

# Agenda

- ▶ What is Cloud storage?
- ▶ Types of storage
- ▶ Before Amazon S3
- ▶ What is S3?
- ▶ Benefits of S3
- ▶ Objects and Buckets
- ▶ How does Amazon S3 work
- ▶ Features of S3



# What is Cloud Storage?

Cloud storage provides a web service where your data can be stored, accessed and easily backed up by users over the internet



Cloud storage is

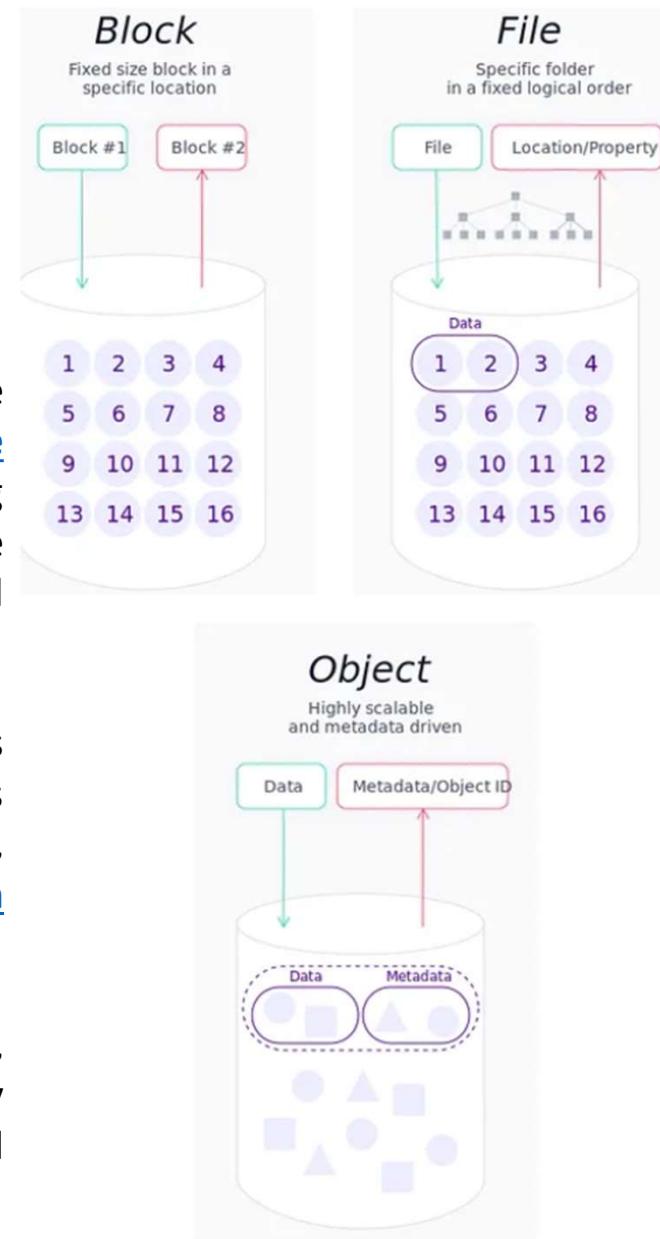
- reliable,
- scalable and
- secure

than traditional on-premises storage systems

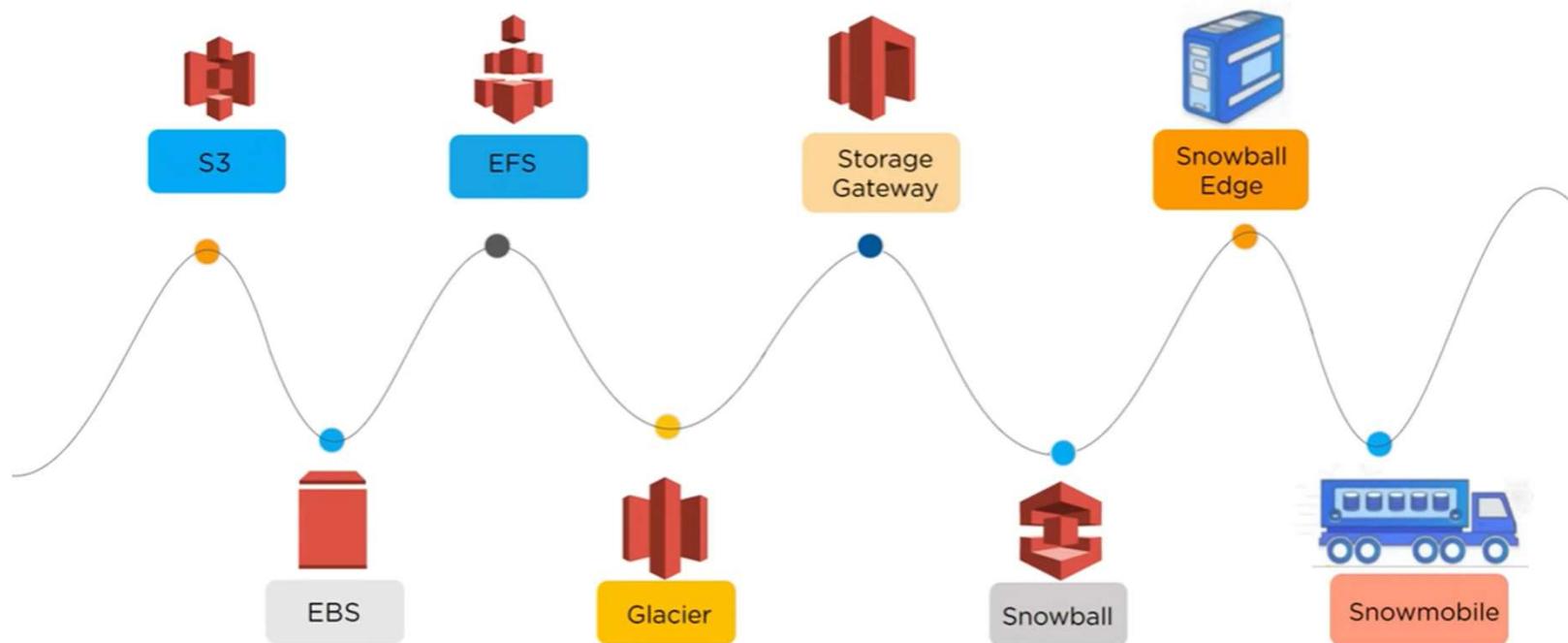
# Storage Types

## There Are 3 Types of Cloud Storage

1. **Object Storage** – The enormous scalability and metadata capabilities of object storage are frequently tapped into by cloud-based applications. [Simple Storage Service \(Amazon S3\)](#) and [Amazon Glacier](#) are excellent object storage options for building modern applications from the ground up that require scale and adaptability. These solutions can also be used to ingest existing data stores for analytics, backup, and archiving purposes.
2. **File Storage** – A filing system is required since many applications need to access shared files. A Network Attached Storage (NAS) server is typically used to support this type of storage. In situations like big content repositories, development environments, media stores, or user home directories, file storage systems like [Elastic File System \(Amazon EFS\)](#) are ideal.
3. **Block Storage** – Other business applications, such as ERP or database systems, frequently need exclusive, low-latency storage for every host. This is frequently compared to a cargo area network (SAN) or direct-attached storage (DAS). Block-based cloud storage options such as Amazon EBS's Elastic Block Store and EC2 Instance Storage



# Storage Types

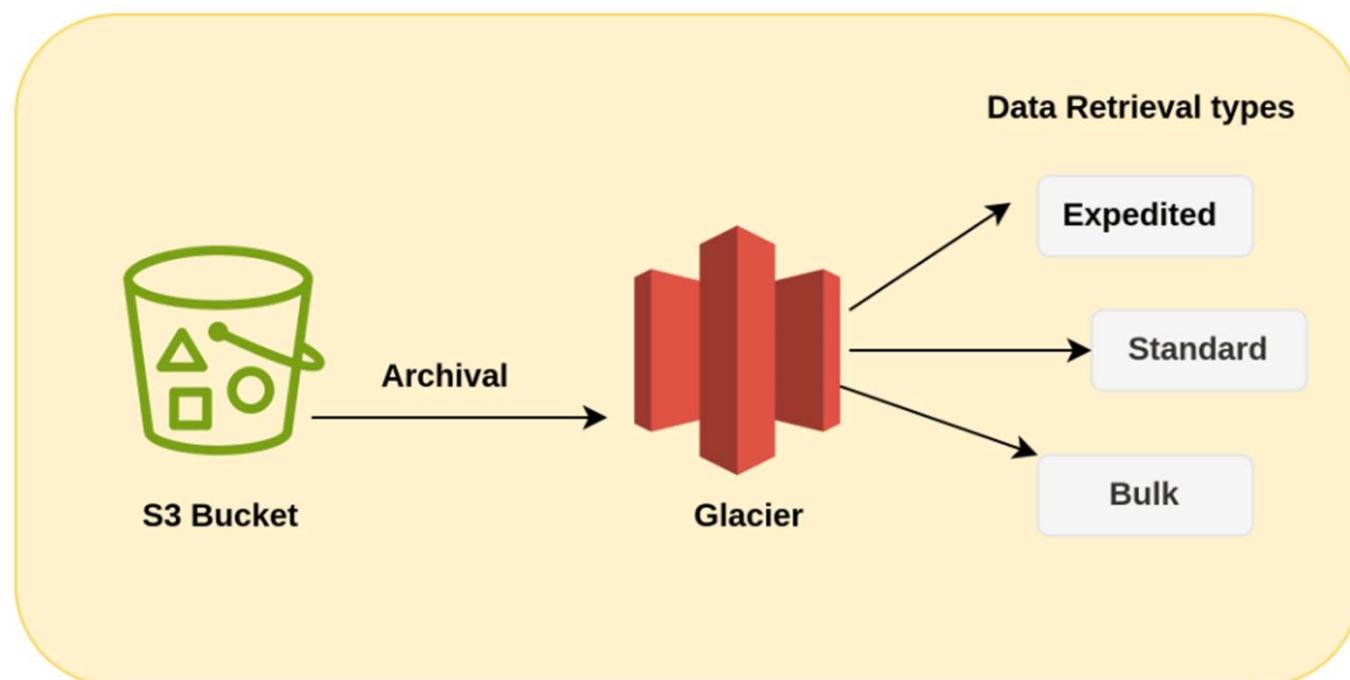


# Storage Types cont....

 <b>Amazon S3</b>	 <b>Amazon EBS</b>	 <b>Amazon EFS</b>
Data storage for unstructured data	System storage for Amazon EC2 VMs	Scalable data storage for Amazon EC2 VMs

# Glacier

Amazon Web Services (AWS) Glacier is a cloud-based storage service designed for long-term data archival and backup. It's part of AWS's extensive suite of storage solutions, and it offers a cost-effective way to store data that you don't need to access frequently but must retain for compliance, regulatory, or business continuity purposes.



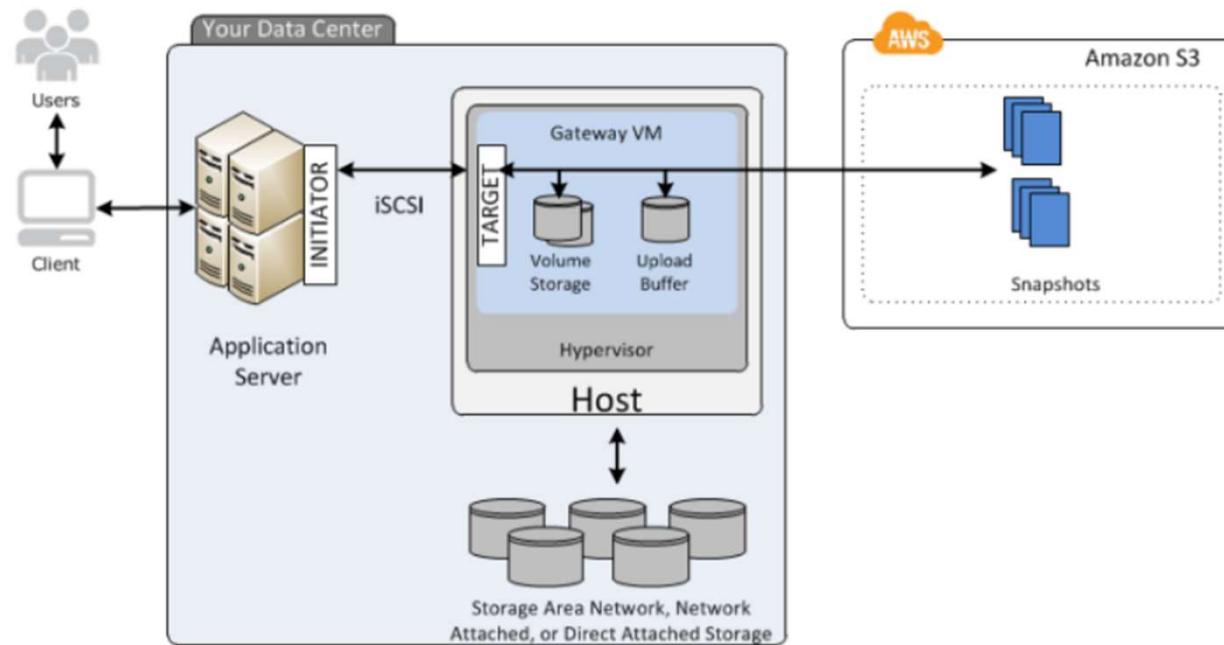
# Storage Gateway

AWS Storage Gateway is a hybrid cloud storage service that allows your on-premise storage & IT infrastructure to seamlessly integrate with AWS Cloud Storage Services. It Can be AWS Provided Hardware or Compatible Virtual Machine.

## **Purpose of Using AWS Storage Gateway(hybrid Cloud Storage) :**

- To Fulfill Licensing Requirements.
- To Achieve Data-Compliance Requirements.
- To Reduce Storage & Management Cost.
- For Easy and Effective Application Storage-Lifecycle & Backup Automation.
- For Hybrid Cloud & Easy Cloud Migration.

# Storage Gateway



# Snowball

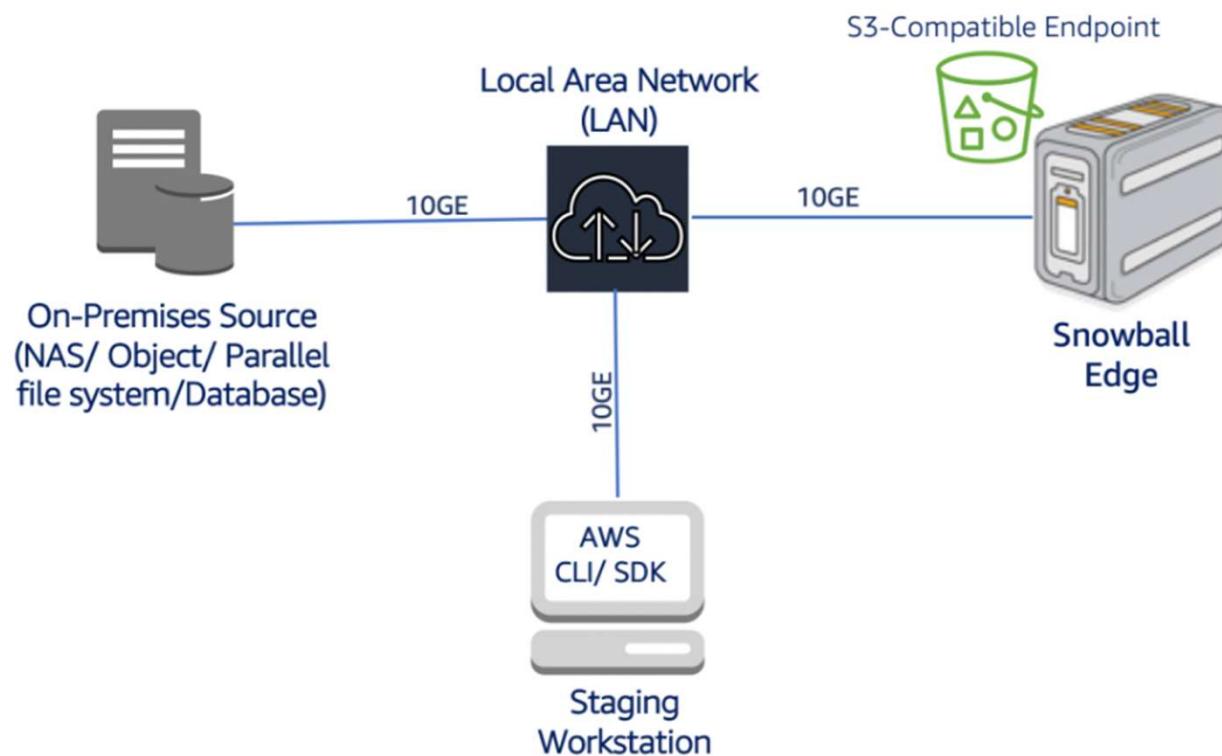
AWS Snowball is a service that allows users to transfer large amounts of data into and out of Amazon Web Services (AWS) using secure, rugged devices. Snowball devices can help address challenges associated with large-scale data transfers, such as high network costs, long transfer times, and security concerns.

