AWS S3

Amazon Simple Storage Service





AWS S3

- What is S3
- Storage Classes (Standard, Glacier)
- Lifecycle Policies
- S3 Events Notifications
- S3 Object Lock
- Version
- Encryption
- Replication
- Accessing S3
 - AWS Management Console
 - o CLI
 - AWS SDK
 - Rest API
- Pre-Signed URL
- S3 Gateway Endpoint



AWS S3

DEMO



What is S3

- Object based storage system
- Bucket
- Objects:
 - Key
 - Value
 - Version
 - Manifest
 - Access information (Permission etc)



S3 Storage Classes

https://aws.amazon.com/s3/storage-classes/

	S3 Standard	S3 Intelligent- Tiering*	S3 Standard-IA	S3 One Zone- IA†	S3 Glacier Instant Retrieval	S3 Glacier Flexible Retrieval	S3 Glacier Deep Archive
Designed for durability	99.99999999% (11 9's)	99.99999999% (11 9's)	99.99999999% (11 9's)	99.99999999% (11 9's)	99.99999999% (11 9's)	99.99999999% (11 9's)	99.99999999% (11 9's)
Designed for availability	99.99%	99.9%	99.9%	99.5%	99.9%	99.99%	99.99%
Availability SLA	99.9%	99%	99%	99%	99%	99.9%	99.9%
Availability Zones	≥3	≥3	≥3	1	≥3	≥3	≥3
Minimum capacity charge per object	N/A	N/A	128 KB	128 KB	128 KB	40 KB	40 KB
Minimum storage duration charge	N/A	N/A	30 days	30 days	90 days	90 days	180 days
Retrieval charge	N/A	N/A	per GB retrieved	per GB retrieved	per GB retrieved	per GB retrieved	per GB retrieved
First byte latency	milliseconds	milliseconds	milliseconds	milliseconds	milliseconds	minutes or hours	hours
Storage type	Object	Object	Object	Object	Object	Object	Object

S3 Storage Classes - Data Retrieval Time

Storage Class	Retrieval Time
Amazon S3 Glacier Instant Retrieval	Milliseconds
Amazon S3 Glacier Flexible Retrieval (Formerly S3 Glacier)	Configurable retrieval times, from minutes to hours, with free bulk retrieval
Amazon S3 Glacier Deep Archive	Retrieval time within 12 hours



S3 LifeCycle Policy

- Transition actions
 - These actions define when objects transition to another storage class
- Expiration actions
 - These actions define when objects expire.
- Demo



S3 Events Notifications

- Notification can be triggered when a object in the S3 bucket is changed
 - Added
 - Updated
 - Deleted
 - Many more...
- Can be triggered SNS, SQS, Lambda
- Demo



S3 Object Lock

- Prevent deleting object
 - Retention period
 - Legal hold
- Demo



Versions, Encryptions

Demo



S3 Replications

- Replication enables automatic, asynchronous copying of objects across Amazon S3 buckets
- Can be replicated to single bucket or multiple buckets
- The destination bucket could be in same AWS account or different AWS account
- Could be same region or different region
- Live replication (Cross Region Replication -CRR)
- S3 Batch Replication



Accessing S3

- Via HTTPS URL
- Pre-Signed URL
- S3 Gateway Endpoint
 - https://docs.aws.amazon.com/vpc/latest/privat elink/vpc-endpoints-s3.html
 - Demo

