

#Devops - Day 03

Virtual Machines Part-1

Que1. What is a server?

Que2. What is physical vs virtual server

Que3. Hypervisor

Que4. How to create virtual machine

Que5. Real world examples.

Devops is all about improving efficiency by efficient utilisation of resources

Que1. What is a server?

example.com

Team 2

Developer
Application code

4GB
App 1
4 CPUs

2

3

Application

server

server

server

4

5

server

server

HP server

Team 5

100GB
100 core

50GB	5GB	45GB
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Team are not efficiently using server.

inefficiency

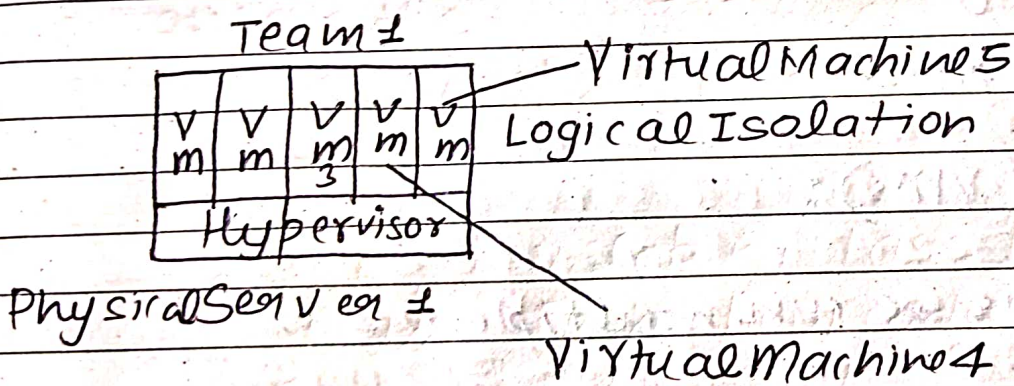
Server is basically a powerful computer or software that provides service or resources to other computer

called clients over a network.

Purposes:- Servers help run important tasks like hosting website, storing files or managing emails. Always on:- Servers usually stay on all the time so that they can help clients whenever needed.

- Physical server: (with its own h/w) real, tangible computer that we touch
- H/W, processor, memory and storage
- It runs software to provide services

eg:- HP Proliant DL380: used by business
Dell PowerEdge R740:



Efficiency: Using Hypervisor

Hypervisor:- It is a software that allows to run multiple virtual machines (VME) on single physical server.

Acting as bridge between physical H/W and virtual servers" managing resources.

eg:- VMware vSphere / ESX:

Microsoft Hyper-V

Xen: used in cloud environments

Oracle VM VirtualBox:

Free and open source hypervisor that allows users to run multiple OS on desktops

Virtualisation:-

It is a technology that allows us to create virtual versions of physical resources like servers, storage or networks

enables multiple virtual systems to run on single physical machine.

Real Life Examples:-

1. Virtual Machine (VMs):

Using VMware we run multiple OS on one computer

2. Cloud Services:-

AWS, Azure use virtualisation to offer customer access to the virtual servers without needing physical hardware.

We can rent a virtual server to host a website without owning physical server

Virtualisation:- Technology that creates virtual versions of physical resources (like servers)

Hypervisor:- Software that manages and runs virtual machines on physical-server.

"Virtualisation is the concept
"Hypervisor is tool that enable it"