AWS interview questions:

1. What is daemon process? example. explain its behaviour?

- Daemon is long running background process that answers requests for services.The term originated with unix,but most os use daemons in some form or another.

In unix,the name of daemons conventionally end in "d".some eg..include inetd,httpd,nfsd,sshd,named nd ipd.

2. How to move file from local machine to remote server using command line in linux?

--To copy files from a local system to a remote server or remote server to a local system,we can use the command 'scp'.

SCP stands for "secure copy' and it is a command used for copying files through the terminal.

We can use 'scp'in Linux,windows and mac.

3. What is the diffrence between Monolythic and Microservices?

Monolithic archietecture is built as one large system and is usually one code-base.

A microservices architecture however is where an app is built as a suite of small services,each with their own code-base.

4. What is elastic IP?.

 Elastic IP is mapping static IP(unique IP) address to your ec2 instance. By default when you create EC2 instance, Amazon will assign dynamic IP(change when you reboot the ec2 instance).When you require static IP for your instance in that case you can choose Elastic IP.

 To use an Elastic IP address, you first allocate one to your account, and then associate it with your instance or a network interface. To ensure efficient use of Elastic IP addresses, we impose a small hourly charge if an Elastic IP address is not associated with a running instance, or if it is associated with a stopped instance or an unattached network interface.

5.What is EC2?

Amazon EC2 (Elastic Compute Cloud) is a web service interface that provides resizable compute capacity in the AWS cloud. It is designed for developers to have complete control over web-scaling and computing resources.
EC2 instances can be resized and the number of instances scaled up or down as per our requirement. These instances can be launched in one or more geographical locations or regions, and Availability Zones (AZs). Each region comprises of several AZs at distinct locations, connected by low latency networks in the same region.

6.Explain Elastic Block Storage?

Amazon Elastic Block Store (EBS) is an easy to use, high-performance, block-storage service designed for use with Amazon Elastic Compute Cloud (EC2) for both throughput and transaction intensive workloads at any scale. A broad range of workloads, such as relational and non-relational databases, enterprise applications, containerized applications, big data analytics engines, file systems, and media workflows are widely deployed on Amazon EBS.

7.How does Elastic Load Balancer work?

A load balancer accepts incoming traffic from clients and routes requests to its registered targets (such as EC2 instances) in one or more Availability Zones. It then resumes routing traffic to that target when it detects that the target is healthy again.

8.What is S3?What is it used for?

Amazon Simple Storage Service is storage for the Internet. It is designed to make web-scale computing easier for developers. Amazon S3 has a simple web services interface that you can use to store and retrieve any amount of data, at any time, from anywhere on the web.
It is used for:
industry-leading scalability, data availability, security, and performance.

9.What is Lambda in Amazon EC2?

AWS Lambda is a responsive cloud service that inspects actions within the application and responds by deploying the user-defined codes, known as functions. It automatically manages the compute resources across multiple availability zones and scales them when new actions are triggered.It supports the code written in Java, Python and Node.js, and the service can launch processes in languages supported by Amazon Linux

10.What is the difference between terminating and stopping an EC2 instance?

Terminate Instance- When you terminate an EC2 instance, the instance will be shutdown and the virtual machine that was provisioned for you will be permanently taken away and you will no longer be charged for instance usage. Any data that was stored locally on the instance will be lost. Any attached EBS volumes will be detached and deleted. However, if you attach an EBS Snapshot to an instance at boot time, the default option in the Dashboard is to delete the attached EBS volume upon termination.

Stop Instance- When you stop an EC2 instance, the instance will be shutdown and the virtual machine that was provisioned for you will be permanently taken away and you will no longer be charged for instance usage. The key difference between stopping and terminating an instance is that the attached bootable EBS volume will not be deleted. The data on your EBS volume will remain after stopping while all information on the local (ephemeral) hard drive will be lost as usual. The volume will continue to persist in its availability zone. Standard charges for EBS volumes will apply.

11.What is auto-scaling?

Amazon EC2 Auto Scaling helps you maintain application availability and allows you to automatically add or remove EC2 instances according to conditions you define. Dynamic scaling responds to changing demand and predictive scaling automatically schedules the right number of EC2 instances based on predicted demand.

12.Describe Storage For Amazon Ec2 Occurrence ?

