

# Weekly Report 2

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## Summary of Presentations

### The basics of Virtualization

- **What is virtualization** Replication of hardware to simulate virtual machines.
- **Types of virtualization**
  - Server side
  - Client side

# Client-side virtualization

- Software installed on a computer to manage virtual machines
- Each VM has its own operating system installed
- For client-side virtualization, the computer needs:
  - A hypervisor (Software that allows the management of virtual machines)
  - Hardware support
    - capable CPU
    - Enough RAM
    - Enough storage



## Type 1 VS Type 2 Hypervisor

### Type 1

Runs on the hardware

Examples are:

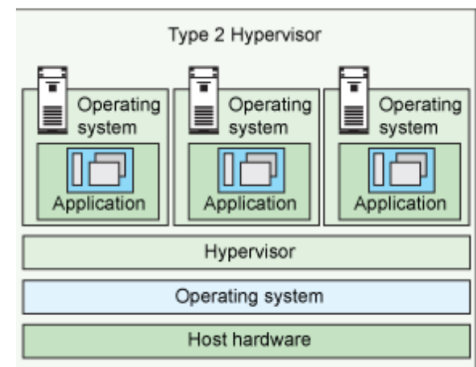
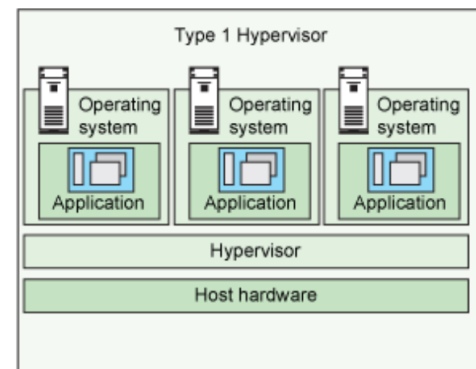
VMware ESX and ESXi  
Citrix XenServer

### Type 2

Runs on a Host Operating System

Examples are:

VMware Workstation Player/Pro  
Oracle VirtualBox

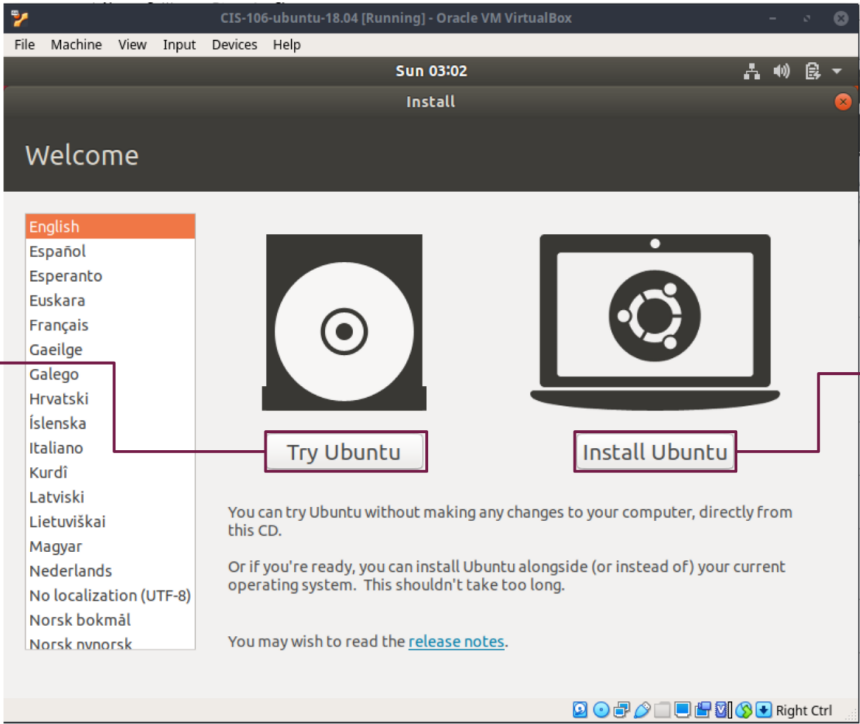
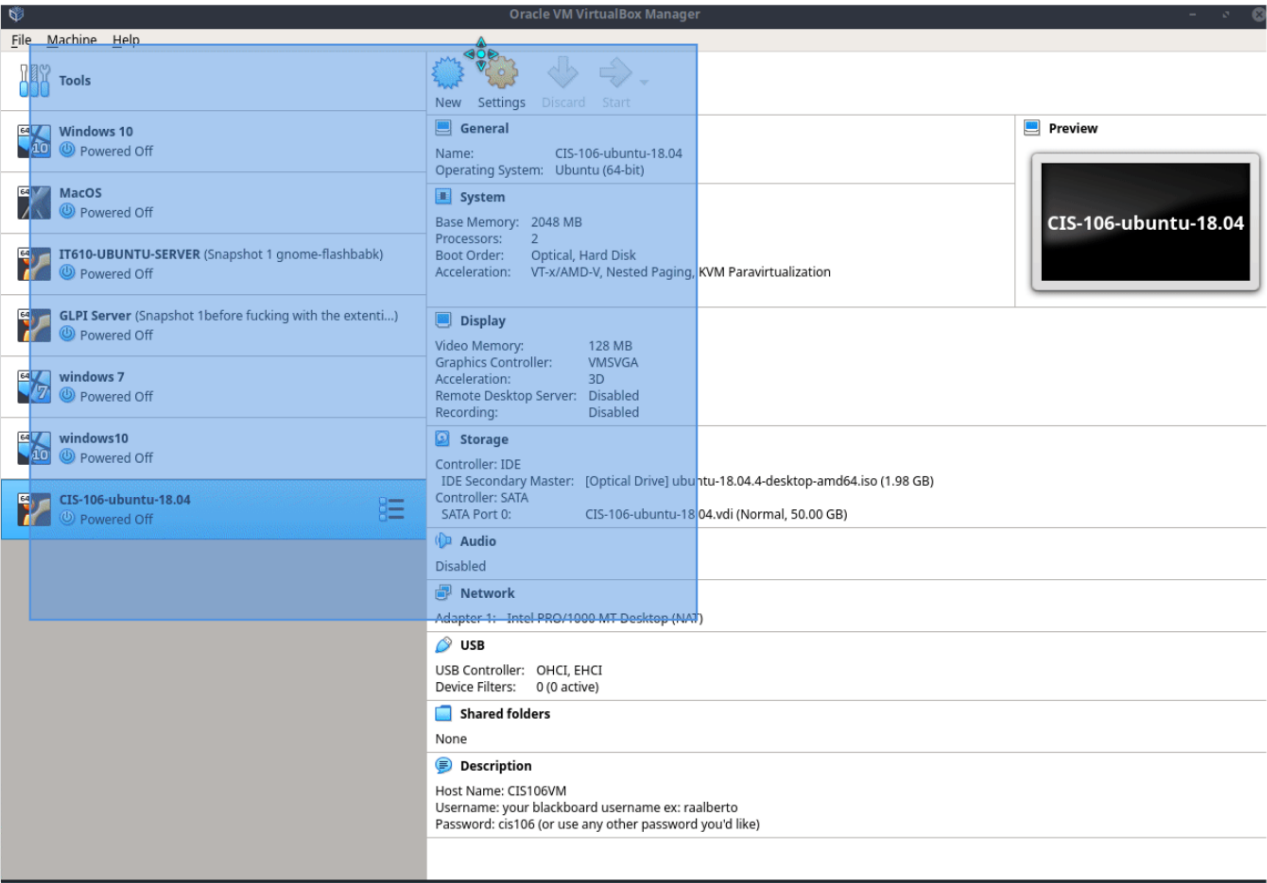


