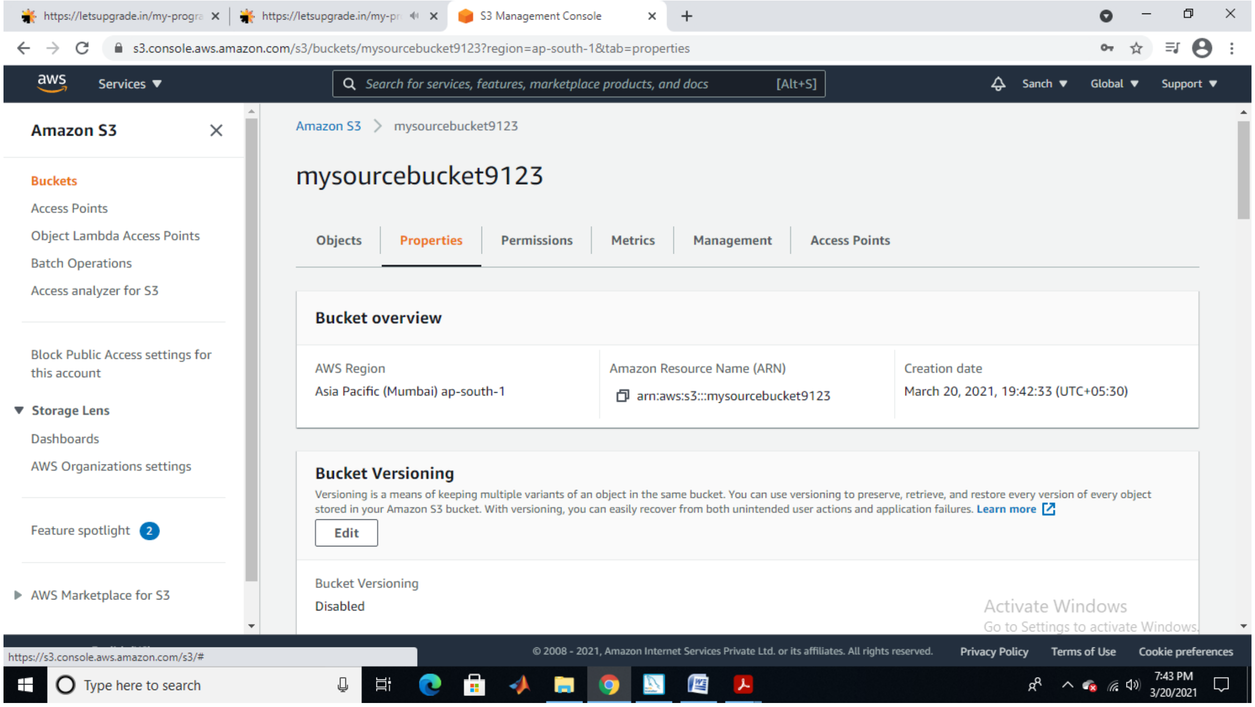
WORKING WITH LAMBDA.

1. Two s3 buckets with the name = sourcebucket arn:aws:s3:::mysourcebucket9123 destinationbucket arn:aws:s3:::mydestinationbucket9123 are created.


https://letsupgrade.in/my-progr
https://letsupgrade.in/my-pr
S3 Management Console
s3.console.aws.amazon.com/s3/buckets/mysourcebucket9123?region=ap-south-1&tab=properties
aws
Services
Search for services, features, marketplace products, and docs
[Alt+S]
Sanch
Global
Support
Amazon S3
Buckets
Access Points
Object Lambda Access Points
Batch Operations
Access analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight 2
AWS Marketplace for S3
Amazon S3 > mysourcebucket9123
Objects
Properties
Permissions
Metrics
Management
Access Points
Edit
Activate Windows
Go to Settings to activate Windows.
https://s3.console.aws.amazon.com/s3/#
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Terms of Use
Cookie preferences
Type here to search
7:43 PM
3/20/2021

mysourcebucket9123

Bucket overview

AWS Region
Asia Pacific (Mumbai) ap-south-1

Amazon Resource Name (ARN)
arn:aws:s3:::mysourcebucket9123

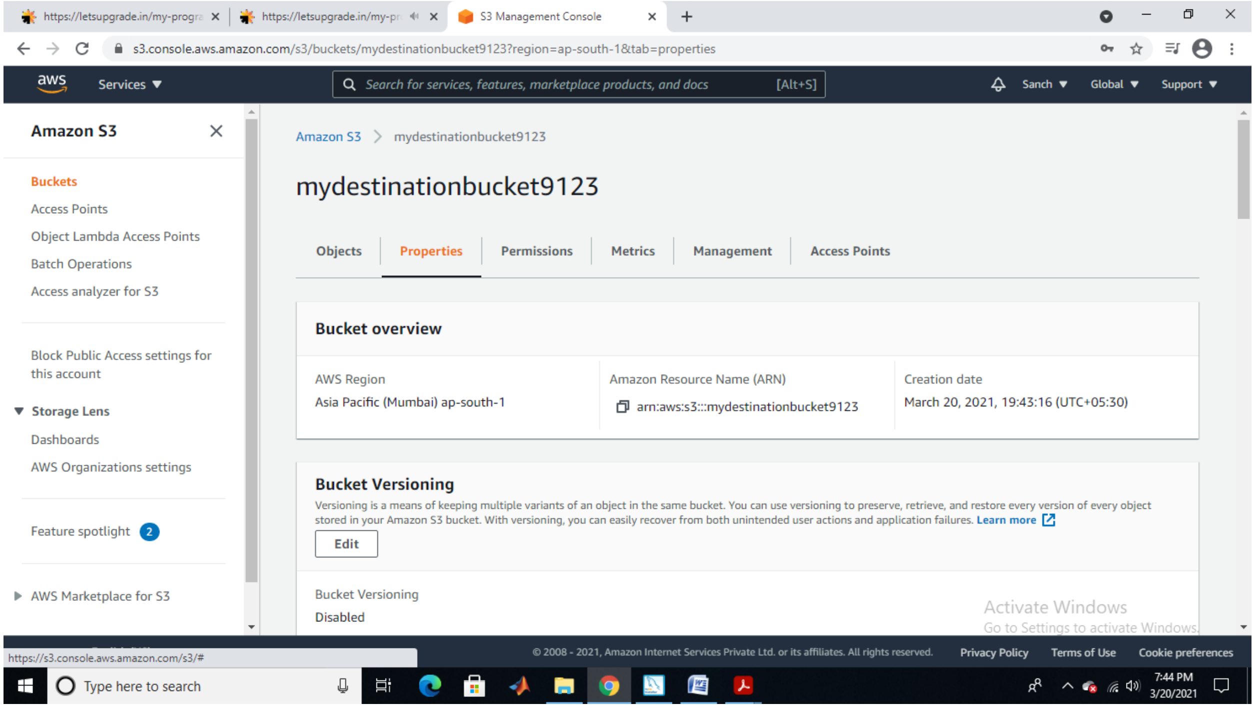
Creation date
March 20, 2021, 19:42:33 (UTC+05:30)

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
Disabled

Destination S3 bucket


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-pr
S3 Management Console
s3.console.aws.amazon.com/s3/buckets/mydestinationbucket9123?region=ap-south-1&tab=properties
aws
Services ▼
Search for services, features, marketplace products, and docs
[Alt+S]
Sanch ▼
Global ▼
Support ▼
Amazon S3
Buckets
Access Points
Object Lambda Access Points
Batch Operations
Access analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight 2
AWS Marketplace for S3
Amazon S3 > mydestinationbucket9123
Objects
Properties
Permissions
Metrics
Management
Access Points
Edit
Activate Windows
Go to Settings to activate Windows.
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Cookie preferences
Type here to search
7:44 PM
3/20/2021

