Week Report 2

Basics of virtualization

1. **What is virtualization**

Virtualization is a replication of hardware to stimulate a virtual machine inside a physical machine.

2. **Types of virtualization**

The two general types of virtualization are server-side virtualization and client-side virtualization. The difference between the two is **where the virtualization takes place.**

Server side virtualization is provides a virtual desktop to each user. It has a virtual desktop infrastructure (VDI). This type runs on hardware such as VMware ESX and ESXi Citrix XenServer.

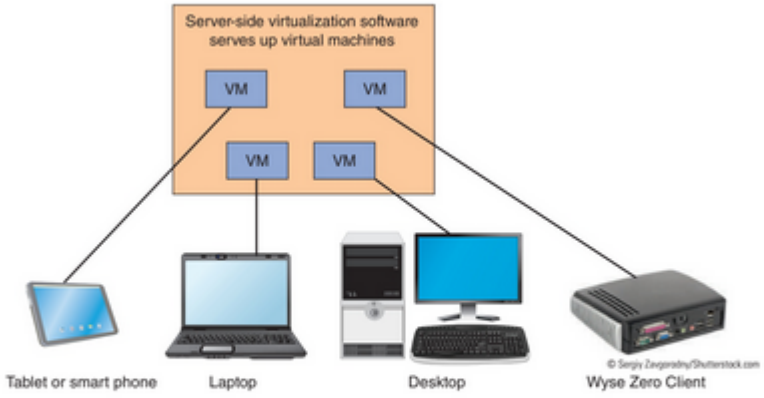
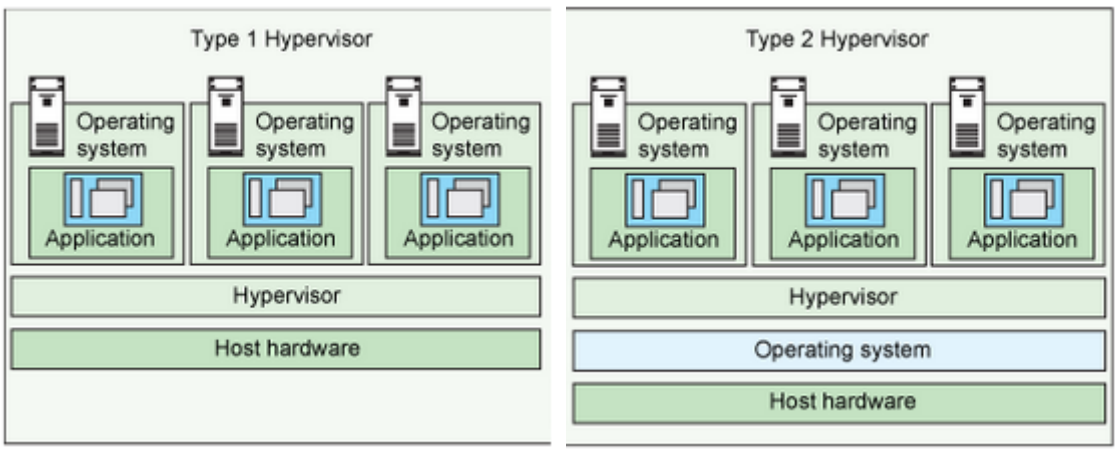


Figure 20-1 Server-side virtualization provides a virtual desktop to each user

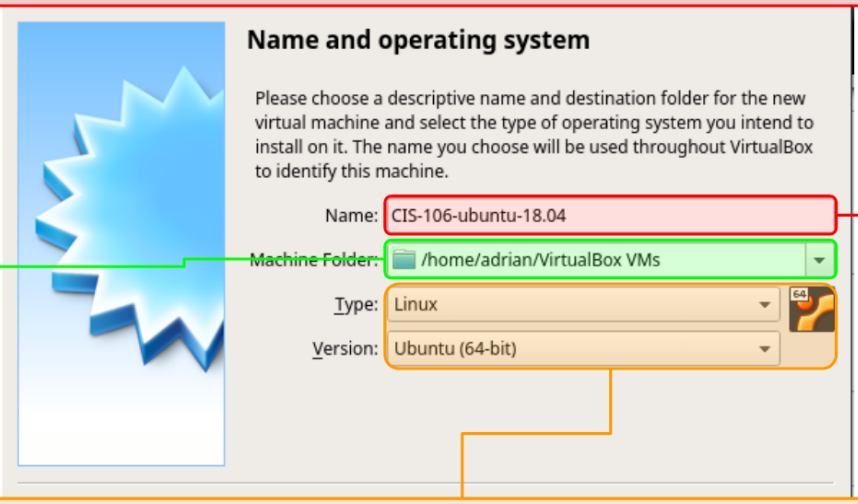
Client side virtualization is software installed on a computer to manage virtual machines. Each VM has its own operating system installed. The computer needs a hypervisor (software that allows the management of virtual machines) and hardware support (capable CPU, enough ram, enough storage). Some examples of the host operating system it runs on are VMware Workstation Player/Pro Oracle VirtualBox.



