

What is S3 in AWS?

S3 is a simple storage device used to store and retrieve the bulk amount of data at any time on the web. The Payment model for S3 is “pay as you go.”

Explain AMI in brief.

Amazon Machine Image – is a template that contains information regarding the application, an operating system, and application server which is required to launch an instance. We can launch an instance of different AMI as per our requirements.

What are the key components of AWS?

- Cloud Watch: used to monitor AWS resources
- Elastic Block Store (EBS): used as persistent storage volumes
- Route 53: a DNS web service
- Identity and Access Management: used as identity management for AWS account
- Simple Storage Device or (S3): used to store and retrieve the bulk amount of data at any time on the web.
- Elastic Compute Cloud (EC2): used to provide on-demand computing resources for hosting applications.

How can we send a request to Amazon S3?

Amazon S3 is used for REST service, and we can use REST API or the AWS SDK wrapper libraries for sending requests. SDK wrapper also used to wrap the underlying Amazon S3 REST API.

How many buckets can a user create in AWS by default?

User can create up to 100 buckets by defaults in each of your AWS accounts.

Explain T2 instance in brief.

We can use T2 instance to provide moderate baseline performance and to burst up to higher performance as per our requirements.

Which subnet is used to launch a database server in VPC with private and public subnets?

Private subnet should be used to launch the database server in VPC with private and public subnets.

Explain the use of the buffer in Amazon web services?

The buffer is used for making the system more robust to manage traffic by synchronizing different components. Generally, Requests are received and proceed in an unbalanced way by elements, but after using a buffer, the items will work with the same speed and in a balanced manner to provide faster services.

Explain key-pairs in AWS?

Key-pairs are the primary login information for virtual machines. Key-pairs contains the public key and a private key. We can use them to connect instances.

Enlist the different types of instances.

Following are the different types of instances:

- General-purpose
- Computer Optimized
- Memory-Optimized
- Storage Optimized
- Accelerated Computing

How many Elastic IPs are allowed to create for each AWS account and When EC2 was officially launched?

5 VPC Elastic IP addresses are permitted for each AWS account. EC2 was officially launched in the year 2006.

What is the default storage class in Simple Storage Device – S3?

A Standard frequently accessed is the default storage class in S3.

What are the possible connection issues user might face While connecting to an instance?

The possible connection errors user might encounter while connecting instances are as follows:

- User key not recognized by the server
- Connection timed out
- An unprotected private key file
- Host key not found, permission denied
- Error using MindTerm on Safari Browser
- Server refused our key or No supported authentication method available.
- Error using Mac OS X RDP Client

Explain the edge locations in brief.

An edge location is an area mainly used for caching all the contents. When the user tries to access content, the edge locations are automatically used for searching contents.

What is VPC in AWS?

Virtual Private Cloud -VPC is used to customize network configuration. It is an isolated network from other networks in the cloud. It provides facilities like having your IP address range, internet gateways, subnet, and security groups.

Explain snowball in brief.

Snowball is used as a data transport option in AWS. We can transfer a large amount of data from one place to another. It also helps in reducing network costs.

What is a redshift in AWS?

Redshift is a big data warehouse product. It is not only fast and powerful but also fully managed data warehouse service in the cloud.

What are the advantages of auto-scaling?

The advantages of autoscaling are as follows:

- Better availability
- Better cost management
- Offers fault tolerance

What do you mean by subnet and How many subnets can a user have per VPC?

The subnet is the large section of IP Address divided into chunks. User can have 200 subnets per VPC.

Enlist the types of AMI provided by AWS.

The following are types of AMI provided by AWS:

- Instance store backed
- EBS backed

Enlist the DB engines which can be used in AWS RDS.

The following are the DB engines which can be used in AWS RDS.

- MS-SQL DB
- MariaDB
- MYSQL DB
- OracleDB
- PostgreDB

1) Explain what AWS is?

AWS stands for Amazon Web Service; it is a collection of remote computing services also known as a cloud computing

platform. This new realm of cloud computing is also known as IaaS or Infrastructure as a Service.

2) Mention what the key components of AWS are?

The key components of AWS are

- **Route 53:** A DNS web service
- **Simple E-mail Service:** It allows sending e-mail using RESTFUL [API](#) call or via regular SMTP
- **Identity and Access Management:** It provides enhanced security and identity management for your AWS account
- **Simple Storage Device or (S3):** It is a storage device and the most widely used AWS service
- **Elastic Compute Cloud (EC2):** It provides on-demand computing resources for hosting applications. It is handy in case of unpredictable workloads
- **Elastic Block Store (EBS):** It offers persistent storage volumes that attach to EC2 to allow you to persist data past the lifespan of a single Amazon EC2 instance
- **CloudWatch:** To monitor AWS resources, It allows administrators to view and collect logs. Also, one can set a notification alarm in case of trouble.

3) Explain what S3 is?

S3 stands for Simple Storage Service. You can use the S3 interface to store and retrieve any amount of data, at any time and from anywhere on the web. For S3, the payment model is “pay as you go.”

4) What is AMI?

AMI stands for Amazon Machine Image. It's a template that provides the information (an [operating system](#), an application server, and applications) required to launch an instance, which is a copy of the AMI running as a virtual server in the cloud. You can launch instances from as many different AMIs as you need.