Amazon EC2 provides you with flexible, cost effective, and easy-to-use data storage options for your instances. Each option has a unique combination of performance and durability. These storage options can be used independently or in combination to suit your requirements.
These storage options include the following:

Amazon EBS- Amazon EBS provides durable, block-level storage volumes that you can attach to a running instance. You can use Amazon EBS as a primary storage device for data that requires frequent and granular updates. For example, Amazon EBS is the recommended storage option when you run a database on an instance.

Amazon EC2 instance store- This disk storage is referred to as instance store. Instance store provides temporary block-level storage for instances. The data on an instance store volume persists only during the life of the associated instance; if you stop, hibernate, or terminate an instance, any data on instance store volumes is lost.

Amazon EFS file system- Amazon EFS provides scalable file storage for use with Amazon EC2. You can create an EFS file system and configure your instances to mount the file system.

Amazon S3- Amazon S3 provides access to reliable and inexpensive data storage infrastructure. It is designed to make web-scale computing easier by enabling you to store and retrieve any amount of data, at any time, from within Amazon EC2 or anywhere on the web.

Adding storage- The root storage device contains all the information necessary to boot the instance. You can specify storage volumes in addition to the root device volume when you create an AMI or launch an instance using block device mapping.

13.What is WorkSpaces in AWS EC2?

Amazon WorkSpaces is a managed, secure Desktop-as-a-Service (DaaS) solution. You can use Amazon WorkSpaces to provision either Windows or Linux desktops in just a few minutes and quickly scale to provide thousands of desktops to workers across the globe.A WorkSpace is available as a bundle of operating system, compute resources, storage space, and software applications that allow a user to perform day-to-day tasks just like using a traditional desktop.

14.How To Connect To Your Amazon Ec2 Instance?

Following are the steps to connect to a Linux instance:

Install PuTTY on your local machine.

Get your instance ID.

Get the public DNS name of the instance.

Locate the private key.

Enable inbound SSH traffic from your IP address to your instance.

Converting Your Private Key Using PuTTYgen.

Starting a PuTTY Session.

Now you are connected to your EC2 instance.

15.What Is Amazon Machine Image (ami) ?

An Amazon Machine Image (AMI) provides the information required to launch an instance. You must specify an AMI when you launch an instance. You can launch multiple instances from a single AMI when you need multiple instances with the same configuration. You can use different AMIs to launch instances when you need instances with different configurations.

16.What Is Public Key Credentials?

A public key credential is created and stored by an authenticator at the behest of a WebAuthn Relying Party, subject to user consent. Subsequently, the public key credential can only be accessed by origins belonging to that Relying Party.

17. Compare AWS with OpenStack

OpenStack and AWS help to upload images in which AWS has EC2, and EMR Hadoop based big data. On the other hand OpenStack is designed to scale on hardware without specific requirements.

18. How will you access the data on EBS in AWS ?

The data on EBS in AWS can be accessed by seeing the EBS ID which is present in the EC2 Web Console in the root device .The EBS Volume ID show the view of the data list in the Elastic Block Store.

19. What is the boot time for an instance store backed instance ?

The boot time for a store backed instance in Amazon EBS-backed AMI is less than 1 minute whereas for Amazon instances store backed AMI is less than 5 minutes usually.

20. Differentiate between vertical and horizontal scaling in AWS.

Horizontal Scaling helps to change the number of nodes without changing the size whereas in Vertical Scaling the size, computing power are increased in AWS.

21. What is the total number of buckets that can be created in AWS by default ?

100 buckets can be created in AWS by default .Additional buckets can be added up to a maximum of 1,000 buckets with some limitations.

22. Differentiate between Amazon RDS, Redshift and Dynamo DB.

Amazon Redshift is a completely managed data warehouse service whereas dynamo DB is a NoSQL database offered as a service and Amazon RDS focus on relational database.

23. What Is Amazon Machine Image (ami)?

An Amazon Machine Image is a packaged environment containing a software configuration in which the machine images are like templates that are configured using an application servers and OS.

24. Explain Storage For Amazon Ec2 Instance.?

An instance store provides temporary block-level storage for the instance located on disks that are attached to the host computer.

25. What Are The Security Best Practices For Amazon Ec2?

The Best practices for Amazon EC2 can be done by managing secure access to resources using identity federation, IAM users along with implementing the least permissive rules for a secure operating system and applications on the instance.

26. Can I Vertically Scale An Amazon Instance? How?

Yes. Vertically scaling of an AWS instance can be done up or down when instance size changed, and then restarted because of moving the VM to a different piece of hardware with the available resources.