Installing Ubuntu in Virtualization

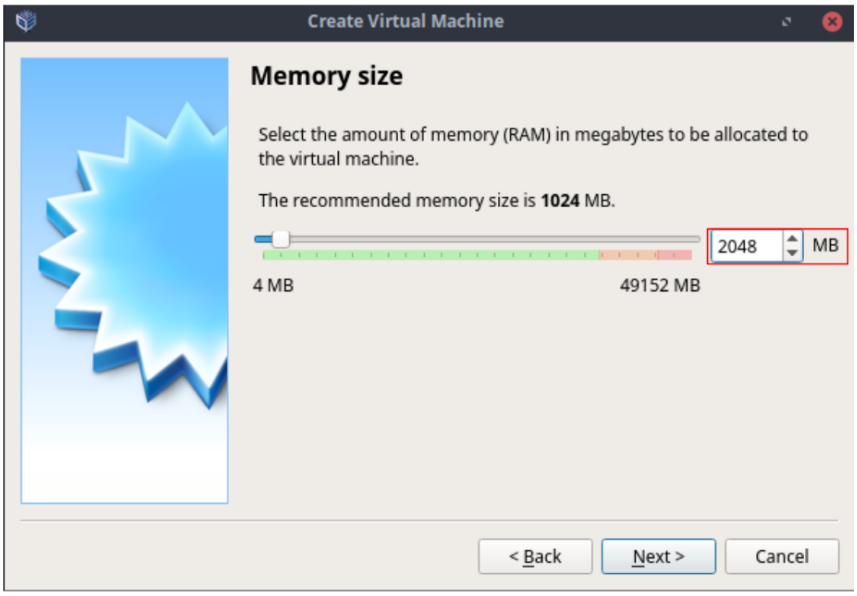
You can name your vm however you want but it is good practice to name it something that indicates what OS is being installed or the purpose of the vm.

This indicates where the virtual machine is located in your host machine.



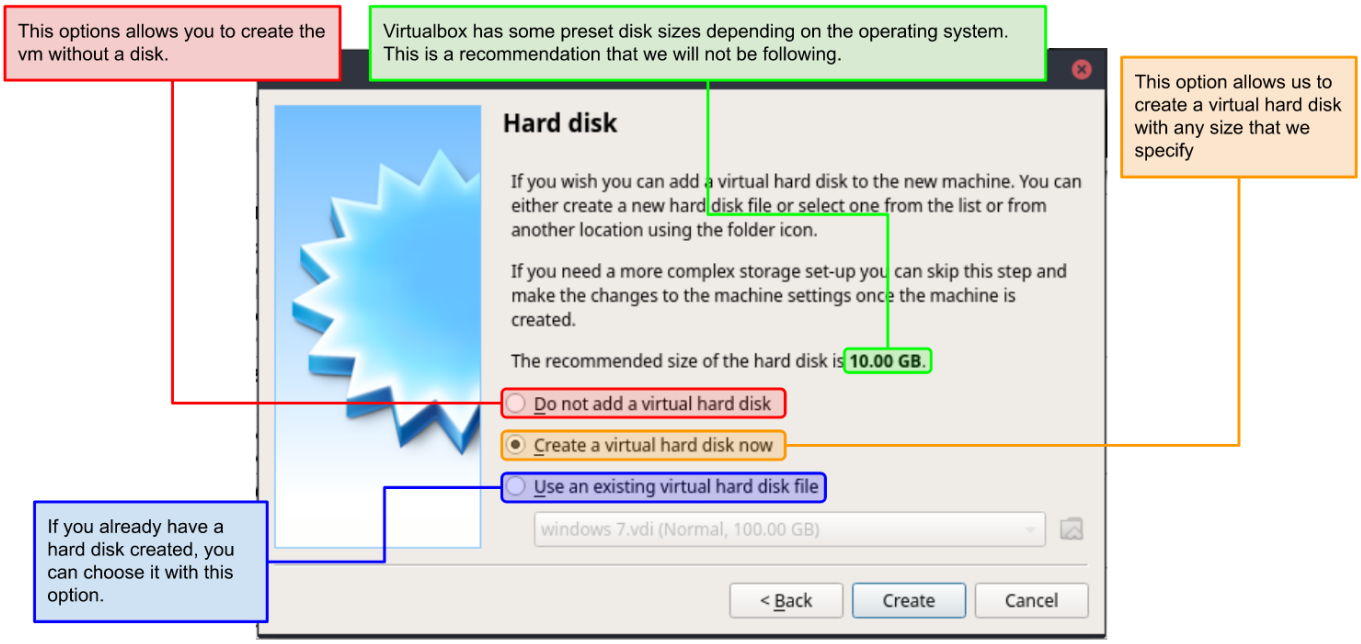
This indicates the type of operating systems and the versions available. If you do not see a 64 bit version of the OS available is probably because virtualization is not enabled in your computer

