**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.

**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:** 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.

### 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”.

### 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.

### 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.

**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

### 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.

**What is the difference between Amazon S3 and EC2?**

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 |

### How many buckets can you create in AWS by default?

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

**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

### What is T2 instances?

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

### 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.

### 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.

**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
* 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

**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
* 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