CloudFormation and App Services

Assignment – 1 CloudFormation SNS

Problem Statement

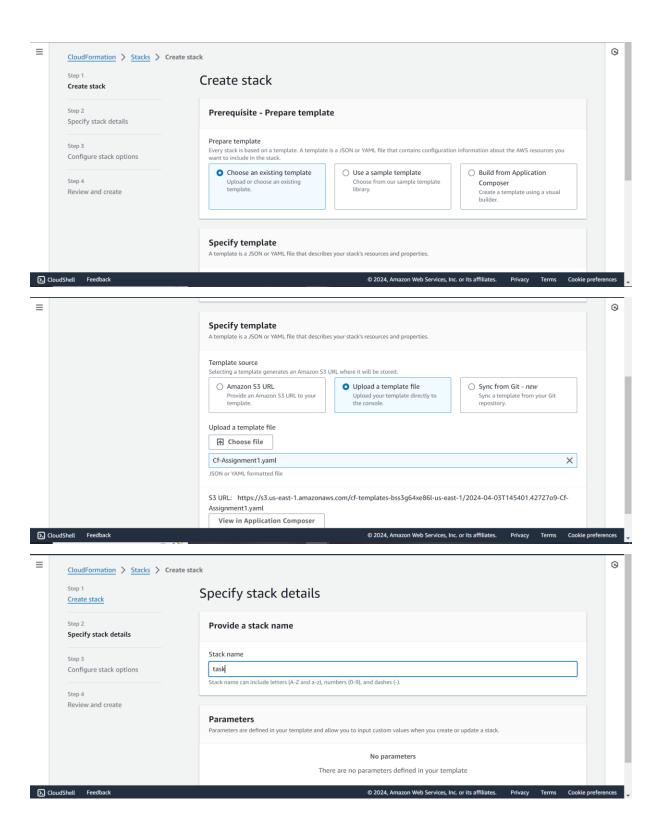
You work for XYZ Corporation. Your team is asked to deploy similar architecture multiple times for testing, development, and production purpose. Implement CloudFormation for the tasks assigned to you below.

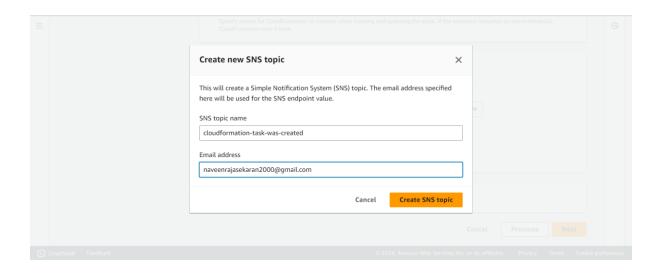
Tasks To Be performed:

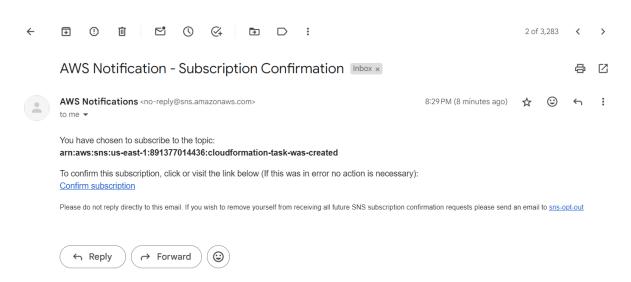
- 1. Use the template from CloudFormation task 1
- 2. Add Notification to the CloudFormation stack using SNS so that you get a notification Via mail for every step of the stack creation process.

