



Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

Amazon Web Services

MLOps with AWS

Masterclass



Machine Learning

Operations with AWS

Day -2



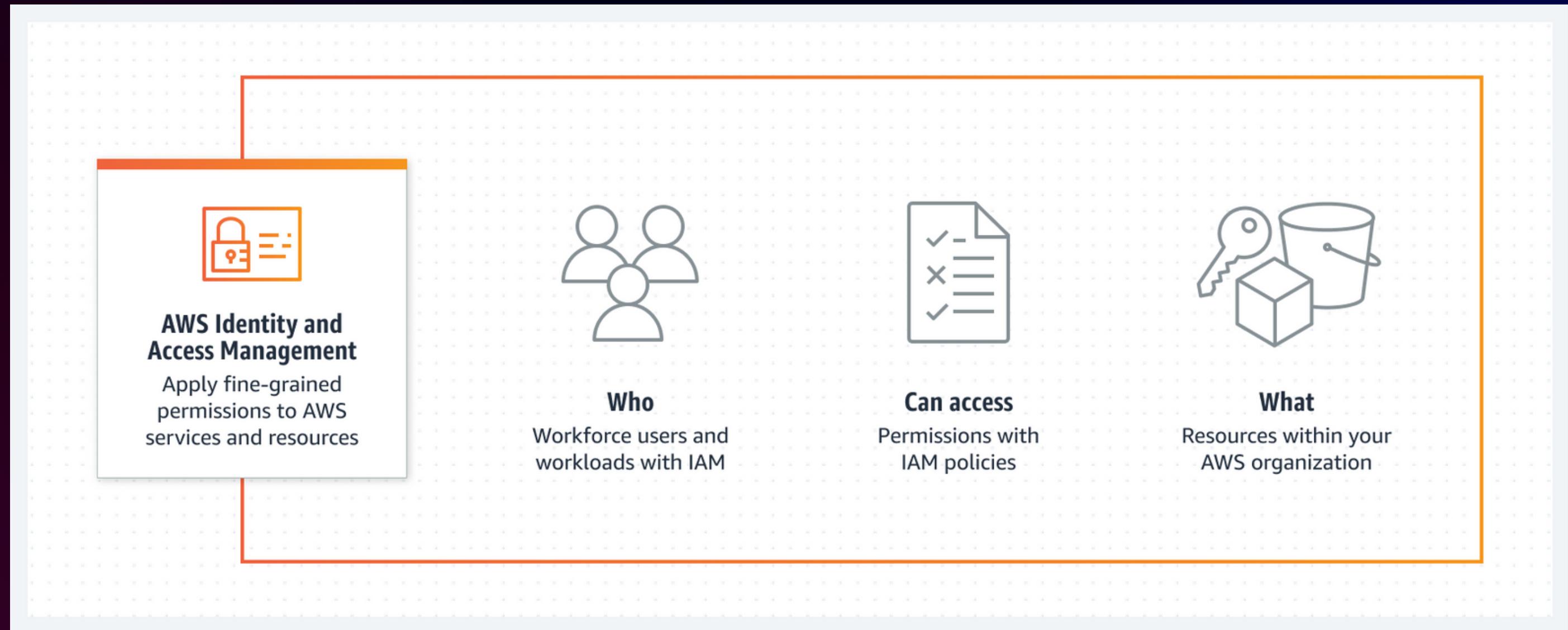
Pantech e Learning
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IAM (Identity & Access Management)



IAM

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IAM (Identity & Access Management)

- AWS IAM is a web service that helps you securely control access to AWS resources.
- With IAM, you can centrally manage permissions that control which AWS resources users can access.
- You use IAM to control who is authenticated (signed in) and authorized (has permissions) to use resources.

