AWS S3-2

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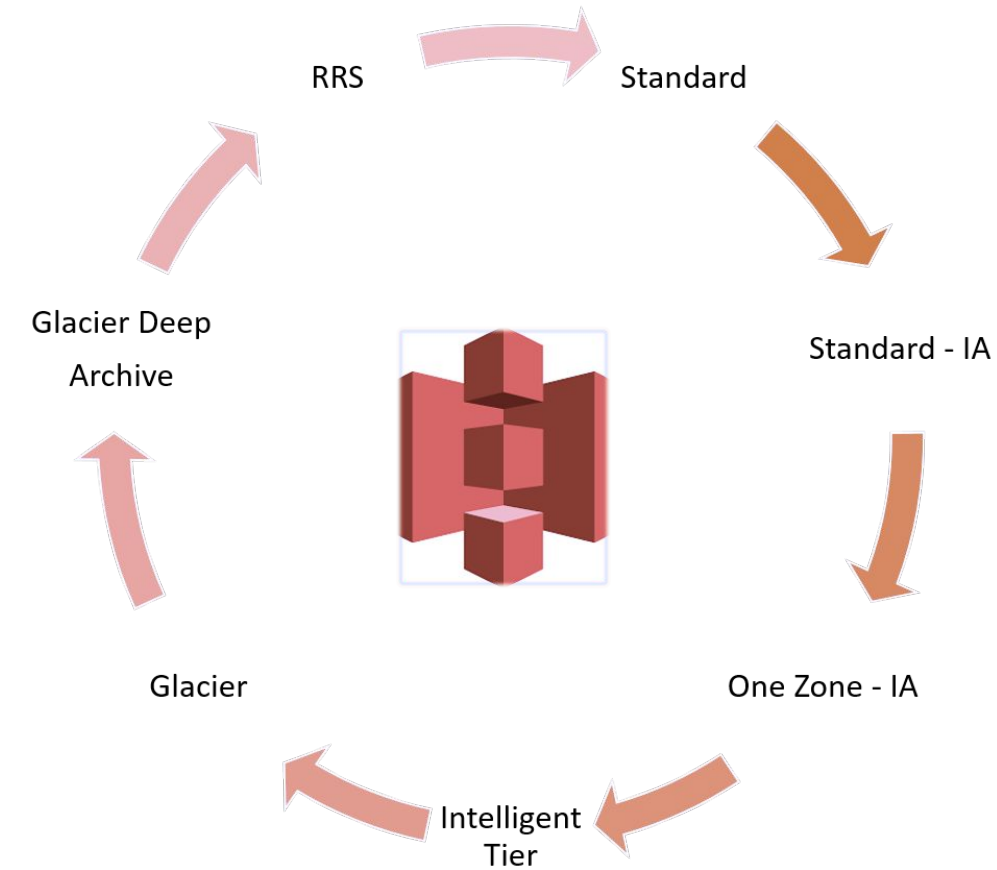
1 Lifecycle Management

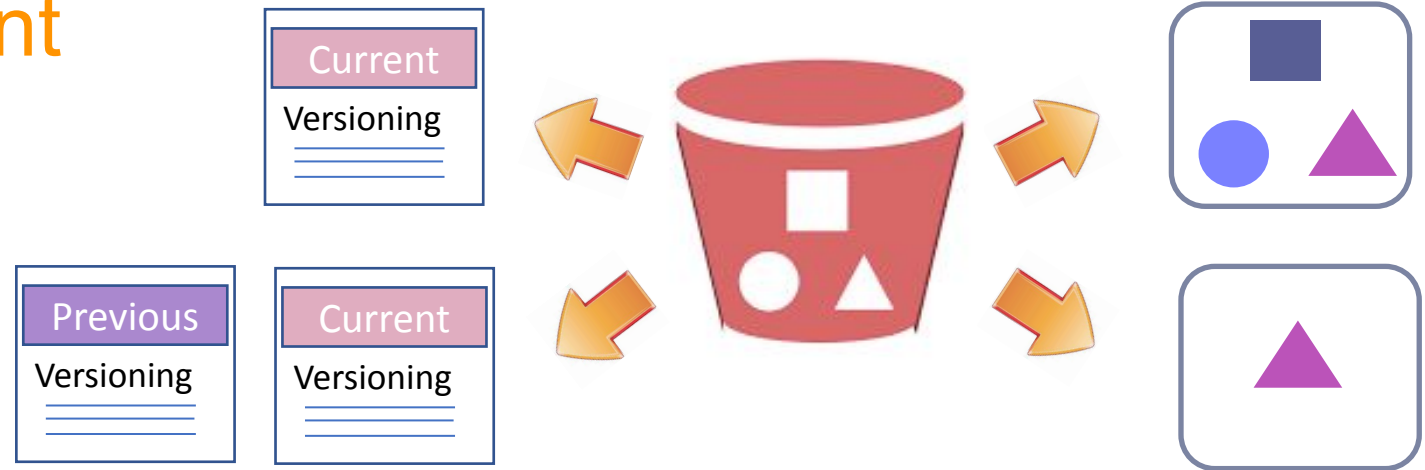CLARUSWAY
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Lifecycle Management

What is Lifecycle Management?

