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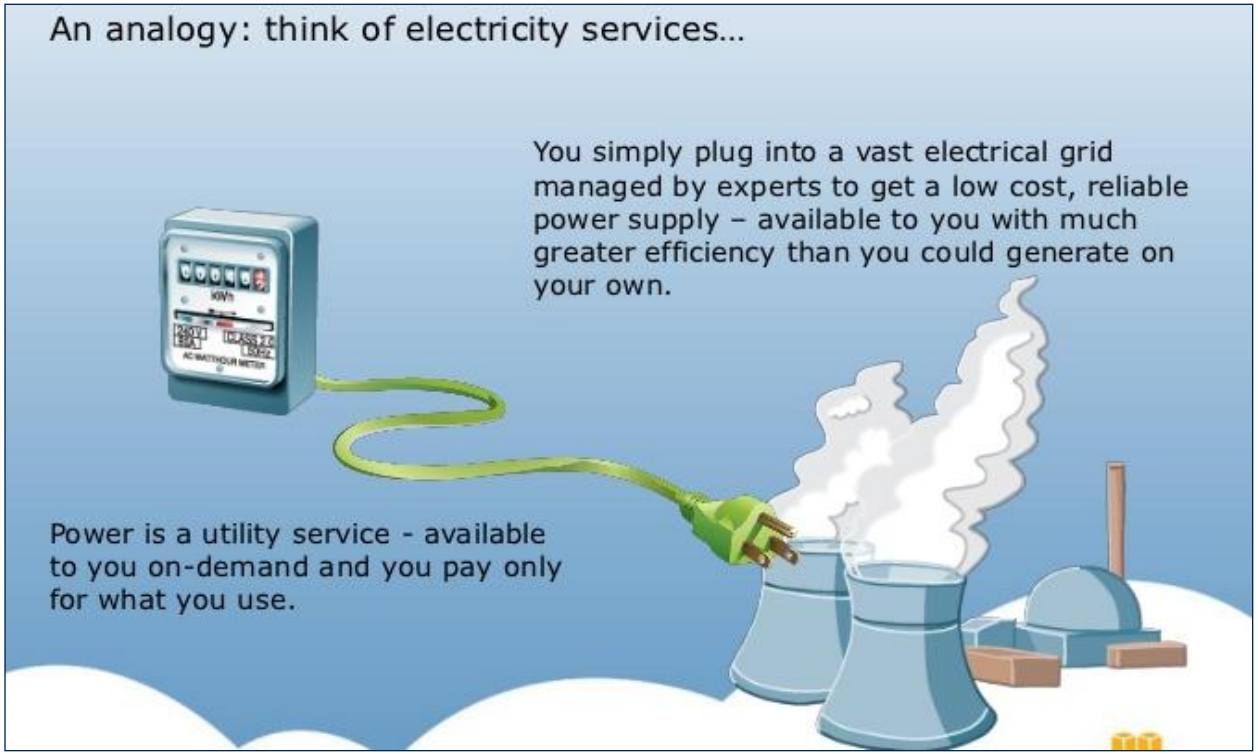
AWS Technical Essentials

Lesson 01 – Cloud Basics

Lesson Objectives

- After completing this lesson you should be able to understand
  - Basics of Cloud Computing
  - Introduction on Virtualization
  - Cloud Deployment Models

What is Cloud Computing?