mydestinationbucket9123

Bucket overview

AWS Region
Asia Pacific (Mumbai) ap-south-1

Amazon Resource Name (ARN)
arn:aws:s3:::mydestinationbucket9123

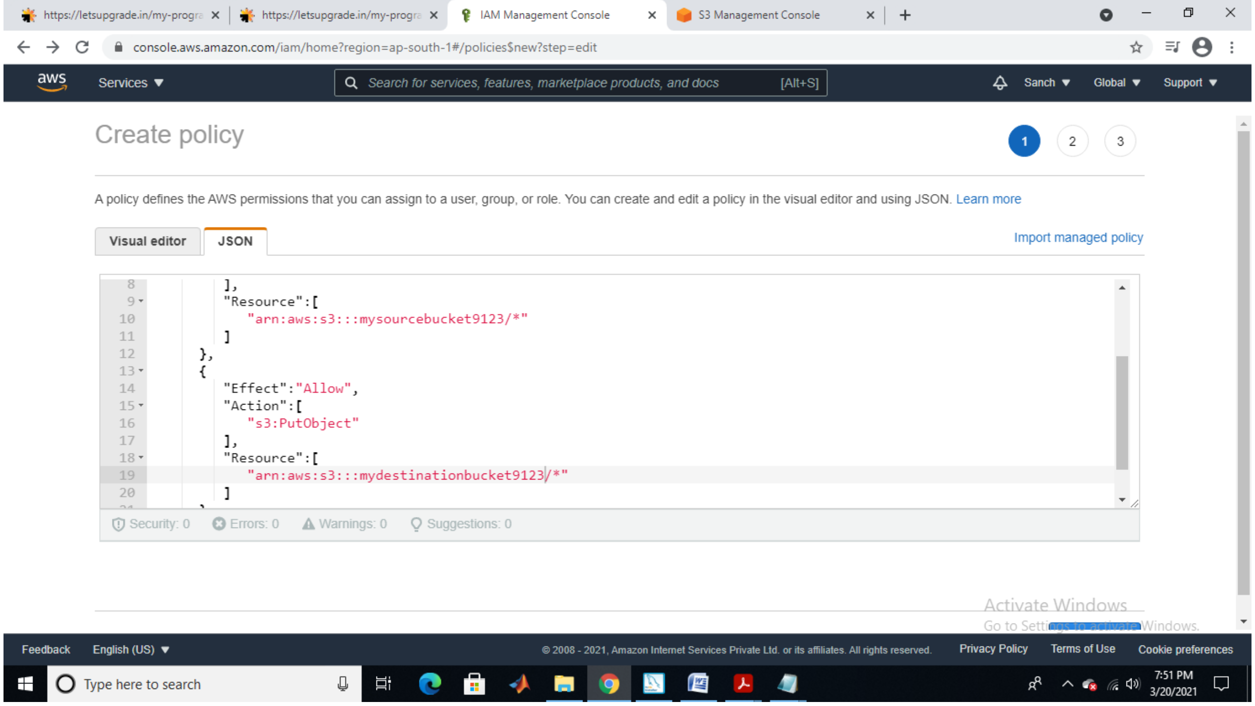
Creation date
March 20, 2021, 19:43:16 (UTC+05:30)

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
Disabled

A policy1 with limited Read-write permissions using a JSON script is created. JSON script is displayed in below screenshot.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
IAM Management Console
S3 Management Console
console.aws.amazon.com/iam/home?region=ap-south-1#/policies$new?step=edit
aws
Services ▼
Search for services, features, marketplace products, and docs
[Alt+S]
Sanch ▼
Global ▼
Support ▼
1
2
3
Visual editor
JSON
Import managed policy
Security: 0
Errors: 0
Warnings: 0
Suggestions: 0
Activate Windows
Go to Settings to activate Windows.
Feedback
English (US) ▼
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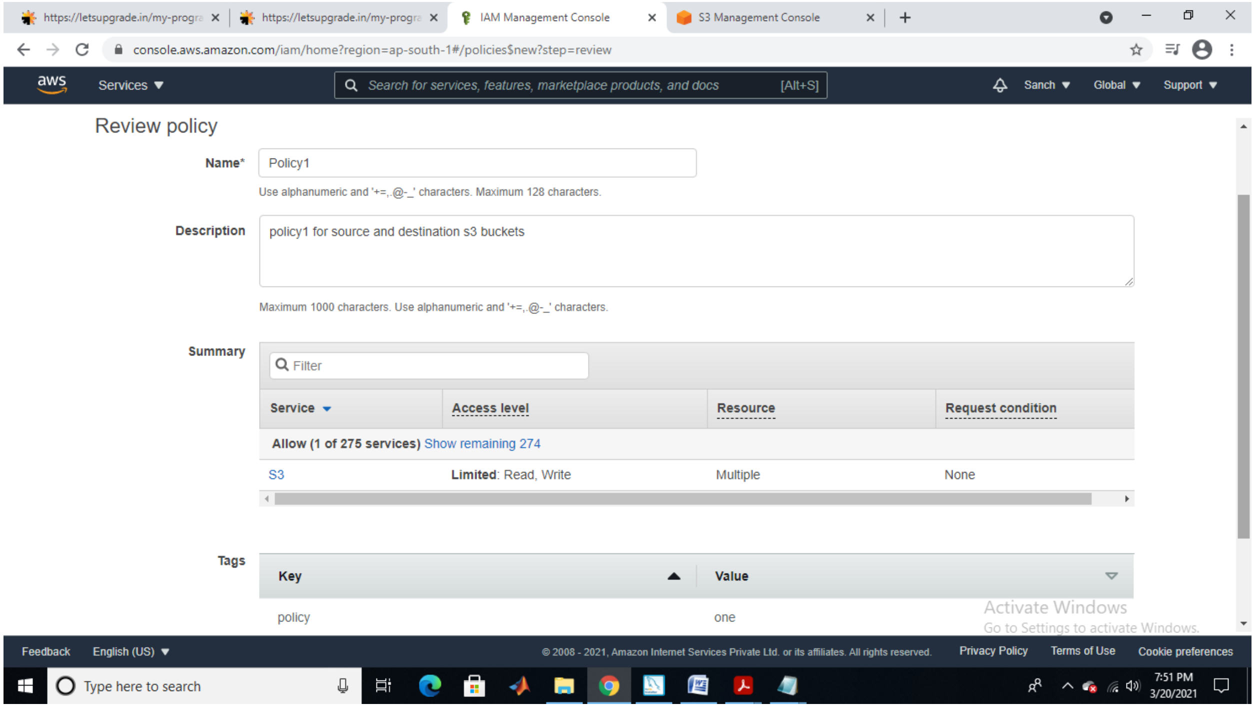
Cookie preferences
Type here to search
7:51 PM
3/20/2021

Create policy

A policy defines the AWS permissions that you can assign to a user, group, or role. You can create and edit a policy in the visual editor and using JSON. Learn more

```
      ],
      "Resource":[
        "arn:aws:s3:::mysourcebucket9123/*"
      ]
    },
    {
      "Effect":"Allow",
      "Action":[
        "s3:PutObject"
      ],
      "Resource":[
        "arn:aws:s3:::mydestinationbucket9123/*"
      ]
```

Policy1 console with policy filtered


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
IAM Management Console
S3 Management Console
console.aws.amazon.com/iam/home?region=ap-south-1#/policies$new?step=review
aws
Services ▼
Search for services, features, marketplace products, and docs [Alt+S]
Sanch ▼
Global ▼
Support ▼
Activate Windows
Go to Settings to activate Windows.
Feedback
English (US) ▼
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3/20/2021

Review policy

Name* Policy1

Use alphanumeric and '+=,.@-_' characters. Maximum 128 characters.

Description policy1 for source and destination s3 buckets

Maximum 1000 characters. Use alphanumeric and '+=,.@-_' characters.