- Lifecycle management is to determine how an object will be subject to a storage policy during the time it is stored in S3.

- So, it is used to ;

  Transition objects to another storage class,

  Archive objects,

  Delete objects after a specified period of time.

RRS

Standard

Standard - IA

Glacier Deep Archive

One Zone - IA

Glacier

Intelligent Tier

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Lifecycle Management

Lifecycle Management

- A lifecycle policy is bucket-base component

- You can narrow Lifecycle Management by using a prefix

- Available for both current and previous versions

- Minimum days for transition

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Lifecycle Management

Amazon S3 Storage Classes

1)Storage classes for frequently accessed objects

For performance-sensitive use cases (those that require millisecond access time) and frequently accessed data, Amazon S3 provides the following storage classes:

- **S3 Standard** — The default storage class. If you don't specify the storage class when you upload an object, Amazon S3 assigns the S3 Standard storage class.
- **Reduced Redundancy** — The Reduced Redundancy Storage (RRS) storage class is designed for noncritical, reproducible data that can be stored with less redundancy than the S3 Standard storage class.

2)Storage class for automatically optimizing data with changing or unknown access patterns

- **S3 Intelligent** -Tiering is an Amazon S3 storage class designed to optimize storage costs by automatically moving data to the most cost-effective access tier, without performance impact or operational overhead. S3 Intelligent-Tiering is the perfect storage class when you want to optimize storage costs for data that has unknown or changing access patterns. There are no retrieval fees for S3 Intelligent-Tiering.

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Lifecycle Management

Amazon S3 Storage Classes

3)Storage classes for infrequently accessed objects

The S3 Standard-IA and S3 One Zone-IA storage classes are designed for long-lived and infrequently accessed data. (IA stands for infrequent access.) S3 Standard-IA and S3 One Zone-IA objects are available for millisecond access (similar to the S3 Standard storage class).

- **S3 Standard-IA —** Amazon S3 stores the object data redundantly across multiple geographically separated Availability Zones (similar to the S3 Standard storage class). S3 Standard-IA objects are resilient to the loss of an Availability Zone. This storage class offers greater availability and resiliency than the S3 One Zone-IA class.