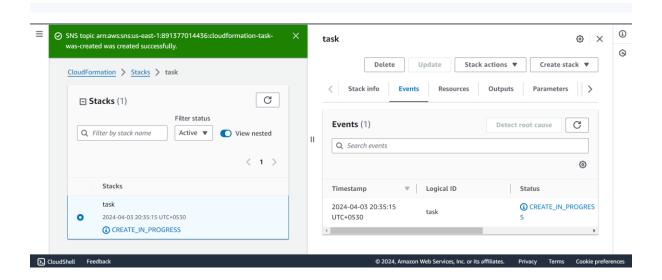
Steps

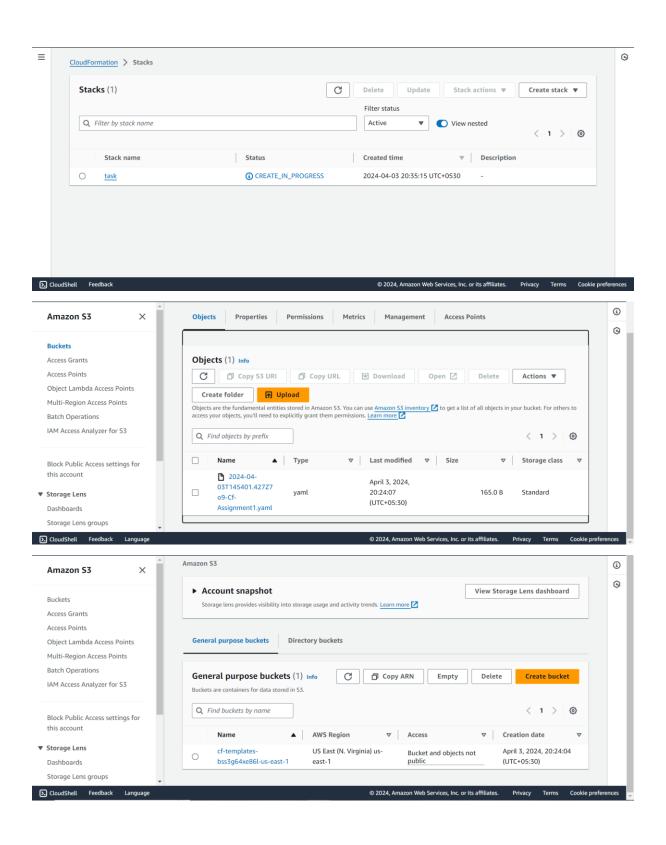
- Click the create stack
- Next upload the code-yaml file to create S3 Bucket resource
- Provide the name for the stack
- Click the create SNS Topic
- Provide the name for SNS Topic
- Next provide the Email ID to receive the Mail
- A subscription mail will be received to provided mail ID and confirm the same
- And provide the necessary configurations
- Click the submit
- Finally the stack is created
- Navigate to S3 now a new Bucket will be created by the cloudformation
- Now the Mail will be received to the mail ID from SNS.











AWS CloudFormation Notification Inbox x





AWS Notifications <no-reply@sns.amazonaws.com>

8:43 PM (2 minutes ago) ☆ ⓒ ← :





to me ▼

StackId='arn:aws:cloud formation: us-east-1:891377014436: stack/task/93cb1880-f1cb-11ee-8a98-0ed853cdb7fb'

Timestamp='2024-04-03T15:13:03.344Z'

EventId='aaa422d0-f1cc-11ee-8c9d-0affd8b53175'

LogicalResourceId='task'

Namespace='891377014436'

Physical Resource Id='arn: aws: cloud formation: us-east-1:891377014436: stack/task/93cb1880-f1cb-11ee-8a98-0ed853cdb7fb', and the contraction of the contraction o

PrincipalId='891377014436'

ResourceProperties='null'

ResourceStatus='DELETE_IN_PROGRESS'

ResourceStatusReason='User Initiated'

DetailedStatus="

ResourceType='AWS::CloudFormation::Stack'

StackName='task'

ClientRequestToken='Console-DeleteStack-fbee7575-67dd-1639-f336-2d68473df71a'

Assignment – 2 SQS And SES

Problem Statement

You work for XYZ Corporation. Your team is asked to deploy similar architecture multiple times for testing, development, and production purpose. Implement CloudFormation for the tasks assigned to you below.

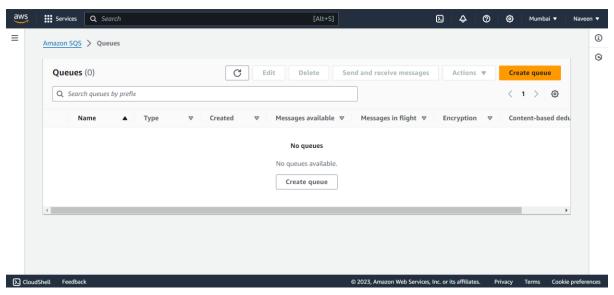
Tasks To Be performed:

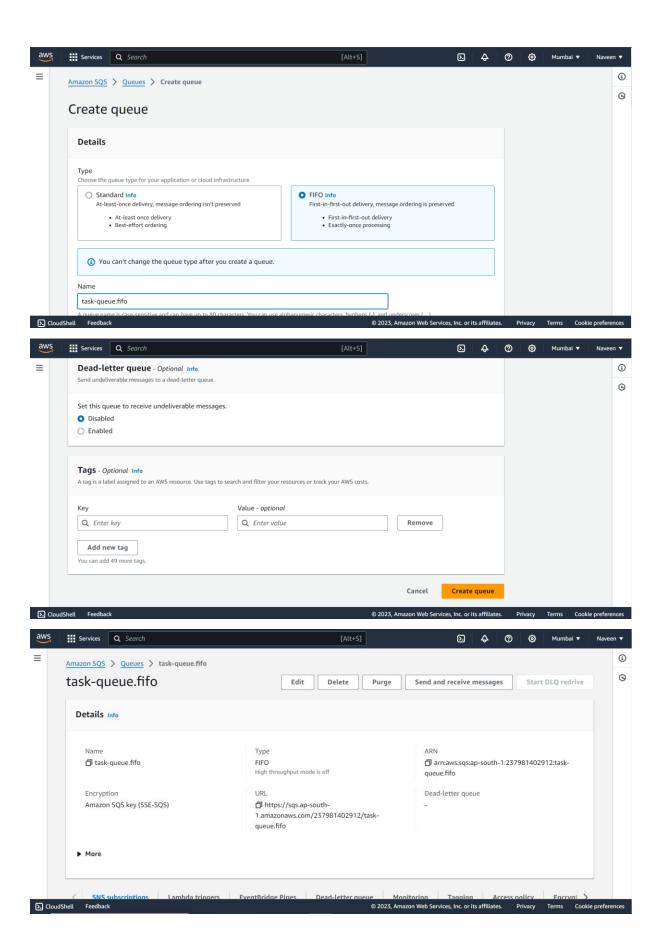
- 1. Create a FIFO SQS Queue and test by sending messages.
- 2. Register your Mail in SES and send a test mail to yourself.

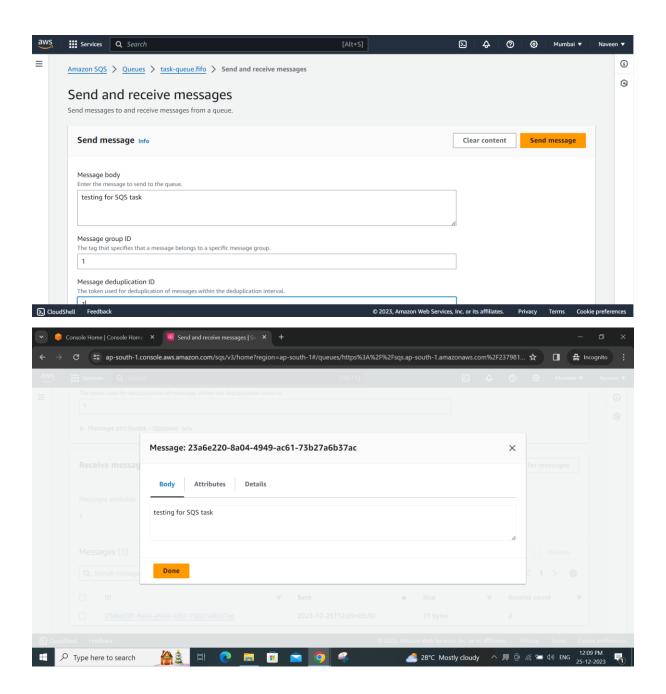
Create a FIFO SQS Queue and test by sending messages.

Steps:

- Go to SQS and click the create Queue
- Select the FIFO in the type
- Provide the name for the Queue and in the end of the name should provide (.fifo)
- And provide the necessary configurations
- Finally the Queue is created
- Next go the inside the created queue and click the send and receive message
- Provide the necessary message in the message body
- Click the send message
- Next click the pool for message and Id will we reflected below messages
- If you click the reflected ID we can see the provided message.



