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 CloudWatch?

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

3. 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.

4. 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.

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

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

5. 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

6. 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.

7. 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.

8. How many Subnets can you have per VPC?

You can have 200 Subnets per VPC.

9. 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)

10. 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.

11. What are the different types of Instances?

Following are the types of instances:

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

12. 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.

13. How do you monitor Amazon VPC?

You can monitor Amazon VPC using:

- CloudWatch
- VPC Flow Logs

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. What is the use of lifecycle hooks is Autoscaling?

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

29. 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.

30. What are the various components of the Google Cloud Platform?

Answer: Just like the above question, this is also one of the popular Google Cloud interview questions that you may come across. You can answer it as Google Cloud Platform (GCP) is composed of a set of elements that helps people in different ways. The various GCP elements that I know are –

- Google Compute Engine
- Google Cloud Container Engine
- Google Cloud App Engine
- Google Cloud Storage
- Google Cloud Dataflow
- Google BigQuery Service
- Google Cloud Job Discovery
- Google Cloud Endpoints
- Google Cloud Test Lab
- Google Cloud Machine Learning Engine

31. What do you know about Google Compute Engine?

Answer: Google Cloud Engine is the basic component of the Google Cloud Platform. So, it becomes a common question that lies under the Google Cloud Engineer interview questions as well as Google Cloud Architect interview questions.

Google Compute Engine is an IaaS product that offers self-managed and flexible virtual machines that are hosted on the infrastructure of Google. It includes Windows and Linux based virtual machines that may run on local, KVM, and durable storage options.

It also includes REST-based API for the control and configuration purposes. Google Compute Engine integrates with GCP technologies such as Google App Engine, Google Cloud Storage, and Google BigQuery in order to extend its computational ability and thus creates more sophisticated and complex applications.

32. How are the Google Compute Engine and Google App Engine related?

Answer: This typical and straightforward question is a part of the frequently asked Google Cloud Platform interview questions and answers, and can be answered like this. Google Compute Engine and Google App Engine are complementary to each other. Google Compute Engine is the IaaS product whereas Google App Engine is a PaaS product of Google.

Google App Engine is generally used to run web-based applications, mobile backends, and line of business. If you want to keep the underlying infrastructure in more of your control, then Compute Engine is a perfect choice. For instance, you can use Compute Engine for the implementation of customized business logic or in case, you need to run your own storage system.

33. How does the pricing model work in GCP cloud?

Answer: While working on Google Cloud Platform, the user is charged on the basis of compute instance, network use, and storage by Google Compute Engine. Google Cloud charges virtual machines on the basis of per second with the limit of minimum of 1 minute. Then, the cost of storage is charged on the basis of the amount of data that you store.

The cost of the network is calculated as per the amount of data that has been transferred between the virtual machine instances communicating with each other over the network. You should prepare yourself with the questions on Google Cloud Platform pricing models as these are among the most common Google Cloud interview questions.

34. What are the different methods for the authentication of Google Compute Engine API?

Answer: This is one of the popular Google Cloud architect interview questions which can be answered as follows. There are different methods for the authentication of Google Compute Engine API:

- Using OAuth 2.0
- Through client library
- Directly with an access token

35. What are the service accounts? How will you create one?

Answer: This is one of the most common Google Cloud interview questions and the detailed answer to it can be given this way. The special accounts related to a project are known as the Service Accounts. The service accounts are used for the authorization of Google Compute Engine so that it could perform on behalf of the user and thus could access non-sensitive data and information.

These accounts generally simplify the authentication process from Google Cloud Engine to the other services through handling the process of authorization for the user. It is required to mention that service accounts are not used in order to access the information of the user.

There are various types of service accounts offered by Google but mainly, users prefer to use two types of service accounts, these are –

- Google Cloud Platform Console service accounts
- Google Compute Engine service accounts

The user doesn't need to create a service account manually. It is automatically created by the Compute Engine whenever a new instance is created. Google Compute Engine also specifies the scope of the service account for that particular instance when it is created.

36. What is the benefit of Salesforce CRM?

Here are some of the top benefits of **Salesforce CRM**:

- Ensuring faster and better sales opportunity
- Deploying an analytical approach to customer acquisition
- Reducing cost and improving customer satisfaction
- Automation of repetitive and less important tasks
- Improved efficiency and enhanced communication on all fronts

37. What are custom objects in Salesforce?

Simply put, custom objects are database tables in Salesforce. All data related to an enterprise can be stored in Salesforce.com, and for that, there is a need for a junction object, which is a custom object. The custom object has a Master-Detail relationship. We can create a Master-Detail relationship between two objects, and then connect a child object as a related list. Custom objects, which can be listed in Custom Settings, have a set of static data that is reusable.

In the process, the custom object has to be defined first, and then the following steps need to be followed:

- Join records with the custom object
- Custom object data is displayed in custom lists
- Create a custom tab for the custom object
- Build page layouts
- Create a dashboard and a report for analyzing the custom object

38. Define object relationship in Salesforce.

In Salesforce, we can link the standard and custom object records in a related list. It is done by the object relationship overview. Various types of relationships can be created to connect specific business cases with specific customers. It is possible to create a custom relationship on an object and define various relationship types.

39. What is an app in Salesforce?

An app in Salesforce is a container that contains a name, a logo, and a group of tabs that work as a unit to provide specific functionality. Users can switch between apps using the Force.com app’s drop-down menu at the top-right corner of every page.

40. Explain the advantages of Salesforce using the SaaS platform.

Some of the main benefits of Salesforce SaaS are:

- Its pay-as-you-go model perfectly suites all customers

- No hassle of infrastructure management
- All applications are accessed via the Internet
- Easy integration between various applications
- The latest features are provided without any delay
- Guaranteed uptime and security
- Scalable performance for various operations
- Ability to access via mobile devices from anywhere