- **S3 One Zone-IA —** Amazon S3 stores the object data in only one Availability Zone, which makes it less expensive than S3 Standard-IA. However, the data is not resilient to the physical loss of the Availability Zone resulting from disasters, such as earthquakes and floods. The S3 One Zone-IA storage class is as durable as Standard-IA, but it is less available and less resilient.
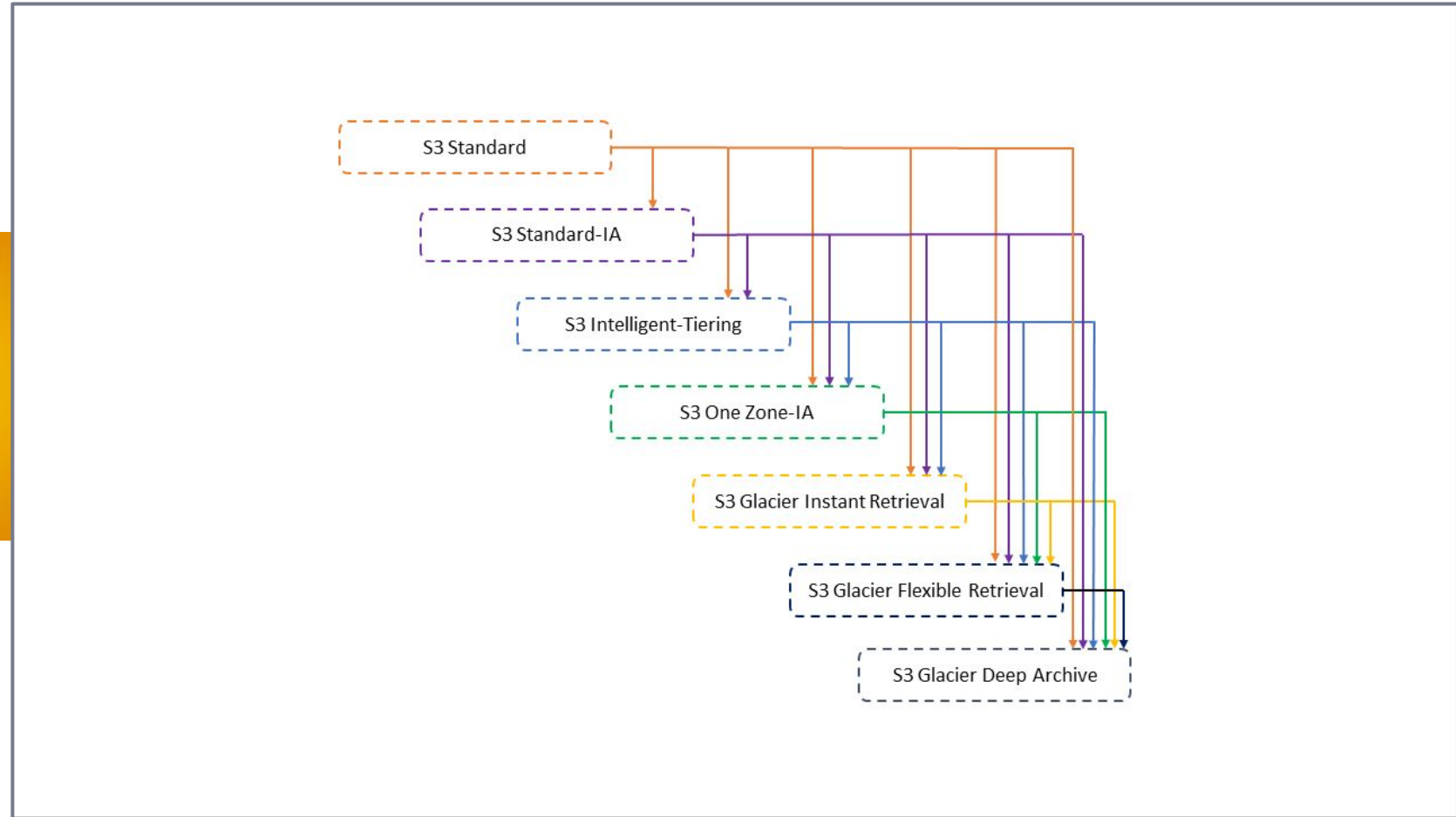
4)Storage classes for archiving objects

The S3 Glacier and S3 Glacier Deep Archive storage classes are designed for low-cost data archiving. These storage classes offer the same durability and resiliency as the S3 Standard storage class.

- **S3 Glacier —** Use for archives where portions of the data might need to be retrieved in minutes. Data stored in the S3 Glacier storage class has a minimum storage duration period of 90 days and can be accessed in as little as 1-5 minutes using expedited retrieval. If you have deleted, overwritten, or transitioned to a different storage class an object before the 90-day minimum, you are charged for 90 days.

- **S3 Glacier Deep Archive —** Use for archiving data that rarely needs to be accessed. Data stored in the S3 Glacier Deep Archive storage class has a minimum storage duration period of 180 days and a default retrieval time of 12 hours. If you have deleted, overwritten, or transitioned to a different storage class an object before the 180-day minimum, you are charged for 180 days.

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Lifecycle Management

Transition

Restoring Layer

ONE WAY TICKET

- S3 Standard
- S3 Standard-IA
- S3 Intelligent-Tiering
- S3 One Zone-IA
- S3 Glacier Instant Retrieval
- S3 Glacier Flexible Retrieval
- S3 Glacier Deep Archive
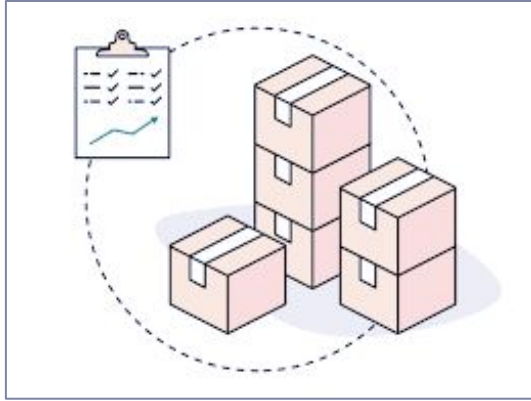
Transitioning objects using Amazon S3 Lifecycle

Lifecycle Management
Advantage of Lifecycle Management

- It provides you to arrange your S3 inventory

- You can save money by transition the objects to the cost-effective storage class

- You can get rid of redundant objects

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Lifecycle Management
Enabling Lifecycle Management

Lifecycle Management Path
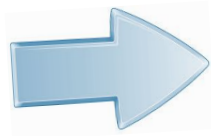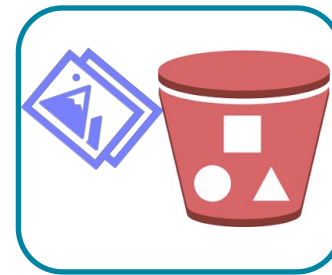**S3>Bucket> Management > Lifecycle>Add a Lifecycle Rule**

