



Simple Storage Service (S3) & Glacier

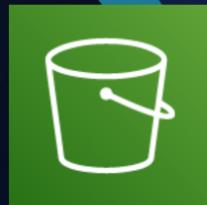
AWS Certification Preparation



© BackSpace Technology LLC



Amazon S3 Terminology



Bucket

- Container for objects stored in S3.
- Total volume of data and number of objects are **unlimited**
- Bucket names must:
 - Be unique
 - Be at least 3 and no more than 63 characters long.
 - Cannot be an ip address format
 - Be lowercase
 - must not contain uppercase characters or underscores

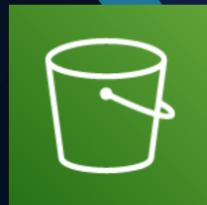
Objects

- Entities (data and metadata) stored in a bucket.
- 0 bytes to a maximum of **5 TB**.
- Largest object upload is **5 GB**.
- **Multi-part upload** for 100 MB to 5 TB.

© BackSpace Technology LLC



Amazon S3 Terminology



Bucket

- Container for objects stored in S3.
- Total volume of data and number of objects are **unlimited**
- Bucket names must:
 - Be unique
 - Be at least 3 and no more than 63 characters long.
 - Cannot be an ip address format
 - Be lowercase
 - must not contain uppercase characters or underscores

Objects

- Entities (data and metadata) stored in a bucket.
- 0 bytes to a maximum of **5 TB**.
- Largest object upload is **5 GB**.
- **Multi-part upload** for 100 MB to 5 TB.

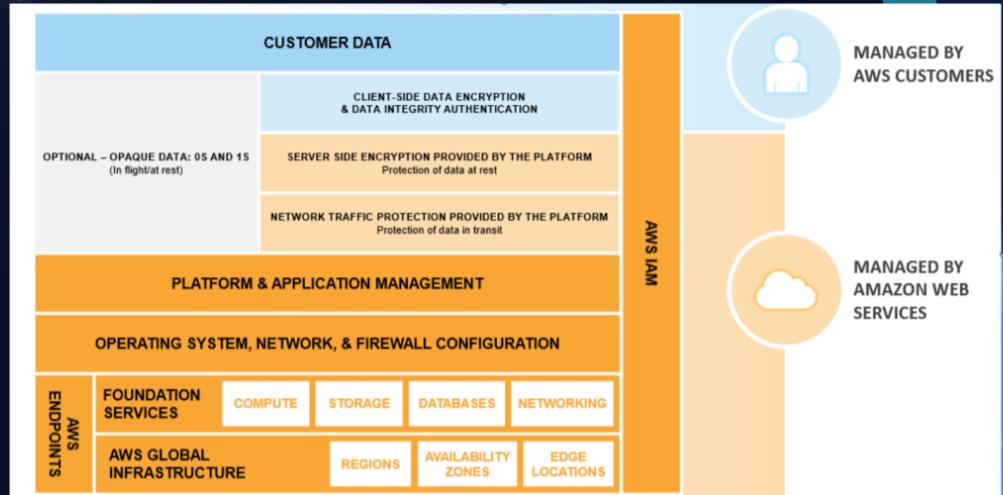
© BackSpace Technology LLC



Secure by Default

S3 is secure by default but can be modified through:

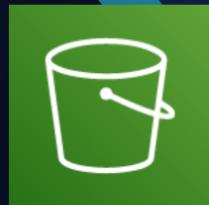
- **IAM Policies** roles, users and groups (fine grained control).
- **Bucket Policies** applied at the bucket level (fine grained control).
- **Access Control Lists (ACL)** applied at the bucket and/or object level.



© BackSpace Technology LLC



S3 Storage Classes



Standard

- 99.99999999% durability (multi (3)-az)
- 99.99% availability
- Supports SSL encryption in transit and at rest
- Lifecycle management

Standard – Infrequent Access (IA)

- Same features as S3 standard
- 99.9% availability
- Lower per GB storage price than standard
- per GB retrieval fee.

Standard – One Zone IA

- 99.99999999% durability (Single AZ)
- 99.5% availability
- Lower per GB storage price than standard IA
- per GB retrieval fee.

