

## SUN MICROSYSTEMS

### OracleFusion Series JeOS Oracle Enterprise Linux virtualbox image setup

### Global Software Sales

Sun Project :	Oracle Fusion 11g Middleware
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## Oracle SOA Suite Hands On Exercises

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### 1. Document Control

#### 1.1. Revision History

Version	Author	Reason For Issue	Date
0.1	Patrice.goutin@sun.com	Initial draft	01/15/2010

#### 1.2. Document Access Control

Section	Access Restrictions
All	Internal use only

## Oracle SOA Suite Hands On Exercises

### 2. Introduction

This tutorial is the 1<sup>st</sup> part of the following serie :

- Part1 - JeOS Oracle Enterprise Linux virtualbox image setup – this document
- Part2 – Oracle SOA Middleware Fusion 11gR1 installation & configuration on JeOS Oracle Enterprise Linux virtualbox image
- Part3 – jDeveloper installation & configuration

#### 2.1. The intention of the tutorial “Part1 - JeOS Oracle Enterprise Linux virtualbox image setup”

The purpose of this lab is to introduce you with the installation of JeOS Oracle Enterprise Linux operating system under VirtualBox in order to setup Oracle SOA Middleware Fusion 11gR1.

#### 2.2. What is JeOS Oracle Enterprise Linux?

JeOS Oracle Enterprise Linux is a specialised installation of **redHat 5.4 Server** with a tuned kernel that only contains the base elements needed to run within a virtualized environment.

There is no limitation to distribute the JeOS Oracle Enterprise Linux internally at Sun Microsystems according to the following statement from the Oracle website as far as you agree the Oracle Export restrictions :

“With Oracle Enterprise Linux JeOS, anyone can put their applications on top of a small footprint, enterprise operating system and build a full stack virtual machine or Oracle VM Template. The resulting Oracle VM Template is freely re-distributable, without trial license requirements, and is backed by enterprise-class support.”

source

- [http://www.oracle.com/technology/software/products/virtualization/vm\\_jeos.htm](http://www.oracle.com/technology/software/products/virtualization/vm_jeos.htm)
- source [http://www.oracle.com/technology/software/products/virtualization/vm\\_jeos.htm](http://www.oracle.com/technology/software/products/virtualization/vm_jeos.htm)

#### 2.3. The intention of JeOS Oracle Enterprise Linux virtualbox image ?

The JeOS Oracle Enterprise Linux virtualbox will be used to install a complete Oracle SOA Middleware Fusion 11gR1 system. The SOA system runs on Oracle WebLogic Server 10.3.2, withan Oracle-XE database being used as a SOA's dehydration store. The virtual image contains all the required elements to start executing a full SOA demonstration in a few minutes.

The intention of this image is to allow users to get familiar with Oracle SOA Middleware Fusion 11gR1 very quickly. This image offers a time-saving approach to deploy a fully configured SOA system.

In this JeOS Oracle Enterprise Linux virtualbox image we will setup the following software in the order it is shown.

##### 1. Database

If you don't already have an Oracle database installed, choose [Oracle Express Edition](#) for a small footprint database. (Oracle XE is suitable for development only. Ignore the warning during installation about the database version as that pertains to production installations.)

##### 2. WebLogic Server

Download WebLogic Server from the [FMW download page](#), in the **Runtime Software** section.

##### 3. Repository Creation Utility

Download RCU from the [FMW download page](#), in the **Required Additional Software** section.

##### 4. SOA Suite

Download SOA Suite from the [FMW download page](#), in the **Runtime Software** section.

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On a separate system or your laptop, we will setup :

### 5. JDeveloper

Download JDeveloper from the [FMW download page](#). Look for **JDeveloper and Application Development Framework** in the **Required Addition Software** section.

#### SOA Extension for JDeveloper

Install the SOA Extension using the JDeveloper Update Center. From the JDeveloper menu choose **Help > Check for Updates**. In the **Update Wizard**, select **Search Update Centers** and ensure **Oracle Fusion Middleware Products** is checked ([screenshot](#)). Then ensure that **Oracle SOA Composite Editor** is checked ([screenshot](#), your version may not match the screenshot exactly). The SOA Extension is approximately 200 MB.



#### JeOS Oracle Enterprise Linux is a redhat 5.4 Server version

- redHat nash version : 5.1.19.6
- kernel version : 2.6.6.18-164-el5

## 3. Pre-Installing

### 3.1. Download

Download VirtualBox 3.1.2 or higher : <http://www.virtualbox.org/wiki/Downloads>

Download JeOS Oracle Enterprise Linux ( **Enterprise-R5-U4-Server-i386-dvd.iso** ) :  
[http://www.oracle.com/technology/software/products/virtualization/vm\\_jeos.html](http://www.oracle.com/technology/software/products/virtualization/vm_jeos.html)

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4. Setup & installation JeOS Oracle Enterprise Linux virtualbox image



This configuration has been made on MAC OS X 10.5, btw it is also applicable for Windows XP and Linux.

4.1. VirtualBox installation

We assume VirtualBox 3.1.2 is already installed on your system. For more information, please have a look to the VirtualBox User manual : <http://dlc-cdn-rd.sun.com/c1/virtualbox/3.1.2/UserManual.pdf>

4.2. Pre-Configuration of the JeOS Oracle Enterprise Linux virtualbox image

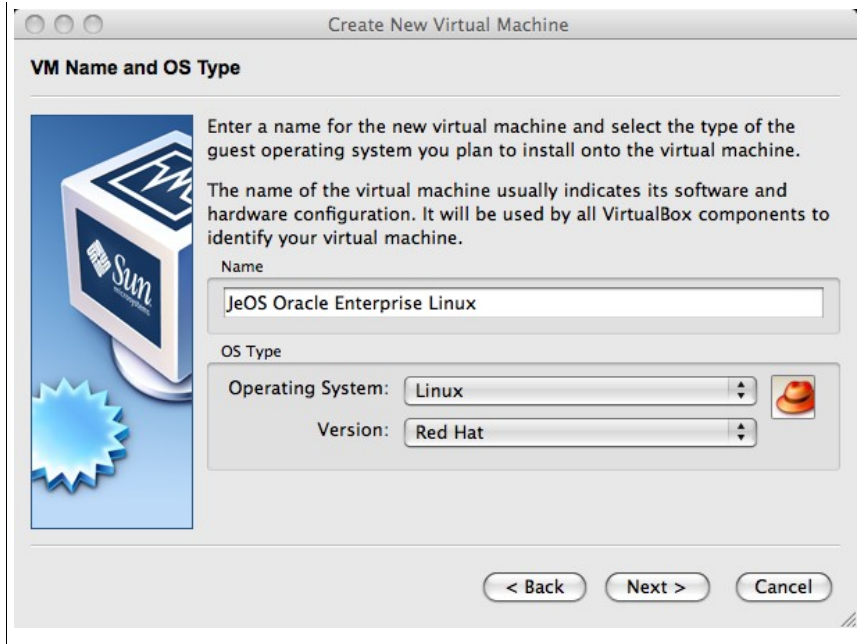
Step	Screenshot
Start VirtualBox	<p>The screenshot shows the Sun VirtualBox application window. On the left, there is a list of virtual machines: 'desktop-ubuntu-09-10' (Powered Off), 'OpenSolaris-webspace' (Powered Off), 'server-redhat-5.4' (Powered Off), 'server-redhat-64b-5.4' (Powered Off), and 'test' (Powered Off). The 'OpenSolaris-webspace' VM is selected, and its configuration details are shown on the right. The 'General' tab is active, displaying: Name: OpenSolaris-webspace, OS Type: OpenSolaris. The 'System' tab shows: Base Memory: 2444 MB, Processor(s): 2, Boot Order: Floppy, CD/DVD-ROM, Hard Disk, VT-x/AMD-V: Enabled, Nested Paging: Disabled. The 'Display' tab shows: Video Memory: 12 MB, 3D Acceleration: Enabled, 2D Video Acceleration: Disabled, Remote Display Server: Disabled.</p>
Create a new VirtualBox and click Next to proceed.	<p>The screenshot shows the 'Create New Virtual Machine Wizard' dialog box. The title bar reads 'Create New Virtual Machine'. The main text says: 'Welcome to the New Virtual Machine Wizard! This wizard will guide you through the steps that are necessary to create a new virtual machine for VirtualBox. Use the Next button to go the next page of the wizard and the Back button to return to the previous page.' There is an illustration of a Sun monitor and a blue starburst. At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>