AWS EC2 (Elastic Compute Cloud)



In traditional setups:



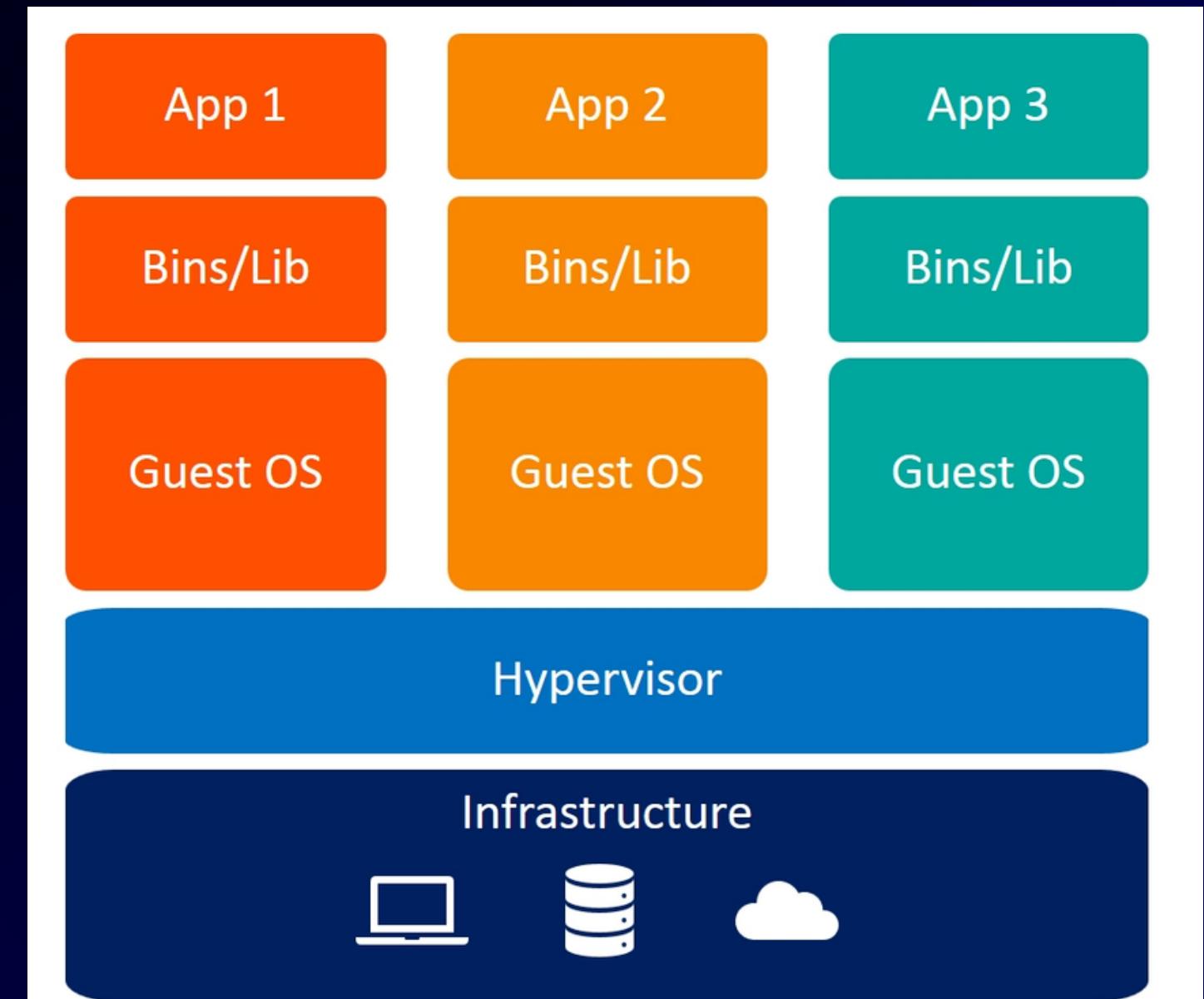
- Applications are deployed to Physical Servers
- Physical Servers has Processors, Memory, Storage, Operating System, Cooling system

In Cloud setups:



