

## CLOUD AND SERVERLESS COMPUTING PROJECT

### TITTLE :

**Using AWS Lambda to send email with SNS for the files stored in S3**

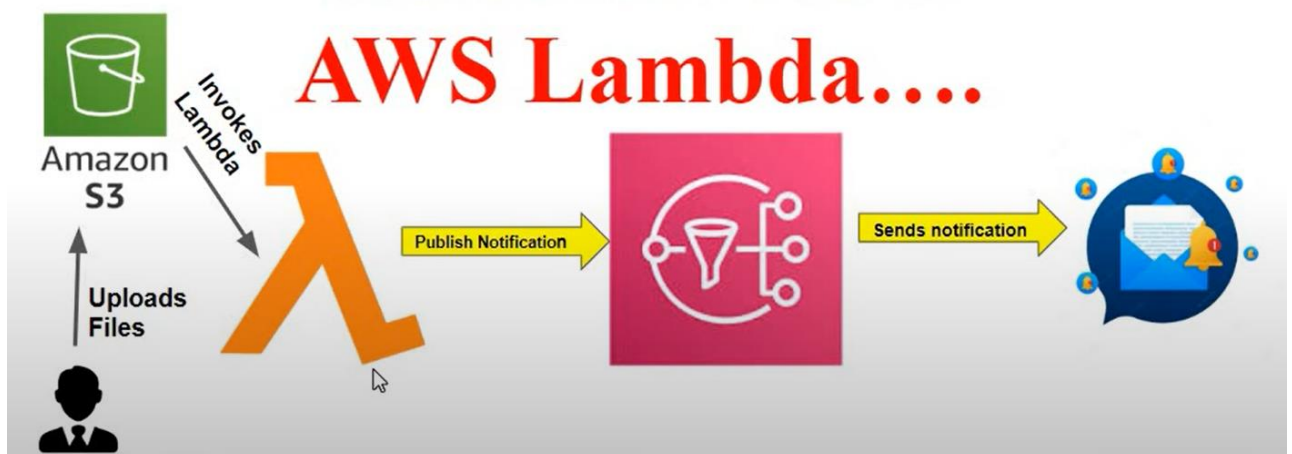
### Objective:

The objective of this project is to leverage AWS Lambda and Amazon SNS (Simple Notification Service) to automate the process of sending emails for files stored in Amazon S3. By utilizing AWS Lambda, we can execute code in response to S3 events, such as file uploads or modifications. This allows us to trigger a Lambda function whenever a file is added or updated in the S3 bucket. The Lambda function can then extract relevant information about the file and use Amazon SNS to send an email notification containing details about the file to designated recipients. This automation streamlines communication and ensures timely notifications for important file events, enhancing operational efficiency and facilitating better collaboration within the system.