TOP 10 BEHAVIORAL INTERVIEW QUESTIONS

EXPLORE MORE  Top 10 Behavioral Interview Questions

and Answers04:00  Top 10 Interview Do's and Don'ts in a

Job Interview02:11



Top 5 Powerpoint Interview Questions

and Answers02:11



What to bring to a JOB Interview:

Interview Tips01:50



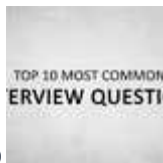
What to wear in interview for Women

| Working women01:44



How To Dress for an Job Interview

for Men01:36



10 Most Common Interview Questions and

Answers



03:54



5 Secrets Tips to Win an Interview01:42

5) Mention what the relationship between an instance and AMI is?

From a single AMI, you can launch multiple types of instances. An instance type defines the hardware of the host computer used for your instance. Each instance type provides different computer and memory capabilities. Once you launch an instance, it looks like a traditional host, and we can interact with it as we would with any computer.



AWS Interview Questions

6) What does an AMI include?

An AMI includes the following things

- A template for the root volume for the instance
- Launch permissions decide which AWS accounts can avail the AMI to launch instances
- A block device mapping that determines the volumes to attach to the instance when it is launched

7) How can you send a request to Amazon S3?

Amazon S3 is a REST service, and you can send a request by using the REST API or the AWS SDK wrapper libraries that wrap the underlying Amazon S3 REST API.

8) Mention what the difference between Amazon S3 and EC2 is?

The difference between EC2 and Amazon S3 is that

EC2	S3
It is a cloud web service used for hosting your application	It is a data storage service where data can be stored
It is like a huge computer machine which can run either Linux or Windows and can handle applications like PHP, Python, Apache, or any databases	It has a REST interface and uses access keys for authentication

9) How many buckets can you create in AWS by default?

By default, you can create up to 100 buckets in each of your AWS accounts.

10) Explain can you vertically scale an Amazon instance? How?

Yes, you can vertically scale on the Amazon instance. For that

- Spin up a new larger instance than the one you are currently running
- Pause that instance and detach the root volume from the server and discard
- Then stop your live instance and detach its root volume
- Note the unique device ID and attach that root volume to your new server
- And start it again

11) Explain what T2 instances is?

T2 instances are designed to provide moderate baseline performance and the capability to burst to higher performance as required by the workload.

12) In VPC with private and public subnets, database servers should ideally be launched into which subnet?

With private and public subnets in VPC, database servers should ideally launch into private subnets.

13) Mention what the security best practices for Amazon EC2 are?

For secure Amazon EC2 best practices, follow the following steps

- Use AWS identity and access management to control access to your AWS resources
- Restrict access by allowing only trusted hosts or networks to access ports on your instance
- Review the rules in your security groups regularly
- Only open up permissions that you require
- Disable password-based login, for example, launched from your AMI

14) Explain how the buffer is used in Amazon web services?

The buffer is used to make the system more robust to manage traffic or load by synchronizing different components. Usually, components receive and process the requests in an unbalanced way. With the help of a buffer, the components will be balanced and will work at the same speed to provide faster services.

15) While connecting to your instance what are the possible connection issues one might face?

The possible connection errors one might encounter while connecting instances are

- Connection timed out
- User key not recognized by the server
- Host key not found, permission denied
- An unprotected private key file
- Server refused our key or No supported authentication method available
- Error using MindTerm on Safari Browser
- Error using Mac OS X RDP Client

16) What are key-pairs in AWS?

Key-pairs are secure login information for your virtual machines. To connect to the instances, you can use key-pairs which contain a public-key and private-key.

17) What are the different types of instances?

Following are the types of instances:

- General purpose
- Computer Optimized
- Memory Optimized
- Storage Optimized
- Accelerated Computing

18) Is the property of broadcast or multicast supported by Amazon VPC?

No, currently Amazon VPC does not provide support for broadcast or multicast.

19) How many Elastic IPs are allowed to be created by AWS?

5 VPC Elastic IP addresses are allowed for each AWS account.

20) Explain default storage class in S3

The default storage class is a Standard frequently accessed.

21) What are the Roles?

Roles are used to provide permissions to entities which you can trust within your AWS account. Roles are very similar to users. However, with roles, you do not require to create any username and password to work with the resources.

22) What are the edge locations?

Edge location is the area where the contents will be cached. So, when a user is trying to access any content, the content will automatically be searched in the edge location.

23) What is VPC?

VPC stands for Virtual Private Cloud. It allows you to customize your networking configuration. It is a network which is logically isolated from another network in the cloud. It allows you to have your IP address range, internet gateways, subnet, and security groups.

24) Explain snowball

Snowball is a data transport option. It used source appliances to a large amount of data into and out of AWS. With the help of snowball, you can transfer a massive amount of data from one place to another. It helps you to reduce networking costs.

25) What is a redshift?

Redshift is a big [data warehouse](#) product. It is a fast and powerful, fully managed data warehouse service in the cloud.

26) What are the advantages of auto-scaling?

Following are the advantages of autoscaling

- Offers fault tolerance
- Better availability
- Better cost management

27) What is meant by subnet?

A large section of IP Addresses divided into chunks is known as subnets.

28) Can you establish a Peering connection to a VPC in a different region?

Yes, we can establish a peering connection to a VPC in a different region. It is called inter-region VPC peering connection.

29) What is SQS?

Simple Queue Service is also known as SQS. It is distributed queuing service which acts as a mediator for two controllers.

30) How many subnets can you have per VPC?

You can have 200 subnets per VPC.

31) DNS and Load Balancer service comes under which type of cloud service?

DNS and Load Balancer and DNS services come under IAAS-storage cloud service.

