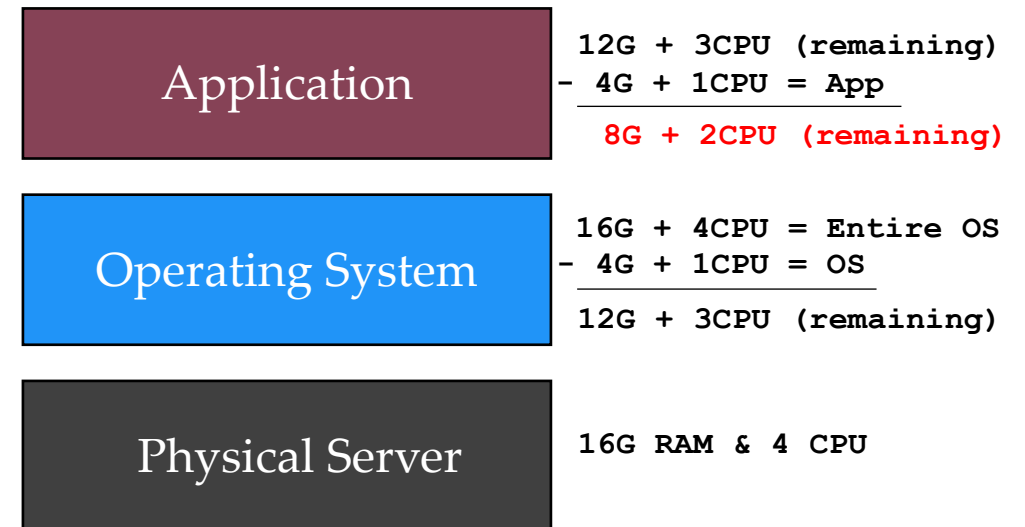
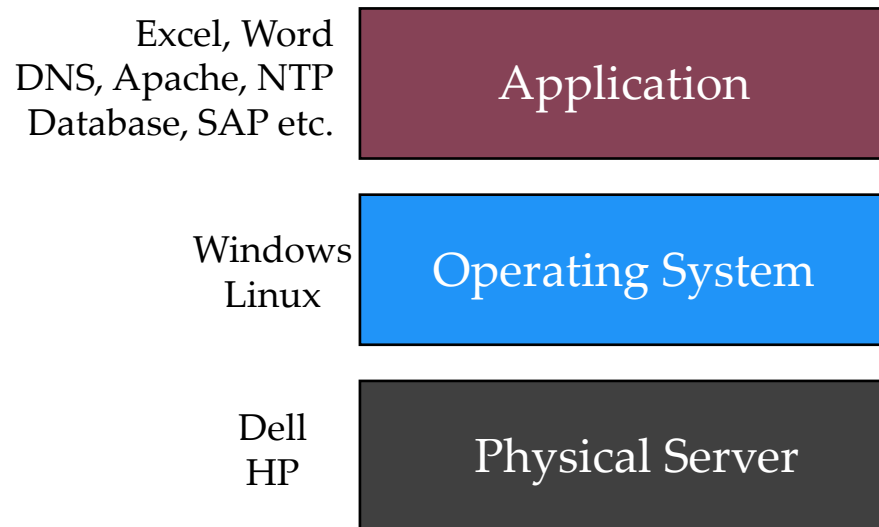


