WELCOME TO WINDOWS SERVER ADMINISTRATION

Brought by: unixcloudtrainings.

About this course:

At the end of this course you will be able to Install and configure a Domain Controller, Active Directory, DNS, WebServer (IIS), Group Policy, WSUS, get your IT dream job and more…….

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MODULE I- WHAT IS WINDOWS?

Windows: is a collection of programs as an operating system that controls a pc (personal computer).

DIFFERENT VERSIONS OF WINDOWS

Link: https://en.wikipedia.org/wiki/List_of_Microsoft_Windows_versions

MICROSOFT PRODUCTS

Windows

Office

Azure

Microsoft SQL Server

skype

msn

Visio 2013

SharePoint

Exchange

Microsoft Active Directory

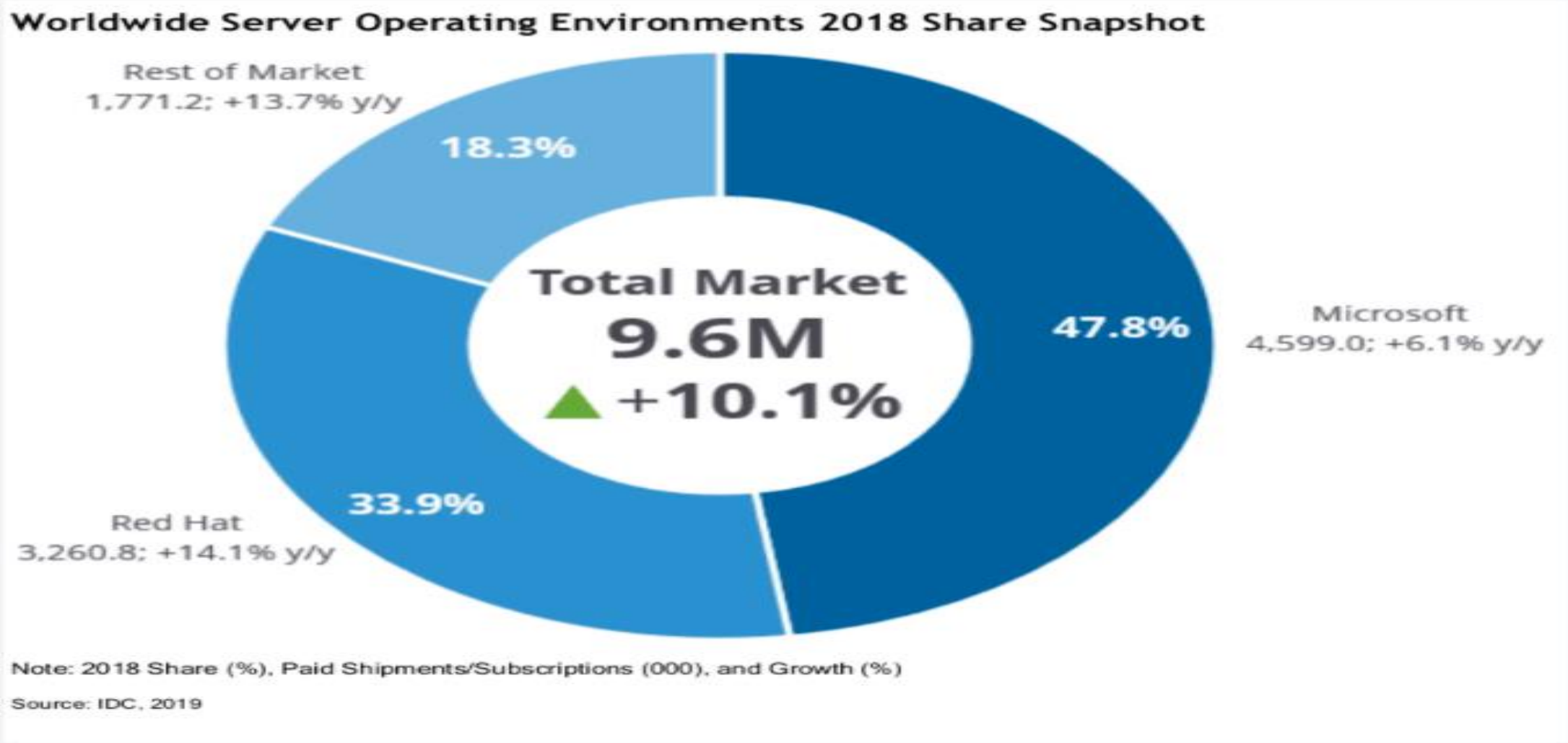
XBOX

Windows Phone 7

WINDOWS BACKGROUD

- Windows is owned by……
- Microsoft is co-funded by _____ and PAUL ALLEN on April 4, 1975.

