As your data stores expand, managing your objects becomes increasingly important but can be time consuming. S3 provides features that let you easily manage and report on data with object-level granularity, as well as at the account and bucket levels.

Amazon Simple Storage Service (S3)

The most feature-rich object storage service to manage data at any scale

Manage data so it works for your business

- Protect data from errors, accidental deletions, and theft
- Organize objects with
  - Buckets
  - Prefixes (shared names)
  - Object tags (up to 10 per object)

S3 Inventory

- Report on objects by prefix or bucket
- Audit object metadata
- Configure delivery of daily or weekly reports
- Manage billions of objects at scale — with a few clicks
- Change object metadata and properties
- Copy objects, replace tag sets, modify access controls, and restore archived objects

S3 Batch Operations

Replicate your data for resiliency and compliance

- Replicate objects into the same or other AWS Regions of your choice
- Reduce latency, increase resiliency, and meet compliance requirements
- Enforce write-once-read-many (WORM) policy to prevent object version deletions
- Attach retention dates to objects to protect from deletion

S3 Object Lock

Preserve, retrieve, and restore every version of every object in your bucket

- Easily recover from unintended user actions and application failures

S3 Versioning

AWS account credentials

- Concatenation of a valid serial number, space, 6-digit code from an authentication device
- Require 2 forms of authentication to delete an object
- Multi-Factor Authentication (MFA) Delete

For data in transit, use SSL or client-side encryption

S3-supported encryption

For data at rest, use server-side or client-side encryption

Choose default encryption for all S3 objects before upload

Storage classes for different use cases and access patterns

- 2 archiving options: active archive and digital asset preservation
- Monitor and learn access patterns across your data
- Discover objects that should be moved to lower-cost storage classes

Configure, enforce, and report on finely tuned access policies

- Resource-based access policies
  - With object tags, access control lists (ACLs), bucket policies, and time-limited URLs
- User policies
  - With AWS Identity and Access Management

S3 Server Access Logging

- 6 distinct S3 Storage Classes
- Receive detailed records of requests made to a bucket (and store them in S3)
- See requester, bucket name, request time, request action, and error code

Enforce a "no public access" policy with a few clicks

- Block access to specific buckets or an entire AWS account
- Discover publicly accessible buckets with Override all other access policies

Retrieve a subset of an object's metadata using SQL expressions

Increase query performance by up to 400%

S3 Block Public Access

- Trusted Advisor bucket permission check
- S3 Management Console's access indicator

S3 Select

Query data in place

Cost-effectively store data throughout its lifecycle

S3 Storage Class Analysis

- Transfer objects to other storage classes
- Expire objects at a designated timeframe
- View usage and costs
- Configure delivery of hourly or monthly reports

S3 Lifecycle policies

Cost Allocation Reports

Audit and report on usage and changes

Amazon CloudWatch Metrics

- Track operational health of AWS resources
- AWS CloudTrail
  - Report on actions taken by users, roles, and/or AWS services
  - Learn details about an S3 access request, including requester, IP address, time, and error code

Configure events to occur when changes are made to S3 resources

- Trigger workflows and alerts, and invoke AWS Lambda

Predictable replication with 99.99% of objects replicated within 15 minutes, backed by an SLA

Compliance mode: Object lock protection cannot be removed by any user

Governance mode: Accounts with specific IAM permissions can remove object locks

https://aws.amazon.com/s3/features/

Learn more about managing data at scale