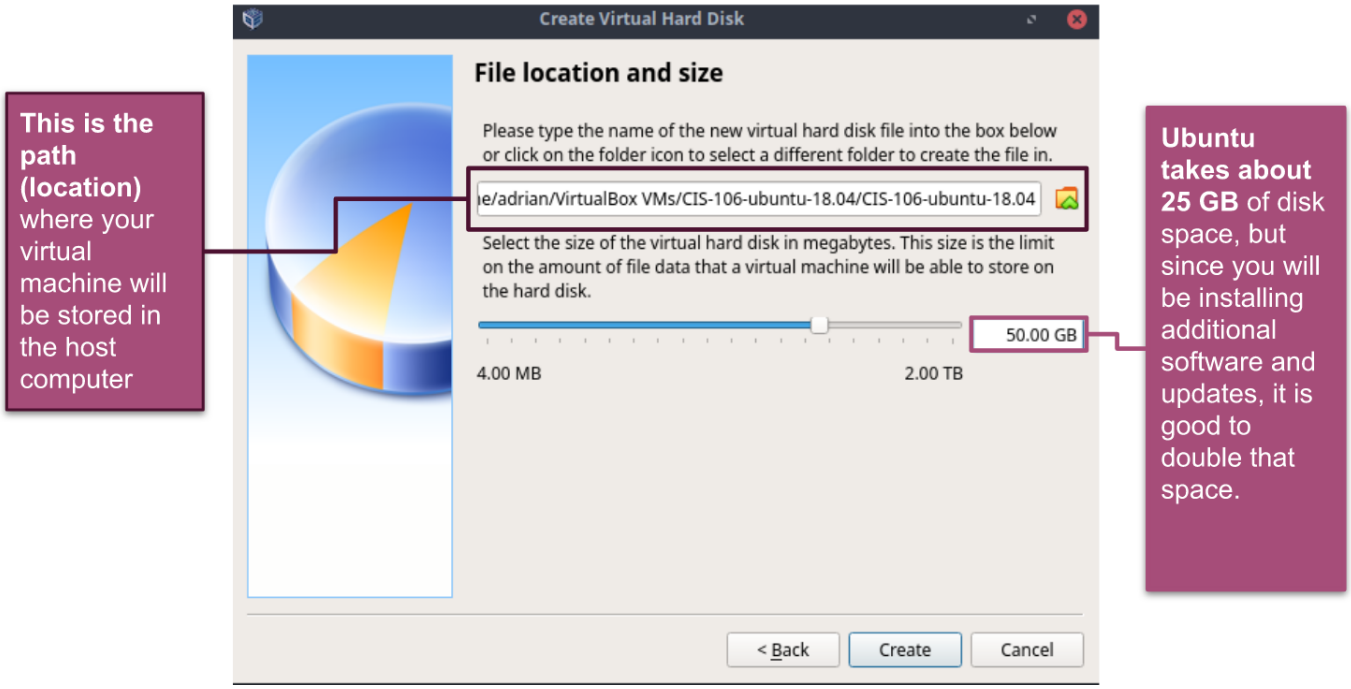
Ubuntu Desktop requires at least 2GB of RAM but if you have more than 8GB of RAM you can increase the amount of RAM you give the virtual machine without diminishing your host OS performance significantly.