Server OS - Server Operating System Market Share, 2018



IDC

Worldwide Server Top 5 Vendors, 2020Q1 vs 2021Q1 (shares based on vendor revenue)

Source: IDC 2021

WINDOWS VS LINUX VS MAC

Windows

With almost 90% of the operating system market share, you can't miss Windows. It's in commercial buildings, industrial facilities, as well as home computers.
Windows, having been introduced in 1985, is a very mature and complete piece of software. Yet, it has it's flaws...

Pros:

- Compatibility: Almost every application, driver or game will work on Windows.
- Technical support: Having so many users, you can always find someone (either online or offline) who can help you with Windows
- User friendly

Cons:

- Viruses: You may need to buy an antivirus program, although free ones exist
- Slow: Windows, especially Vista and 7, requires a lot of computer resources (memory, processor, disk space), and thus, runs slower

Price: It easily costs over a hundred dollars

WINDOWS VS LINUX VS MAC

Macintosh

Apple's Macintosh OS is even older than Windows. It is the first ever successful graphical-based operating system, being released one year before it's Microsoft counterpart.

Pros:

- Viruses: Apple Macs get almost no viruses. This is mostly due to Window's superior market share
- Reliability: Macs only run on Apple computers, and are thus less prone to hardware and software crashing.
- Graphic designing. Great for professional who are in designing such as, architects, engineers, constructions, web designing, planning, aircraft or car designing etc.

Cons:

- Expensive: Mac costs even more than Windows
- Only available on Apple computers: If you already have a computer, you cannot install MAC on it unless it's an Apple. Otherwise, you must buy a new computer
- Compatibility: Only a few programs will run on Mac, and almost no games.

WINDOWS VS LINUX VS MAC

Linux

Linux is an answer to Mac and Windows. Yes, this means that Linux is FREE! By free, you can download, modify and redistribute it without spending a dime! . Linux is a younger player in the OS world, having been written in 1991, and is optimized for modern use (well, more than Windows and Mac). Unfortunately, it has some disadvantages also...

Pros:

- Price: Linux is F-R-E-E. You can download it, install it, use it, modify it... All for a whooping 0$.
- Open source
- Viruses: Almost no virus because it is mostly used for enterprise environment which runs behind the firewalls and has no internet access
- Runs applications a lot faster

Cons:

- Complicated: Although some distros are quite easy to use, most of them will required a good deal of computer knowledge in order to get them to work
- Compatibility: Like Mac, representing only a few percent of the market share, Linux does not have as many programs and games as Windows

Vendors: You won't find a lot of vendors selling Linux computers. Usually, you'll just end up having to buy Windows computer, reformatting the hard drive, and installing Linux yourself

QUIZ

1- What's Microsoft windows?

a) Home structure windows?

b) Operating system

c) Hardware

d) Peripherals

2- Why do we need and operating system?

a) Without operating system there is no communication with hardware.

b) Without operating system there is no communication with users.

c) Without operating system there is no operating between hardware and users.

d) Without operating system there is no communication with applications.

3- what are different versions of windows?

a) Windows 2003

b) Windows 2012

c) Windows server 2016

d) Windows 7 & XP

e) All above

QUIZ

4- **Microsoft was funded by Bill Gates and Paul Allen on?**

a) April 4th , 1975

b) April 4th , 1976

c) April 5th , 1975

d) May 6th , 1976

5- **Which ones are the products of Microsoft?**

a) PlayStation

b) Linux

c) Chrome Web Browser

d) None of the above

6- **What is common on Windows, Mac and Linux.**

a) They are all hardware.

b) They are all personal computers.

c) All of them are operating system.

d) All of them are paid software.