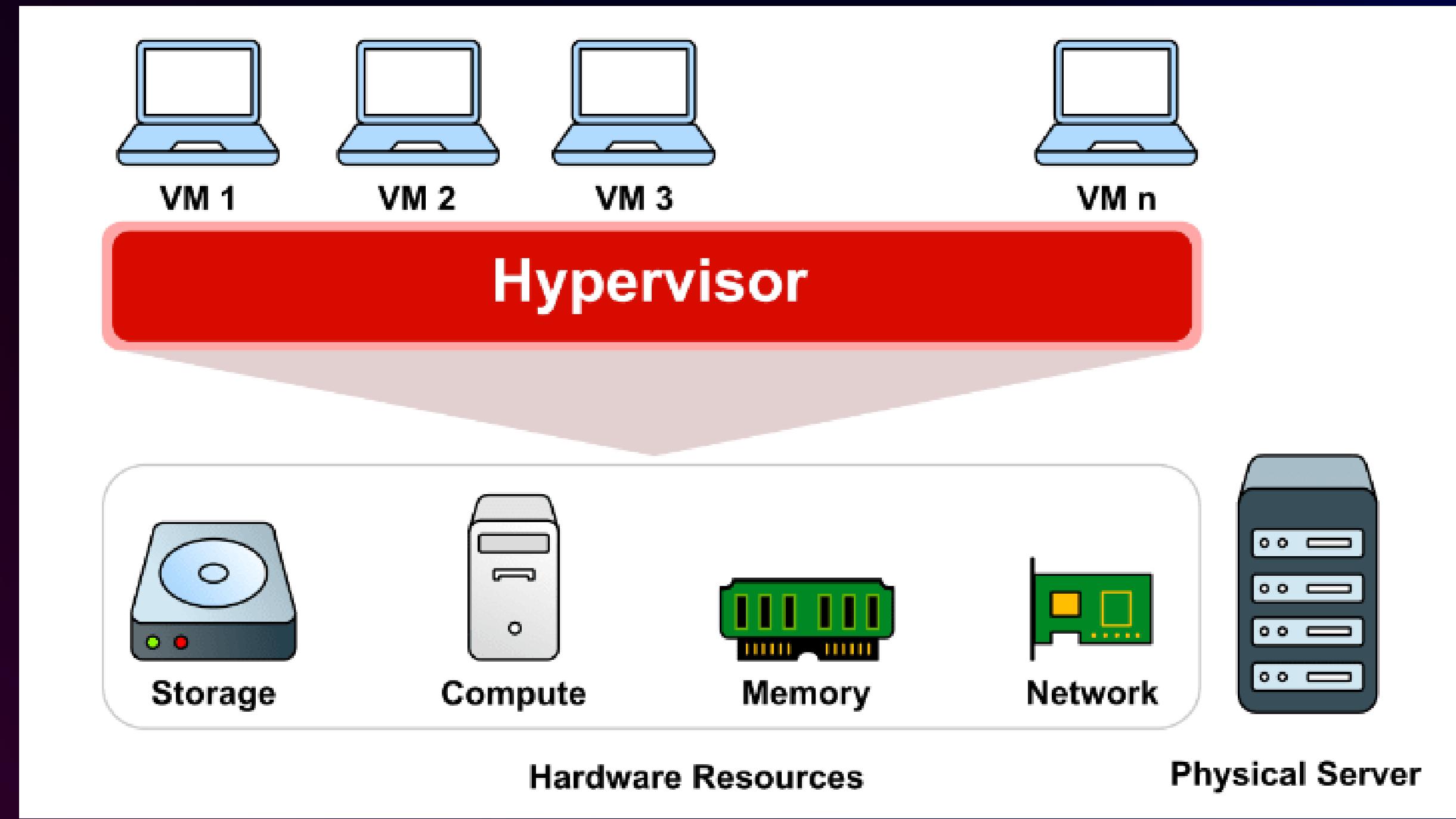
- Applications are deployed to Virtual Machines
- AWS EC2 is an Virtual Machine

What is a Virtual Machine ?