# Welcome to Section 9

Virtualization and Cloud

# Virtualization

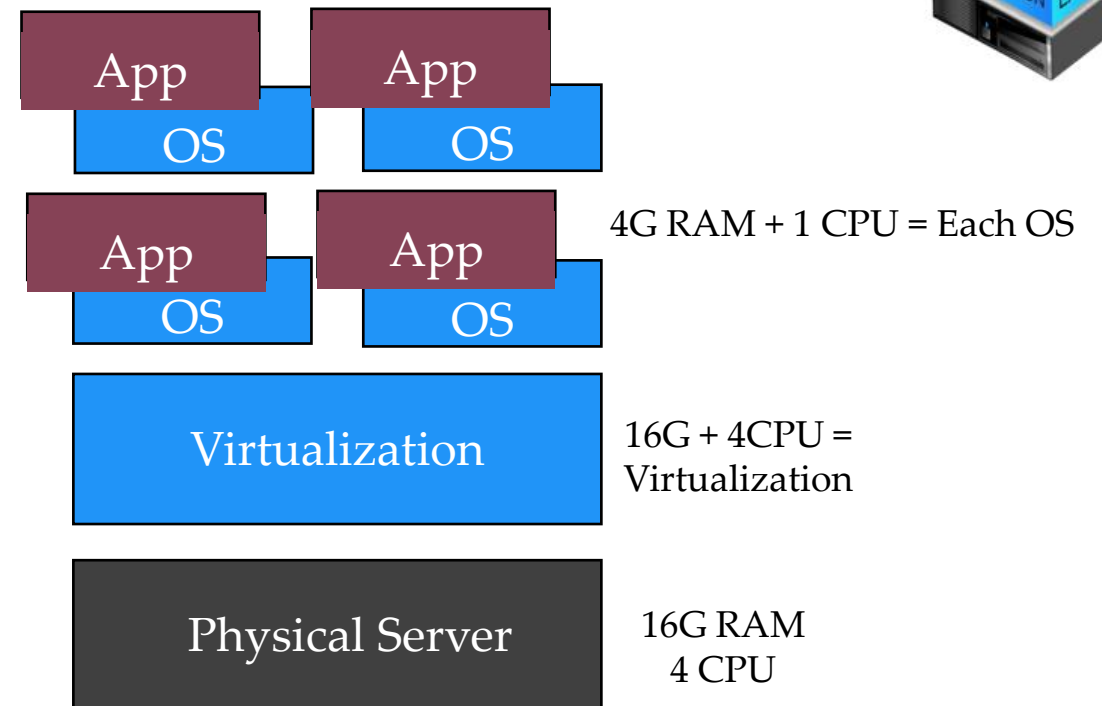
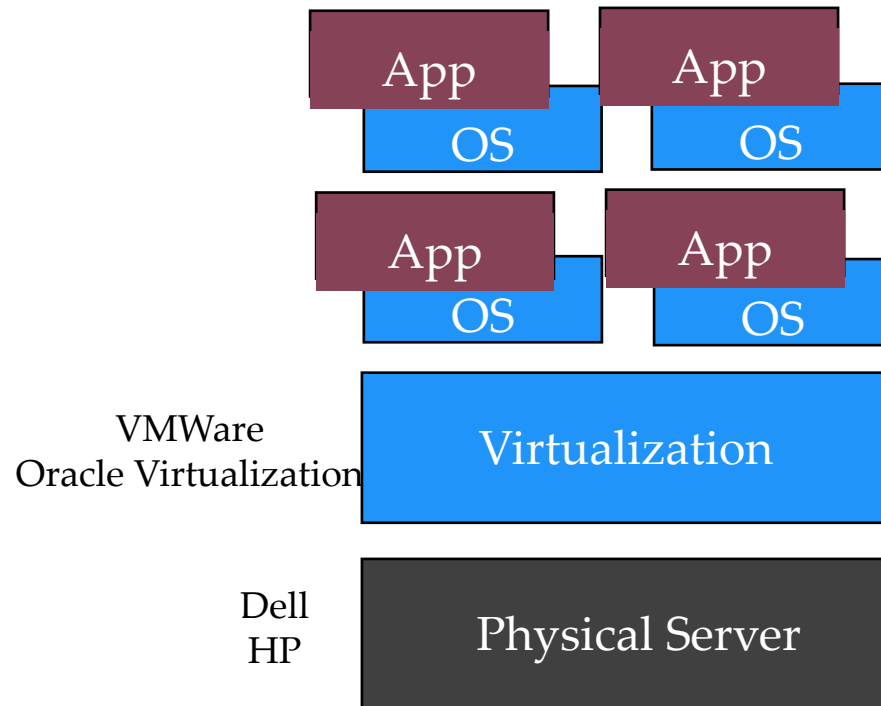
- What is Virtualization?
  - Let's understand the physical system configuration