It is commonly used for migrating data from on-premises data sources such as NAS arrays, databases, data warehouses, or other storage systems to AWS using Snowball Edge. The [Snowball Edge Storage Optimized \(SBE -SO\) device](#) has a raw storage capacity of 100 TB with a built-in Amazon S3 compatible endpoint, Amazon EC2 compute, and block storage capabilities.

This architecture uses a temporary “staging workstation.” The workstation mounts the data source using the NFS or SMB protocol. For migrations of data from Hadoop (HDFS/QFS) or other file systems, this architecture enables the use of native connectors and libraries on the staging workstation to mount the data source. Once you mount the data source, use the [AWS Command Line Interface \(CLI\)](#) commands (copy and sync) to transfer your data into the Snowball Edge

Network File System (NFS) and Server Message Block (SMB) are file access storage protocols that allow users to share files and directories over a network.

# Snowball

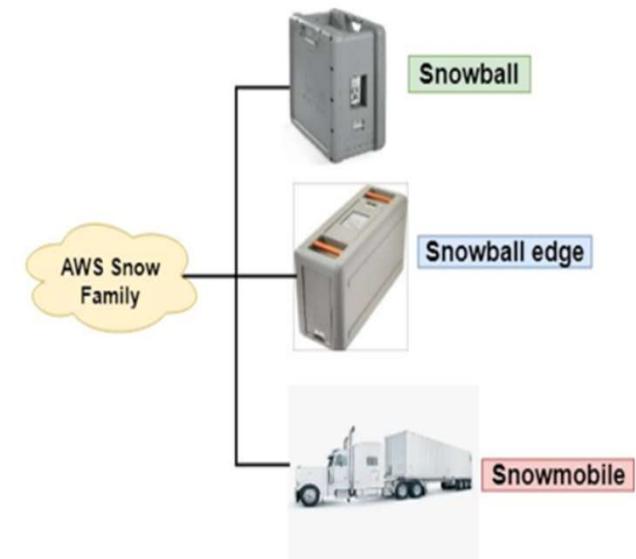


# Snowball and Snowmobile

Snowball comes in two different models, Snowball and Snowball Edge, each with its own set of features. The original Snowball is designed for transferring up to 80 terabytes of data, while the Snowball Edge can transfer up to 100 terabytes of data and also includes computing capabilities, making it suitable for data processing tasks. Both devices are highly secure and include tamper-resistant enclosures, 256-bit encryption, and a chain of custody tracking mechanism to ensure data security during transit.

AWS Snowball is a physical device that customers can use to transfer data. It is a small, ruggedized device that customers can use to transfer data via a local network connection. This is useful for customers who have a large amount of data to transfer and don't have a fast internet connection.

AWS Snowmobile, on the other hand, is a large truck that can be used to transfer petabytes of data to the AWS cloud. This is useful for customers who have an extremely large amount of data to transfer, such as a data center migration. In summary, Snowball is for small-scale data migration, and Snowmobile is for extremely large-scale data migration.



# Why Storage Services

MAINTAINING YOUR OWN REPOSITORY IS EXPENSIVE AND TIME CONSUMING

Factors that make a repository expensive and time consuming are:

- To purchase hardware and software components
- Hiring a team of experts for maintenance
- Lack of scalability based on your requirements
- Data security requirements



# About S3

Amazon S3 (Simple Storage Service) provides object storage which is built for storing and recovering any amount of information or data from anywhere over the internet



- ✓ Amazon S3 provides storage through web services interface
- ✓ It is designed for developers where web-scale computing can be easier for them
- ✓ It provides 99.99999999% durability and 99.99% availability of objects
- ✓ It can store computer files up to 5 terabytes in size

# Benefits of S3



# AWS Buckets and Objects

An object consists of data, key (assigned name), and metadata. A bucket is used to **store objects**. When data is added to a bucket, Amazon S3 creates a unique version ID and allocates it to the object.



Object: [folder/Penguins.jpg](#) → Key(name)  
Bucket: [simplilearn](#) → Version ID  
Link Address: <https://s3.amazonaws.com/simplilearn/folder/Penguins.jpg>

Example of an object, bucket, and link address

# Practical



Root user sign in

Email  
sammiee2000@gmail.com  
Password  
\*\*\*\*\*  
  
[Sign in to a different account](#)  
[Forgot your password?](#)



Logging into AWS

aws Services ▾ Resource Groups ▾

History

S3

Console Home

Billing

EC2

Cost Explorer

Simple Queue Service

Compute

EC2

Lightsail

Elastic Container Service

EKS

Lambda

Batch

Elastic Beanstalk

Developer Tools

CodeStar

CodeCommit

CodeBuild

CodeDeploy

CodePipeline

Cloud9

X-Ray

Analytics

Athena

EMR

CloudSearch

Elasticsearch Service

Kinesis

QuickSight

Data Pipeline

AWS Glue

Customer Engagement

Amazon Connect

Pinpoint

Simple Email Service

Business Productivity

Alexa for Business

Amazon Chime

WorkDocs

WorkMail

Storage

S3

EFS

Glacier

Storage Gateway

Management Tools

CloudWatch

AWS Auto Scaling

CloudFormation

CloudTrail

Config

OpsWorks

IAM

Cognito

Secrets Manager

GuardDuty

Inspector

Internet Of Things

Amazon Macie

AWS Single Sign-On

Certificate Manager

CloudHSM

Directory Service

WAF & Shield

Artifact

Security, Identity & Compliance

WorkSpaces

AppStream 2.0

Desktop & App Streaming

Config

OpsWorks

Service Catalog

Systems Manager

Trusted Advisor

Managed Services

Neptune

Amazon Redshift

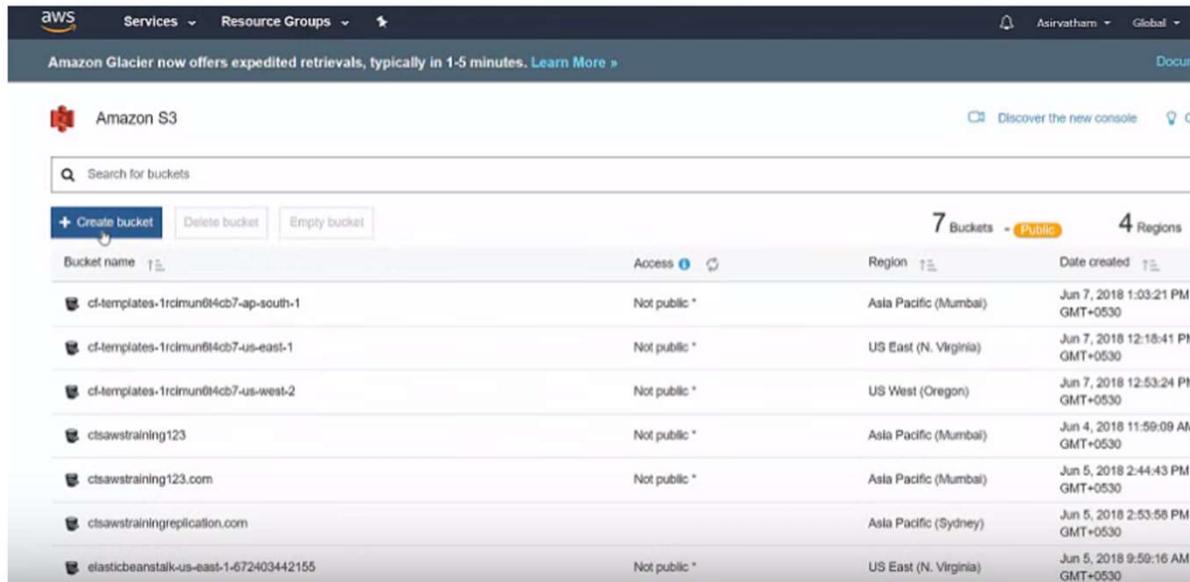
Media Services

Greengrass

The image shows the AWS Services menu. It lists various services under categories like Compute, Storage, Management Tools, Security, and others. The "S3" service is highlighted in the "Storage" category.

Selecting S3 from Service offerings

# Bucket List

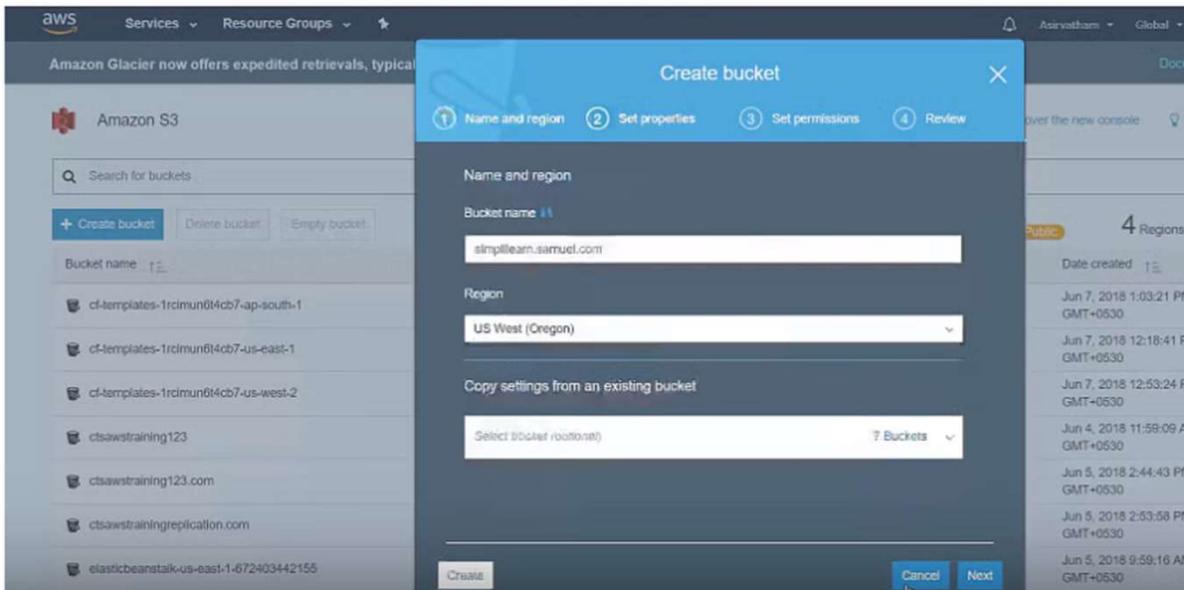


The screenshot shows the AWS S3 console. At the top, there's a banner for Amazon Glacier. Below it, the S3 logo and a search bar labeled "Search for buckets". There are three buttons: "+ Create bucket", "Delete bucket", and "Empty bucket". To the right, it displays "7 Buckets" and "4 Regions". A table lists the buckets:

Bucket name	Access	Region	Date created
cf-templates-1rcimun6l4cb7-ap-south-1	Not public *	Asia Pacific (Mumbai)	Jun 7, 2018 1:03:21 PM GMT+0530
cf-templates-1rcimun6l4cb7-us-east-1	Not public *	US East (N. Virginia)	Jun 7, 2018 12:18:41 PM GMT+0530
cf-templates-1rcimun6l4cb7-us-west-2	Not public *	US West (Oregon)	Jun 7, 2018 12:53:24 PM GMT+0530
ct sawstraining123	Not public *	Asia Pacific (Mumbai)	Jun 4, 2018 11:59:09 AM GMT+0530
ct sawstraining123.com	Not public *	Asia Pacific (Mumbai)	Jun 5, 2018 2:44:43 PM GMT+0530
ct sawstrainingreplication.com		Asia Pacific (Sydney)	Jun 5, 2018 2:53:58 PM GMT+0530
elasticbeanstalk-us-east-1-672403442155	Not public *	US East (N. Virginia)	Jun 5, 2018 9:59:16 AM GMT+0530

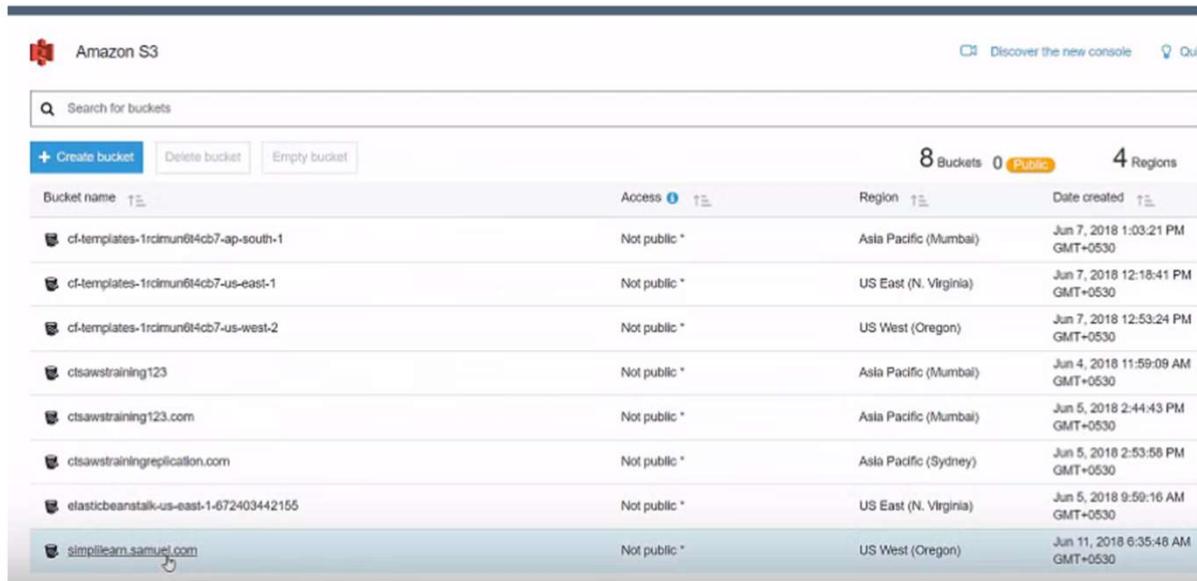
Amazon S3 bucket list (usually empty for first-time users); create a bucket by clicking on the "Create bucket" button

# Create Bucket



Create a bucket by setting up name, region, and other options; finish off the process by pressing the "Create" button

# Select Newly Created Bucket



The screenshot shows the Amazon S3 console interface. At the top, there is a search bar labeled "Search for buckets". Below the search bar are three buttons: "+ Create bucket", "Delete bucket", and "Empty bucket". To the right of these buttons, it displays "8 Buckets" (with 0 Public ones), "4 Regions", and a "Discover the new console" link. The main area is a table listing eight buckets:

Bucket name	Access	Region	Date created
cf-templates-1rcimun6t4cb7-ap-south-1	Not public *	Asia Pacific (Mumbai)	Jun 7, 2018 1:03:21 PM GMT+0530
cf-templates-1rcimun6t4cb7-us-east-1	Not public *	US East (N. Virginia)	Jun 7, 2018 12:18:41 PM GMT+0530
cf-templates-1rcimun6t4cb7-us-west-2	Not public *	US West (Oregon)	Jun 7, 2018 12:53:24 PM GMT+0530
ctawsTraining123	Not public *	Asia Pacific (Mumbai)	Jun 4, 2018 11:59:09 AM GMT+0530
ctawsTraining123.com	Not public *	Asia Pacific (Mumbai)	Jun 5, 2018 2:44:43 PM GMT+0530
ctawsTrainingReplication.com	Not public *	Asia Pacific (Sydney)	Jun 5, 2018 2:53:58 PM GMT+0530
elasticbeanstalk-us-east-1-672403442155	Not public *	US East (N. Virginia)	Jun 5, 2018 9:59:16 AM GMT+0530
simplilearn.samuel.com	Not public *	US West (Oregon)	Jun 11, 2018 6:35:48 AM GMT+0530

Select the created bucket

# Upload File

This screenshot shows the Amazon S3 Overview page for a bucket named "simpilearn.samuel.com". The main message is "This bucket is empty. Upload new objects to get started." Below this, there are three sections: "Upload an object" (with a bucket icon), "Set object properties" (with a user icon), and "Set object permissions" (with a database icon). A note at the bottom left states: "Buckets are globally unique containers for everything that you store in Amazon S3." A note at the bottom right states: "After you create a bucket, you can upload your objects (for example, your photo or video files)." A note in the center right states: "By default, the permissions on an object are private, but you can set up access control policies to grant permissions to others."