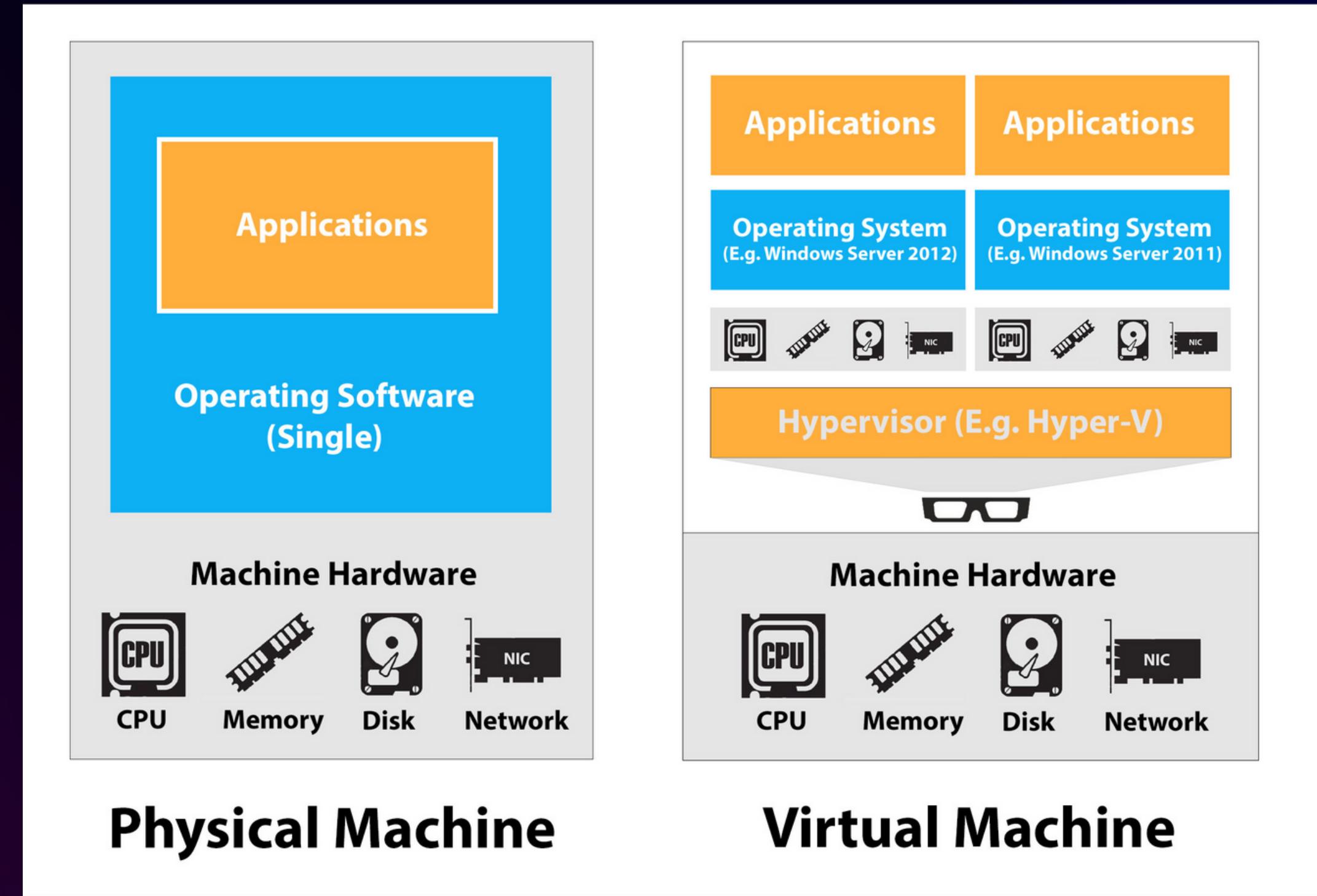


Virtual Machines

What is a Virtual Machine ?



Physical server vs Virtual Machine



What can you do in EC2 ?

- Create, manage, terminate lifecycle of EC2 instances
- Attach Storage to your EC2 Instances using aws EBS (Elastic Block Store)
- Load Balancing using aws ELB (Elastic Load Balancer)

AMI (Amazon Machine Image)

- An Amazon Machine Image (AMI) acts as a template for launching EC2 instances with precise operating systems, software configurations, and application environments.



Amazon Machine
Image (AMI)

AMI (Amazon Machine Image)

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Quick Start



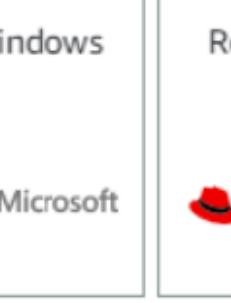
Amazon
Linux



macOS



Ubuntu



Windows



Red Hat

>



[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

Free tier eligible

ami-0607784b46cbe5816 (64-bit (x86)) / ami-0b533d531f49fd430 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Amazon Linux 2023 AMI 2023.0.20230517.1 x86_64 HVM kernel-6.1