2 Bucket Replication
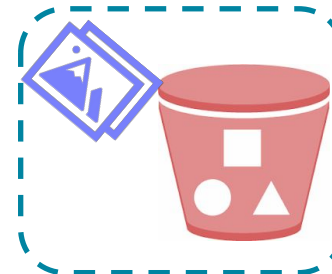
Bucket Replication

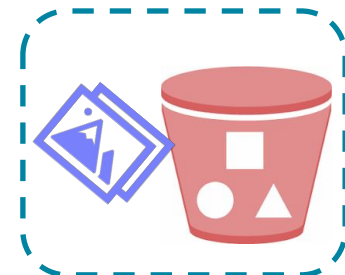## What is Bucket Replication?

Region-A

Availability Zone-1

Availability Zone-2

Availability Zone-3

Bucket Replication

What is Bucket Replication?

- Replication is to copy the objects in the buckets to another bucket in different region or in the same region

- There are 2 types of replication in S3:

  - Cross-Region Replication (CRR) is used to copy objects in different AWS Regions

  - Same-Region Replication (SRR) is used to copy objects in the same AWS Region

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Bucket Replication
Replication Features

- Keep the object's metadata while replicating

- Replicating in Different storage class

- Option of changing ownership of the replicated object

- Synchronizing within 15 minutes

- Narrowing replication based on prefix or tag
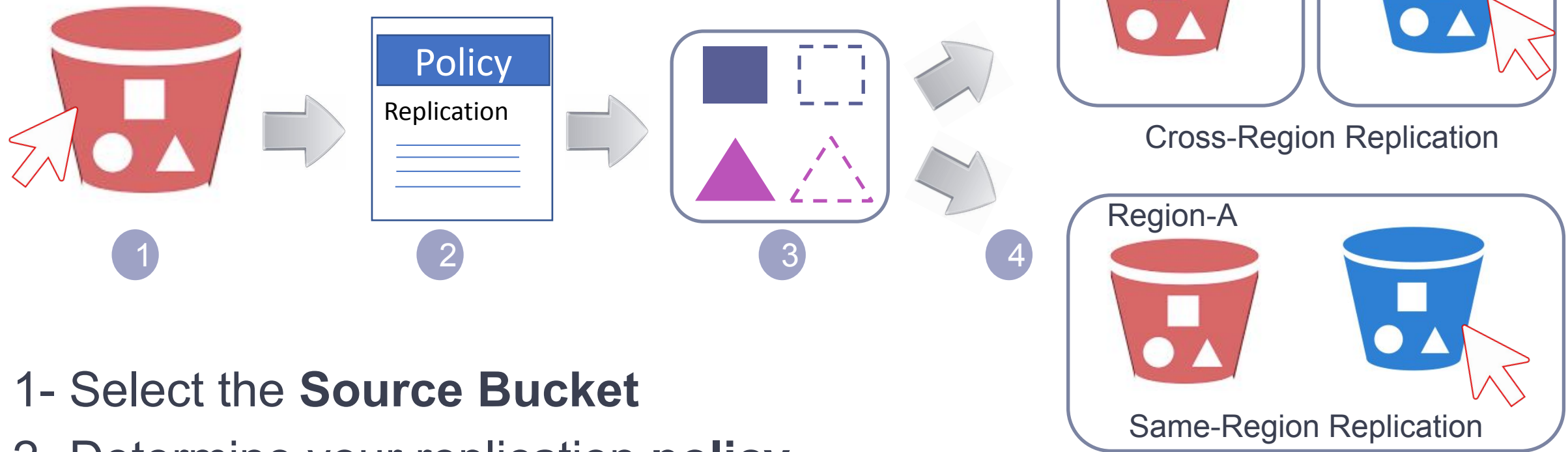
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Bucket Replication

Why Replication?

- Compliance requirements

- Backup

- Minimize latency

- Aggregating related data into a single bucket

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Bucket Replication

How S3 Replication Works?

1- Select the **Source Bucket**

2- Determine your replication **policy**

3- Select your data set by object **tag, prefix or entire bucket**

4- Select the **Destination Bucket** in the same region or in different region

Region-A Region-B

Cross-Region Replication

Region-A

Same-Region Replication

Policy

Replication

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Bucket Replication
Creating Bucket Replication

Bucket Replication Path

S3>Bucket> Management > Bucket Replication >Add a Rule

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Lifecycle Management & Bucket Replication

Let's get our hands dirty!

- Enabling Lifecycle Management

- Creating Bucket Replication

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THANKS!

Any questions?

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