Click on upload to select a file to be added to the bucket

A file selection dialog box is overlaid on the S3 upload interface. The dialog shows a list of files from the "Desktop" folder, including "index.html", "ADD", "christian-wallpapers-your-way", "GPS request", "Sthaabithaa", and several "Day 2 Poll 2.1 Results" files. The "Open" button is visible at the bottom right of the dialog.

The S3 upload interface in the background includes a large "Upload an object" button, a note about buckets being unique containers, and a "Select a file to be added" button at the bottom right.

Select a file to be added

# Done

The screenshot shows the AWS S3 console interface. At the top, there's a navigation bar with the AWS logo, 'Services' dropdown, 'Resource Groups' dropdown, and user information ('Asirvatham', 'Global'). Below the navigation is a breadcrumb trail: 'Amazon S3 > simplilearn.samuel.com'. The main area has tabs: 'Overview' (selected), 'Properties', 'Permissions', and 'Management'. A search bar says 'Type a prefix and press Enter to search. Press ESC to clear.' Below the search bar are buttons for 'Upload' (blue), '+ Create folder' (white), and 'More' (dropdown). To the right, it says 'US West (Oregon)'. The main content area shows a table with one item:

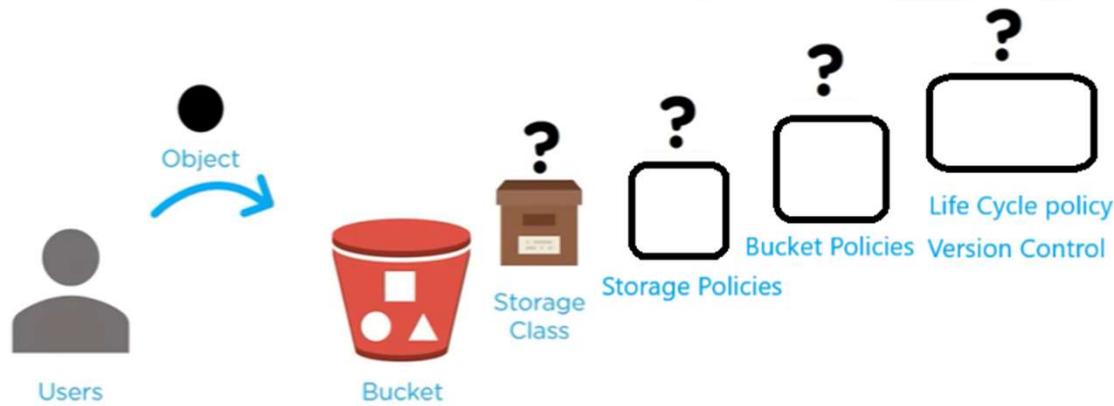
Name	Last modified	Size	Storage class
christian-wallpapers-your-way.jpg	Jun 11, 2018 6:36:25 AM GMT+0530	576.7 KB	Standard

Below the table, it says 'Viewing 1 to 1'.

The file is now uploaded into the bucket

# How S3 Works?

- ✓ When files are uploaded to the bucket, the user will specify the type of S3 storage class to be used for those specific objects
- ✓ Later, users can define features to the bucket like bucket policy, lifecycle policies, versioning control etc.



# Storage Classes

	S3 Standard	S3 Intelligent-Tiering	S3 Standard-IA	S3 One Zone-IA	S3 Glacier	S3 Glacier Deep Archive
<b>Designed for durability</b>	99.999999999% (11 9's)					
<b>Designed for availability</b>	99.99%	99.9%	99.9%	99.5%	99.99%	99.99%
<b>Availability SLA</b>	99.9%	99%	99%	99%	99.9%	99.9%
<b>Availability Zones</b>	≥3	≥3	≥3	1	≥3	≥3
<b>Minimum capacity charge per object</b>	N/A	N/A	128KB	128KB	40KB	40KB
<b>Minimum storage duration charge</b>	N/A	30 days	30 days	30 days	90 days	180 days
<b>Retrieval fee</b>	N/A	N/A	per GB retrieved	per GB retrieved	per GB retrieved	per GB retrieved

# Storage Classes

Amazon S3 Standard for frequent data access

Suitable for a use case where the latency should be low  
Example: Frequently accessed data will be the data of students' attendance, which should be retrieved quickly



Students' attendance

Amazon S3 Standard for infrequent data access

Can be used where the data is long lived and less frequently accessed  
Example: Students' academic record will not be needed on a daily basis, but if they have any requirement, their details should be retrieved quickly



Students record

Amazon Glacier

Can be used where the data has to be archived and high performance is not required  
Example: Ex-student's old record (like admission fee), will not be required on a daily basis and even if it is necessary, low latency is not needed



Student's old record

One Zone-IA Storage Class

Can be used where the data is infrequently accessed and stored in a single region  
Example: Student's report card is not used on a daily basis and stored in a single availability region (i.e., school)



Student's report card

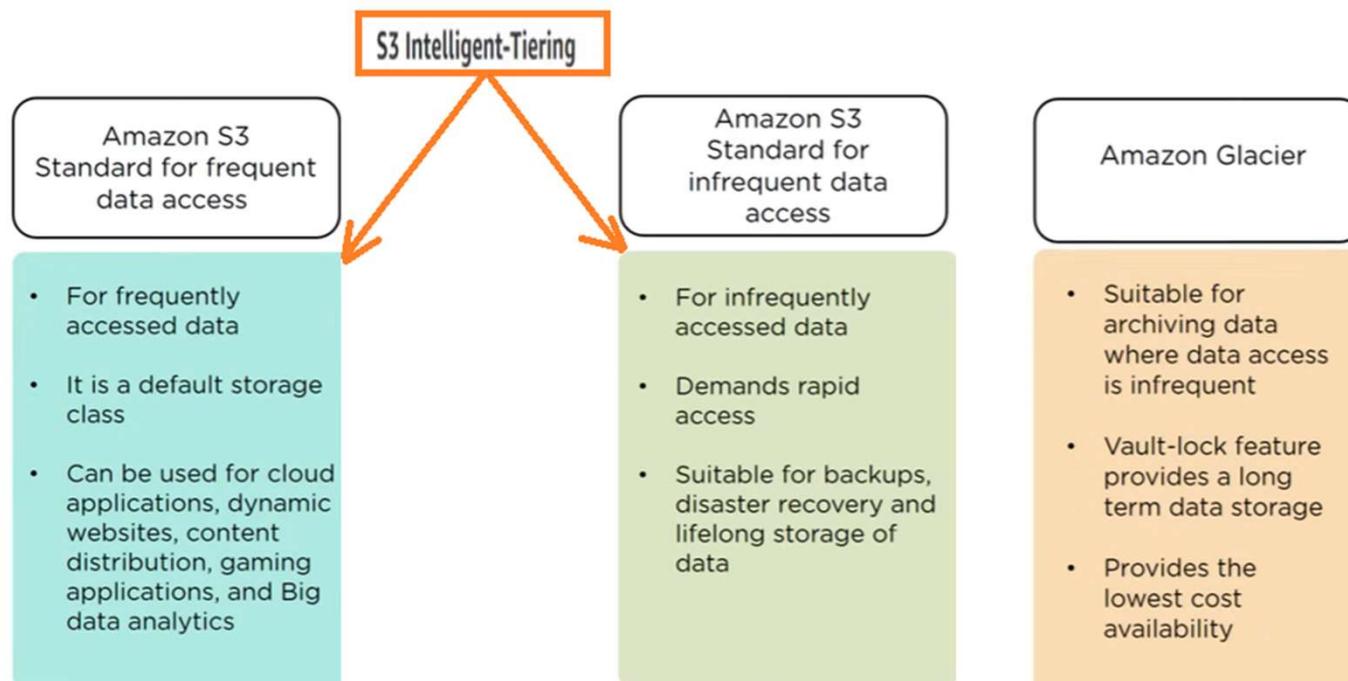
Amazon S3 Standard Reduced Redundancy storage

Suitable for a use case where the data is non critical and reproduced quickly  
Example: Books in the library are non critical data and can be replaced if lost

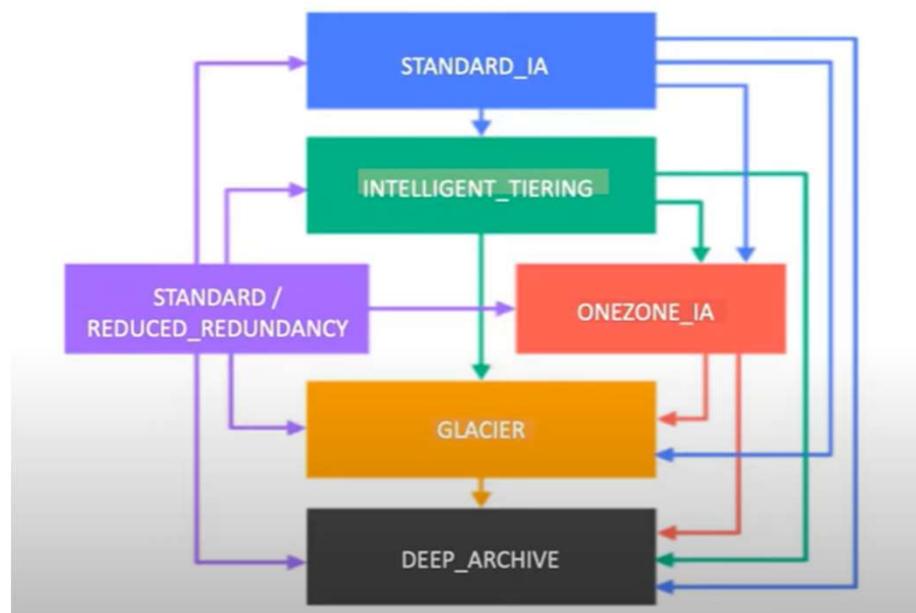


Library Books

# Data Movement



# Data Movement



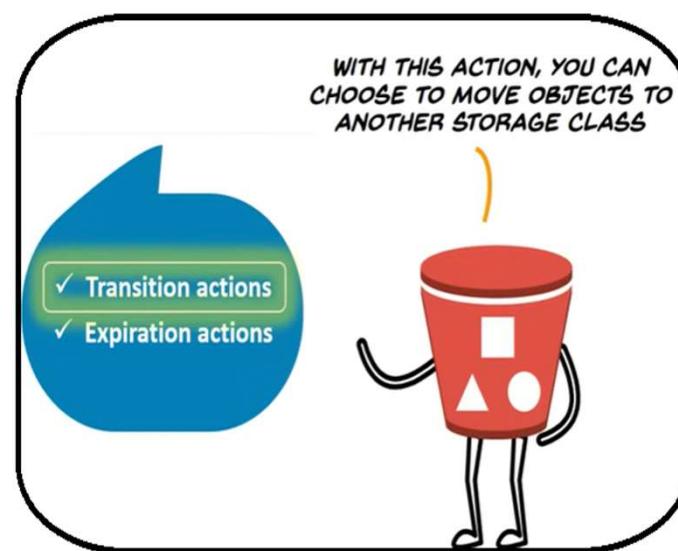
# Life Cycle Management

In lifecycle management, Amazon S3 applies a set of rules that define actions to a group of objects

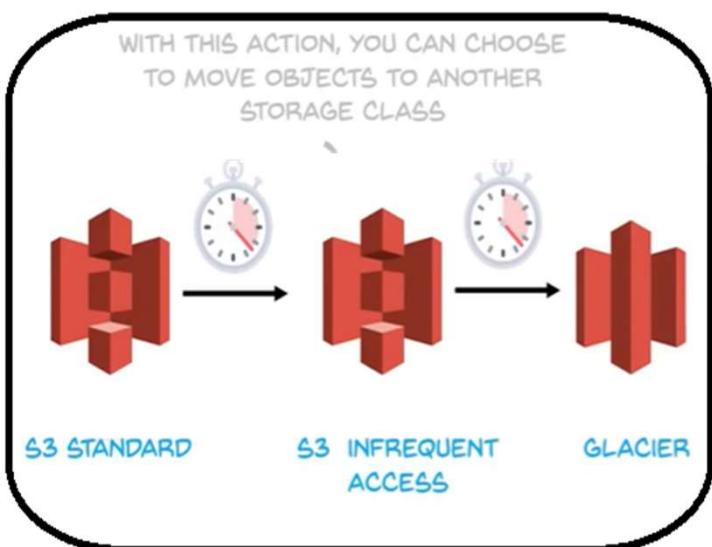
WITH LIFECYCLE MANAGEMENT, YOU CAN MANAGE AND STORE YOUR OBJECTS COST EFFECTIVELY



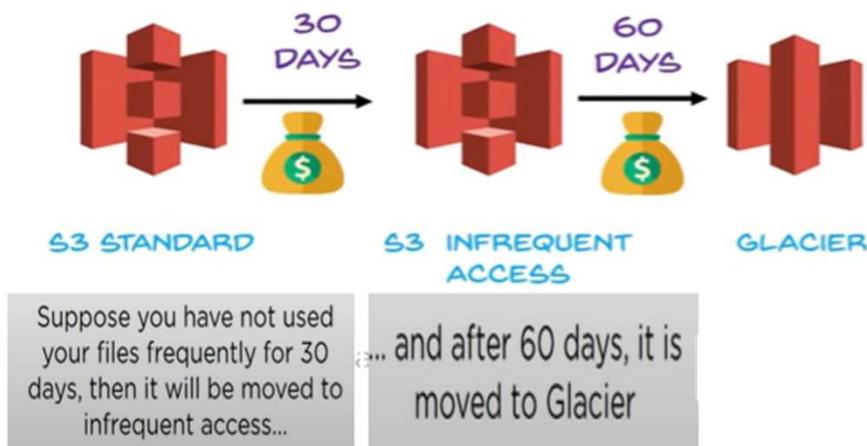
WITH THIS ACTION, YOU CAN CHOOSE TO MOVE OBJECTS TO ANOTHER STORAGE CLASS



WITH THIS ACTION, YOU CAN CHOOSE TO MOVE OBJECTS TO ANOTHER STORAGE CLASS



# Transition Action - Example



## Transition actions

THIS LIFECYCLE MANAGEMENT HELPS YOU TO AUTOMATICALLY MIGRATE YOUR DATA TO LOWER COST STORAGE AS YOUR DATA AGES



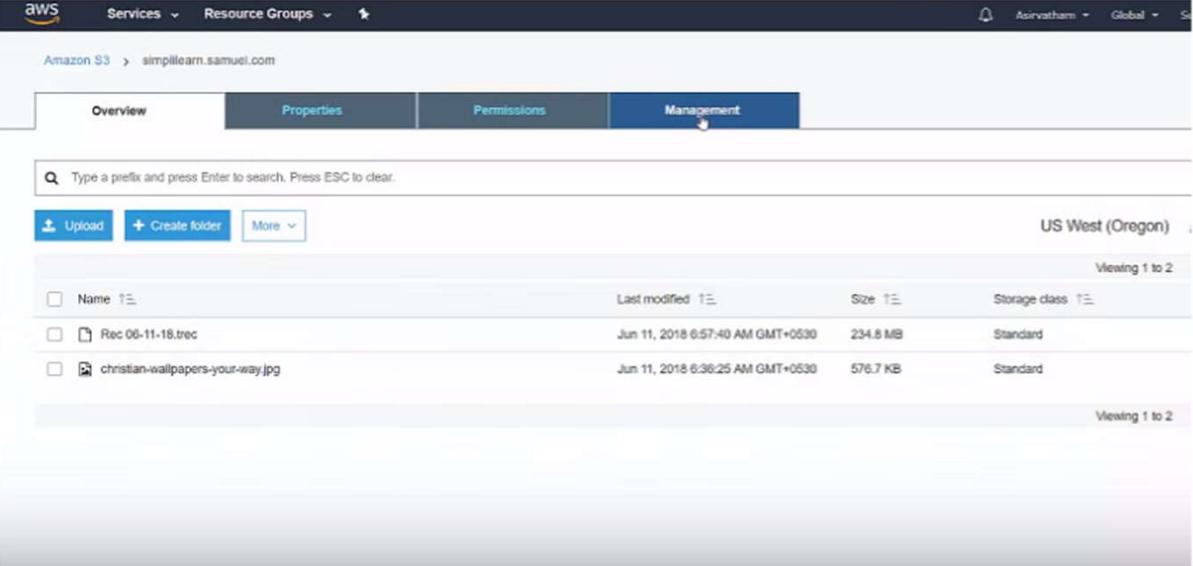
# Expiration Action



HERE, S3 REMOVES ALL THE  
OBJECTS IN THE BUCKET WHEN  
A SPECIFIED DATE OR TIME  
PERIOD IN THE OBJECT'S  
LIFETIME IS REACHED