27. How To Use Amazon Sqs?

The Amazon Sqs can be used by creating a queue followed by sending message and can be used followed by deleting the queue.

28. Name The Several Layers Of Cloud Computing?

The layers of Cloud Computing are Infrastructure as a Service (IaaS) which is the basic layer, Platform as a Service (PaaS), Software as a Service (SaaS), and Business Process Outsourcing (BPO).

29. What is auto-scaling?

Amazon EC2 Auto Scaling helps to identify unhealthy instances by performing health checks along with replacing impaired instances automatically and terminate instances using difficult times.

30. What are the different types of cloud services?

The three main service models of cloud computing are Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS).

31. What is Amazon S3?

Amazon Simple Storage Service (Amazon S3) is storage service that offers effective performance with durability to store data all around the world.

32. What is SimpleDB?

Amazon Simple DB is a NoSQL data store that helps in database administration along with service charges for consumed resources to store data, serve requests with change in data model can be done at any time.

33. What is an AMI?

AMI stands for Area Median Income which is the combined average household income for the full New York .AMI is calculated using the household size and household income.

34.What is the type of architecture, where half of the workload is on the public load while at the same time half of it is on the local storage?

Hybrid cloud architecture is used when half of the workload is on the public load while at the same time half of it is on the local storage.

35. Can I vertically scale an Amazon instance? How do you do it?

Amazon instances can be scaled vertically by increasing the EC2 instances capacity to the growing demands of the application. Scaling can be done by adding more power (CPU, RAM) to an existing machine.

36. How can you send request to Amazon S3?

We can send requests to Amazon S3 using the REST API or the AWS SDK with wrapper libraries and to simplify the programming tasks. Amazon S3 interactions are either authenticated or anonymous.

37. How many buckets can be create in AWS by default?

100 buckets can be created in each AWS account and can be increased based on user requirements.

38. Should encryption be used for S3?

Encryption can be used by sending requests to Amazon S3 using the REST API or the AWS SDK with wrapper libraries to simplify the programming tasks.

39. What are the various AMI design options?

The AMIs include minimal configurations and software before dynamically installing the required packages. This leads to proper bootstrapping all the instances using simple and flexible before functions are intended.

40.What is Geo Restriction in CloudFront?

Geo Restriction is a new feature to restrict access to content on the basis of geographic location of the viewers. The content can be delivered by choosing the countries using Geo Restriction.

41. Explain what is T2 instances?

T2 instance is a General Purpose instance type for the workloads that helps to provide a baseline level of CPU performance without using CPU utilization but bursts above the baseline to higher CPU performance.

42. What is AWS Lambda?

Lambda is a compute service that helps in code running and runs functions without managing servers only when needed from a few requests per day to thousands per second.

43. Compare between AWS and OpenStack.

Amazon Web Services (AWS) is used to increase speed worldwide cloud hosting capability and physical infrastructure. OpenStack serves businesses to set up the proprietary cloud-system based services on standard average hardware.

44. What is AWS?

AWS is the evolving cloud computing platform that includes a mixture of infrastructure as a service (IaaS), platform as a service (PaaS) and packaged software as a service (SaaS) offerings.

45. What is the importance of buffer in Amazon Web Services?

The Buffer in AWS establishes the balance among the components that helps to synchronize and maintain speed while getting requests and processes it in an unsynchronized way. It ensures efficiency in handling the process.

46. How are Spot Instance, On-demand Instance, and Reserved Instance different from one another?

Reserved instances have to commit on our side to running the instance for 1 to 3 years. With spot, more savings can be obtained than even the 3-year reserved instance commitment. An additional benefit is that there is still no commitment from you at all. You can stop using spot instances at any time.

47. What is the maximum number of S3 buckets you can create?

100 buckets can be created in AWS by default. Additional buckets can be added up to a maximum of 1,000 buckets with some limitations

48. What Is The Use Of Multi-threaded Fetching In Amazon S3?

Multi-threading fetching in Amazon S3 is used to fetch the objects concurrently using the multiple threads and map the task so that fetching can be made simpler. It is not appreciated to increase the threading for a particular object as every node on the server has some bandwidth constraints.

49. Tell Me How To Use Simpledb With Amazon?

Amazon Simple Storage Service (Amazon S3) is storage for the Internet. It is designed to make web-scale computing easier for developers. Amazon S3 has a simple web services interface that you can use to store and retrieve any amount of data, at any time, from anywhere on the web.