32) What is the role of AWS CloudTrail?

CloudTrail is a specially designed tool for logging and tracking API calls. It helps to [audit](#) all S3 bucket accesses.

33) When was EC2 officially launched?

EC2 officially launched in the year 2006.

34) What is SimpleDB?

SimpleDB is a data repository of structure record which encourages data doubts and indexing both S3 and EC2 are called SimpleDB.

35) Explain Amazon ElasticCache

Amazon ElastiCache is a web service which makes it easy to deploy, scale and store data in the cloud.

36) What is AWS Lambda?

Lambda is an Amazon compute service which allows you to run code in the AWS Cloud without managing servers.

37) Name the types of AMI provided by AWS

The types of AMI provided by AWS are:

1. Instance store backed
2. EBS backed

38) Name the AWS service that exists only to redundantly cache data and images?

AWS Edge locations are services that redundantly cache data and images.

39) Explain Geo Restriction in CloudFront

A Geo-restriction feature helps you to prevent users of specific geographic locations from accessing content which you're distributing through a CloudFront web distribution.

40) What is Amazon EMR?

EMR is a managed cluster service which helps you to interpret the working of data structures before the implementation. Apache [Hadoop](#) and Apache Spark on the Amazon Web Services help you to investigate a large amount of data. You can prepare data for the analytics goals and marketing intelligence workloads using Apache [Hive](#) and using other relevant open-source designs.

41) What is the boot time taken for the instance stored backed AMI?

The boot time for an Amazon instance store-backend AMI is less than 5 minutes.

42) Do you need an internet gateway to use peering connections?

Yes, the Internet gateway is needed to use VPC (virtual private cloud peering) connections.

43) How to connect EBS volume to multiple instances?

We can't be able to connect EBS volume to multiple instances. However, you can connect various EBS Volumes to a single instance.

44) List different types of cloud services

Various types of cloud services are:

- Software as a Service (SaaS),
- Data as a Service (DaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS).

45) State the difference between An Instance and AMI

AMI is a template consisting of software configuration part. For example Operating systems, applications, application servers if you start an instance, a duplicate of the AMI in a row as an attendant in the cloud.

46) What are the different types of Load Balancers in AWS services?

Two types of Load balancers are:

1. Application Load Balancer

2. Classic Load Balancer

47) In which situation you will select provisioned IOPS over Standard RDS storage?

You should select provisioned IOPS storage over standard RDS storage if you want to perform batch-related workloads.

48) What are the important features of Amazon cloud search?

Important features of the Amazon cloud are:

- Boolean searches
- Prefix Searches
- Range searches
- Entire text search
- AutoComplete advice

49) Can vertically scaling is allowed in Amazon Instance?

Yes, you can vertically estimate one Amazon instance.

50) What is the use of lifecycle hooks in Autoscaling?

Lifecycle hooks are used for autoscaling to put an additional wait time to a scale in or scale out event.

51) What are the various layers of Cloud Architecture explained in AWS training?

Different layers of cloud architecture are:

- Cloud controller
- Cluster controller
- Storage Controller
- Node Controller

52) What are the storage class available in Amazon s3?

Storage classes available with Amazon s3 are:

- Amazon S3 standard
- Amazon S3 standard-infrequent Access
- Amazon S3 Reduced Redundancy Storage
- Amazon Glacier

53) Name some of the DB engines which can be used in AWS RDS

1. MS-SQL DB
2. MariaDB
3. MYSQL DB
4. OracleDB
5. PostgreDB

1. What is Cloud Computing?

Cloud computing provides access to IT resources such as computing power, applications, and storage to users as per their demands. Here, users do not need to maintain their physical resources on their premises. In cloud computing, you can pay only for the resources you have used, so there are no investment costs. This service provides greater flexibility and scaling on resources according to your changing workloads.

2. What are the featured services of AWS?

The Key Components of AWS are:

- **Elastic compute cloud(EC2):** It acts as an on-demand computing resource for hosting applications. EC2 is very helpful in times of uncertain workloads.
- **Route 53:** It's a DNS web service.
- **Simple Storage Device S3:** It is a widely used storage device service in AWS Identity and Access Management.
- **Elastic Block Store:** It allows you to store constant volumes of data which is integrated with EC2 and enables you to data persist.
- **Cloud watch:** It allows you to watch the critical areas of the AWS with which you can even set a reminder for troubleshooting.
- **Simple Email Service:** It allows you to send emails with the help of regular SMTP or by using a restful API call.

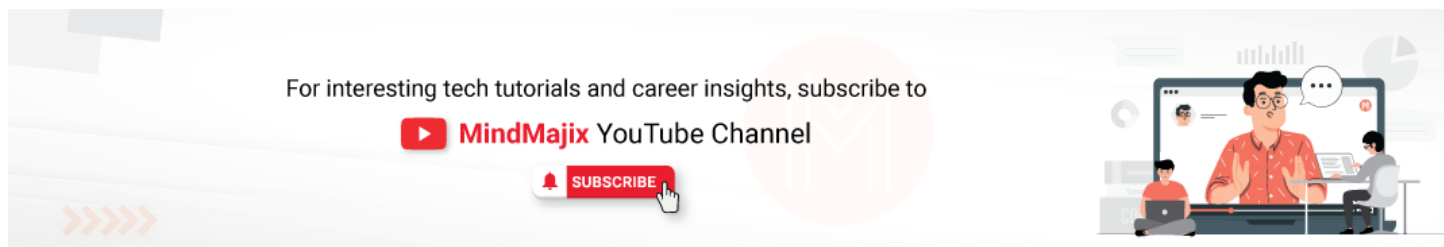
3. What are the top product categories of AWS?