# Life Cycle Management - Practical



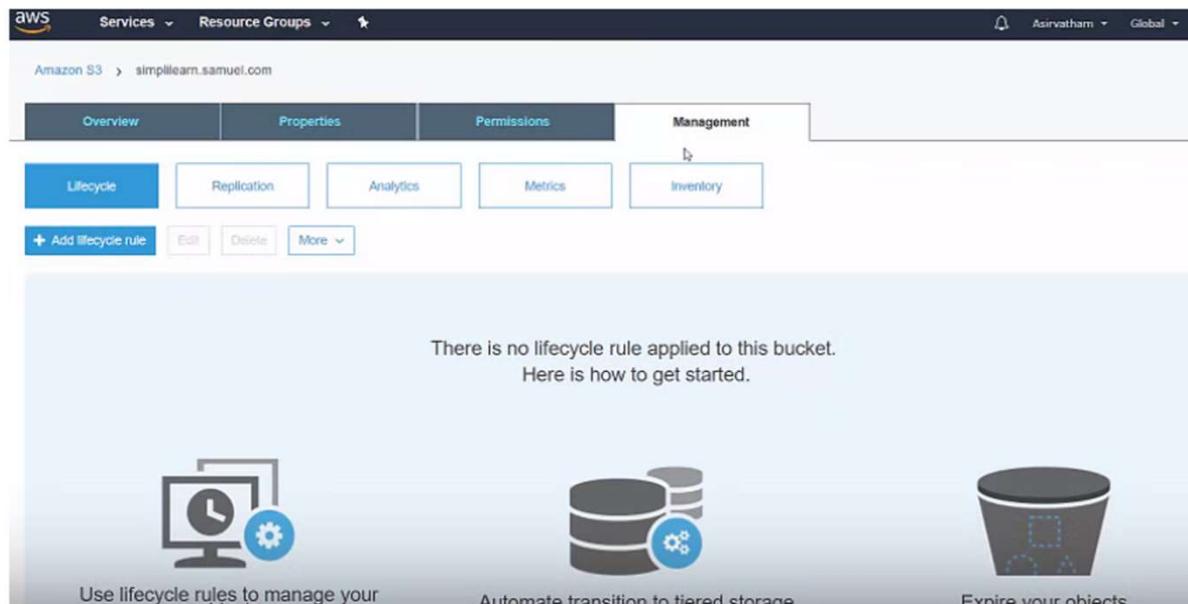
The screenshot shows the AWS S3 Management console for a bucket named "simplilearn.samuel.com". The "Management" tab is selected in the top navigation bar. Below the navigation, there is a search bar with placeholder text "Type a prefix and press Enter to search. Press ESC to clear." and buttons for "Upload", "Create folder", and "More". The main area displays two items in a table:

Name	Last modified	Size	Storage class
Rec 06-11-18.trec	Jun 11, 2018 6:57:40 AM GMT+0530	234.8 MB	Standard
christian-wallpapers-your-way.jpg	Jun 11, 2018 6:38:25 AM GMT+0530	576.7 KB	Standard

Below the table, there are two small callout boxes with the text "Viewing 1 to 2".

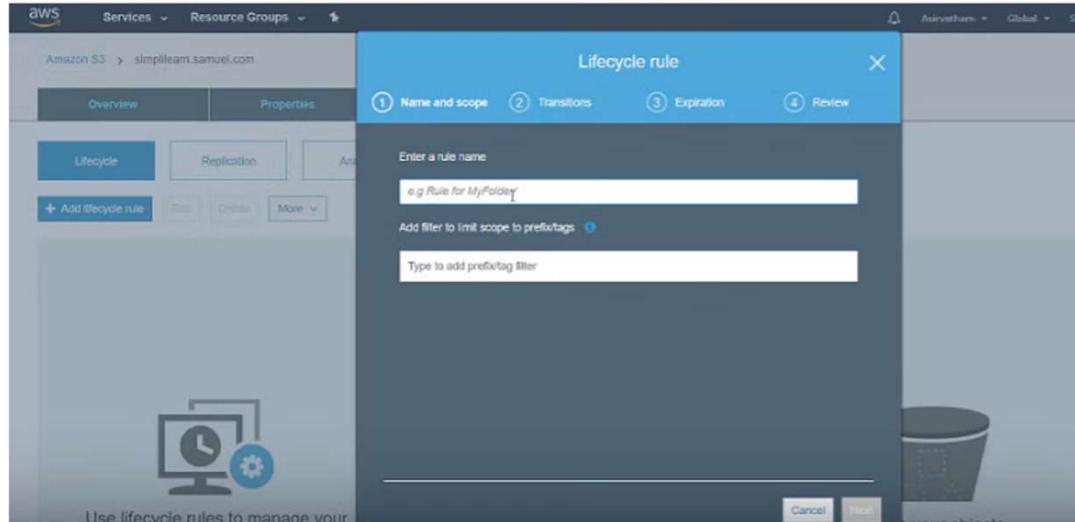
From within your bucket select management

# Set Rules

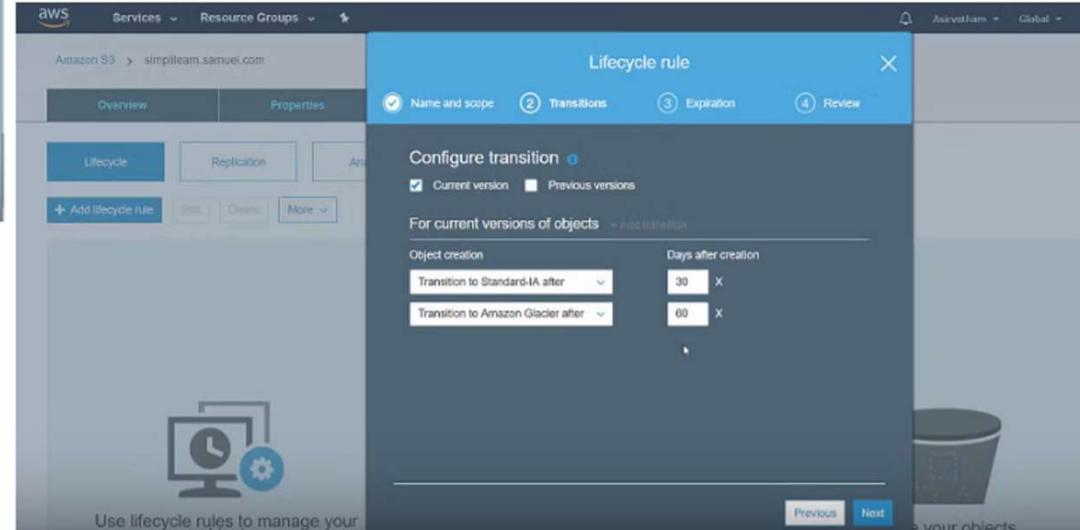


Select "Lifecycle" and then click on the "Add lifecycle rule."

# Rule Name and Scope

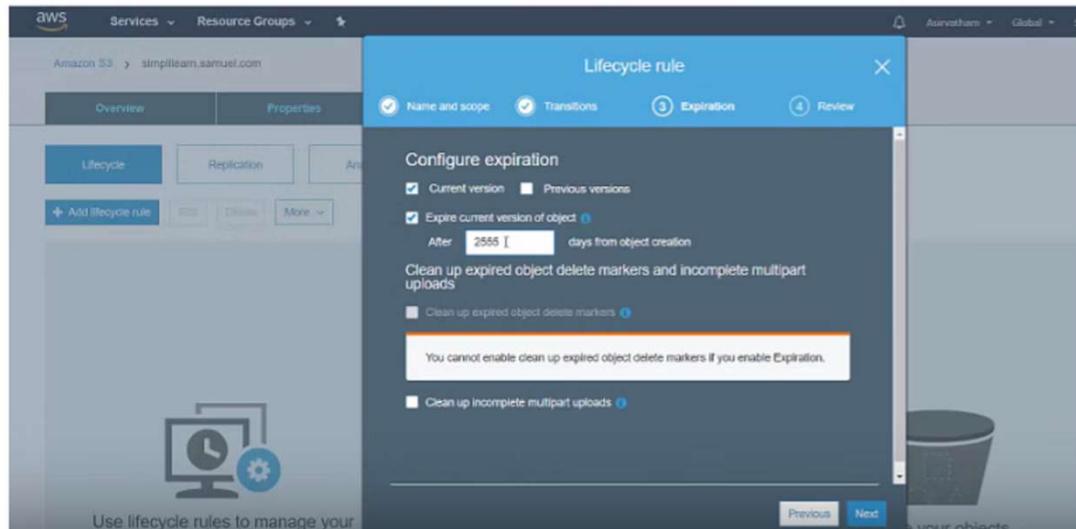


Add a rule name and scope



Configure transaction options

# Set Expiration Details



Set up expiration details

Save and use



# Bucket Policy

- ✓ Bucket policy is an IAM policy where you can allow and deny permission to your Amazon S3 resources
- ✓ With bucket policy, you also define security rules that apply to more than one file within a bucket
- ✓ For example: If you do not want a user to access the “Simplilearn” bucket, then with the help of JSON script you can set permissions



An Identity and Access Management (IAM) bucket policy is a mechanism that controls access to resources in a bucket, such as an Amazon S3 bucket or Google Cloud bucket:

# Bucket Policy Tool

<https://awspolicygen.s3.amazonaws.com/policygen.html>

Bucket policy is an **IAM** policy where you can allow or deny permission to your Amazon S3 resources. With bucket policy, you also define security rules that apply to more than one file within a bucket. For example: If you do not want a user to access the “Simplilearn” bucket, then with the help of JSON script, you can set permissions. As a result, a user would be denied access to the bucket.

The screenshot shows a web-based policy generator tool. At the top, it says "Step 1: Select Policy Type". It asks for a "Policy Type" and has a dropdown menu set to "SQS Queue Policy". Below this, "Step 2: Add Statement(s)" is shown, with fields for "Effect" (set to "Allow"), "Principal" (empty), "AWS Service" (set to "Amazon SQS"), "Actions" (empty), and "Amazon Resource Name (ARN)" (empty). There's also an "Add Conditions (Optional)" section with a button. At the bottom, "Step 3: Generate Policy" is shown, with a note about generating a policy document from statements.

Use an online tool to generate a policy. Select the type of policy as an S3 bucket policy. Select the appropriate effect. In this case, denying access.

# Find ARN

The screenshot shows the Amazon S3 console interface. On the left, there's a search bar labeled "Search for buckets" and three buttons: "+ Create bucket", "Delete bucket", and "Empty bucket". Below these are eight listed buckets:

Bucket name	Access
cf-templates-1rcimun6t4cb7-ap-south-1	Not public *
cf-templates-1rcimun6t4cb7-us-east-1	Not public *
cf-templates-1rcimun6t4cb7-us-west-2	Not public *
ctsaawstraining123	Not public *
ctsaawstraining123.com	Not public *
ctsaawstrainingreplication.com	Not public *
elasticbeanstalk-us-east-1-672403442155	Not public *
simplilearn.samuel.com	Not public *

On the right, a detailed view of the "simplilearn.samuel.com" bucket is shown. It includes sections for Properties, Permissions, and Management. The "Properties" section has a "Copy Bucket ARN" button. The "Permissions" section lists the owner as "sammiee2000" and grants "Bucket policy: No", "Access control list: 1 Grantees", and "CORS configuration: No". The "Management" section shows "Lifecycle: Enabled", "Cross-region replication: Disabled", and "Analytics: Disabled".

Find the ARN of the bucket

# What is ARN?

Amazon Resource Name (ARN) is a unique string that identifies an Amazon S3 bucket in the Amazon Web Services (AWS) public cloud:

ARNs follow a naming convention that includes:

- Namespaces**: The individual elements of the ARN syntax
- Partition and service**: The locations where the resource resides
- Region**: The region code of the endpoint of a specific service
- Account-id**: The user's AWS account number

Example:

arn:*partition:service:region:account-id:resource-id*  
arn:*partition:service:region:account-id:resource-type/resource-id*  
arn:*partition:service:region:account-id:resource-type:resource-id*

# ARN Example

## partition

The partition in which the resource is located  
A *partition* is a group of AWS Regions. Each AWS account is scoped to one partition.

The following are the supported partitions:

- aws - AWS Regions
- aws-cn - China Regions
- aws-us-gov - AWS GovCloud (US) Regions

### *service*

The service namespace that identifies the AWS product.

### *region*

The Region code. For example, `us-east-2` for US East (Ohio). For the list of Region codes, see [Regional endpoints in the AWS General Reference](#).

### *account-id*

The ID of the AWS account that owns the resource, without the hyphens. For example, `123456789012`.

### *resource-type*

The resource type. For example, `vpc` for a virtual private cloud (VPC).

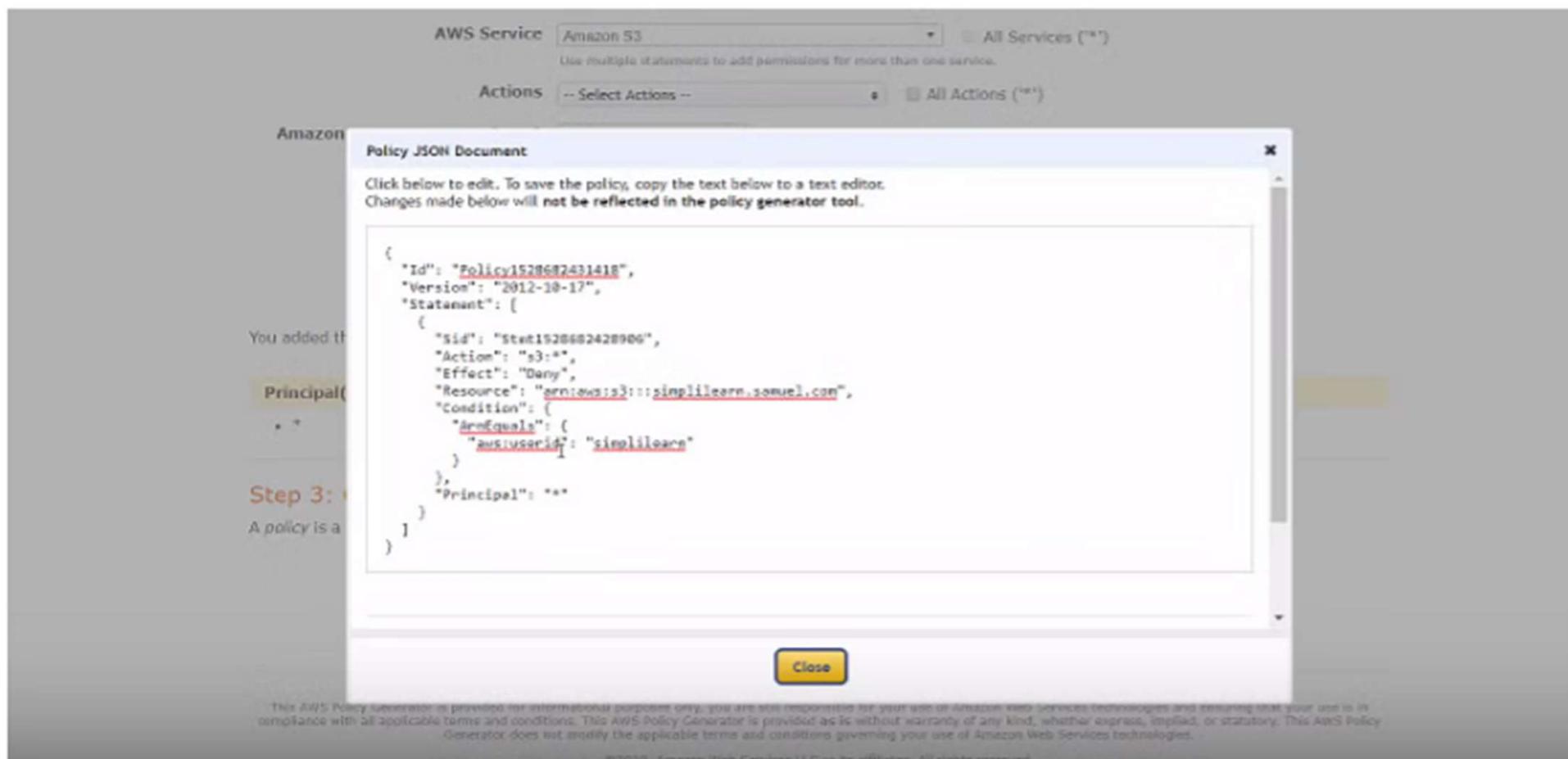
### *resource-id*

The resource identifier. This is the name of the resource, the ID of the resource, or a [resource path](#). Some resource identifiers include a parent resource (sub-resource-type/parent-resource/sub-resource) or a qualifier such as a version (resource-type:resource-name:qualifier).

