

AMAZON S3 – CROSS REGION REPLICATION (CRR)

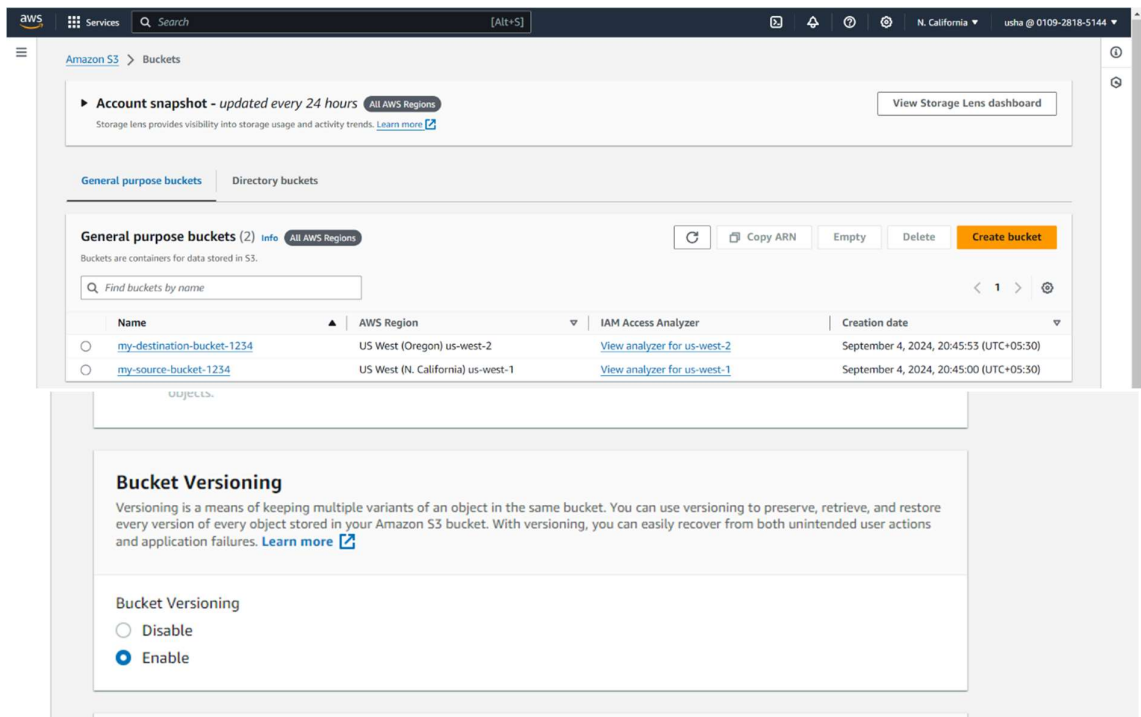
➤ What is cross region replication?

The AWS S3 – Cross-region replication (CRR) allows you to replicate or copy your data in two different regions.

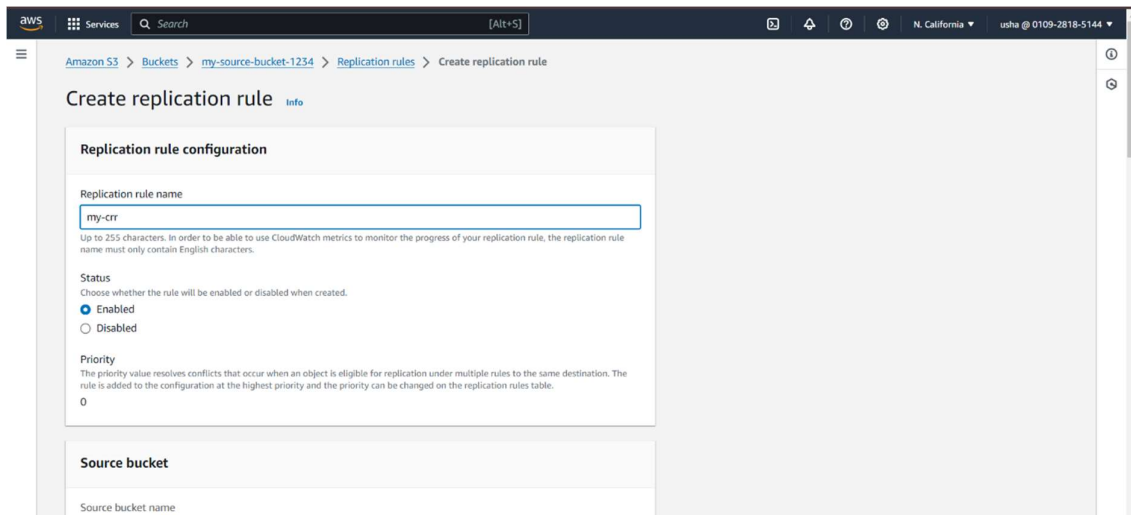
Setting up CRR:

Follow the below steps to set up the CRR:

- Go to the AWS S3 – console and create two buckets in TWO DIFFERENT REGIONS.
- Let's Create source bucket in CALIFORNIA REGION and give name as “my-source-bucket-1234”.
- Create destination bucket in OREGON REGION and give name as “my-destination-bucket-1234”.
- Do not forget to **enable versioning**. Also, note that the S3 bucket name needs to be globally unique and hence try adding random numbers after bucket name.



- Now click on your source bucket and head over to the management tab & click on “Create a replication rule” and give your replication rule name as “my-crr”



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Amazon S3 > Buckets > my-source-bucket-1234 > Replication rules > Create replication rule

Create replication rule Info

Replication rule configuration

Replication rule name

my-crr

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

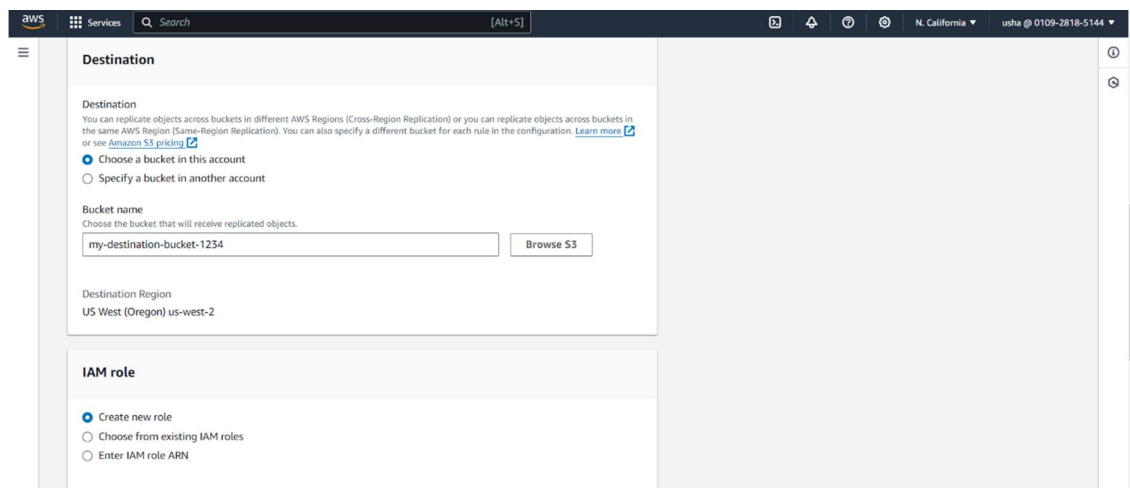
The priority value resolves conflicts that occur when an object is eligible for replication under multiple rules to the same destination. The rule is added to the configuration at the highest priority and the priority can be changed on the replication rules table.

0

Source bucket

Source bucket name

- Choose the destination bucket as “my-destination-bucket-1234”.
- Notice that you have an option to choose a destination bucket in another account.
- In order to replicate objects from the source bucket to the destination bucket, you need to create an IAM role. So just create one by clicking on “create a new role”.



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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](#)

☒ Choose a bucket in this account

☐ Specify a bucket in another account

Bucket name

Choose the bucket that will receive replicated objects.