The top product categories of AWS are:

1. Compute
2. Storage
3. Database
4. Networking and Content Delivery
5. Analytics
6. Machine Learning
7. Security
8. Identity
9. Compliance

4. What is a Data lake?

It is a centralized data repository to store all your structured and unstructured data at any volume. The core aspect of Data lake is that you can apply various analytical tools to data, derive analytics, and uncover useful insights without structuring the data. Also, Data lake stores data coming from various sources such as business applications, mobile applications, and IoT devices.



5. What is Serverless Computing?

AWS offers a serverless computing facility to run codes and manage data and applications without managing servers. Serverless computing eliminates infrastructure management tasks like capacity provisioning, patching, etc. It reduces the operating costs significantly. As this technology scales in response to the demands for resources automatically, it ensures quick service to users.

6. What is Amazon EC2?

Amazon EC2 is known as Amazon Elastic Cloud Computing Platform. It provides a robust computing platform to handle any workload with the latest

processors, storage, Operating Systems, and networking capabilities. It simplifies the computing process for developers. And this service reduces time by allowing quick scaling as per the requirements.

7. What is Amazon EC2 Auto Scaling?

This AWS service automatically adds or removes EC2 instances as per the changing demands in workloads. Also, this service detects the unhealthy EC2 instances in the cloud infrastructure and replaces them with new instances, consequently. In this service, scaling is achieved in dynamic scaling and Predictive scaling. They can be used separately as well as together to manage the workloads.

8. What is fleet management in Amazon EC2 Auto Scaling?

Amazon EC2 auto-scaling service continuously monitors the health of Amazon EC2 instances and other applications. When EC2 auto-scaling identifies unhealthy instances, it automatically replaces the unhealthy EC2 instances with new EC2 instances. Also, this service ensures the seamless running of applications and balances EC2 instances across the zones in the cloud.

9. What is Amazon S3?

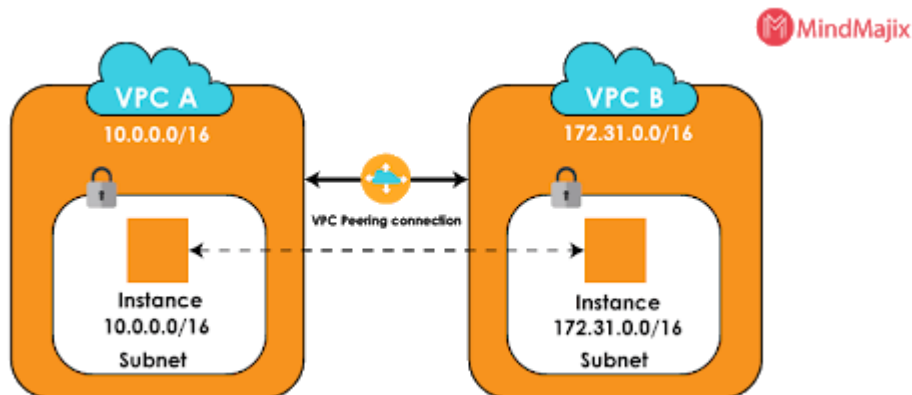
Amazon S3 is known as Amazon Simple Storage Service, which allows storing any volume of data and retrieving data at any time. It reduces costs significantly, eliminating the requirement for investments. Amazon S3 offers effective scalability, data availability, data protection, and performance. Using this service, you can uncover insights from the stored data by analyzing it with various analytical tools such as Big Data analytics, Machine Learning, and Artificial Intelligence.

10. What is Amazon CloudFront?

Amazon CloudFront is known as the Content Delivery Network (CDN) service. This service provides high security and performance and is a developer-friendly tool. Amazon CloudFront uses a global network with 310+ Points of Presence (PoPs) across the globe, which helps to reduce latency effectively. And this service uses automated mapping and intelligent routing mechanisms to reduce latency. Amazon CloudFront secures data by applying traffic encryption and controlling access to data.

11. What is Amazon VPC?

Amazon VPC is known as Amazon Virtual Private Cloud (VPC), allowing you to control your virtual private cloud. Using this service, you can design your VPC right from resource placement and connectivity to security. And you can add Amazon EC2 instances and Amazon Relational Database Service (RDS) instances according to your needs. Also, you can define the communication between other VPCs, regions, and availability zones in the cloud.



12. What is Amazon SQS?

Amazon Simple Queuing Service (SQS) is a fully managed message queuing service. Using this service, you can send, receive and store any quantity of messages between the applications. This service helps to reduce complexity and eliminate administrative overhead. In addition to that, it provides high protection to messages through the encryption method and delivers them to destinations without losing any message.

13. What are the two types of queues in SQS?

There are two types of queues known

Standard Queues: It is a default queue type. It provides an unlimited number of transactions per second and at least one message delivery option.

FIFO Queues: FIFO queues are designed to ensure that the order of messages is received and sent is strictly preserved as in the exact order that they sent.

14. What is Amazon DynamoDB?

Amazon [DynamoDB](#) is a fully managed, serverless, key-value No SQL database service. This service has many essential features such as built-in security, in-memory caching, continuous back-ups, data export tools, and automated multi-region replication. Mainly, you can run high-performance applications at any scale using this service. For instance, it extensively supports internet-scale applications that require high concurrency and connections for many users with millions of requests per second.

