

Week Report 2

Summary of Presentations

The basics of virtualization

- **What is virtualization**

Replication on hardware to simulate virtual machines inside a physical machine

- **Types of virtualization**

client-side virtualization server-side virtualization

The big difference between this two is where the virtualization takes place. That's it!

Server-side virtualization

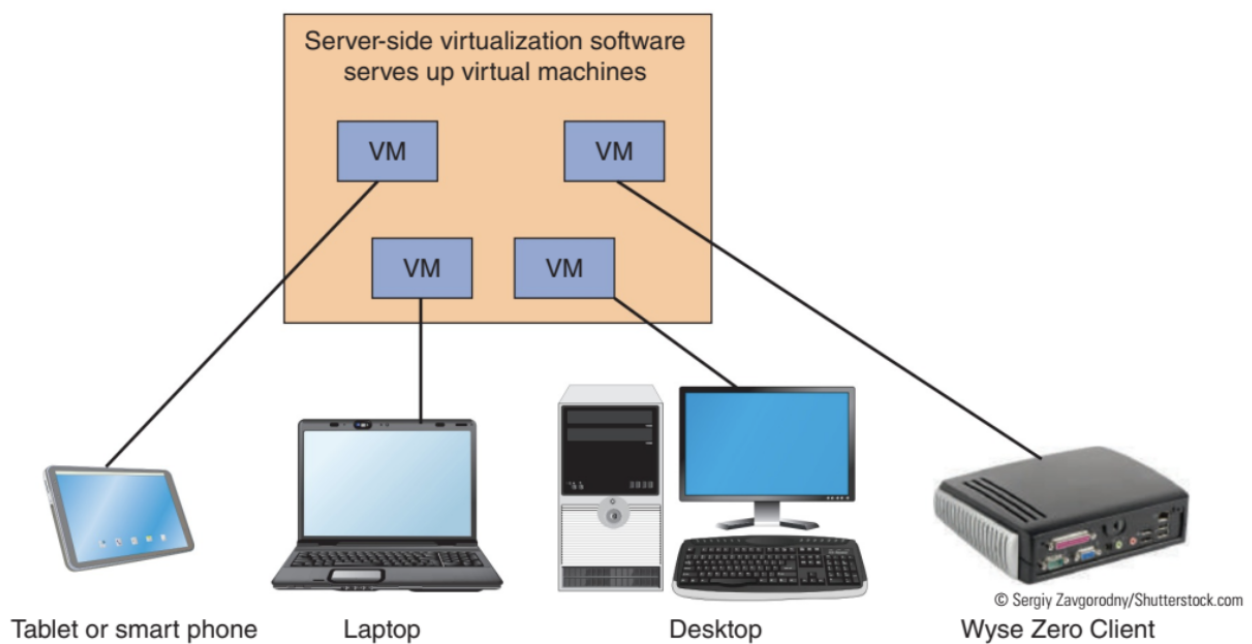


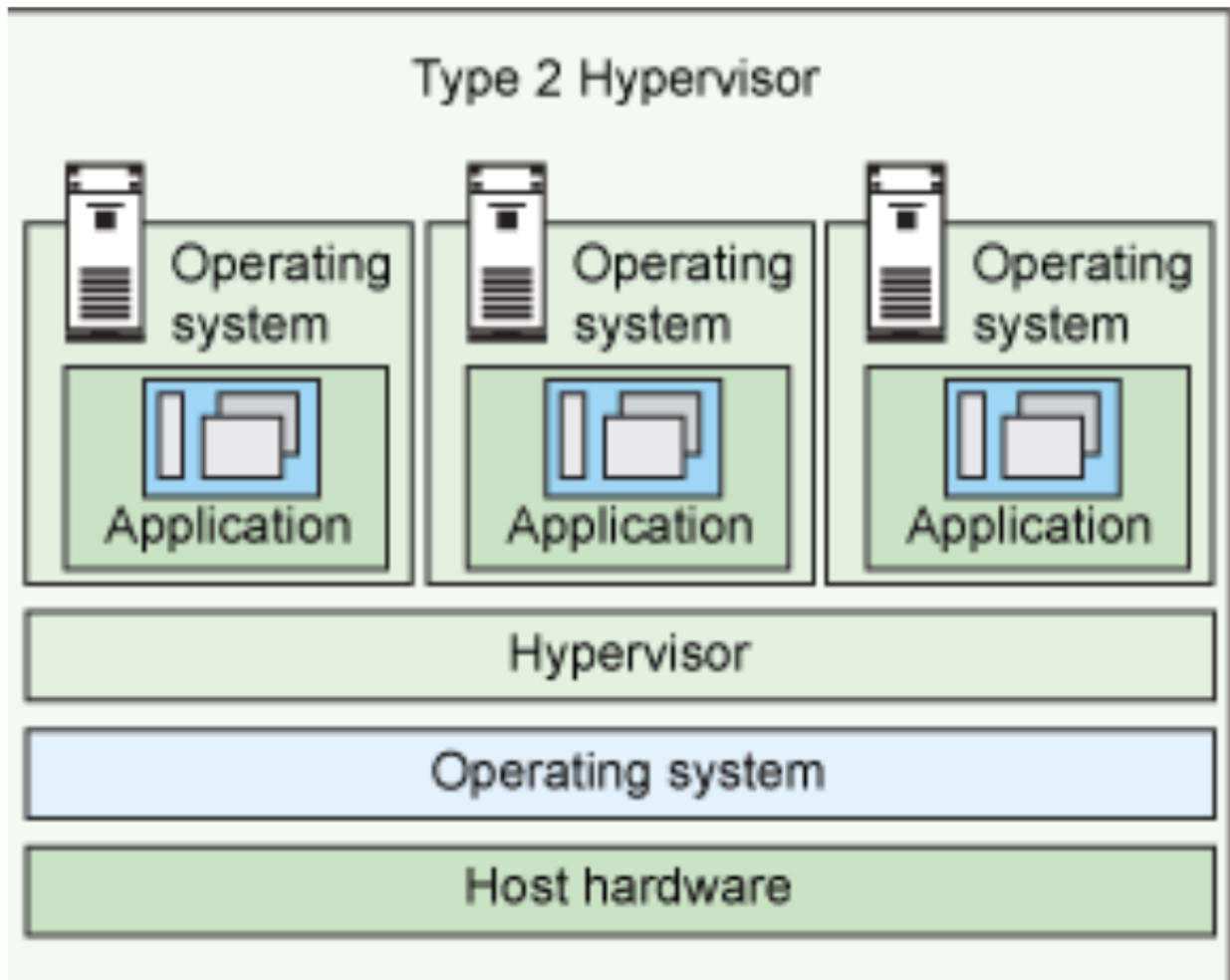
Figure 20-1 Server-side virtualization provides a virtual desktop to each user

- For example: Our school uses this server-side platform using (VMware ESXi) with (VDI) virtual desktop infrastructure. And provides "Thin clients" and "Zero clients" for students in the classrooms.