7- Which operating system is more vulnerable to viruses.

a) Linux ; b) Windows ; c) Mac ; d) VMware

MODULE 2- SITTING UP THE LAB

Steps to setup the lab

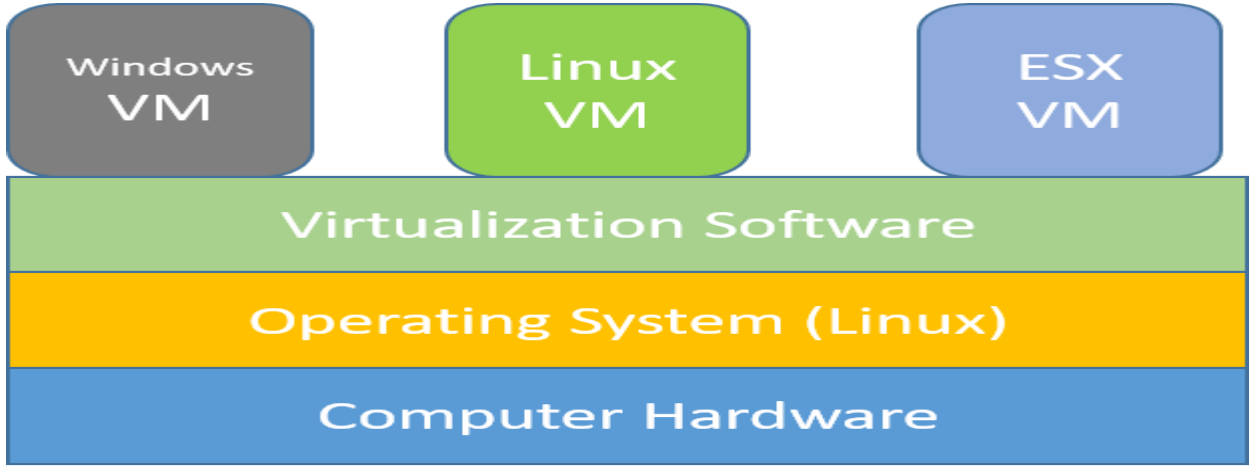
- What is a virtual environment or virtual machine.
- Download and installing oracle VirtualBox.
- Creating first virtual machine.

What is Oracle Virtual Box?

Oracle VM VirtualBox is a free, open source, cross-platform application for creating, managing and running virtual machines (VMs).

Virtual machines allow you to run an operating system in an app window on your desktop that behaves like a full, separate computer. You can use them play around with different operating systems, run software your main operating system can't, and try out apps in a safe, sandboxed environment.

Oracle VirtualBox enables you to set up one or more virtual machines (VMs) on a single physical machine, and use them simultaneously, along with the actual machine. Each virtual machine can execute its own operating system, including versions of Microsoft Windows, Linux, BSD, and MS-DOS. You can install and run as many virtual machines as you like – the only practical limits are disk space and memory.



Desktop Level Virtualization - Arkit

VIRTUALBOX INSTALLATION

This is the site for downloading VirtualBox: www.virtualbox.org

create our fist virtual machine.

CREATING A NEW VIRTUAL MACHINE IN VIRTUALBOX

- To create a new virtual machine, you need to start VirtualBox. On the host where you installed Oracle VDI and VirtualBox, select the **Applications** menu on the desktop, then the **System Tools** menu, and then **Oracle VM VirtualBox**. Alternatively, you can run the **VirtualBox** command in a terminal. The Oracle VM VirtualBox Manager is displayed as shown in Figure 6.4.

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Figure 6.4. Oracle VM VirtualBox Manager

