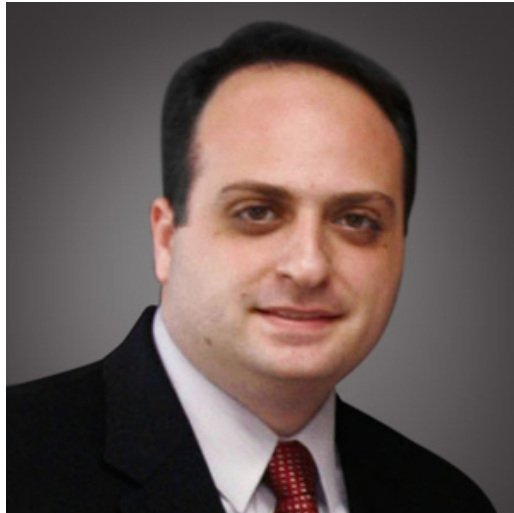


# Working with Amazon S3



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# Amazon S3 Characteristics



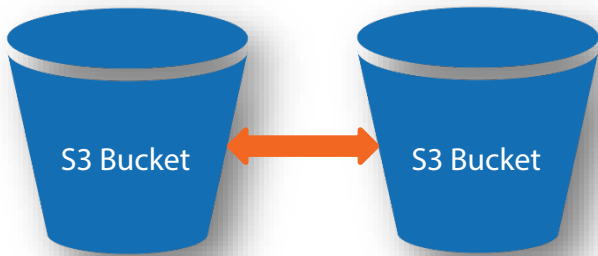
- It's not a file system
- AWS Region-level storage
- Support REST and SOAP APIs
- Globally unique S3 bucket names
- Server-side encryption of data at rest

# Two Types of S3 Storage



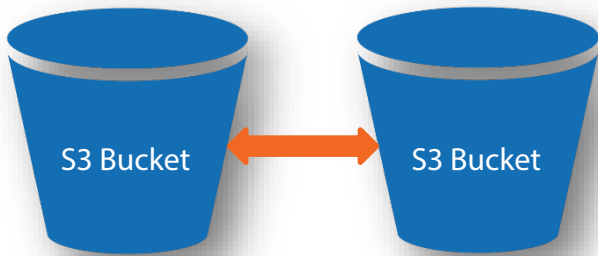
- Standard storage
  - 99.9999999999% durability
  - 99.99% availability
- Reduced Redundancy Storage (RRS)
  - 99.99% durability (average annual expected loss of 0.01% of objects)
  - 99.99% availability

# Amazon S3 Replication



- S3 stores data in multiple facilities and on multiple devices within each facility
- RRS Amazon S3 does not replicate objects as many times as standard Amazon S3

# Amazon S3 Replication



- Synchronously stores data across multiple facilities before confirming that the data has been successfully stored
- Calculates checksums on all network traffic to detect corruption of data packets

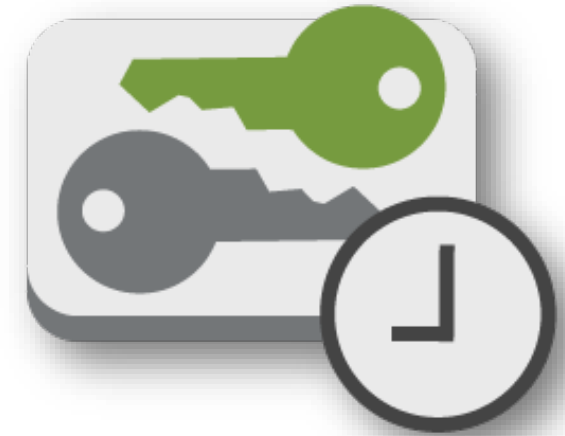
# Amazon S3 Features



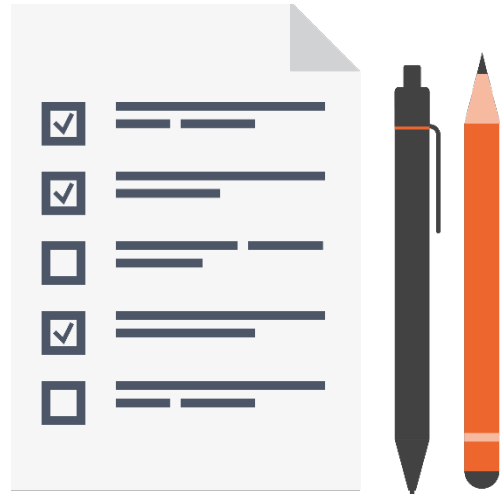
- Versioning
- Cross-region replication (CRR)
- MFA delete (via API)
- Time-limited access to objects
- Audit logs
- Event notifications
- Data lifecycle management
- Permissions

# Amazon S3 Security

- **IAM policies**
  - User-level security
  - Granular security configuration
- **Bucket policies**
  - Bucket-level security
- **ACLs**
  - Legacy access control mechanism
  - Bucket and object-level security
- **Query string authentication** (Presigned URLs)
  - Grant temporary access to your Amazon S3 resources



# Summary



Amazon S3 characteristics

Amazon S3 replication

Amazon S3 features

Amazon S3 security