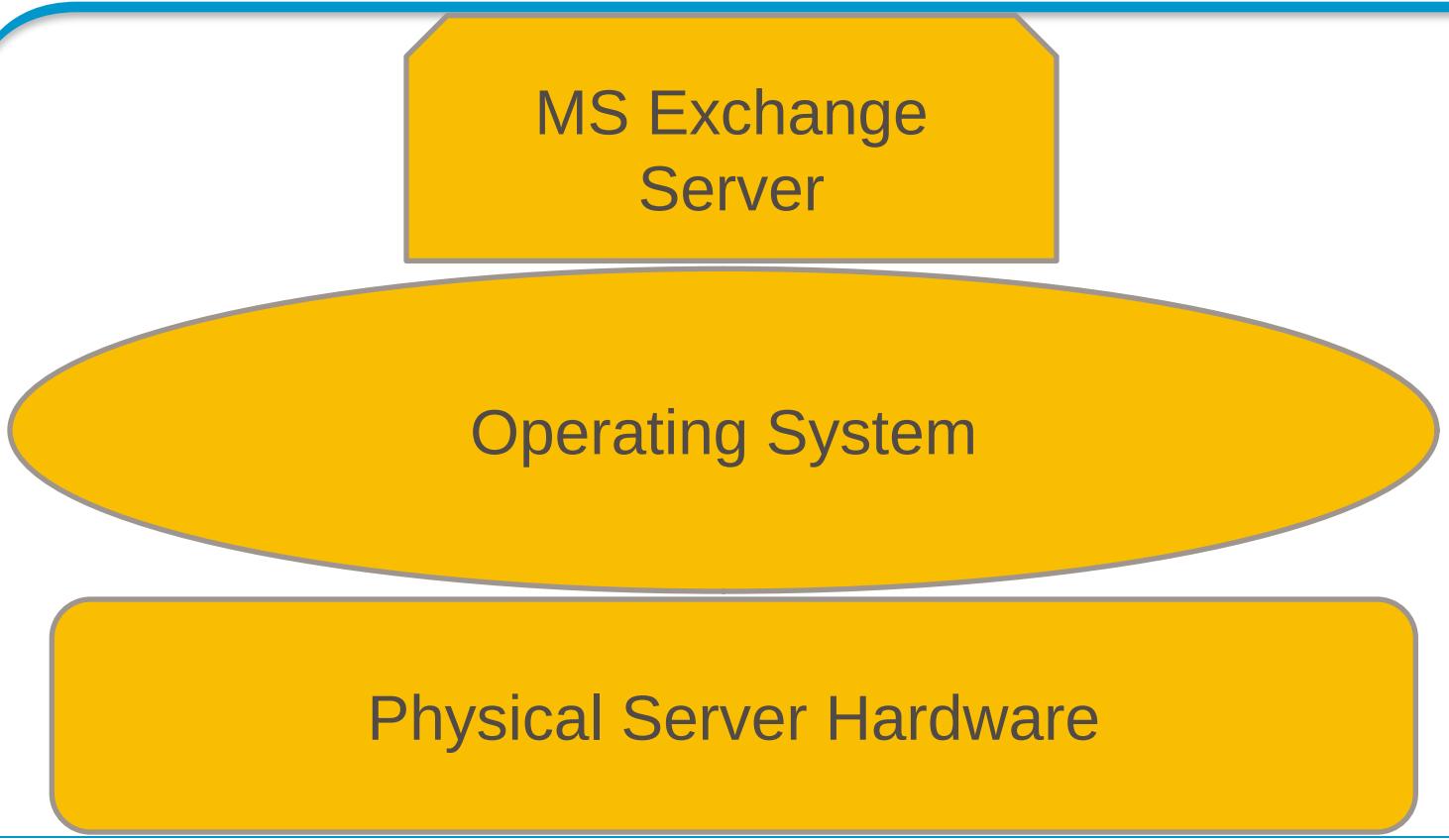


How Cloud Computing works

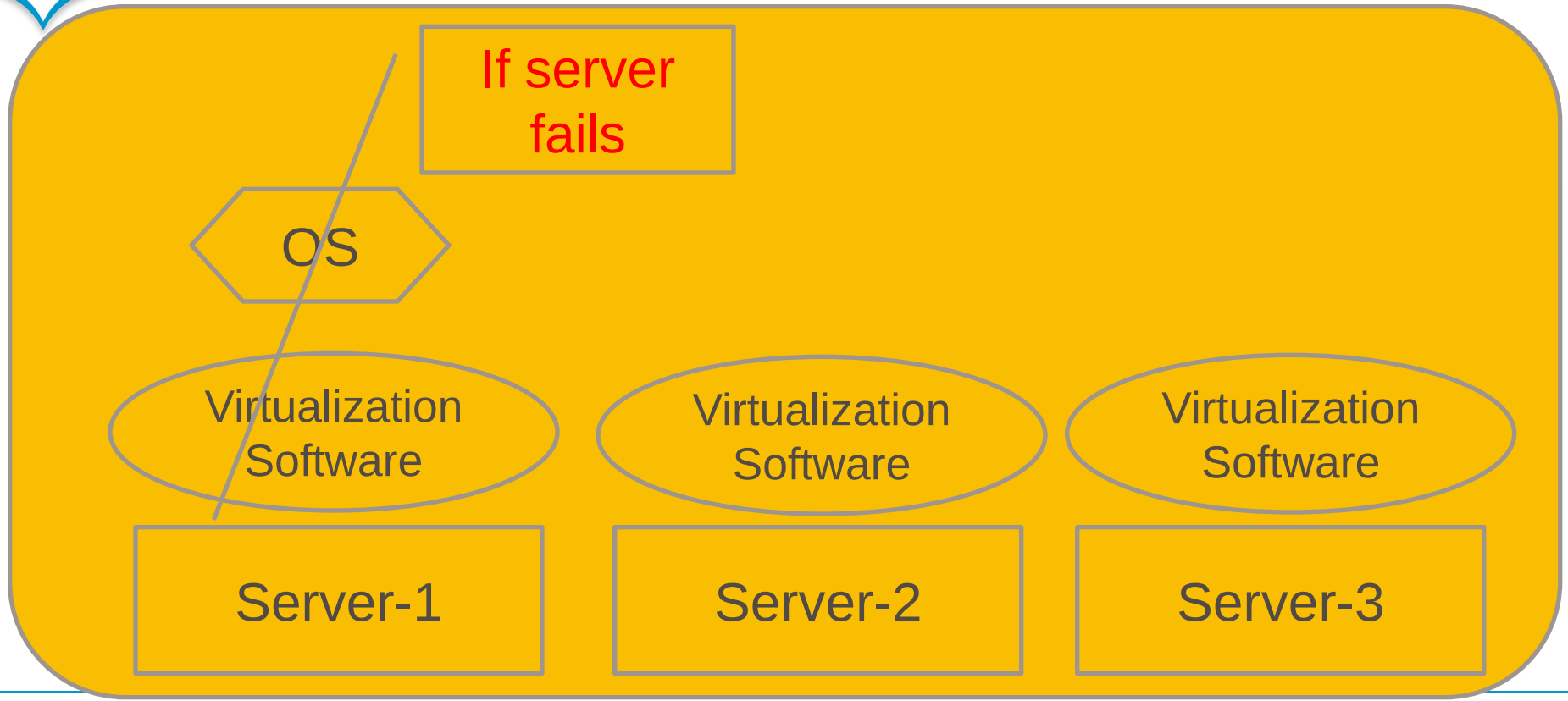
- Separate application from OS and the Hardware that runs everything

