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**2KE20CS032**

### **Assignment 44**

*Understood. To follow the provided instructions and create the files/directory using the same name and case as provided in the task steps, please provide me with the specific names and case instructions for the files/directory you want to create.*

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**AWS**

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### **Assignment: 10 S3 Cross region replication with bucket versioning**

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**Note: keep 2 buckets, one as source and other as destination, both buckets should be in different region**

1. Create a destination bucket in another region, and enable bucket versioning while creating

[Amazon S3](#) > [Buckets](#) > Create bucket

**Create bucket** [Info](#)

Buckets are containers for data stored in S3. [Learn more](#) 

**General configuration**

AWS Region

Asia Pacific (Mumbai) ap-south-1 

Bucket name [Info](#)

aws-source-bucket-01

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#) 

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

[Choose bucket](#)

Format: s3://bucket/prefix

2. Navigate to your source bucket -> management -> Replication rule -> Create a Replication rule, Give rule name, status: enabled, rule scope: apply to all objects

The screenshot shows the 'Bucket Versioning' section of the AWS S3 console. It includes a descriptive text about versioning and a radio button selection for enabling it. The 'Enable' option is selected.

**Bucket Versioning**

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

Disable

Enable

The screenshot shows the 'Default encryption' section of the AWS S3 console. It includes a descriptive text about server-side encryption and a radio button selection for the encryption type. The 'Server-side encryption with Amazon S3 managed keys (SSE-S3)' option is selected.

**Default encryption** [Info](#)

Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [Info](#)

Server-side encryption with Amazon S3 managed keys (SSE-S3)

Server-side encryption with AWS Key Management Service keys (SSE-KMS)

Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)  
Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the **Storage** tab of the [Amazon S3 pricing page](#).

**Bucket Key**

Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)

Disable

Enable

3. In Destination, Choose your destination bucket name

## Create bucket Info

Buckets are containers for data stored in S3. [Learn more](#)

### General configuration

#### AWS Region

Asia Pacific (Singapore) ap-southeast-1

Bucket name [Info](#)

aws-source-bucket-02

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

#### Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

[Choose bucket](#)

Format: s3://bucket/prefix

### Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

#### Bucket Versioning

- Disable
- Enable

### Default encryption Info

Server-side encryption is automatically applied to new objects stored in this bucket.

#### Encryption type [Info](#)

- Server-side encryption with Amazon S3 managed keys (SSE-S3)
- Server-side encryption with AWS Key Management Service keys (SSE-KMS)
- Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)  
Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the Storage tab of the [Amazon S3 pricing page](#).

#### Bucket Key

Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)

- Disable
- Enable

## Create replication rule [Info](#)

### Replication rule configuration

#### Replication rule name

my-replication-rule-01

Up to 255 characters. In order to be able to use CloudWatch metrics to monitor the progress of your replication rule, the replication rule name must only contain English characters.

#### Status

Choose whether the rule will be enabled or disabled when created.

- Enabled
- Disabled

#### Priority

The priority value resolves conflicts that occur when an object is eligible for replication under multiple rules to the same destination. The rule is added to the configuration at the highest priority and the priority can be changed on the replication rules table.

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### Source bucket

#### Source bucket name

aws-source-bucket-01

#### Source Region

Asia Pacific (Mumbai) ap-south-1

#### Choose a rule scope

- Limit the scope of this rule using one or more filters
- Apply to all objects in the bucket

4. For the AM role. Choose to Create new role
5. Leave everything else as default and click save
6. Then choose yes, replicate all the objects
7. Click Save, Then go and see your destination bucket, you can see all the files replicated from your source bucket

8. Now edit any files in the source bucket you can see the versions of that edited file in your destination bucket

**IAM role**

Choose from existing IAM roles  
 Enter IAM role ARN

IAM role

Create new role ▼ C View

**Destination**

**Destination**  
You can replicate objects across buckets in different AWS Regions (Cross-Region Replication) or you can replicate objects across buckets in the same AWS Region (Same-Region Replication). You can also specify a different bucket for each rule in the configuration. [Learn more](#)   
or see [Amazon S3 pricing](#)

Choose a bucket in this account  
 Specify a bucket in another account

**Bucket name**  
Choose the bucket that will receive replicated objects.

aws-source-bucket-02 Browse S3

Format: s3://bucket

**Destination Region**  
Asia Pacific (Singapore) ap-southeast-1

## OUR BUCKETS ARE

[General purpose buckets](#) [Directory buckets](#)

**General purpose buckets (2)** [Info](#) C

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

	Name	AWS Region	Access
<input type="radio"/>	aws-source-bucket-01 <b>source</b>	Asia Pacific (Mumbai) ap-south-1	Bucket and objects r
<input type="radio"/>	aws-source-bucket-02 <b>destination</b>	Asia Pacific (Singapore) ap-southeast-1	Bucket and objects r

## Verification: S3 Cross-region replication with bucket versioning

Amazon S3 > Buckets > aws-source-bucket-01 > Upload

### Upload Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose Add files or Add folder.

Files and folders (1 Total, 1014.0 B)					
<small>All files and folders in this table will be uploaded.</small>					
<input type="text"/> Find by name <span style="float: right;">&lt; 1 &gt;</span>					
	Name	Folder	Type	Size	
<input type="checkbox"/>	test.html	-	text/html	1014.0 B	

Yes replicated

Amazon S3 > Buckets > aws-source-bucket-02

### aws-source-bucket-02 Info

Objects Properties Permissions Metrics Management Access Points

Objects (1) <small>Info</small>						
Objects are the fundamental entities stored in Amazon S3. You can use <a href="#">Amazon S3 inventory</a> to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. <a href="#">Learn more</a>						
<input type="button"/> Copy S3 URI <input type="button"/> Copy URL <input type="button"/> Download <input type="button"/> Open <input type="button"/> Delete <input type="button"/> Actions <input type="button"/> Create folder						
<input type="button"/> Upload <input type="text"/> Find objects by prefix <input type="checkbox"/> Show versions <span style="float: right;">&lt; 1 &gt; </span>						
	Name	Type	Last modified	Size	Storage class	
<input type="checkbox"/>	test.html	html	December 5, 2023, 19:05:07 (UTC+05:30)	1014.0 B	Standard	