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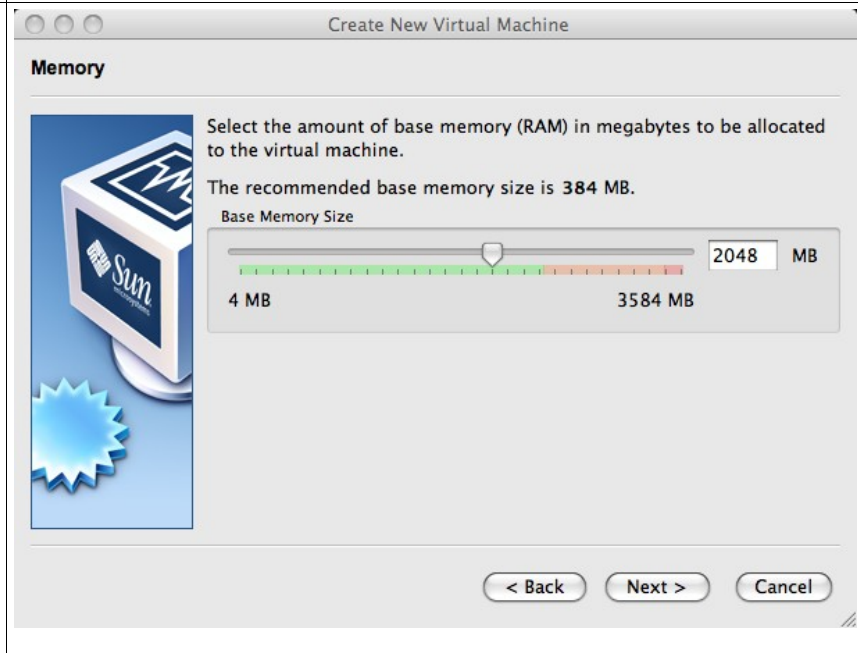
Provide a Name as "JeOS Oracle Enterprise Linux" and choose Operating System = Linux Version = RedHat and click Next to proceed.

Oracle Enterprise Linux is a redhat 5.4 Server version and is based on

- redHat nash version : 5.1.19.6
- kernel version : 2.6.6.18-164-el5



Define the Base Memory Size according to your host system and click Next to proceed.

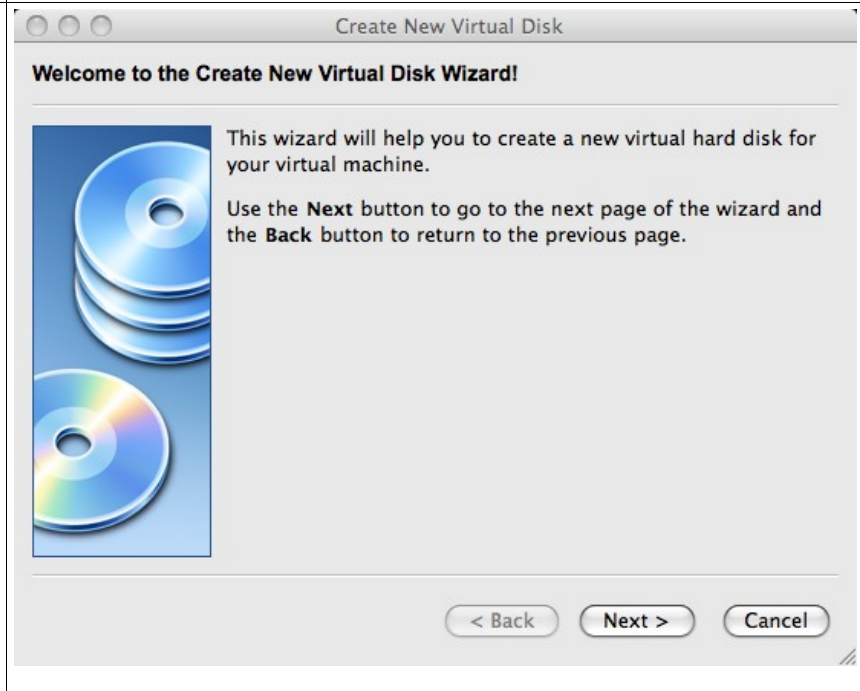


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Create a new hard disk for JeOS Oracle Enterprise Linux and click Next to proceed.

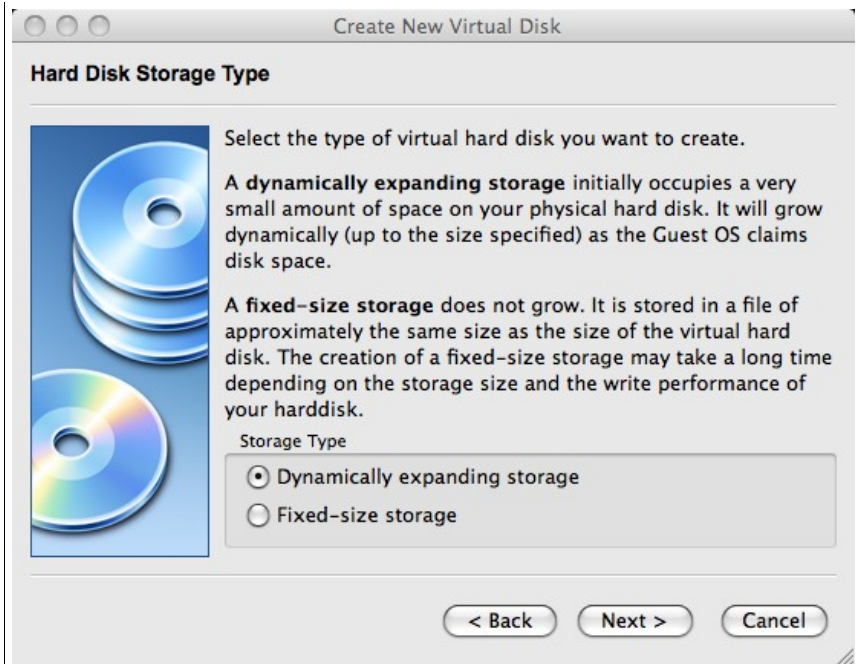


A wizard starts to help you in creating the hdd and click Next to proceed.

