

Use case

Encrypt S3, set lifecycle rules, monitor logs

Use case Description

Schedule Lambda every evening and stop running Ec2 instances to reduce billing

This use case demonstrates how to secure an S3 bucket using KMS-based encryption, implement a lifecycle rule to transition objects to S3 Glacier Instant Retrieval after 30 days, and enable basic logging for access monitoring.

1. Create an S3 bucket with server side encryption as

The screenshot shows the 'Create bucket' page in the AWS S3 console. The 'Encryption' section is expanded, showing options for 'Server-side encryption with Amazon S3 managed keys (SSE-S3)', 'Server-side encryption with AWS Key Management Service keys (SSE-KMS)', and 'Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)'. The 'SSE-KMS' option is selected. Under 'AWS KMS key', the 'Choose from your AWS KMS keys' option is selected, and the key 'arn:aws:kms:us-east-1:123456789012:key/a2261426-c9e3-47ef-b1cc-cba87afdcbe1' is chosen. The 'Bucket Key' option is also selected. The 'Advanced settings' section is collapsed. At the bottom, there are 'Cancel' and 'Create bucket' buttons.

The screenshot shows the 'Properties' page for the bucket 's3-my-secure-bucket'. The 'Bucket overview' section displays the 'AWS Region' as 'Asia Pacific (Mumbai) ap-south-1', the 'Amazon Resource Name (ARN)' as 'arn:aws:s3::s3-my-secure-bucket', and the 'Creation date' as 'July 30, 2025, 13:03:24 (UTC+05:30)'. The 'Bucket Versioning' section shows 'Bucket Versioning' as 'Enabled'. The 'Multi-factor authentication (MFA) delete' section shows 'MFA delete' as 'Disabled'. The 'Tags' section shows 'No tags associated with this resource'. The 'Default encryption' section shows 'Encryption type' as 'Server-side encryption with AWS Key Management Service keys (SSE-KMS)' and 'Encryption key ARN' as 'arn:aws:kms:us-east-1:123456789012:key/a2261426-c9e3-47ef-b1cc-cba87afdcbe1'. The 'Bucket Key' section shows 'Bucket Key' as 'Enabled'.

2. Create a lifecycle rule

The screenshot shows the 'Create lifecycle rule' wizard in the AWS Management Console. The breadcrumb trail is 'Amazon S3 > Buckets > s3-my-secure-bucket > Lifecycle configuration > Create lifecycle rule'. The page title is 'Create lifecycle rule'. The first section, 'Choose the actions you want this rule to perform', has several checkboxes: 'Transition current versions of objects between storage classes' (checked), 'Transition noncurrent versions of objects between storage classes', 'Expire current versions of objects', 'Permanently delete noncurrent versions of objects', and 'Delete expired object delete markers or incomplete multipart uploads'. A warning box states 'Transitions are charged per request'. A blue box notes 'By default, objects less than 128KB will not transition across any storage class'. The second section, 'Transition current versions of objects between storage classes', has a dropdown for 'Choose storage class transitions' set to 'Standard-IA' and a 'Days after object creation' field set to '1'. A 'Remove' button is next to the field. A third section, 'Review transition and expiration actions', shows 'Current version actions' for Day 0 (Objects uploaded) and Day 1, and 'Noncurrent versions actions' for Day 0 (No actions defined).

s3-my-secure-bucket

The screenshot shows the 'Lifecycle configuration' page for bucket 's3-my-secure-bucket'. The breadcrumb trail is 'Objects | Properties | Permissions | Metrics | Management | Access Points'. The page title is 'Lifecycle configuration'. The text says 'To manage your objects so that they are stored cost effectively throughout their lifecycle, configure their lifecycle. A lifecycle configuration is a set of rules that define actions that Amazon S3 applies to a group of objects. Lifecycle rules run once per day.' The 'Default minimum object size for transitions' is 'All storage classes 128K'. The 'Lifecycle rules (1)' section shows a table with one rule: 'TransitionToGlacierIR', which is 'Enabled', has a scope of 'Entire bucket', and actions of 'Transition to Glacier Instant Reti...'. Buttons for 'View details', 'Edit', 'Delete', 'Actions', and 'Create lifecycle rule' are at the top right. A 'View lifecycle configuration' link is at the bottom.