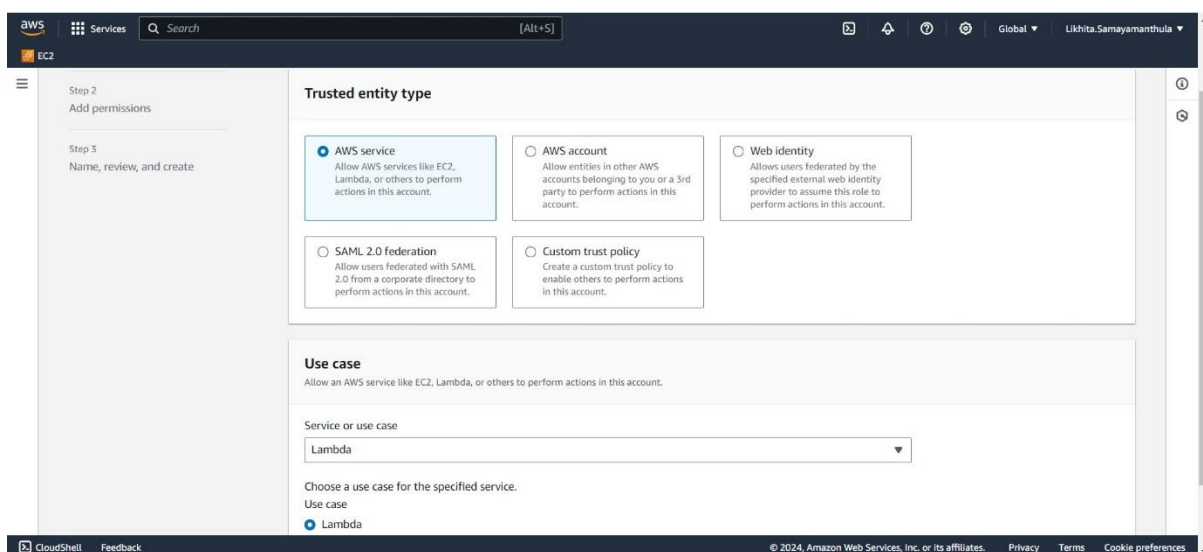
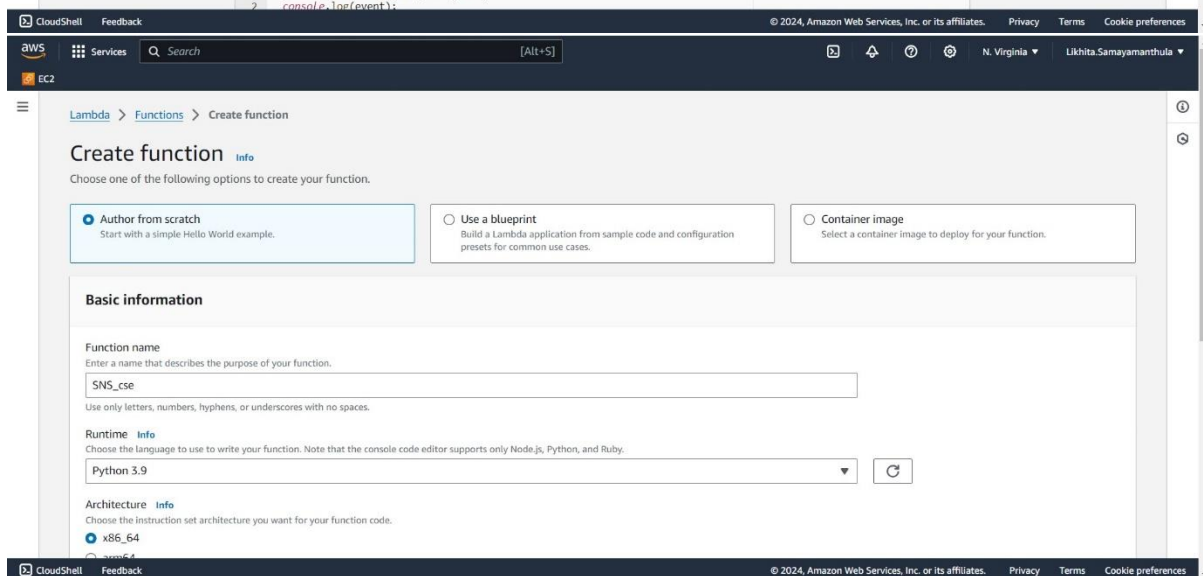
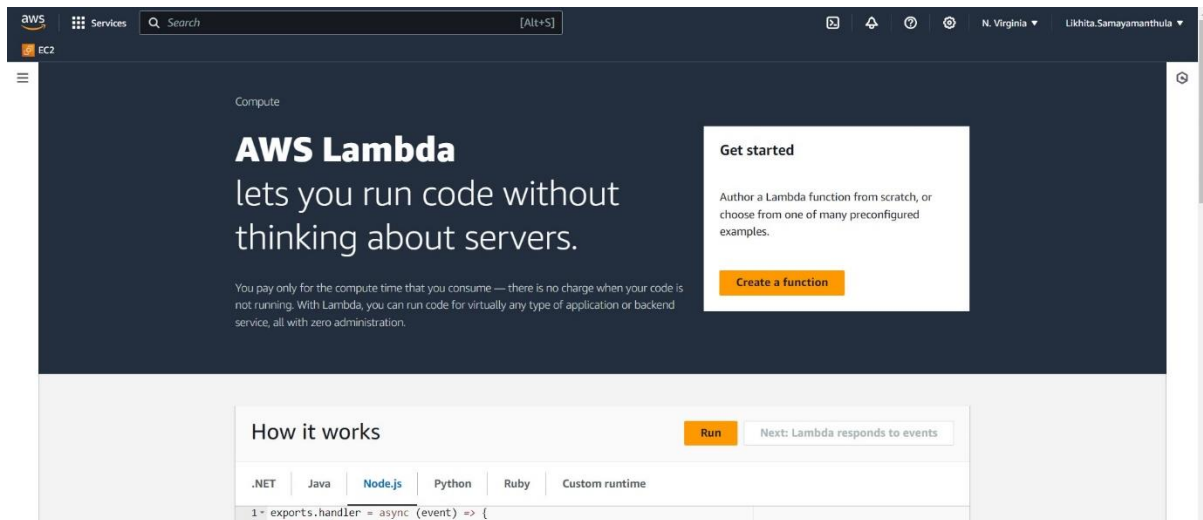
### Services Used:

AWS Lambda,SNS,S3

# Automate Notifications with AMAZON SNS and AWS Lambda....



NAME:S.Likhita  
ID:2100032485



NAME:S.Likhita  
ID:2100032485

aws

Services

Search

[Alt+S]

EC2

Global

Likhita.Samayamanthula

Select trusted entity

Step 2

Add permissions

Step 3

Name, review, and create

Add permissions

Permissions policies (3/945)

Choose one or more policies to attach to your new role.