Summary

Filter

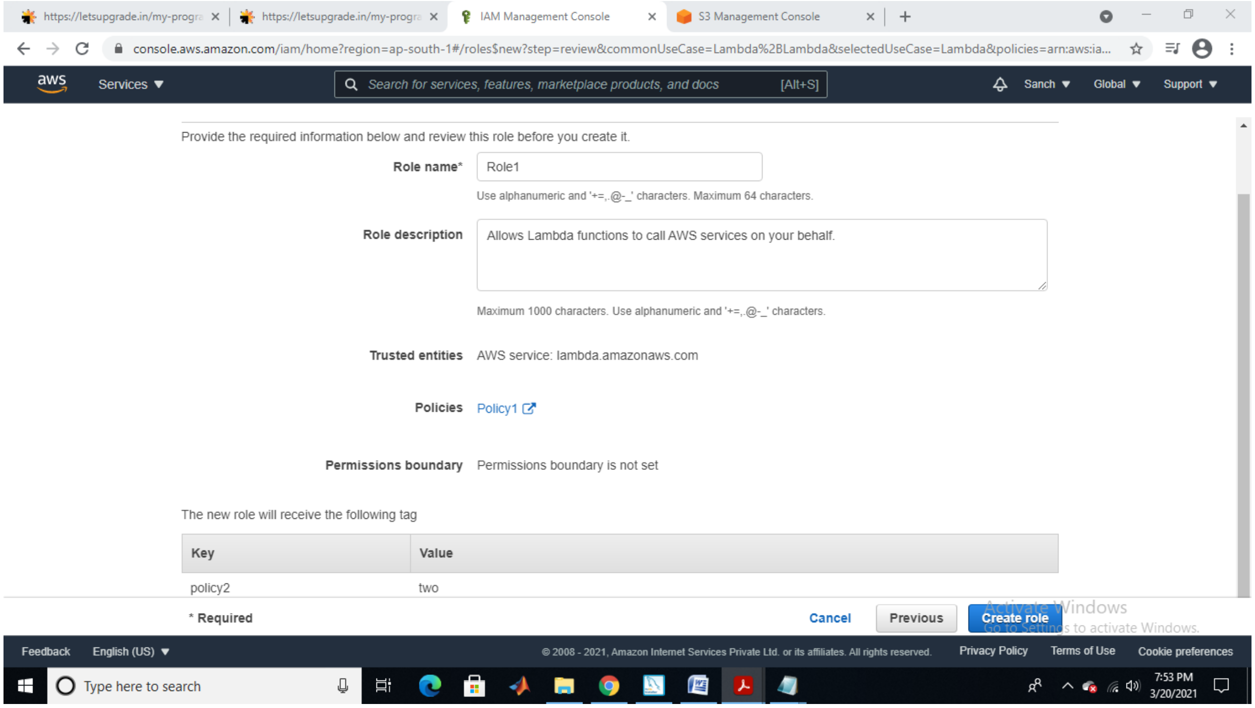
Service	Access level	Resource	Request condition
Allow (1 of 275 services) Show remaining 274			
S3	**Limited**: Read, Write	Multiple	None

Tags

Key	Value
policy	one

A role with attached Policy1 that was created in the previous step. Below is the Role console showing details of the role

:



console.aws.amazon.com/iam/home?region=ap-south-1#/roles$new?step=review&commonUseCase=Lambda%2BLambda&selectedUseCase=Lambda&policies=arn:aws:ia...

Provide the required information below and review this role before you create it.

Role name* Role1

Use alphanumeric and '+=,.@-_' characters. Maximum 64 characters.

Role description Allows Lambda functions to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and '+=,.@-_' characters.

Trusted entities AWS service: lambda.amazonaws.com

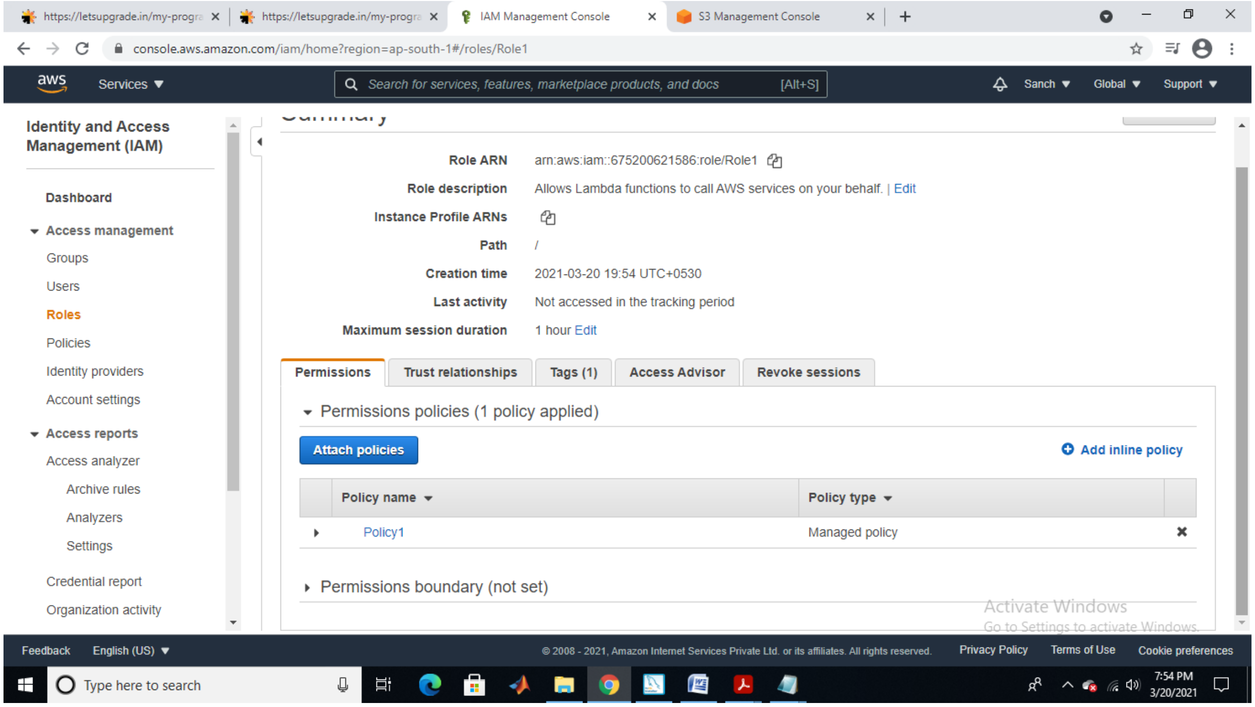
Policies Policy1

Permissions boundary Permissions boundary is not set

The new role will receive the following tag

Key	Value
policy2	two

* Required



console.aws.amazon.com/iam/home?region=ap-south-1#/roles/Role1

Role ARN arn:aws:iam::675200621586:role/Role1

Role description Allows Lambda functions to call AWS services on your behalf. | Edit

Instance Profile ARNs

Path /

Creation time 2021-03-20 19:54 UTC+0530

Last activity Not accessed in the tracking period

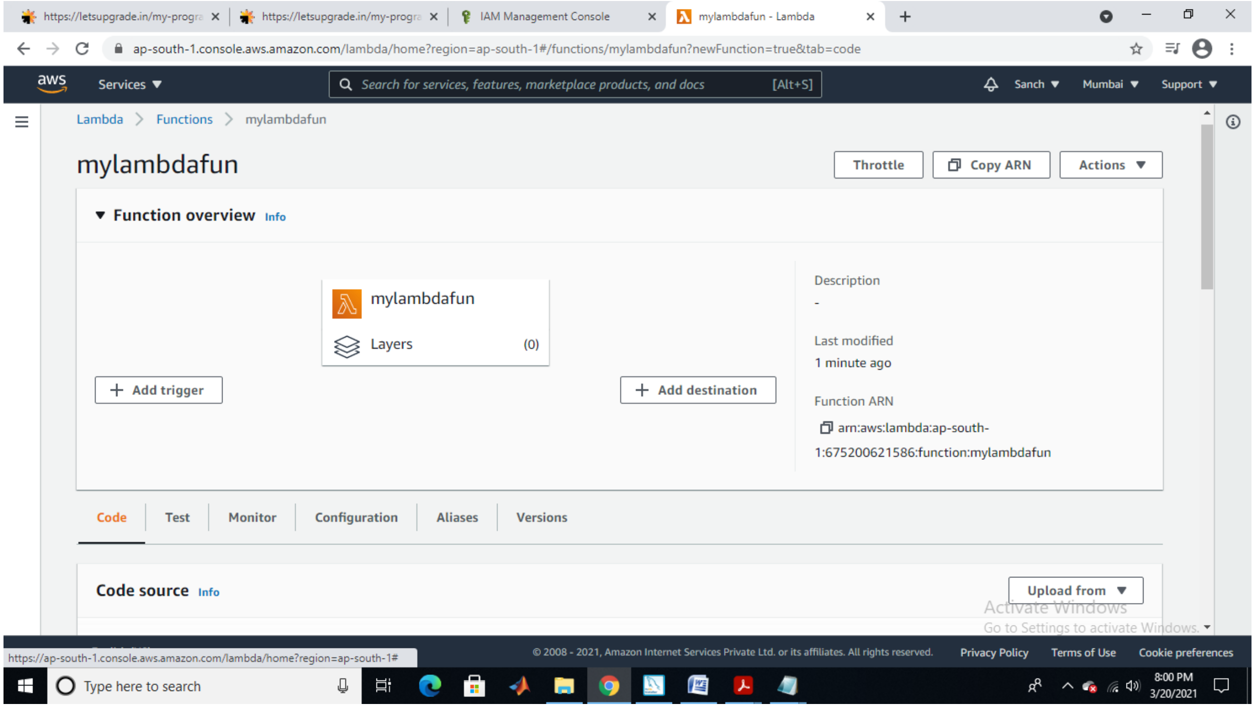
Maximum session duration 1 hour Edit

Permissions policies (1 policy applied)

