

Oracle® VM
Server Installation Guide
Release 2.1

November 2007

Oracle VM Server Installation Guide, Release 2.1

Copyright © 2007, Oracle. All rights reserved.

Primary Author: Alison Holloway

Contributing Authors: Kurt Hackel, Herbert van den Bergh

Contributor: Tatyana Bagerman

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

Contents

Preface	v
Audience	v
Documentation Accessibility	v
Command Syntax	vi
Related Documents	vi
Conventions	vi
1 Installing Oracle VM Server	
1.1 Hardware Requirements	1-1
1.2 Software Requirements	1-1
1.3 Network Requirements	1-1
1.4 Before You Begin	1-2
1.5 Installing Oracle VM Server From a CDROM	1-2
1.6 Installing Oracle VM Server From Other Sources	1-12
1.6.1 Installing Oracle VM Server From a Hard Drive	1-15
1.6.2 Installing Oracle VM Server From an NFS Image	1-15
1.6.3 Installing Oracle VM Server From an FTP Server	1-17
1.6.4 Installing Oracle VM Server From an HTTP Server	1-20
Index	

Preface

The preface contains information on how to use the Oracle VM Server Installation Guide. The areas discussed are:

- [Audience](#)
- [Documentation Accessibility](#)
- [Command Syntax](#)
- [Related Documents](#)
- [Conventions](#)

Audience

The Oracle VM Server Installation Guide is intended for system administrators who wish to install a virtualized environment.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, 7 days a week. For TTY support, call 800.446.2398. Outside the United States, call +1.407.458.2479.

Command Syntax

UNIX command syntax appears in monospace font. The dollar character (\$), number sign (#), or percent character (%) are UNIX command prompts. Do not enter them as part of the command. The following command syntax conventions are used in this guide:

Convention	Description
backslash \	A backslash is the UNIX command continuation character. It is used in command examples that are too long to fit on a single line. Enter the command as displayed (with a backslash) or enter it on a single line without a backslash: <pre>dd if=/dev/rdsd/c0t1d0s6 of=/dev/rst0 bs=10b \ count=10000</pre>
braces { }	Braces indicate required items: <pre>.DEFINE {macro1}</pre>
brackets []	Brackets indicate optional items: <pre>cvtcrt <i>termname</i> [<i>outfile</i>]</pre>
ellipses ...	Ellipses indicate an arbitrary number of similar items: <pre>CHKVAL <i>fieldname</i> <i>value1</i> <i>value2</i> ... <i>valueN</i></pre>
<i>italics</i>	Italic type indicates a variable. Substitute a value for the variable: <pre><i>library_name</i></pre>
vertical line	A vertical line indicates a choice within braces or brackets: <pre>FILE <i>filesize</i> [K M]</pre>

Related Documents

For more information, see the following documents in the Oracle VM Release 2.1 documentation set:

- *Oracle VM Quick Start Guide*
- *Oracle VM Server Release Notes*
- *Oracle VM Server User's Guide*
- *Oracle VM Manager Release Notes*
- *Oracle VM Manager Installation Guide*
- *Oracle VM Manager User's Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Installing Oracle VM Server

This chapter discusses downloading and installing Oracle VM Server. It contains:

- [Hardware Requirements](#)
- [Software Requirements](#)
- [Network Requirements](#)
- [Installing Oracle VM Server From a CDROM](#)
- [Installing Oracle VM Server From Other Sources](#)

1.1 Hardware Requirements

Oracle VM Server supports computers with x86 (i686) and x86_64 processors. This includes all Intel Pentium Pro or newer, and all AMD Athlon/Duron processors and newer. At least a Pentium 4 or Athlon CPU is recommended.

For hardware virtualized (unmodified) guest operating systems (for example, Microsoft Windows), a CPU with hardware virtualization support is required. This includes some Intel Pentium D, Core, Core2 and Xeon models, and some AMD Athlon and Opteron models. This feature may also need to be enabled in the BIOS. Please refer to your processor documentation for information on whether your processor supports hardware virtualization and how to enable it in the BIOS.

A dual core CPU or multiple CPUs are recommended to run multiple guests.

The minimum memory requirement is 1GB RAM, although it is recommended you have a computer with at least 2GB RAM. Guest memory requirements vary for each guest operating system. You should perform your own memory sizing for guest operating systems.

1.2 Software Requirements

There are no prerequisite software requirements. Oracle VM Server includes a small Linux-based management operating system. All previous operating systems and data are lost during the installation of Oracle VM Server.

Migration from any operating system, or previous Xen environment, is not supported in this release.

1.3 Network Requirements

It is recommended that you install Oracle VM Server on a machine with a static IP address. If your machine uses DHCP you should configure your DHCP server to

assign static DHCP addresses. This makes sure your host always receives the same IP address. The behavior of the Oracle VM Server host is undefined if used in an environment where your IP address may change due to DHCP lease expiry.

1.4 Before You Begin

If you do not already have the Oracle VM Server software, download the Oracle VM Server ISO file from:

<http://www.oracle.com/virtualization>

Burn the Oracle VM Server ISO file to a bootable CDROM.

You can install Oracle VM Server from a number of sources:

- Local CDROM
- Hard drive
- NFS server
- FTP server
- HTTP server

To install Oracle VM Server from a CDROM, see [Section 1.5, "Installing Oracle VM Server From a CDROM"](#). To install Oracle VM Server from a hard drive, NFS server, FTP server, or HTTP server, see [Section 1.6, "Installing Oracle VM Server From Other Sources"](#).

1.5 Installing Oracle VM Server From a CDROM

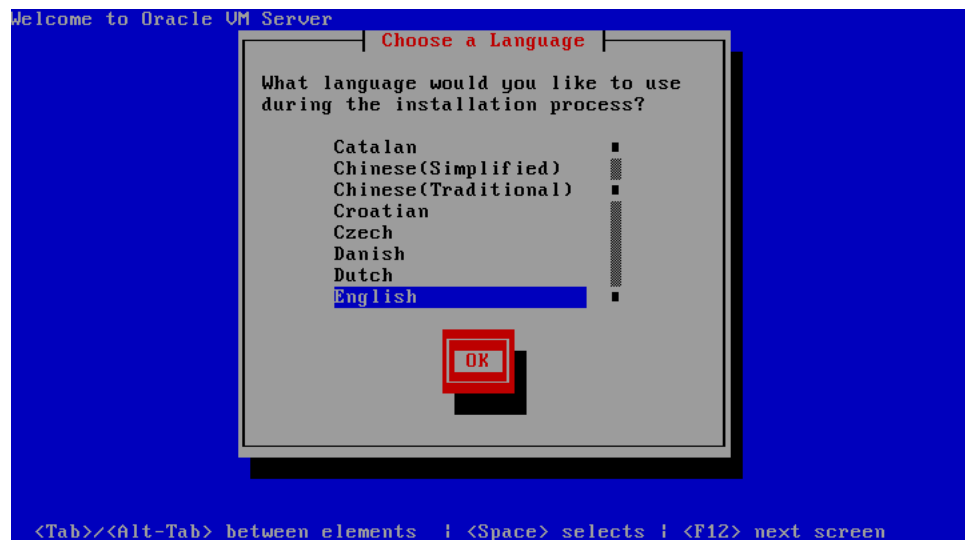
To install Oracle VM Server from a CDROM:

1. Insert the Oracle VM Server CDROM into your CDROM drive.
2. Boot the computer with the Oracle VM Server CDROM.
3. The **Oracle VM Server** screen is displayed.



Press **Enter** to begin the installation. If you do not press a key for one minute, the installer automatically starts. The installer is only available in text mode.

4. The **Language Selection** screen is displayed.



Select the operating system language from the list of available options. The language you select becomes the default language for the operating system. Selecting the appropriate language also helps target your time zone configuration later in the installation.

Select **OK** and press **Enter**.