Q sns

Filter by Type

All types

5 matches

Policy name	Type	Description
<input checked="" type="checkbox"/> AmazonSNSFullAccess	AWS managed	Provides full access to Amazon SNS via...
<input type="checkbox"/> AmazonSNSReadOnlyAccess	AWS managed	Provides read only access to Amazon S...
<input type="checkbox"/> AmazonSNSRole	AWS managed	Default policy for Amazon SNS service...
<input type="checkbox"/> AWSElasticBeanstalkRoleSNS	AWS managed	(Elastic Beanstalk operations role) Allo...
<input type="checkbox"/> AWSIoTDeviceDefenderPublishFindings...	AWS managed	Provides messages publish access to S...

Set permissions boundary - optional

Cancel

Previous

Next

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Services

Search

[Alt+S]

EC2

Global

Likhita.Samayamanthula

IAM

Roles

Create role

Step 1

Select trusted entity

Step 2

Add permissions

Step 3

Name, review, and create

Name, review, and create

Role details

Role name

Enter a meaningful name to identify this role.

csc\_project

Maximum 64 characters. Use alphanumeric and "+", "@", "\_" characters.

Description

Add a short explanation for this role.

Allows Lambda functions to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and "+", "@", "\_" characters.

Step 1: Select trusted entities

Edit

Trust policy

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Services

Search

[Alt+S]

EC2

Global

Likhita.Samayamanthula

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access Analyzer

External access

Unused access

Analyzer settings

Role csc\_project created.

View role

Roles (43)

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Q Search

1 2 3

Role name	Trusted entities	Last activity
<input type="checkbox"/> getCustomerDetailsByEmail-role	AWS Service: lambda	69 days ago

Roles Anywhere

Authenticate your non AWS workloads and securely provide access to AWS services.

Access AWS from your non AWS workloads

Operate your non AWS workloads using the same authentication and authorization strategy that you use within AWS.

X.509 Standard

Use your own existing PKI infrastructure or use AWS Certificate Manager Private Certificate Authority to authenticate identities.

Temporary credentials

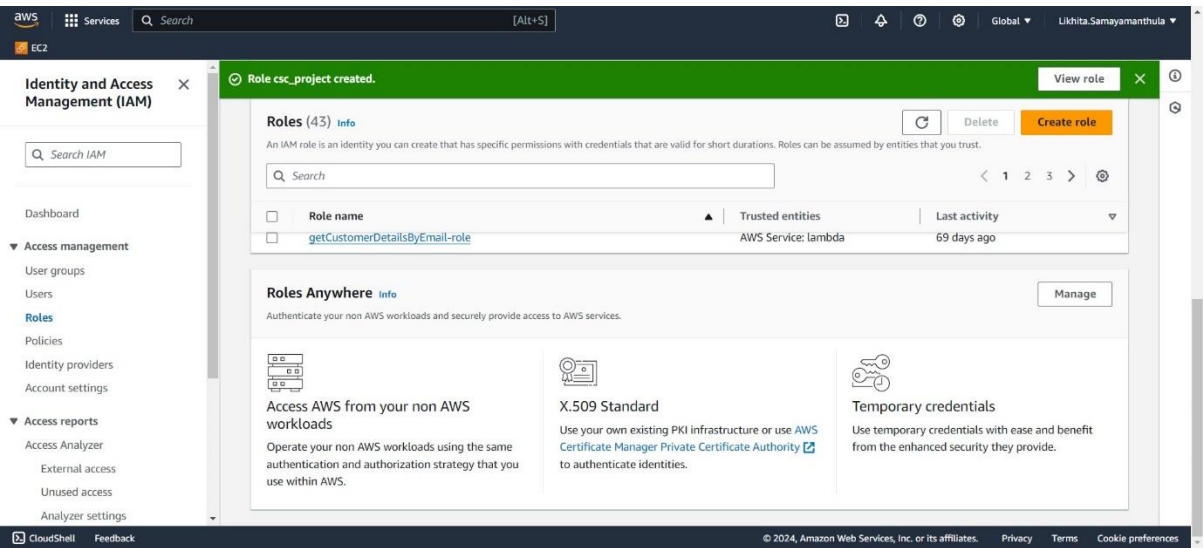
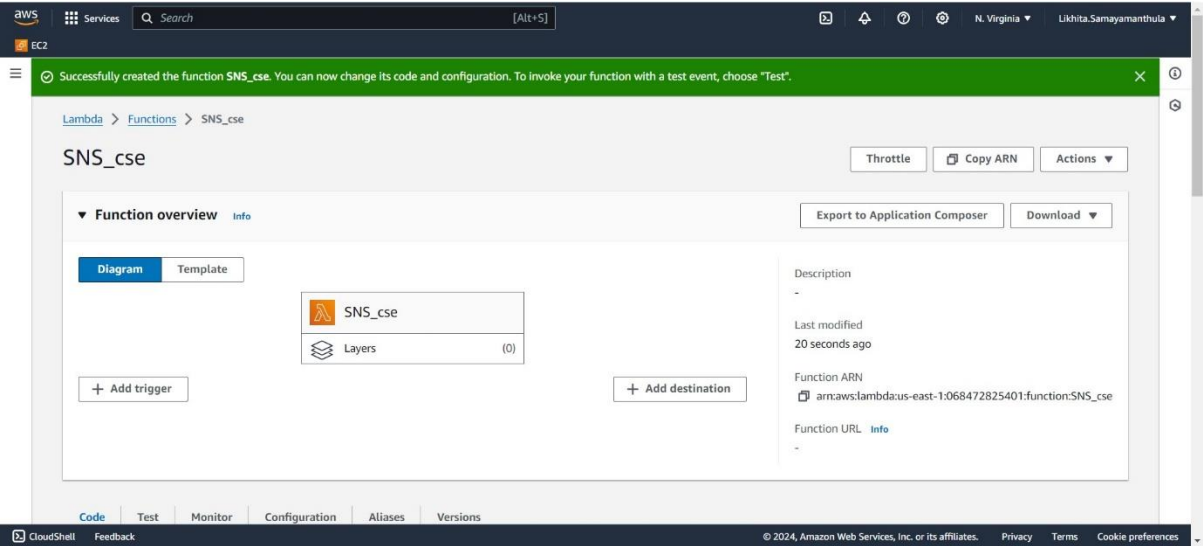
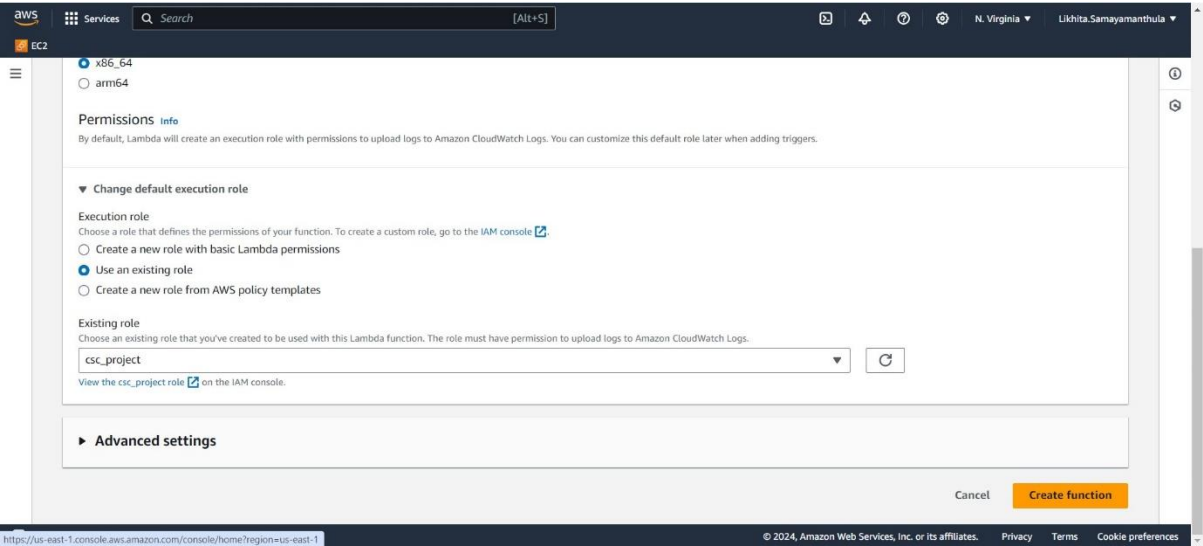
Use temporary credentials with ease and benefit from the enhanced security they provide.