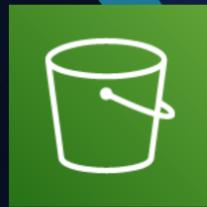
Reduced Redundancy Storage (RRS)

- Retired and replaced with IA

© BackSpace Technology LLC



S3 Storage Classes



S3 Intelligent-Tiering

- Same features as Standard – Infrequent Access (IA) **without retrieval fee**
- Automatically moves objects between **two access tiers** (frequent and infrequent access)
- Objects that have not been accessed for **30 days** moved to the infrequent access tier.
- Small monthly monitoring and automation **fee**

Object level Configuration

- A single bucket can contain objects stored in S3 Standard, S3 Intelligent-Tiering, S3 Standard-IA, and S3 One Zone-IA.

© BackSpace Technology LLC



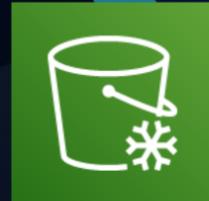


Simple Storage Service (S3) & Glacier

AWS Certification Preparation



Amazon S3 Glacier

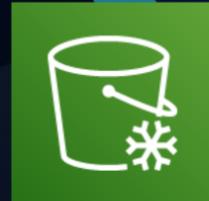


- Archiving solution
- **Lowest cost** AWS object storage class
- 99.99999999% of durability across 3 AZs
- 3 retrieval options:
 - **Expedited** (1-5 minutes)
 - **Standard** (3-5 hours)
 - **Bulk** (5-12 hours)

© BackSpace Technology LLC



Amazon S3 Glacier



- Archiving solution
- **Lowest cost** AWS object storage class
- 99.99999999% of durability across 3 AZs
- 3 retrieval options:
 - **Expedited** (1-5 minutes)
 - **Standard** (3-5 hours)
 - **Bulk** (5-12 hours)

© BackSpace Technology LLC





Simple Storage Service (S3) & Glacier

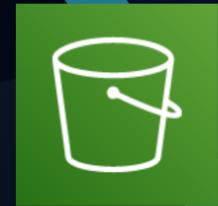
AWS Certification Preparation



© BackSpace Technology LLC



LifeCycle Management

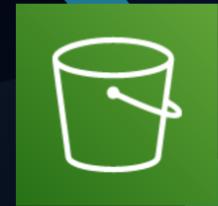


- Object **Deletion** after expiry time
- Object **Archiving** to **Glacier** after expiry time
- Can be restored from Glacier back to S3

© BackSpace Technology LLC

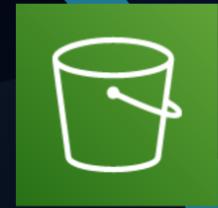


LifeCycle Management



- Object **Deletion** after expiry time
- Object **Archiving** to **Glacier** after expiry time
- Can be restored from Glacier back to S3

S3 Versioning



- Preserves copies of objects inside a bucket.
- Individual objects can be **restored** to previous versions.
- **Deleted** objects can be **recovered**.

© BackSpace Technology LLC



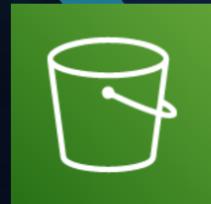


Simple Storage Service (S3) & Glacier

AWS Certification Preparation



S3 Cross Region Replication

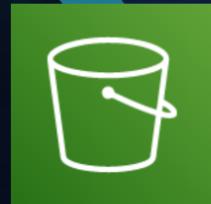


- **Reduced latency** for end users
- Both source and destination buckets need versioning enabled if using versioning
- ACL details updated
 - S3 enabled **encryption replicated**
 - KMS encryption **not replicated**
- Need to copy existing objects to new region
- Replication always takes place between a **pair of AWS regions**.
Buckets can be source buckets for another cross region replication.

© BackSpace Technology LLC



S3 Cross Region Replication



- **Reduced latency** for end users
- Both source and destination buckets need versioning enabled if using versioning
- ACL details updated
 - S3 enabled **encryption replicated**
 - KMS encryption **not replicated**
- Need to copy existing objects to new region
- Replication always takes place between a **pair of AWS regions**.
Buckets can be source buckets for another cross region replication.

© BackSpace Technology LLC

