INSTALLING UBUNTU

WHAT IS VIRTUALIZATION? Virtualization is the replication of hardware to simulate a virtual machine inside a physical machine. It is basically using computer inside a computer as long as the hardware specifications are good enough to handle.

There are 2 general types of Virtualization Server-side Virtualization Client-Side virtualization - Main difference between them is where the virtualization is taking place.

Client-side Virtualization

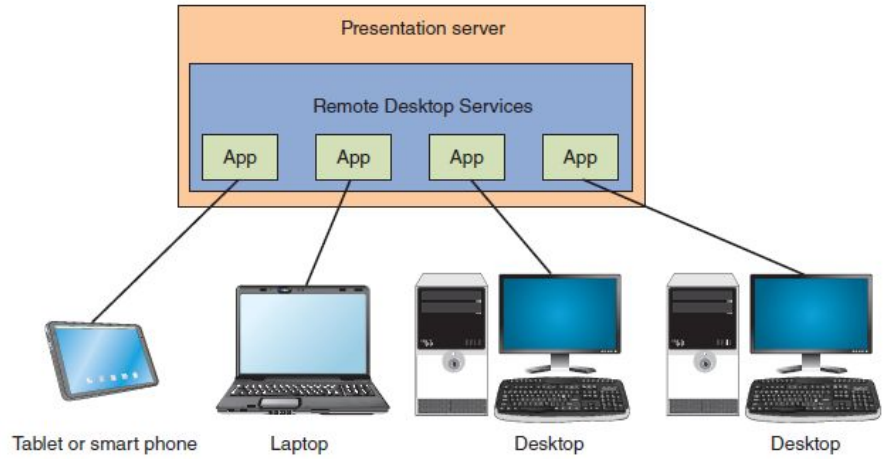


Figure 20-2 Microsoft Remote Desktop Services presents applications to the user at the local computer

Server-Side Virtualization

- Provides a virtual desktop for users on multiple client machines
- Most processing is done on the server
- Provides a virtual desktop infrastructure (VDI)

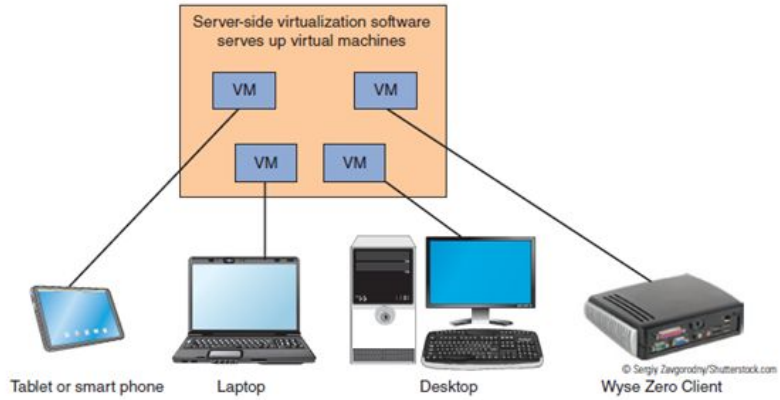


Figure 20-1 Server-side virtualization provides a virtual desktop to each user

For Client-side Virtualization the computer needs a hypervisor. A hypervisor is a software that allows the management of virtual machines. There are 2 types of hypervisors.

