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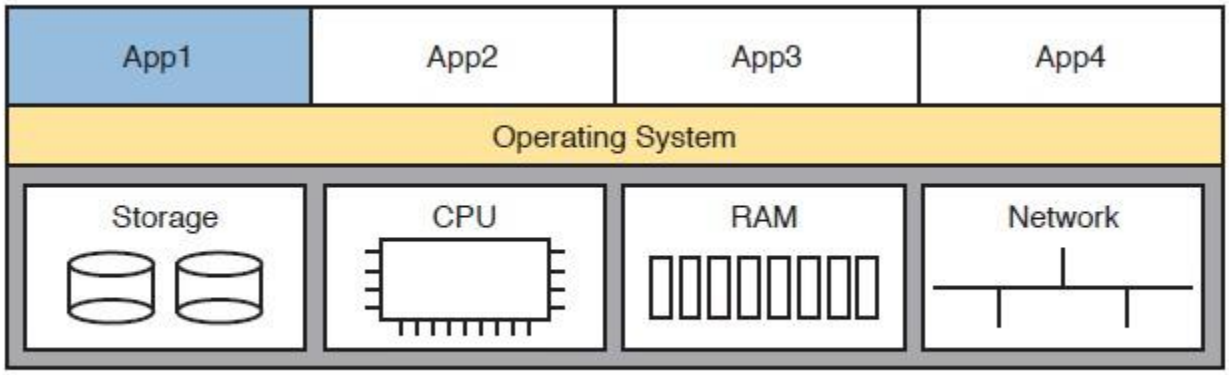
Cloud Computing for CCNA Students

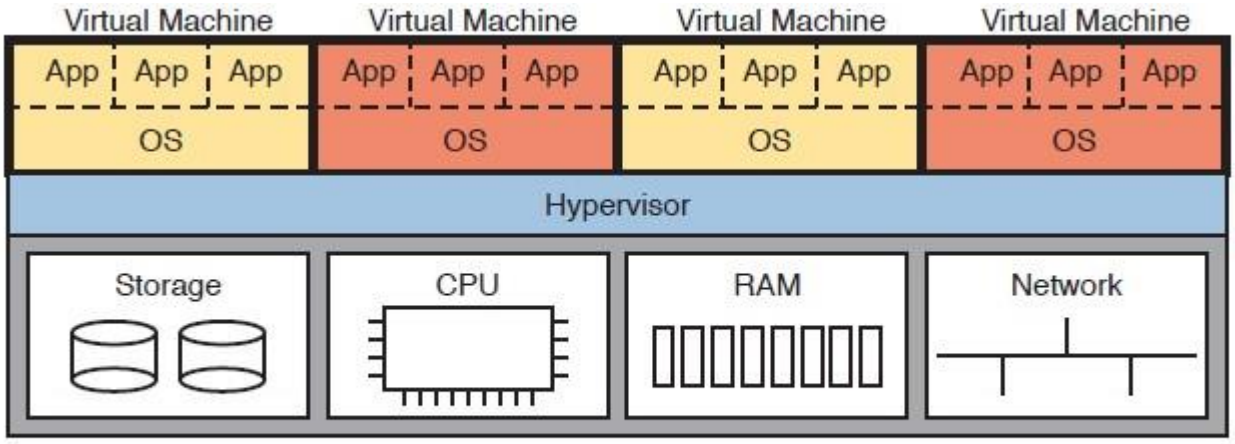
By

Eng. Abeer Hosni

Server Virtualization:



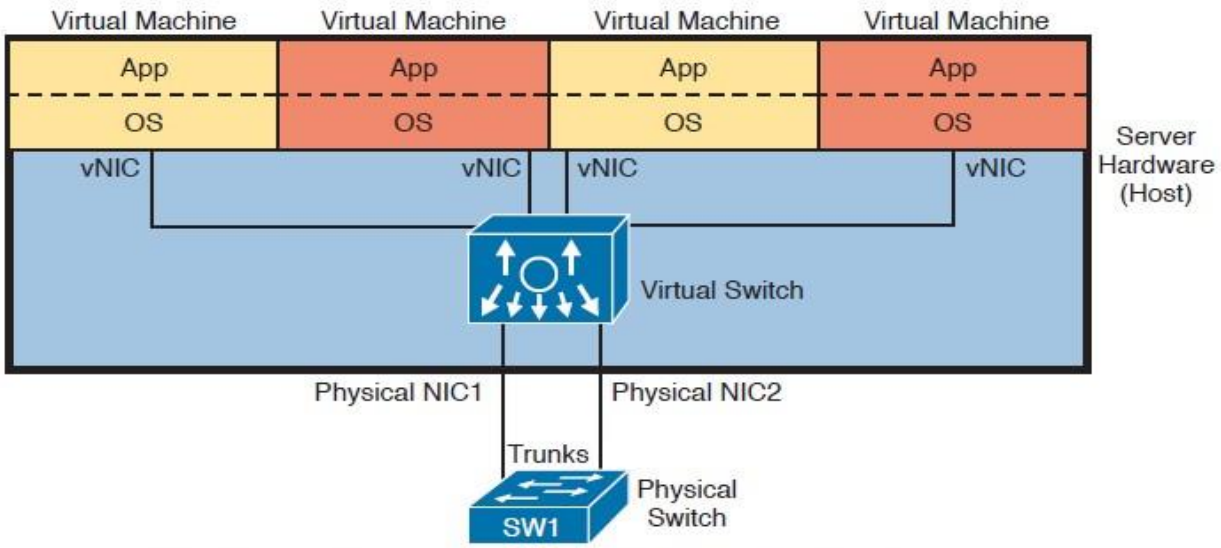
Physical Server Model: Physical Hardware, One OS, and Applications