Tip

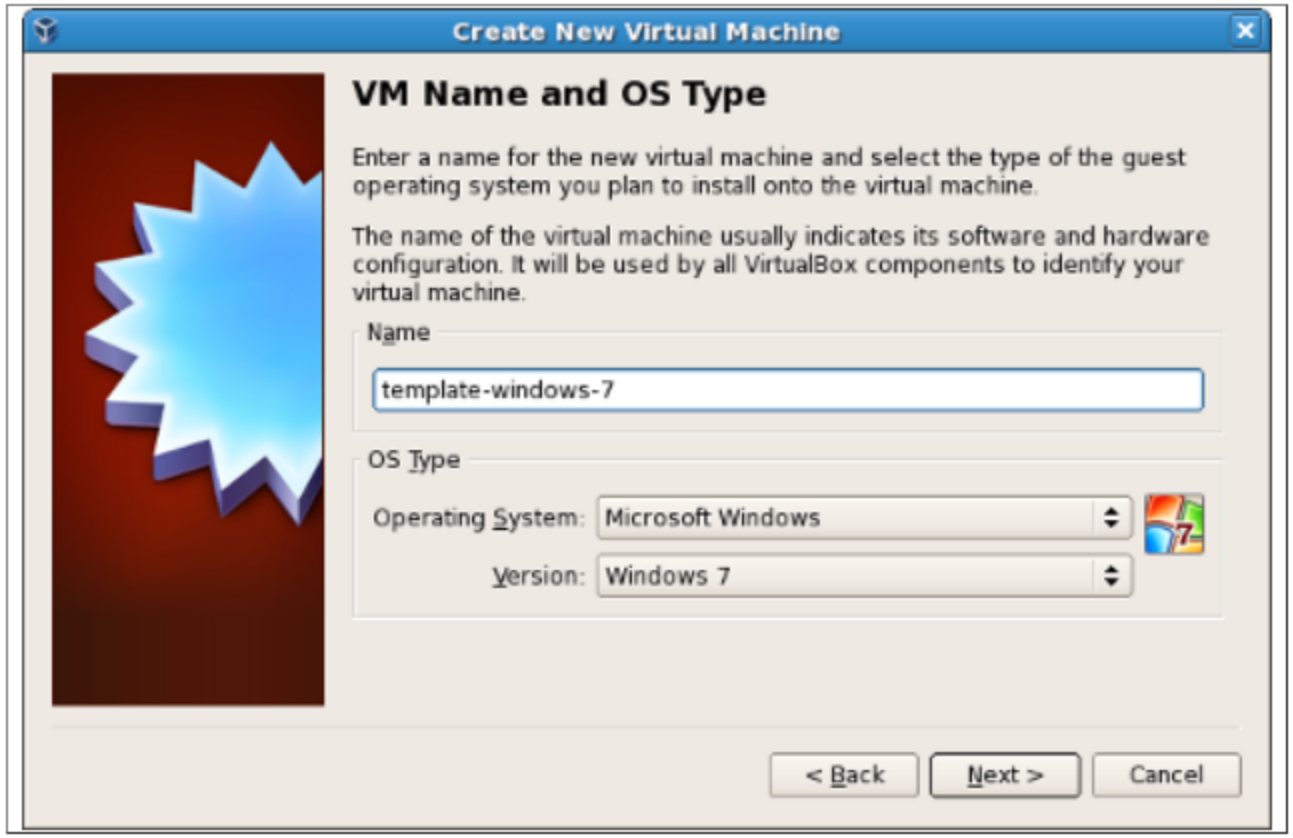
All the following steps for creating a virtual machine can be performed using the VirtualBox command line. However, if you are new to VirtualBox, you will probably find the Oracle VM VirtualBox Manager easier to use.

In the toolbar, click the **New** button. The New Virtual Machine Wizard is displayed in a new window, as shown in Figure 6.5.

Figure 6.5. New Virtual Machine Wizard

Click the **Next** button to move though the various steps of the wizard. The wizard enables you to configure the basic details of the virtual machine. On the VM Name and OS Type step, enter a descriptive name for the virtual machine in the **Name** field and select the operating system and version that you are going to install from the drop-down lists, as shown in Figure 6.6. It is important to select the correct operating system and version as this determines the default settings for VirtualBox uses for the virtual machine. You can change the settings later after you have created the virtual machine.

Figure 6.6. VM Name and OS Type Step



import the template into Oracle VDI.

