

Day->05/10

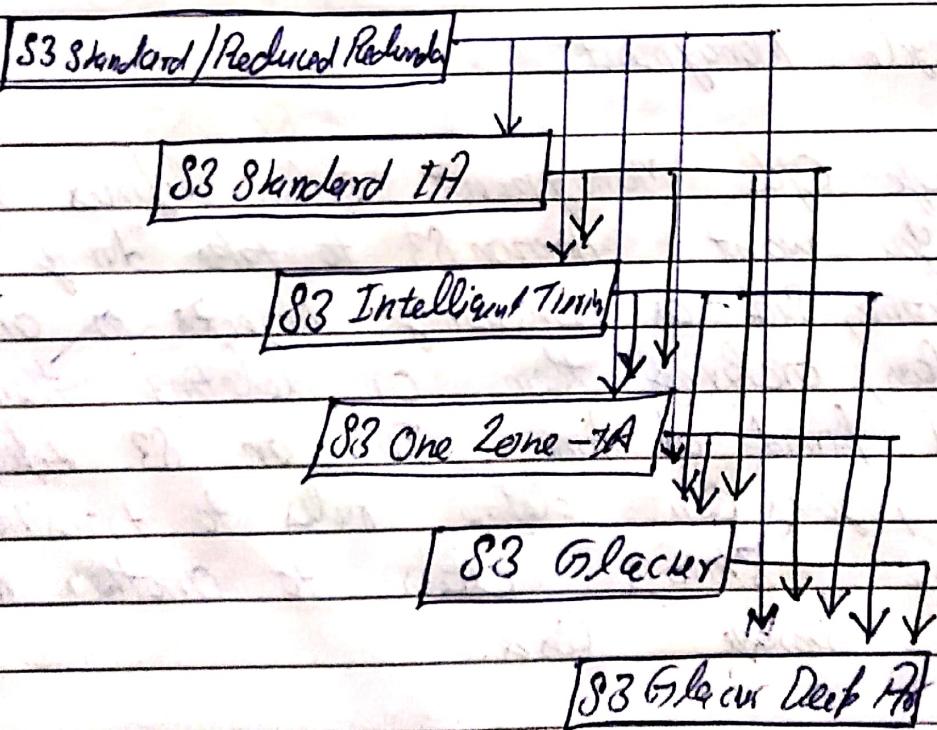
Date - 07/12/2021

## # S3 Lifecycle Management

S3 Life Cycle Management rules defines the actions you want Amazon S3 to take during an object's lifetime, such as transitioning objects to another storage class, archiving them or deleting them after a specified period of time. In an S3 Lifecycle Configuration, you can define rules to transition object from one storage class to another to save on storage costs.

⇒ Amazon S3 supports the following lifecycle transitions b/w storage classes using on S3 Lifecycle Configuration

- The S3 Standard storage class to any other storage class.
- Any storage class to the S3 Glacier or S3 Glacier Deep Archive storage classes.
- The S3 Standard-IA storage class to the S3 Intelligent-Tiering or S3 One Zone-IA storage classes.
- The S3 Intelligent-Tiering storage class to the S3 One zone-IA storage class.
- The S3 Glacier storage class to the S3 Glacier-Deep Archive



S3 Transition

## # Amazon S3 Replication:

You can copy objects across Amazon S3 bucket in different AWS Region (CRR) or bucket in the same AWS Region (SRR). To set up replication, you need to ensure that the versioning is enabled in both source and destination buckets and S3 has permissions to both the buckets. source and destination buckets and S3 has permissions to both the buckets.

F Region 1.



Source Bucket

F Region 2



Destination Bucket

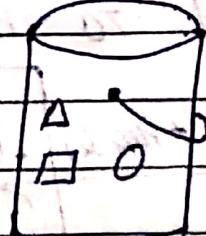
Cross - Region Replication.