15. What is Amazon S3 Glacier?

It is a storage class built for data archiving, which helps retrieve data with high flexibility and performance. So, data can be accessed faster in milliseconds, and S3 Glacier offers a low-cost service. There are three S3 glacier storage classes – Glacier instant retrieval storage, S3 Glacier flexible retrieval, and S3 Glacier deep archive.

16. What is Amazon Redshift?

Amazon Redshift helps analyze data stored in data warehouses, databases, and data lakes using Machine Learning (ML) and AWS-designed hardware. It uses SQL to analyze structured and semi-structured data to yield the best performance from the analysis. This service automatically creates, trains, and deploys Machine Learning models to create predictive insights.

17. What are Elastic Load Balancing (ELB) and its types?

Elastic Load Balancing ([ELB](#)) automatically directs incoming application traffic to various destinations and virtual appliances. In fact, the destinations and virtual appliances may be in one or more availability zones. In this service, you can secure your applications using tools such as integrated certificate management, SSL/TLS decryption methods, and user authentication.

There are three types of load balancers such as Application Load Balancer, Gateway Load Balancer, and Network Load Balancer.

18. What are sticky sessions in ELB?

A sticky session is also known as session affinity. During sticky sessions, load balancers connect a user's session with a specific target. So, all the user's requests during that session will be directed to the same target. It will provide a continuous experience to users. Here, the cookie AWSELB is used to define the sticky session duration to the instance.

19. What is AWS Elastic Beanstalk?

This AWS service helps deploy and manage applications in the cloud quickly and easily. Here, developers need to upload the codes; after that, Elastic Beanstalk will manage other requirements automatically. Simply put, Elastic Beanstalk manages right from capacity provisioning, auto-scaling, load balancing up to application health monitoring.

20. What are the benefits of AWS Elastic Beanstalk?

1. In a way, it is faster and simpler to deploy applications
2. The auto-scaling facility of Elastic Beanstalk supports to scale applications up and down based on the demands.
3. This AWS service manages application platforms by updating with the latest patches and updates.
4. When they use this service, developers could achieve enough freedom to choose the type of EC2 instance, processors, etc.



Following are the few benefits of the Elastic Beanstalk:

1. **Easy and simple:** Elastic Beanstalk enables you to manage and deploy the application easily and quickly.
2. **Autoscaling:** Beanstalk scales up or down automatically when your application traffic increases or decreases.
3. **Developer productivity:** Developers can easily deploy the application without any knowledge, but they need to maintain the application securely and be user-friendly.
4. **Cost-effective:** No charge for Beanstalk. Charges are applied for the AWS service resources which you are using for your application.
5. **Customization:** Elastic Beanstalk allows users to select the configurations of AWS services that users want to use for application development.
6. **Management and updates:** It updates the application automatically when it changes the platform. Platform updates and infrastructure management are taken care of by AWS professionals.

21. What is Amazon CloudWatch?

Amazon CloudWatch is a monitoring service that would help IT professionals, extensively by providing actionable insights. The tool

provides complete visibility on AWS resources and applications running on AWS and on-premises. In addition, it tracks the status of applications, which would help to apply suitable response actions and optimize the performance of applications.

22. What is AWS Snowball?

AWS Snowball is an edge computing and storage service. There are two features available in this service: Snowball edge storage optimized devices and Snowball edge computes optimized devices. The snowball storage devices offer block storage and Amazon S3 object storage. Snowball edge computing devices provide 52 vCPUs and an optional GPU, and it is suitable for handling advanced Machine Learning and full-motion video analysis.

Classic Load Balancer: Classic load balancer is designed to make routing decisions either at the application layer or transport layer. It requires a fixed relationship between the container instance port and the load balancer port.

23. What is AWS CloudTrail?

This AWS service monitors user activities on AWS infrastructure and records their activities. And this service identifies suspicious activities on AWS resources through CloudTrail insights and Amazon EventBridge features. So, you can get reasonable control over your resources and response activities. In addition to that, it analyses the log files with Amazon Athena.

24. What is Amazon ElastiCache?

It is an in-memory caching service. It acts as a data store that can be used as a database, cache, message broker, and queue. This caching service accelerates the performance of applications and databases. For instance, you can access data in microseconds using this caching service. Not only that, it helps to reduce the load on the backend database.

25. What is AWS Lambda?

It is a serverless and event-driven computing service. It allows running codes virtually for applications without any provisioning or managing servers. Most AWS services and SaaS applications can trigger AWS

Lambda. This service can execute any code volume due to its scaling properties. Also, decoupled services can be communicated through the event-driven functions of AWS Lambda.

26. What is Amazon Lightsail?

Amazon Lightsail is a service that helps to build and manage websites and applications faster and with ease. It provides easy-to-use virtual private server instances, storage, and databases cost-effectively. Not just that, you can create and delete development sandboxes using this service, which will help to test new ideas without taking any risk.

27. What is Amazon ECS?

It is known as Amazon Elastic Container Registry (ECR). It provides high-performance hosting so that you can store your application images securely in ECR. Amazon ECS compresses and encrypts images and controls access to images. The images can be simply stored in containers; also, they can be accessed from the containers without the support of any management tools.

28. What is Amazon EFS?

Amazon EFS is a simple and serverless Elastic File System. It allows adding or removing files on the file system without provisioning and management. This service creates file systems using EC2 launch instance wizard, EFS Console, CLI, and API. You can reduce costs significantly since accessed files will be moved automatically over a period.