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Client-side virtualization

- Software installed on a computer to manage virtual machines

- 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



- **For this course we will be using Type 2 Hypervisor.**

Which is software that runs on a Host Operating System. Ex:

VMware Workstation Player/Pro Oracle VirtualBox

- **For the course We will use: Oracle VirtualBox**

Some of the benefits of virtualization are:

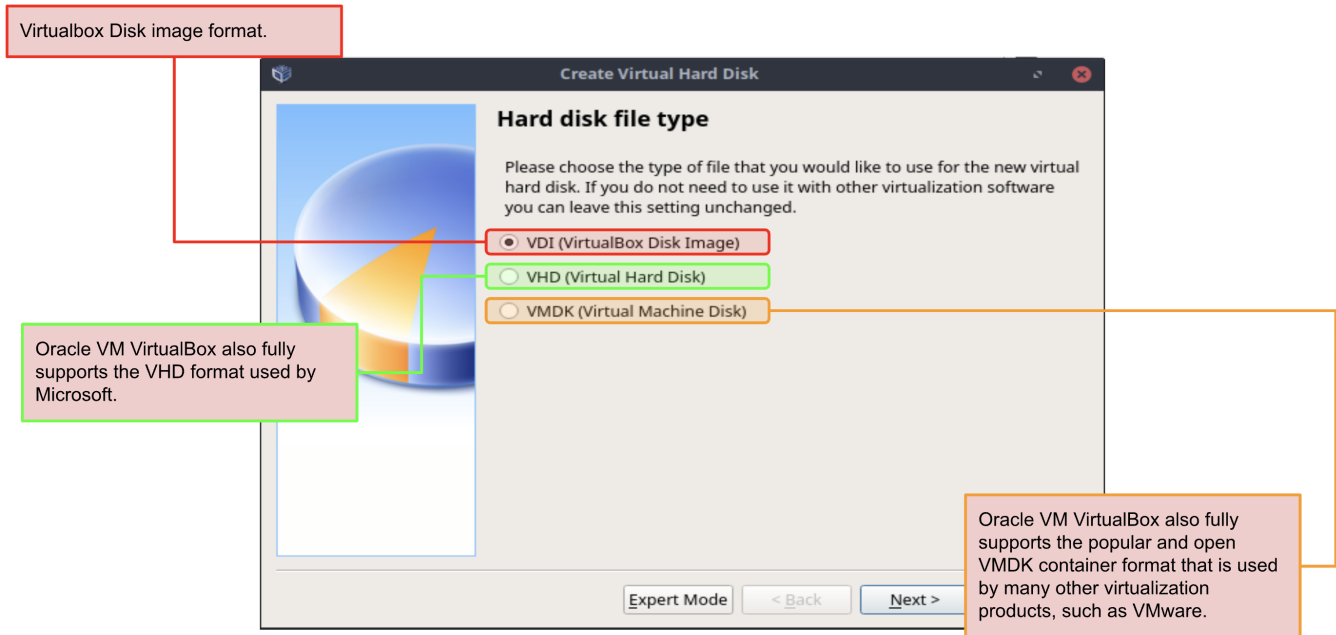
- Allows multiple OS.
- Allows applications to be tested before installing them on a host machine.
- Reduces the costs by decreasing the physical hardware that must be purchased for a network.