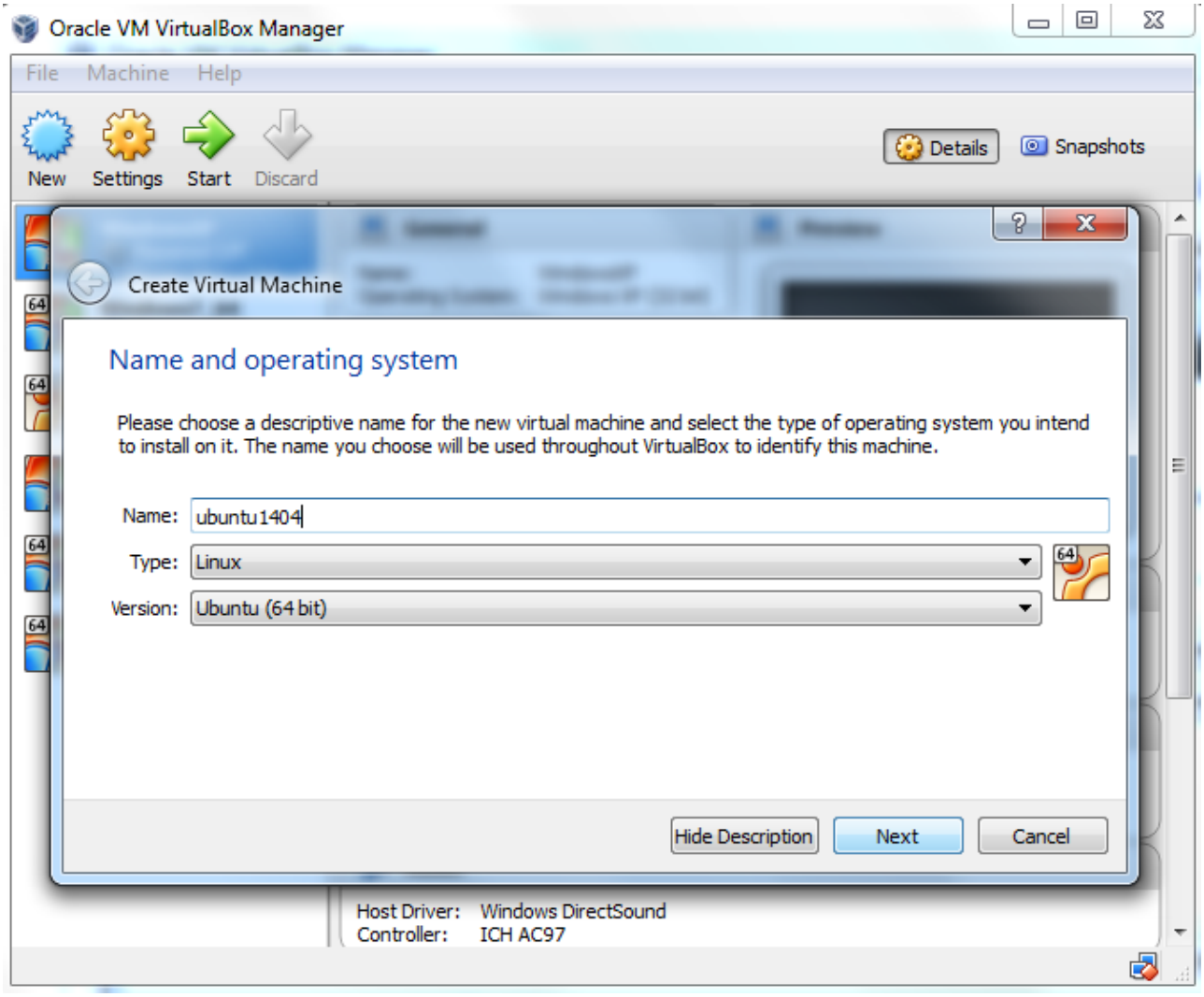
- Type 1 Hypervisor(Runs on the hardware) Example : Citrix XenServer
- Type 2 Hypervisor(Runs on a host operating system) Example : Oracle Virtualbox