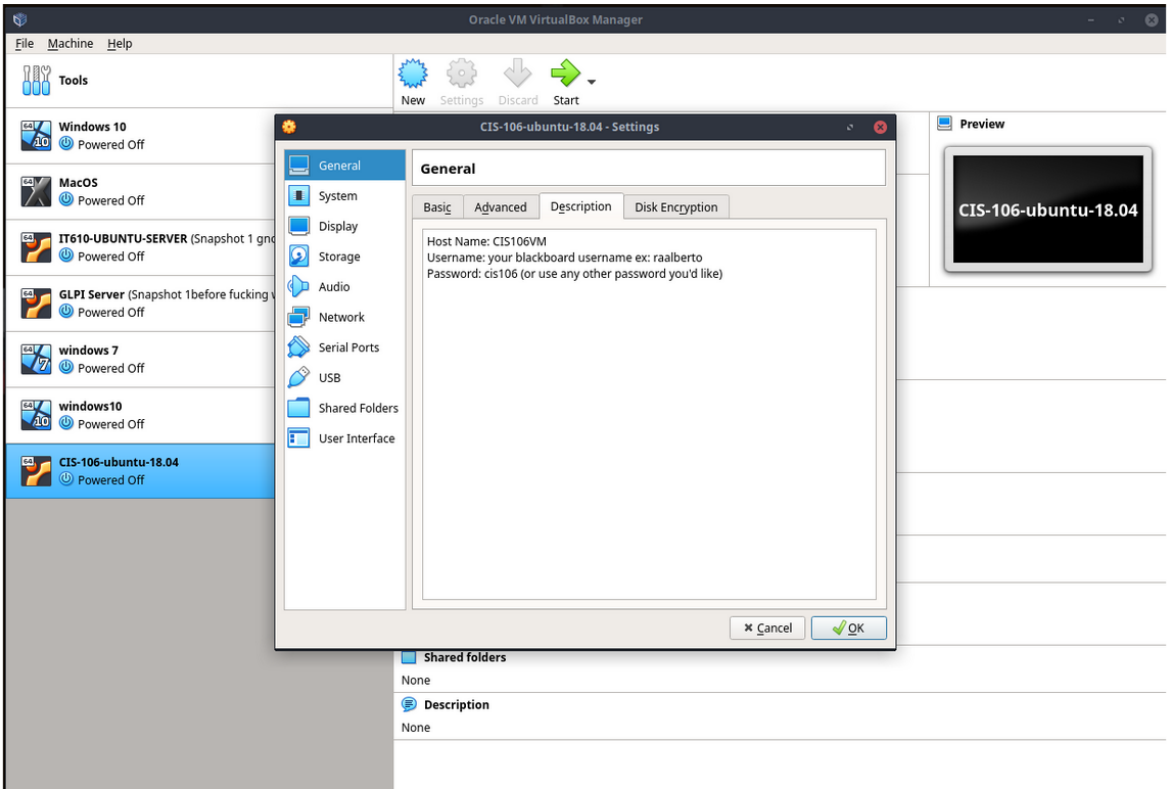


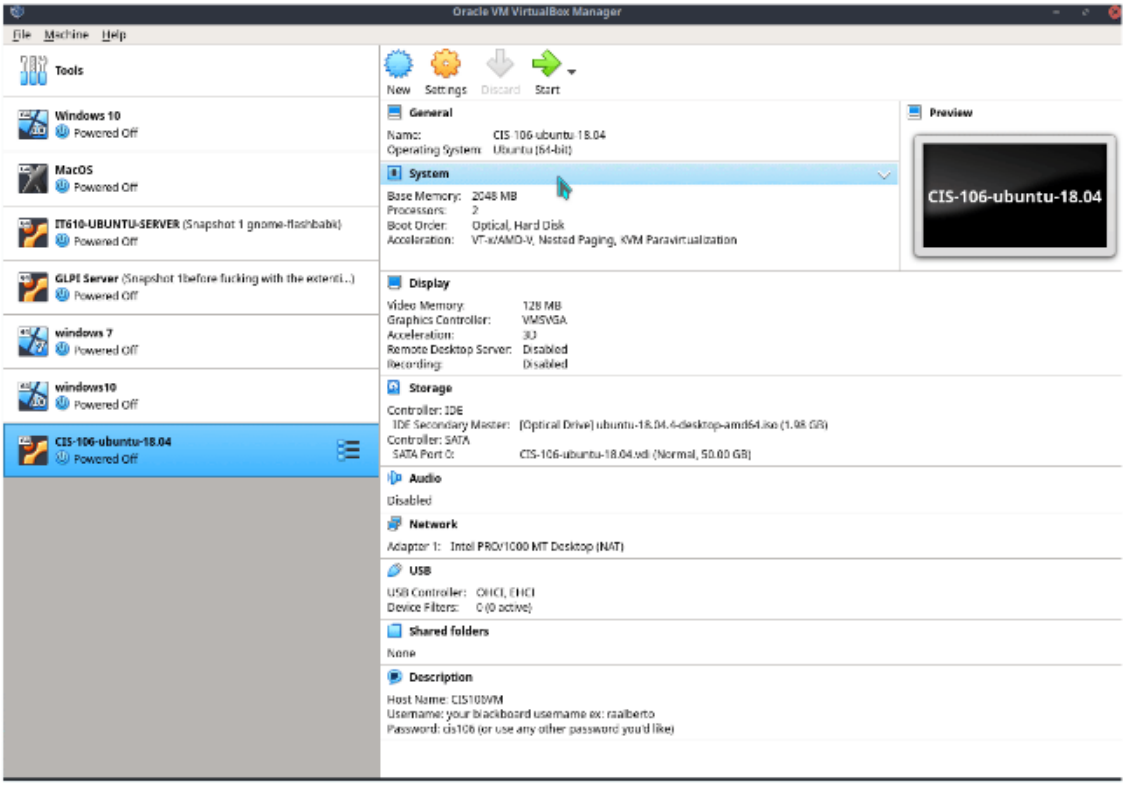
Here is a tip.

