

# Notes Lecture 02

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## What is Virtualization?

- Creating a "fake" computer inside of your pc.
- Two general types of virtualization.
  - Server-side virtualization.
  - Client-side virtualization.
    - Difference is where the virtualization takes place.

### Server-Side Virtualization.

#### **Virtual Desktop Infrastructure (VDI)**

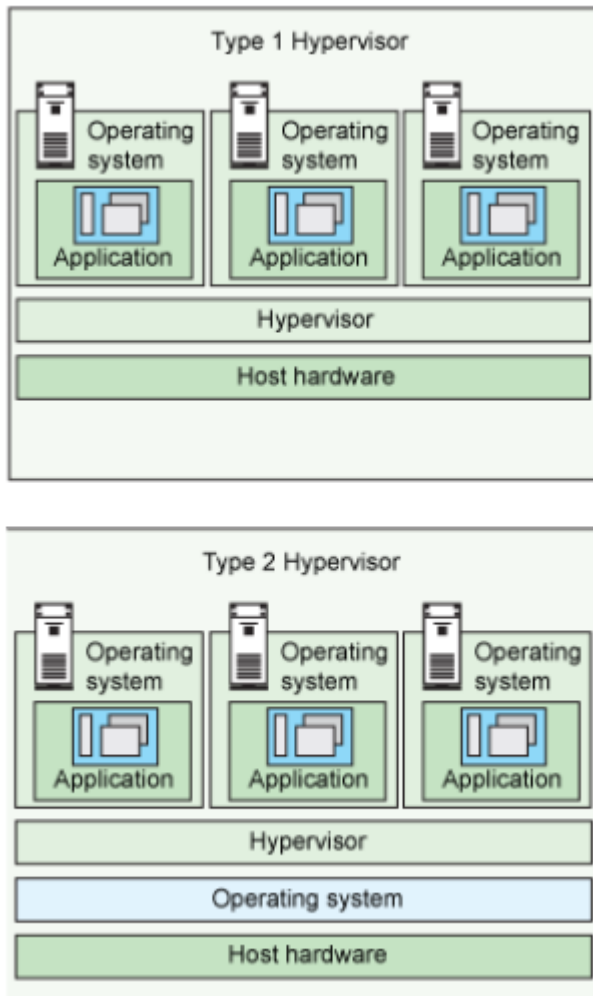
- Thin Client or Fat client
- Thin client
- Zero client

### Client-side virtualization.

- Software installed to manage Virtual Machine VM.
- each VM has its own operating system.
- For client side virtualization, Computer needs:
  - A hypervisor (software that allows management of VM)
  - Hardware support
- capable CPU
- Enough RAM
- Enough storage

## Type 1 VS Type 2 Hypervisor

**Type 1** Runs on hardware EX) VMware ESX & ESXi **Type 2** Runs on Hosting Operating System EX) Oracle



VirtualBox

VirtualBox

- Powerful type 2 virtualization product for enterprise as well as home use.
- Open source software under GPL version 2
- Supports large number of guest operating systems.

## Installing Ubuntu 20.04

- Name virtual machine
  - Name w/ use of VM
- Select a memory size
  - Requires at least 2GB of RAM
- If you wish Create Hard disc
  - allows to create a virtual hard disk w/ any size
- Choose type of file you would like to use for the new hard disk
  - Virtual disk image format.
- Choose storage you would like to use.
  - Select Dynamically allocated.
- Choose file location size
  - Ubuntu takes about 25GB of disc space.

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 is capable of doing everything you'd expect a desktop computer to do.