## Examples

### IAM user

`arn:aws:iam::123456789012:user/johndoe`



Set up additional conditions and set up a JSON script to deny access to a particular user. In this case, “simplilearn.”

# Save Permission

The screenshot shows the AWS S3 Bucket Policy editor for the bucket 'simplilearn.samuel.com'. The 'Bucket Policy editor ARN' is listed as 'arn:aws:s3:::simplilearn.samuel.com'. A note below says 'Type to add a new policy or edit an existing policy in the text area below.' The policy document is displayed in a code editor:

```
1 {
2     "Id": "Policy1528682431418",
3     "Version": "2012-10-17",
4     "Statement": [
5         {
6             "Sid": "Stmt1528682428986",
7             "Action": "s3:*",
8             "Effect": "Deny",
9             "Resource": "arn:aws:s3:::simplilearn.samuel.com",
10            "Condition": {
11                "ArnEquals": {
12                    "aws:userid": "simplilearn"
13                }
14            },
15            "Principal": "*"
16        }
17    ]
18 }
```

The line 'aws:userid': 'simplilearn' is highlighted with a blue background. At the bottom right, there are 'Delete', 'Cancel', and 'Save' buttons.

Go back to the bucket and set up a bucket policy under “Permissions.” Then click on “Save.”

# Two Methods

- ✓ Amazon S3 provides IT teams a highly durable, protected and scalable infrastructure designed for object storage
- ✓ Amazon S3 protects your data using 2 methods:
  - ❑ Data Encryption and
  - ❑ Versioning



Data encryption



Versioning

# Data Protection

- ✓ It refers to protection of data while it's being transmitted and at rest
- ✓ Data Encryption can happen in two ways:



Client-Side Encryption - Data encryption at rest



Server-Side Encryption - Data encryption in motion

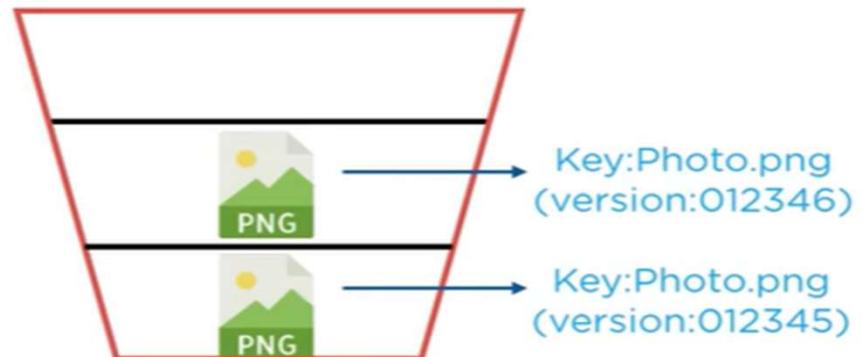
# Versioning

- ✓ It can be utilized to preserve, recover and restore early versions of every object you store in your Amazon S3 bucket
- ✓ Unintentional erase or overwriting of objects can be easily regained with versioning

**IN ONE BUCKET, YOU CAN HAVE SAME KEY NAME BUT DIFFERENT VERSION IDS**



For Example:



# Enable Versioning

The screenshot shows the AWS S3 Properties tab for the bucket 'simplilearn.samuel.com'. The 'Versioning' section is highlighted with a red box and a red arrow pointing from the main properties page to the modal dialog.

**Versioning**  
Keep multiple versions of an object in the same bucket.  
[Learn more](#)  
 Disabled

**Server access logging**  
Set up access log records that provide details about access requests.  
[Learn more](#)  
 Disabled

**Object-level logging**  
Record object-level API activity using the CloudTrail data events feature (additional cost).  
[Learn more](#)

**Default encryption**  
Automatically encrypt objects when stored in Amazon S3  
[Learn more](#)

**Static website hosting**

**Versioning**

Enable versioning  
This bucket has one or more lifecycle rules. After you enable versioning, these rules are applied only to the current version of objects. To manage previous versions, you need to configure the rules to apply to those versions.

Suspend versioning  
This suspends the creation of object versions for all operations but preserves any existing object versions.

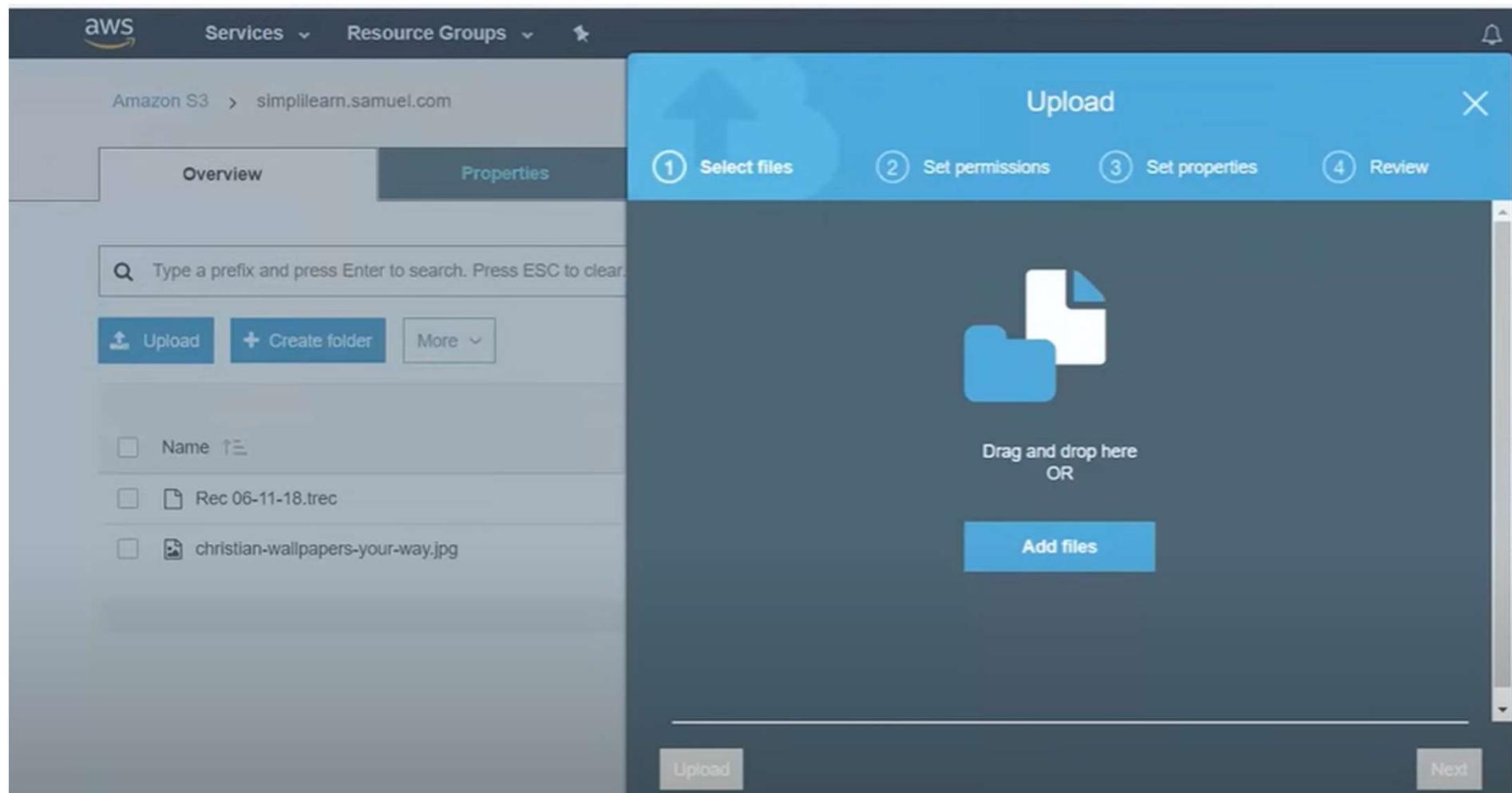
[Cancel](#) [Save](#)

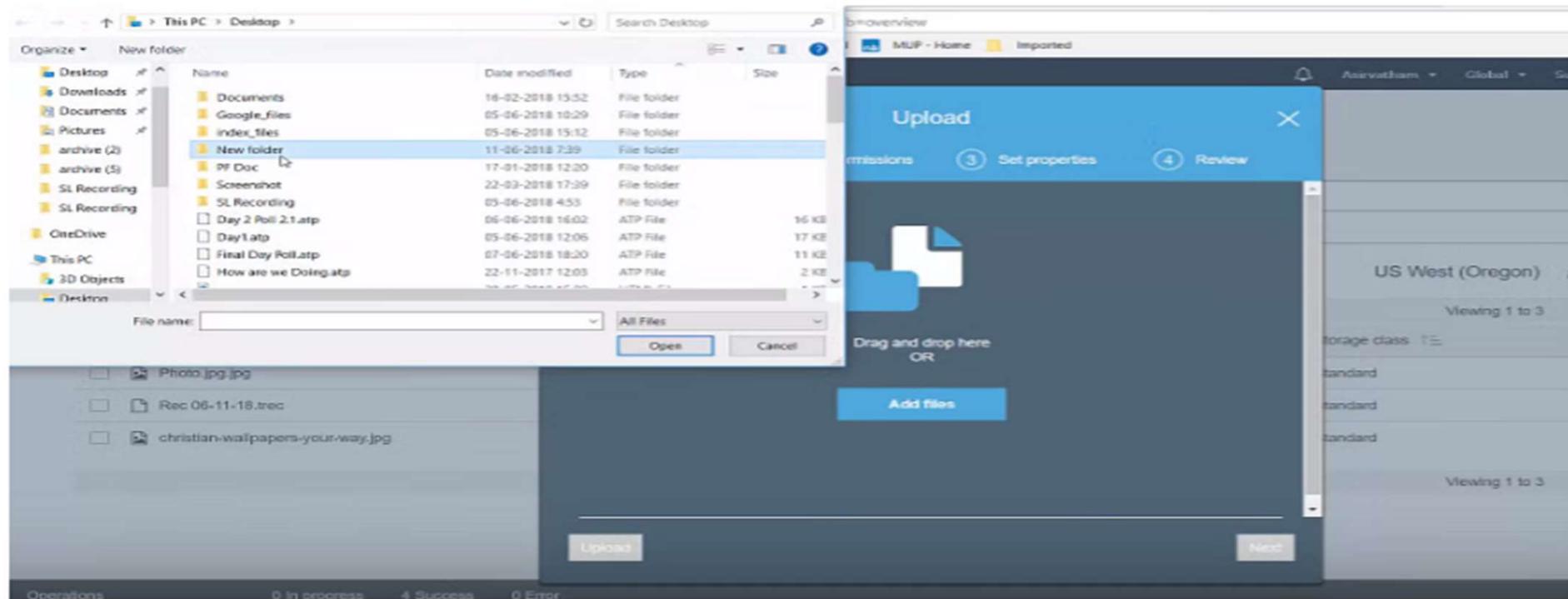
**Server access logging**  
Set up access log records that provide details about access requests.  
[Learn more](#)  
 Disabled

**Static website hosting**  
Host a static website, which does not require server-side technologies.  
[Learn more](#)  
 Disabled

Go to your bucket, select proper

# Upload an Object





**Upload a File and then**  
**Upload another file of the same name**

Amazon S3 > simplilearn.samuel.com

**Photo.jpg.jpg** Latest version

Version	Last modified	Storage class	Actions
Jun 11, 2018 7:41:15 AM GMT+0530 (Latest version)	Jun 11, 2018 7:41:15 AM GMT+0530	Standard	
Jun 11, 2018 7:40:35 AM GMT+0530	Jun 11, 2018 7:40:35 AM GMT+0530	Standard	

**Owner**  
sammilee2000

**Last modified**  
Jun 11, 2018 7:41:15 AM GMT+0530

**Etag**  
0e218ea924b8f5f9e915e303e8cd7cbe

**Storage class**  
Standard

**Server-side encryption**  
None

**Expiration date**  
Jun 10, 2025 5:30:00 AM GMT+0530

**Expiration rule**  
Expire after 7

Select the file and alternate between its current and older versions

# Switch Back Possible

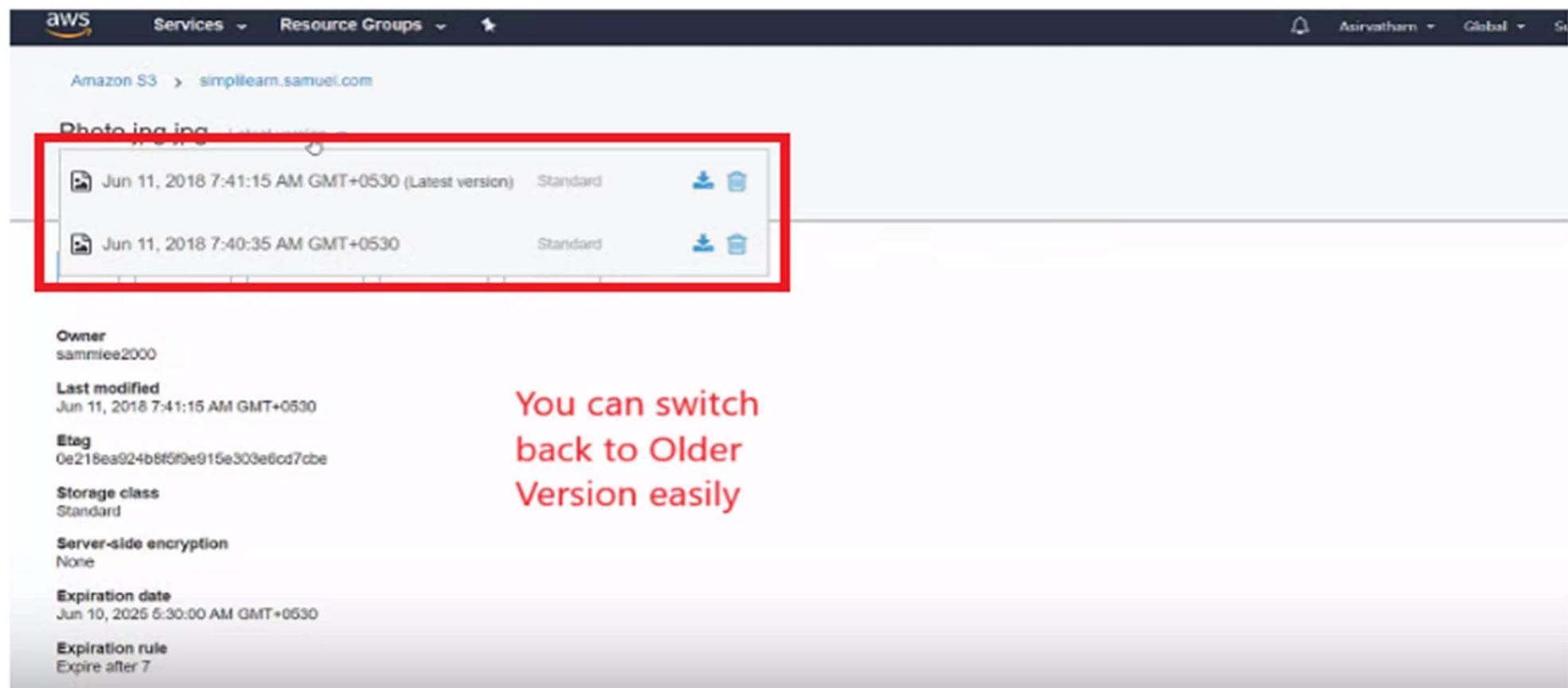


Photo.jpg (2 versions)

Last modified	Version ID	Storage class	Actions
Jun 11, 2018 7:41:15 AM GMT+0530 (Latest version)	0e218ea924b8f5f9e915e303e6cd7cbe	Standard	
Jun 11, 2018 7:40:35 AM GMT+0530	0e218ea924b8f5f9e915e303e6cd7cbe	Standard	