INSTALLING UBUNTU IN A VIRTUAL MACHINE

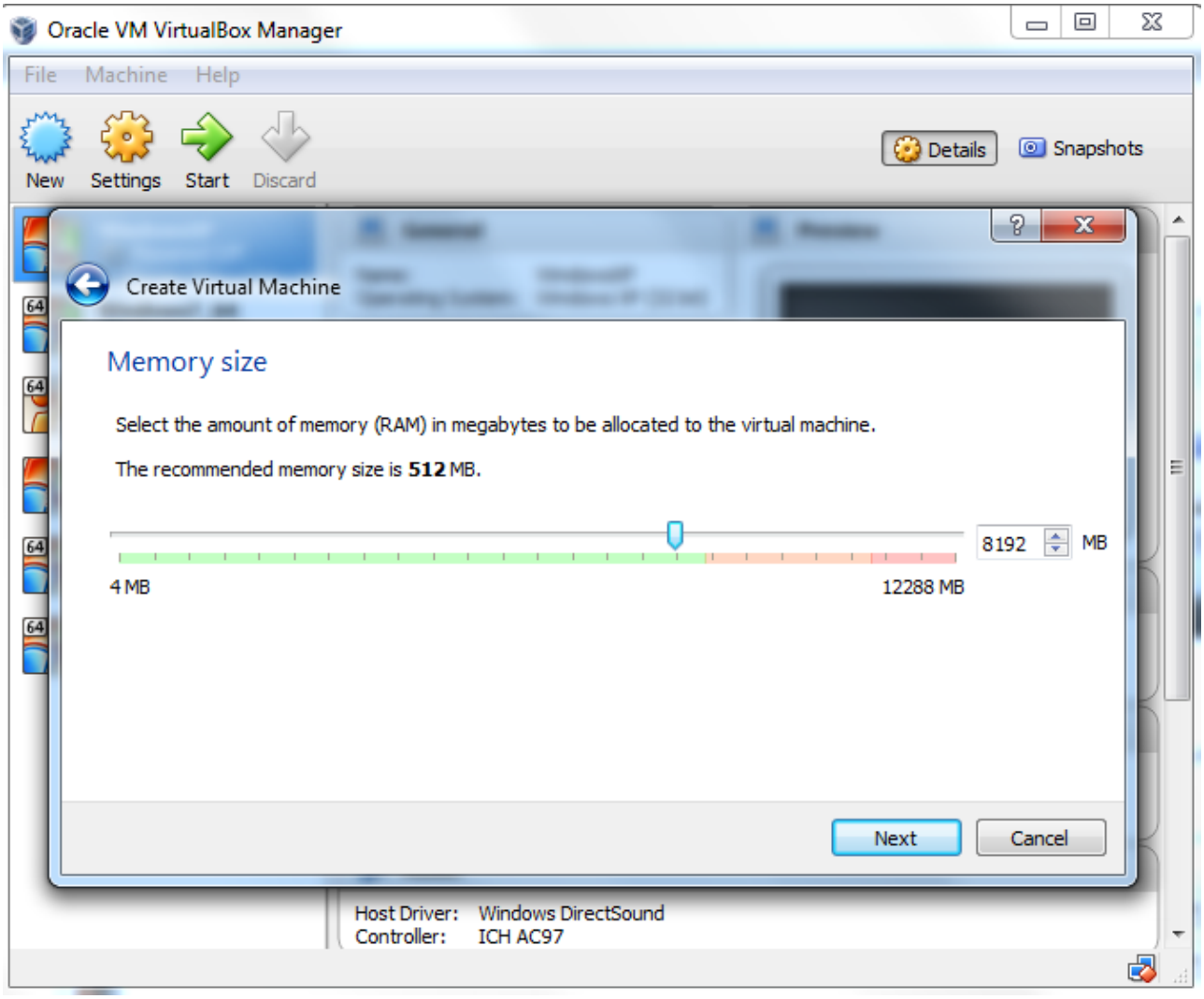
For installing ubuntu we need a Hypervisor(software that allows the management of virtual machines). To install ubuntu we will install Oracle Virtualbox which is an example of Type 2 Hypervisor.