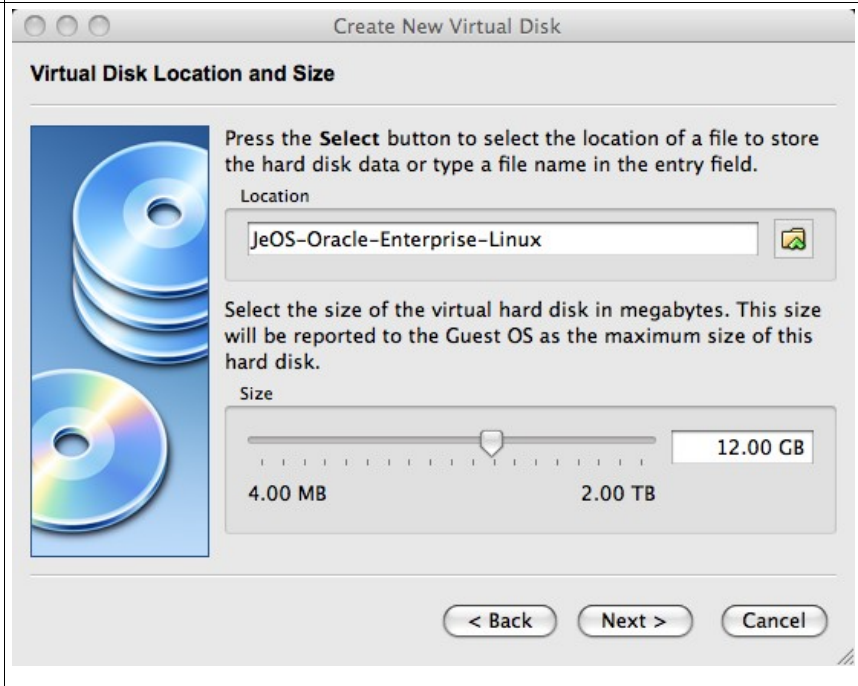


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Choose a dynamically expanding storage and click Next to proceed.

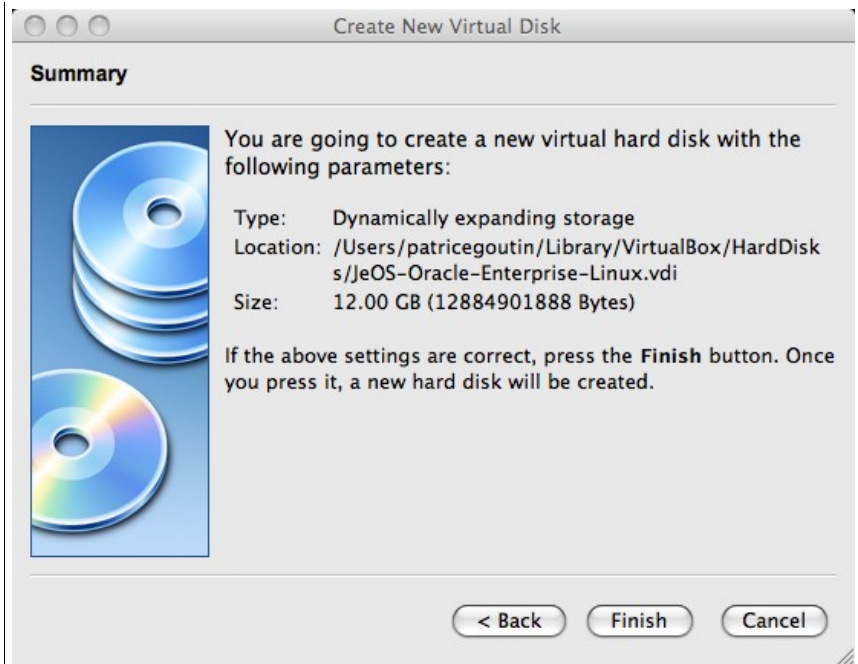


Define the maximum size of the hdd and click Next to proceed.

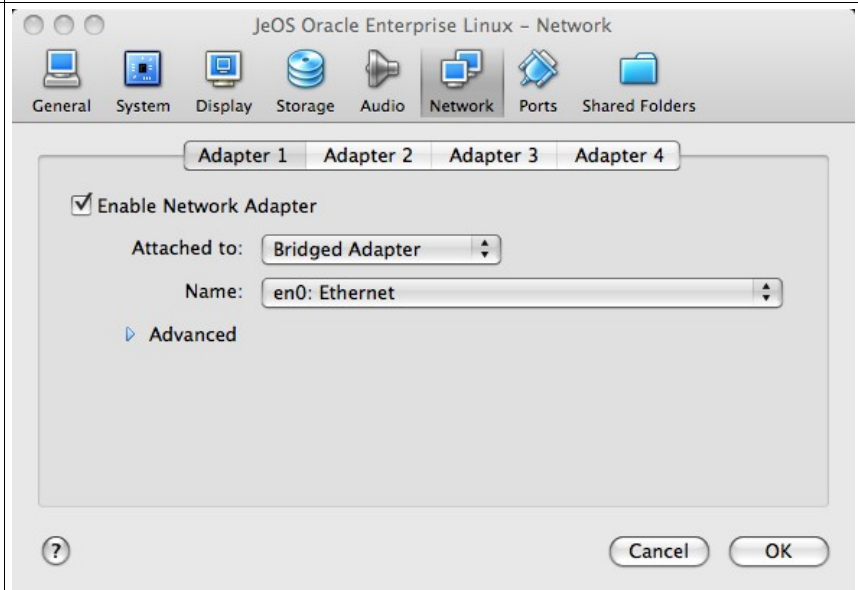


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Double-check your configuration and click Finish to proceed.



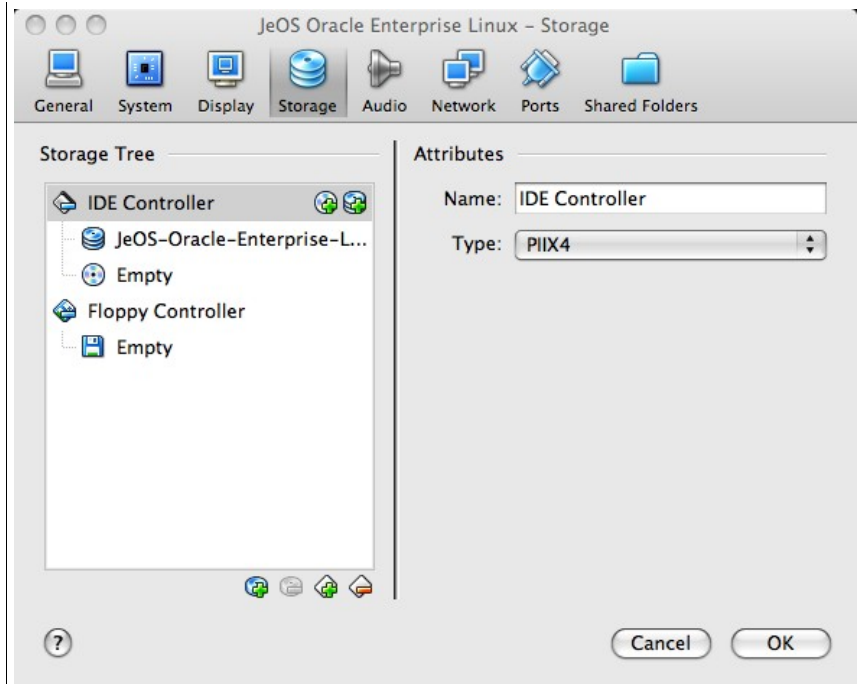
For the JeOS Oracle Enterprise Linux virtualbox, select the Network icon and configure the Network adapter as follow. Click OK to proceed.



