

- Bucket names share a common name space. You cannot have the same bucket name as someone else.
- When you view your buckets you view them globally but you can have buckets in individual regions.
- You can replicate the contents of one bucket to another bucket automatically by using cross region replication.
- You can change storage classes and encryption of your objects on the fly.
- Restricting Bucket Access
  - Bucket policies - applies across the whole bucket
  - Object policies - applies to individual files
  - IAM policies to users & groups - applies to Users & Groups

## S3 Pricing Tiers

What makes up the cost of s3?

- Storage

Storage pricing	
<b>S3 Standard</b> - General purpose storage for any type of data, typically used for frequently accessed data	
First 50 TB / Month	\$0.023 per GB
Next 450 TB / Month	\$0.022 per GB
Over 500 TB / Month	\$0.021 per GB
<b>S3 Intelligent - Tiering *</b> - Automatic cost savings for data with unknown or changing access patterns	
Frequent Access Tier, First 50 TB / Month	\$0.023 per GB
Frequent Access Tier, Next 450 TB / Month	\$0.022 per GB
Frequent Access Tier, Over 500 TB / Month	\$0.021 per GB
Infrequent Access Tier, All Storage / Month	\$0.0125 per GB
Monitoring and Automation, All Storage / Month	\$0.0025 per 1,000 objects
<b>S3 Standard - Infrequent Access *</b> - For long lived but infrequently accessed data that needs millisecond access	
All Storage / Month	\$0.0125 per GB
<b>S3 One Zone - Infrequent Access *</b> - For re-createable infrequently accessed data that needs millisecond access	
All Storage / Month	\$0.01 per GB
<b>S3 Glacier **</b> - For long-term backups and archives with retrieval option from 1 minute to 12 hours	
All Storage / Month	\$0.004 per GB
<b>S3 Glacier Deep Archive **</b> - For long-term data archiving that is accessed once or twice in a year and can be restored within 12 hours	
All Storage / Month	\$0.00099 per GB

- Requests and Data Retrievals
- Data Transfer
- Management & Replication

## S3 Security & Encryption

All newly created buckets are PRIVATE. You can setup access control to your buckets using Bucket Policies & Access Control Lists

S3 buckets can be configured to create access logs which log all requests made to the S3 bucket. This can be sent to another bucket and evn another bucket in another account.

- **Encryption In Transit** is achieved by
  - SSL/TLS
- **Encryption At Rest**(Server Side) is achieved by
  - S3 managed Keys - SSE-S3
  - AWS Key management Service, Managed Keyes-SSE-KMS
  - Server Side Encryption with Customer Provided Keys - SSE-C
- **Client Side Encryption**

## S3 Visioning

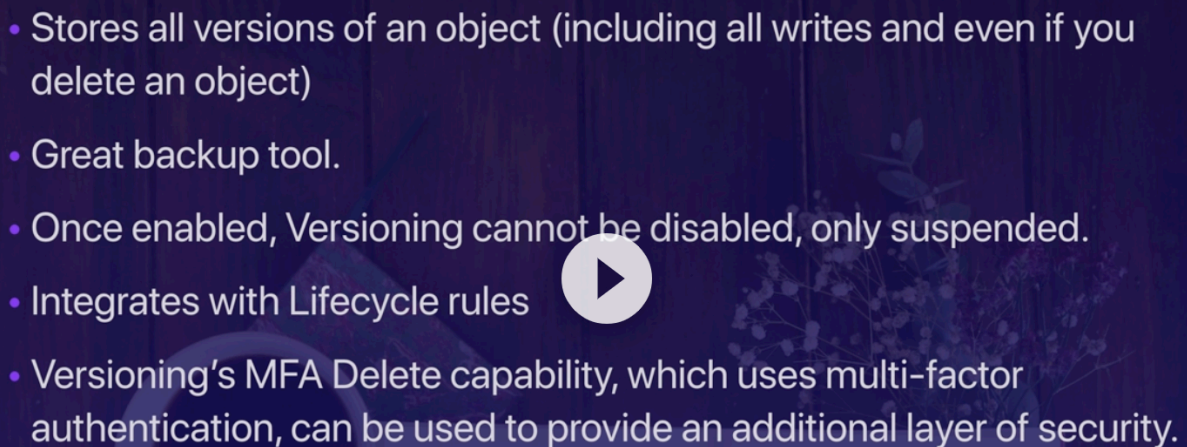
Stores all versions of an object ( including all writes and evn if you delete an object)

Great backup tool

Once enabled, versioning cannot be disabled, only suspended.

Integrates with Lifecycle rules

Versioning MFA Delete capability, which uses multi-factor authentication, can be used to provide an additional layer of security.

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- Stores all versions of an object (including all writes and even if you delete an object)
  - Great backup tool.
  - Once enabled, Versioning cannot be disabled, only suspended.
  - Integrates with Lifecycle rules
  - Versioning's MFA Delete capability, which uses multi-factor authentication, can be used to provide an additional layer of security.

LifeCycle Management

- Automates moving your objects between the different storage tiers.
- Can be used in conjunction with versioning.
- Can be applied to current versions and previous versions.

## Timeline summary

### Current version actions

Day 0

Objects uploaded



Day 30

Objects transition to Standard-IA



Day 30

Objects transition to Intelligent-Tiering



Day 30

Objects transition to One Zone-IA



Day 60

Objects transition to Glacier



Day 60

Objects transition to Glacier Deep Archive

### Previous version actions

Day 0

Objects become noncurrent



Day 60

Objects transition to Standard-IA



Day 60

Objects are permanently deleted