- Offers the chance to experiment with untested programs without infecting machines with malicious software or viruses.

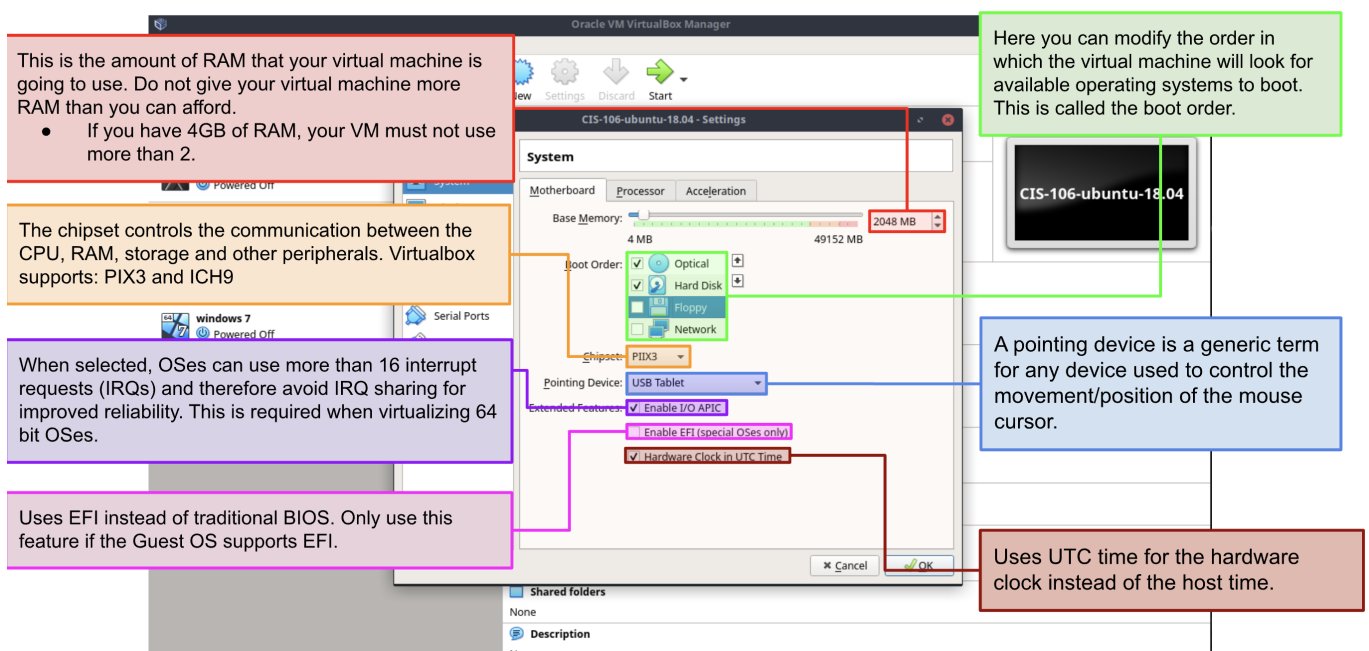
Installing Ubuntu in Virtualbox

How to install Ubuntu Distro in VirtualBox

Selecting the VDI (iso image needed)



Setting System Motherboard



Setting up CPU

This limits the amount of time a host CPU spends to emulate a virtual CPU. The default setting is 100%, meaning that there is no limitation.