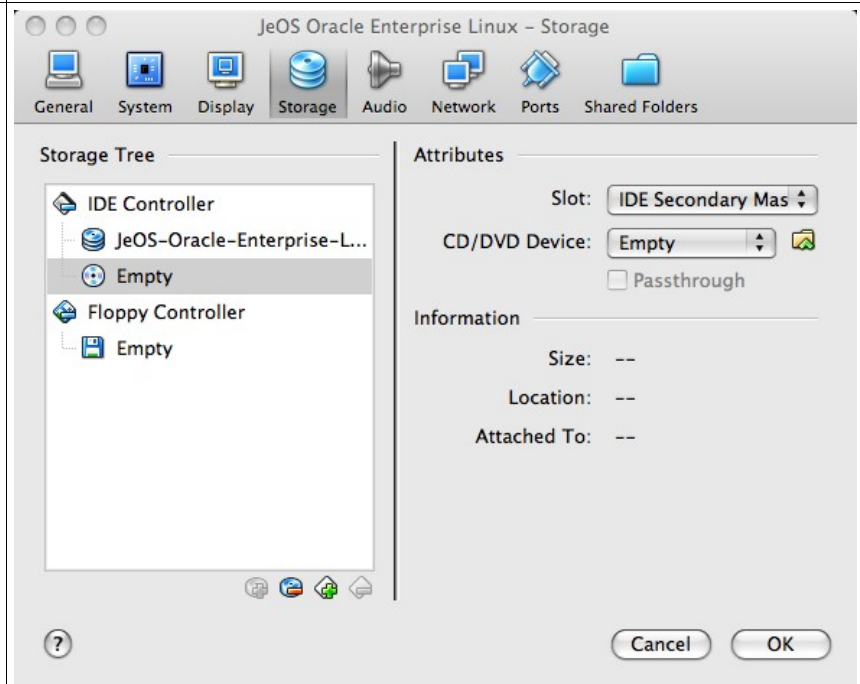
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For the JeOS Oracle Enterprise Linux virtualbox, select the Storage icon and configure the IDE adapter to add a new CDROM with the Enterprise-R5-U4-Server-i386-dvd.iso file

Click "Empty" icon from the IDE Controller

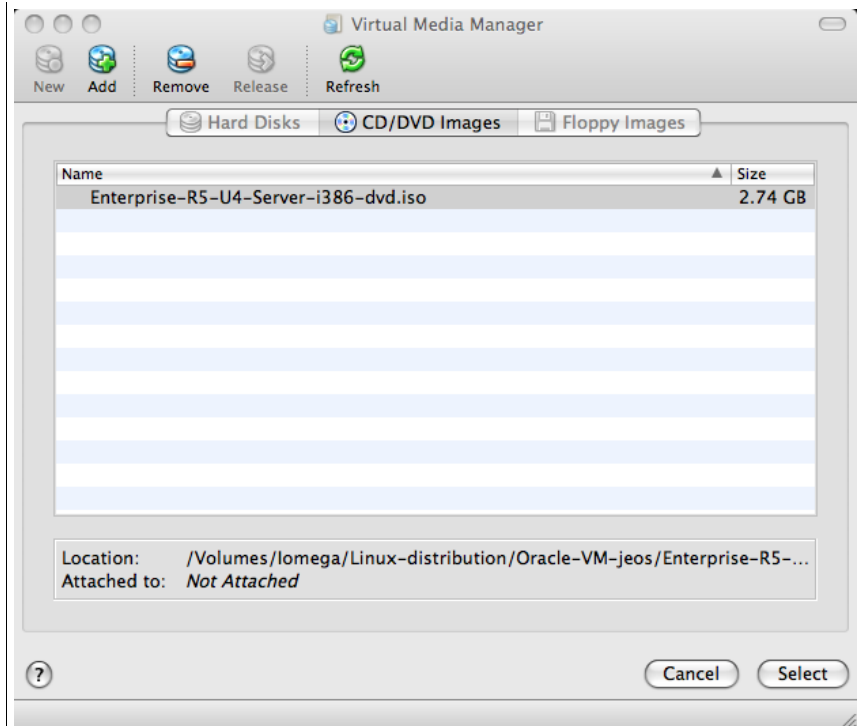


Click on the Folder icon with the green arrow on the left side of the CD/DVD Device

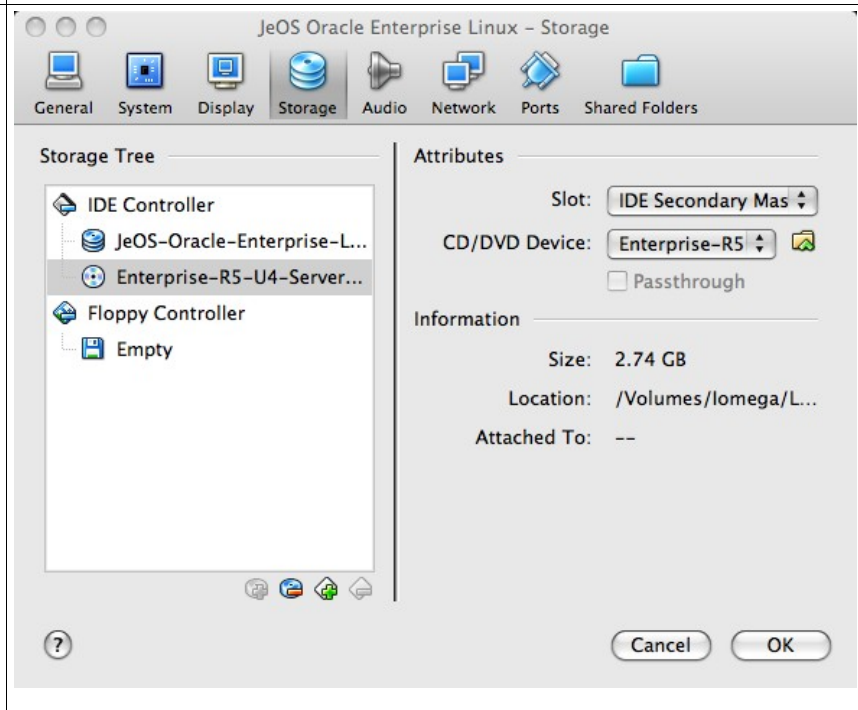


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Click the Add icon, browse your hard disk and select the Enterprise-R5-U4-Server-i386-dvd.iso and then click Select to proceed.



Your setup should be like the following. When we will start the JeOS Oracle Enterprise Linux , the VirtualBox will boot with the iso distribution.



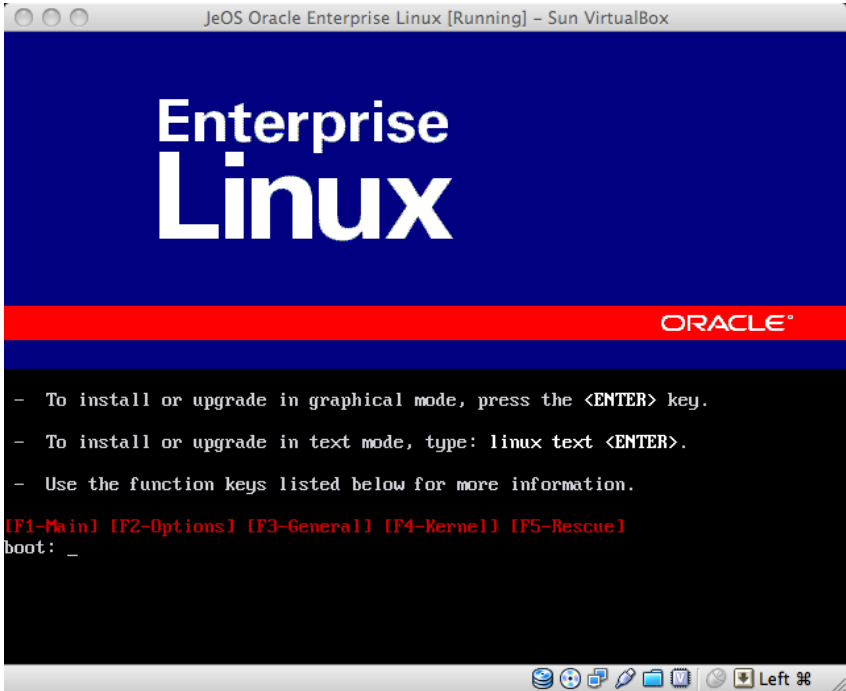
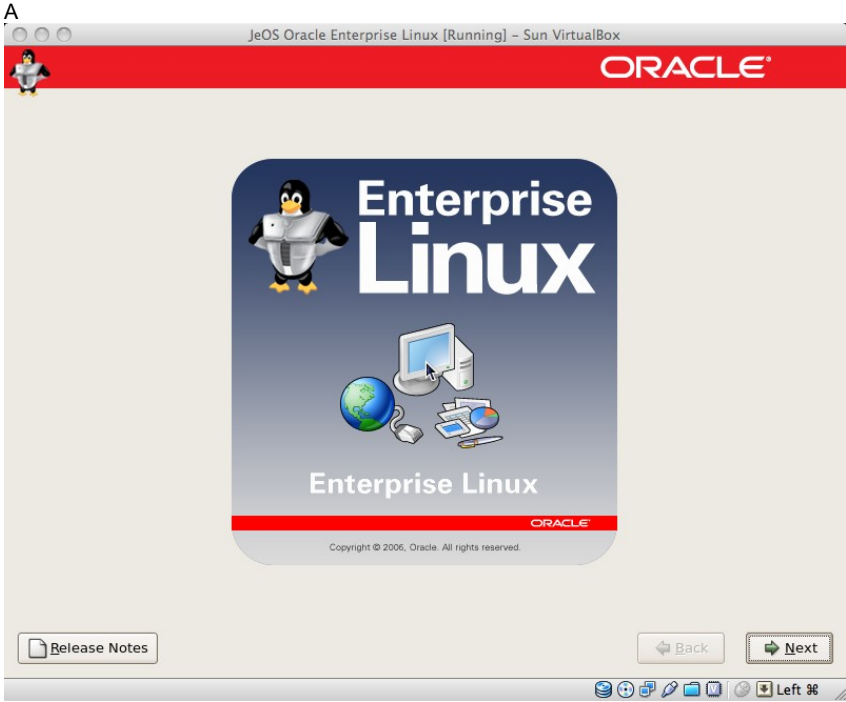
**You are done with the initial configuration of the VirtualBox for JeOS Oracle Enterprise Linux.**

