Week Report 2

The basics of virtualization

1. **What is virtualization?** Virtualization - replication of hardware to simulate a virtual machine inside a physical machine

2. **Types of Virtualization** There are two types:

   - **Server side virtualization** provides a virtual desktop to each user. Server-side-virtualization
   - **Client-side virtualization** is installed using software on a computer. Each virtual machine has it's own operating system and software applications.
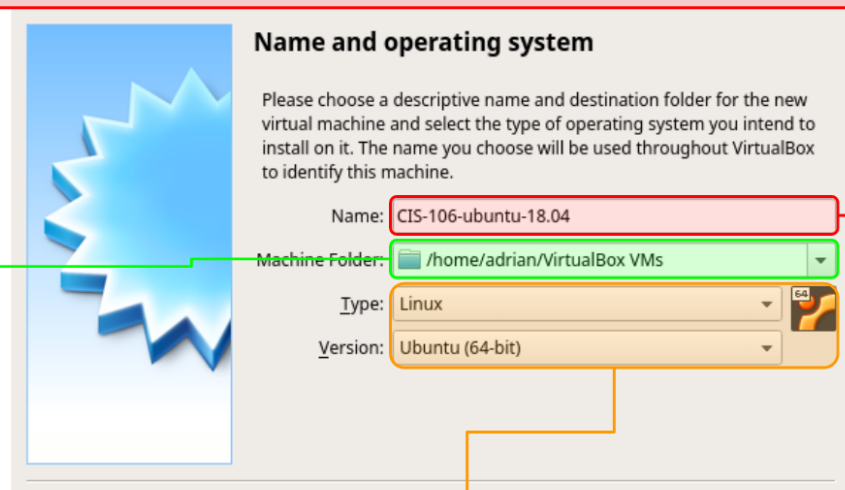
   > The main difference between the two is *where the virtualization occurs*

Installing Ubuntu in Virtualbox

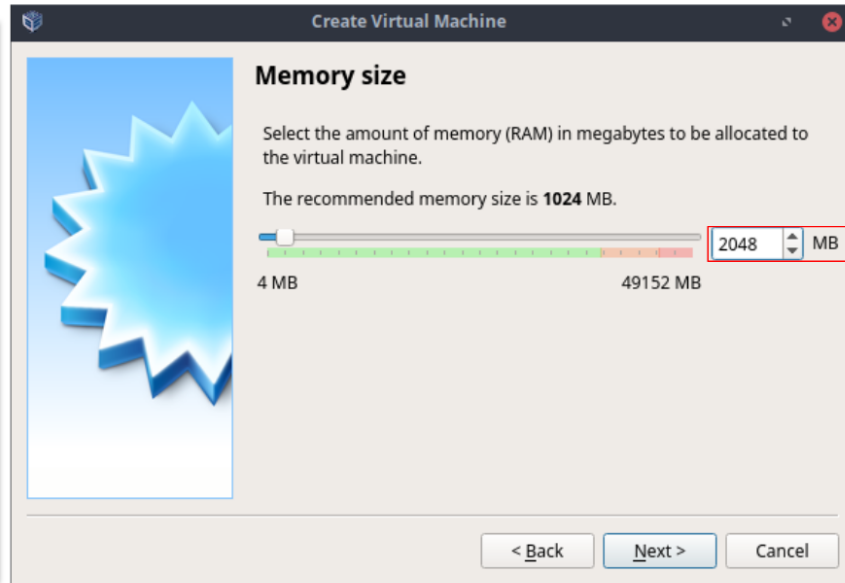*Ubuntu Installation Process. In my opinion, these steps are important.

