### **Explain what is AWS(Amazon Web Service)?**

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.

### **Explain what are the key components of AWS( Amazon Web Service )?**

The key components of AWS are :- (AWS 2016 INTERVIEW QUESTIONS)

* **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.

### **Explain what is S3 in AWS?**

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.  Also we can host a website in Amazon S3. most of the companies storing the documents, images and other files to S3. For S3, the payment model is “pay as you go”.

### **Explain what is IAM service?**

AWS Identity and Access Management (IAM) is a web service that helps you securely control access to AWS resources for your users. You use IAM to control who can use your AWS resources (authentication) and what resources they can use and in what ways (authorization

### **Explain what is AMI ( 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.

### **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.

### **What Is Amazon EC2?**

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

### **Explain what Is Amazon EC2 instance?**

An EC2 instance is a virtual server in Amazon's Elastic Compute Cloud (EC2) for running applications on the Amazon Web Services (AWS) infrastructure.

### **Explain some features of Amazon EC2?**

Amazon EC2 provides the following features:

* Virtual computing environments, known as instances
* Preconfigured templates for your instances, known as Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software)
* Various configurations of CPU, memory, storage, and networking capacity for your instances, known as instance types
* Secure login information for your instances using key pairs (AWS stores the public key, and you store the private key in a secure place)
* Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as instance store volumes
* Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS), known as Amazon EBS volumes
* Multiple physical locations for your resources, such as instances and Amazon EBS volumes, known as regions and Availability Zones
* A firewall that enables you to specify the protocols, ports, and source IP ranges that can reach your instances using security groups
* Static IP addresses for dynamic cloud computing, known as Elastic IP addresses

### **Mention what are the differences between Amazon S3 and EC2 ?**

**S3:** Amazon S3 is just a storage service, typically used to store large binary files. Amazon also has other storage and database services, like RDS for relational databases and DynamoDB for NoSQL.  
  
**EC2:**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.

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

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

### **Explain what is T2 instances?**

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

### **Explain what is C4 instances?**

C4 instances are ideal for compute-bound applications that benefit from high performance processors

### **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

### **Explain what is DynamoDB in AWS?**

Amazon DynamoDB is a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability. You can use Amazon DynamoDB to create a database table that can store and retrieve any amount of data, and serve any level of request traffic. Amazon DynamoDB automatically spreads the data and traffic for the table over a sufficient number of servers to handle the request capacity specified by the customer and the amount of data stored, while maintaining consistent and fast performance.

### **Explain what is ElastiCache?**

ElastiCache is a web service that makes it easy to set up, manage, and scale distributed in-memory cache environments in the cloud.

### **What is the AWS Key Management Service?**

The AWS Key Management Service (AWS KMS) is a managed service that makes it easy for you to create and control the encryption keys used to encrypt your data.

### **What is AWS WAF? What are the potential benefits of using WAF?**

AWS WAF is a web application firewall that lets you monitor the HTTP and HTTPS requests that are forwarded to Amazon CloudFront and lets you control access to your content. Based on conditions that you specify, such as the IP addresses that requests originate from or the values of query strings, CloudFront responds to requests either with the requested content or with an HTTP 403 status code (Forbidden). You can also configure CloudFront to return a custom error page when a request is blocked.  
Benefits of using WAF:

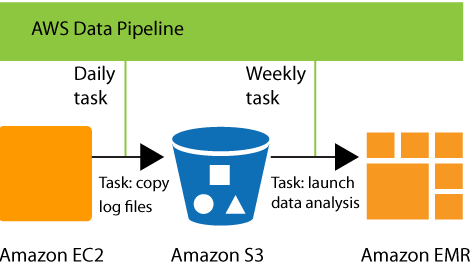
* Additional protection against web attacks using conditions that you specify. You can define conditions by using characteristics of web requests such as the IP address that the requests originate from, the values in headers, strings that appear in the requests, and the presence of malicious SQL code in the request, which is known as SQL injection.
* Rules that you can reuse for multiple web applications
* Real-time metrics and sampled web requests
* Automated administration using the AWS WAF API

### **What is Amazon EMR?**

Amazon Elastic MapReduce (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 analyze vast amounts of data. By using these frameworks and related open-source projects, such as Apache Hive and Apache Pig, you can process data for analytics purposes and business intelligence workloads. Additionally, you can use Amazon EMR to transform and move large amounts of data into and out of other AWS data stores and databases, such as Amazon Simple Storage Service (Amazon S3) and Amazon DynamoDB

### **What is AWS Data Pipeline? and what are the components of AWS Data Pipeline?**

AWS Data Pipeline is a web service that you can use to automate the movement and transformation of data. With AWS Data Pipeline, you can define data-driven workflows, so that tasks can be dependent on the successful completion of previous tasks.

[](https://1.bp.blogspot.com/-cZ868ThaXLE/VsK8iBnAx_I/AAAAAAAAK1A/-SG4cXUAmwM/s1600/Capture1.PNG)

The following components of AWS Data Pipeline work together to manage your data:

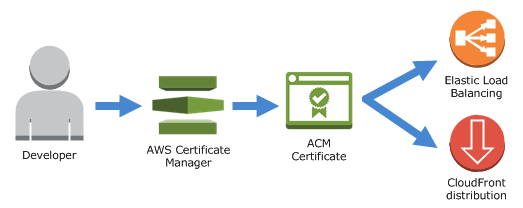
* A pipeline definition specifies the business logic of your data management. For more information, see Pipeline Definition File Syntax.
* A pipeline schedules and runs tasks. You upload your pipeline definition to the pipeline, and then activate the pipeline. You can edit the pipeline definition for a running pipeline and activate the pipeline again for it to take effect. You can deactivate the pipeline, modify a data source, and then activate the pipeline again. When you are finished with your pipeline, you can delete it.
* Task Runner polls for tasks and then performs those tasks. For example, Task Runner could copy log files to Amazon S3 and launch Amazon EMR clusters. Task Runner is installed and runs automatically on resources created by your pipeline definitions. You can write a custom task runner application, or you can use the Task Runner application that is provided by AWS Data Pipeline. For more information, see Task Runners.

### **Explain what is Redshift?**

Redshift is a fast, fully managed, petabyte-scale data warehouse service that makes it simple and cost-effective to efficiently analyze all your data using your existing business intelligence tools.

### **What is AWS Certificate Manager?**

AWS Certificate Manager (ACM) handles the complexity of provisioning, deploying, and managing certificates provided by ACM (ACM Certificates) for your AWS-based websites and applications. You use ACM to request and manage the certificate and then use other AWS services to provision the ACM Certificate for your website or application. As shown by the following illustration, ACM Certificates are currently available for use with only Elastic Load Balancing and Amazon CloudFront. You cannot use ACM Certificates outside of AWS.

[](https://1.bp.blogspot.com/-KdI24OLpK-4/VsK8iDoX5PI/AAAAAAAAK1E/qzvEvZWc4cI/s1600/Capture.PNG)