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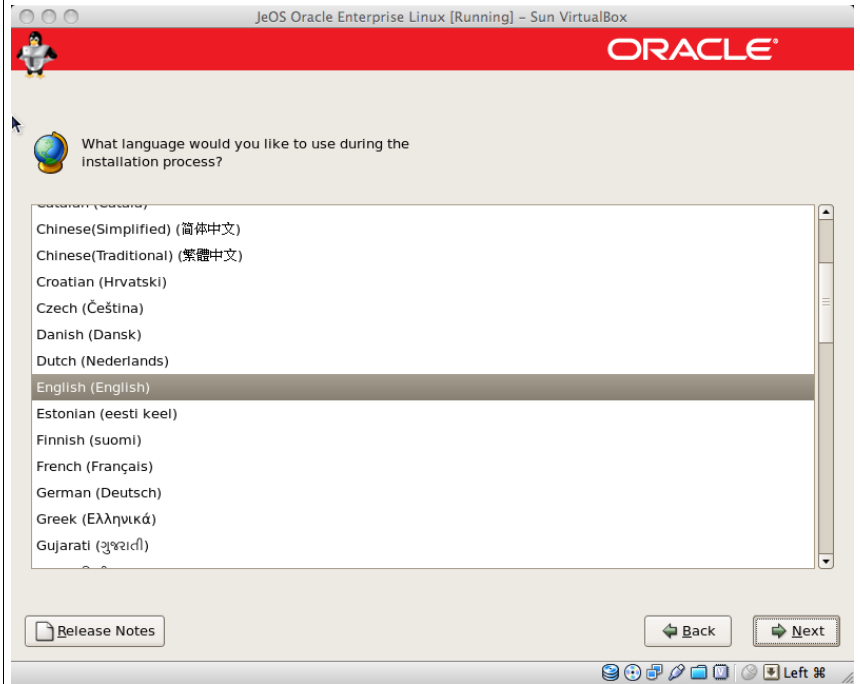
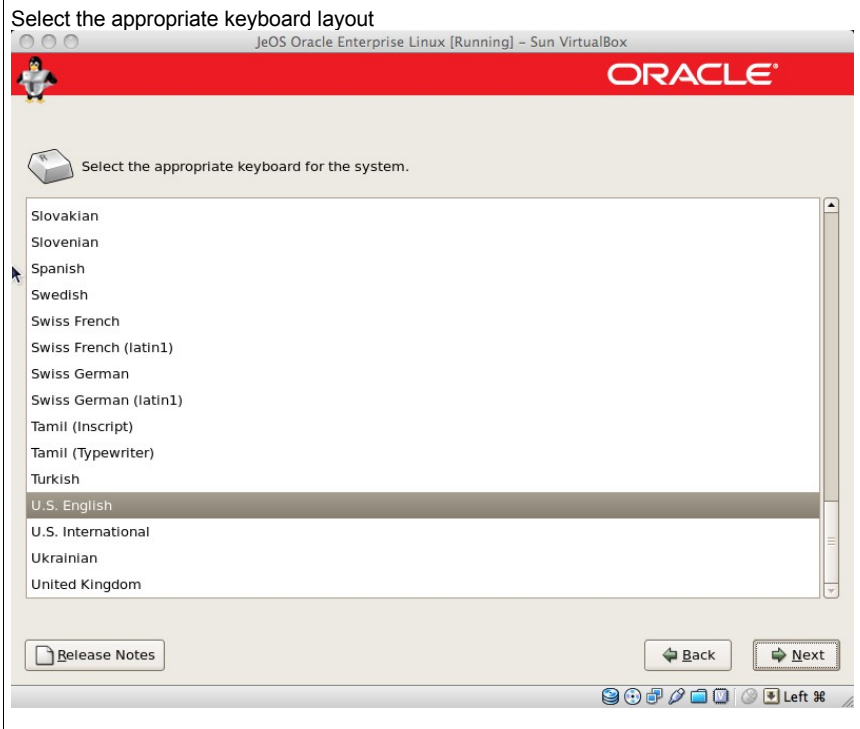
### 4.3. Installation of the JeOS Oracle Enterprise Linux virtualbox image (operating system installation)



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Step	Screenshot
<p>When the virtualbox JeOS Oracle Enterprise Linux boots, the following screen shows up</p>	 <p>Click Enter to proceed with the installation of Enterprise Linux. On the following screen, click "Skip" to bypass the media test.</p>
<p>The installation process starts</p>	 <p>click Next to proceed</p>
<p>Language selection screen</p>	<p>Select the language for the final system</p>

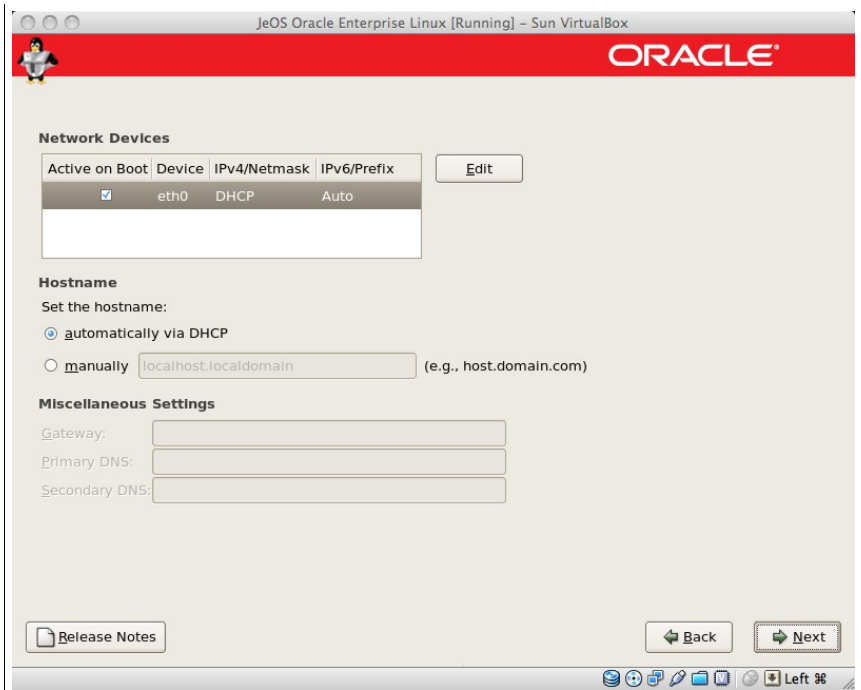

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	 <p>choose your language and then click Next to proceed</p>
Keyboard selection screen	 <p>choose your keyboard and then click Next to proceed</p>
Partition device screen warning	There is no partition table so far on the hda device