**8G RAM and 2CPUs are under utilized**

# Virtualization

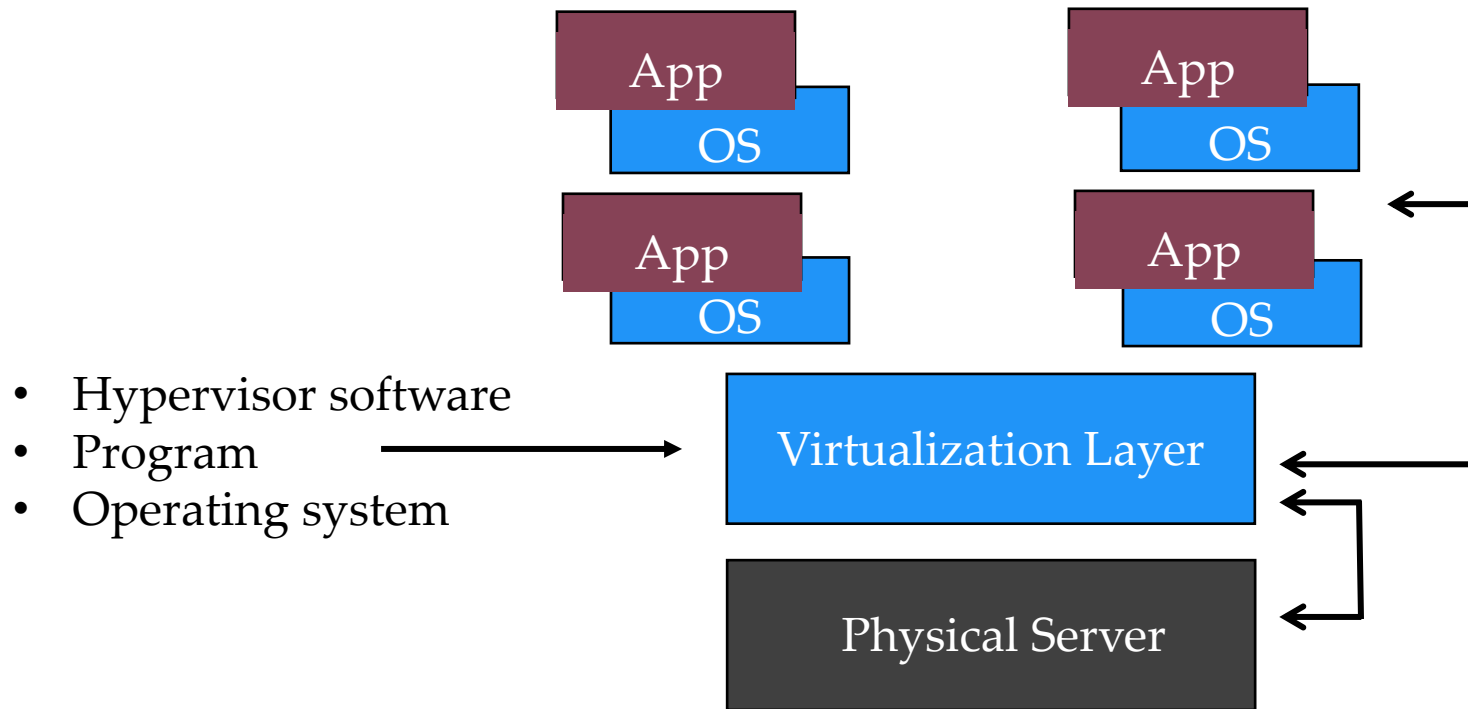
- Now let's look at virtualization



**All resources are fully utilized**

# Virtualization Software

- How virtualization works?



# Benefits of Virtualization

- Cost \$\$\$
- Real estate
- Electricity
- Ease of management
- Redundancy (lesser downtime)
- Faster deployment of machines
- Resource availability
- Better testing and performance
- Licensing

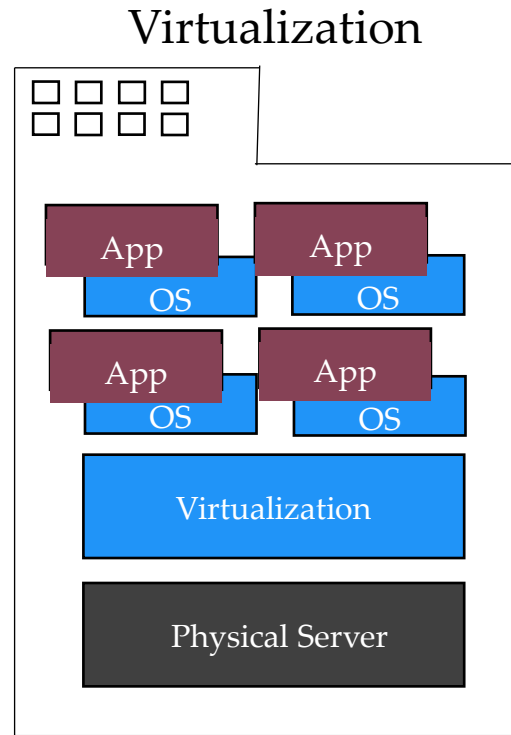


# Virtualization Basic Terms

- Bare-metal server = Physical server with NO OS
- Hypervisor = Host or Virtual server
- Virtual Machine = VM, Guest, Instance
- Virtualization Manager = vCenter, OVM manager etc.
- Virtual Desktop = VDI
- P2V = Physical to virtual
- V2V = Virtual to virtual
- VM template
- Snapshot
- Clone or cloning.