Policy name	Policy type
Policy1	Managed policy

Permissions boundary (not set)

Lambda function named mylambdafun is created.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
IAM Management Console
mylambdafun - Lambda
ap-south-1.console.aws.amazon.com/lambda/home?region=ap-south-1#/functions/mylambdafun?newFunction=true&tab=code
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
Sanch
Mumbai
Support
Lambda > Functions > mylambdafun
Throttle
Copy ARN
Actions
Info
mylambdafun
Layers (0)
+ Add trigger
+ Add destination
Code
Test
Monitor
Configuration
Aliases
Versions
Info
Upload from
Activate Windows
Go to Settings to activate Windows.
https://ap-south-1.console.aws.amazon.com/lambda/home?region=ap-south-1#
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Terms of Use
Cookie preferences
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8:00 PM
3/20/2021

mylambdafun

Function overview

Description

-

Last modified

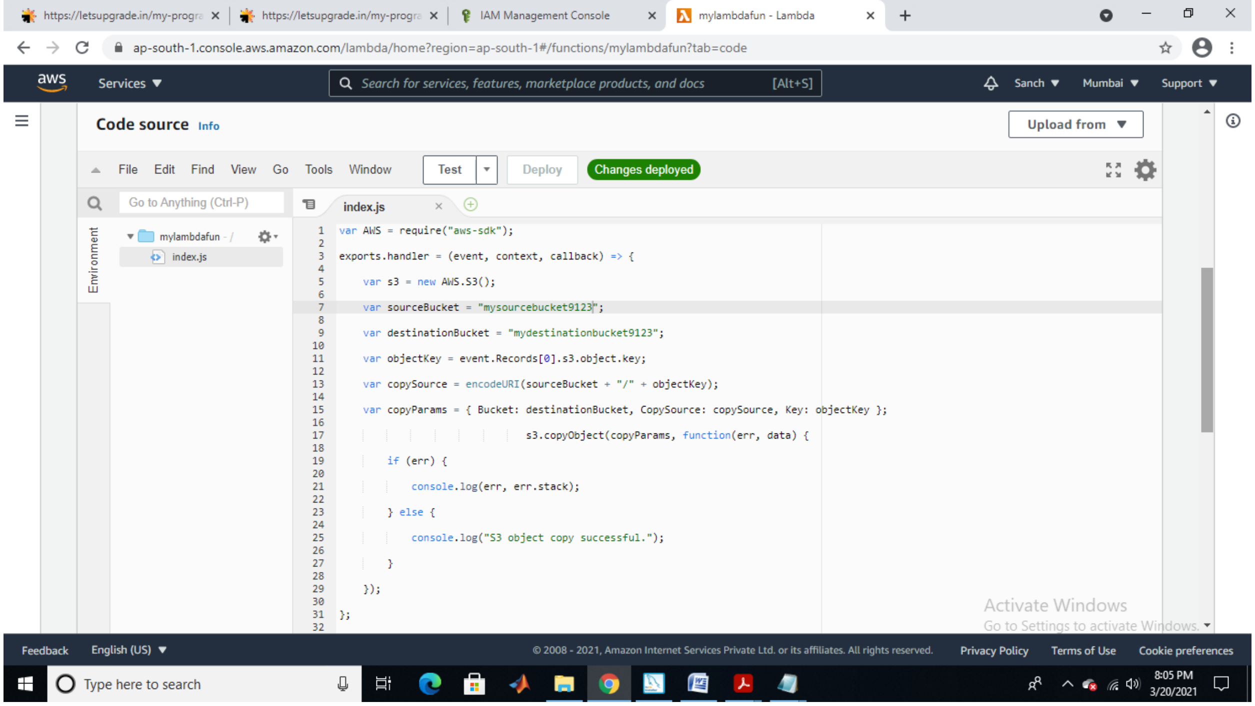
1 minute ago

Function ARN

arn:aws:lambda:ap-south-1:675200621586:function:mylambdafun

Code source

JSON file edited is shown below.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
IAM Management Console
mylambdafun - Lambda
ap-south-1.console.aws.amazon.com/lambda/home?region=ap-south-1#/functions/mylambdafun?tab=code
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
Sanch
Mumbai
Support
Info
Upload from
File
Edit
Find
View
Go
Tools
Window
Test
Deploy
Changes deployed
Go to Anything (Ctrl-P)
Environment
mylambdafun - /
index.js
index.js
Activate Windows
Go to Settings to activate Windows.
Feedback
English (US)
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Cookie preferences
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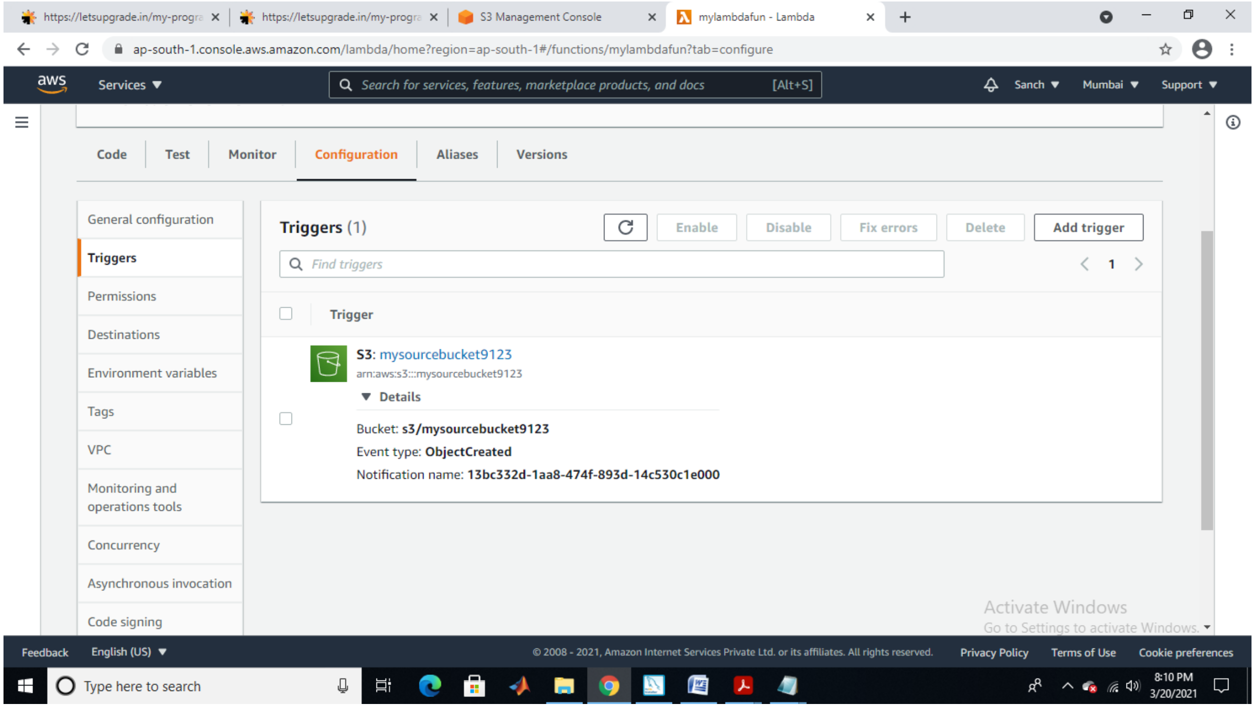
8:05 PM
3/20/2021

Code source

```
var AWS = require("aws-sdk");

exports.handler = (event, context, callback) => {

    var s3 = new AWS.S3();

    var sourceBucket = "mysourcebucket9123";

    var destinationBucket = "mydestinationbucket9123";

    var objectKey = event.Records[0].s3.object.key;

    var copySource = encodeURI(sourceBucket + "/" + objectKey);

    var copyParams = { Bucket: destinationBucket, CopySource: copySource, Key: objectKey };

                            s3.copyObject(copyParams, function(err, data) {

        if (err) {

            console.log(err, err.stack);

        } else {

            console.log("S3 object copy successful.");

        }

    });

};

```

Adding triggers Trigger with -s3,bucket name, confirmation for having

separate buckets to the lambda function and lambda configuration page with trigger added details are displayed in upcoming screenshots.