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

NAME:S.Likhita  
ID:2100032485



NAME:S.Likhita  
ID:2100032485

aws

Services

Search

[Alt+S]

EC2

CloudShell

Feedback

Global

Likhita.Samayamanthula

Storage

Amazon S3

Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

How it works

Introduction to Amazon S3

Copy link

Pricing

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Estimate your monthly bill using the [AWS Simple Monthly Calculator](#)

[View pricing details](#)

© 2024, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Services

Search

[Alt+S]

EC2

CloudShell

Feedback

Global

Likhita.Samayamanthula

Successfully created bucket "cscprojectemail"

To upload files and folders, or to configure additional bucket settings, choose [View details](#).

View details

Amazon S3

Buckets

Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

View Storage Lens dashboard

General purpose buckets

Directory buckets

General purpose buckets (1)

Info

Buckets are containers for data stored in S3.

Find buckets by name

Name

▲

AWS Region

▼

Access

▼

Creation date

▼

cscprojectemail

US East (N. Virginia) us-east-1

Objects can be public

March 21, 2024, 10:40:37 (UTC+05:30)

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Services

Search

[Alt+S]

EC2

CloudShell

Feedback

Global

Likhita.Samayamanthula

Amazon S3

Buckets

cscprojectemail

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, 4.1 MB)

All files and folders in this table will be uploaded.