- If you plan to run only 1 virtual machine at a time and you have 8GB of RAM. You can give your vm 4GB of RAM and your PC will still be fast.
- If you have 4GB of RAM. Do not give your VM more than 2GB of RAM.


This options allows you to create the vm without a disk.
Virtualbox has some preset disk sizes depending on the operating system. This is a recommendation that we will not be following.
This option allows us to create a virtual hard disk with any size that we specify
If you already have a hard disk created, you can choose it with this option.
Hard disk
If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select one from the list or from another location using the folder icon.
If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.
The recommended size of the hard disk is 10.00 GB.
Do not add a virtual hard disk
Create a virtual hard disk now
Use an existing virtual hard disk file
windows 7.vdi (Normal, 100.00 GB)
< Back
Create
Cancel


This is the path (location) where your virtual machine will be stored in the host computer
Create Virtual Hard Disk
File location and size
Please type the name of the new virtual hard disk file into the box below or click on the folder icon to select a different folder to create the file in.
e/adrian/VirtualBox VMs/CIS-106-ubuntu-18.04/CIS-106-ubuntu-18.04
Select the size of the virtual hard disk in megabytes. This size is the limit on the amount of file data that a virtual machine will be able to store on the hard disk.
50.00 GB
4.00 MB
2.00 TB
< Back
Create
Cancel
Ubuntu takes about 25 GB of disk space, but since you will be installing additional software and updates, it is good to double that space.


Oracle VM VirtualBox Manager
File Machine Help
Tools
Windows 10
Powered Off
MacOS
Powered Off
IT610-UBUNTU-SERVER (Snapshot 1 gnc
Powered Off
GLPI Server (Snapshot 1before fucking
Powered Off
windows 7
Powered Off
windows10
Powered Off
CIS-106-ubuntu-18.04
Powered Off
New
Settings
Discard
Start
CIS-106-ubuntu-18.04 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
General
Basic
Advanced
Description
Disk Encryption
Host Name: CIS106VM
Username: your blackboard username ex: raalberto
Password: cis106 (or use any other password you'd like)
Cancel
OK
Preview
CIS-106-ubuntu-18.04
Shared folders
None
Description
None


Oracle VM VirtualBox Manager
File Machine Help
Tools
Windows 10
Powered Off
MacOS
Powered Off
IT610-UBUNTU-SERVER (Snapshot 1 gnome-flashbabk)
Powered Off
GLPI Server (Snapshot 1before fucking with the extensi..)
Powered Off
windows 7
Powered Off
windows10
Powered Off
CIS-106-ubuntu-18.04
Powered Off
New
Settings
Discard
Start
General
Name: CIS-106-ubuntu-18.04
Operating System: Ubuntu (64-bit)
System
Base Memory: 2048 MB
Processors: 2
Boot Order: Optical, Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization
Display
Video Memory: 128 MB
Graphics Controller: VMSVGA
Acceleration: 3D
Remote Desktop Server: Disabled
Recording: Disabled
Storage
Controller: IDE
IDE Secondary Master: [Optical Drive] ubuntu-18.04.4-desktop-amd64.iso (1.98 GB)
Controller: SATA
SATA Port 0: CIS-106-ubuntu-18.04.vdi (Normal, 50.00 GB)
Audio
Disabled
Network
Adapter 1: Intel PRO/1000 MT Desktop (NAT)
USB
USB Controller: OHCI, EHCI
Device Filters: 0 (0 active)
Shared folders
None
Description
Host Name: CIS106VM
Username: your blackboard username ex: raalberto
Password: cis106 (or use any other password you'd like)
Preview
CIS-106-ubuntu-18.04