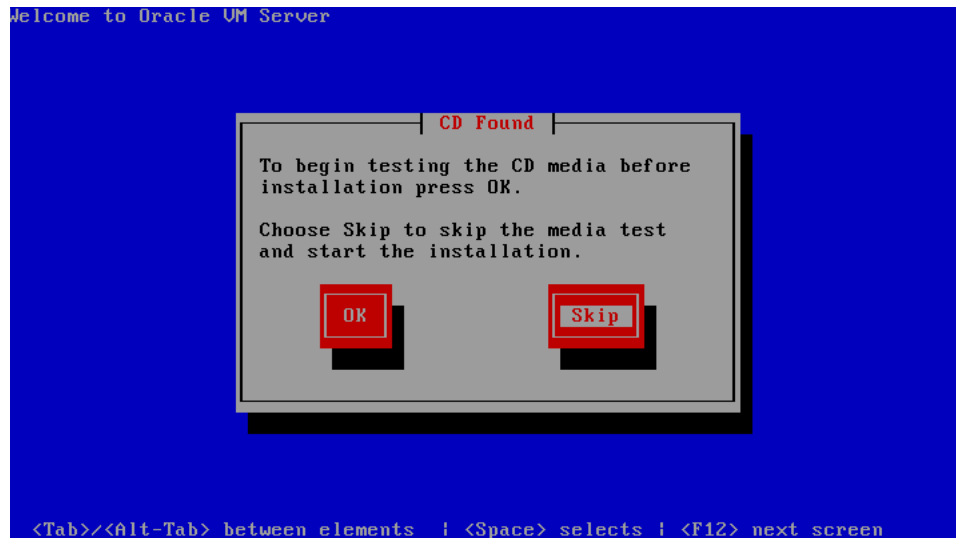
5. The **Keyboard Type** screen is displayed.



Select the keyboard layout type (for example, **us** for U.S. English) from the list of available options. The keyboard you select becomes the default keyboard for the operating system.

Select **OK** and press **Enter**.

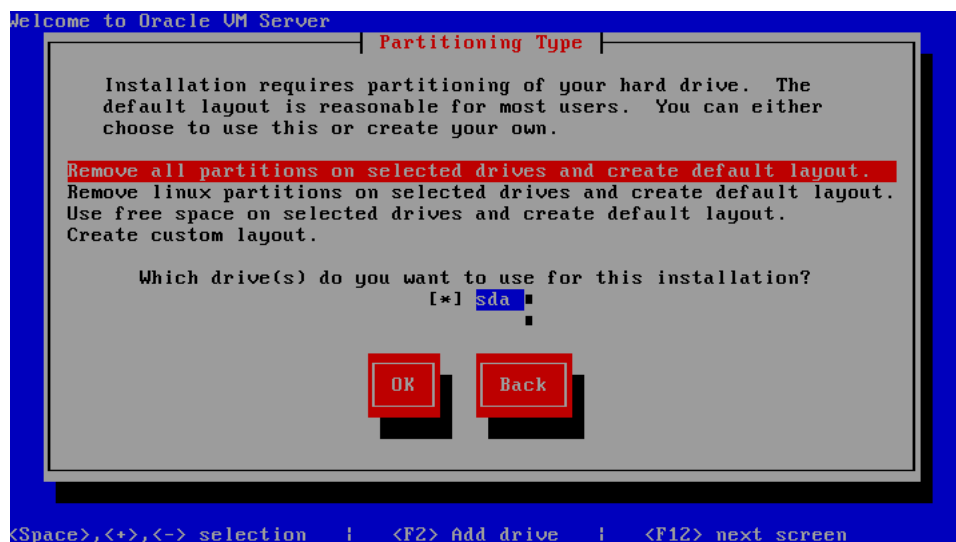
6. The **CD Found** screen is displayed.



If you want to make sure the CDROM has been created correctly you can have the installer test it for errors. To test the CDROM, select **OK** and press **Enter**. The CDROM is tested and any errors are reported.

To skip media testing and continue with the install, select **Skip** and press **Enter**.

7. The **Partitioning Type** screen is displayed.



Select whether you want to:

- Remove all partitions and create a new default partition layout
- Remove all Linux partitions and create a new default partition layout
- Use the free space on selected drives to create a new default partition layout
- Create a custom partition layout

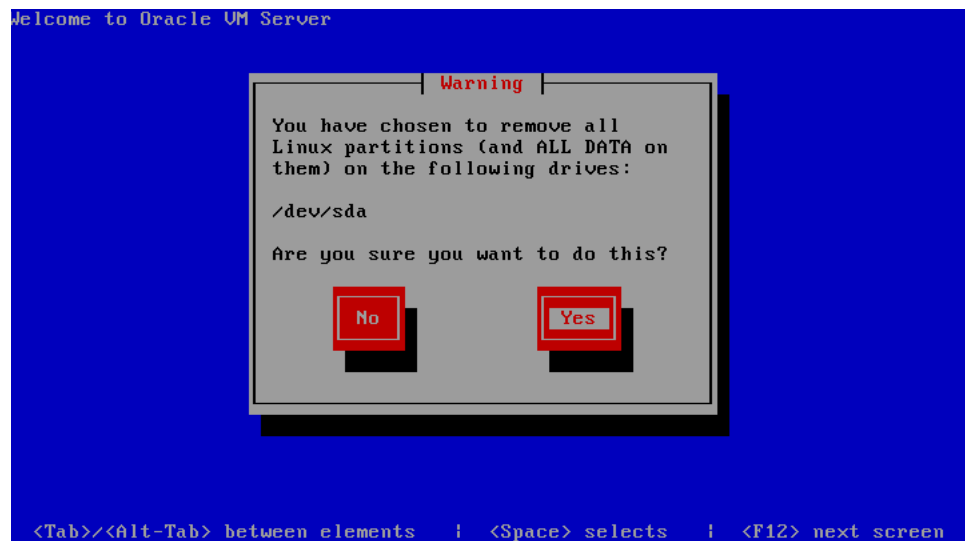
Oracle recommends you use a default partition layout.

Note: As the Oracle VM Server installer can only be run in text mode, you cannot set up LVM (Logical Volume Manager). If you want to create an LVM configuration, press **Alt + F2** to use the terminal and run the `lvm` command. To return to the Oracle VM Server installer, press **Alt + F1**.

Select which drive you want to use for the installation.

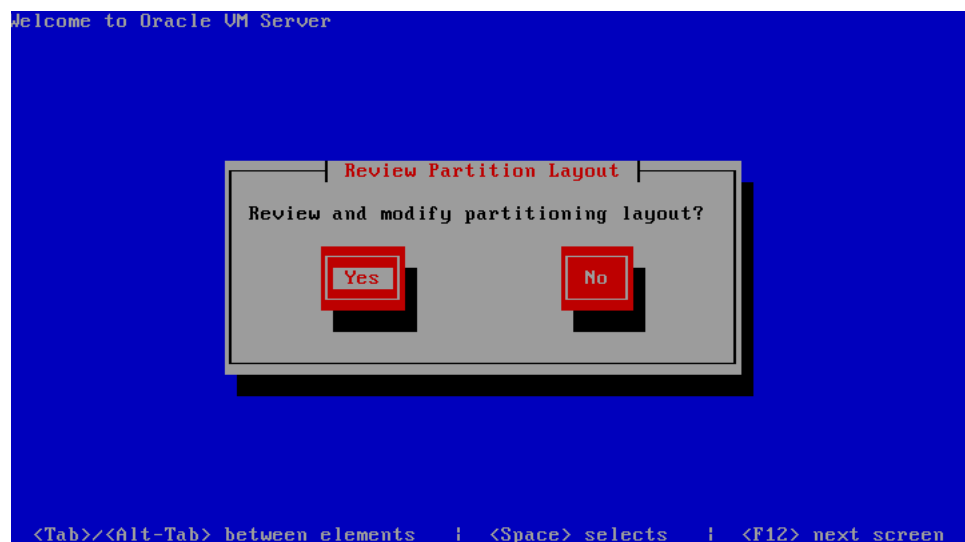
Select **OK** and press **Enter**.