3. To create logging, create a new S3 bucket for logging and connect it with the primary bucket

The first screenshot shows the 's3-my-access-logs-bucket' page in the AWS Management Console. The breadcrumb trail is 'Amazon S3 > Buckets > s3-my-access-logs-bucket'. The page title is 's3-my-access-logs-bucket info'. The 'Objects (0)' section shows a table with columns 'Name', 'Type', 'Last modified', 'Size', and 'Storage class'. A message says 'No objects. You don't have any objects in this bucket.' with an 'Upload' button. The second screenshot shows the 'Server access logging' configuration page for bucket 's3-my-secure-bucket'. The breadcrumb trail is 'Amazon S3 > Buckets > s3-my-secure-bucket > Create configuration'. The page title is 'Create configuration'. The 'Server access logging' section has a checkbox 'Server access logging' which is 'Enabled'. The 'Destination bucket' is 's3://s3-my-access-logs-bucket'. The 'Log object key format' is '[YYYY]-[MM]-[DD]-[hh]-[mm]-[ss]-[UniqueString]'. An 'Edit' button is at the top right.

Amazon S3

Buckets

s3-my-access-logs-bucket

General purpose buckets

Directory buckets

Table buckets

Vector buckets

Access Grants

Access Points (General Purpose Buckets, FSx file systems)

Access Points (Directory Buckets)

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

Feature spotlight

AWS Marketplace for S3

s3-my-access-logs-bucket

Objects (30)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

< 1 >

Name	Type	Last modified	Size	Storage class
2025-07-30-08-14-04-503000342237431C	-	July 30, 2025, 15:44:05 (UTC+05:30)	1.2 KB	Standard
2025-07-30-08-15-08-843754000027253795	-	July 30, 2025, 15:45:09 (UTC+05:30)	1.2 KB	Standard
2025-07-30-08-17-04-63F3F5148C9AC40	-	July 30, 2025, 15:47:05 (UTC+05:30)	607.0 B	Standard
2025-07-30-08-17-41-001082A4066E3F3F	-	July 30, 2025, 15:47:42 (UTC+05:30)	609.0 B	Standard
2025-07-30-08-17-49-02A0549051465844	-	July 30, 2025, 15:47:50 (UTC+05:30)	611.0 B	Standard
2025-07-30-08-19-31-0F8BAE4970B713	-	July 30, 2025, 15:49:52 (UTC+05:30)	2.1 KB	Standard
2025-07-30-08-21-49-2824625567763709	-	July 30, 2025, 15:51:50 (UTC+05:30)	1.2 KB	Standard
2025-07-30-08-24-09-002796C3F3FA05C	-	July 30, 2025, 15:54:10 (UTC+05:30)	609.0 B	Standard
2025-07-30-08-25-07-6820A00F274019007	-	July 30, 2025, 15:55:08 (UTC+05:30)	609.0 B	Standard
2025-07-30-08-25-17-9281CE3880107A00	-	July 30, 2025, 15:55:18 (UTC+05:30)	1.6 KB	Standard
2025-07-30-08-25-59-05540747C33AA3D	-	July 30, 2025, 15:56:00 (UTC+05:30)	627.0 B	Standard
2025-07-30-08-27-06-FA147CC7000A9F073C	-	July 30, 2025, 15:57:07 (UTC+05:30)	2.4 KB	Standard

Amazon S3

Buckets

s3-my-access-logs-bucket

2025-07-30-08-43-13-3CA4C6D8D30C4482

General purpose buckets

Directory buckets

Table buckets

Vector buckets

Access Grants

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2025-07-30-08-43-13-3CA4C6D8D30C4482

Properties

Permissions

Versions

Object overview

Owner

d24ba78dc52c5994286da8b8ee4656e8848096800bf8b9a66687b53240f621

AWS Region

Asia Pacific (Mumbai) ap-south-1

Last modified

July 30, 2025, 14:13:14 (UTC+05:30)

Size

613.0 B

Type

Key

2025-07-30-08-43-13-3CA4C6D8D30C4482

S3 URI

s3://s3-my-access-logs-bucket/2025-07-30-08-43-13-3CA4C6D8D30C4482

Amazon Resource Name (ARN)

arn:aws:s3::s3-my-access-logs-bucket/2025-07-30-08-43-13-3CA4C6D8D30C4482

Entity tag (ETag)

24cd7c44889c7486925e8da379ef8184

Object URL

https://s3-my-access-logs-bucket.s3.ap-south-1.amazonaws.com/2025-07-30-08-43-13-3CA4C6D8D30C4482

Object management overview

The following bucket properties and object management configurations impact the behavior of this object.

Bucket properties

Bucket Versioning

When enabled, multiple variants of an object can be stored in the bucket to easily recover from unintended user actions and application failures.

Disabled

Bucket "s3-my-access-logs-bucket" doesn't have Bucket Versioning enabled

We recommend that you enable Bucket Versioning to help protect against unintentionally overwriting or deleting objects. [Learn more](#)

Enable Bucket Versioning

Management configurations

Replication status

When a replication rule is applied to an object the replication status indicates the progress of the operation.

View replication rules

Expiration rule

You can use a lifecycle configuration to define expiration rules to schedule the removal of this object after a pre-defined time period.

Expiration date