Remove

Add files

Add folder

CloudShell

Feedback

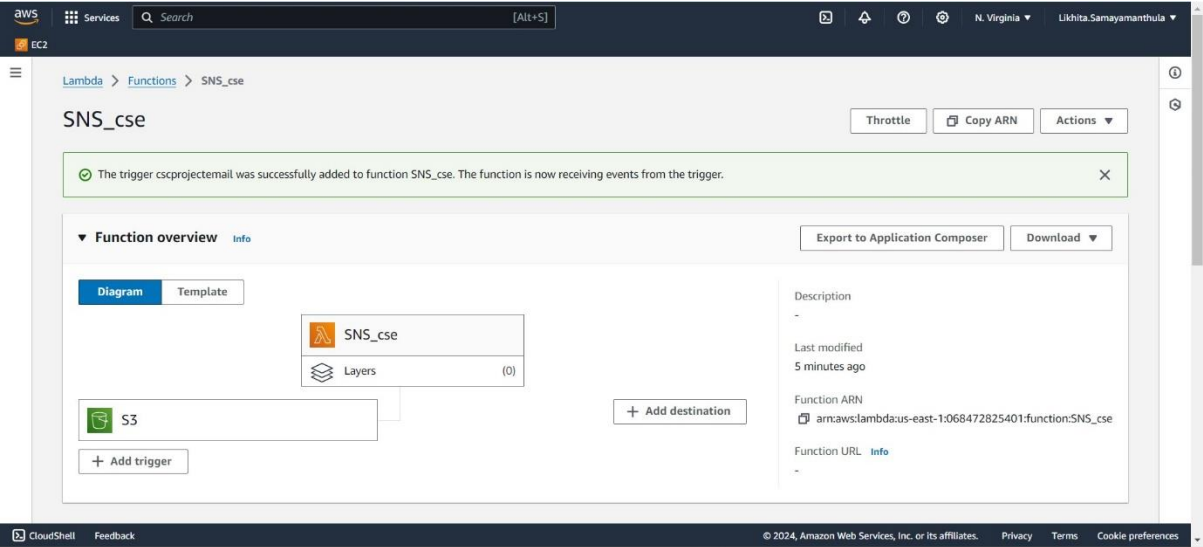
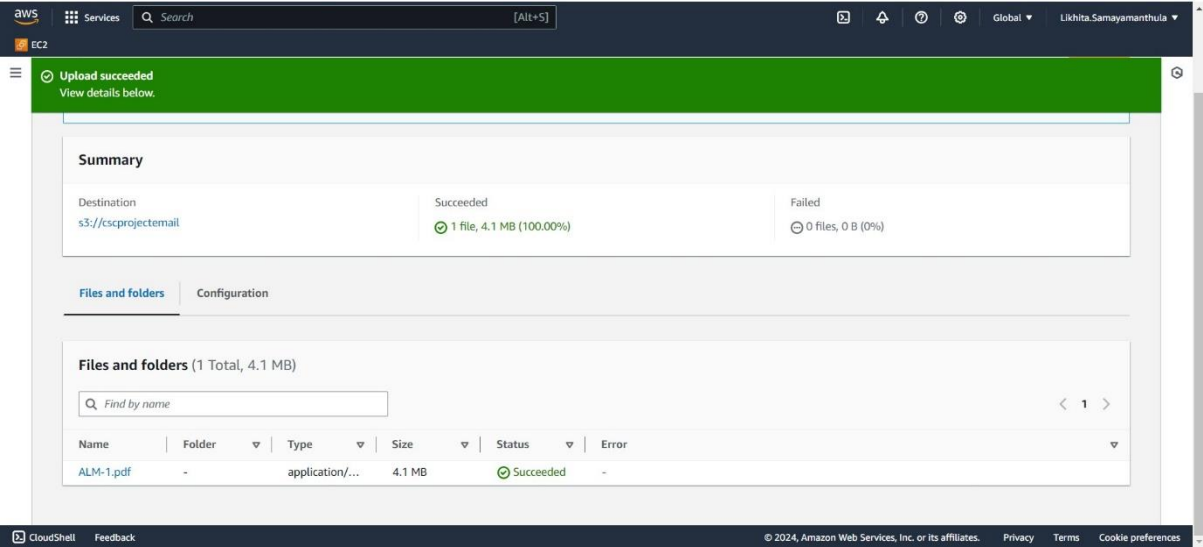
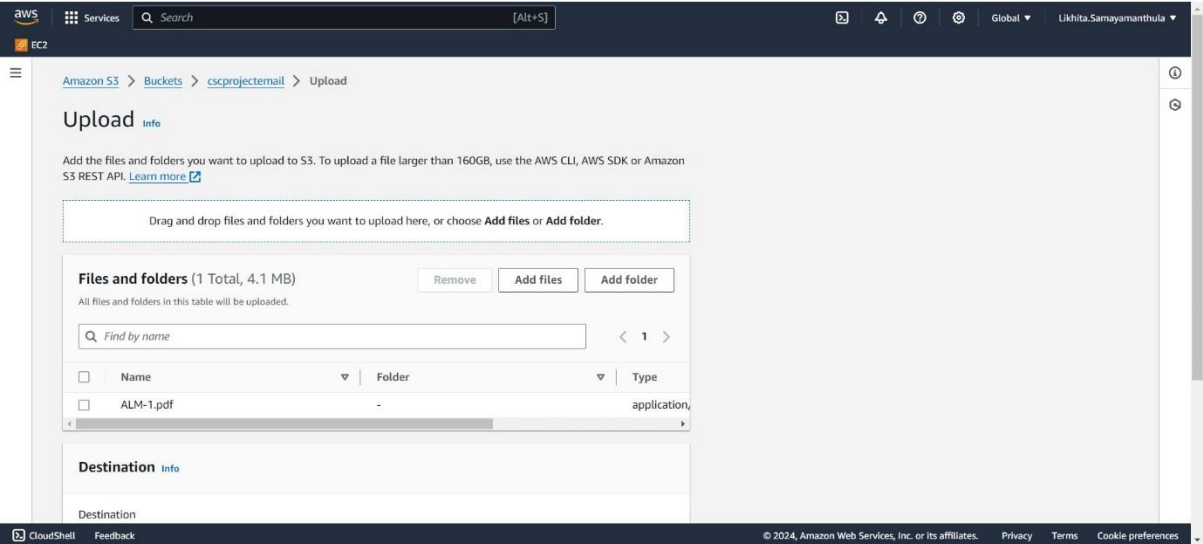
© 2024, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

