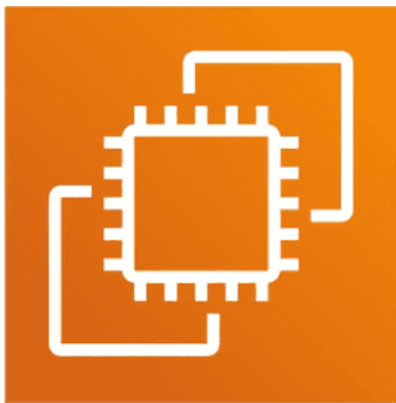# 30 Important Questions And Answers Of AWS EC2

Amazon Elastic Compute Cloud

1. What is Amazon EC2?
   Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers.

2. What is an EC2 instance?
   An EC2 instance is a virtual server in the cloud that you can use to run your applications. It's like a virtual machine that you can customize to meet your needs.

3. What are the different types of EC2 instances?
   EC2 instances come in different types, or instance families, which are optimized for different use cases. Examples include General Purpose, Compute Optimized, Memory Optimized, and Storage Optimized instances.

4. What is an AMI?
   An Amazon Machine Image (AMI) is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance.

5. Can I change the instance type of my EC2 instance after it is launched?
   Yes, you can change the instance type of your EC2 instance while it is stopped.

6. What is an EC2 key pair?
   An EC2 key pair consists of a public key that AWS stores and a private key file that you store. You use the private key to securely access your instances.

7. How can I secure my EC2 instances?
   You can secure your EC2 instances by using key pairs for SSH access, setting up security groups to control inbound and outbound traffic, and regularly patching and updating your instances.

8. What is a security group in EC2?
   A security group acts as a virtual firewall for your EC2 instances to control inbound and outbound traffic. You can specify which traffic is allowed to reach your instances.

9. What is an Elastic IP address?

An Elastic IP address is a static IPv4 address that you can associate with your EC2 instance. It allows you to mask the failure of an instance or software by rapidly remapping the address to another instance in your account.

10. What is the difference between an on-demand instance and a reserved instance?
    On-demand instances are billed at a fixed rate per hour, while reserved instances require you to pay an upfront fee to receive a significant discount on the hourly charge for the instance.

11. Can I attach multiple Elastic IP addresses to an EC2 instance?
    Yes, you can attach multiple Elastic IP addresses to an EC2 instance, but only one can be associated with the instance at any given time.

12. What is an EC2 instance profile?
    An EC2 instance profile is a container for an AWS Identity and Access Management (IAM) role that you can use to pass role information to an EC2 instance when it starts.

13. How can I monitor my EC2 instances?
    You can monitor your EC2 instances using Amazon CloudWatch, which provides metrics such as CPU utilization, disk I/O, and network traffic.

14. What is the difference between instance store volumes and EBS volumes?
    Instance store volumes are temporary storage volumes that are physically attached to the host computer, while EBS volumes are network-attached storage volumes that persist independently from the life of an instance.

15. Can I encrypt my EBS volumes?
    Yes, you can encrypt your EBS volumes using AWS Key Management Service (KMS) encryption keys.

16. What is the EC2 instance metadata service?
    The EC2 instance metadata service provides temporary, frequently requested, and dynamic data about an EC2 instance.

17. How can I scale my EC2 instances automatically?
    You can use Auto Scaling to automatically scale your EC2 instances based on demand.

18. What is the difference between horizontal and vertical scaling?
    Horizontal scaling involves adding more instances to your application, while vertical scaling involves increasing the size of the instance (e.g., adding more CPU, RAM) to handle increased load.

19. How can I back up my EC2 instances?
    You can back up your EC2 instances by creating Amazon Machine Images (AMIs) of your instances, which can be used to launch new instances.

20. What is Amazon Lightsail?
    Amazon Lightsail is an easy-to-use virtual private server (VPS) service that offers a simple way to launch and manage virtual private servers in the cloud.

21. Can I use Amazon EC2 for hosting a website?
    Yes, you can use Amazon EC2 to host a website. You can install a web server (e.g., Apache, Nginx) on your EC2 instance and configure it to serve your website.

22. What is the difference between an instance store-backed instance and an EBS-backed instance?
    An instance store-backed instance uses temporary storage that is physically attached to the host computer and is lost when the instance is stopped or terminated. An EBS-backed instance uses EBS volumes for storage, which persist independently from the life of the instance.

23. How can I access my EC2 instance if I lose my private key?
    If you lose your private key, you can't access your EC2 instance. However, you can create a new key pair and associate it with your instance, but you'll lose access to any data that was encrypted with the old key pair.

24. What is the difference between a spot instance and a reserved instance?
    A spot instance is a spare EC2 instance that is available for less than the On-Demand price, while a reserved instance is a capacity reservation that offers a significant discount compared to On-Demand pricing in exchange for a one- or three-year commitment.

25. How can I move my EC2 instance to a different availability zone?
    You can't move an EC2 instance to a different availability zone. However, you can create an AMI of your instance and launch a new instance in a different availability zone using that AMI.

26. What is the maximum number of Elastic IP addresses that I can associate with my AWS account?
    By default, you can have up to 5 Elastic IP addresses per AWS account. If you need more, you can request an increase.

27. Can I use my own operating system with EC2?
    Yes, you can use your own operating system with EC2 by creating a custom AMI that includes your preferred operating system and software configurations.

28. How can I enable enhanced networking on my EC2 instance?
    You can enable enhanced networking on your EC2 instance by selecting an instance type that supports enhanced networking and installing the required drivers and software.

29. What is AWS Nitro?
    AWS Nitro is a collection of hardware and software components that provide high performance, high availability, and enhanced security for EC2 instances.

30. How can I deploy a web application on EC2?
    You can deploy a web application on EC2 by installing a web server (e.g., Apache, Nginx), configuring it to serve your application, and then pointing your domain name to the Elastic IP address of your EC2 instance.