How to Install Virtual Box

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I-Introduction

This How To will show the installation of the Virtual Box program that can be set up in Windows XP to run a second Operating System in a single computer. Additionally, Linux OpenSolaris, will be installed to demonstrate the use of the Virtual Box.

II-What is VirtualBox?

Virtual Box is an Open Source software, is freely available, and performs as a *Virtual Machine*. It can be installed in the most popular operating systems such as Windows XP and Vista, Macintosh and Linux *hosts, while additionally* supporting a large number of *guest* operating systems such as Red Hut, Fedora, Obuntu, OpenSolaris, Open SUSE, Devian. You can even install Windows Vista or Windows XP *Guest* in a Linux *Host* without a dual boot environment ...just one key will switch from *Host* OS to *Guest* OS. This is a big advantage since you can have two operating systems in the same screen at the same time without restarting your machine!

III- How to install the VirtualBox

We will go step by step in the process of installing VirtualBox in a computer that runs Windows XP. Before proceeding with any installation I suggest to create a new partition exclusively for VirtualBox. I have created a new partition with the letter $E: \setminus$ and have assigned 16 GB. I'm sure that you don't need to create a special partition for this installation but I feel more relieved doing it...

...and remember VirtualBox is free!

- 1- To download the VirtualBox application, go to www.virtualbox.org
- 2- Select on the right side menu, Downloads
- 3- From the list select *VirtualBox 2.0.4 for Windows hosts x86* (for XP only) for other host operating systems select accordingly. Choose the destination where you will save it. (Fig. 1.1)



4 - A window will indicate the download progress. The download will take approximately 3 minutes.

5 - Once the download is completed, go to the location where you have saved the file and double click on it. A welcome window will open. Hit *next* and accept the conditions. Click *next*.

When you get to the *Custom Set Up* window you can chose in which location you would like to save the program. By default it goes to your *Program Files* in you're C:\ drive but you have the option of choosing another folder or partition where the program will be stored (Fig. 1.2)



Click on the icons in the tree below to change the	way features will be installed.
VirtualBox Application	Sun xVM VirtualBox application. This feature requires 62MB on your hard drive. It has 2 of 2 subfeatures selected. The subfeatures require 164KB on yo

6 - Once you selected the place where you're going to save the VirtualBox program, hit *next*.

7 - Next window will ask you to install the VirtualBox. Go ahead and hit Install

8 - VirtualBox will be installed in your computer. This process will take a few minutes.

9 - Once the installation is completed hit *Finish* and open the VirtualBox in your computer.

Go to Start>All Programs>Sun xVM VirtualBox>VirtualBox. This will bring up the VirtualBox windows in your screen, as showed in Fig. 1.3. Notice that the first time you open VirtualBox it is going to ask you to register the product. Do this just by typing your name and email.



10- Our VirtualBox is already installed.

IV- Installing a Guest operating system

Next step will be installing an operating system. I have chosen OpenSolaris distribution, which is also free. There are 2 options to get OpenSolaris. One is to download the .iso file from this site: http://opensolaris.org/os/downloads

The second option is to order a CD from this site: <u>https://oscd.sun.com</u>. It will ask you to register and then enter your name and address and a copy of OpenSolaris will be sent to your home for free. I chose the second option since I could use the CD as a live CD and play with OpenSolaris first before installing it.

11- Place the CD into the disc drive and open VirtualBox. Now hit *New* in the upper left side of the window as showed in Fig 1.4



12- A Wizard installation will show up and just follow the steps. We will be naming the OS to be installed, I chose the name "Orbitahead". Also select OpenSolaris in the drop down menu. Fig 1.5

🥸 Create New Virtu	al Machine 🔹 💽 🔀		
VM Name and OS Type			
	Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine. The name of the virtual machine usually indicates its software and hardware configuration. It will be used by all VirtualBox components to identify your virtual machine. Name Orbitahead OS Type OpenSolaris		
	< Back Next > Cancel		

13- Now we will set the system memory. This means how much RAM the *Guest* operating system will be using. OpenSolaris recommends a minimum of 512 MB. I selected 1 GB or 1000MB (Fig 1.6)

Create New Virtu Memory	al Machine		?>
	Select the amount of base memory (RAM) is allocated to the virtual machine. The recommended base memory size is 51 Base Memory Size 4 MB 3584 MB	in megabyti 2 MB.	es to be
	< Back Next >] [Ca	ncel

14- Now is the turn of the Hard Drive. You will be setting the size of hard drive that we can use for this Guest Operating system (Fig 1.7). You will have 2 options; *Fixed-size image* and *dynamically expanding image*. I would recommend selecting *dynamically expanding image* because this means that initially, the image will take a small amount of hard drive when installed (Fig 1.8).