Triggers (1)

Trigger

S3: mysourcebucket9123
arn:aws:s3:::mysourcebucket9123

▼ Details

Bucket: s3/mysourcebucket9123
Event type: ObjectCreated
Notification name: 13bc332d-1aa8-474f-893d-14c530c1e000

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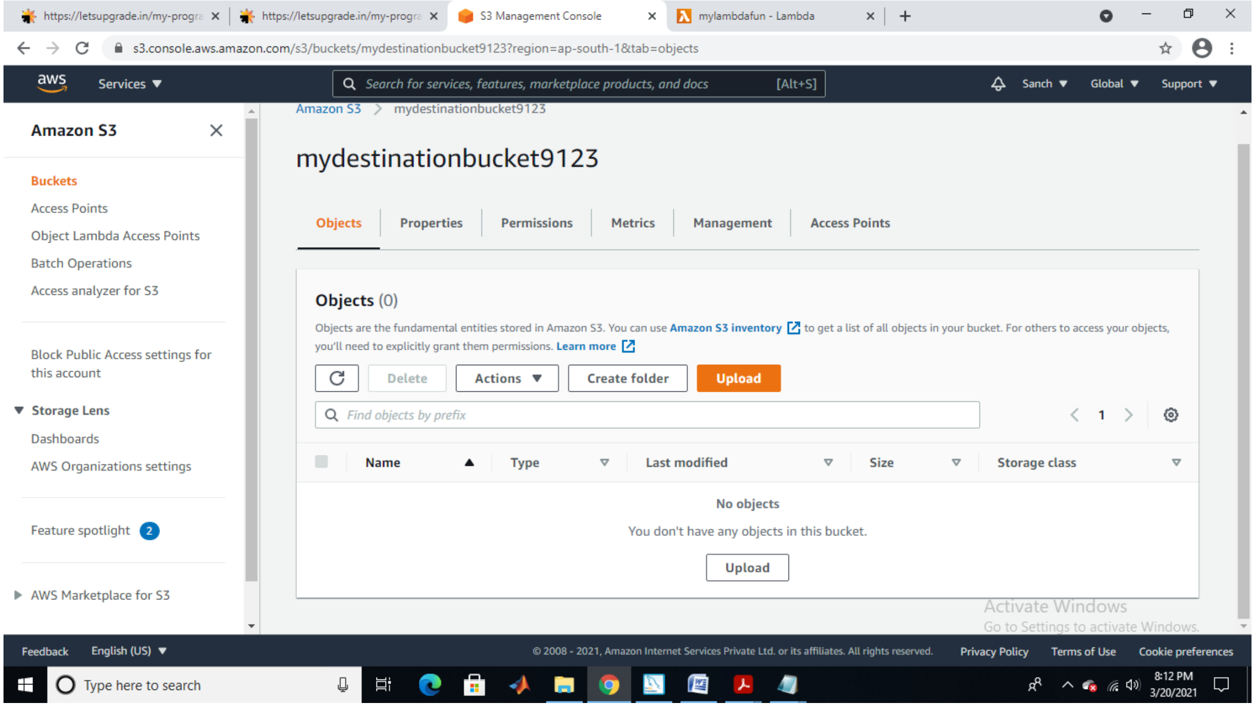
Activate Windows
Go to Settings to activate Windows.

The destination bucket has no objects uploaded before trigger.



mydestinationbucket9123

Objects (0)

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

Name	Type	Last modified	Size	Storage class

No objects

You don't have any objects in this bucket.

Upload

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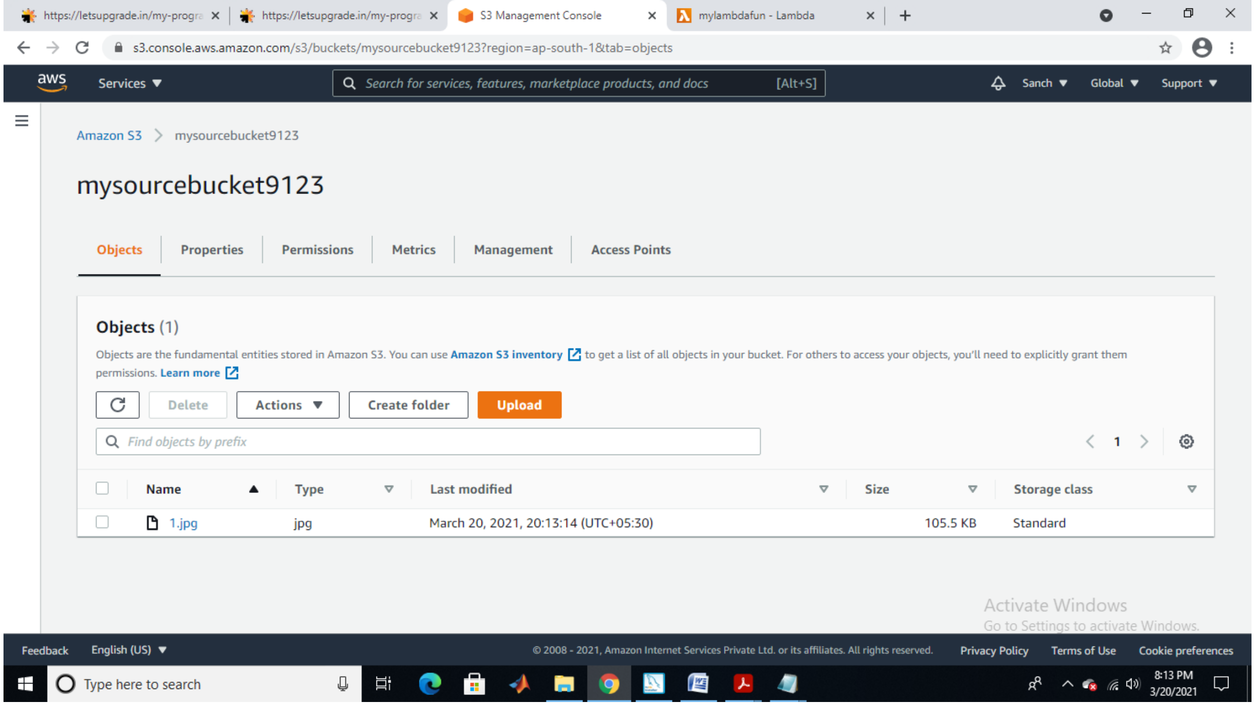
Activate Windows
Go to Settings to activate Windows.

1.jpg file is uploaded in source bucket.



s3.console.aws.amazon.com/s3/buckets/mysourcebucket9123?region=ap-south-1&tab=objects

Amazon S3 > mysourcebucket9123

mysourcebucket9123

Objects (1)

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

Name	Type	Last modified	Size	Storage class
1.jpg	jpg	March 20, 2021, 20:13:14 (UTC+05:30)	105.5 KB	Standard