50. What Is The Function Of A Amazon Controller?

An EC2 instance is a virtual server in Amazon Web services terminology that stands as Elastic Compute Cloud which is a web service that allows AWS subscribers to request and provision a computer server in the cloud.

51. What Is Amazon Ec2 In Cloud Computing?

Amazon Elastic Compute Cloud (EC2) in Cloud computing is a web service that allows launching instances, offering secure and resizable, compute capacity in the cloud.

52. What Is Amazon S3 In Cloud Computing?

Amazon S3 is object storage built to store and retrieves any amount of data from anywhere. It's a simple storage service that offers industry leading durability, availability, performance, security, and virtually unlimited scalability at very low costs.

53. How is buffer used in AWS?

The Buffer in AWS establishes the balance among the components that helps to synchronize and maintain speed while getting requests and processes it in an unsynchronized way. It ensures efficiency in handling the process.

54. Explain the key components of AWS?

The key components of AWS are

DNS web service

E-mail Service

Access Management

Simple Storage Device

Elastic Compute Cloud

Elastic Block Store

55. What is AMI?

An Amazon Machine Image is a packaged environment containing a software configuration in which the machine images are like templates that are configured using an application server and OS.

56. Explain the relationship between an instance and AMI?

Instance is a copy of AMI running as a virtual server in the cloud which can be launched from an AMI in which AMI is a template that contains a software configuration involving operating system, an application server, and applications.

57. What des AMI include?

AWS includes EBS snapshots. Control permission launch, block device mapping which allows multiple instances to be created, to copy and deregister whenever needed.

58. How can you send request to Amazon S3?

We can send requests to Amazon S3 using the REST API or the AWS SDK with wrapper libraries and to simplify the programming tasks. Amazon S3 interactions are either authenticated or anonymous.

59. Explain TC2 instances?

T2 instance is a general purpose instance type that provides a baseline level of CPU performance with the ability to burst above the baseline when needed which is ideal for applications like micro-services, low-latency interactive applications, small and medium databases, virtual desktops, development, build and stage environments, code repositories, and product prototypes.

60. State the difference between Amazon S3 and EC2?

Amazon EC2 (Elastic Compute Cloud) is a virtual machine hosted in the cloud. An EC2 instance is like a remote computer running Windows or Linux and on which you can install whatever software you want, including a Web server running PHP code and a database server Amazon EBS (Elastic Block Store) is a virtual disk for your virtual machine, like your C: and D: drive. It is just a storage service, typically used to store large binary files.

61. Name several layers of cloud computing?

The 4 layers of Cloud

Infrastructure as a Service (IaaS) which is the basic layer of cloud

Platform as a Service (PaaS) is the second layer of the cloud in the platform

Software as a Service (SaaS)

Business Process Outsourcing (BPO)

62. Mention the types of storages offered by AWS?

The list of the main storage services available on the AWS Cloud, as follows:

Amazon Simple Storage Service (Amazon S3)

Amazon Glacier.

Amazon Elastic File System (Amazon EFS)

Amazon Elastic Block Store (Amazon EBS)

Amazon EC2 Instance Storage.

AWS Storage Gateway.

AWS Snowball.

Amazon CloudFront.

63. What is Amazon SQS?

Amazon SQS is a message queue service used by distributed applications to exchange messages through a polling model, and can be used to decouple sending and receiving components.

Developers use SQS to build distributed applications with decoupled components without having to deal with the overhead of creating and maintaining message queues.

64. What is RedShift?

Amazon Redshift is a fully-managed petabyte-scale cloud based data warehouse product designed for large scale data set storage and analysis which enables you to use your data to acquire new insights for your business and customers It is also used to perform large scale database migrations.

Redshift managed storage uses large, high-performance SSDs in each RA3 node for fast local storage and Amazon S3 for longer-term durable storage.

65. What is Amazon EMR?

Amazon EMR stands for Amazon Elastic MapReduce – an Amazon Web Service tool is a platform that allows developers to write code for programs used for processing and analysing massive amounts of unstructured big data across computing clusters.

Amazon EMR is a managed cluster platform that simplifies running big data frameworks, such as Apache Hadoop and Apache Spark, on AWS to process and analyse vast amounts of data.