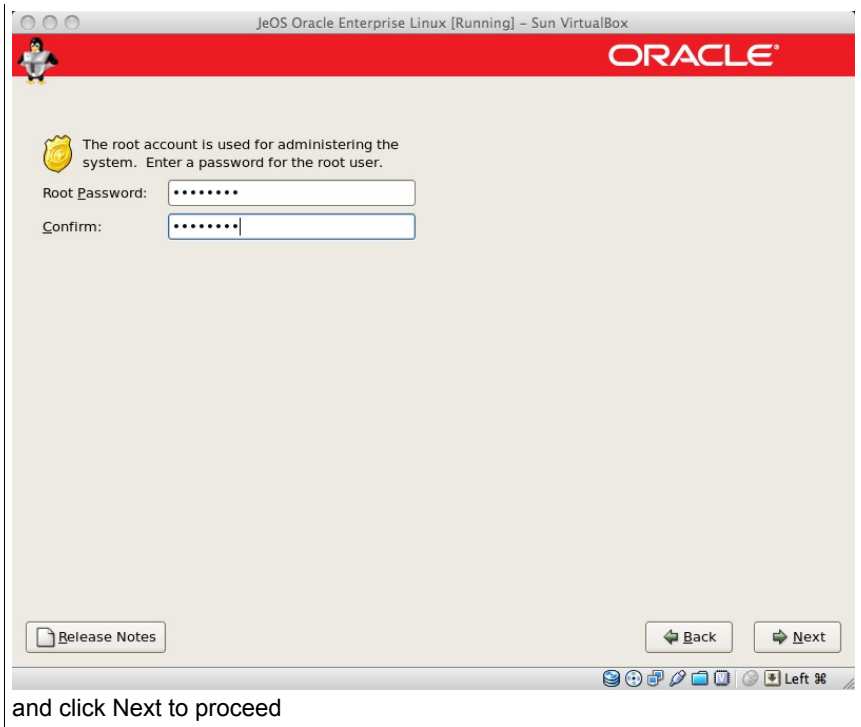
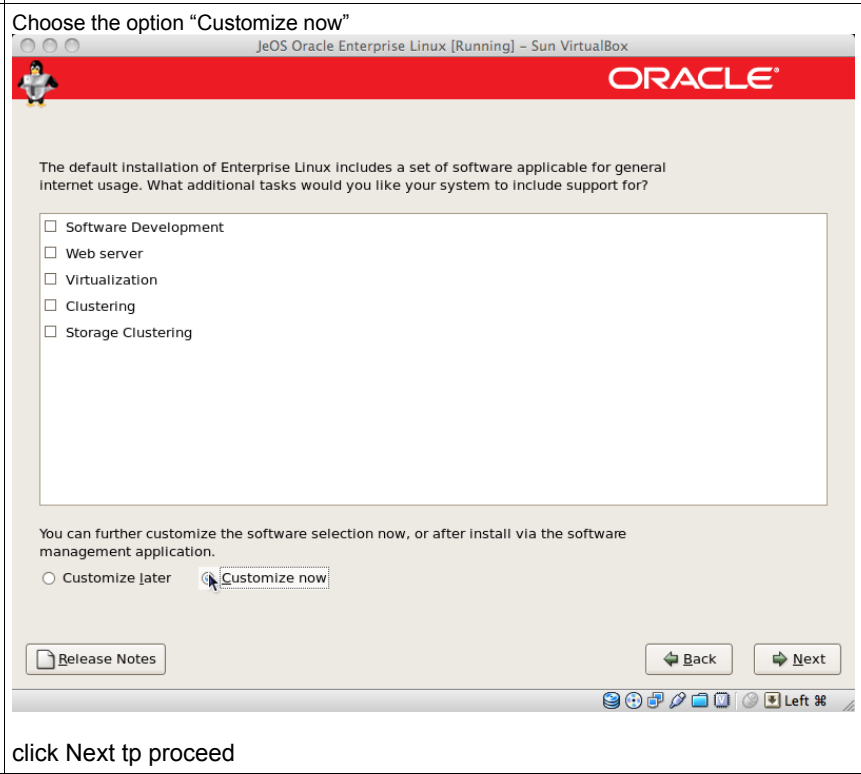
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	 <p>click Yes to create a new Partition table</p>
<p>Partition configuration screen</p>	 <p>If you don't want to change the partition schema, click Next. Confirm the warning screen and click Yes</p>
<p>Network configuration</p>	<p>Confirm the Network setup as DHCP</p>

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	 <p>click Next to proceed</p>
<p>Map location screen</p>	 <p>click Next to proceed</p>
<p>Root account password screen</p>	<p>Enter the root's password</p>

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	 <p>and click Next to proceed</p>
<p>Selection of software to be installed (1/2)</p>	 <p>click Next to proceed</p>
<p>Selection of software to be installed (2/2)</p>	<p>Configure the software installation as follow :</p> <ul style="list-style-type: none"> <li>• Desktop Environments : remove all</li> <li>• Applications : keep Editors</li> <li>• Servers : remove all</li> <li>• Base System : accept the default</li> <li>• Cluster Storage : remove all</li> </ul>

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- Clustering : remove all
  - Virtualization : remove all
  - Languages : remove all
- click Next to proceed  
Dependencies in packages are checked automatically for you.

Pre-installation screen

Confirm you want to install Oracle Enterprise Linux with your current configuration