Steps to install and configure your Hypervisor with Ubuntu

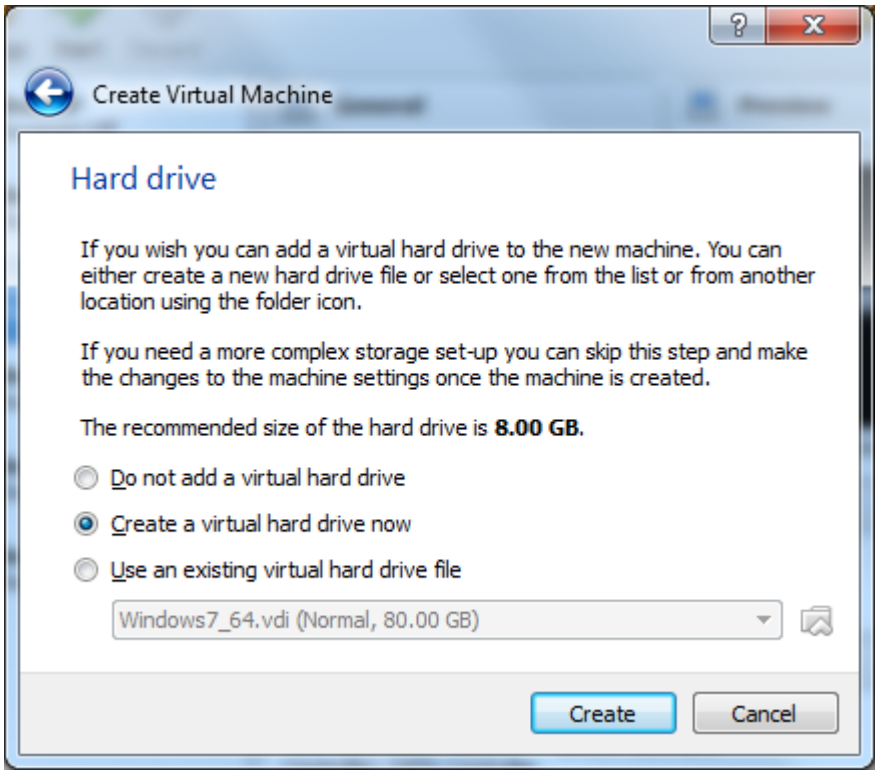
- Click the new button to open a dialog and name your virtual machine and if you are not sure about what you are doing use Ubuntu which will automatically choose the type and the version for you.



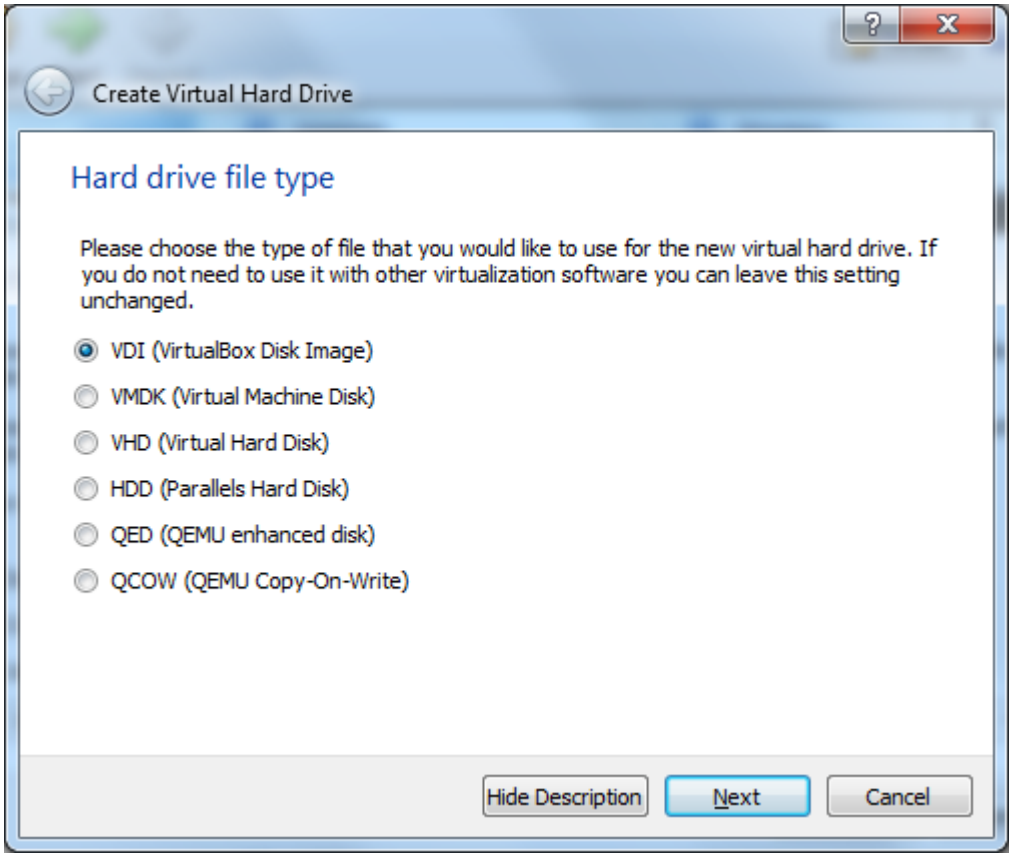
- Secondly you need to adjust your memory(RAM) to be allocated for this virtual machine.If you are not sure leave it to recommended for now and change it later.