66. What is Hybrid cloud architecture?

A hybrid cloud with Amazon Web Services (AWS) delivers IT resources like compute, storage, databases, and more, through an integration of AWS Cloud services with on-premises and edge infrastructure. With AWS, you can use the same infrastructure, services, APIs, and tools wherever you need it – from the cloud, to on premises, and to the edge.

67. List the features of Amazon cloud search?

Amazon CloudSearch supports powerful search features such as:

Free text, Boolean, and Faceted search.

Autocomplete suggestions.

Customizable relevance ranking and query-time rank expressions.

Field weighting, Geospatial search.

Highlighting, Support for 34 languages.

68. What are the Iaas, Paas and SaaS services in AWS

IaaS: cloud-based services, pay-as-you-go for services such as storage, networking, and virtualization. PaaS: hardware and software tools available over the internet. SaaS: software that's available via a third-party over the internet. On-premise: software that's installed in the same building as your business.

69. What are the key components of AWS?

The key components of AWS are

Amazon Cluster.

Storage, Databases.

Management and security.

Networks, Analytics.

Application services.

Implementation and management.

**70) 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](https://career.guru99.com/top-20-questions-on-api-testing/) 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 key Also, one can set a notification alarm in case of trouble.

**71) Explain what S3 is?**

S3 stands for Simple Storage Service. You can use 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.”

**72) What is AMI?**

AMI stands for Amazon Machine Image.  It’s a template that provides the information (an [operating system](https://career.guru99.com/top-50-operating-system-interview-questions/), 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.

**73) 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.

**74) 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

**75) 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.

**76) 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 system where any amount of data can be stored |
| It is like a huge computer machine which can run either Linux or Windows and can handle application like PHP, Python, Apache or any databases | It has a REST interface and uses secure HMAC-SHA1 authentication keys |

**77) 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.

**78) Explain can you vertically scale an Amazon instance? How?**

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

Spin up a new larger instance than the one you are currently running

Pause that instance and detach the root webs 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

**79) 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.

**80) 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.

**81) 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

**82) 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 component.  Usually, components receive and process the requests in an unbalanced way. With the help of buffer, the components will be balanced and will work at the same speed to provide faster services.

**83) 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

**84) 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.

**85)  What are the different types of instances?**

Following are the types of instances:

General purpose

Computer Optimized

Memory Optimized

Storage Optimized

Accelerated Computing

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

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

**87) How many Elastic IPs is allows you to create by AWS?**

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

**88) Explain default storage class in S3**

The default storage class is a Standard frequently accessed.

**89) 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.

**90) What are the edge locations?**

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

**91) 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.

**92) 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.

**93) What is a redshift?**

Redshift is a big [data warehouse](https://career.guru99.com/top-50-datawarehousing-questions-answers/) product. It is fast and powerful, fully managed data warehouse service in the cloud.

**94) What are the advantages of auto-scaling?**

Following are the advantages of autoscaling

Offers fault tolerance

Better availability

Better cost management

**95) What is meant by subnet?**

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

**96) 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.

**97) What is SQS?**

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

**98) How many subnets can you have per VPC?**

You can have 200 subnets per VPC.

**99) 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.

**100) What is the role of AWS CloudTrail?**

CloudTrail is a specially designed tool for logging and tracking API calls. It helps to [audit](https://career.guru99.com/top-10-internal-audit-interview-questions/) all S3 bucket accesses.

**101) When EC2 officially launched?**

EC2 officially launched in the year 2006.

**102) What is SimpleDB?**

SimpleDB is a data repository of structure record which encourages data doubts and indexing both S3 and EC2are called SimpleDB.

**103) Explain Amazon ElasticCache**

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

**104) What is AWS Lambda?**

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

**105) Name the types of AMI provided by AWS**

The types of AMI provided by AWS are:

Instance store backed

EBS backed

**106) Name the AWS service exists only to redundantly cache data and images?**

AWS Edge locations are service which redundantly cache data and images.

**107) 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.

**108) What is Amazon EMR?**

EMR is a survived cluster stage which helps you to interpret the working of data structures before the intimation.  Apache [Hadoop](https://career.guru99.com/top-25-hadoop-admin-interview-questions-and-answers/) and Apache Spark on the Amazon Web Services helps you to investigate a large amount of data. You can prepare data for the analytics goals and marketing intellect workloads using Apache [Hive](https://career.guru99.com/top-30-hive-interview-questions/) and using other relevant open source designs.

