## **BASICS**

#### 1. What is AWS EC2?

**Ans:** EC2 (Elastic Compute Cloud) is a service from AWS that lets you run virtual servers in the cloud. You can use it to host websites, apps, or anything that needs computing power.

### 2. What is AWS Educate?

**Ans:** AWS Educate is a program by Amazon that provides students and educators access to AWS tools, free credits, and learning resources for cloud computing.

#### 3. What is an EC2 instance?

**Ans:** An EC2 instance is a virtual server in the AWS cloud that you can use to run your applications.

#### 4. What is AMI in EC2?

**Ans:** AMI (Amazon Machine Image) is a template used to create EC2 instances. It includes an operating system and software.

# 5. What are the steps to launch an EC2 instance in AWS Educate? Ans:

- Log in to AWS Educate.
- Go to "AWS Educate Classrooms" and open the classroom.
- Launch AWS Console.
- Go to EC2 Dashboard.
- Click "Launch Instance".
- Choose an AMI (e.g., Ubuntu, Amazon Linux).
- Choose instance type (e.g., t2.micro free tier).
- Configure details and storage.
- Add tags (optional).
- Configure security group (allow SSH/HTTP if needed).
- · Review and launch.
- Select or create a key pair and launch.

## 6. What is a key pair and why is it needed?

**Ans:** A key pair is used for securely connecting (SSH) to your EC2 instance. It includes a public and a private key.

## 7. What is a security group in EC2?

**Ans:** A security group acts as a firewall. It controls which traffic is allowed to reach your EC2 instance.

### 8. What is t2.micro?

**Ans:** It's a type of EC2 instance that is free tier eligible. It has 1 vCPU and 1 GB RAM, good for testing or small apps.

## 9. What is SSH and how do you connect to an EC2 instance?

**Ans:** SSH (Secure Shell) is used to securely access remote servers. You use a terminal and a private key file (.pem) to connect.

## 10. What is the purpose of the .pem file?

**Ans:** The .pem file is your private key to connect to the EC2 instance. It proves your identity securely.

## 11. How do you connect to EC2 from your system?

#### Ans:

ssh -i "your-key.pem" ec2-user@<Public-IP>

#### 12. What is the default username for EC2?

#### Ans:

• Amazon Linux: ec2-user

• Ubuntu: ubuntu

CentOS: centos

## **▼** TROUBLESHOOTING & PRACTICAL USES

## 13. What should you do if the .pem file is lost?

**Ans:** You cannot connect to the instance anymore. You'll have to stop the instance, create a new one or replace the key by creating a new image.

## 14. How do you host a website on EC2?

#### Ans:

- Launch EC2 instance.
- SSH into it.
- Install a web server (e.g., Apache or Nginx).

- Place your HTML files in the server directory.
- Open port 80 in the security group.

# 15. What is the difference between a public IP and a private IP in EC2? Ans:

- Public IP: Used to connect from the internet.
- Private IP: Used to connect within AWS VPC (private network).

## ADDITIONAL CONCEPTS

#### 16. What is EBS in EC2?

**Ans:** EBS (Elastic Block Store) is a storage volume attached to your EC2 instance, like a virtual hard drive.

### 17. What is termination of EC2 instance?

**Ans:** Termination means the instance is permanently deleted. All data on it is lost unless stored in EBS and backed up.

## 18. How do you stop and restart an EC2 instance?

**Ans:** From the EC2 dashboard, select the instance  $\rightarrow$  Actions  $\rightarrow$  Instance State  $\rightarrow$  Stop/Start.

## 19. What happens if you stop an EC2 instance?

Ans: The instance is shut down, but not deleted. You can start it again later.

# 20. What is the difference between stopping and terminating an instance? Ans:

- **Stop:** The instance shuts down but can be restarted.
- **Terminate:** The instance is deleted and cannot be recovered.