my-destination-bucket-1234 Browse S3

Destination Region

US West (Oregon) us-west-2

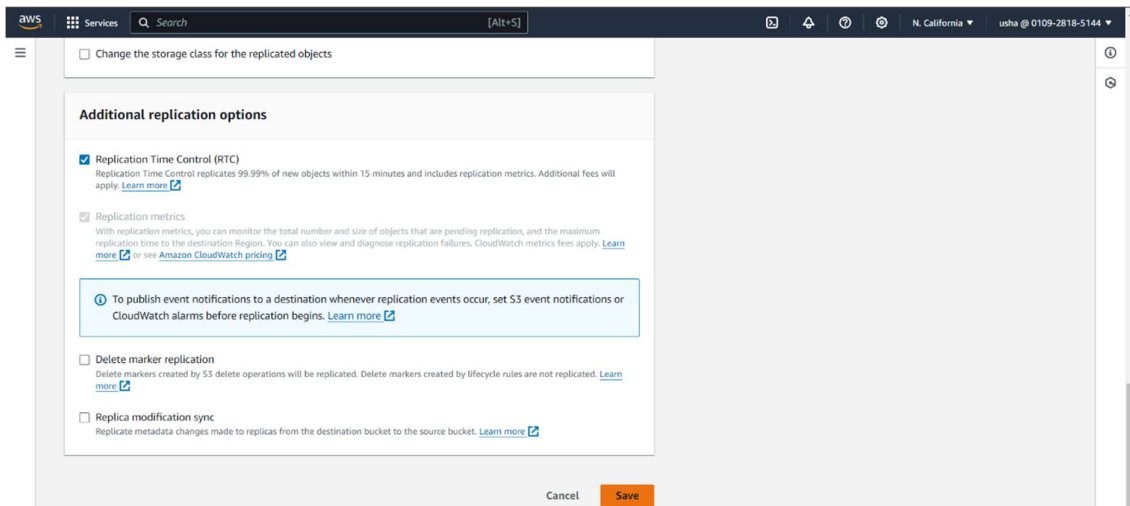
IAM role

☒ Create new role

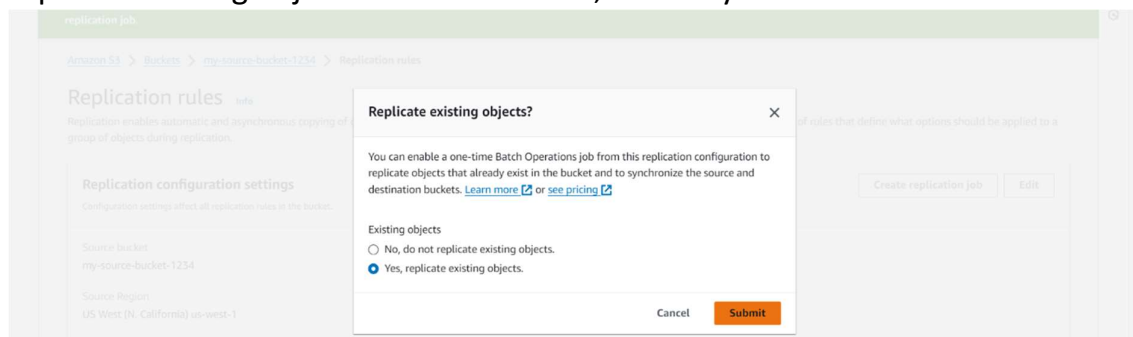
☐ Choose from existing IAM roles

☐ Enter IAM role ARN

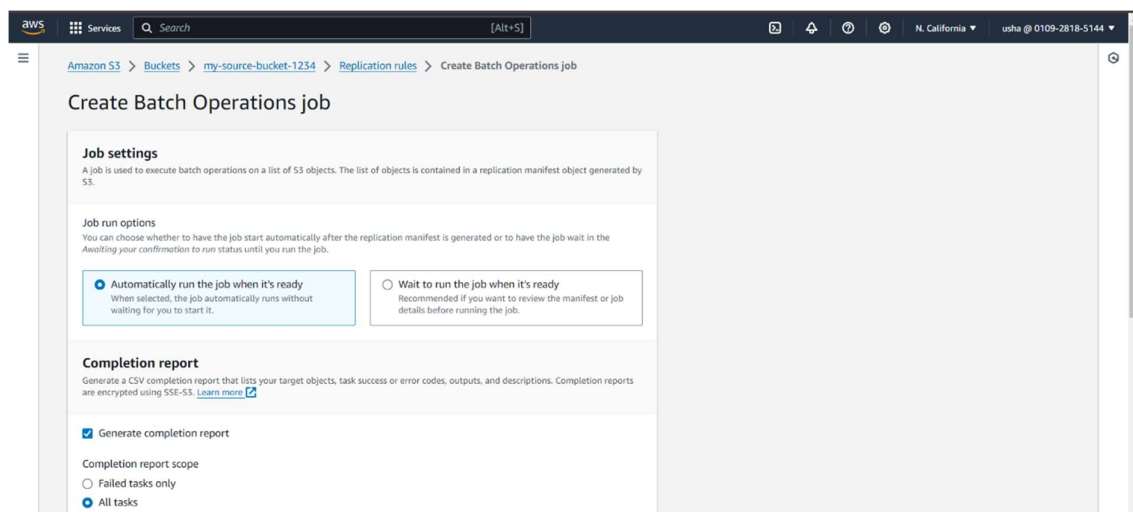
- If you want your S3 objects to be replicated within 15 minutes you need to check the “Replication Time Control (RTC) box. So enable that and click on save.