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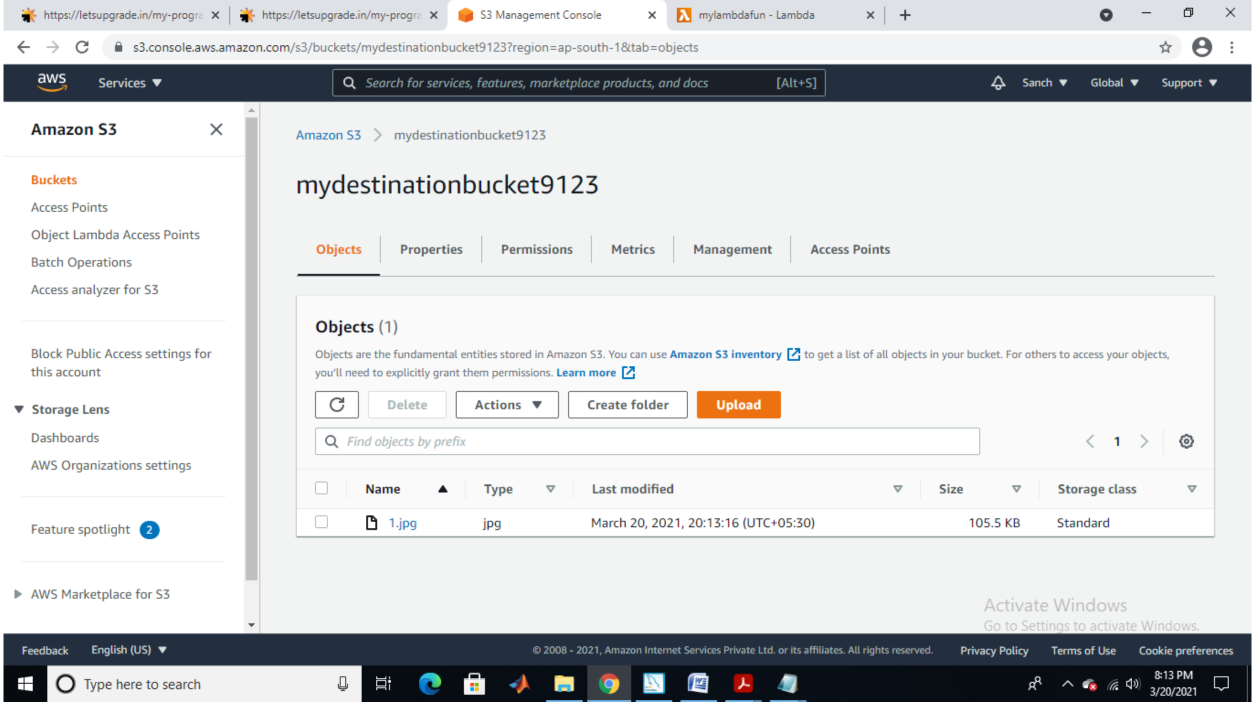
After trigger, destination bucket has 1.jpg uploaded.



s3.console.aws.amazon.com/s3/buckets/mydestinationbucket9123?region=ap-south-1&tab=objects

Amazon S3 > mydestinationbucket9123

mydestinationbucket9123

Objects (1)

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

Name	Type	Last modified	Size	Storage class
1.jpg	jpg	March 20, 2021, 20:13:16 (UTC+05:30)	105.5 KB	Standard

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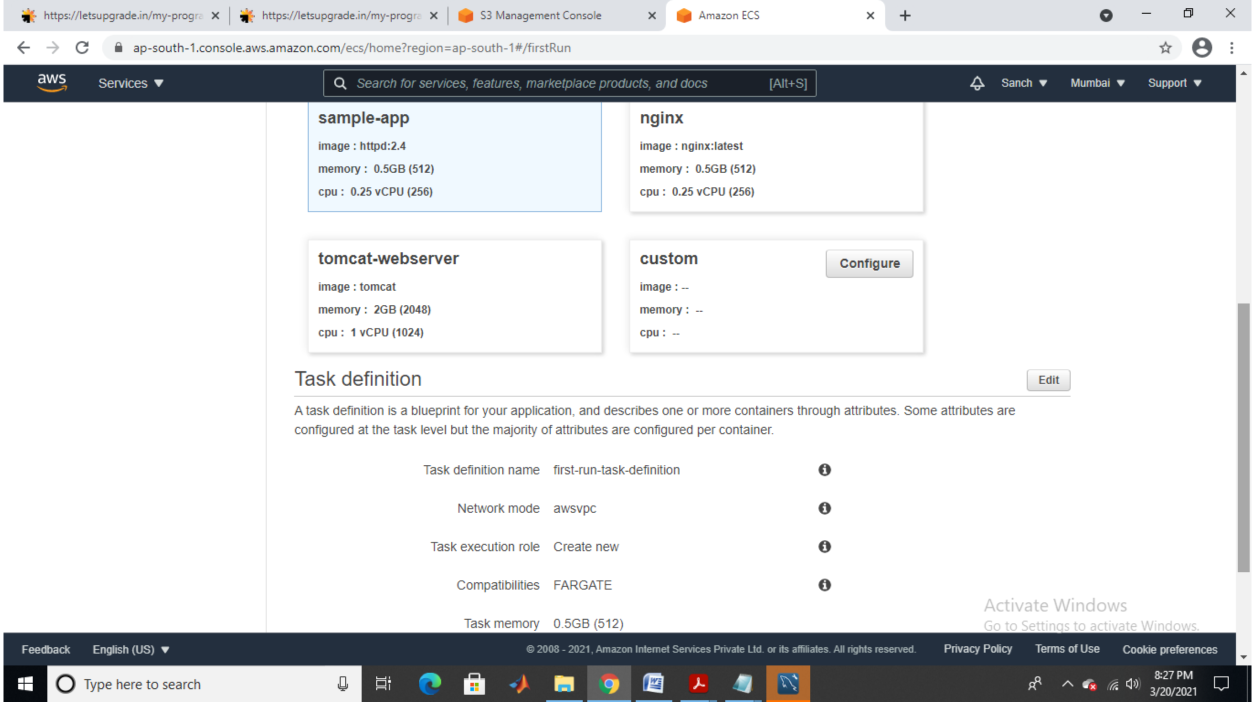
2: Working with Elastic container service using fargate.

Container and task definition is created.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
S3 Management Console
Amazon ECS
ap-south-1.console.aws.amazon.com/ecs/home?region=ap-south-1#/firstRun
aws
Services
Search for services, features, marketplace products, and docs
[Alt+S]
Sanch
Mumbai
Support
Configure
Edit
Activate Windows
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Feedback
English (US)
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Cookie preferences
Type here to search
8:27 PM
3/20/2021

sample-app
image : httpd:2.4
memory : 0.5GB (512)
cpu : 0.25 vCPU (256)

nginx
image : nginx:latest
memory : 0.5GB (512)
cpu : 0.25 vCPU (256)

tomcat-webserver
image : tomcat
memory : 2GB (2048)
cpu : 1 vCPU (1024)

custom
image : --
memory : --
cpu : --

Task definition

A task definition is a blueprint for your application, and describes one or more containers through attributes. Some attributes are configured at the task level but the majority of attributes are configured per container.

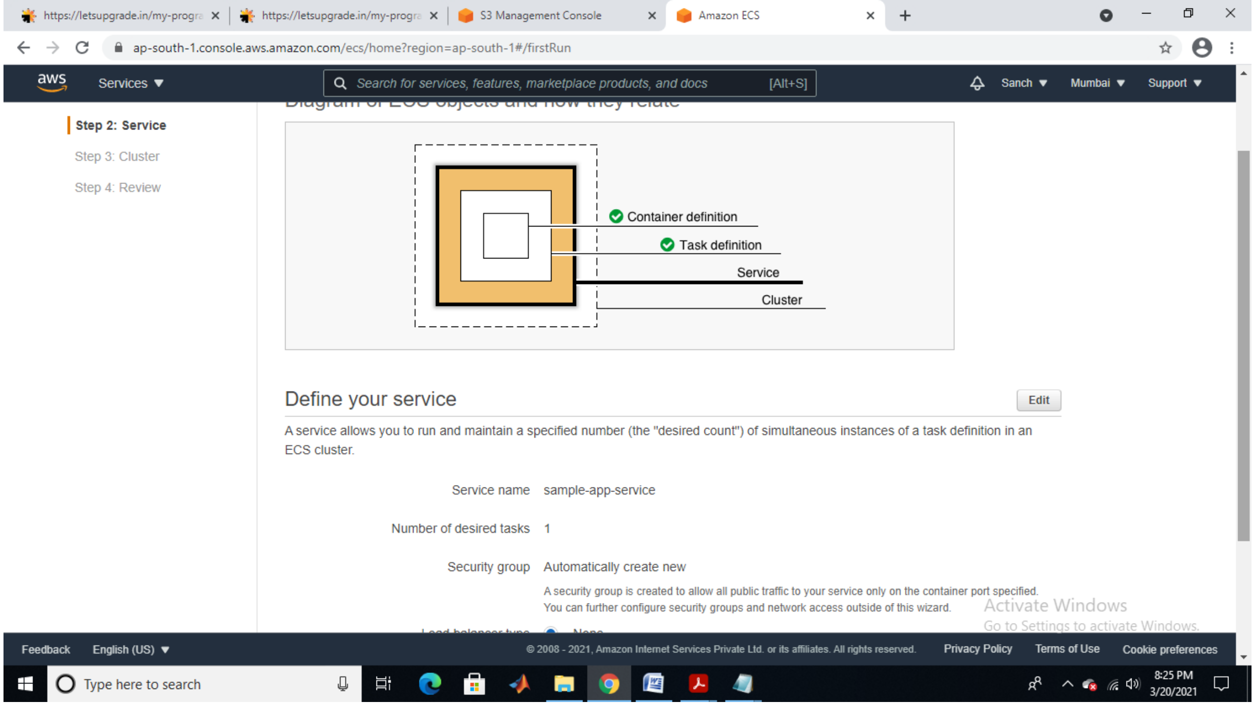
Task definition name first-run-task-definition