29. What is the AWS Snow Family?

AWS Snow family allows transferring data in and out of the cloud using physical devices very simply. It doesn't require the need for networks. AWS Snow Family helps transfer a large volume of data such as cloud migration, data center relocation, disaster recovery, and remote data collection projects. With the help of this service, many AWS services can be used to analyze, archive, and file data.

30. What is AWS Elastic Disaster Recovery?

This AWS service reduces application downtime on a greater scale by quickly recovering applications both on-premises and on the cloud if there is an application failure. It needs minimal computing power and storage and achieves point-in-time recovery. It helps recover applications within a few minutes in the same state when they failed. Mainly, it reduces recovery costs considerably, unlike the typical recovery methods.

31. What is Amazon Aurora, and mention its features?

Amazon Aurora is the MySQL and PostgreSQL relational database. It performs similar-like traditional databases and has simplicity and cost-effectiveness of open source databases. Amazon Aurora is fully managed by Amazon RDS and automates the processes, such as hardware provisioning, database setup, back-ups, and patching. Also, it has a self-healing storage system that can scale up to 128 TB per database instance.

32. What is Amazon RDS?

Amazon RDS is known as Relational Database Service that allows easy setup, operation, and scaling of relational databases in the cloud. And it automates administrative tasks such as provisioning, database setup, and back-ups. Amazon RDS offers six familiar database engines, such as Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle Database, and SQL server.

33. What is Amazon Neptune?

It is a purpose-built graph database that helps execute queries with easy navigation on datasets. Here, you can use graph query languages to execute queries, which will perform effectively on connected datasets. Moreover, Amazon Neptune's graph database engine can store billions of relationships and query the graph with milliseconds latency. This service is mainly used in fraud detection, knowledge graphs, and network security.

34. What is Amazon Route 53?

It is the highly scalable Cloud Domain Name System (DNS) web service. It connects users to AWS infrastructures such as Amazon EC2 instances, Elastic load balancing, and Amazon S3 buckets. It connects users outside of AWS infrastructure as well. Using this service, you can configure DNS health checks and monitor applications continuously for their ability to

recover from failures. Amazon Route 53 can work alongside Amazon IAM, thereby controlling the access to DNS data.

35. What is AWS Shield?

AWS Shield is the service that protects against DDoS (Distributed Denial of Service) attacks on AWS applications. There are two types of AWS Shields: AWS Shield Standard and AWS Shield Advanced. AWS Shield Standard supports to protect applications from common and frequently occurring DDoS attacks. At the same time, AWS Shield advanced offers higher level protection for the applications running on Amazon EC2, ELB, Amazon CloudFront, AWS Global Accelerator, and Route 53.

36. What is Amazon Network Firewall?

This AWS service helps to protect VPCs (Virtual Private Cloud) against attacks. In this service, scaling is carried out automatically as per the traffic flow in the network. You can define your firewall rules using Network Firewall's flexible rules engine; therefore, you can get reasonable control over the network traffic. Network Firewall can work alongside AWS firewall manager to build and apply security policies on all VPCs and accounts.

37. What is Amazon EBS?

It is known as Amazon Elastic Block Store, and it is a high-performance block storage service. And it is designed to support Amazon EC2 instances. Amazon EBS could scale quicker with respect to the workload demands of high-level applications such as SAP, Oracle, and Microsoft products. Using this service, you can resize the clusters by attaching and detaching storage volumes; therefore, it can be analyzed by big data analytics engines such as Hadoop and Spark.

38. What is Amazon Sagemaker?

It is a managed AWS service, which builds, trains, and deploys Machine Learning models. It consists of the needed infrastructure, tools, and workflow to support any use case. You could manage a large volume of structured as well as unstructured data using this service; as a result, you can build ML models quickly.

39. What is Amazon EMR?

Amazon EMR is nothing but it is a cloud Big Data platform. This AWS service helps run large-scale distributed data processing tasks, Machine Learning applications, and interactive SQL queries. Also, you can run and scale big data workloads using open-source frameworks such as Apache Spark, Hive, and Presto. Amazon EMR uncovers hidden patterns, correlations, and market trends through large-scale data processing.

40. What is Amazon Kinesis?

This AWS service collects, processes, and analyses real-time streaming data and generates useful insights. Here, the real-time data will be video, audio, application logs, IoT telemetry data, and website clickstreams. And you can take the right actions at the right time based on these insights. Especially, data is processed and analyzed once received rather than waiting for the arrival of the whole data.

41. What are the Snow family members?

- AWS Snowcone
- AWS Snowball
- AWS Snowmobile

42. What are the attacks that AWS Shield can prevent?

AWS Shield protects websites from the following DDoS attacks

- UDP floods
- TCP SYN floods
- HTTP GET and POST floods

43. What do you mean by AMI?

AMI is nothing but Amazon Machine Images. It provides the necessary information to launch an instance. Please note that a single AMI can launch multiple instances with the same configuration, whereas different AMIs are required to launch instances with different configurations.

1. What is EC2?

EC2, a Virtual Machine in the cloud on which you have OS-level control. You can run this cloud server whenever you want and can be used when you need to deploy your own servers in the cloud, similar to your on-premises servers, and when you want to have full control over the choice of hardware and the updates on the machine.