8. If you selected to remove a partition, a **Warning** screen is displayed to confirm that you want to remove the partition(s), including the data contained on any partitions.



Select **Yes** and press **Enter**.

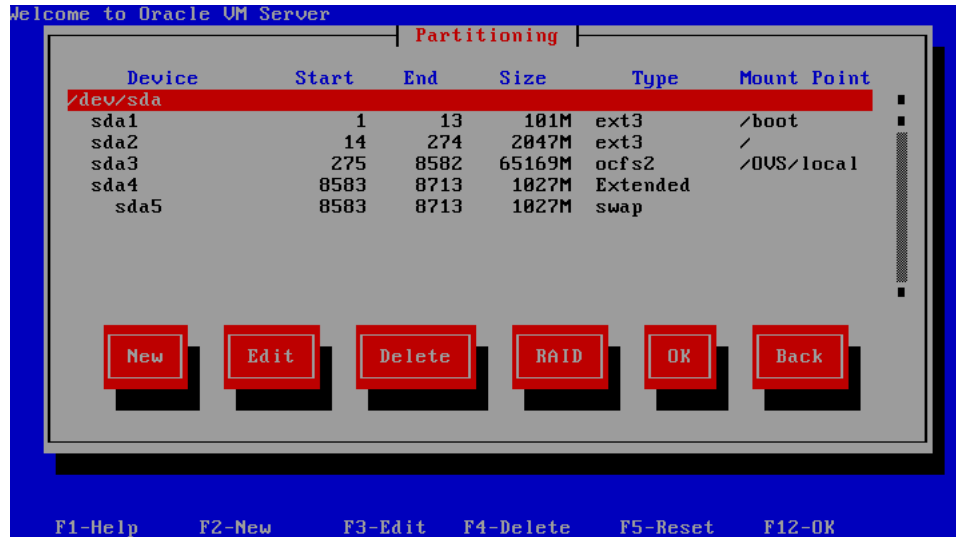
9. The **Review Partition Layout** screen is displayed.



If you do not want to review the partition layout and accept the default partition layout, select **No** and press **Enter**.

If you want to review the partition layout, select **Yes** and press **Enter**.

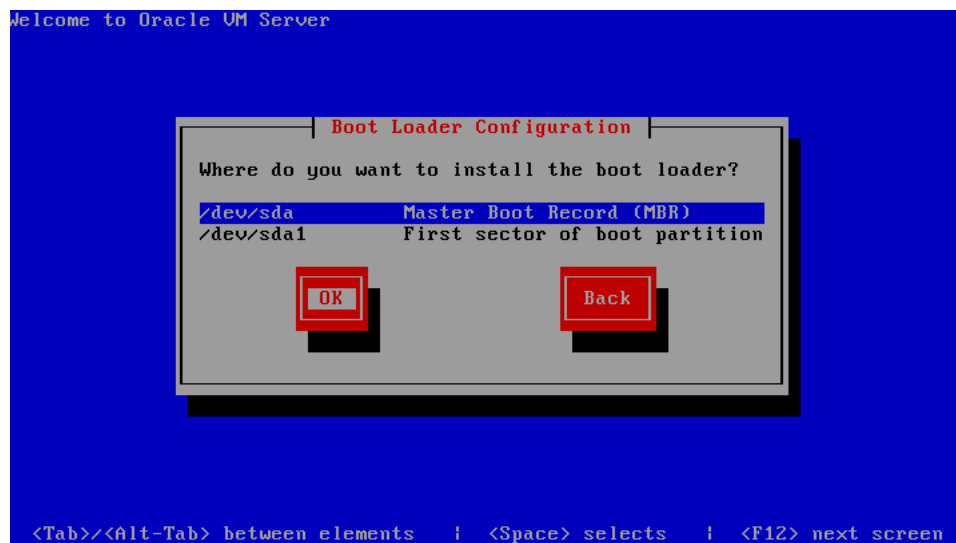
The **Partitioning** screen is displayed.



Review the partition layout, and make any changes you want.

Select **OK** and press **Enter** to save any changes.

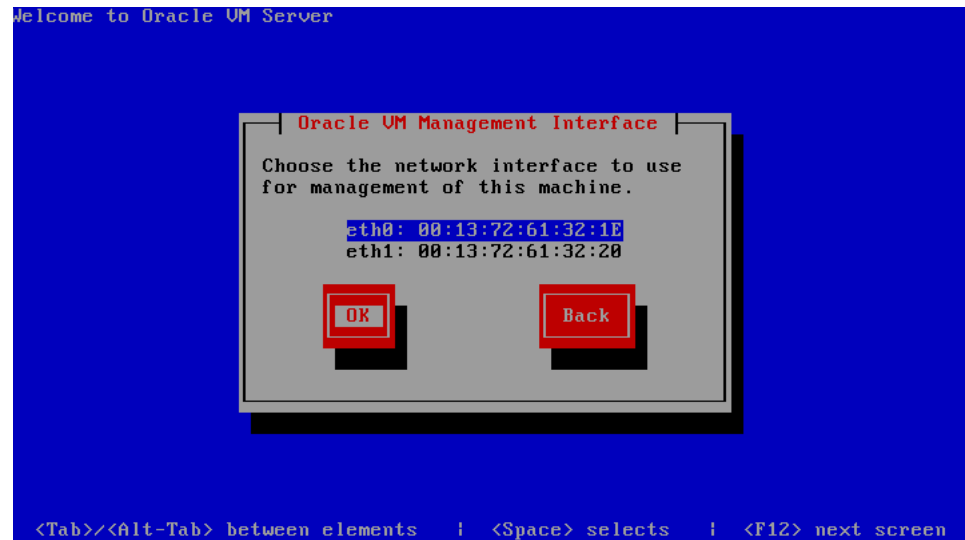
10. The **Boot Loader Configuration** screen is displayed.



Select **Master Boot Record (MBR)** or **First sector of boot partition** as the location to install the boot loader.

Select **OK** and press **Enter**.

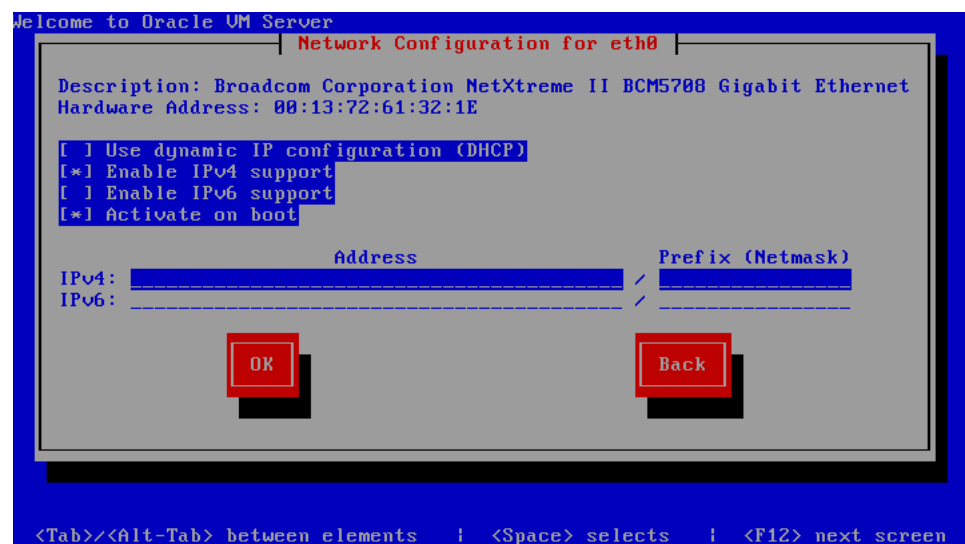
11. The **Oracle VM Management Interface** screen is displayed.