**Owner**  
sammiee2000

**Last modified**  
Jun 11, 2018 7:41:15 AM GMT+0530

**Etag**  
0e218ea924b8f5f9e915e303e6cd7cbe

**Storage class**  
Standard

**Server-side encryption**  
None

**Expiration date**  
Jun 10, 2025 6:30:00 AM GMT+0530

**Expiration rule**  
Expire after 7

You can switch back to Older Version easily

Select the file and alternate between its current and older versions

# Cross Region Replication

Cross-Region Replication provides automatic copying of every object uploaded to your buckets (source bucket and destination bucket) in different AWS regions



Note: Versioning must be turned on to enable CRR

# Create New Bucket in Different Region

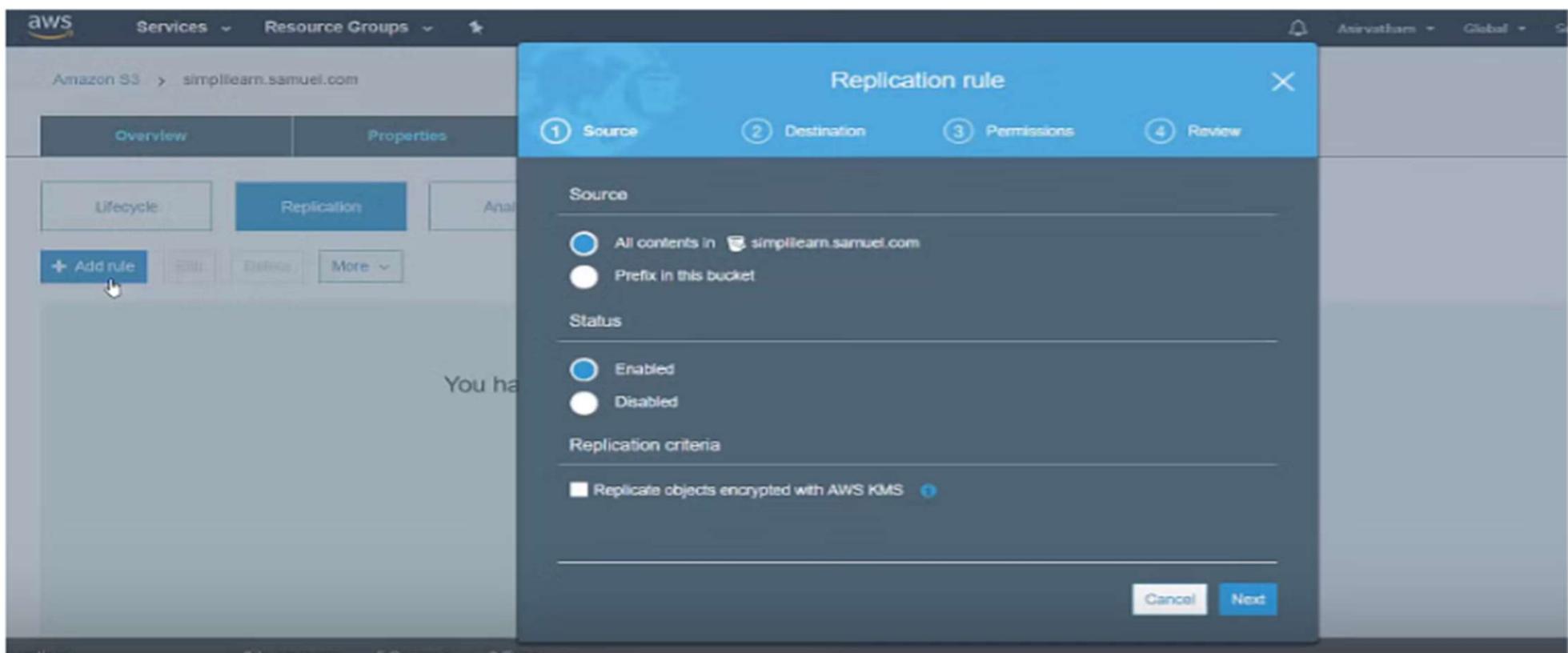
Cross-region replication provides automatic copying of every object uploaded to your buckets (source and destination bucket) in different AWS regions. Versioning needs to be turned on to enable CRR.

The screenshot shows the 'Create bucket' dialog box from the Amazon S3 console. The dialog is divided into four steps: 1. Name and region, 2. Set properties, 3. Set permissions, and 4. Review. Step 1 is active. The 'Bucket name' field contains 'simpilearn.samuel.com'. A red box highlights this field, and a message below it says 'Bucket name is already owned by you'. The 'Region' dropdown is set to 'US West (Oregon)'. Below that, there's a section for 'Copy settings from an existing bucket' with a dropdown menu showing 'Select bucket (optional)' and '8 Buckets'. At the bottom are 'Create' and 'Cancel' buttons. To the left of the dialog, the main S3 dashboard lists several existing buckets, including 'simpilearn.samuel.com' which is highlighted in blue. On the right, a sidebar shows a list of 4 regions with their creation dates and times.

Date created	Region
Jun 7, 2018 1:03:21 PM GMT+0630	Jun 7, 2018 12:18:41 PM GMT+0630
Jun 7, 2018 12:53:24 PM GMT+0630	Jun 4, 2018 11:59:09 AM GMT+0630
Jun 5, 2018 2:44:43 PM GMT+0630	Jun 5, 2018 2:53:58 PM GMT+0630
Jun 5, 2018 9:59:16 AM GMT+0630	Jun 11, 2018 6:35:48 AM GMT+0630

Create a new bucket in a different region

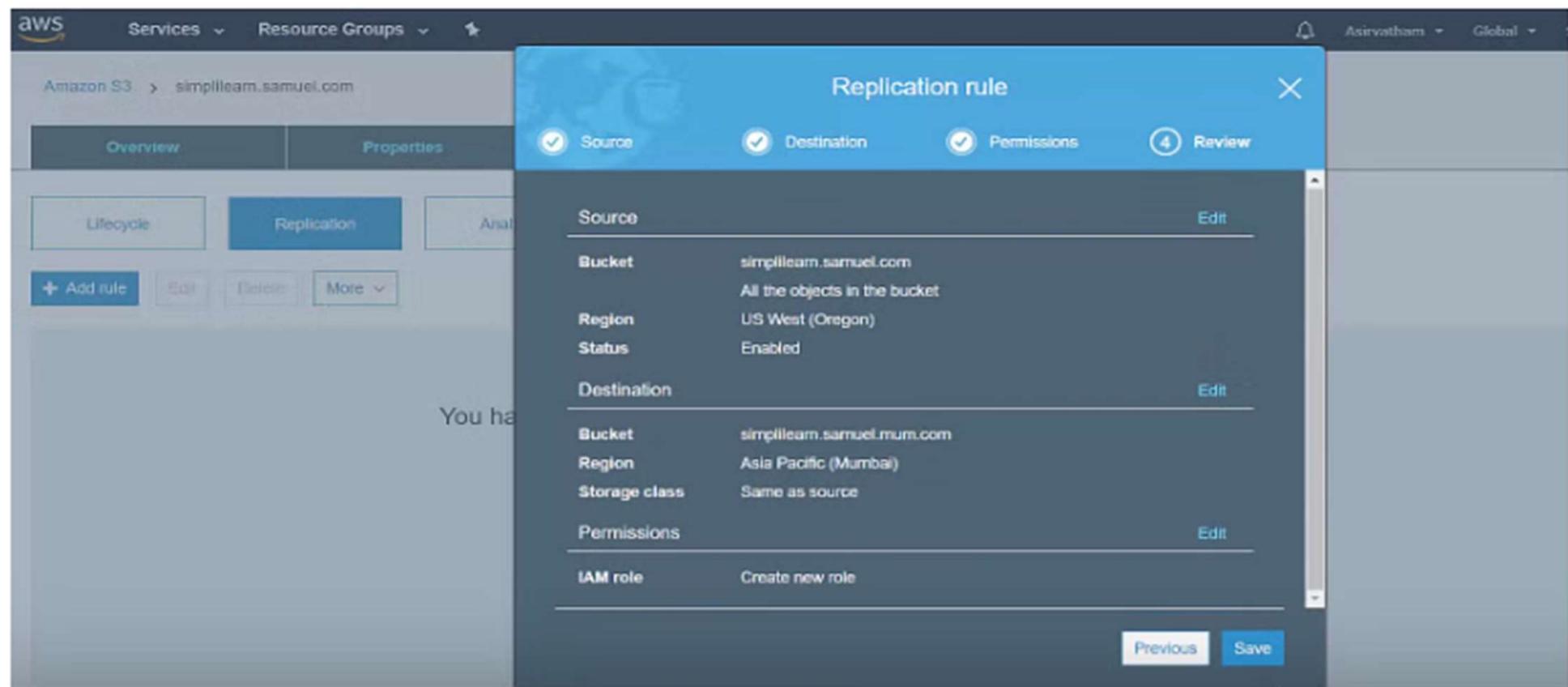
# Upload & start replication



Select uploaded file, go to “Management” and then replication.

**Enable Versioning on Source as well as Destination Bucket**

Here, click on “Add Rule.”



Select the source, destination, and IAM rule

# Transfer Acceleration

- ✓ It enables fast, easy and secure transfers of files over long distances between your client and S3 bucket
- ✓ The edge locations around the world provided by Amazon CloudFront are taken advantage by transfer acceleration
- ✓ It works via carrying data over an optimized network bridge that keeps running between the AWS Edge Location (closest region to your clients) and your Amazon S3 bucket

**CLOUDFRONT IS A CONTENT DELIVERY NETWORK (CDN) SERVICE THAT SECURELY TRANSFERS DATA TO YOUR PREFERRED DESTINATION WITH A HIGH TRANSFER SPEED**



# Process

<https://s3-accelerate-speedtest.s3-accelerate.amazonaws.com/en/accelerate-speed-comparsion.html>

Advanced settings

The screenshot shows the 'Advanced settings' section of an AWS S3 bucket's properties. It includes sections for Tags, Transfer acceleration, Events, Requester pays, and a modal dialog for Transfer acceleration.

- Tags:** Use tags to track your cost against projects or other criteria. Learn more. 0 Tags.
- Transfer acceleration:** Enable fast, easy and secure transfers of files to and from your bucket. Learn more. Suspended.
- Events:** Receive notifications when specific events occur in your bucket. Learn more. 0 Active notifications.
- Requester pays:** The requester (instead of the bucket owner) will pay for requests and data transfer. Learn more. Disabled.

**Transfer acceleration** (Modal Dialog)

Endpoint: simplilearn.samuel.com.s3-accelerate.amazonaws.com  
Use the new accelerated endpoint for faster data transfers, which will incur an additional fee.  
Want to compare your data transfer speed by region?

Enabled  
 Suspended

Cancel Save

Go to properties and select transfer acceleration to enable it

The screenshot shows the 'Requester pays' section of an AWS S3 bucket's properties. It includes sections for Tags, Transfer acceleration, Events, Requester pays, and a modal dialog for Transfer acceleration.

- Tags:** Use tags to track your cost against projects or other criteria. Learn more. 0 Tags.
- Transfer acceleration:** Enable fast, easy and secure transfers of files to and from your bucket. Learn more. Suspended.
- Events:** Receive notifications when specific events occur in your bucket. Learn more. 0 Active notifications.
- Requester pays:** The requester (instead of the bucket owner) will pay for requests and data transfer. Learn more. Disabled.

# Check for the speed test to see effect

<https://s3-accelerate-speedtest.s3-accelerate.amazonaws.com/en/accelerate-speed-comparsion.html>

# Amazon EBS- Is a Hard Disk With Root Volume

- EBS Volume
- EBS Snapshot
- Data Life Cycle Manager



Amazon EBS Volume



Amazon EBS Snapshots



Data Lifecycle Manager

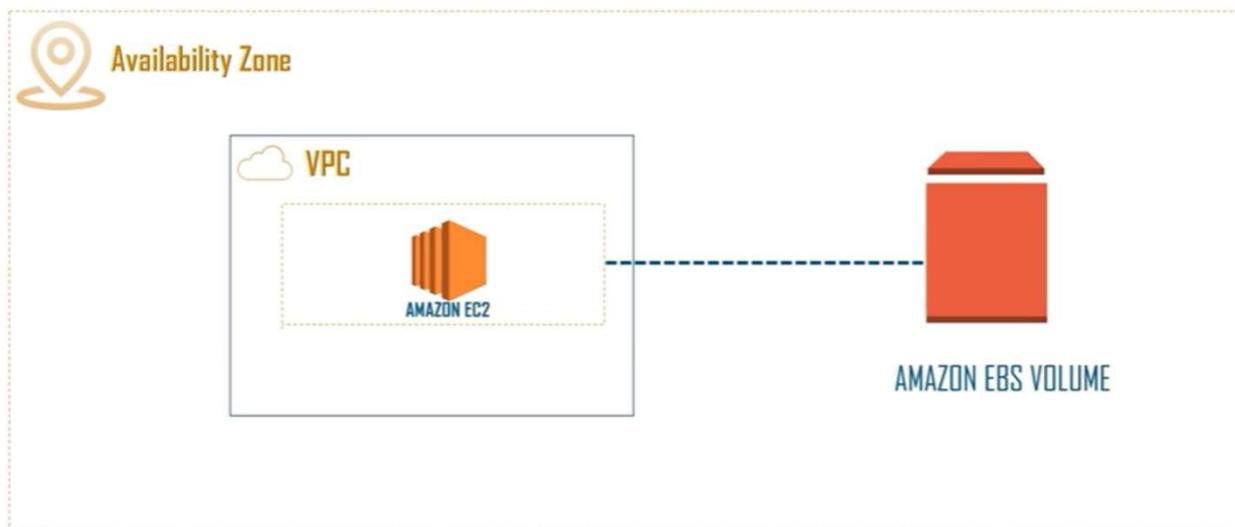
# Elastic Block Store volume – External-EBS

Amazon Elastic Block Store (EBS) is a block storage service that allows users to store data on Amazon Web Services (AWS):

- **Persistent data:** EBS stores data on AWS servers even when the EC2 instances are shut down.
- **Scalability:** EBS allows users to scale storage capacity at low subscription-based pricing.
- **High availability:** EBS guarantees 99.999% availability.
- **Encryption:** EBS offers encryption of data at rest using Amazon-managed keys or keys created through Amazon Key Management Service (KMS).
- **Snapshots:** EBS allows users to create point-in-time backups of Amazon EBS volumes.
- **Replication:** EBS automatically replicates every provisioned volume to other storage devices in the same Availability Zone.

EBS is designed to be used with Amazon Elastic Compute Cloud (EC2) instances. Users can attach EBS volumes to EC2 instances and use them like local hard drives

# About EBS Volume



These are External Block Storage

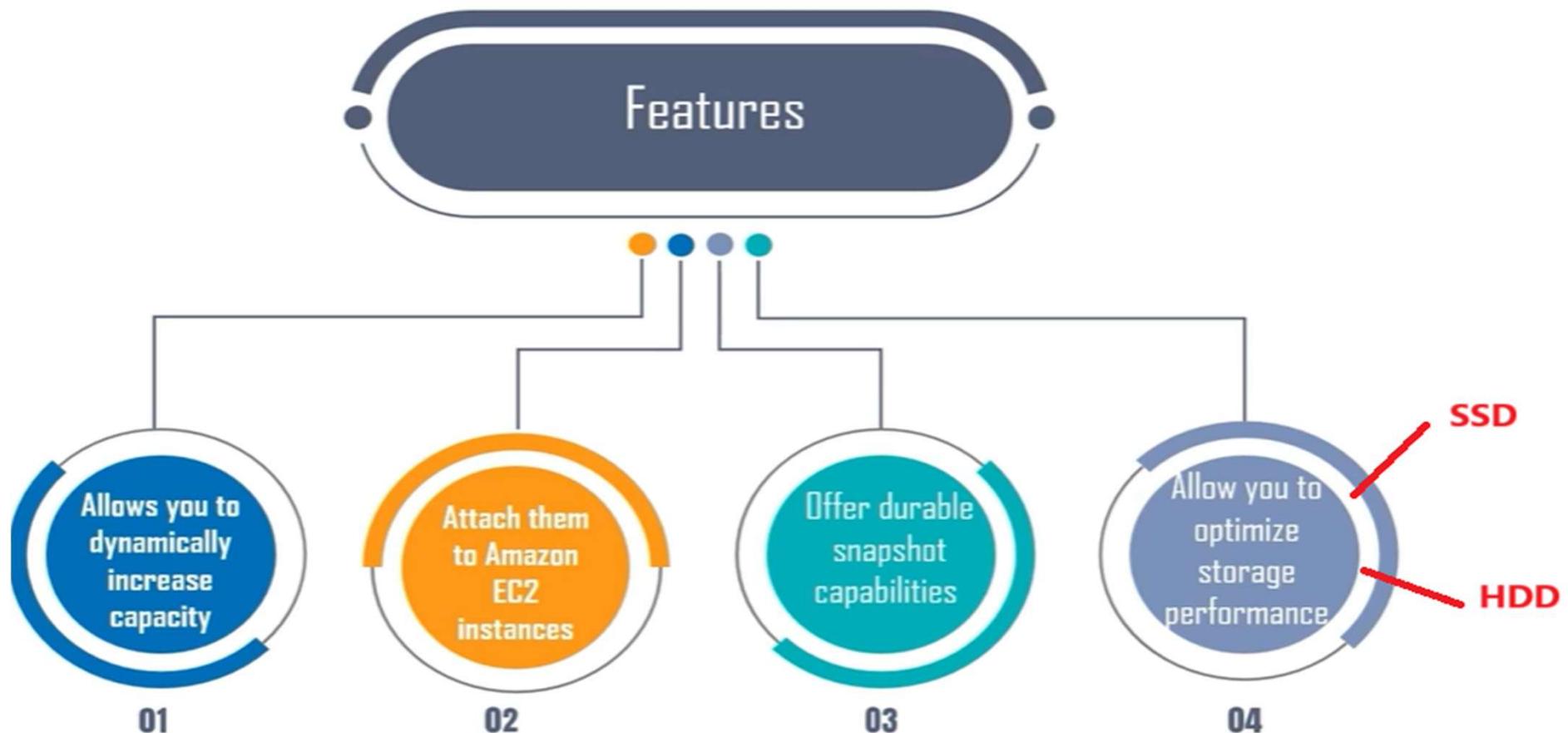
EBS Volume can be attached to only a single ECS Instance at a time.