So what do we mean by this

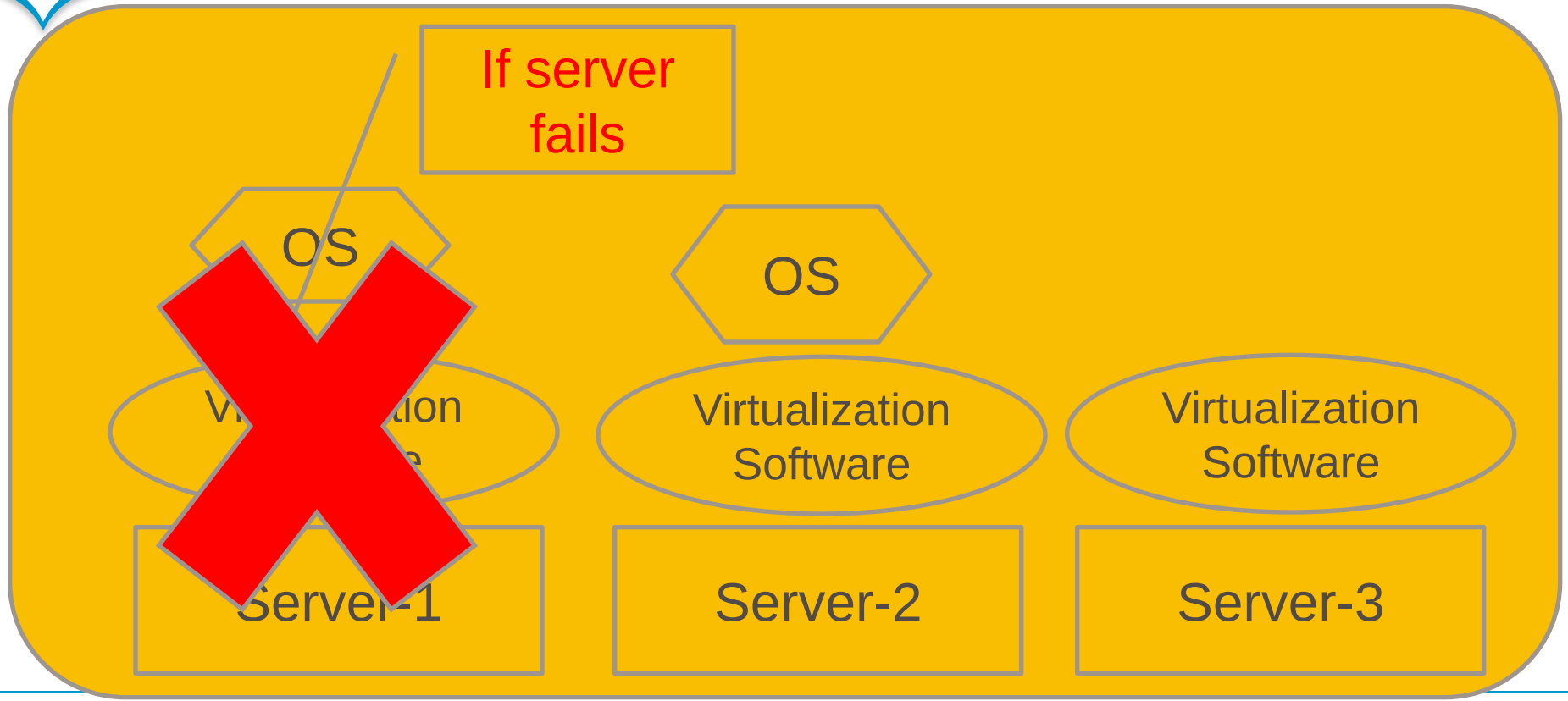
Traditional Computing - Few Years Back



Virtual Computing



Virtual Computing



Virtualization

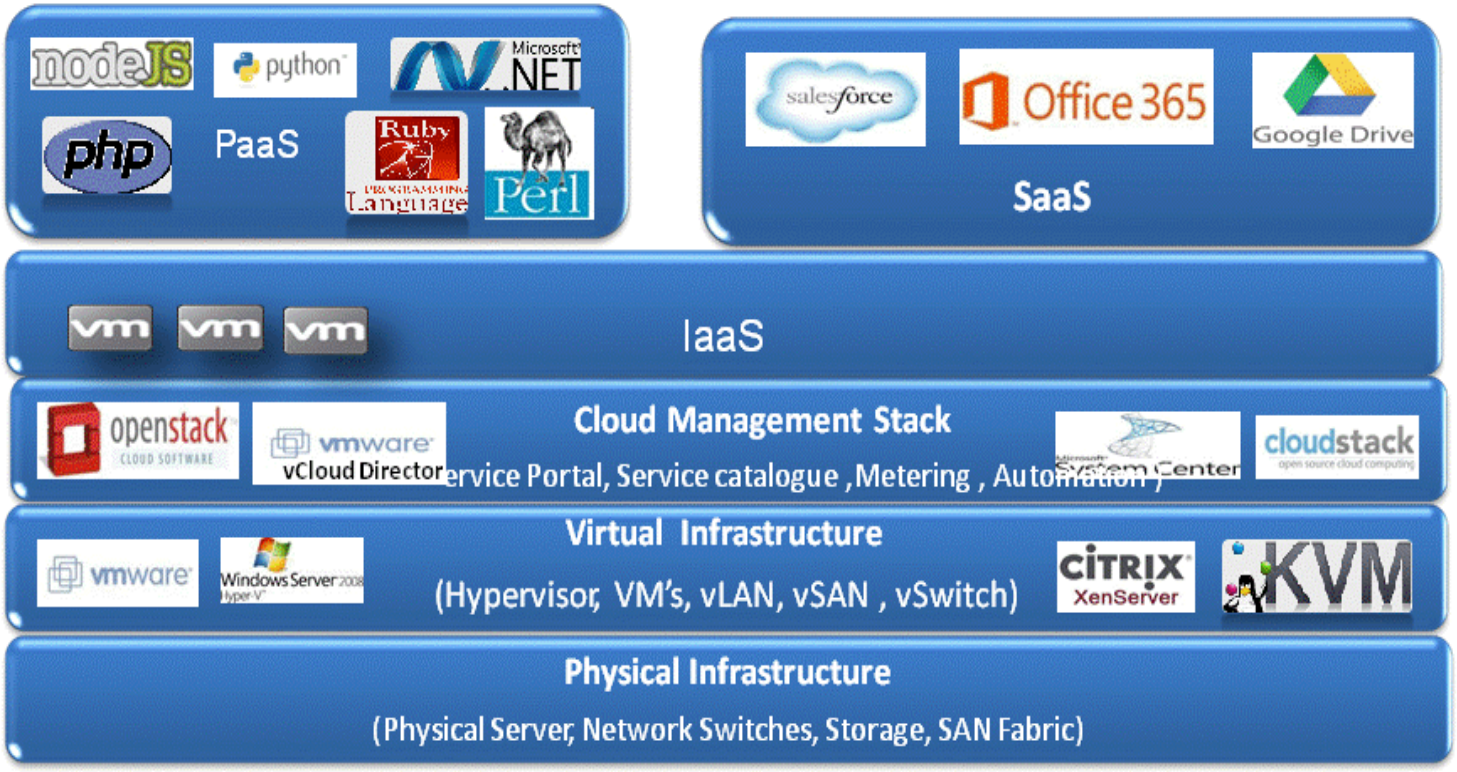
- Single physical server can run multiple Virtual servers and each Virtual server can run different operating system and applications
- Each virtual server will have a virtual hardware (vCPU, vNIC, vRAM, vDisk)