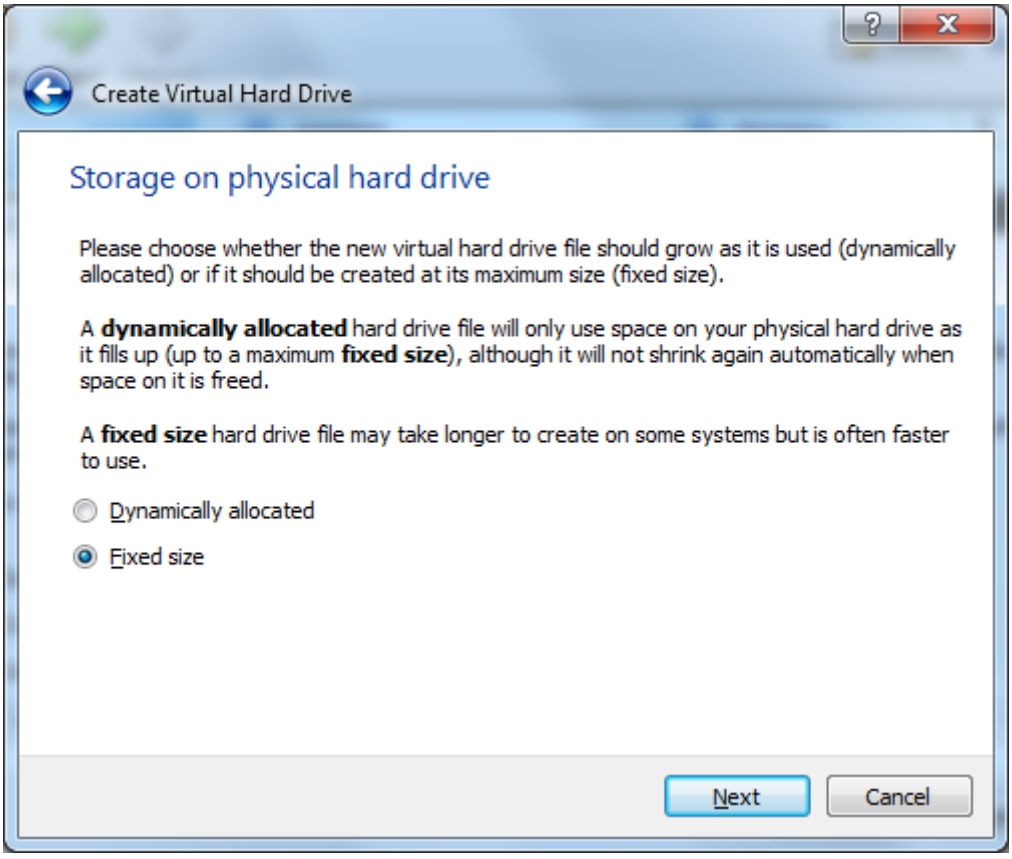
- After selecting the ram amount , Accept the default create a virtual hard disk drive option and click "Create".



