

## Day 03

⇒ server | virtual machines | Hypervisor

→ Server:

server is a computer (physical or virtual) that provides service to other computers called clients.

Example:

Web server: Host websites

Database server: store databases

File server: share files across a network.

→ Why we need servers  
Servers allow:

- i) centralized resource sharing
- ii) 24/7 uptime for services like websites, APIs, apps.
- iii) Handle multiple requests simultaneously.
- iv)

→ What is virtual Machine (VM)?

A virtual machine is a software based emulation of physical computer. It behaves like a real computer but runs inside another computer.

A VM has

→ Its own OS

→ Its own CPU, RAM, Memory



→ What is Hypervisor  
A hypervisor is the software that creates and runs VMs. It allows multiple VMs to run on one physical machine (host) by managing and sharing hardware resources.  
Example:

VirtualBox, VMware Workstation

How many servers does AWS have?  
As of recent reports → a  
→ AWS owns well over 3 to 5 million physical servers globally.  
→ These servers spread across 30 regions and 100+ AZs.