PAE/NX allows x64 CPUs to directly access a physical address space larger than 4 gigabytes. If you are virtualizing 32bits oses,disable this. Nested virtualization allows you to create vms inside vms.

Sets the number of virtual CPU cores the guest OSes can see. You should not configure virtual machines to use more CPU cores than are available physically.

Setting up Display

Sets the size of the memory provided by the virtual graphics card available to the guest

With this setting, Oracle VM VirtualBox can provide more than one virtual monitor to a virtual machine.

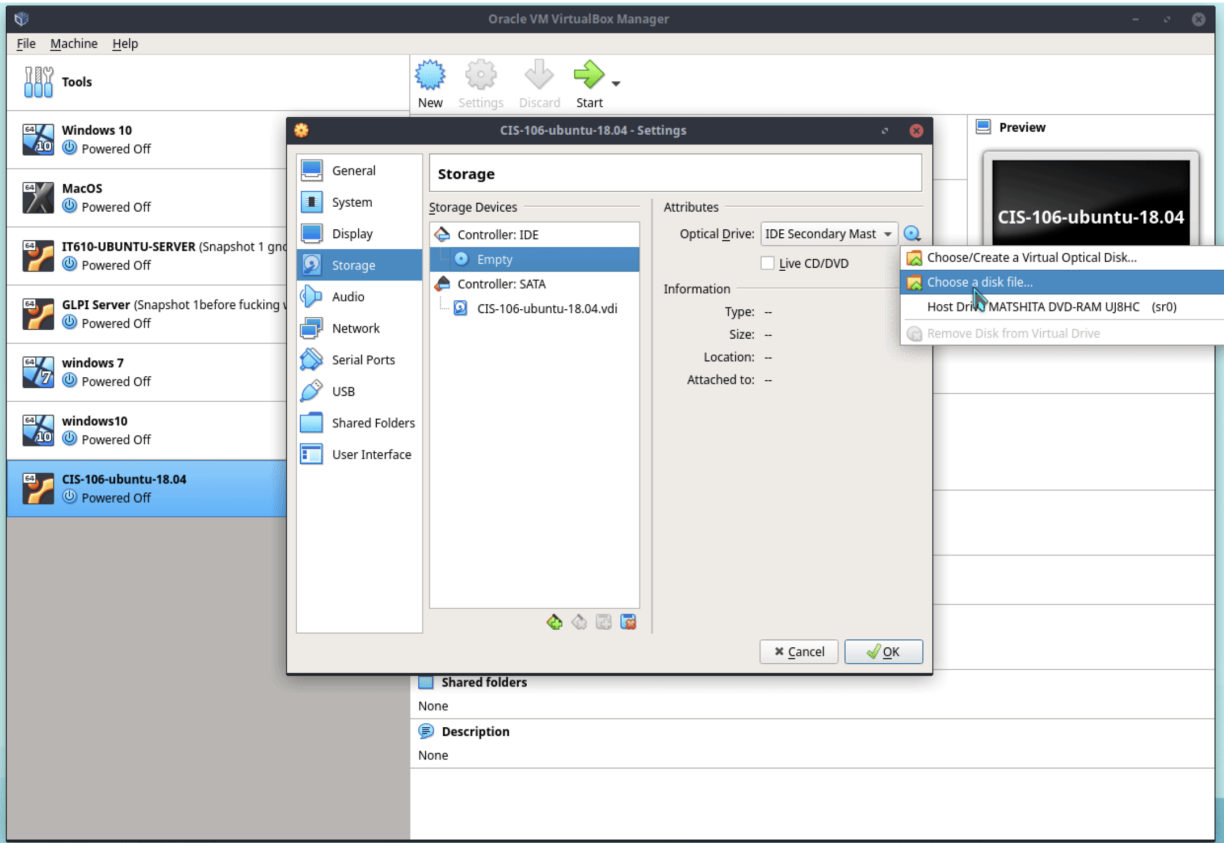
Specifies the graphics adapter type used by the guest VM. Guest Additions are required for VBoxSVGA and VMSVGA.

- **VBoxSVGA**: for Windows 7 or later.
- **VBoxVGA**: for legacy guest OSes.
- **VMSVGA**: emulate a VMware SVGA graphics device.

Enables scaling of the display size. For multiple monitor displays, you can set the scale factor for individual monitors, or globally for all of the monitors.

If a virtual machine has Guest Additions installed, you can select here whether the guest should support accelerated 3D graphics.

Setting up Storage



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