Both EBS Volume and EC2 instance Must be in same availability zone

EBS Volumes are replicated by AWS Across multiple server but in the same availability zone.

This is to avoid data loss resulting from failure of any AWS component

# EBS Features



aws | Services | Search for services, features, blogs, docs, and more [Alt+S]

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Improve your application's availability and performance using the AWS Global Network

aws Services  [Alt+S]

▼ Instances

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- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

► Images

▼ Elastic Block Store

- Volumes**
- Snapshots

Lifecycle Manager

▼ Network & Security

Resources

You are using the following Amazon EC2 resources in the Asia Pacific (Mu)

Instances (running) 2 Dedicated Hosts

Instances Placement groups Volumes

Easily size, configure, and d Launch Wizard for SQL Ser

Launch instance To get started, launch an Amazon EC2 i occur in the cloud

aws Services  [Alt+S]

▼ Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

► Images

▼ Elastic Block Store

- Volumes**
- Snapshots

Lifecycle Manager

Create Volume Actions ▾

Filter by tags and attributes or search by keyword

	Name	Volume ID	Size	Volume Type	IOPS
<input type="checkbox"/>	Attached_Vol...	vol-0355903...	15 GiB	gp2	100
<input type="checkbox"/>	demo-ebs	vol-0d21971...	20 GiB	gp2	100
<input type="checkbox"/>	Demo_EBS	vol-0f6e893d...	10 GiB	gp2	100
<input type="checkbox"/>	Demo_EBS_...	vol-04c1873...	10 GiB	gp2	100
<input type="checkbox"/>		vol-082f6341...	25 GiB	gp2	100
<input type="checkbox"/>		vol-0ad21de...	100 GiB	io1	3000
<input type="checkbox"/>		vol-0bd7826...	10 GiB	gp2	100
<input type="checkbox"/>		vol-0db7467...	8 GiB	gp3	3000
<input type="checkbox"/>		vol-0f665a6e...	30 GiB	oo2	100

Select a volume above

## Create Volume

Volume Type: General Purpose SSD (gp2) ?

Size (GiB): 10 (Min: 1 GiB, Max: 16384 GiB)

1 IOPS: 100 / 3000 (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS)

Throughput (MB/s): Not applicable ?

Availability Zone\*: ap-south-1a ?

Snapshot ID:  Filter by attributes ?  
ap-south-1a  
ap-south-1b  
ap-south-1c

Encryption:  Encrypt this volume

Key: (128 characters maximum)

2 Value: (256 characters maximum)

This resource currently has no tags

Choose the Add tag button or click to add a Name tag ?

Add Tag 50 remaining (Up to 50 tags maximum)

Cancel Create Volume 3

aws | Services |  [Alt+]

New EC2 Experience

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

▼ Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

► Images

▼ Elastic Block Store

Create Volume Actions ▾

Volume ID : vol-0e35443c7676c43dd Add filter

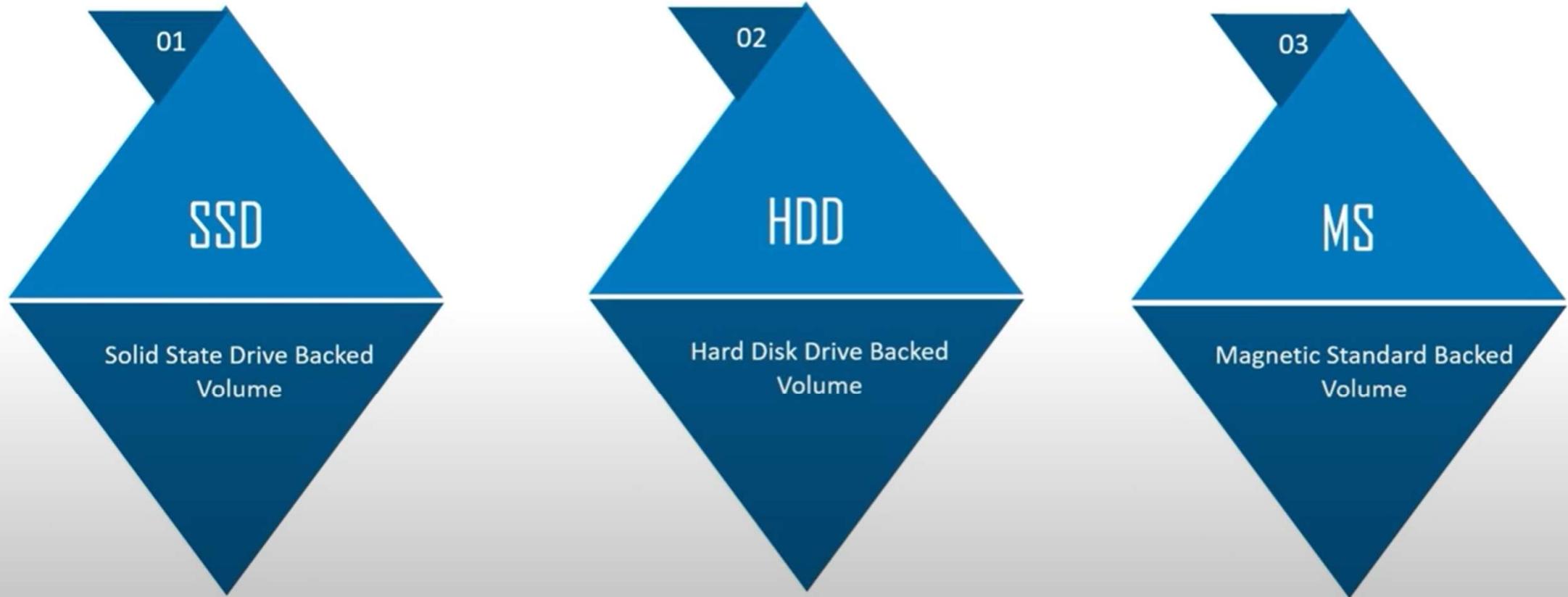
Name	Volume ID	Size	Volume Type
vol-0e35443...	10 GiB	gp2	

Newly Created Volume

Volumes: vol-0e35443c7676c43dd

Description	Status Checks	Monitoring	Tags
Volume ID	vol-0e35443c7676c43dd		
Alarm status	None		
Snapshot	-		
Availability Zone	ap-south-1b		
Encryption	Not Encrypted		

# EBS Volume Types



# SSD

## Solid State Drives (SSD)

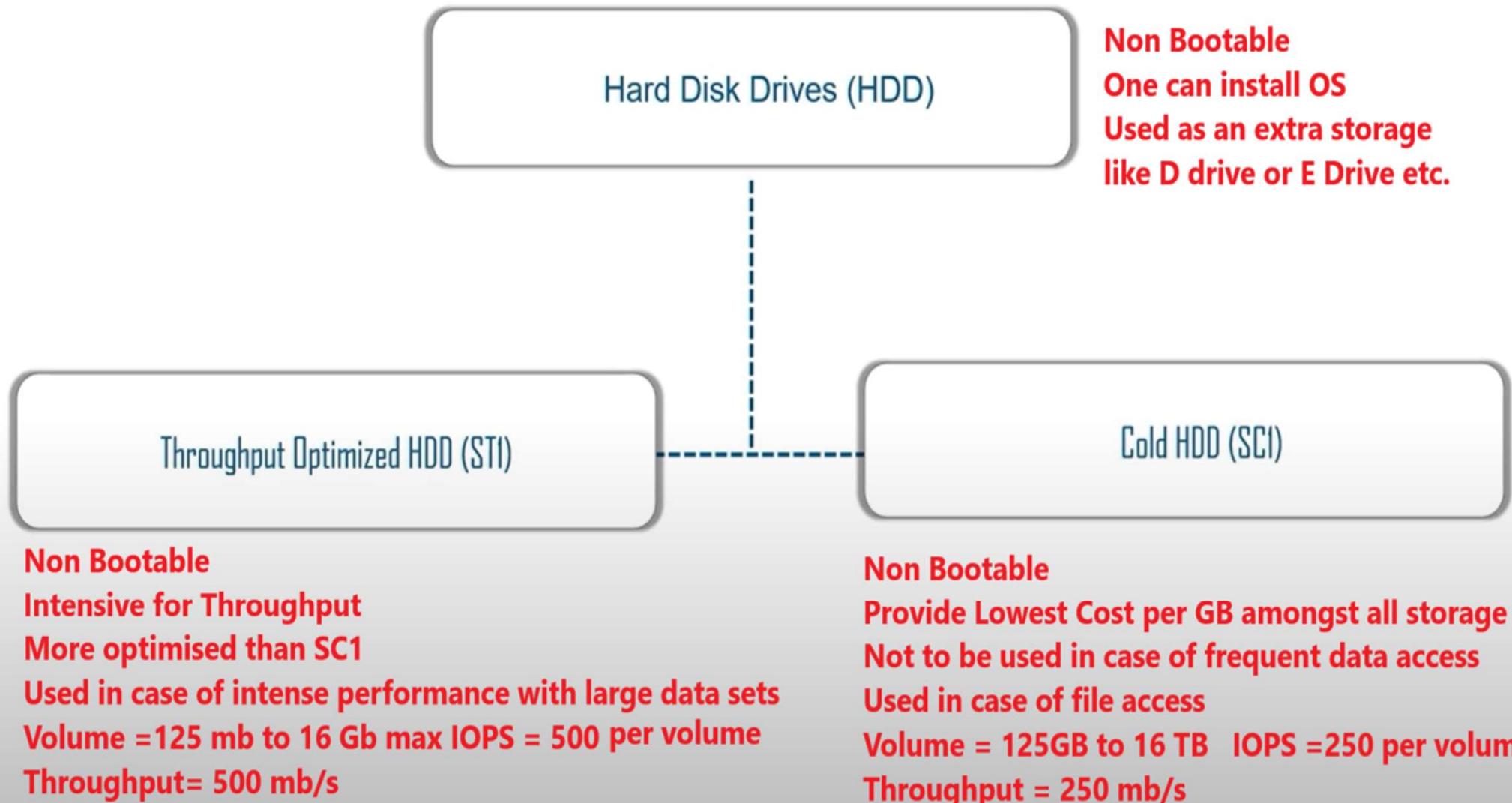
### General Purpose SSD

**Provide Balance Between Pricing and Performance I/O & Throughput**  
**Volume = 1 to 16 GB**  
**Throughput = 1000 mb/s**

### Provisioned IOPS SSD

**Provide High Performance and is generally used in Mission critical low latency & high throughput**  
**Volume = 4 GB to 64 TB**  
**Throughput = 4000 mb/s**  
**Used in case of high frequency read & write operations**

# HDD



# Magnetic Volumes



is used when data is accessed infrequently and storage cost is more important

Volume = 1 GB to 1 TB IOPS = 40 to 200 per volume

Throughput = 40 to 90 mb/s



# Attach Volume to instance

The screenshot shows the AWS EC2 Dashboard with the 'Elastic Block Store' section selected. Under 'Volumes', a list of volumes is displayed in a table. The columns include Name, Volume ID, Size, Volume Type, IOPS, Throughput, Snapshot, Created, Availability Zone, State, and Alarm Status. One volume, 'Attached\_Vol...', is highlighted with a cursor. A red box highlights the text 'Select a volume above' and the heading 'EC2 Dashboard --> EBS-->Volumes and Select the volume to be attached'.

Name	Volume ID	Size	Volume Type	IOPS	Throughput	Snapshot	Created	Availability Zone	State	Alarm Status
Attached_Vol...	vol-0355903...	15 GiB	gp2	100	-		July 6, 2022 at 5:37...	ap-south-1b	in-use	None
demo-ebs	vol-0d21971...	20 GiB	gp2	100	-		July 4, 2022 at 1:06...	ap-south-1a	in-use	None
Demo_EBS	vol-0f6e893d...	10 GiB	gp2	100	-		July 6, 2022 at 5:19...	ap-south-1b	available	None
Demo_EBS_...	vol-04c1873...	10 GiB	gp2	100	-		July 6, 2022 at 4:55...	ap-south-1a	available	None
	vol-082f6341...	25 GiB	gp2	100	-		July 6, 2022 at 3:29...	ap-south-1a	available	None
	vol-0ad21de...	100 GiB	io1	3000	-		July 7, 2022 at 4:29...	ap-south-1a	available	None
	vol-0bd7826...	10 GiB	gp2	100	-	snap-095d81d...	July 4, 2022 at 12:3...	ap-south-1b	in-use	None
	vol-0db7467...	8 GiB	gp3	3000	125		July 6, 2022 at 5:36...	ap-south-1a	in-use	None
	vol-0e35443...	10 GiB	gp2	100	-		July 7, 2022 at 4:53...	ap-south-1b	available	None

Select a volume above  
EC2 Dashboard --> EBS-->Volumes and Select the volume to be attached

Volumes | EC2 Management Con +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Volumes:sort=tag:Name

aws Services Search for services, features, blogs, docs, and more [Alt+S]

Limits

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Elastic Block Store

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Snapshots

Create Volume Action

Modify Volume

Create Snapshot

Create Snapshot Lifecycle Policy

Delete Volume

Attached\_0

demo-ebs

Demo\_EBS

Demo\_EBS\_

vol-0ad21de... 100 GiB io1 3000

vol-0bd7826... 10 GiB gp2 100

vol-0db7467... 8 GiB gp3 3000

vol-0e35443... 10 GiB ssd 100

Volumes: vol-082f63419ad88404c

Attach Volume

Volume: vol-082f63419ad88404c in ap-south-1a

Instance: Search instance ID or Name tag in ap-south-1a

Device: i-06c5329c121882be (DEMO\_EBS) (running)

Cancel Attach

Volume ID: vol-082f63419ad88404c

Outposts ARN: -

Size: 25 GiB

Check status: None

Make Sure that your  
Instance and Volume  
Are in same Data center  
or  
Availability ZONE

# Confirm volume attached with Instance

The screenshot shows the AWS CloudFormation console. On the left, the navigation pane includes 'Instances', 'Images', 'Elastic Block Store', 'Network & Security', and other services. The main area displays a stack named 'DEMO\_EBS' with two resources:

- EBS Demo**: An AWS Lambda function resource.
- AWS Lambda Function**: An AWS Lambda function resource.

Below the resources, the 'Outputs' section lists:

- Output 1**: Value: 'DEMO\_EBS'
- Output 2**: Value: 'arn:aws:lambda:ap-south-1:569717746472:DEMO\_EBS'

At the bottom, there are 'Next Step' and 'Create New Stack' buttons.

**Now ..Select the instance and check with Block Devices ..you can confirm that additional volume attached**

The screenshot shows the AWS CloudWatch Metrics console. A red box highlights the 'Block Device xvdf' section, which displays the following details:

Block Device xvdf	
EBS ID	vol-082f63419ad88404c
Root device type	EBS
Attachment time	2022-07-07T11:31:59.000Z
Block device status	attached
Delete on termination	False

Below this, another red box highlights the 'xvdf' label.