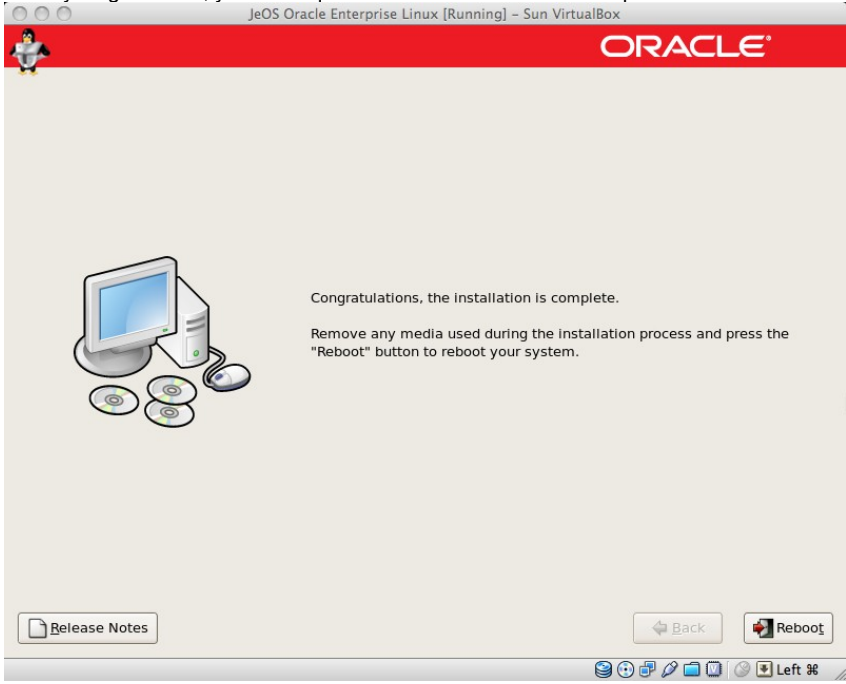

click Next to proceed

Installation progress screens

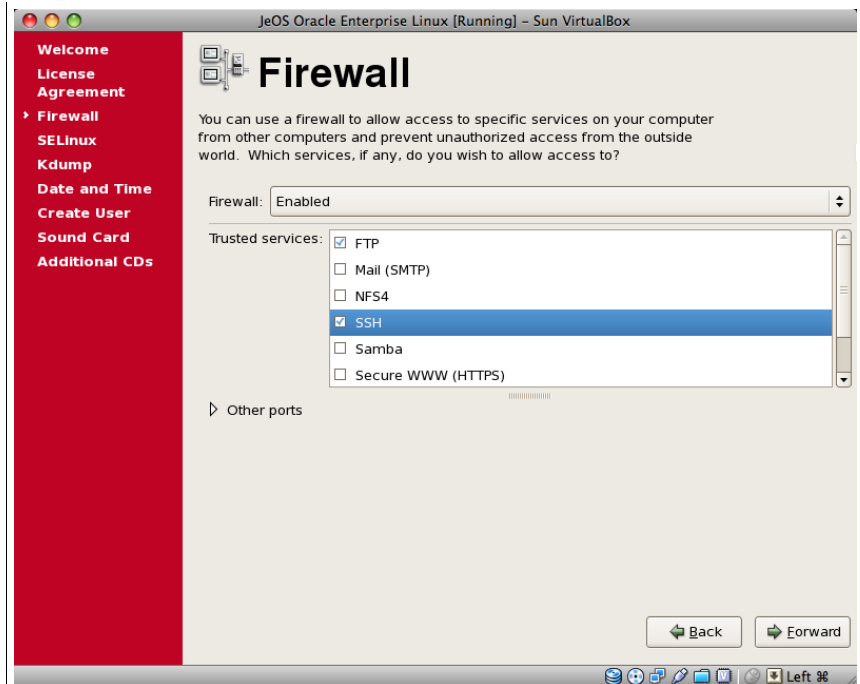
Just follow the installation in progress



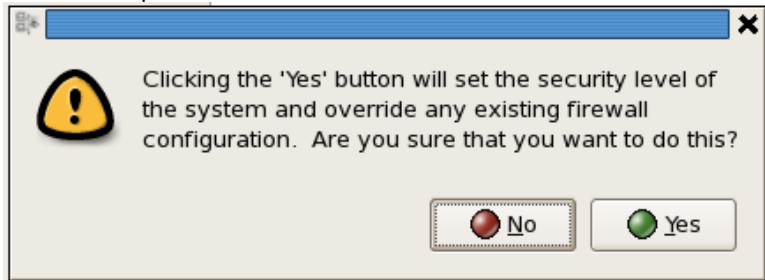
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<p>When the installation is complete, a reboot is required.</p>	<p>If everything runs OK, you are requested to reboot in order to complete the installation.</p>  <p>click Reboot to proceed</p>
<p>1<sup>st</sup> Reboot – Welcome screen</p>	<p>The installation process continues with the following steps.</p>  <p>click Forward to proceed</p>
<p>License agreement screen</p>	<p>Select the Yes option and directly click Forward as we never ever read the License Agreement</p>
<p>Firewall</p>	<p>Enable the Firewall and select the Trusted services : FTP, SSH</p>

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click Forward to proceed





click yes to confirm your selection

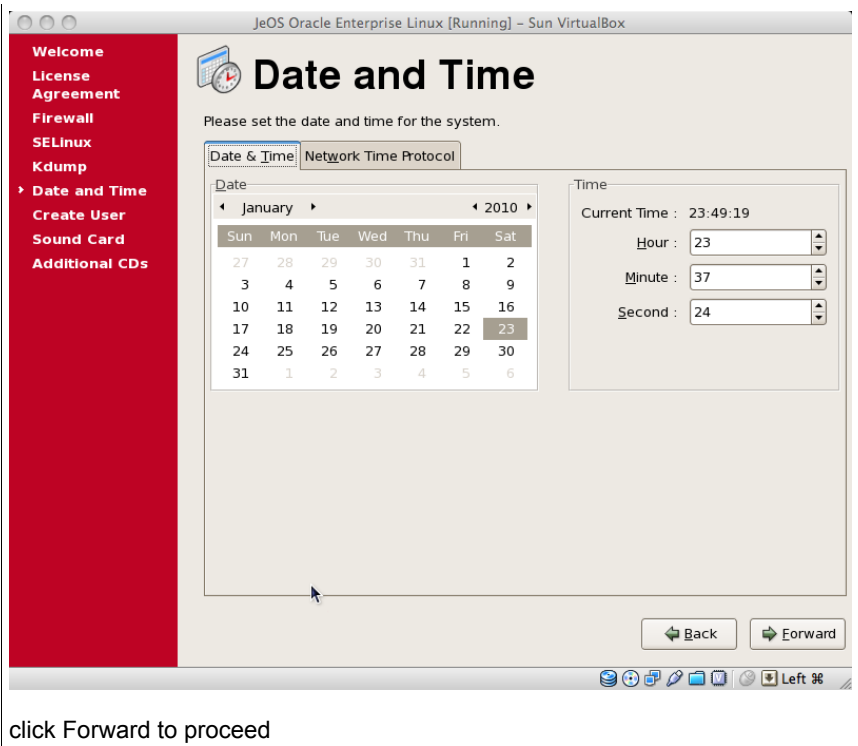
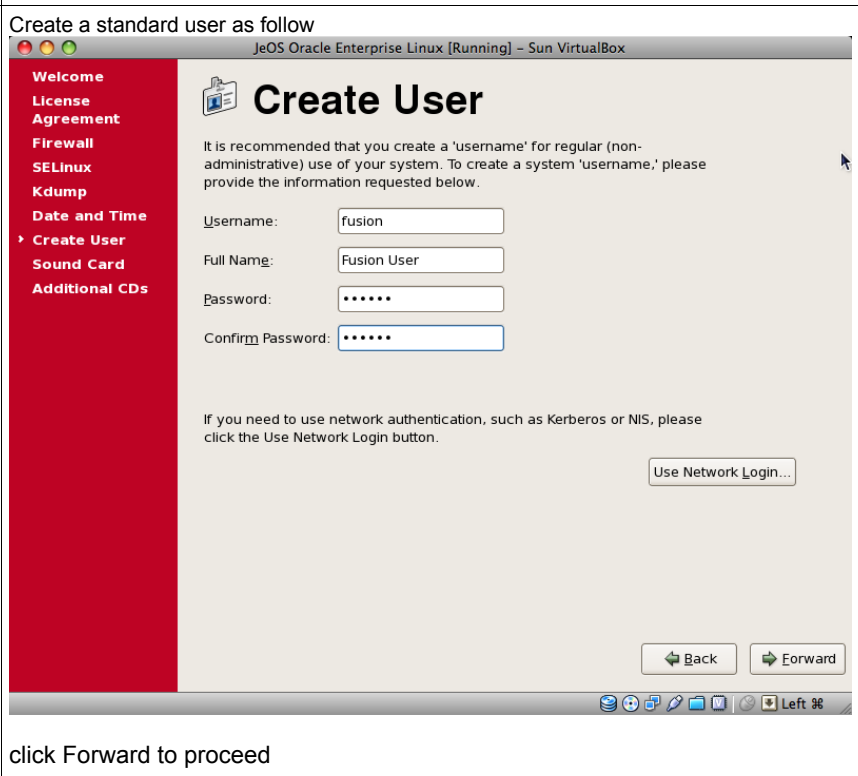
SELinux screen