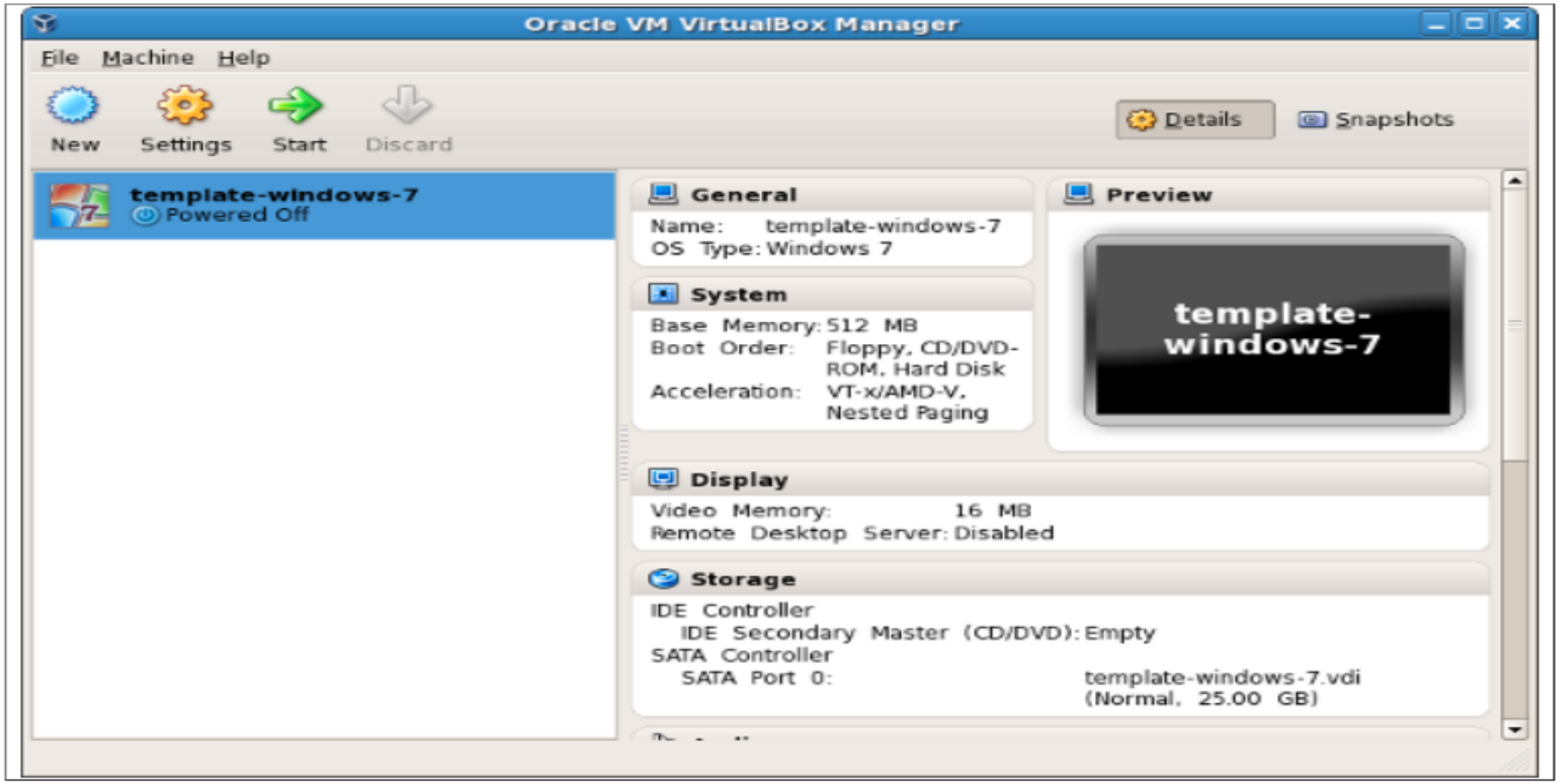
On the Virtual Hard Disk step, ensure **Start-up Disk** is selected (see Figure 6.7) , select **Create new hard disk** and click **Next**. The Virtual Disk Creation Wizard is displayed in a new window so you can create the new virtual disk.

Figure 6.7. Virtual Hard Disk Step

On the following steps, select **VDI (VirtualBox Disk Image)** as the file type, **Dynamically allocated** as the storage details, and accept the defaults for the virtual disk file location and size, and then click **Create** to create the virtual disk.