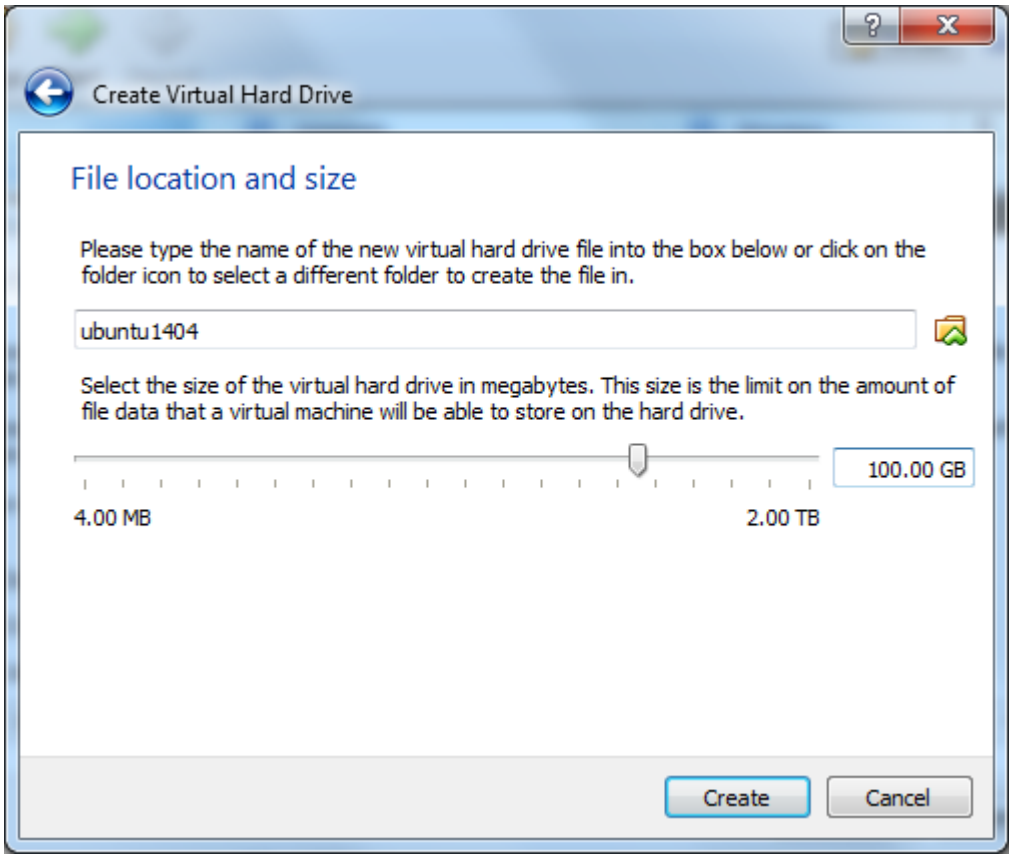
- Continue to accept the default 'VDI' drive file type and click 'Next' button.



- After this step you can either choose Dynamically allocated or fixed size but fixed size will give you a better performance.