Architecture

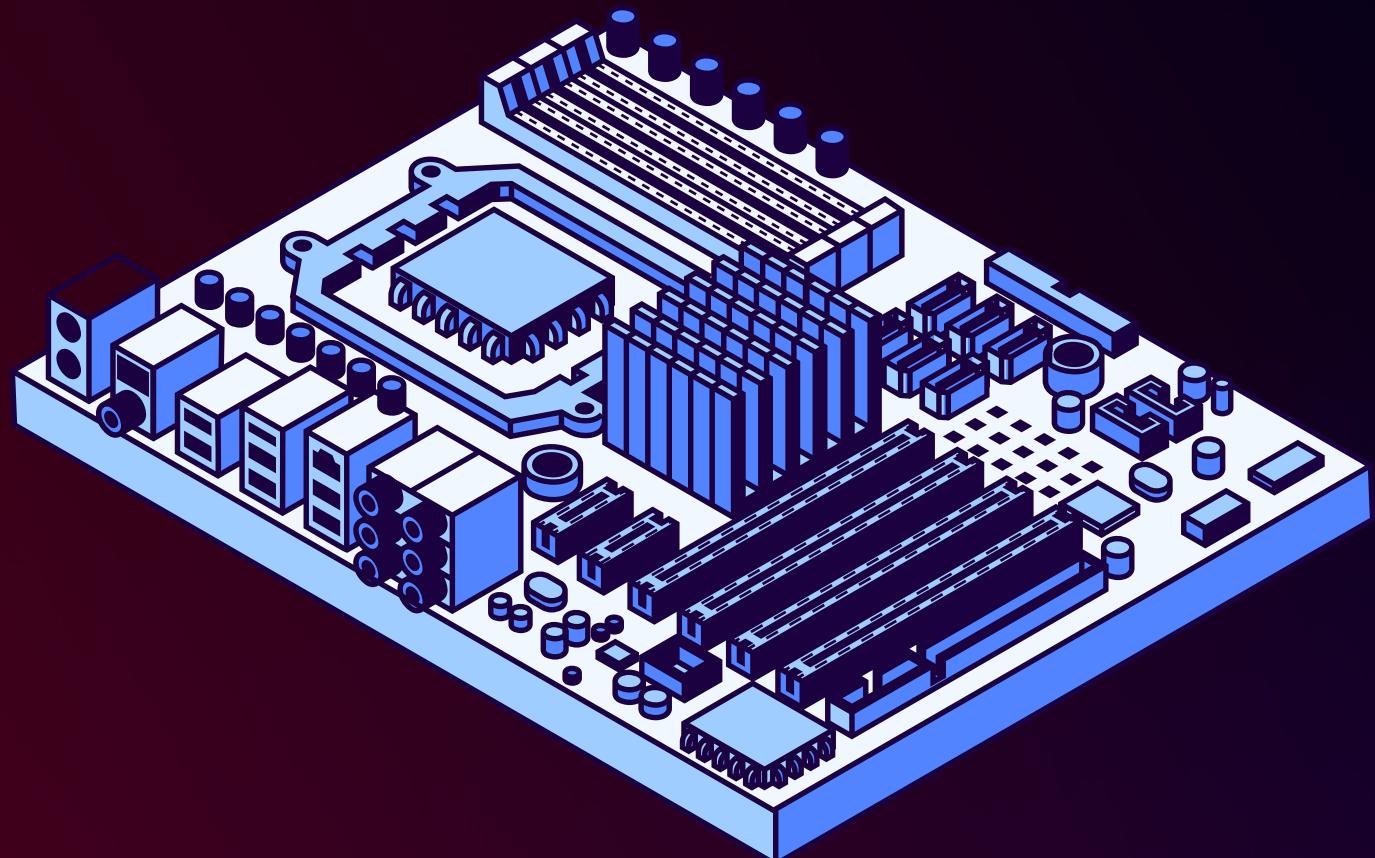
64-bit (x86)

AMI ID

ami-0607784b46cbe5816

Verified provider

Instance type



- Instance type in AWS refers to the configuration of virtual machines (EC2 instances) with varying combinations of CPU, memory, storage, and networking capacity optimized for specific workloads.

Instance type

▼ Instance type [Info](#)

Instance type

t2.micro	Free tier eligible		
Family: t2	1 vCPU	1 GiB Memory	Current generation: true
On-Demand Linux pricing:	0.0124 USD per Hour		
On-Demand Windows pricing:	0.017 USD per Hour		
On-Demand RHEL pricing:	0.0724 USD per Hour		
On-Demand SUSE pricing:	0.0124 USD per Hour		

All generations

[Compare instance types](#)

Elastic Block store (EBS)



- Amazon EBS is suitable for EC2 instances by providing highly available block level storage volumes. EC2 is a virtual server in a cloud while EBS is a virtual disk in a cloud. Amazon EBS allows you to create storage volumes and attach them to the EC2 instances.

