**SIMPLE STORAGE SERVICE**

* It is highly scalable, securable, durable to store the data.
* It’s a object level storage type.
* Easy to store and retrieve the data.
* Object Based storage & data is spread multiple regions.
* Customers of all sizes and industries can use Amazon S3 to store and protect any amount of data for a range of use cases, such as data lakes, websites, mobile applications, backup and restore, archive, enterprise applications, IoT devices, and big data analytics.

**BUCKETS:**

* If you create a root-level folder then it is called as Buckets.
* Used to store Objects.
* Bucket ownership is not transferable to another account.
* After you create a bucket, you can't change its name or Region.
* We cannot delete the bucket directly we need to make empty it first.
* After a bucket is deleted, the name becomes available for reuse
* The files which are stored in S3 can be from 0 Bytes to 5 TB.
* By default, you can create up to 100 buckets in each of your AWS accounts.
* If you need additional buckets, you can increase your account bucket limit to a maximum of 1,000 buckets by submitting a service limit increase.

**OBJECTS:**

* Files/folders/images/videos that you stored in a bucket is called as Objects.
* A bucket is a container for objects.
* An object is a file and any metadata that describes that file.
* With Amazon S3, you pay only for what you use

Depending on the size of the data you are uploading, Amazon S3 offers the following options:

* **Upload an object in a single operation using the AWS SDKs, REST API, or AWS CLI—**With a single PUT operation, you can upload a single object up to 5 GB in size.
* **Upload a single object using the Amazon S3 Console—**With the Amazon S3 Console, you can upload a single object up to 160 GB in size.
* **Upload an object in parts using the AWS SDKs, REST API, or AWS CLI—**Using the multipart upload API, you can upload a single large object, up to 5 TB in size.

**MAJOR COMPONENTS OF OBJECT:**

* KEY : NAME OF OBJECT
* VALUE : DATA IN BYTES
* VERSION ID : SHOWS VERSIONING ID FOR UNIQUNESS OF OBJECT
* META DATA : DATA ABOUT DATA WE ARE STORING

**RULES TO CRAETE A BUCKET**

* UNIQUE NAME
* NAME SHOULD BE 3 TO 63 CHARACTERS
* ONLY LOWER CASE IS VALID
* SHOULD NOT BE IN IP FORMAT
* MUST BEGIN AND END WITH A NUMBER OR LETTER.

**Note**

Before March 1, 2018, buckets created in the US East (N. Virginia) Region could have names that were up to 255 characters long and included uppercase letters and underscores. Beginning March 1, 2018, new buckets in US East (N. Virginia) must conform to the same rules applied in all other Regions.

**S3 VERSIONING:**

* It will enable you the multiple versions of the same file.
* It will helps accidental termination.
* It can retrieve the Previous versions of the Objects.
* By default it will not be enabled we need to enable it.
* We cant disable the Versioning only we can able to suspend it.

S3 REPLICATION ( CRR & SRR )

* Must enable versioning in both source and destinantion buckets.
* Cross Region Replication (CRR)
* Same Region Replication (SRR)
* Buckets can be in different accounts
* After activating new objects are replicated

CREATE A BUCKET -- > N.VIRGINIA -- > ENABLE BUKCET VERSIONING -- > CREATE

CREATE A BUCKET -- > AP-SOUTH-1 -- > ENABLE BUKCET VERSIONING -- > CREATE

UPLOAD A BUCKET IN ONE REGION IT WILL NOT REFLECT

MANAGEMENT -- > CREATE REPLICATION RULE -- > NAME -- > SOURCE BUCKET : APPLY ALL OBJECTS

BROWSE S3 -- > SAVE -- > SUBMIT