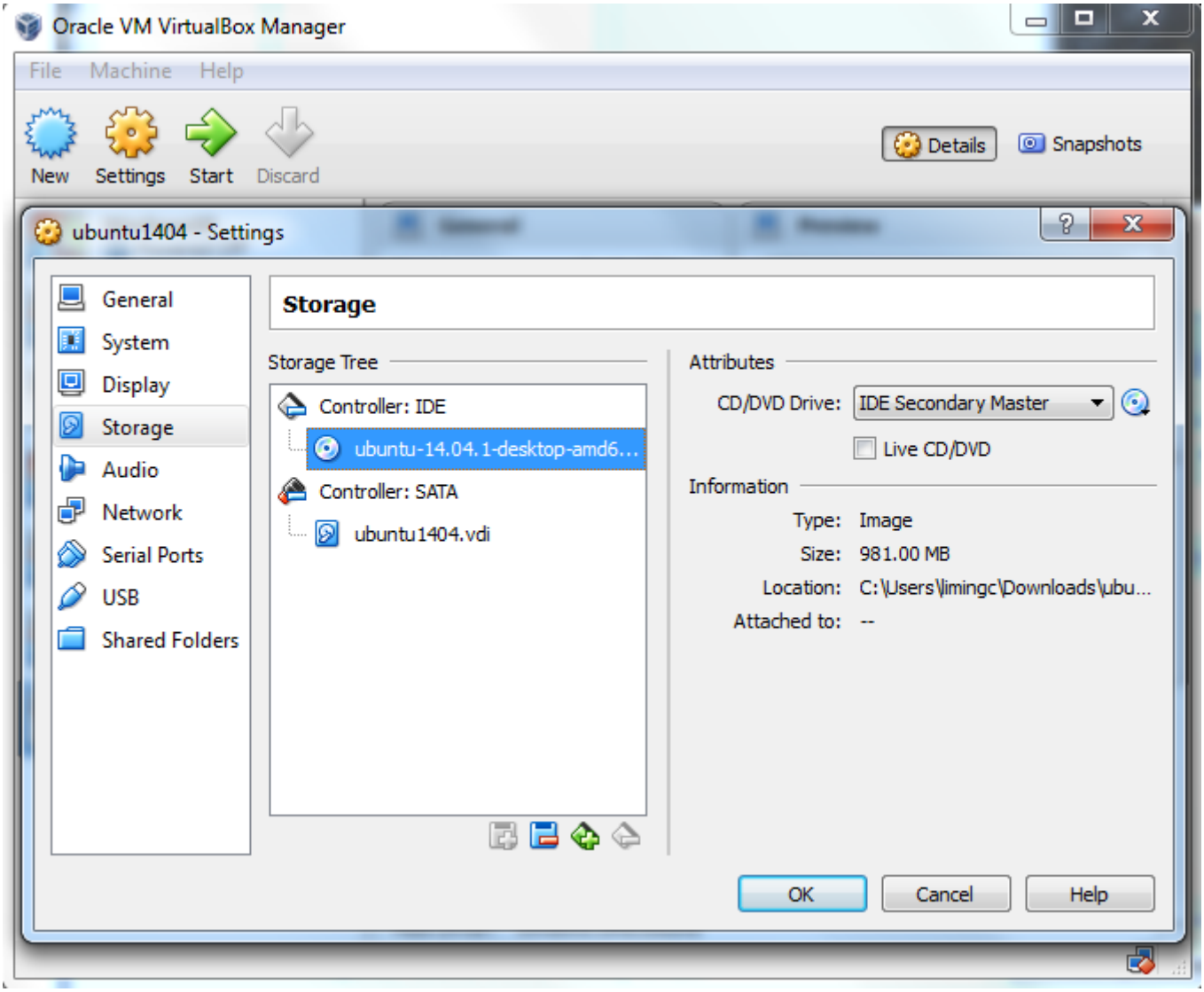
- This step is to choose the memory which depends totally on your storage and preference but allocating less than 8GB may cause system errors.



Once the virtual machine has been created we need to install ubuntu into the virtual machine. In order to install Ubuntu the ISO file is required to integrate Ubuntu into the hypervisor.