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

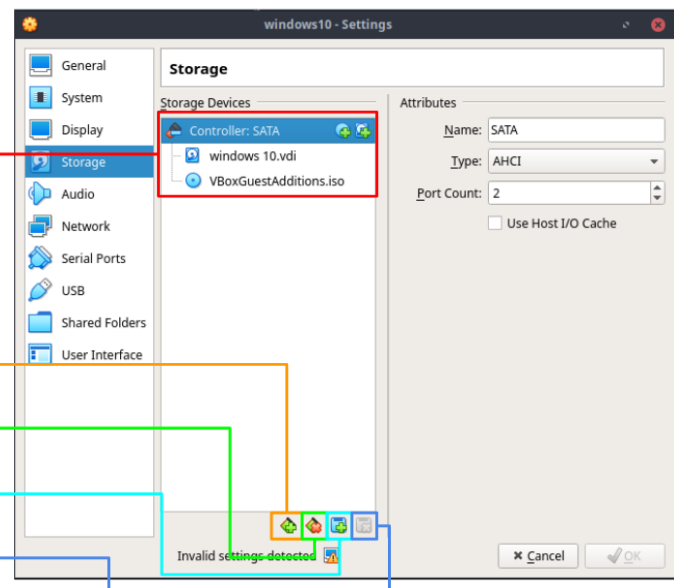2048 MB

< 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.
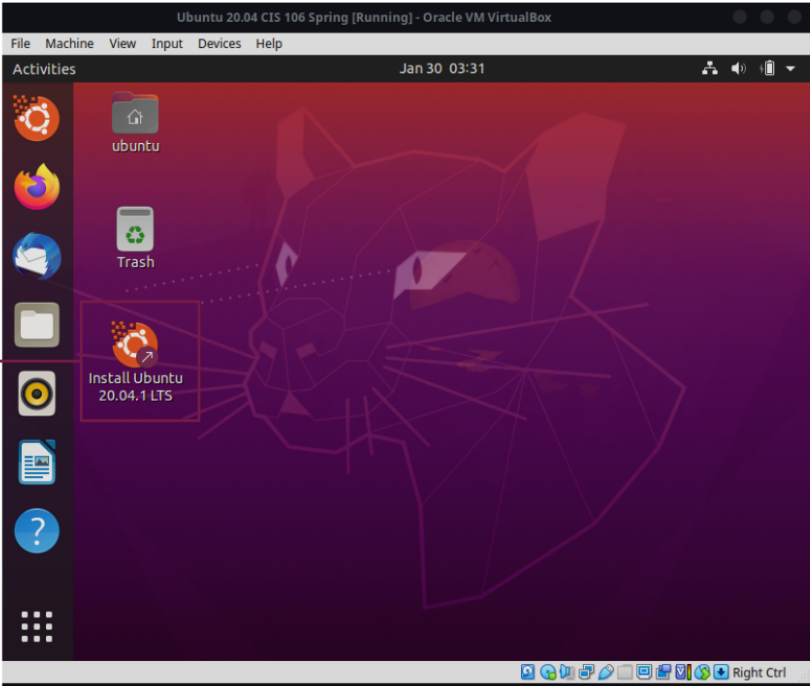- If you have 4GB of RAM. Do not give your VM more than 2GB of RAM.

4

Depending on the guest OS type, a new VM includes the following storage devices:
- **IDE controller.** A virtual CD/DVD drive is attached to the secondary master port of the IDE controller.
- **SATA controller.** This is a modern type of storage controller for higher hard disk data throughput, to which the virtual hard disks are attached.

windows10 - Settings

General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface

Storage

Storage Devices
Controller: SATA
  windows 10.vdi
  VBoxGuestAdditions.iso

Attributes
Name: SATA
Type: AHCI
Port Count: 2
Use Host I/O Cache

Invalid settings detected

Cancel   OK

Add new storage controller

Remove selected storage controller

Add new storage attachment

Remove storage attachment

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To start Ubiquity, double click on the "**Install Ubuntu 18.04.4 LTS**" icon. This will launch the installation wizard.
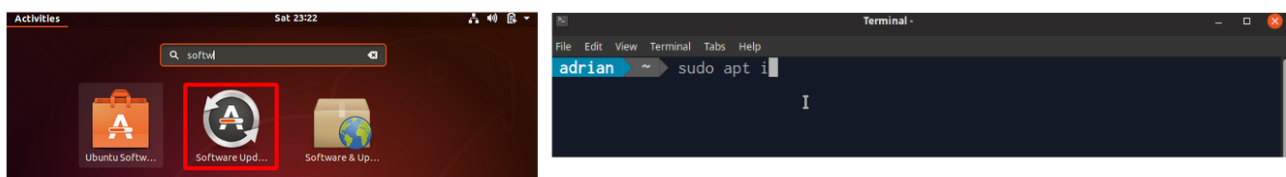
You can use the live environment as a regular computer. All ubuntu's default applications are available in this environment. However, any changes will not remain as well as any data saved in this environment

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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
```


3
2