the Supported OS drop-down list, select the version of Oracle VM that you want to install.**

11 **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.

12 **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.

13 **Click Install OS.**

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

The server boots.

Next Steps

- Install Oracle VM Manager, if needed. Refer to:

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- "Completing the Oracle VM Installation" on page 29

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 (Local or Remote Media)" on page 25
- "Installing Oracle VM Server (PXE Server)" on page 26

▼ Install Oracle VM Server (Local or Remote Media)

Before You Begin Follow the instructions in "Preparing for Oracle VM Server Installation" on page 15.

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 "Selecting the Installation Method" on page 15.**

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 appears offering a selection of boot devices.

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. **To install the software, follow the prompts.**

   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`

Next Steps

- Install Oracle VM Manager, if needed. Refer to:

  `http://download.oracle.com/docs/cd/E20065_01/index.htm`
- "Completing the Oracle VM Installation" on page 29

Installing Oracle VM Server (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" on page 26
- "Install Oracle VM Server (PXE Server)" on page 27

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) from internal or external CD/DVD drive
- 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.
  - Files on the TFTP server necessary for PXE booting.
  - Server MAC network port address to boot from the PXE configuration.
  - Dynamic Host Configuration Protocol (DHCP).

▼ Install Oracle VM Server (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. The prompt allows you to choose the PXE server to install from.

5. **Choose the PXE server to install from.**

   After a few seconds the installation kernel begins to load.

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

   Oracle VM server is installed.

7. **Update the Oracle VM drivers.**

Next Steps

- Install Oracle VM Manager, if needed. Refer to:

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

- "Completing the Oracle VM Installation" on page 29

Completing the Oracle VM Installation

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

Task	Link
Install server system tools.	"Access Server System Tools" on page 29
Update specific drivers manually.	"Install Oracle VM NEM Drivers" on page 30
Learn about creating and managing Oracle VM resources.	"Creating and Managing Oracle VM Resources" on page 31

▼ Access Server System Tools

Use this procedure to access the Oracle Hardware Management Pack tools (supplemental software) from the Oracle System Assistant USB device or the Oracle support site. Oracle Hardware Management Pack (HMP) provides tools to help you manage and configure your Oracle servers from the host.

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 from your server OS.**

     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.**

        Refer to "Getting Server Firmware and Software Updates" in *Sun Blade X4-2B Installation Guide* 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 "Install Oracle VM NEM Drivers" on page 30

▼ Install Oracle VM NEM Drivers

Use this procedure to update the server system drivers if you have the Sun Blade 6000 Virtualized 40 GbE Network Express Module installed in the chassis.

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.**

  For information on how to access the system tools and drivers, refer to "Getting Server Firmware and Software Updates" in *Sun Blade X4-2B Installation Guide* .

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

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

`OracleVM/`*version*`/Drivers/NEM-SOL`

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

The directory contains instructions for installing the drivers.

3 **Install the drivers.**

4 **Restart the server.**

Next Steps "Creating and Managing Oracle VM Resources" on page 31

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.

You can do the following:

- Create a shared storage repository. For fault tolerance, you can set up multiple virtual machines in a clustered configuration using this storage. 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

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