Week report 2

The basics of Virtualization

Virtualization is has two types of hypervisors, there's type 1 where it runs on the hardware. Then there's type 2, where it runs on a host operating system. Type 1 Example: VMware ESX and ESXi Type 2 Example: VMware Workstation Player/Pro

Virtualization also has many benefits.

1. You're able to run multiple operating systems on single machine.
2. You're able to try out untested programs without giving the host machine a virus or malware.

In order to have a good experience using virtualization your computer must have the following specifications:

1. Quad core CPU or Dual core with a base frequency of 2.0GHz
2. 6GB or more of RAM
3. 60GB or more of Free storage

What is virtualization Definition of Virtualization: Is when you install and run multiple operating systems inside a physical machine.

Types of virtualization

- Server-side virtualization Definition: Server-side virtualization provides a virtual desktop to each user

Server-side virtualization software serves up virtual machines

Tablet or smart phone   Laptop   Desktop   Wyse Zero Client
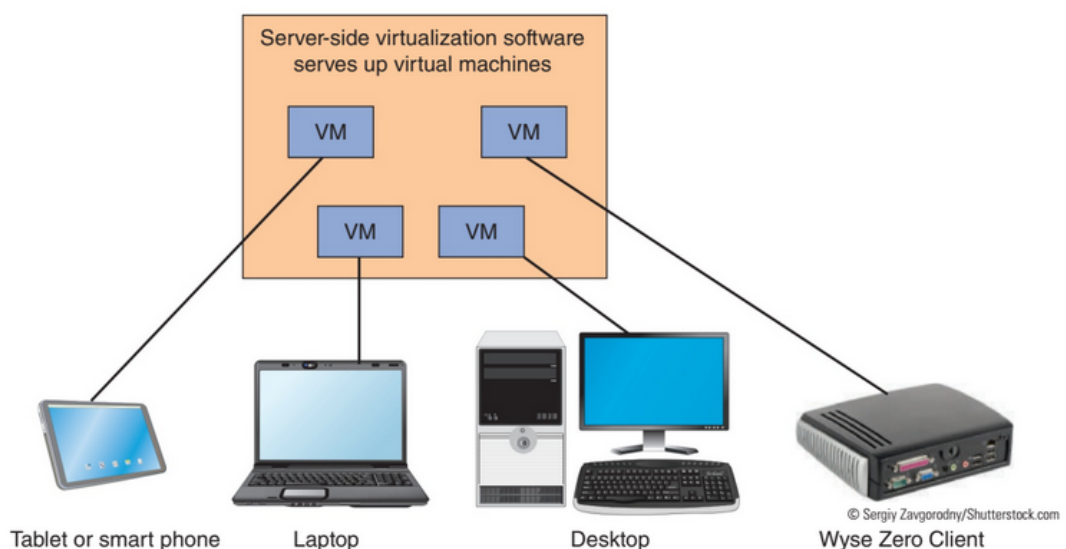
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Figure 20-1 Server-side virtualization provides a virtual desktop to each user

- Client-side virtualization Definition: Client-side virtualization is a software that manages virtual machines on your computer.

Installing Ubuntu in Virtualbox

- Confirming virtualization is enabled

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.

Name and operating system

Please choose a descriptive name and destination folder for the new virtual machine and select the type of operating system you intend to install on it. The name you choose will be used throughout VirtualBox to identify this machine.