2. What is SnowBall?

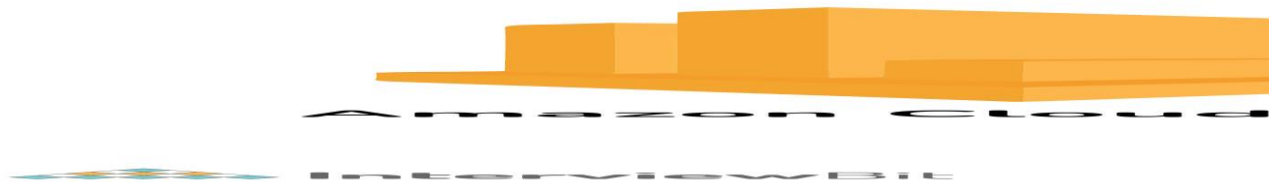
SnowBall is a small application that enables you to transfer terabytes of data inside and outside of the AWS environment.



AWS Snowball

3. What is CloudWatch?

CloudWatch helps you to monitor AWS environments like EC2, RDS Instances, and CPU utilization. It also triggers alarms depending on various metrics.



AWS Cloudwatch

You can download a PDF version of Aws Interview Questions.

[Download PDF](#)

4. What is Elastic Transcoder?

Elastic Transcoder is an AWS Service Tool that helps you in changing a video's format and resolution to support various devices like tablets, smartphones, and laptops of different resolutions.

5. What do you understand by VPC?

VPC stands for Virtual Private Cloud. It allows you to customize your networking configuration. VPC is a network that is logically isolated from other networks in the cloud. It allows you to have your private IP Address range, internet gateways, subnets, and security groups.

6. DNS and Load Balancer Services come under which type of Cloud Service?

DNS and Load Balancer are a part of IaaS-Storage Cloud Service.

7. What are the Storage Classes available in Amazon S3?

Storage Classes available with Amazon S3 are:

- Amazon S3 Standard
- Amazon S3 Standard-Infrequent Access
- Amazon S3 Reduced Redundancy Storage
- Amazon Glacier

8. Explain what T2 instances are?

T2 Instances are designed to provide moderate baseline performance and the capability to burst to higher performance as required by the workload.

9. What are Key-Pairs in AWS?

Key-Pairs are secure login information for your Virtual Machines. To connect to the instances, you can use Key-Pairs which contain a Public Key and a Private Key.

10. How many Subnets can you have per VPC?

You can have 200 Subnets per VPC.

11. List different types of Cloud Services.

Different types of Cloud Services are:

- Software as a Service (SaaS)
- Data as a Service (DaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)

Advanced AWS Questions

12. Explain what S3 is?

S3 stands for Simple Storage Service. You can use the S3 interface to store and retrieve any amount of data, at any time and from anywhere on the web. For S3, the payment model is “pay as you go”.

13. How does Amazon Route 53 provide high availability and low latency?

Amazon Route 53 uses the following to provide high availability and low latency:

- **Globally Distributed Servers** - Amazon is a global service and consequently has DNS Servers globally. Any customer creating a query from any part of the world gets to reach a DNS Server local to them that provides low latency.
- **Dependency** - Route 53 provides a high level of dependability required by critical applications.
- **Optimal Locations** - Route 53 serves the requests from the nearest data center to the client sending the request. AWS has data-centers across the world. The data can be cached on different data-centers located in different regions of the world depending on the requirements and the configuration chosen. Route 53 enables any server in any data-center which has the required data to respond. This way, it enables the nearest server to serve the client request, thus reducing the time taken to serve.



Amazon Route

As can be seen in the above image, the requests coming from a user in India are served from the Singapore Server, while the requests coming from a user in the US are routed to Oregon region.

14. How can you send a request to Amazon S3?

Amazon S3 is a REST Service, and you can send a request by using the REST API or the AWS SDK wrapper libraries that wrap the underlying Amazon S3 REST API.

15. What does AMI include?

An AMI includes the following things:

- A template for the root volume for the instance.
- Launch permissions to decide which AWS accounts can avail the AMI to launch instances.
- A block device mapping that determines the volumes to attach to the instance when it is launched.

16. What are the different types of Instances?

Following are the types of instances:

- Compute Optimized
- Memory-Optimized
- Storage Optimized
- Accelerated Computing
- General Purpose

17. What is the relation between the Availability Zone and Region?

An AWS Availability Zone is a physical location where an Amazon data center is located. On the other hand, an AWS Region is a collection or group of Availability Zones or Data Centers.

This setup helps your services to be more available as you can place your VMs in different data centers within an AWS Region. If one of the data centers fails in a Region, the client requests still get served from the other data centers located in the same Region. This arrangement, thus, helps your service to be available even if a Data Center goes down.

18. How do you monitor Amazon VPC?

You can monitor Amazon VPC using:

- CloudWatch
- VPC Flow Logs

19. What are the different types of EC2 instances based on their costs?

The three types of EC2 instances based on the costs are:

On-Demand Instance - These instances are prepared as and when needed. Whenever you feel the need for a new EC2 instance, you can go ahead and create an on-demand instance. It is cheap for the short-time but not when taken for the long term.

Spot Instance - These types of instances can be bought through the bidding model. These are comparatively cheaper than On-Demand Instances.

Reserved Instance - On AWS, you can create instances that you can reserve for a year or so. These types of instances are especially useful when you know in advance that you will be needing an instance for the long term. In such cases, you can create a reserved instance and save heavily on costs.

20. What do you understand by stopping and terminating an EC2 Instance?

Stopping an EC2 instance means to shut it down as you would normally do on your Personal Computer. This will not delete any volumes attached to the instance and the instance can be started again when needed.

On the other hand, terminating an instance is equivalent to deleting an instance. All the volumes attached to the instance get deleted and it is not possible to restart the instance if needed at a later point in time.