SEE [HTTPS://VAPOUR-APPS.COM/WHAT-IS-HYPERVISOR/](https://VAPOUR-APPS.COM/WHAT-IS-HYPERVISOR/) FOR MORE INFORMATION

#### • Benefits of Virtualization

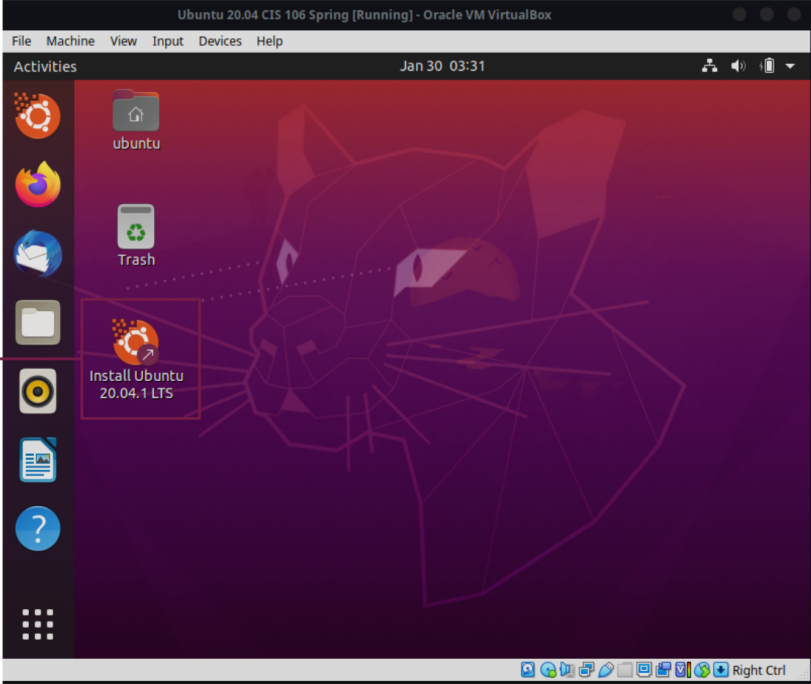
- Allows running multiple OSs
- Allows application sandboxing
- Reduces hardware cost

## Installing Ubuntu



**Try Ubuntu:**  
Starts  
Ubuntu live  
environment.  
You can  
launch the  
installer from  
the live  
environment.

**Install Ubuntu:**  
Starts  
Ubuntu  
installer.  
Ubuntu  
installer is  
called  
*Ubiquity*



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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## What is the Raspberry Pi

- What is a raspberry pi

# What is a Raspberry Pi?

- The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It’s capable of doing everything you’d expect a desktop computer to do.

## Raspberry Pi Foundation

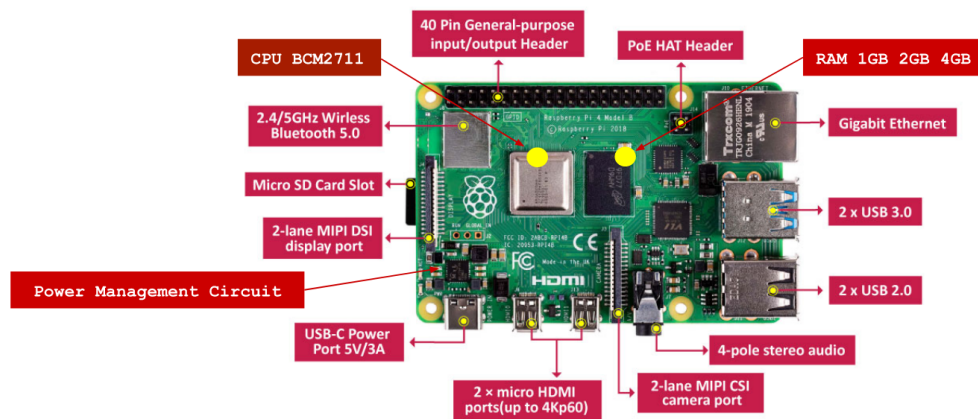
- The Raspberry Pi Foundation is a registered educational charity based in the UK.
- The Foundation’s goal is to advance the education of adults and children, particularly in the field of computer science and related subjects.

- Different models

- Raspberry Pi 400
- Raspberry Pi 4
- Raspberry Pi 3
- Raspberry Pi Zero W
- Raspberry Pi 3 A+
- Raspberry Pi 2
- Raspberry Pi CMP
- Raspberry Pi

- Specs of the latest model

# The components of the Pi | Raspberry Pi 4



- 5 projects you can do in Build a DNS/DHCP server and ads blocker with the Pi
  - Pi-hole
  - Build a wireless access Point
  - Build a Tor Router
  - Build a print server
  - Build a camera server