Security Enhanced Linux


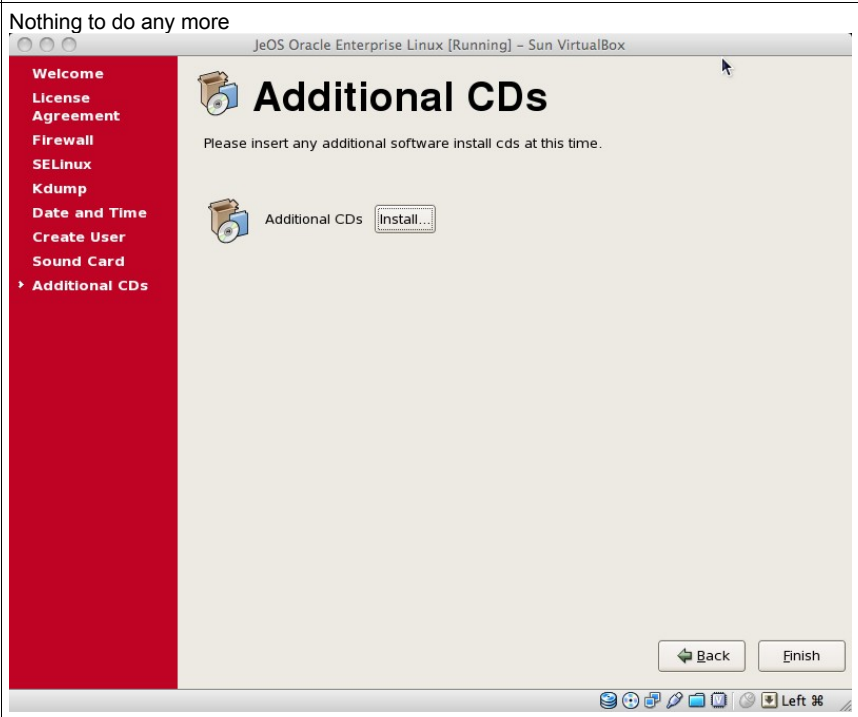
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	 <p>click Forward to proceed</p>
<p>Kdump screen</p>	 <p>click Forward to proceed</p>
<p>Date and Time screen</p>	<p>Double-check the date and time</p>

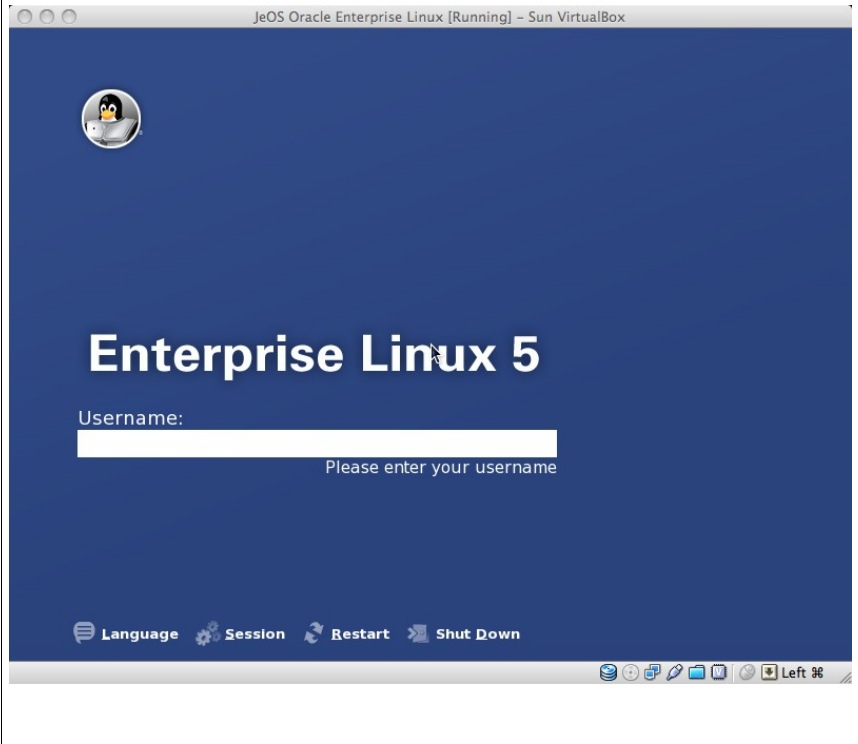
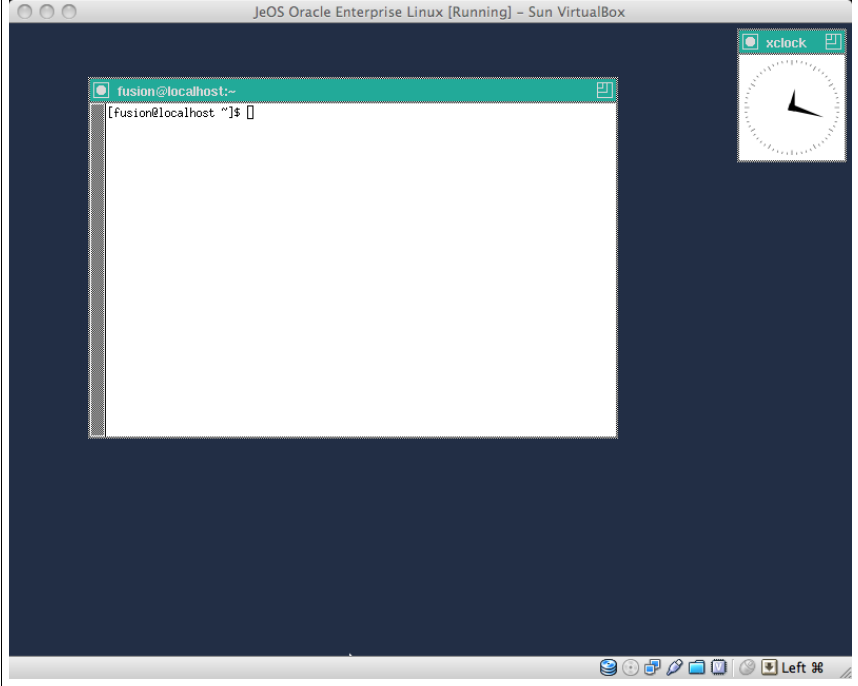
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	 <p>click Forward to proceed</p>
<p>Create User screen</p> <ul style="list-style-type: none"> <li>• username : fusion</li> <li>• password : fusion</li> </ul>	 <p>click Forward to proceed</p>
<p>Sound card screen</p>	<p>We don't care</p>

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	 <p>click Forward to proceed</p>
<p>Additional CDs</p>	 <p>click Finish. The installation is complete. The system is available.</p>
<p>1<sup>st</sup> Login screen after installation</p>	<p>Login as 'fusion'</p>

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<p>Session screen</p>	<p>The session looks like this one Navigate and experiment some commands</p>  <p>The redHat desktop is missing as we deselect it during the installation process. With the mouse, left click to get some menu items</p>
<p>The JeOS Oracle Enterprise Linux virtualbox is accessible remotely with a ssh or a ssh -X session</p>	<p>Remote accessible HOST-system &gt;&gt; ssh -X <a href="mailto:fusion@jeos-oracle-enterprise-linux-ip_address">fusion@jeos-oracle-enterprise-linux-ip_address</a></p>

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When the JeOS Oracle Enterprise Linux is shutdown, release the installation DVD.

Don't forget to release and remove the Enterprise-R5-U4-Server-i386-dvd.iso from the Storage configuration of the Virtualbox

**You are done with the installation of the VirtualBox for JeOS Oracle Enterprise Linux .**