Select the network interface to use for management of the computer.

Select **OK** and press **Enter**.

- The **Network Configuration for eth*n*** screen is displayed.



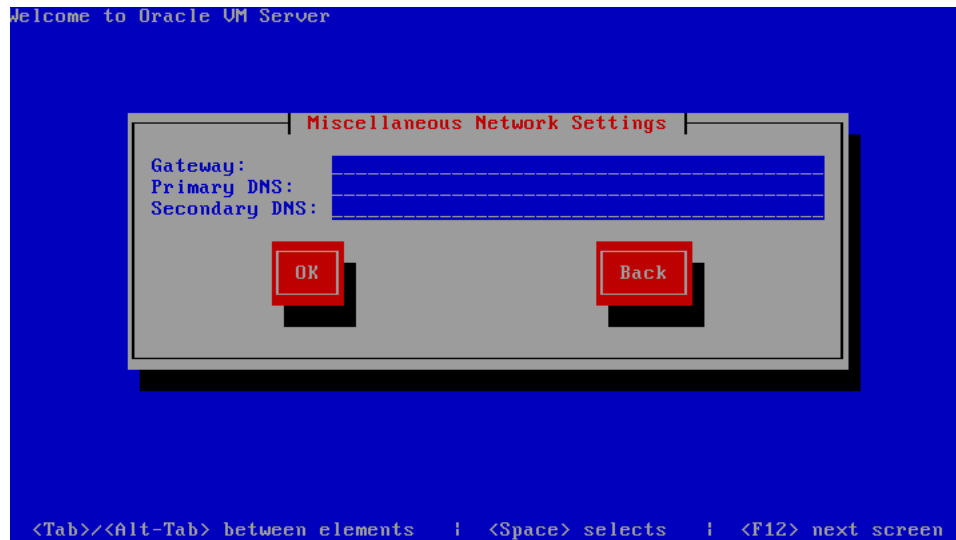
If your computer uses a static IP address, select whether you want to enable IPv4 and/or IPv6 support. Enter the IP address and prefix (netmask) for your computer. IPv4 details must be entered if you are performing an installation using an NFS drive. IPv4 support is enabled by default.

If your computer uses DHCP to assign its IP address, select **Use dynamic IP configuration (DHCP)**. See [Section 1.3, "Network Requirements"](#) for more information on using DHCP with Oracle VM Server.

Select whether you want to enable the network configuration each time you boot the computer. This is enabled by default.

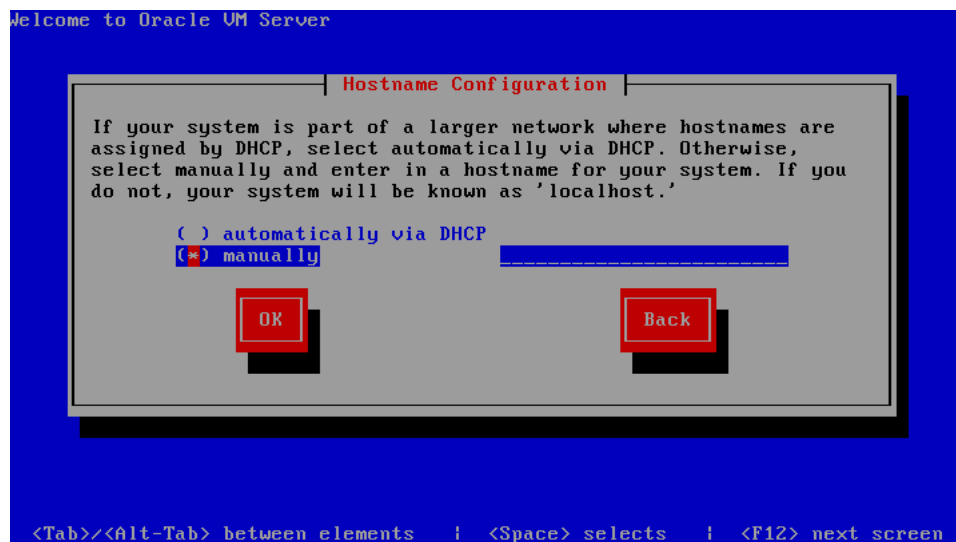
Select **OK** and press **Enter**.

- The **Miscellaneous Network Settings** screen is displayed.



Enter the Gateway, Primary DNS and optional Secondary DNS in the fields.
 Select **OK** and press **Enter**.

14. The **Hostname Configuration** screen is displayed.

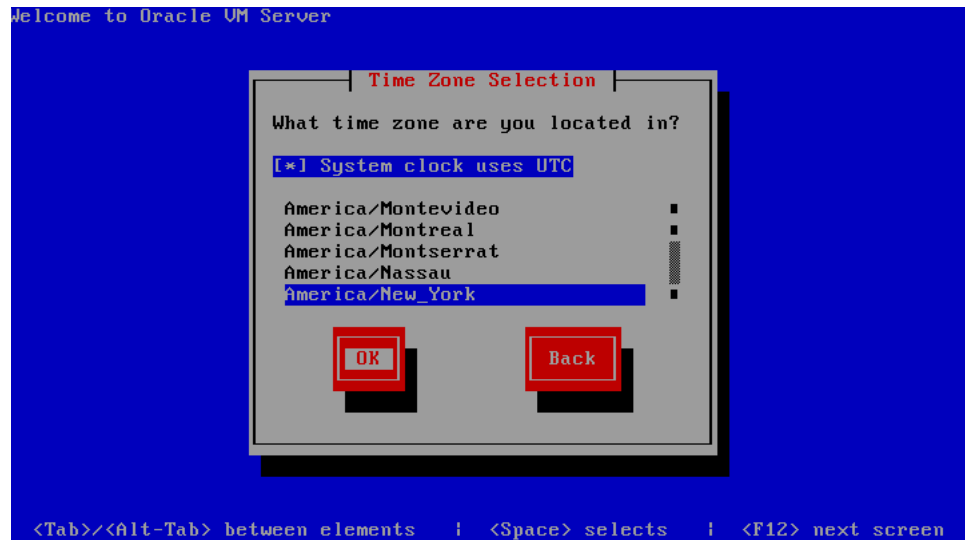


If your machine has its own hostname, select **manually** and enter the hostname or IP address.

If your machine uses DHCP to assign its hostname, select **automatically via DHCP**. See [Section 1.3, "Network Requirements"](#) for more information on using DHCP with Oracle VM Server.

Select **OK** and press **Enter**.

15. The **Time Zone Selection** screen is displayed.



If your operating system uses Coordinated Universal Time (UTC), select **System clock uses UTC**.

Select your time zone by selecting the city closest to your computer's physical location.

Select **OK** and press **Enter**.