Network mode awsvpc

Task execution role Create new

Compatibilities FARGATE

Task memory 0.5GB (512)


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
S3 Management Console
Amazon ECS
ap-south-1.console.aws.amazon.com/ecs/home?region=ap-south-1#/firstRun
aws
Services
Search for services, features, marketplace products, and docs
[Alt+S]
Sanch
Mumbai
Support
Step 2: Service
Step 3: Cluster
Step 4: Review
Container definition
Task definition
Service
Cluster
Edit
Activate Windows
Go to Settings to activate Windows.
Feedback
English (US)
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Define your service

A service allows you to run and maintain a specified number (the "desired count") of simultaneous instances of a task definition in an ECS cluster.

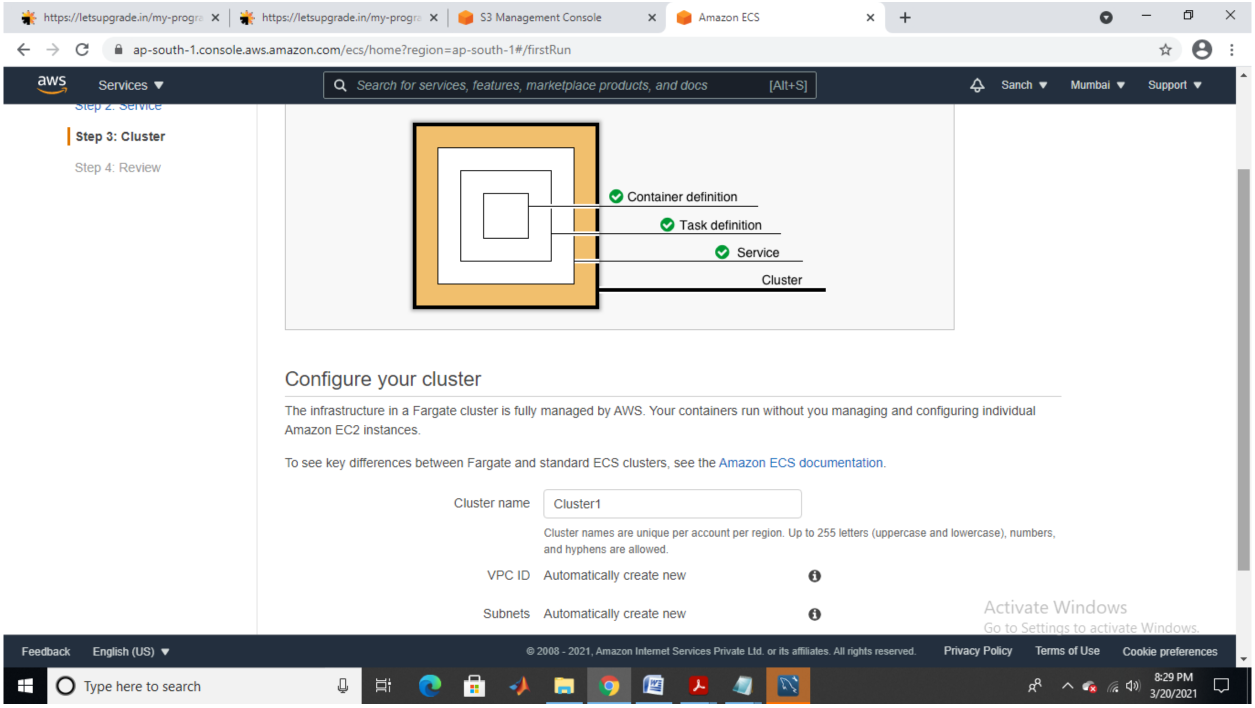
Service name sample-app-service

Number of desired tasks 1

Security group Automatically create new

A security group is created to allow all public traffic to your service only on the container port specified. You can further configure security groups and network access outside of this wizard.

This is Configuring the service detail.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
S3 Management Console
Amazon ECS
ap-south-1.console.aws.amazon.com/ecs/home?region=ap-south-1#/firstRun
aws
Services ▼
Search for services, features, marketplace products, and docs [Alt+S]
Sanch ▼
Mumbai ▼
Support ▼
Step 2: Service
Step 3: Cluster
Step 4: Review
Container definition
Task definition
Service
Cluster
Activate Windows
Go to Settings to activate Windows.
Feedback
English (US) ▼
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3/20/2021

Configure your cluster

The infrastructure in a Fargate cluster is fully managed by AWS. Your containers run without you managing and configuring individual Amazon EC2 instances.

To see key differences between Fargate and standard ECS clusters, see the Amazon ECS documentation.

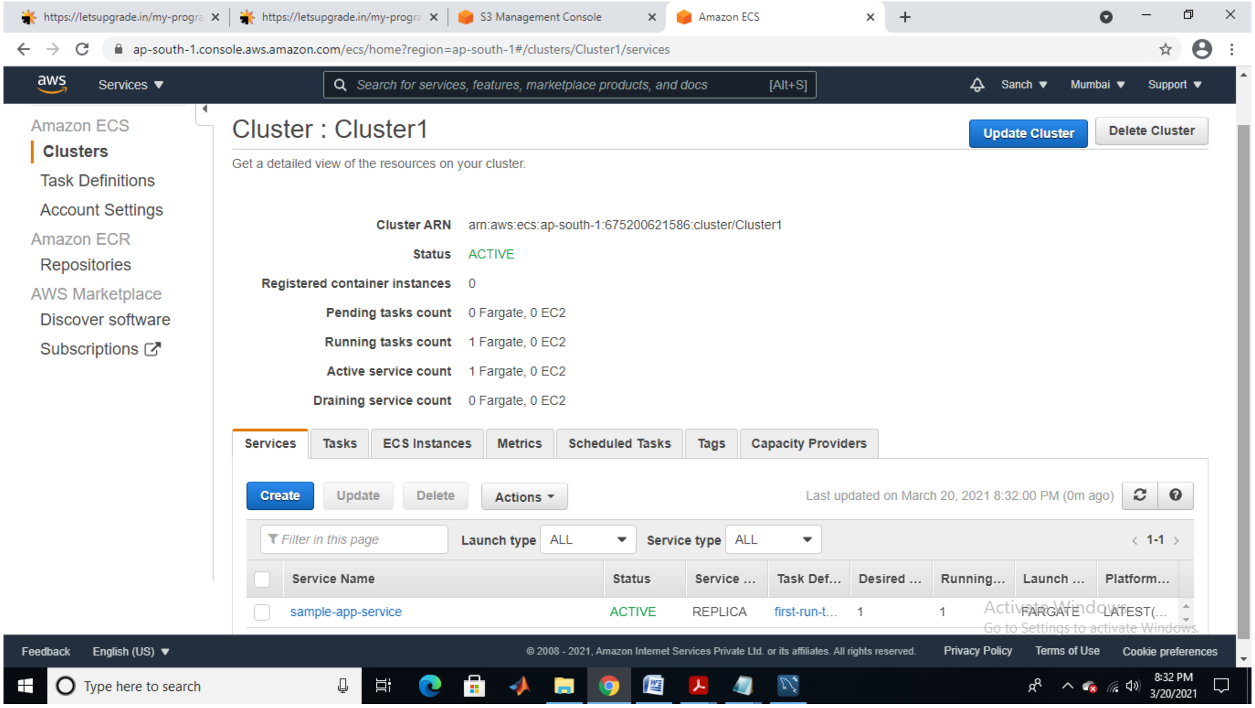
Cluster name: Cluster1

Cluster names are unique per account per region. Up to 255 letters (uppercase and lowercase), numbers, and hyphens are allowed.

VPC ID: Automatically create new

Subnets: Automatically create new

This is Configuring the cluster detail.