NAME:S.Likhita  
ID:2100032485





NAME:S.Likhita  
ID:2100032485

aws

Services

Search

[Alt+S]

EC2

N. Virginia

Likhita.Samayamanthula

New Feature

Amazon SNS now supports in-place message archiving and replay for FIFO topics. [Learn more](#)

Application Integration

# Amazon Simple Notification Service

## Pub/sub messaging for microservices and serverless applications.

Amazon SNS is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and event-driven serverless applications. Amazon SNS provides topics for high-throughput, push-based, many-to-many messaging.

Create topic

Topic name

A topic is a message channel. When you publish a message to a topic, it fans out the message to all subscribed endpoints.

MyTopic

Next step

Start with an overview

Pricing

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. [Privacy](#) [Terms](#) [Cookie preferences](#)

aws

Services

Search

[Alt+S]

EC2

N. Virginia

Likhita.Samayamanthula

▼ Access policy - optional [Info](#)

This policy defines who can access your topic. By default, only the topic owner can publish or subscribe to the topic.

Choose method

☒ Basic

Use simple criteria to define a basic access policy.

☐ Advanced

Use a JSON object to define an advanced access policy.

Publishers

Specify who can publish messages to the topic.

Everyone

Anybody can publish

Subscribers

Specify who can subscribe to this topic.

Everyone

Any AWS account can subscribe to the topic

JSON preview

```
{
  "Version": "2008-10-17",
  "Id": "_default_policy_ID",
  "Statement": [
    {
      "Sid": "_default_statement_ID",
      "Effect": "Allow",
      "Principal": {
        "AWS": "*"
      },
      "Action": [
        "SNS:Publish",
        "SNS:RemovePermission",
        "SNS:ResetSubscription"
      ]
    }
  ]
}
```

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. [Privacy](#) [Terms](#) [Cookie preferences](#)

aws

Services

Search

[Alt+S]

EC2

N. Virginia

Likhita.Samayamanthula

Details

Type [Info](#)

Topic type cannot be modified after topic is created

☐ FIFO (first-in, first-out)

- Strictly-preserved message ordering
- Exactly-once message delivery
- High throughput, up to 300 publishes/second
- Subscription protocols: SQS

☒ Standard

- Best-effort message ordering
- At-least once message delivery
- Highest throughput in publishes/second
- Subscription protocols: SQS, Lambda, HTTP, SMS, email, mobile application endpoints

Name

MyTopic

Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (\_).

Display name - optional [Info](#)

To use this topic with SMS subscriptions, enter a display name. Only the first 10 characters are displayed in an SMS message.

My Topic

Maximum 100 characters.

