## AWS Interview Questions

**1. Compare AWS and OpenStack**

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| **Criteria** | **AWS** | **OpenStack** |
| License | Amazon proprietary | Open Source |
| Operating System | Whatever cloud administrator provides | Whatever AMIs provided by AWS |
| Performing repeatable operations | Through templates | Through text files |

**2. What is AWS?**

AWS (Amazon Web Services) is a platform to provide secure cloud services, database storage, offerings to compute power, content delivery, and other services to help business level and develop.

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

An Elastic Load Balancer ensures that the incoming traffic is distributed optimally across various AWS instances.  A buffer will synchronize different components and makes the arrangement additional elastic to a burst of load or traffic. The components are prone to work in an unstable way of receiving and processing the requests. The buffer creates the equilibrium linking various apparatus and crafts them effort at the identical rate to supply more rapid services.

**4. What is the way to secure data for carrying in the cloud?**

One thing must be ensured that no one should seize the information in the cloud while data is moving from point one to another and also there should not be any leakage with the security key from several storerooms in the cloud. Segregation of information from additional companies’ information and then encrypting it by means of approved methods is one of the options.

**5. Name the several layers of Cloud Computing.**

Here is the list of layers of the cloud computing

* **PaaS** – Platform as a Service
* **IaaS** – Infrastructure as a Service
* **SaaS** – Software as a Service

**6. Distinguish between scalability and flexibility**

The aptitude of any scheme to enhance the tasks on hand on its present hardware resources to grip inconsistency in command is known as scalability. The capability of a scheme to augment the tasks on hand on its present and supplementary hardware property is recognized as flexibility, hence enabling the industry to convene command devoid of putting in the infrastructure at all.  AWS has several configuration management solutions for AWS scalability, flexibility, availability and management.

**7. Name the various layers of the cloud architecture**

There are 5 layers and are listed below

* CC- Cluster Controller : EC2
* SC- Storage Controller : S3, EBS
* CLC- Cloud Controller : VPC
* Walrus
* NC- Node Controller : EC2, RDS etc.

**8. Define auto-scaling.**

Auto- scaling is one of the remarkable features of AWS where it permits you to arrange and robotically stipulation and spin up fresh examples without the requirement for your involvement. This can be achieved by setting brinks and metrics to watch. If those entrances are overcome, a fresh example of your selection will be configured, spun up and copied into the weight planner collection.

**9. Which automation gears can help with spinup services?**

The API tools can be used for spinup services and also for the written scripts. Those scripts could be coded in Perl, bash or other languages (python) of your preference. There is one more option that is patterned administration and stipulating tools such as a dummy or improved descendant. A tool called Scalr can also be used and finally we can go with a controlled explanation like a Rightscale.

**10. Is it possible to scale an Amazon instance vertically? How?**

Yes, it is possible. Just stop the server and then change its instance type and again start server.

**11. How the processes start, stop and terminate works? How?**

**Starting and stopping of an instance**: If an instance gets stopped or ended, the instance functions a usual power cut and then change over to a clogged position. You can establish the case afterward since all the EBS volumes of Amazon remain attached. If an instance is in stopping state, then you will not get charged for additional instance.

**Finishing the instance**: If an instance gets terminated it tends to perform a typical blackout, so the EBS volumes which are attached will get removed except the volume’s deleteOnTermination characteristic is set to zero. In such cases, the instance will get removed and cannot set it up afterward.

**12. What is the relation between an instance and AMI?**

AMI can be elaborated as Amazon Machine Image, basically, a template consisting software configuration part. For example an OS, applications, application server. If you start an instance, a duplicate of the AMI in a row as an unspoken attendant in the cloud.

**13. What is DynamoDB?**

When You require a fast and flexible NoSQL database with a flexible datamodel and reliable performance then DynamoDB is the service from AWS

**14. Security elements used at network and server level in AWS?**

A network ACL is a network security for your Amazon VPC that acts as a firewall for controlling traffic in and out of one or more subnets.

Security Groups is security placed at server level which is first level of defence

**1) Explain what is AWS?**

AWS stands for Amazon Web Service; it is a collection of remote computing services also known as cloud computing platform.  This new realm of cloud computing is also known as IaaS or Infrastructure as a Service.

**2) Mention what are the key components of AWS?**

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 (IAM) :** 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 very useful in case of unpredictable workloads
* **Elastic Block Store (EBS):** It provides persistent storage volumes that attach to EC2 to allow you to persist data past the lifespan of a single EC2
* **CloudWatch:**To monitor AWS resources, It allows administrators to view and collect key Also, one can set a notification alarm in case of trouble.

**3) Explain what is S3?**

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”.

**4) Explain what is AMI (Amazon machine image – its configuration with OS template)?**

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.

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

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 compute 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.

[](https://career.guru99.com/wp-content/uploads/2015/11/aws-logo.png)

**6) What does an AMI include?**

An AMI includes the following things

* A template for the root volume for the instance ( CPU, RAM, Default EBS size)
* 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 request to Amazon S3?**

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

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

The difference between EC2 and Amazon S3 is that

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| **EC2** | **S3** |
| * It is a cloud web service used for hosting your application (virtual machine) | * 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 |

**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 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

**11) Explain what is T2 instances?**

T2 (tier 2) instances are designed to provide moderate baseline performance and the capability to burst to higher performance as required by 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 are the security best practices for Amazon EC2?**

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:

Custom: 192.168.1.0/26 = 2^6 = 64 , 192.168.1.0 - 192.168.1.63

* Review the rules in your security groups regularly
* Only open up permissions that your require
* Disable password-based login, for instance, 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 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.

**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 : server is not responding
* User key not recognized by the server: public key has been changed
* Host key not found, permission denied: user permission/ port permission
* Unprotected private key file: try to use public key instead of private key
* Server refused our key or No supported authentication method available: IP allowed
* Error using MindTerm on Safari Browser: http or https is not allowed
* Error using Mac OS X RDP Client