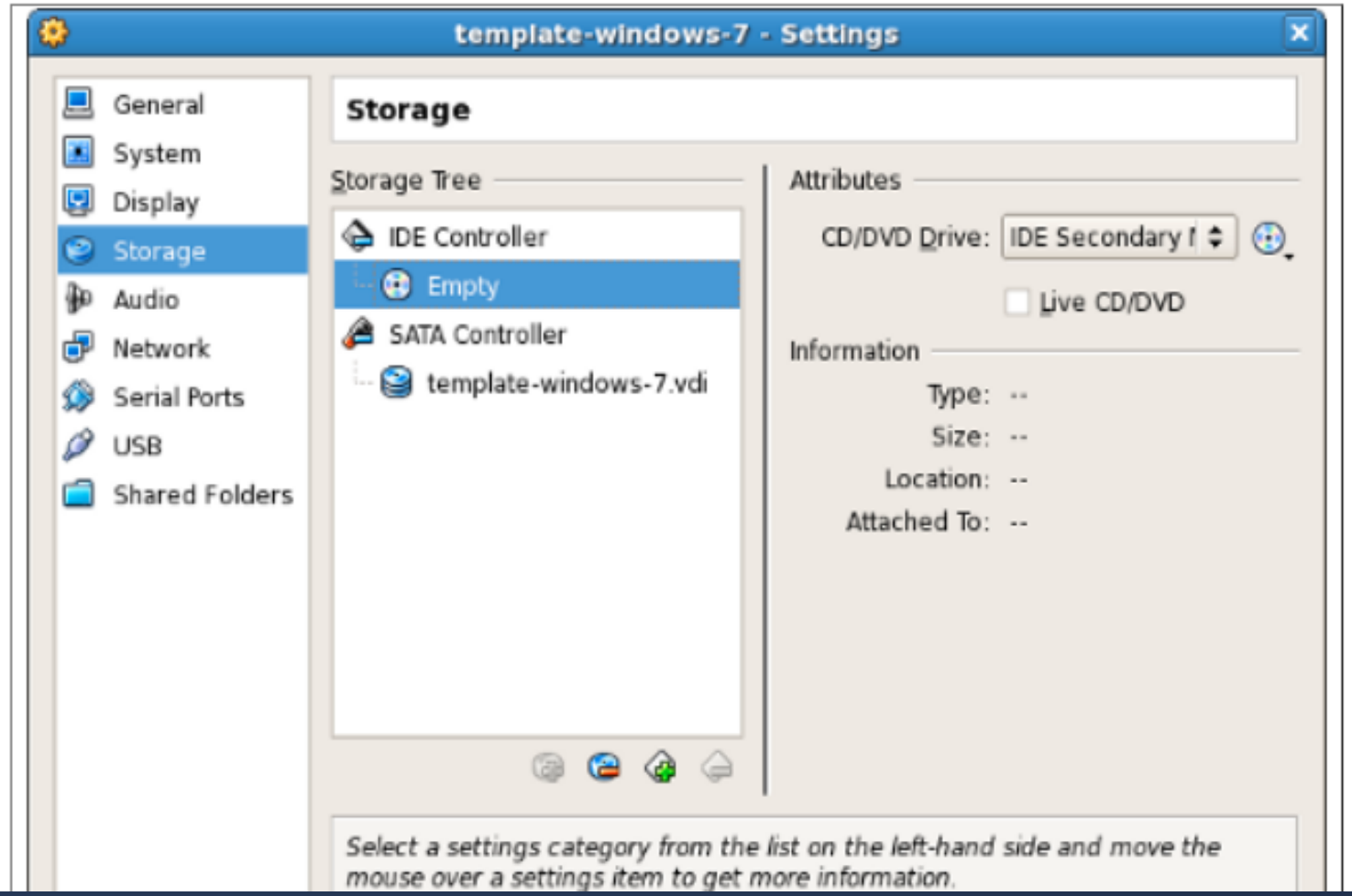
When the virtual disk is created, the Virtual Disk Creation Wizard is closed and you are returned to the Summary step of the New Virtual Machine Wizard. Click **Create** to create the virtual machine. The wizard is closed and the newly-created virtual machine is listed in Oracle VM VirtualBox Manager, as shown in Figure 6.8.

Figure 6.8. Virtual Machine Added



Since you want to install an operating system in the virtual machine, you need to make sure the virtual machine can access the installation media. To do this, you edit the virtual machine settings. In Oracle VM VirtualBox Manager, select the virtual machine and then in the toolbar click the **Settings** button. The Settings window is displayed. In the navigation on the left, select **Storage** as shown in Figure 6.9.