Account 1



Source Bucket

Account 2



Destination Bucket

SAME Region  
Replication

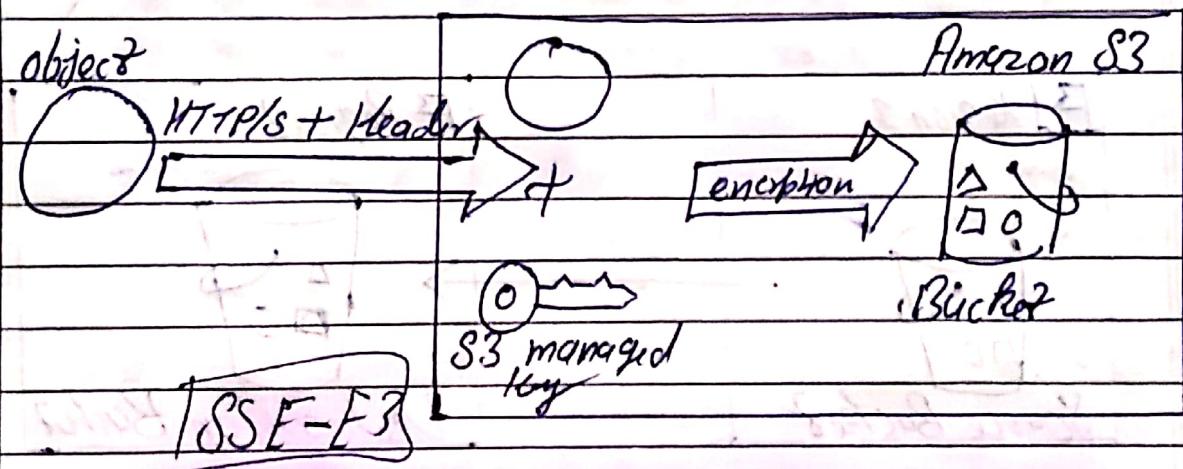
## # S3 Encryption →

With S3 encryption, you can protect your data so that it is not used maliciously.

There are four ways in which object can be encrypted in S3

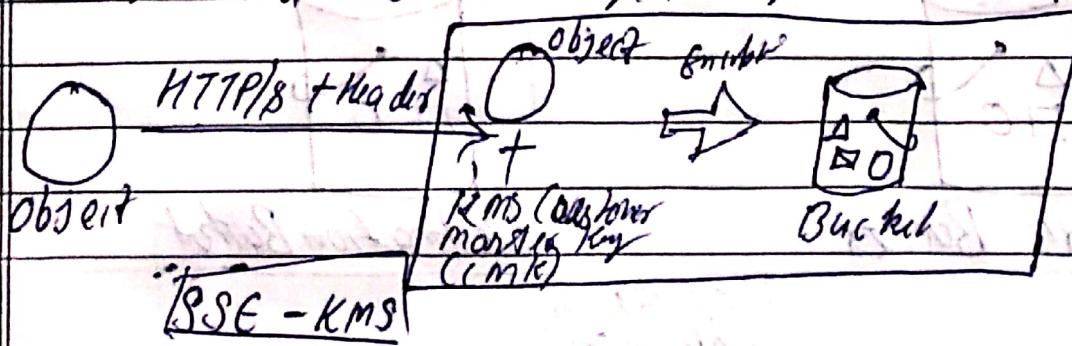
- Server-side encryption with S3 managed key (SSE-S3):

Object are encrypted using the key handled by AWS.



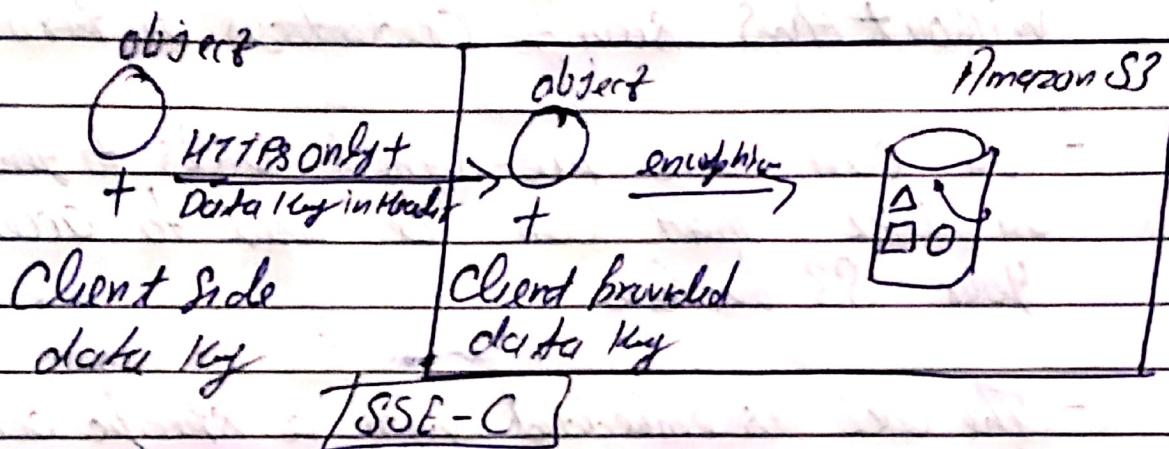
- Server-side encryption with AWS KMS managed key (SSE-KMS):