▼ Encryption - optional

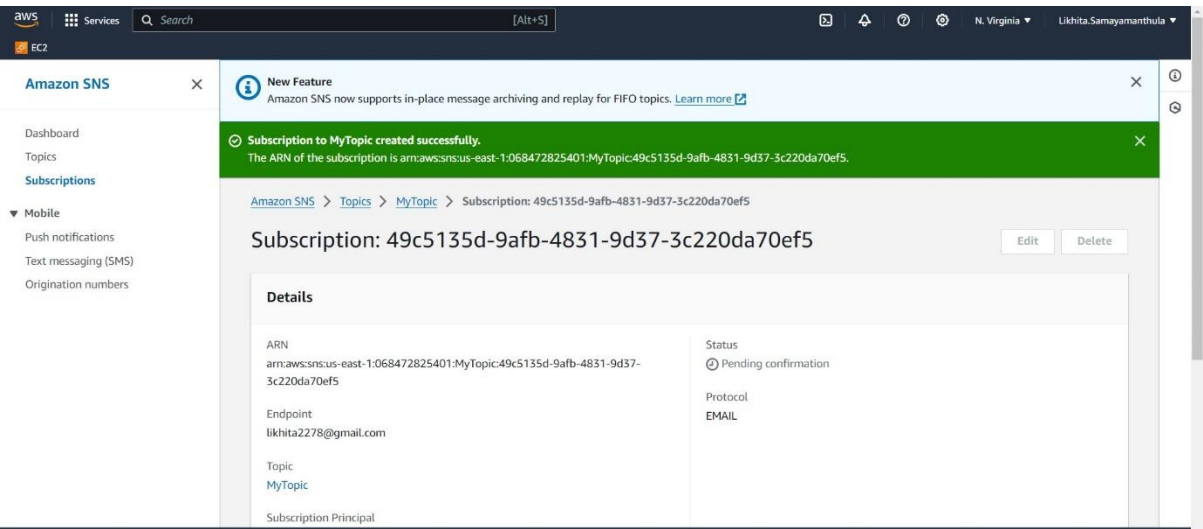
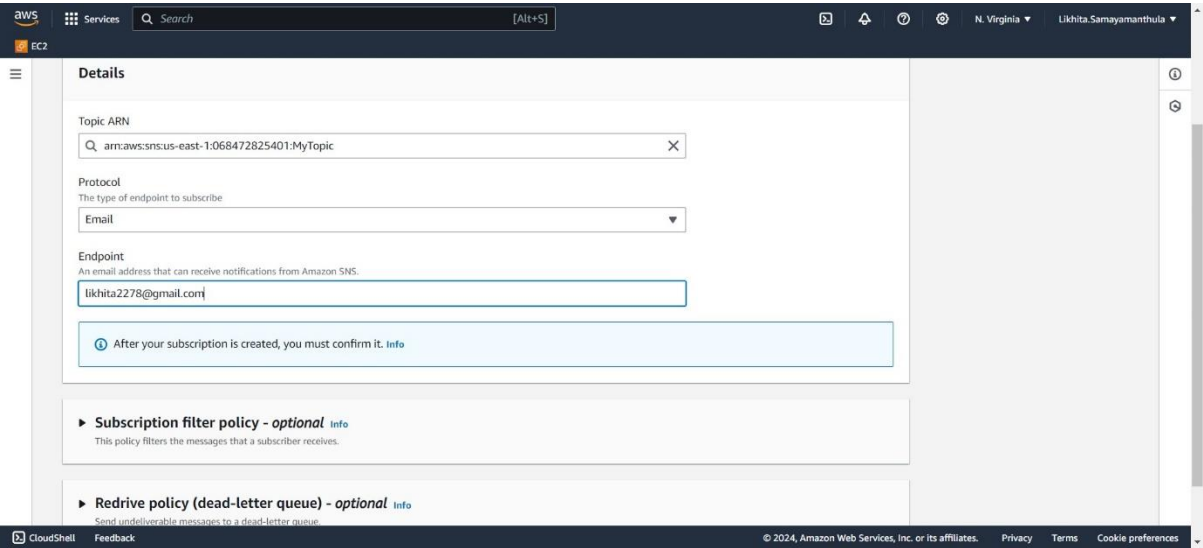
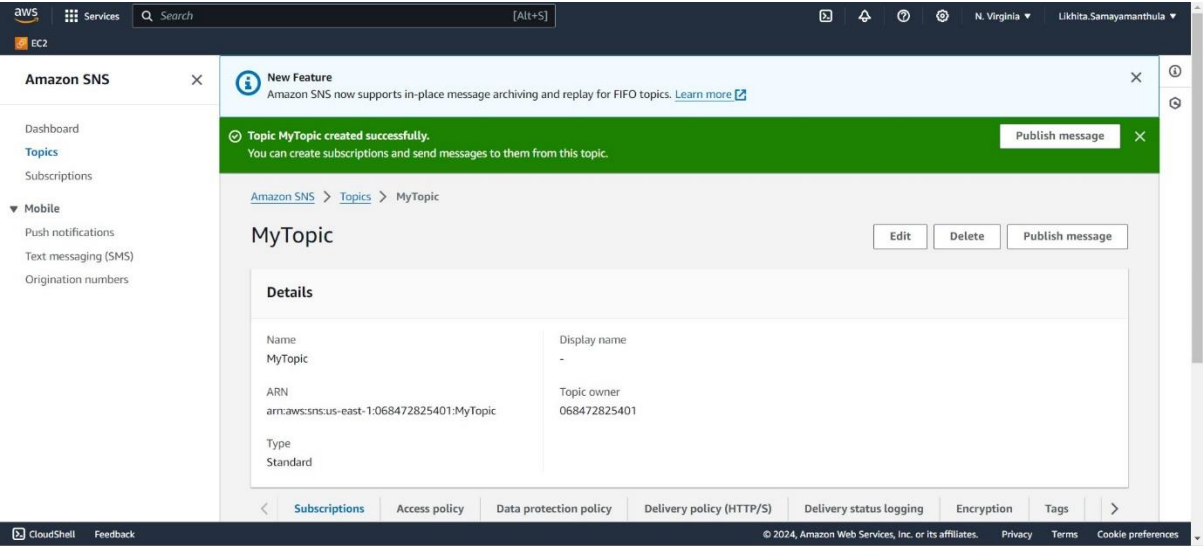
Amazon SNS provides in-transit encryption by default. Enabling server-side encryption adds at-rest encryption to your topic.