- As soon as you click on save, a screen will pop up asking if you want to replicate existing objects in the S3 bucket, choose yes and click on submit.



- Now you will get create batch operations job – go down at completion report destination- choose destination bucket that we already created.
- For better understanding look at below snapshots.



Completion report
Generate a CSV completion report that lists your target objects, task success or error codes, outputs, and descriptions. Completion reports are encrypted using SSE-S3. [Learn more](#)

☒ Generate completion report

Completion report scope

☐ Failed tasks only

☒ All tasks

Completion report destination
Specify a general purpose bucket location to store the completion report. '/job-[job-id]/report.json' will automatically be appended to the specified destination. [Learn more](#)

s3://my-destination-bucket-1234 [View](#) [Browse S3](#)

Format: s3://<bucket>/<optional-prefix-with-path>. S3 will append the path with a "/". If you add a "/" to the prefix, it will appear as an extra folder in the S3 console.

Successfully created job ID 75ae9326-69ca-4b12-99e6-0473920a4fa9
The time it takes to prepare a job is based on the size of the job's manifest and the time required to complete higher-priority jobs. [View details](#)

Amazon S3 > Batch Operations

Batch Operations [info](#)

A job is used to execute batch operations on a list of S3 objects. The list of S3 objects is contained in a manifest object, which can be an S3 inventory report or a list of objects that you generate. After the total number of objects listed in the manifest has been confirmed, the job status will update to *Awaiting your confirmation to run*, and you must **Run job** within 30 days. Job events are published to [CloudWatch Events](#). Jobs are deleted 90 days after they finish or fail. [Learn more](#)

Jobs (1) [Refresh](#) [Run job](#) [Actions](#) [Clone job](#) [Create job](#)

[All status types](#) [1](#) [Settings](#)

Job ID	Status	Description	Operation	Date created	Total objects	% Complete	Total failed (rate)	Priority
75ae9326-69ca-4b12-99e6-0473920a4fa9	New	2024-09-04 - Replicate	Replicate	September 4, 2024, 21:05:18 (UTC+05:30)	Not yet available	0%	0 (0%)	10

- Now It's time to test! Now go to the source bucket: my-source-bucket-1234 and upload a file.

Amazon S3 > Buckets > my-source-bucket-1234

my-source-bucket-1234 [info](#)

[Objects](#) [Properties](#) [Permissions](#) [Metrics](#) [Management](#) [Access Points](#)

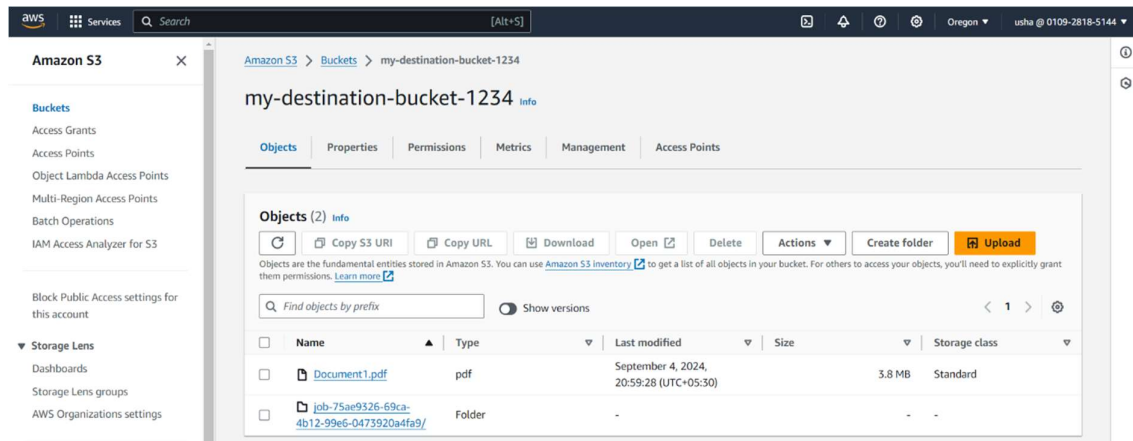
Objects (1) [info](#) [Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

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](#)

[Show versions](#) [1](#) [Settings](#)

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	Document1.pdf	pdf	September 4, 2024, 20:59:28 (UTC+05:30)	3.8 MB	Standard

- Now go to the destination bucket: my-destination-bucket-1234 to check if the uploaded file is replicated to our destination bucket. You can see that our uploaded file is successfully copied to the destination bucket.



Note: While deleting the buckets, do not forget to empty your buckets and then delete them, if you do not have any further use. Also, you cannot delete a bucket if it is not empty.