16. The Oracle VM Agent password screen is displayed.



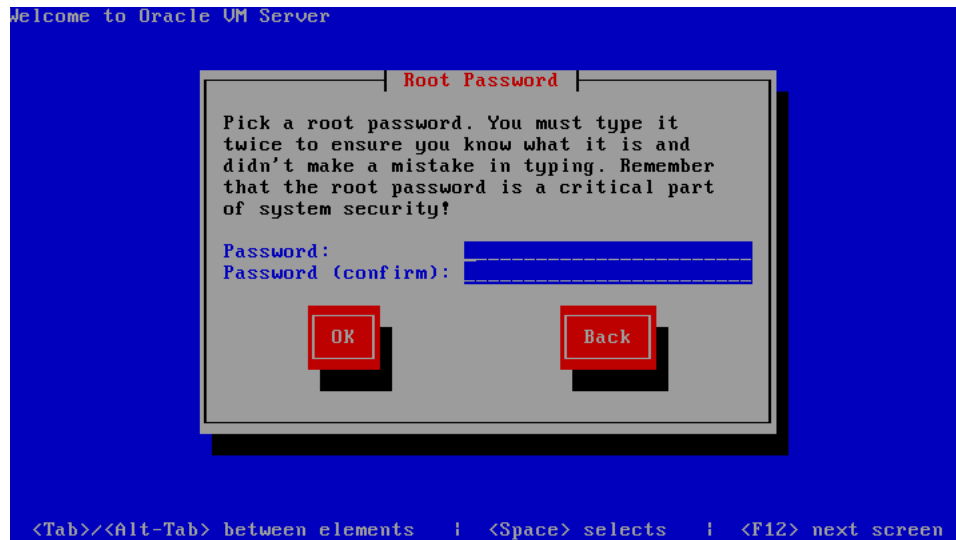
Enter a password to be used for the Oracle VM Agent in the **Password** field. This password is used by Oracle VM Manager to manage and monitor Oracle VM Server, and the guests created and running within it.

Re-enter the password in the **Password (confirm)** field.

The password characters are not echoed to the screen.

Select **OK** and press **Enter**. If the two passwords do not match, the installer prompts you to enter them again.

17. The Root Password screen is displayed.



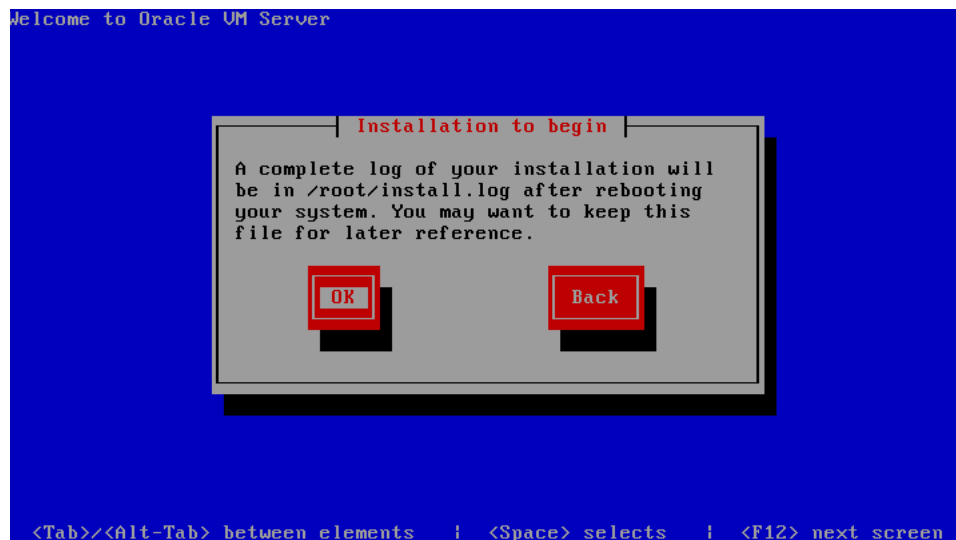
Enter a password for the `root` user in the **Password** field. The `root` password must be at least six characters long.

Re-enter the password in the **Password (confirm)** field.

The password characters are not echoed to the screen.

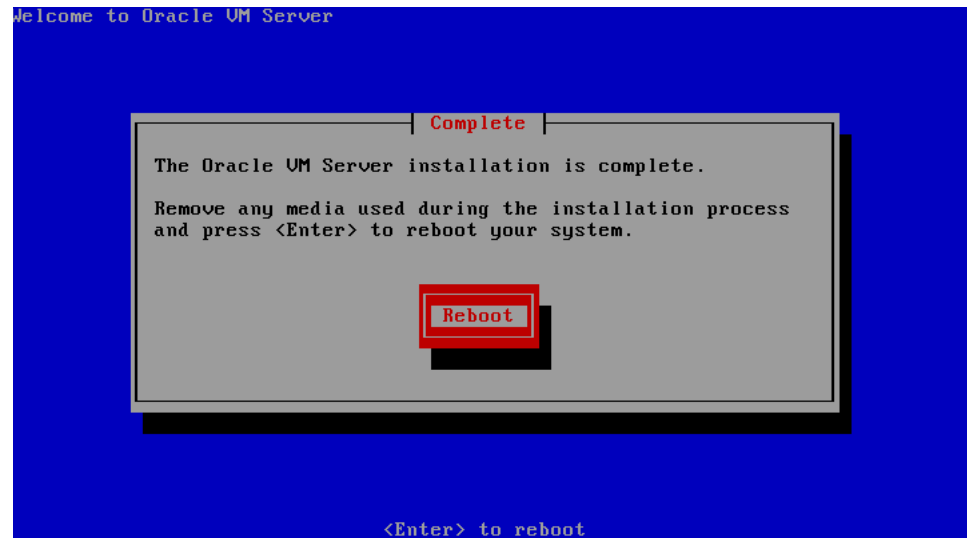
Select **OK** and press **Enter**. If the two passwords do not match, the installer prompts you to enter them again.

18. The **Installation to begin** screen is displayed.



Select **OK** and press **Enter**. The installer installs and configures Oracle VM Server.

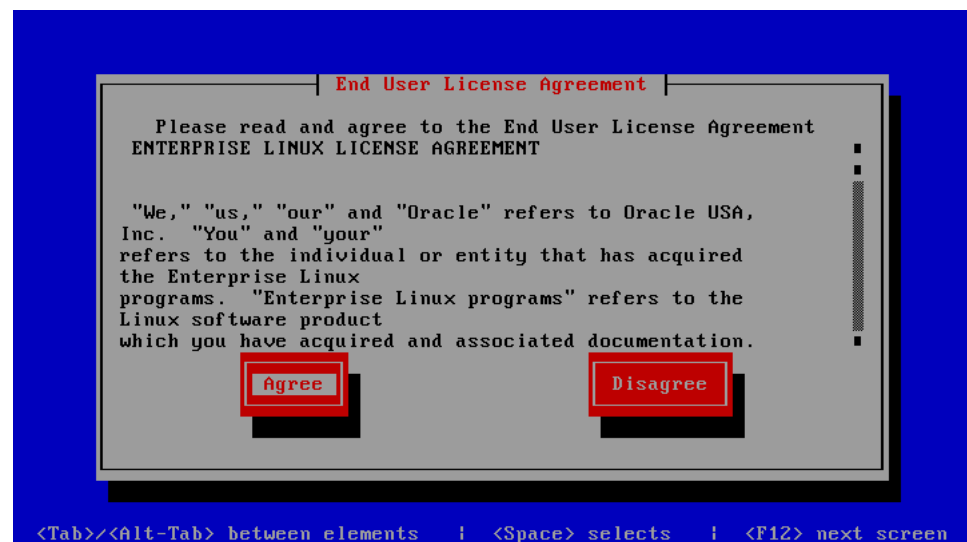
19. When all files are installed and configuration complete, the **Complete** screen is displayed.



Remove the Oracle VM Server CDROM.

Select **Reboot** and press **Enter**. The computer reboots.

20. The **End User License Agreement** screen is displayed.



Review the license agreement. If you agree to the terms of the license agreement, select **Agree** and press **Enter**.

21. System information similar to the following example is displayed in the Oracle VM Server console:

```
Oracle VM server release 2.1
Hypervisor running in 64 bit mode with Hardware Virtualization support.
Total system memory : 4095 Mb.

Network :
Management Interface : eth0(Up)           Mac Address : 00:13:72:61:32:1E
Management IP address : 139.185.48.227

CPU :
cpu family      : 6
model          : 15
model name     : Intel(R) Xeon(R) CPU           5150 @ 2.66GHz
stepping      : 6
ca-ostest227m login:
```

22. The Oracle VM Server login prompt is displayed. Log into Oracle VM Server as `root`, with the password you set during the install.