Figure 6.9. Virtual Machine Storage Settings

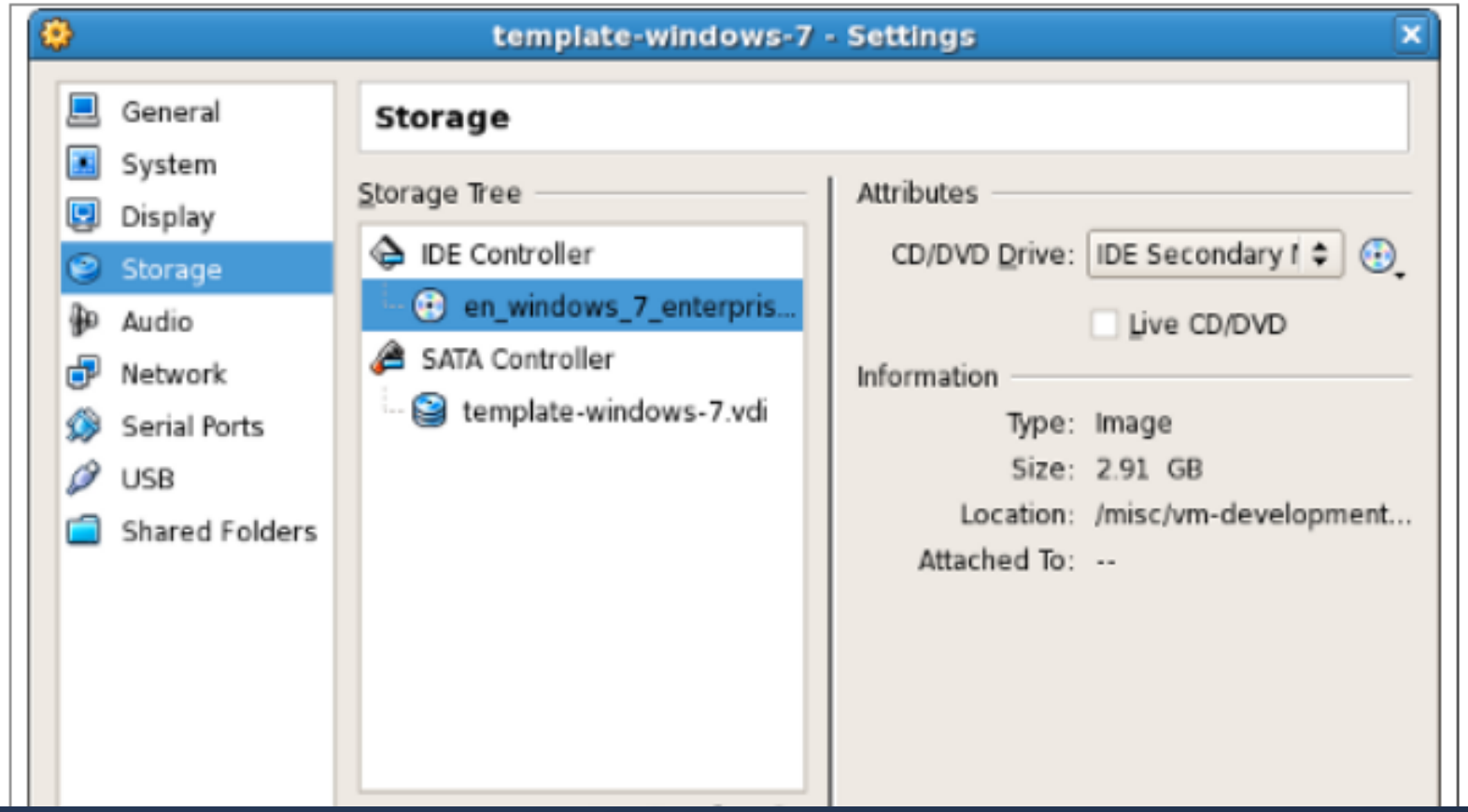


- To connect the virtual CD/DVD drive to the host's physical CD/DVD drive, select **Host Drive** ***<drive-name>***.

  To insert an ISO image in the virtual CD/DVD drive, select **Choose a virtual CD/DVD disk file** and browse for the ISO image.

Figure 6.10 shows an ISO image inserted in the virtual CD/DVD drive.

Figure 6.10. Virtual Machine CD/DVD Drive Settings



In Oracle VM VirtualBox Manager, select the virtual machine and click the **Start** button in the toolbar. A new window is displayed, which shows the virtual machine booting up. Depending on the operating system and the configuration of the virtual machine, VirtualBox might display some warnings first. It is safe to ignore these warnings. The virtual machine should boot from the installation media, as shown in Figure 6.11.

Figure 6.11. An Installation Program in a Running Virtual Machine