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

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

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

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

**1) How to connect EBS volume to multiple instances?**

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

**2) 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).

**3) State the difference between An Instance  and AMI**

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

**4) What are the different types of Load Balancer in AWS services?**

Two types of Load balancer are:

Application Load Balancer

Classic Load Balancer

**5) 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.

**6) 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

**7) Can vertically scaling is allows in  Amazon Instance?**

Yes, you can vertically estimate one Amazon instance.

**8) 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.

**9) What are various layers of Cloud Architecture explained in AWS training?**

Different layers of cloud architecture are:

Cloud controller

Cluster controller

Storage Controller

Node Controller

**10) 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

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

MS-[SQL](https://www.guru99.com/sql-server-questions.html) DB

MariaDB

[MYSQL](https://career.guru99.com/top-50-mysql-interview-questions-answers/) DB

OracleDB

PostgreDB

12.What is the main purpose to have a IAM user?

The main purpose of IAM Users is that they can sign in to the AWS Management Console and can make requests to the AWS services.

 13.How many IAM roles can I create?

You are limited to 1,000 IAM roles under your AWS account. If you need more roles, submit the IAM limit increase request form with your use case, and we will consider your request.

14.What is S3?

Simple Storage Service, Its comes under storage service in AWS

You can use to store and retrieve any amount of data, at any time, from anywhere on the web.

S3 acts like a webserver also.Pay for wat we use.Secured.

S3 is total unlimited storage

S3 Store Darmet file (unexecutable file, S3 help in EC2).

Core concepts of Amazon S3, such as buckets, access points, and objects, and how to work with these resources using the Amazon S3 application programming interface (API).

15.Two Concept in S3?

Bucket and Object

Bucket:

Bucket Name should be unique.

Basic storage unit , are container for data stored

Name of the bucket should be globally unique (Application , Environment , Current date )

No size restriction for bucket

upload and download are easier

100 Buckets per account.

30/40 bucket in real time scenario

If need more bucket contact amazon support to upgrade.

Object:

Each and everything stores inside the bucket is called object (text, jpeg, etc..)

Object Size should be max 5TB.

Any server present in any region we can access this bucket which can i create S3 Globally.

 Bucket Create -> create bucket - bucket name - region - block access remove (ACL) bucket is public - create Bucket.

Inside the bucket called objects -> upload- select files (create file) - people called metadata (data about data) - add upload option.

16.7 type’s storage class: Benefits (cost variation)

Standard - frequently access data - 3 above zone

Standard -IA - long lived - infrequent access data - 3 above zone

One zone-IA - long lived - infrequent access data, non-critical data - 1

Reduced redundancy - frequently accessed, non-critical data

Intelligent Tiering - long lived with changing or unknown access patterns- Amazon to decide, monitor my object.

Glacier - long time data archiving with retrieval times from min to hrs.

Glacier Deep Archive - within 12 hrs.

17.OBJECT LEVEL PROPERTIES:

Details

Bucket Overview – Region, ARN, Creation Date.

Bucket Versioning

Tags

Default Encryption

Intelligent Tiering archiving Configuration

Event Notification

Transfer Acceleration

Object Lock

Requestor Pay

Static web hosting

-Permission

Permission over view

Which can access the bucket (Public or private)

Bucket Policy

Object Ownership: Object Owner ship, Object Writer

Access Control List (ACL) – Basic read & write access to other AWS Account

18.Metrics – Total Bucket Size, Total number of object.

Management – Life cycle rules, replications rules.

Access Points – Simply Accessing data access, Named as network Endpoints, Attached to the bucket that you can use to perform S3 Object Operations.

19.Bucket Versioning:

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures.

Versioning: Works like a devops tool, GIT, SVN, Version controlling tool.

Multiple version of file in same object.

Recover and delete object: Need to enable Versioning first - enable list version - delete marker is delete means object file is recover in object.

Lifecycle Rules - automatically move one cycle to another cycle period storage class.

Replication Rules – Manually Backup for critical data – Destination path – Versioning – Existing bucket or new bucket.

List Version: If it’s enable we can see the Old file & updated saved file – Tree Hierarchy.

Tagging: Data for your data it’s also called as META Data.

Encryption: Security Use, Client Trusted

2 types of Encryption Algorithm

Amazon S3 key (SSE-S3)

AWS key management service key (SSE- KMS).

Intelligent Tiering Archiving config: Monitoring, amazon will said with storage class is ok.

