Microsoft Learn
Student Ambassadors

Cloud-Verse
Road to Azure and Virtualization

Cloud +Virtualization = Awesomeness

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A bit of Nostalgia - Console Emulation

Game Boy Advance

VisualBoy Emulator

Console Emulation

Gaming console emulators perform hardware virtualization by emulating a video game console's behavior

What is Virtualization?

- *"Virtualization is technology that lets you create useful IT services using resources that are traditionally bound to hardware."* (RedHat)

- Basically virtualization is the act of creating a virtual version of something such as virtual computer hardwares, storage devices, network resources and so on.

- Companies could partition their servers and run legacy apps on multiple operating system types and versions

- Virtualization's widespread applicability made it the foundation of cloud computing.

Types & variants

Storage virtualization

Group the physical storage from multiple network storage devices to look like a single storage device.

OS Virtualization

Run Linux and Windows environments side-by-side.

Desktop virtualization

Deploy simulated desktop environments (such as VDI) to hundreds of physical machines at once.

Server virtualization

Virtualize a server to do client-serving functions. Can be further partitioned to serve multiple functions.

Network Virtualization

Abstracts hardware and software network resources and functionalities into a single virtual network

Common Terms

Hypervisor

The software that creates a virtual machine on the host hardware (Oracle VirtualBox, VMware Workstation)

Snapshot

A restorable state of a virtual machine, and generally its storage devices, at an exact point in time

Migration

Moving snapshot to another host machine with its own hypervisor

Nesting

Ability of running a virtual machine within another

Containerization

- A process which encapsulates an application and all its dependencies in a container with its own operating environment.

- Portability from one computing environment to another.

- Deploy multiple applications using the same operating system on a single virtual machine
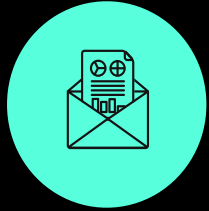
- Docker is a popular containerization platform

Cloud Virtualization

- Transforms the traditional computing and make it more scalable, economical and efficient with Cloud computing

- Users shares the cloud Infrastructure through virtualization

- Incorporates OS, Hardware, Server, Network and Storage Virtualization
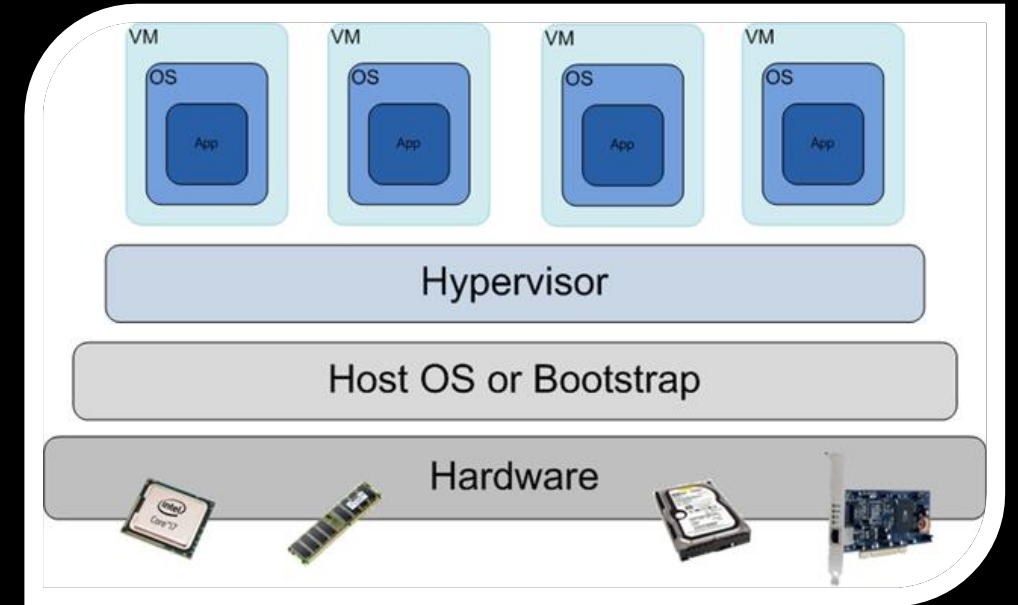
How Azure data center works

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That's All From Me!

References

This slide is created with resources from following sources-

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