# Difference Between Virtualization and Cloud

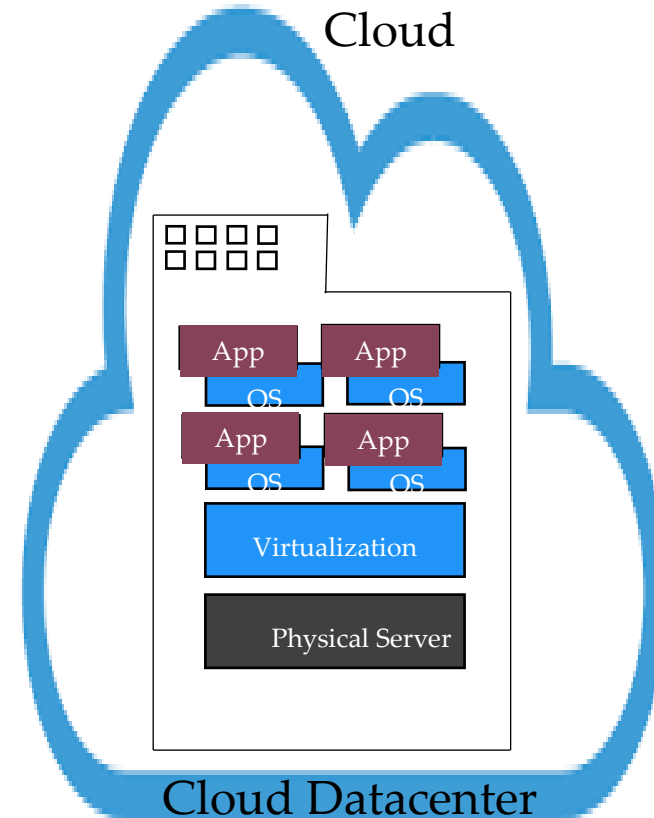
- Virtualization is a technology whereas cloud is a remote location which utilizes virtualization technology



Customer Datacenter



- Datacenter
- Hardware
- Operating System
- Provide on-going support
- Manage apps



- Datacenter
- Hardware
- Operating System
- Provide on-going support
- **DO NOT** manage apps

# Virtualization Companies

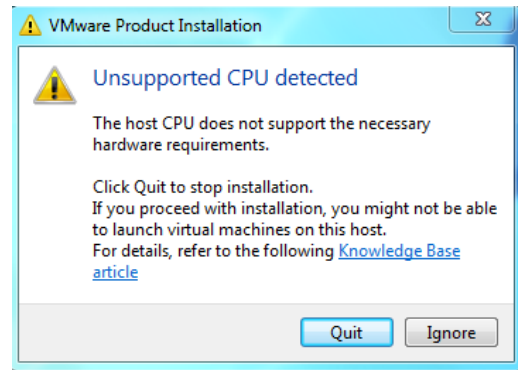
<u>Company</u>	<u>Hypervisor</u>	<u>Cloud Technology</u>
• VMWare	(ESXi)	vCloud
• VMWare player		
• Oracle	(OVM or OLVM)	OCI
• Oracle Virtualbox		
• Microsoft	(Hyper-V)	Azure
• Citrix	(Xen Server)	Citrix cloud services
• Redhat	(KVM)	Redhat Cloud Suite
• Amazon		AWS
• Google		Google Cloud platform.



# Download and Install VMWare Player

- Version = 16

<https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html>

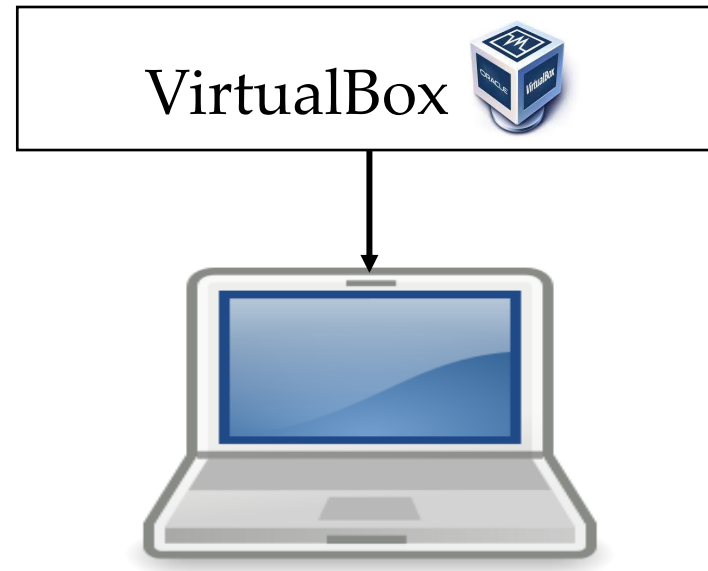


- Version 12

<https://my.vmware.com/web/vmware/downloads/details?downloadGroup=PLAYER-1250&productId=522>



# Oracle VirtualBox Installation



# Creating VM on VMWare Player and Oracle VirtualBox