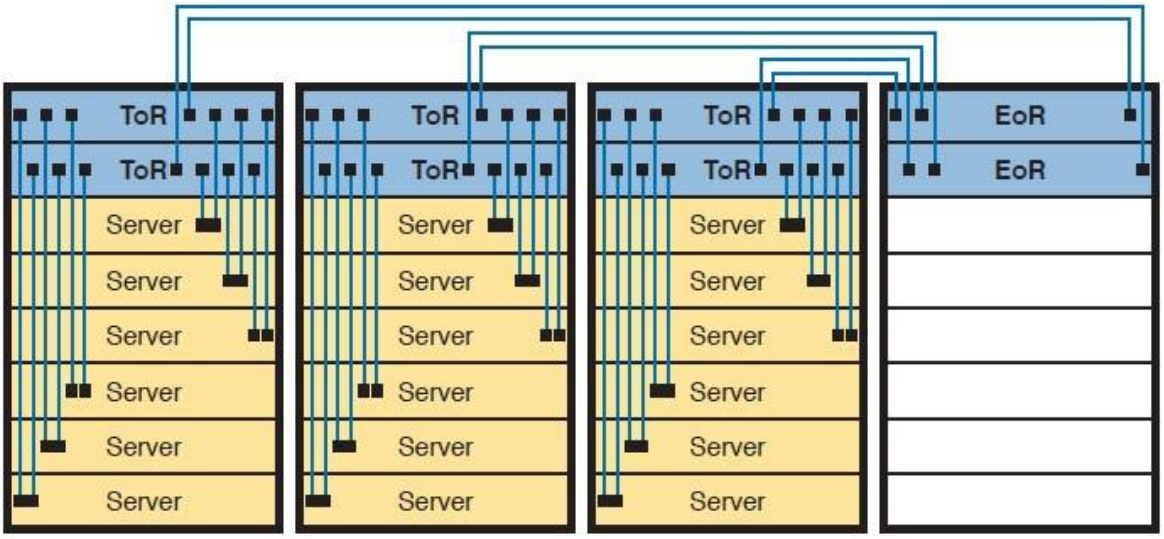
Four VMs Running on One Host; Hypervisor Manages the Hardware

Examples on the virtualization family products:

- VMware vCenter.
- Microsoft HyperV.
- Redhat KVM.
- Citrix XenServer.



Basic Networking in a Virtualized Host with a Virtual Switch



Traditional Data Center Top-of-Rack and End-of-Row Physical Switch

Cloud Computing Services:

- Remote data storage: Google drive, amazon S3.
- Remote computing resources: Amazon web services (AWS).
- Applications: Gmail, Google calendar.

Cloud Computing Advantage:

- Centralization.
- Automation: Easy backup and upgrade.
- Standardization.
- Allows self-service provisioning by the consumer of the service.
  - Private Clouding: Creates a service inside a company to internal customers.
  - Public Clouding: The cloud provider sells services to consumers in other companies.

Cloud Service Model:

1- IaaS (Infrastructure as a Service):

The cloud provider provides the hardware like servers, memory, CPU and network connections. The customer installs the OS, remotely turns on and turns off the server, installs the applications.

2- PaaS (Plateform as a Service):

The cloud provider provides the hardware besides the OS. Only the cloud provider can power on or off the servers. The customer installs the applications and backup the system and data.

3- SaaS (Software as a Service):

The cloud provider provides the hardware, OS, and the applications. The customer only needs an internet connection to manage the applications.

Best wishes:

Abeer ☺