Name: CIS-106-ubuntu-18.04

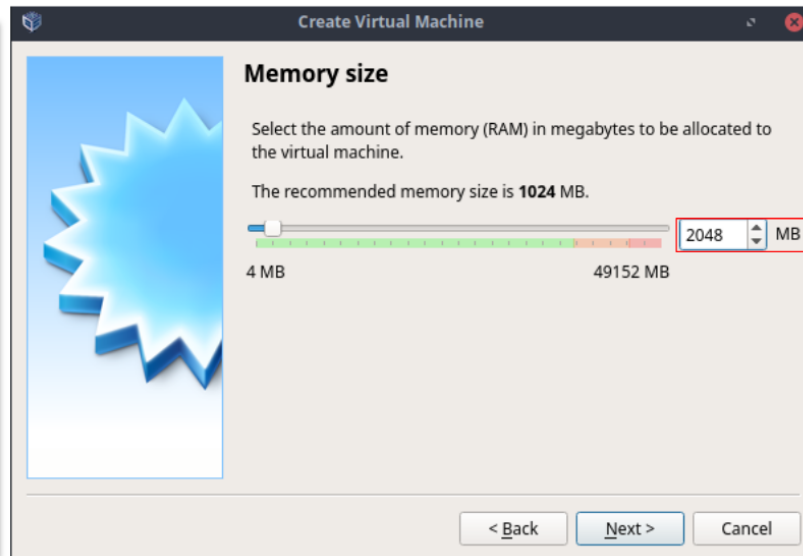Machine Folder: /home/adrian/VirtualBox VMs

Type: Linux

Version: Ubuntu (64-bit)

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

- Required RAM for Ubuntu

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.

Create Virtual Machine

Memory size

Select the amount of memory (RAM) in megabytes to be allocated to the virtual machine.

The recommended memory size is **1024** MB.

4 MB   49152 MB
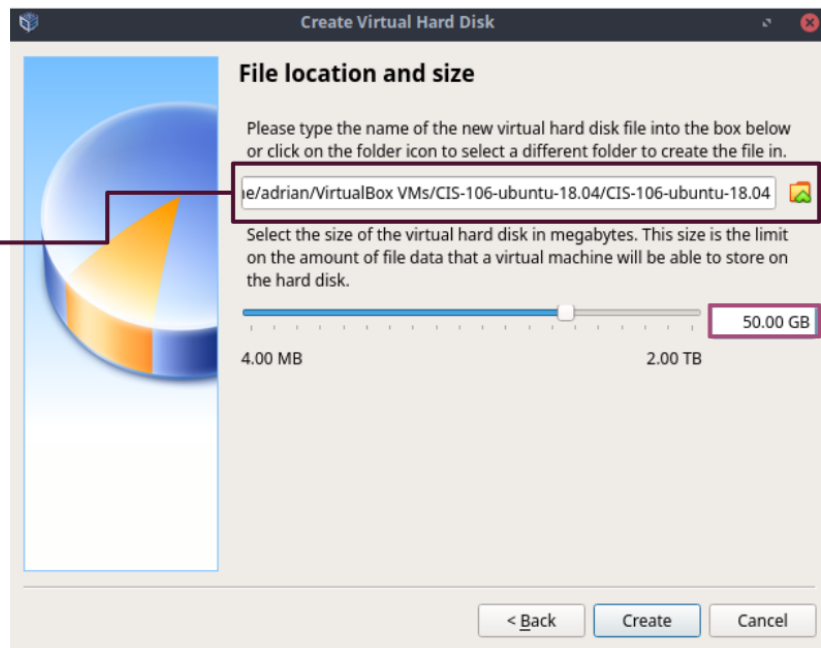
2048 MB

< Back   Next >   Cancel

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.

- Disk Space

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.

4.00 MB   2.00 TB

50.00 GB

< Back   Create   Cancel

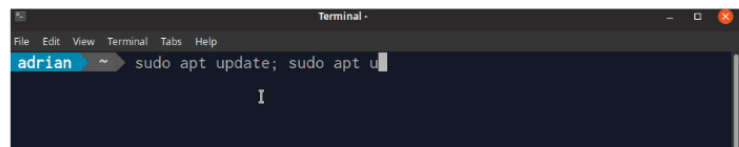**This is the path (location)** where your virtual machine will be stored in the host computer

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.

- How to Update Ubuntu

Update Ubuntu 20.04

- Two ways:
  - Using Ubuntu Software Update
  - Using the command line
    - Command:

```
sudo apt update; sudo apt upgrade -y; sudo apt full-upgrade -y
```


- Always take a snapshot

Take a snapshot of a virtual machine