Elastic Block store (EBS)

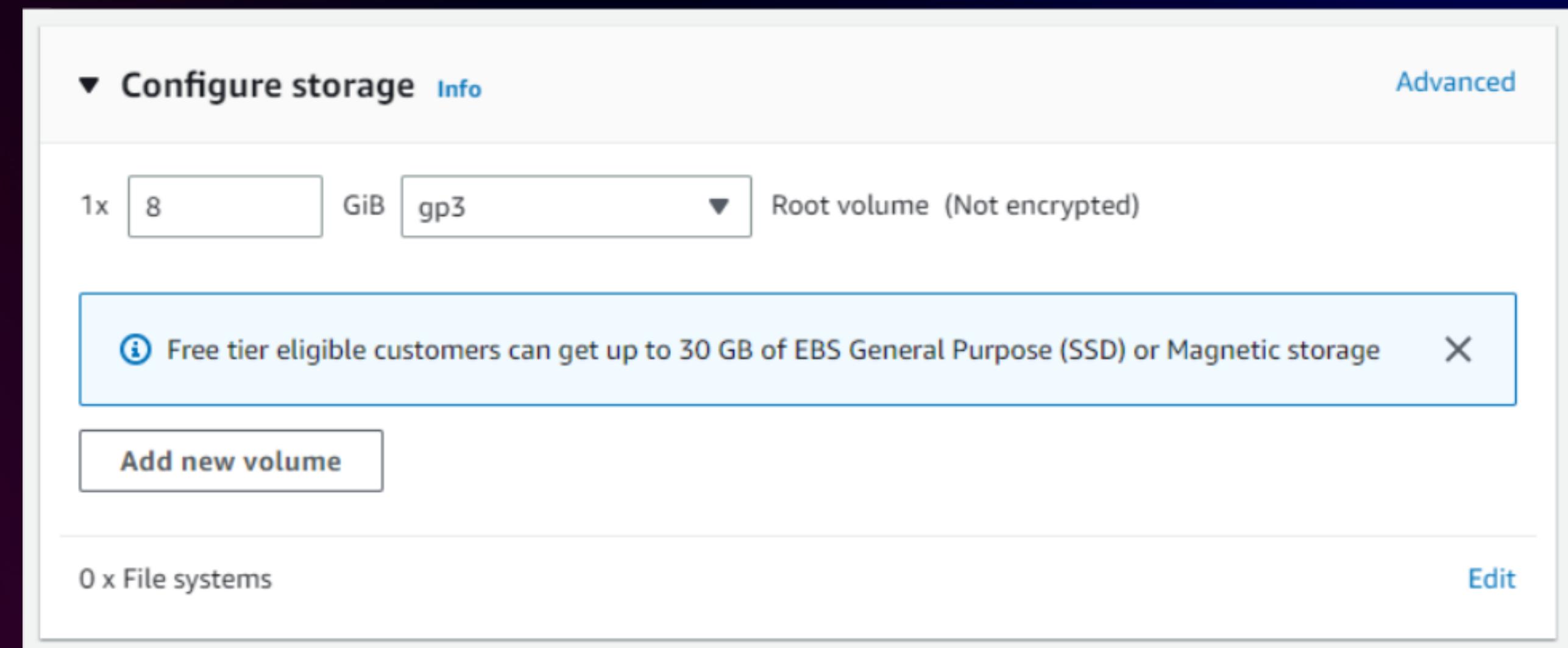
▼ Configure storage [Info](#) [Advanced](#)

1x GiB [▼](#) Root volume (Not encrypted)

 Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage [X](#)

[Add new volume](#)

0 x File systems [Edit](#)



Launch and Connect to EC2 instance



```
aws | Services | Search [Alt+S] | X | ▲ | ? | Mumbai | pantechelearning

#          #
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~~~ /
~~ .-/
~/`-/
[m/`-/
[ec2-user@ip-172-31-5-234 ~]$
```

**Lets try to launch Apache
server from our EC2 Instance**

Elastic Load Balancing (ELB)



Thank you