21. What are the consistency models for modern DBs offered by AWS?

Eventual Consistency - It means that the data will be consistent eventually, but may not be immediate. This will serve the client requests faster, but chances are that some of the initial read requests may read the stale data. This type of consistency is preferred in systems where data need not be real-time. For example, if you don't see the recent tweets on Twitter or recent posts on Facebook for a couple of seconds, it is acceptable.

Strong Consistency - It provides an immediate consistency where the data will be consistent across all the DB Servers immediately. Accordingly, This model may take some time to make the data consistent and subsequently start serving the requests again. However, in this model, it is guaranteed that all the responses will always have consistent data.

22. What is Geo-Targeting in CloudFront?

Geo-Targeting enables the creation of customized content based on the geographic location of the user. This allows you to serve the content which is more relevant to a user. For example, using Geo-Targeting, you can show the news related to local body elections to a user sitting in India, which you may not want to show to a user sitting in the US. Similarly, the news related to Baseball Tournament can be more relevant to a user sitting in the US, and not so relevant for a user sitting in India.

23. What are the advantages of AWS IAM?

AWS IAM enables an administrator to provide granular level access to different users and groups. Different users and user groups may need different levels of access to different resources created. With IAM,

you can create roles with specific access-levels and assign the roles to the users.

It also allows you to provide access to the resources to users and applications without creating the IAM Roles, which is known as Federated Access.

24. What do you understand by a Security Group?

When you create an instance in AWS, you may or may not want that instance to be accessible from the public network. Moreover, you may want that instance to be accessible from some networks and not from others.

Security Groups are a type of rule-based Virtual Firewall using which you can control access to your instances. You can create rules defining the Port Numbers, Networks, or protocols from which you want to allow access or deny access.

25. What are Spot Instances and On-Demand Instances?

When AWS creates EC2 instances, there are some blocks of computing capacity and processing power left unused. AWS releases these blocks as Spot Instances. Spot Instances run whenever capacity is available. These are a good option if you are flexible about when your applications can run and if your applications can be interrupted.

On the other hand, On-Demand Instances can be created as and when needed. The prices of such instances are static. Such instances will always be available unless you explicitly terminate them.

26. Explain Connection Draining.

Connection Draining is a feature provided by AWS which enables your servers which are either going to be updated or removed, to serve the current requests.

If Connection Draining is enabled, the Load Balancer will allow an outgoing instance to complete the current requests for a specific period but will not send any new request to it. Without Connection Draining, an outgoing instance will immediately go off and the requests pending on that instance will error out.

27. What is a Stateful and a Stateless Firewall?

A Stateful Firewall is the one that maintains the state of the rules defined. It requires you to define only inbound rules. Based on the inbound rules defined, it automatically allows the outbound traffic to flow.

On the other hand, a Stateless Firewall requires you to explicitly define rules for inbound as well as outbound traffic.

For example, if you allow inbound traffic from Port 80, a Stateful Firewall will allow outbound traffic to Port 80, but a Stateless Firewall will not do so.

28. What is a Power User Access in AWS?

An Administrator User will be similar to the owner of the AWS Resources. He can create, delete, modify or view the resources and also grant permissions to other users for the AWS Resources.

A Power User Access provides Administrator Access without the capability to manage the users and permissions. In other words, a user with Power User Access can create, delete, modify or see the resources, but he cannot grant permissions to other users.

29. What is an Instance Store Volume and an EBS Volume?

An Instance Store Volume is temporary storage that is used to store the temporary data required by an instance to function. The data is available as long as the instance is running. As soon as the instance is turned off, the Instance Store Volume gets removed and the data gets deleted.

On the other hand, an EBS Volume represents a persistent storage disk. The data stored in an EBS Volume will be available even after the instance is turned off.

30. What are Recovery Time Objective and Recovery Point Objective in AWS?

Recovery Time Objective - It is the maximum acceptable delay between the interruption of service and restoration of service. This translates to an acceptable time window when the service can be unavailable.

Recover Point Objective - It is the maximum acceptable amount of time since the last data restore point. It translates to the acceptable amount of data loss which lies between the last recovery point and the interruption of service.

31. Is there a way to upload a file that is greater than 100 Megabytes in Amazon S3?

Yes, it is possible by using the Multipart Upload Utility from AWS. With the Multipart Upload Utility, larger files can be uploaded in multiple parts that are uploaded independently. You can also decrease upload time by uploading these parts in parallel. After the upload is done, the parts are merged into a single object or file to create the original file from which the parts were created.

32. Can you change the Private IP Address of an EC2 instance while it is running or in a stopped state?

No, a Private IP Address of an EC2 instance cannot be changed. When an EC2 instance is launched, a private IP Address is assigned to that instance at the boot time. This private IP Address is attached to the instance for its entire lifetime and can never be changed.

33. What is the use of lifecycle hooks in Autoscaling?

Lifecycle hooks are used for Auto-scaling to put an additional wait time to a scale-in or a scale-out event.

34. What are the policies that you can set for your user's passwords?

Following are the policies that can be set for user's passwords:

- You can set a minimum length of the password.
- You can ask the users to add at least one number or special character to the password.
- Assigning the requirements of particular character types, including uppercase letters, lowercase letters, numbers, and non-alphanumeric characters.
- You can enforce automatic password expiration, prevent the reuse of old passwords, and request for a password reset upon their next AWS sign-in.
- You can have the AWS users contact an account administrator when the user has allowed the password to expire.