Cluster : Cluster1

Get a detailed view of the resources on your cluster.

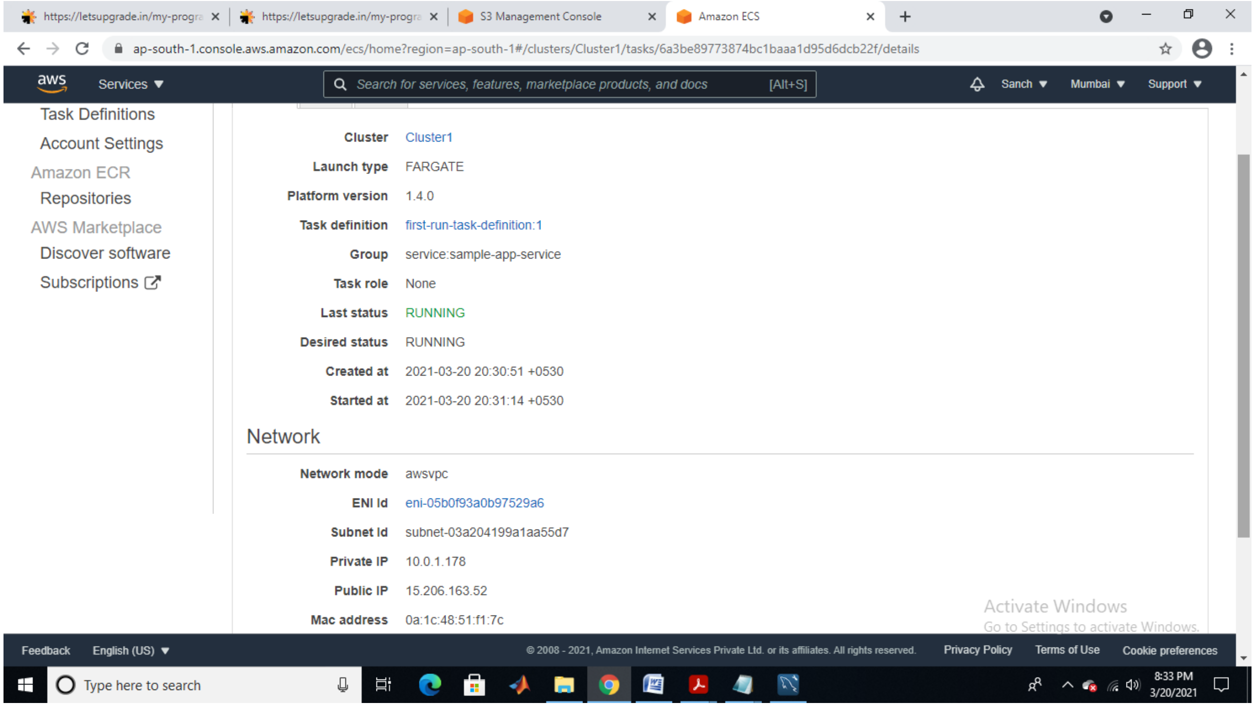
Cluster ARN	arn:aws:ecs:ap-south-1:675200621586:cluster/Cluster1
Status	ACTIVE
Registered container instances	0
Pending tasks count	0 Fargate, 0 EC2
Running tasks count	1 Fargate, 0 EC2
Active service count	1 Fargate, 0 EC2
Draining service count	0 Fargate, 0 EC2

Last updated on March 20, 2021 8:32:00 PM (0m ago)

Launch type: ALL   Service type: ALL   1-1

Service Name	Status	Service ...	Task Def...	Desired ...	Running...	Launch ...	Platform...
sample-app-service	ACTIVE	REPLICA	first-run-t...	1	1	FARGATE	LATEST(...

Viewing the service along with Dashboard displaying the cluster created, cluster information, panel displaying ENI ID, Panel displaying the private, public, and the MAC id, display application is shown below.


https://letsupgrade.in/my-progra
https://letsupgrade.in/my-progra
S3 Management Console
Amazon ECS
ap-south-1.console.aws.amazon.com/ecs/home?region=ap-south-1#/clusters/Cluster1/tasks/6a3be89773874bc1baaa1d95d6dcb22f/details
aws
Services ▼
Search for services, features, marketplace products, and docs [Alt+S]
Sanch ▼
Mumbai ▼
Support ▼
Task Definitions
Account Settings
Amazon ECR
Repositories
AWS Marketplace
Discover software
Subscriptions
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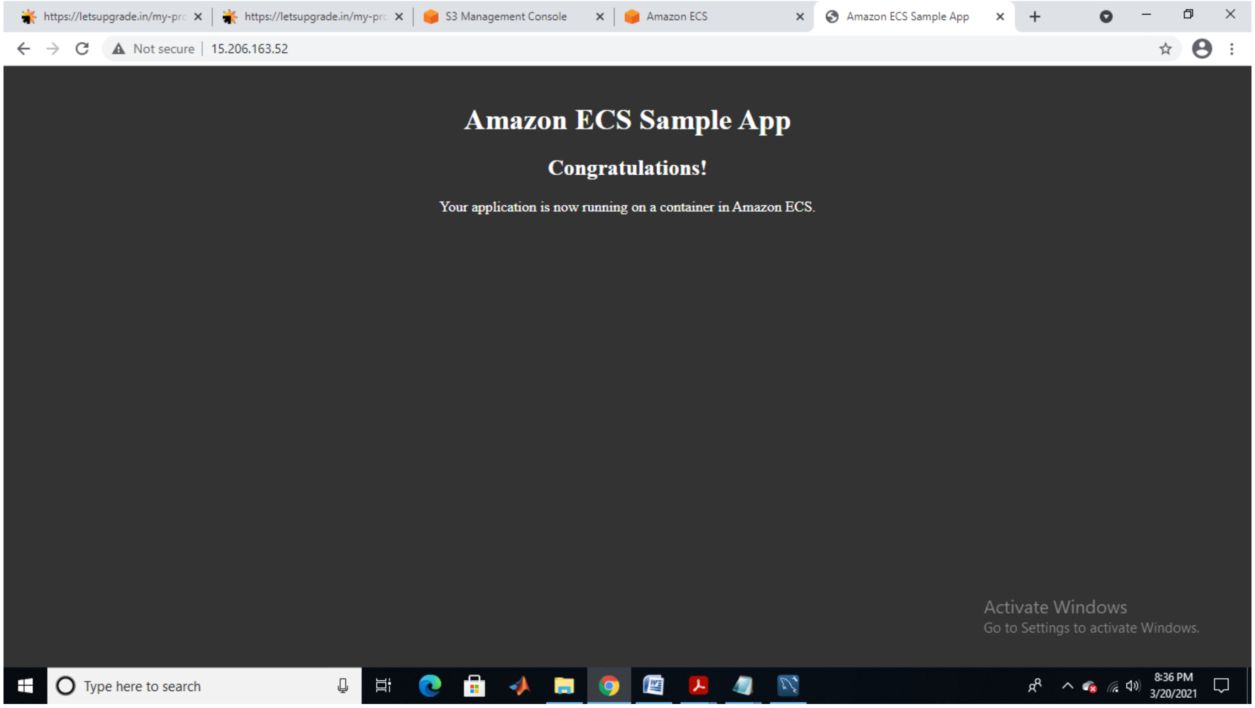
Type here to search
8:33 PM
3/20/2021

Cluster	Cluster1
Launch type	FARGATE
Platform version	1.4.0
Task definition	first-run-task-definition:1
Group	service:sample-app-service
Task role	None
Last status	RUNNING
Desired status	RUNNING
Created at	2021-03-20 20:30:51 +0530
Started at	2021-03-20 20:31:14 +0530

Network

Network mode	awsvpc
ENI Id	eni-05b0f93a0b97529a6
Subnet Id	subnet-03a204199a1aa55d7
Private IP	10.0.1.178
Public IP	15.206.163.52
Mac address	0a:1c:48:51:f1:7c

Sample App page display is successful.



https://letsupgrade.in/my-pr
https://letsupgrade.in/my-pr
S3 Management Console
Amazon ECS
Amazon ECS Sample App
Not secure | 15.206.163.52

Amazon ECS Sample App

Congratulations!

Your application is now running on a container in Amazon ECS.

Activate Windows
Go to Settings to activate Windows.
Type here to search
8:36 PM
3/20/2021