# Attach Volume to multiple Instance

The screenshot shows the AWS EBS service interface. The left sidebar has 'Instances' selected. A volume named 'vol-082f63419ad88404c' is listed in the main pane, which is highlighted with a red box. The volume details show a size of 25 GiB, type gp2, and IOPS of 100.

The screenshot shows the AWS EC2 service interface. The left sidebar has 'Instances' selected. A button labeled 'Launch Instance' is highlighted with a red box. Below it, two instances are listed: 'DEMO\_EBS' and 'EBSDemoExp'. Both instances are running in the 'ap-south-1a' availability zone.

The screenshot shows the AWS EC2 service interface. The left sidebar has 'Instances' selected. An 'Instance type' section is shown, detailing the t2.micro instance type. A 'Key pair (login) info' section is highlighted with a red box, showing 'Key pair name - required' set to 'WindowEBS'.

The screenshot shows the AWS AMI service interface. The left sidebar has 'Images' selected. A 'Name' field is highlighted with a red box, containing the value 'demo EBS'. Below it, the 'Application and OS Images (Amazon Machine Image)' section is shown, featuring a 'Quick Start' tab. The 'Windows' image is highlighted with a red box.

**select volume type**

The screenshot shows the 'Configure storage' section of the EC2 launch wizard. A red box highlights the dropdown menu where 'gp2' is selected. A red number '1' is placed above the dropdown. Below it, a note says: 'Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage'. At the bottom left is a 'Add new volume' button.

Allow HTTPS traffic from the internet  
Allow HTTP traffic from the internet  
Select  
Rules with source security group rule  
General purpose SSD (gp3)  
General purpose SSD (gp2)  
Provisioned IOPS SSD (io1)  
Provisioned IOPS SSD (io2)  
Cold HDD (sc1)  
Throughput Optimized HDD (st1)  
Magnetic (standard)  
1x 30 GiB gp2 Root volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

**View the instance running**

The screenshot shows the EC2 Instances page. A red box highlights the 'demo EBS' instance in the list. A red number '3' is placed above the list. The table columns are: Name, Instance ID, Instance Type, Availability Zone, and State. The 'demo EBS' row shows: Name - demo EBS, Instance ID - i-002ff0cc88cdade58, Instance Type - t2.micro, Availability Zone - ap-south-1a, State - running. Other instances listed are DEMO\_EBS and EBSDemoExp.

Name	Instance ID	Instance Type	Availability Zone	State
demo EBS	i-002ff0cc88cdade58	t2.micro	ap-south-1a	running
DEMO_EBS	i-06c5329c121882be	t2.micro	ap-south-1a	running
EBSDemoExp	i-0e6c820f145068d2f	t2.micro	ap-south-1b	running

**Launch the Instance and wait for success**

The screenshot shows the 'Launch an instance' success page. A green checkmark icon indicates success, followed by the message: 'Successfully initiated launch of instance (i-002ff0cc88cdade58)'. Below it is a 'Launch log' link. A red number '2' is placed next to the success message. The 'Next Steps' section includes a 'Get notified of estimated charges' link.

You've been opted into the new launch experience. [Find out more](#) about this experience or [send us feedback](#). You can still return to the previous version by opting-out.

Opt out to the old experience

Success  
Successfully initiated launch of instance (i-002ff0cc88cdade58)  
Launch log

Next Steps  
Get notified of estimated charges  
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier)

You can attach a **maximum of 27 EBS volumes** to an ec2 instance.

**1**

Select Volume and attach it to the instances

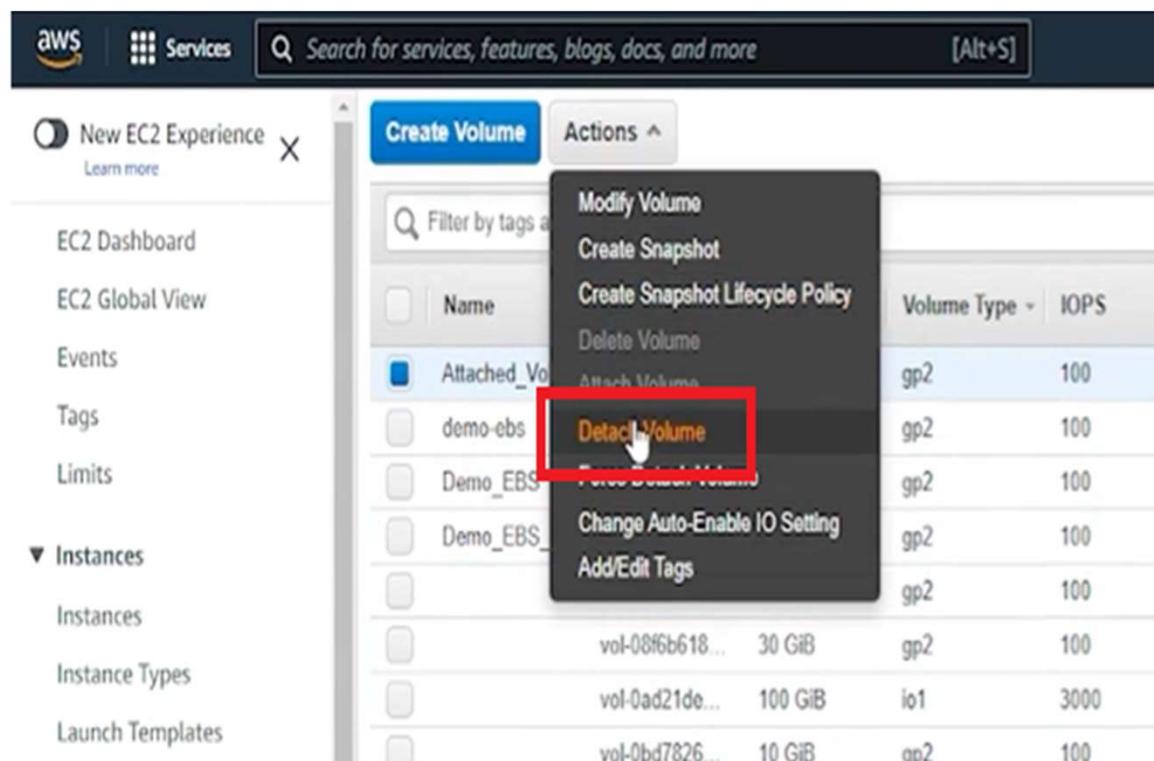
**2**

**3**

**4**

Repeat steps to attach one more instance

# Detach and Delete



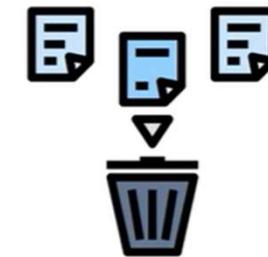
# EBS Snapshot – What can we do with that?



Store or Restore  
Data



Copy data



Delete Data

You Can Create  
5000 Volumes Per  
AWS Account  
And can have up to  
10000 snapshots  
Per account

You can back up the data on your Amazon EBS volumes by making point-in-time copies, known as *Amazon EBS snapshots*. A snapshot is an **incremental backup**, which means that we save only the blocks on the volume that have changed since the most recent snapshot. This minimizes the time required to create the snapshot and saves on storage costs by not duplicating data.

## DISCLAIMER BY AWS

**Important**

AWS does not automatically back up the data stored on your EBS volumes. For data resiliency and disaster recovery, it is your responsibility to create EBS snapshots on a regular basis, or to set up automatic snapshot creation by using [Automate backups with Amazon Data Lifecycle Manager](#) or [AWS Backup](#).

# About EBS Snapshots – point in time

EBS Snapshots are point-in-time images or copies of your EBS Volume

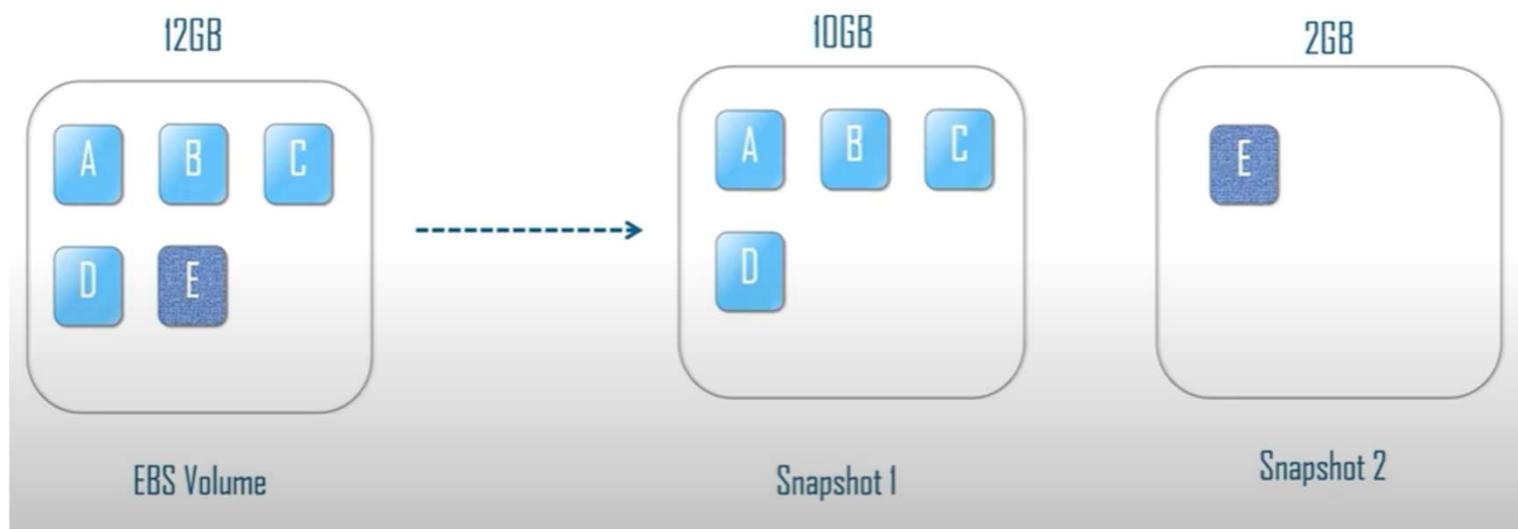
Per AWS Account, up-to 5000 Volumes can be created

Per Account, up-to 10,000 EBS Snapshots can be created

EBS Volumes are AZ Specific, Snapshots are Region Specific

EBS Snapshots are stored on S3

# Incremental Backup



# EBS Snapshot Features



# Create EBS Snapshot

The screenshot shows the AWS EC2 Snapshots interface. On the left, a sidebar lists various services like EC2 Dashboard, Events, Tags, Limits, Instances, Images, and Elastic Block Store. Under EBS, the 'Snapshots' option is selected and highlighted with a red box. In the main pane, there's a 'Create Snapshot' button at the top left, also highlighted with a red box. Below it is a table listing existing snapshots. A modal window titled 'Create Snapshot' is open, containing a success message: 'Create Snapshot Request Succeeded' with snapshot ID 'snap-01def14e6926574a7'. The modal has a close button in the top right. The main pane also shows a dropdown menu for selecting a volume to snapshot, with several options listed.

Snapshots > Create Snapshot

Create Snapshot

✓ Create Snapshot Request Succeeded

snap-01def14e6926574a7

Select a snapshot above

Specify the volume who's snapshot you want to take

Volume\*

Description

Encrypted

Value (256 characters maximum)

Add Tag

50 remaining (Up to 50 tags maximum)

\* Required

Cancel Create Snapshot

Name	Snapshot ID	Size	Description
snapshot-0b554ccf6020...	8 GiB	Created by	
snapshot-0dfc46ed28ec...	20 GiB	Created for	
snapshot-0ee47310546...	20 GiB	Created for	

# EBS Lifecycle

- Changing your phone or when your phone break down
- Losing your phone
- WhatsApp crashes etc...



## The Result



Users are now able to access their data whenever they need it  
With Amazon Data Lifecycle Manager, you can manage the lifecycle of your AWS resources  
Useful in big Cooperation where data are sensitive

## The Solution



WhatsApp recognize this issue & solved this by backing up your data  
Similarly, EBS data life cycle manager works in the same way  
They use cloud this service to store your data and made it accessible to you whenever you wanted it

# Simple Solution

01

Simple, automated way to back up data stored on EBS volumes

02

You can be sure that snapshots are cleaned up regularly

03

Use CloudWatch Events to monitor your policies

1,2 & go



# Process

Screenshot of the AWS Management Console showing the EC2 service page. The sidebar navigation includes:

- Events
- Tags
- Limits
- Instances
  - Instances
  - Instance Types
  - Launch Templates
  - Spot Requests
  - Savings Plans
  - Reserved Instances
  - Dedicated Hosts
  - Capacity Reservations
- Images
- Elastic Block Store
  - Volumes
  - Copy activity
  - Lifecycle Manager
- Network & Security

The "Lifecycle Manager" link in the Elastic Block Store section is highlighted with a red box.

Screenshot of the AWS Management Console showing the Policies > Create Lifecycle Policy page. The top navigation bar shows "Services" and a search bar.

Policies > Create Lifecycle Policy

## Create Lifecycle Policy

Data Lifecycle Manager enables you to automate the creation, retention, copy and deletion of EBS snapshots and EBS-backed AMIs. It also enables you to automate cross-account snapshot copy actions for snapshots that are shared with you, based on Amazon CloudWatch events.

- Policy type**  EBS snapshot policy  
 EBS-backed AMI policy  
 Cross-account copy event policy

- Select resource type**  Volume  
 Instance

**Description\*** schedule for ebs

**Target with these tags** This policy will be applied to EBS volumes with **any** of the following tags.

Policy Tags	Value	(256 characters maximum)
Tag key	aws:dim:lifecycle-policy-id	
	aws:dim:lifecycle-schedule-name	
	aws:recycle-bin:resource-in-bin	
	dim:managed	
Name		

## Welcome to Data Lifecycle Manager



Schedule and manage the creation and deletion of EBS snapshots

**Create Lifecycle Policy**

# Schedule

IAM role This policy must be associated with an IAM role that has the appropriate permissions. If you choose a role, you must grant relevant role permissions and setup trust relationships correctly. If you are unsure, choose Default role. [Learn more](#)

Default role  
If a default role does not exist, then a role with the required permissions will be automatically created.  
 Choose another role

## Policy Schedule 1

Schedules define how often the policy is triggered, and the specific actions that are to be performed. The policy must have at least one schedule, while schedules 2, 3, and 4 are optional.

Schedule name\* Schedule 1 i

Frequency Weekly i  
on  Mon  Tue  Wed  Thu  Fri  Sat  Sun

Starting at 09 : 00 UTC

Retention type\* Count i

Retain\* i

New EC2 Experience X

EC2 Dashboard EC2 Global View Events Tags Limits Instances Instances Instance Types Launch Templates Spot Requests Savings Plans

Create Lifecycle Policy Actions v

Policy ID	Description	Policy Type	State
policy-0679b95e116de2ca3	schedule for ebs	EBS snapshot policy	ENABLED

# EBS Backed AMI Policy

The screenshot shows the 'Create Lifecycle Policy' page in the AWS Management Console. At the top, there's a navigation bar with the AWS logo, 'Services' dropdown, search bar ('Search for services, features, blogs, docs, and more'), and keyboard shortcut '[Alt+S]'. Below the navigation, the path 'Policies > Create Lifecycle Policy' is shown.

The main section is titled 'Create Lifecycle Policy'. It includes a description of Data Lifecycle Manager and its capabilities. A 'Policy type' section has three options: 'EBS snapshot policy' (radio button), 'EBS-backed AMI policy' (radio button, selected), and 'Cross-account copy event policy'. A 'Description\*' field contains 'Ebs Schedule'. Below this, a note says 'Target with these tags' followed by a dropdown menu. The dropdown is open, showing a list of tag values: 'Attached\_Volume', 'demo-ebs', 'Demo\_EBS', 'DEMO\_EBS', 'Demo\_EBS\_Volume', 'EBSDemoExp', and 'Schedule 1'. A tooltip 'A value' is visible next to the dropdown. On the left, there are sections for 'Policy Tags' (with a 'Key' dropdown) and 'IAM Role'.

An AMI lifecycle policy in Amazon Elastic Block Store (EBS) is a policy that automates the creation, retention, and deregistration of EBS-backed Amazon Machine Images (AMIs). You can use Amazon Data Lifecycle Manager (DLM) to create and manage these policies.

You can modify as well as delete the Policy

That is all