👽 Create New Virtu	al Disk 🔹 💽
Virtual Disk Ima	де Туре
	Select the type of virtual hard disk image you want to create. A dynamically expanding image initially occupies a very small amount of space on your physical hard disk. It will grow dynamically (up to the size specified) as the Guest OS claims disk space. A fixed-size image does not grow. It is stored in a file of approximately the same size as the size of the virtual hard disk. The creation of a fixed-size image may take a long time depending on the image size and the write performance of your harddisk. Image Type O Dynamically expanding image Tixed-size image
	< Back Next > Cancel

15- Fig 1.9 shows the size that you expect the Guest OS will use. I selected 16 GB. If you want to assign a different partition (other than C :\) where the Virtual Drive will be, you can choose it here. I have created a special partition for the VirtualBox previously its installation. I suggest doing the same since you don't want to delete any data you already have in your *Host* operating system by accident.

😵 Create New Virts	al Disk 🛛 ? 🗙
Virtual Disk Loo	cation and Size
	Press the Select button to select the location and name of the file to store the virtual hard disk image or type a file name in the entry field. Image File Name E:\VM\VirtualBox.vdi Select the size of the virtual hard disk image in megabytes. This size will be reported to the Guest OS as the size of the virtual hard disk.
	Image Size 16.00 GB < Eack
	Browse
	Select the HD size for this guest operati

16. Hit next and now you will have the confirmation of the settings. (Fig 2.0, and 2.1) If you want to change any of the settings, just hit *back* to do so.

Once you have confirmed the system memory, the hard drive memory and its location, hit *finish.*

👽 Create New Virtu	al Machine 🔹 🔀		
Virtual Hard Disk			
	Select a hard disk image to be used as the boot hard disk of the virtual machine. You can either create a new hard disk using the New button or select an existing hard disk image from the drop-down list or by pressing the Existing button (to invoke the Virtual Disk Manager dialog). If you need a more complicated hard disk setup, you can also skip this step and attach hard disks later using the VM Settings dialog. The recommended size of the boot hard disk is 16384 MB. Boot Hard Disk (Primary Master) VirtualBox.vdi (E:VM) New Existing		
	< Back Next > Cancel		

Fig 2.1



17- And that's it! We have created a Virtual Machine for OpenSolaris in Virtual Box. You can see the VirtualBox and the new Virtual Machine on the left side of the screen. On the right side you can see the settings that you have created for the *Guest* OS. Fig 2.2



18. Now that you have the Virtual Machine OpenSolaris, next will be installing the OpenSolaris operating system. Hit start (Fig 2.3) and select the CD where the OS will boot (Fig 2.4)





🧱 First Run Wizard	? 🗙
Select Installation	on Media
	Select the type of the media you would like to use for installation purposes below. Media Type O CD/DVD-ROM Device O Floppy Device Select the media which contains the setup program of the
	operating system you want to install. This media must be bootable, otherwise the setup program will not be able to start. Media Source O Host Drive D: Image File C
	<pre>< Back Next > Cancel</pre>

19- Now we have the OpenSolaris OS booting from the CD as showed in Fig 2.5



20. Next screen will ask you to select the language and keyboard layout. I selected English for both.

21- After selecting the language, you are already working with the Live CD. To install the OS, just double click in the Install OpenSolaris Icon placed on the desktop (Fig 2.6)



23- Follow the installation process. Special attention must be taken when selecting the partition where the *Guest* OS will be located (Fig 2.7). I selected the partition that I had already created for VirtualBox (see step 15).

opensolaris						
Welcome	Disk Where should Opens	Solaris be ins	stalled?	Recommended s	ize: 8GB Minimu	m: 3.2GB
Disk						
Time Zone	Contraction of the second					
Locale	16.0GB ATA					
Users		<u>A</u>	The entire disk wi	ll be erased		
Installation	OpenSolaris can b	e installed o	n the whole disk			
Finish	Use the whole	disk				
	Partition the discussion	sk				
	The following existing partities	partition is pro	oposed. The			
	There must be on	ne Solaris parti	ition. It will be the ta	rget for this installation	on.	
	Partition Type	Size (GB)				
(Solaris 🛟	16.0	🙏 Warning: The data	in this partition will be e	rased.	
	Unused 🛟	0.0				
	Unused 🛟	0.0				
	Unused 🛟	0.0				
	Available Space:	0.0	Type "=" into any parti	tion size to adjust the ava	ailable disk space.	
		<u>R</u> eset				
	Quit	<u>H</u> elp			e Back	<u>N</u> ext

22- The next steps will ask you to set the time zone, country location, and user and root passwords. Choose a password that you will remember.

23- Now the installation will start. This process will take about an hour or so. (Fig 2.8)



24- Once completed, the screen will ask you to reboot the *Guest* OS. This will only reboot the *Guest* OS in the VirtualBox, not the *Host* OS.

25- After the reboot is completed, open your *Guest* operating system (OpenSolaris) again in the VirtualBox. Log in entering the password you have chosen and you now have two operating systems in your computer; Windows XP and OpenSolaris.

Notes: - When clicking with the mouse in the VirtualBox screen, the Mouse will be "captured" inside the VirtualBox, allowing you to use it only in your *Guest* operating system. If you want to go back to your *Host* Operating system, just hit the *Right Alt* key in your keyboard. You can configure any other key to do this in the VirtualBox by going to File>Preference>Input.

- After installing OpenSolaris you might want to download the Guest additions to take full advantage of your *Guest* operating system such as full frame and screen resolution.

- Nevertheless to say, it is always recommended backing up all your data before installing the VirtualBox.