The Oracle VM Server installation is complete. The Oracle VM Agent is started automatically and restarts each time the computer is rebooted.

Note: A log of the install is located in `/root/install.log`. If the install fails, review this log file for help identifying the cause.

1.6 Installing Oracle VM Server From Other Sources

This section discusses installing Oracle VM Server from a hard drive, NFS server, FTP server, or HTTP server. All the installations in this section assume that the Oracle VM Server ISO file is available at the location being used in the installation. To install Oracle VM Server:

1. Insert the Oracle VM Server CDROM into your CDROM drive.
2. Boot the computer with the Oracle VM Server CDROM.
3. The **Oracle VM Server** screen is displayed.



At the **boot:** prompt, enter

```
linux askmethod
```

Press **Enter**.

4. The **Language Selection** screen is displayed.



Select the operating system language from the list of available options. The language you select becomes the default language for the operating system. Selecting the appropriate language also helps target your time zone configuration later in the installation.

Select **OK** and press **Enter**.

5. The **Keyboard Type** screen is displayed.



Select the keyboard layout type (for example, **us** for U.S. English) from the list of available options. The keyboard you select becomes the default keyboard for the operating system.

Select **OK** and press **Enter**.

6. The **Installation Method** screen is displayed.



Continue the installation with the section relevant to your install location selection:

- Section 1.6.1, "Installing Oracle VM Server From a Hard Drive"
- Section 1.6.2, "Installing Oracle VM Server From an NFS Image"
- Section 1.6.3, "Installing Oracle VM Server From an FTP Server"
- Section 1.6.4, "Installing Oracle VM Server From an HTTP Server"

1.6.1 Installing Oracle VM Server From a Hard Drive

To install Oracle VM Server from a hard drive:

1. Select **Hard drive** from the list of installation methods.
Select **OK** and press **Enter**.
2. The **Select Partition** screen is displayed.



Select the partition containing the Oracle VM Server ISO file. The partition must be formatted with an EXT2 or VFAT file system, and cannot be a logical volume. If the partition you want is not listed, press **F2** to configure additional devices.

Enter the directory containing the Oracle VM Server ISO image in the **Directory holding images** field. If the Oracle VM Server ISO file is in the root (top-level) directory of a partition, enter a / (slash). If the Oracle VM Server ISO file is in a subdirectory of a mounted partition, enter the name of the directory containing the file within that partition. For example, if the partition on which the Oracle VM Server ISO file is mounted is `/myhome/`, and the Oracle VM Server ISO file is in `/myhome/new/`, enter `/new/`.

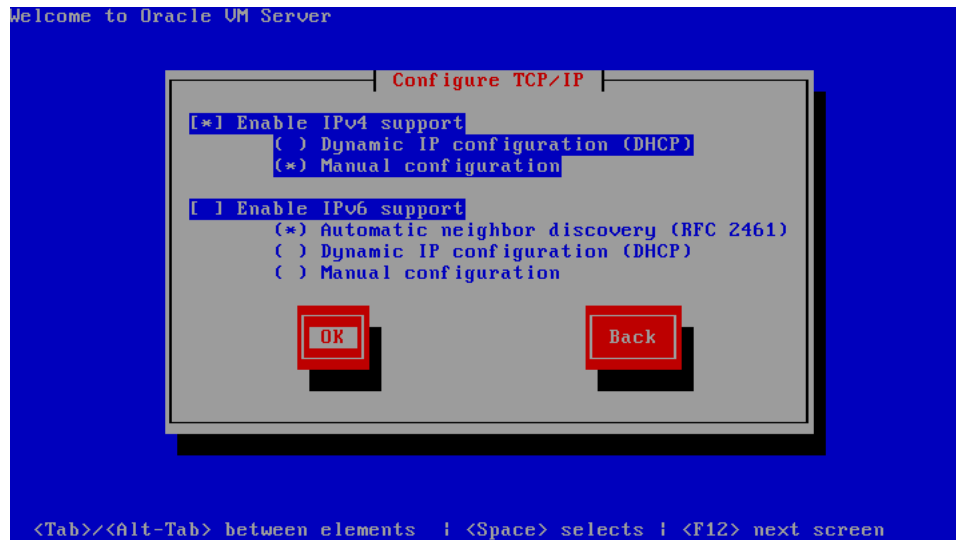
Select **OK** and press **Enter**.

See step 7. in Section 1.5, "Installing Oracle VM Server From a CDROM" to continue the installation.

1.6.2 Installing Oracle VM Server From an NFS Image

You can install Oracle VM Server from an NFS (Network File System) drive with either the Oracle VM Server ISO file or a mirror image. To install Oracle VM Server from an NFS drive:

1. Select **NFS image** from the list of installation methods.
Select **OK** and press **Enter**.
2. The **Configure TCP/IP** screen is displayed.

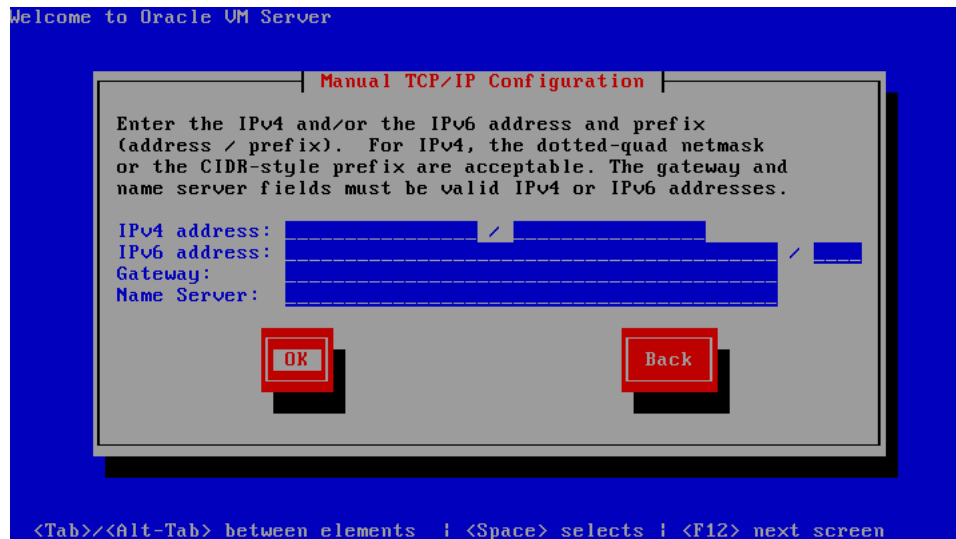


If your machine has its own IP address, select **Manual configuration** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. IPv4 details must be entered.

If your machine uses DHCP to assign its IP address, select **Dynamic IP configuration (DHCP)** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. See [Section 1.3, "Network Requirements"](#) for more information on using DHCP with Oracle VM Server.

Select **OK** and press **Enter**.

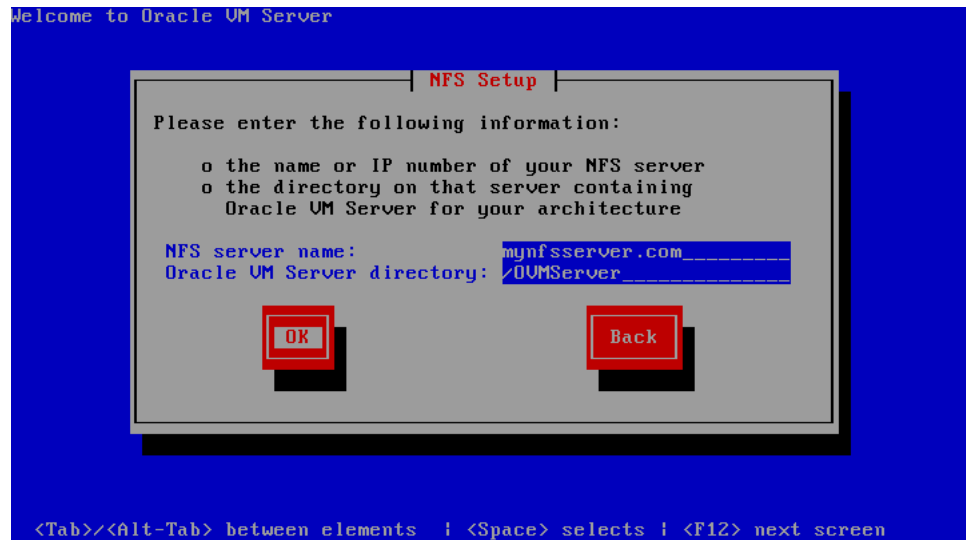
3. If you selected Manual configuration, the **Manual TCP/IP Configuration** screen is displayed.