Server access Logging: Buckets level information is logs, who are all access my buckets they stored my logs in server access.

Cloud trail: Object level information Logs, Separate Service in amazon, where my log in console called Cloud trail.

(Trail - create trail - xxxx- which bucket my object should be enabled - log files is in JSON format - object related information -- save)

Notification: Event Alert Mechanism – (SNS, SQS Notification)

Transfer Acceleration: If enables Storing & Retrieving is Faster, COST is double.

Object Lock: If we enable the object Lock it’s permanently lock, if need to disable contact amazon support.

Requester Pays: If enable (requester pay for request and data transfer cost, Unwanted action to this bucket is disabled.

Static Web Hosting: Its looks like a webserver

20. What is the diffrence between Vertical and Horizontal scaling? - Automatic and Manual

21. What is the default instance name? - on-demand in spot,reservered, deticated, free-tier

22. What is the default protocol for Linux and window?

 Linux - SSH - 22

 Windows - RDP - 3389

23. is first time generating public ip static?

 before restart - 10.20.30.40

 after restart - 10.24.56.78

 dynamic:

 static:

 before restart - 10.20.30.40

 after restart - 10.20.30.40

24. what is the max size of one volume? how many can have it for single instance? is there any root to increase

 number of EBS volumes?

 16TB

 100

 can increase through support

 25. What is mean by IOPS in Volumes?

 IOPS - Input output per seconds

 IOPS - 40000

26. What is initializing is for? = OS + HWs (Installation) Plus (nws,ips, sto, nam, sec, key) {Configuration}

27. 2/2 checks passed = 1/2 Installation + 1/2 Configuration

28.Default package for Linux? - "yum"

29.Pem and ppk?

PEM (Privacy Enhanced Mail) is a base64 container format for encoding keys and certificates. . ... PPK(Putty Private Key) is a windows ssh client, it does not support . pem format. Hence you have to convert it to .

SQS, SNS - Application Engineering

30.What is SNS?

 Amazon Simple Notification Service (Amazon SNS) is a fully managed messaging service for both application-to-application (A2A) and application-to-person (A2P) communication.

31.What is SQS?

 Amazon Simple Queue Service (SQS) is a fully managed message queuing service, where you can send, store, and receive messages between software components at any volume, without losing messages or requiring other services to be available.

32.what is message? Meaningful Information

33.Parts of message? Subject, Body, metadata, Timestamp

34.What is Queue?

 It is a buffer/temporary location where the message stays until receiver picks up.

Email Examples

Types of Queues:

Local: Inbox

Remote: Sent

Dead letter queue: outbox - undelivered message

Alias: customised folder / duplicate.

35.What is communication?

 Transferring the message/information from one end (sender) to another end (receiver)

36.Two ways of communication:

synchronized mode: Both sender and receiver should be active (call)

asynchronized mode: sender always active but it won't bother about receiver activeness (whatsapp group message) - in real-time we will use this mode of communication.

 Within this we are having 2 different types

 1 to 1 communication: SQS - Simple Queueing Service

 1 to many : SNS - Simple Notification service

37.2 types of Queue:

Standard : Non-Sequential manner of communication

FIFO : Sequential manner of communication (First in - First out)

38.What is Cloudwatch?

 It is a Monitoring tool, highly used in support/delivery team. This helps to monitors the Infra's and helps to triggers alert, this helps to troubleshoot and fix the issue. It is a chargable service.

Every 5 mins monitoring - Basic

Every 1 mins montoring - Advanced/Deatiled

Steps:

1. Create Simple SQS - provide the needed details - try sending test message and confirm the same

2. Create simple SNS topic

3. Add Subscriber - Email (verify it)

4. Create an IAM role as we are going to bring communication between 2 different services.

5. Create SQS - Attach the Role (ARN) under access policy.

6. Add as a 2nd Subscriber - SQS - attach the SNS subscriber for 2 way communication

7. Try sending message - confirm whether both the subscribers received it or not.

8. Create a free-tier Linux machine and open the server.

9. Open cloudwatch - Metrics - put the Instance ID - select the metrics - check the CPU utilization - click graphed metrics - create alarm (for sending notification) - under conditions select greater/equal to - keep the threshold limit as 0%, as we have an empty server - under notification select existing SNS topic - Provide an alarm name (description if needed).

10. Once it reached the time - from Insufficient data, it moves automatically into In alarm - check SQS and Email - for Notification.