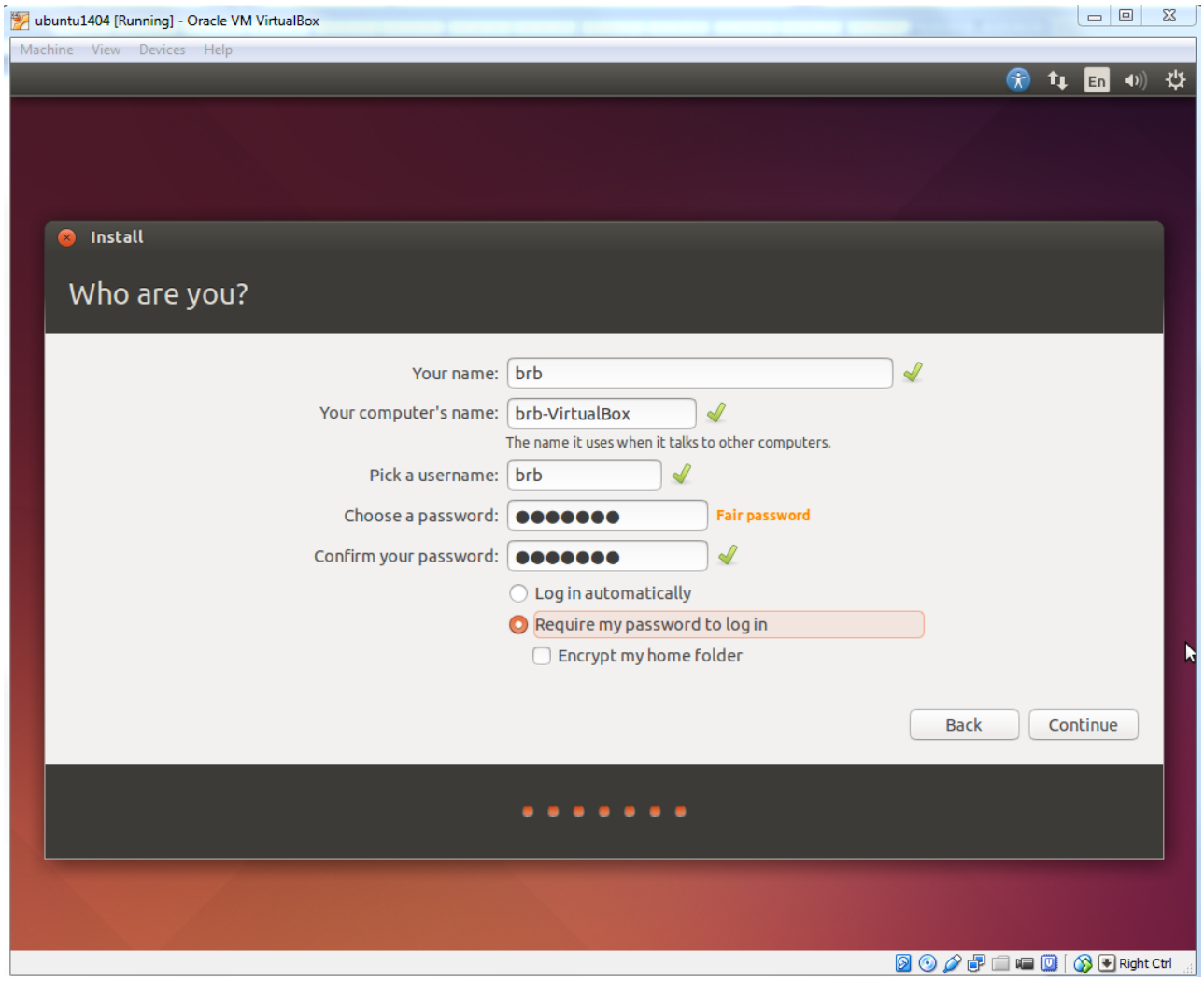
After downloading the iso file , Select your new virtual machine and click 'Settings' button. Click on 'Storage' category and then 'Empty' under Controller:IDE. Click "CD/DVD" icon on right hand side and select

the ubuntu ISO file to mount. It should look similar to this.



Back to Oracle VM VirtualBox Manager, click on the new Ubuntu virtual machine and hit 'Start' button. Now you shall see a 'Welcome' screen. Ubuntu will ask a few simple questions such as;

- Click 'Install Ubuntu' button.
- Click 'Continue' button
- Make sure 'Erase disk and install Ubuntu' option is selected and click 'Install Now' button.
- Ubuntu will ask you a few more questions. If the default is good, click 'Continue' button.
- After reaching the Who are you? question make sure to note the username and password that you will create and choose a secure password with characters and numbers included.



After the installation is completed the system will prompt for a restart.After the restart Ubuntu is ready to use.

Virtualbox Extension Pack

Even though it is not necessary Virtualbox Extension Pack can be useful in many ways.

VirtualBox Extension Pack is a binary package intended to extend the functionality of VirtualBox. The Extension pack adds many functionalities to the hypervisor such as USB 2.0 and USB 3.0 devices, VirtualBox RDP, disk encryption, NVMe and PXE boot for Intel cards.