Enter the **IPv4 address**, **IPv6 address**, **Gateway** and **Name Server**.

Select **OK** and press **Enter**.

4. The **NFS Setup** screen is displayed.



Enter the domain name or IP address of your NFS server in the **NFS server name** field.

If the NFS server is exporting a mirror of the Oracle VM Server installation tree, enter the directory which contains the root of the installation tree. If the NFS server is exporting the Oracle VM Server ISO file, enter the directory which contains the ISO file.

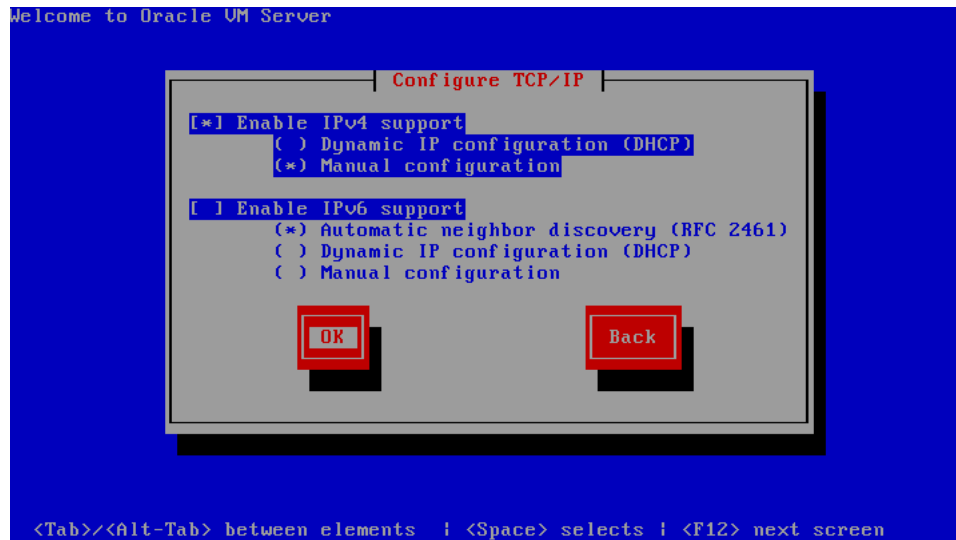
Select **OK** and press **Enter**.

See step 7. in [Section 1.5, "Installing Oracle VM Server From a CDROM"](#) to continue the installation.

1.6.3 Installing Oracle VM Server From an FTP Server

To install Oracle VM Server from an FTP server:

1. Select **FTP** from the list of installation methods.
Select **OK** and press **Enter**.
2. The **Configure TCP/IP** screen is displayed.

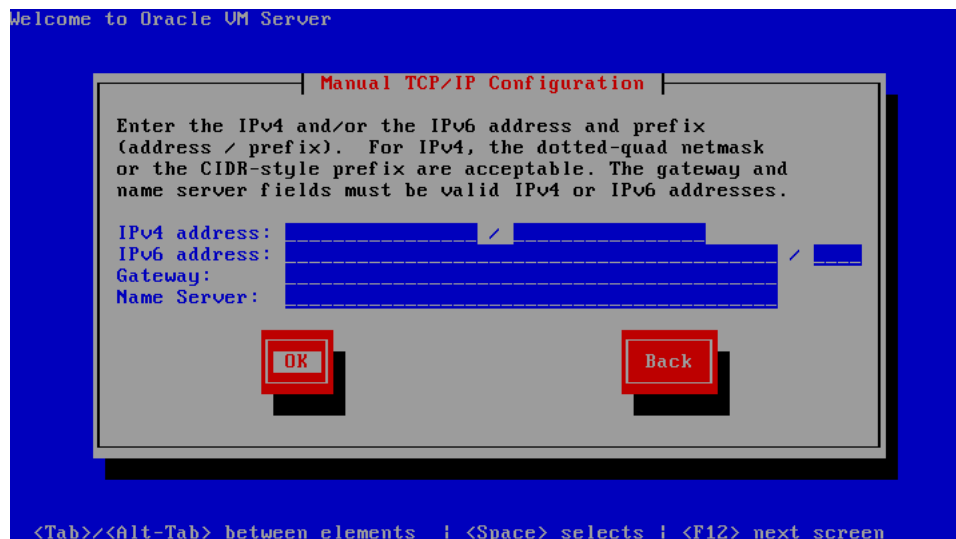


If your machine has its own IP address, select **Manual configuration** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. IPv4 details must be entered.

If your machine uses DHCP to assign its IP address, select **Dynamic IP configuration (DHCP)** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. See [Section 1.3, "Network Requirements"](#) for more information on using DHCP with Oracle VM Server.

Select **OK** and press **Enter**.

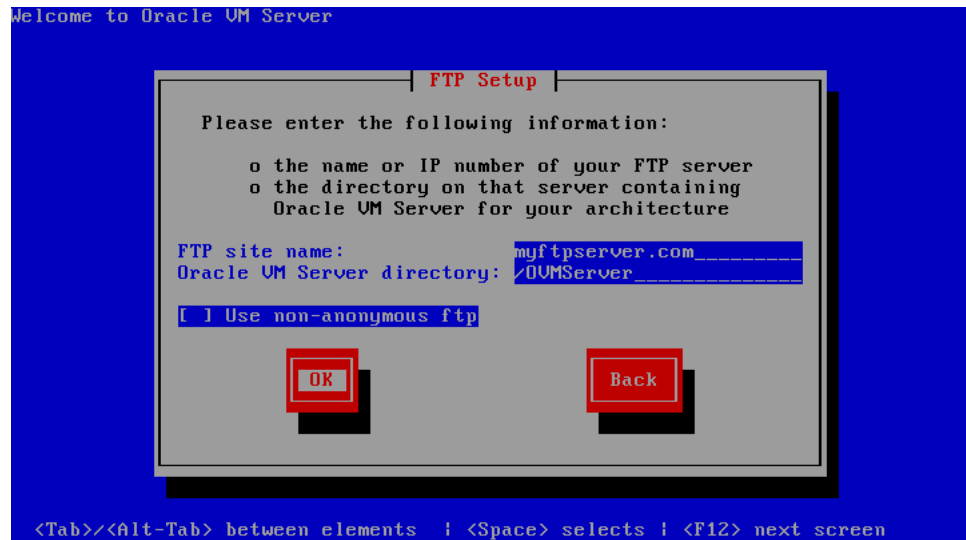
3. If you selected Manual configuration, the **Manual TCP/IP Configuration** screen is displayed.



Enter the **IPv4 address**, **IPv6 address**, **Gateway** and **Name Server**.

Select **OK** and press **Enter**.

4. The **FTP Setup** screen is displayed.



Enter the domain name or IP address of your FTP server in the **FTP site name** field.