AWS Key management service is used to manage your encryption key.



- Server-Side encryption with Client provided key (SSE-C):

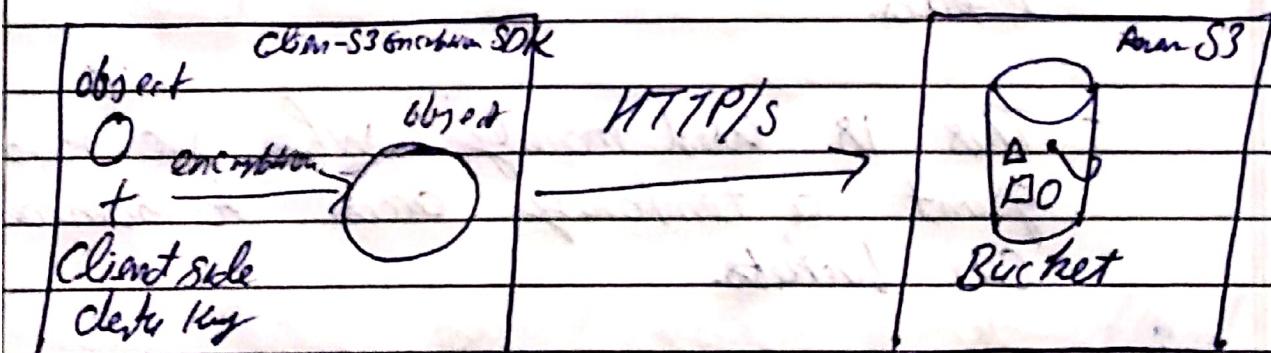
It is used when you manage your own encryption keys.



### • Client Side Encryption:

The Encryption is performed

by the Client. You can encrypt object before uploading to S3.



Client Side encryption

- S3 - Pre-signed URLs:

- Pre-signed URLs can be used to enable the user to upload object to buckets without AWS security credentials or permissions.
- You can use pre-signed URLs to generate an URL that can be used to access your S3 buckets.
- The URL is embedded with a specific action, the URL can be send to the user & he can perform the action embedded in the URL.
- Pre-Signed URL has an expiration period so it can be accessed only before it expires.
- This is used mainly when we need to grant a temporary access to someone to our buckets.

- S3 Bucket Policy:

Bucket Policy are used to grant access to your S3 resources. The Bucket Policy written in JSON, provides access to the objects

Stored in the bucket. Below is a sample bucket policy which allow to read objects from a testa bucket. The policy can be modified to restrict the access as per the requirements.

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "PublicReadObject",  
      "Effect": "Allow",  
      "Principal": "*",  
      "Action": "S3:GetObject",  
      "Resource": "arn:aws:s3:::test-bucket/*"  
    }  
  ]  
}
```

### Multi upload:

- Multipart upload allows you to upload a single object as a set of parts.
- Each part is a contiguous portion of the object's data.
- You can upload these object parts independently and in any order.

- If transmission of any part fails, you can retransmit that part without affecting other parts.
- After all parts of your object are uploaded, Amazon S3 assembles these parts and creates the objects.

## # S3 Transfer Acceleration:

- S3 transfer acceleration enables fast, easy and secure transfers of files over long distance b/w your client and on S3 bucket.
- Transfer Acceleration takes advantage of the globally distributed edge locations in Amazon CloudFront. As the data arrives at an edge location, the data is routed to Amazon S3 over optimized network path.
- Transfer acceleration is useful when objects are uploaded in centralized bucket from users in may part of the world.
- You will not be charged if there is no speed advantage.