S3 [SIMPLE STORAGE SERVICE]

* It is an object storage service which stores files as object with its metadata and given ID.
* S3 comes in two different classes. **STANDARD,** **Amazon S3 Intelligent-Tiering (S3 Intelligent-Tiering**), **Amazon S3 Standard-Infrequent Access (S3 Standard-IA),** **Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA)** and **Amazon S3 Glacier (S3 Glacier).**
* S3 standard is suitable for the data which is frequently accessed that's need to be delivered with low latency and fast throughput like dynamic website, content distribution, applications etc.
* S3 infrequent access offers a low-storage price for backups and long-term data storage.
* To store the data, first you have to create a bucket. All the objects are stored in buckets.
* To create a bucket,

**Go to S3.**

**Click create bucket.**

**Type a name.**

**Select a region and Create.**

* To delete a bucket,

**Select the bucket you want to delete. Click Delete.**

* To empty bucket,

**Select the bucket.**

**Click empty bucket.**

* To Upload objects to bucket,

**Go to bucket.**

**Click upload.**

**Select files to upload.**

**Click save.**

* To download objects from bucket,

**Go to bucket.**

**Click on object.**

**Click download.**

* To delete an object,

**Go to bucket.**

**Click on object.**

**Click delete.**

VERSIONING

* Versioning enables you to keep multiple versions of an object in one bucket. It protects from objects overrides and deletions.
* After enabling versioning, every object gets an Id to identify object versions.
* Once you disable the versioning, all the version enabled objects will be deleted from the bucket.
* To enable versioning,

**Go to S3.**

**Click on bucket.**

**Select properties.**

**Click versioning.**

**Choose Enable.**

SERVER ACCESS LOGGING

* It gives detailed records for the requests made to a bucket.
* By default, access logs are disabled.
* If you enable this logs, it stores the details of requests in the bucket. this details contains requests type, time and date when requests are made etc.
* Go to that destination bucket to see all the logs made by users to an bucket.
* To enable server access logs,

**Go to S3.**

**Click on bucket.**

**Select properties.**

**Click access logs.**

**Choose enable.**

**Select your target bucket (to store logs).**

**Type prefix and Save.**

STATIC WEBSITE USING S3

* You can host a static website in S3 with static content like web pages. you can configure a static website and then upload data to S3.
* To host a static website,

**Go to S3, click bucket.**

**Click properties.**

**Choose static website.**

**Click Enable.**

**Index document** = index.html**.**

**Error document** = error.html(if you have).

**Click Save.**

* Create a policy to give public access to your website.

**{**

**"Version":"2012-10-17",**

**"Statement":[{**

**"Sid":"PublicReadGetObject",**

**"Effect":"Allow",**

**"Principal": "\*",**

**"Action":["s3:GetObject"],**

**"Resource":["arn:aws:s3:::sample666.com/\*"**

**]**

**}**

**]**

**}**

* Note the Endpoint to go to your website.
* Create a route 53 hosted zone and record sets to use your custom domain name.

LIFE CYCLE POLICY

* You can use lifecycle policy to define actions on object like moving to another storage class, delete after specific period of time etc.
* You can use lifecycle policy on all the objects in the bucket (or) add a prefix for some objects with same prefix.
* If you have enabled versioning, you can select current (or) non-current version in policy.
* To add lifecycle policy,

**Go to S3.**

**Select bucket.**

**Click management.**

**Click, add lifecycle.**

**Type a name.**

**Enter prefix(to apply for some objects) or leave blank for entire bucket.**

**If you enabled versioning, select current (or) non-current version (or) both. Choose add transaction, select standard IA (or) glacier after = 1-2147483647 . Choose expiration, select version, type number of days.**

**On review, click save.**

S3 CMDS

* To create a bucket = **aws s3 mb s3://bucket**.
* To delete an empty bucket = **aws s3 rb s3://bucket**.
* To remove an non-empty bucket = **aws s3 rb s3://bucket --force**.
* To list all buckets = **aws s3 ls**.
* To list objects in a bucket = **aws s3 ls s3://bucket**.
* To copy a file from local to s3 = **aws s3 cp localfilepath s3://bucket/folder**.
* To copy a file from s3 to local = **aws s3 cp s3://bucket/file local path**.
* To copy from one bucket to another = **aws s3 cp s3://source-bucket s3://dest-bucket**.
* To copy all files from s3 to local recursively = **aws s3 cp s3://bucket –recursive**.
* To move objects from local to s3 = **aws s3 mv localpath s3://bucket**.
* To move from s3 to local = **aws s3 mv s3://bucket localpath**.
* To move from one bkt to other = **aws s3 mv s3://sourcebkt s3://destbucket**.
* To delete an object = **aws s3 rm s3://bucket/file**.
* To delete all objects recursively in a bucket = **aws s3 rm s3://bucket –recursive**.
* To sync objects from a specific directory to bucket = **aws s3 sync s3://bucket**.
* To sync objects from s3 to a local-path = **aws s3 sync s3://bucket local-path**.
* To sync objects between two buckets = **aws s3 sync s3://sourcebkt s3://destbckt**.
* To sync and deletes existing files in s3 but not in local = **aws s3 sync s3://bucket –delete**.