Hypervisor

- It is a software installed on the physical hardware
- It isolates operating system and application from the underlying hardware
- This abstraction allows the underlying host machine hardware to independently operate one or more virtual machines as guests, allowing multiple guest VMs to effectively share the system's physical compute resources, such as processor cycles, memory space, network bandwidth and so on
- Citrix has XenServer, Oracle has OracleVM, VmWare has ESXI and many more

Public Cloud Service Providers

Cloud Computing Infrastructure Framework



Hypervisor Installation

It gives screen with IP Address, Computer Name, few bits of information, but otherwise it does not allow you to do anything

So how to access Hypervisor

Install Management Software live vSphere

Deployment Models- Cloud

Private Cloud

- Single Tenancy
- CAPEX model
- Owned and managed by customer
- Customer has Complete control over resources
- Cloud infrastructure is hosted on premises or hosted at service provider data centers

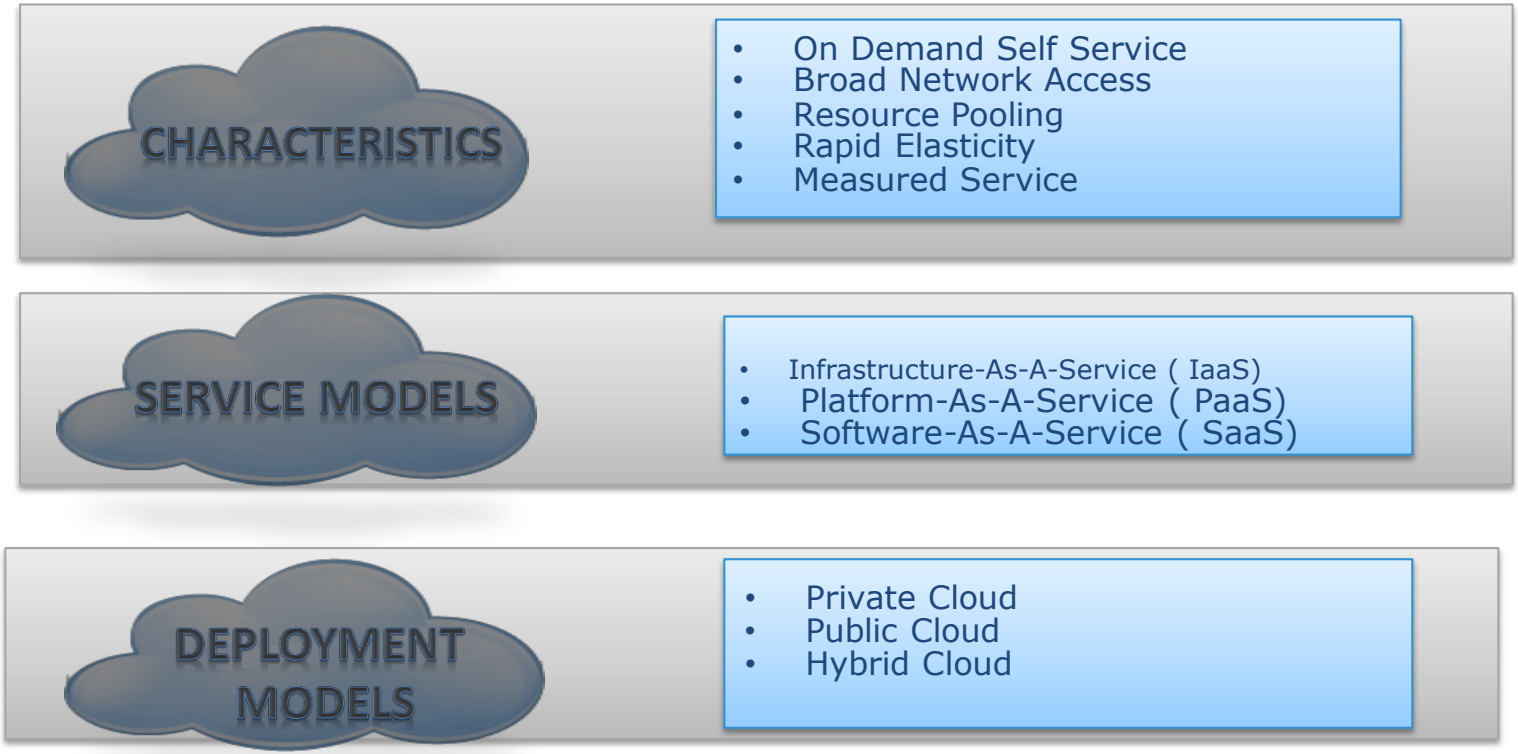
Public Cloud

- Multi-Tenancy
- OPEX Model
- Owned and Managed by Cloud Service Provider(CSP)
- CSP has complete control on resources
- Customer has limited control over his applications based on subscription

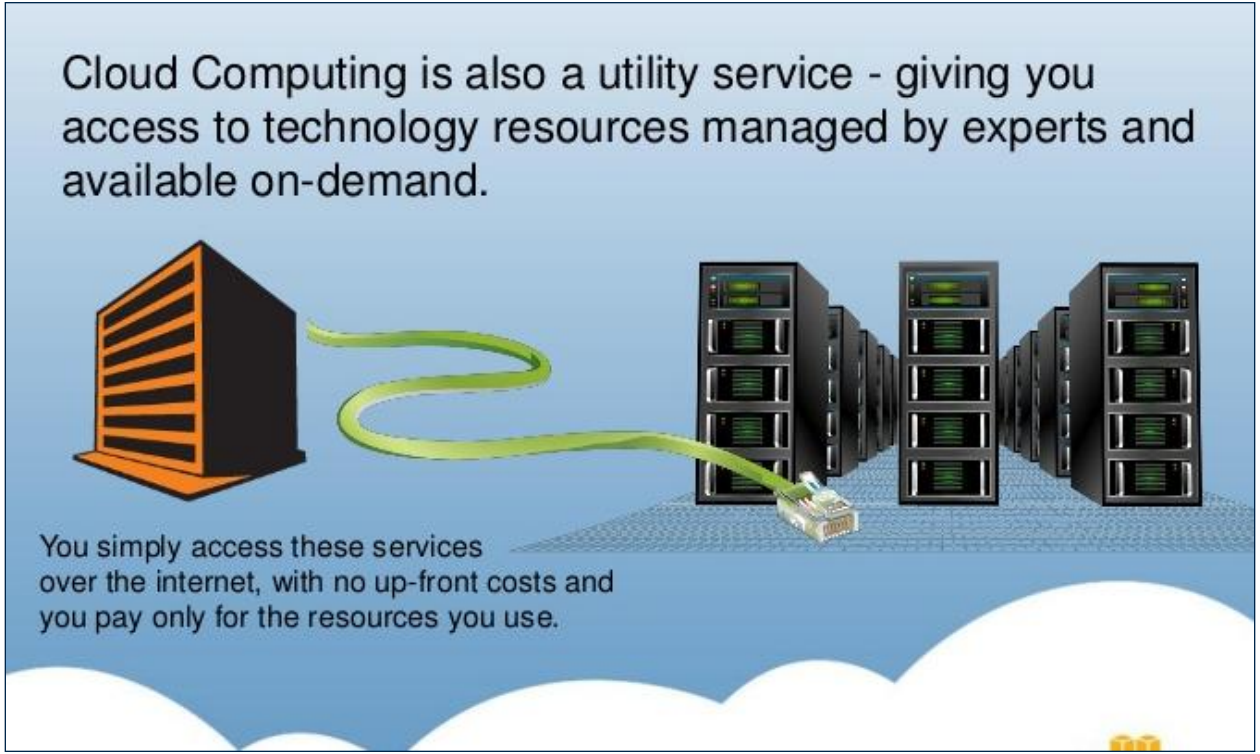
Hybrid Cloud

- Federation of Private and Public Cloud
- Ideal for critical workloads on Private cloud and non critical workloads on Public cloud
- Results in 40 -60 % cost savings compared managing infrastructure in house and Physical data center

Cloud Computing



Cloud computing summary



Summary

- In this lesson you learnt
  - What is Cloud Computing
  - Virtualization and Cloud Deployment Models