CloudShell

Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. [Privacy](#) [Terms](#) [Cookie preferences](#)

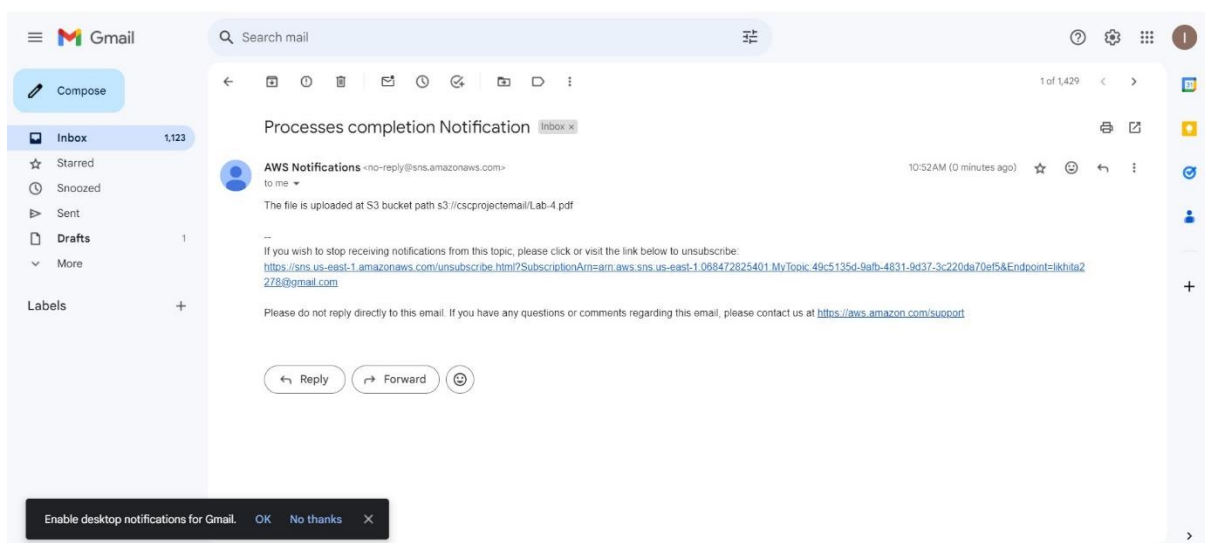
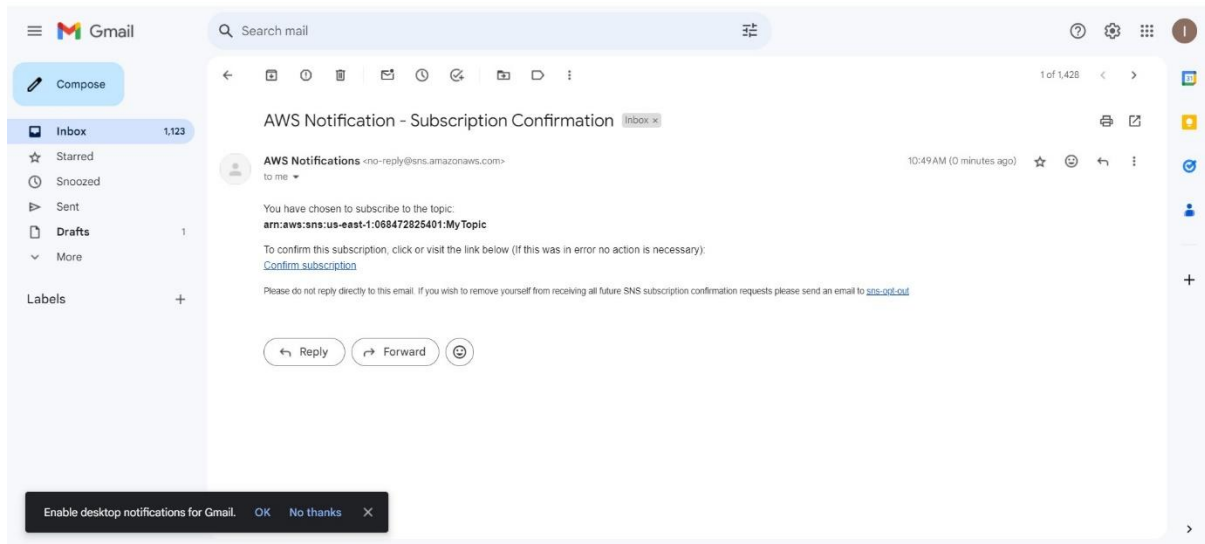
NAME:S.Likhita  
ID:2100032485



OUTPUT:



NAME:S.Likhita  
ID:2100032485



**Github link:**

NAME:S.Likhita  
ID:2100032485

<https://github.com/LikhitaSamayamanthula/csc-project.git>

**Reference link:**

<https://www.youtube.com/watch?v=zLL4ZTmDHSI&t=5s>