Enter the name of the directory containing the variant directory for your architecture in the **Oracle VM Server directory** field. For example, if the FTP server contains the directory:

```
/mirrors/ovs/arch/variant/
```

Enter

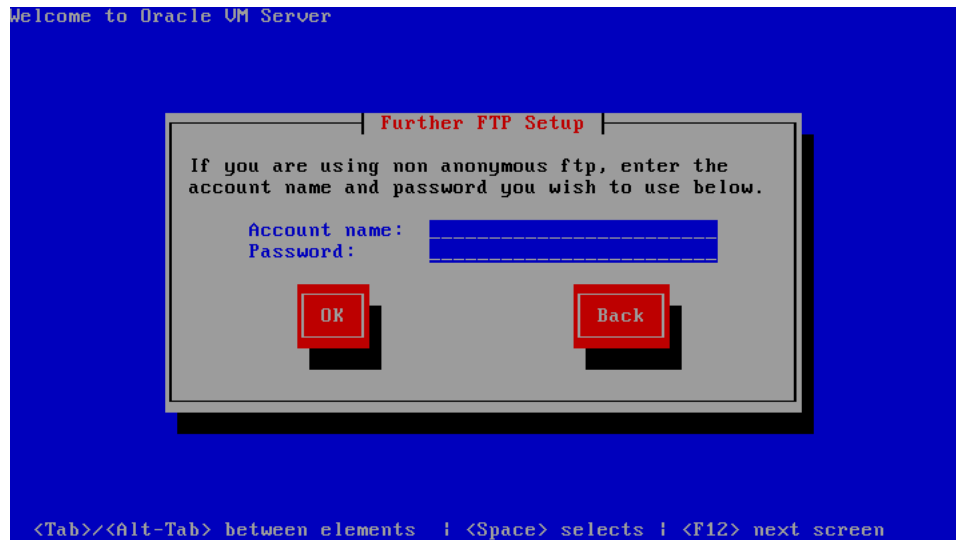
```
/mirrors/ovs/i386/Server
```

Replace *arch* with the architecture type of your system, for example, i386, ia64, ppc, or s390x. Replace *variant* with the variant that you are installing, for example, Client, Server, Workstation, and so on.

Select **Use non-anonymous ftp** if you must enter login credentials to access the FTP server.

Select **OK** and press **Enter**.

5. If you selected **Use non-anonymous ftp**, the **Further FTP Setup** screen is displayed.



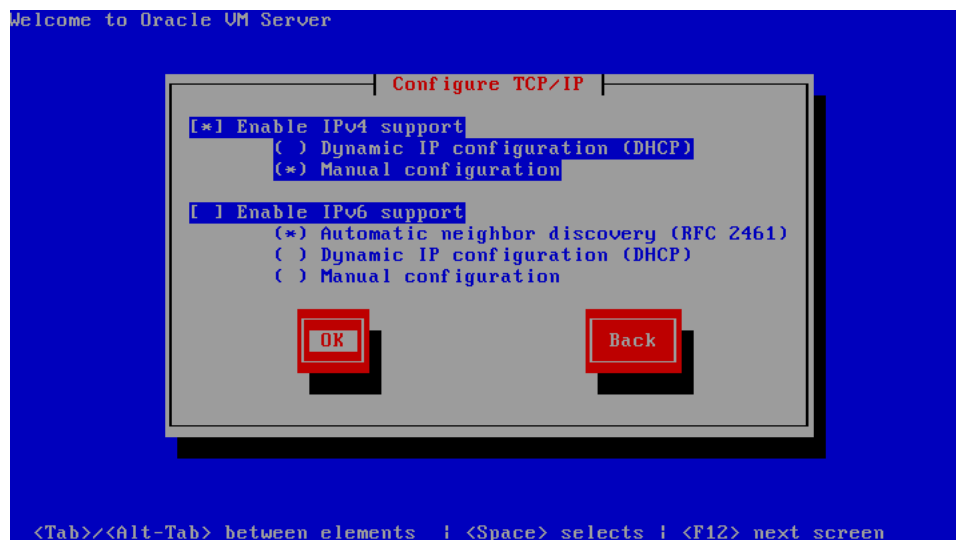
Enter the FTP server username in the **Account name** field, and the FTP server password in the **Password** field. Select **OK** and press **Enter**.

See step 7. in Section 1.5, "Installing Oracle VM Server From a CDRROM" to continue the installation.

1.6.4 Installing Oracle VM Server From an HTTP Server

To install Oracle VM Server from an HTTP server:

1. Select **HTTP** from the list of installation methods.
Select **OK** and press **Enter**.
2. The **Configure TCP/IP** screen is displayed.

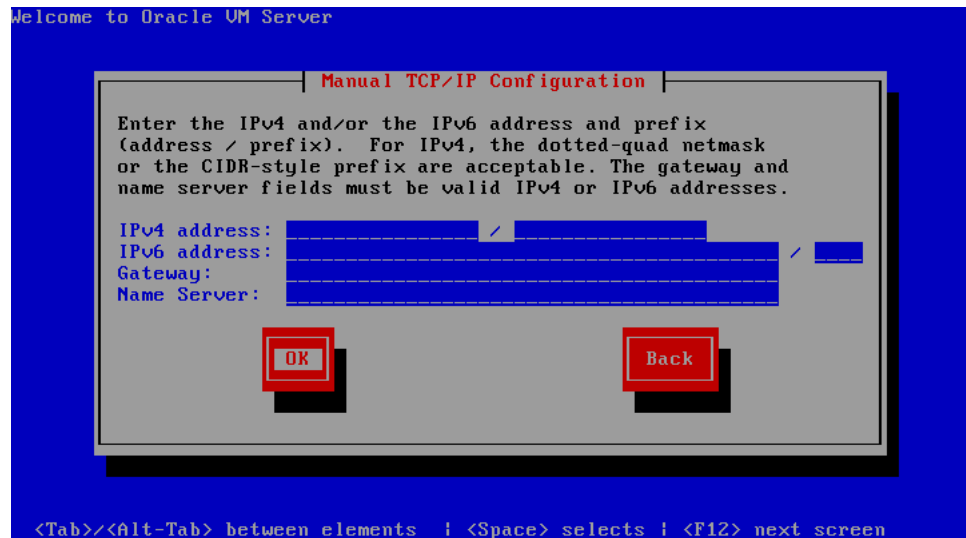


If your machine has its own IP address, select **Manual configuration** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. IPv4 details must be entered.

If your machine uses DHCP to assign its IP address, select **Dynamic IP configuration (DHCP)** under **Enable IPv4 support** and optionally under **Enable IPv6 support**. See [Section 1.3, "Network Requirements"](#) for more information on using DHCP with Oracle VM Server.

Select **OK** and press **Enter**.

3. If you selected Manual configuration, the **Manual TCP/IP Configuration** screen is displayed.



Enter the IPv4 address, IPv6 address, Gateway and Name Server.

Select **OK** and press **Enter**.

4. The **HTTP Setup** screen is displayed.



Enter the domain name or IP address of your HTTP server in the **Web site name** field.

Enter the name of the directory containing the variant directory for your architecture in the **Oracle VM Server directory** field. For example, if the HTTP server contains the directory:

```
/mirrors/ovs/arch/variant/
```

Enter

```
/mirrors/ovs/i386/Server
```

Replace *arch* with the architecture type of your system, for example, *i386*, *ia64*, *ppc*, or *s390x*. Replace *variant* with the variant that you are installing, for example, *Client*, *Server*, *Workstation*, and so on.

Select **OK** and press **Enter**.

See step 7. in [Section 1.5, "Installing Oracle VM Server From a CDROM"](#) to continue the installation.

I

- Installing Oracle VM Server
 - From a hard drive, 1-15
 - From an FTP server, 1-17
 - From an HTTP server, 1-20
 - From an NFS image, 1-15

L

- Log
 - Install log location, 1-12
- Logical Volume Manager
 - Installation restriction, 1-5

P

- Password
 - Oracle VM Agent, 1-9

R

- Requirements
 - Hardware, 1-1
 - Software, 1-1