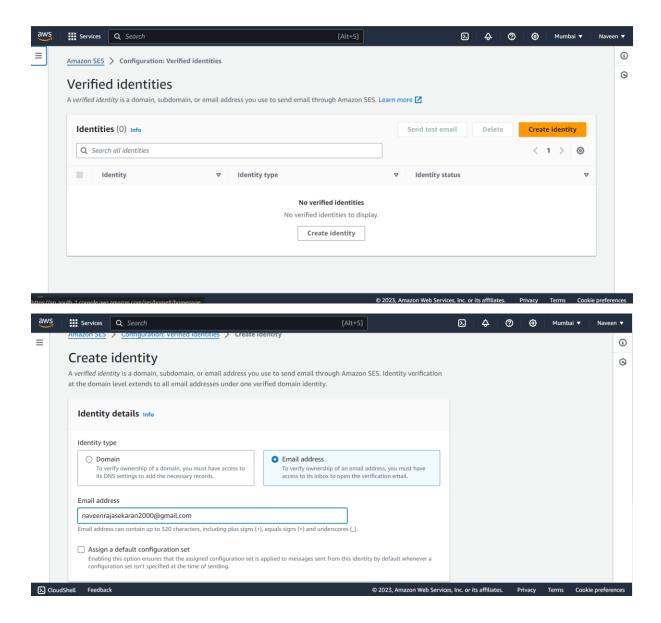


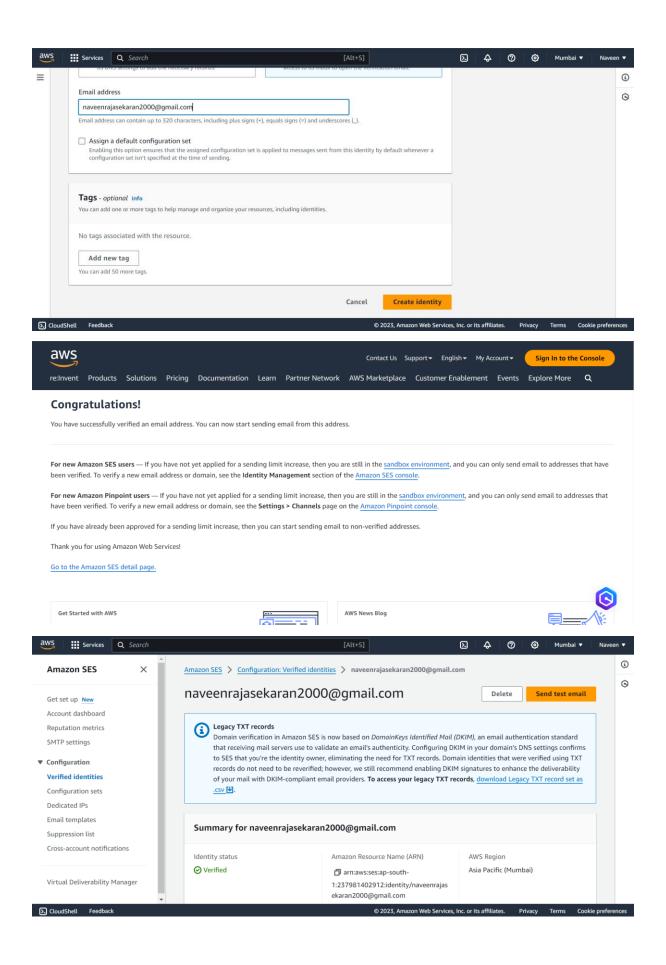


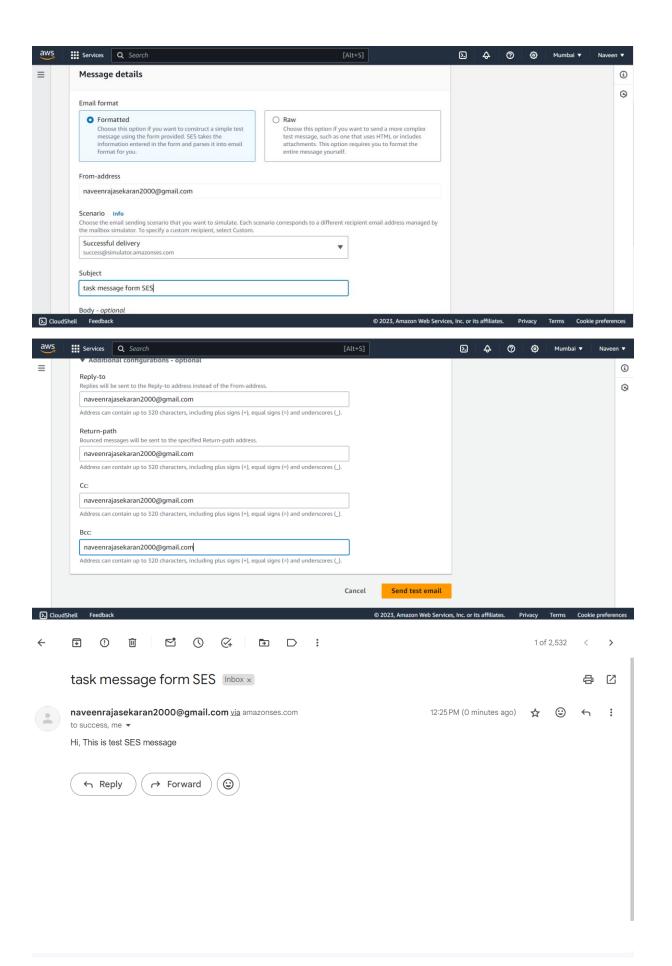
Register your Mail in SES and send a test mail to yourself.

Steps

- Go to SES and click the create Identity
- Select the Email address in Identity type
- And provide the Mail ID
- Finally Identity is created
- Next mail will be received to provided mail ID and confirm the same
- Now click the send test email and select the successful delivery in scenario
- Provide the necessary subject and message in body
- And provide the necessary configurations
- Finally click the send test email
- Now the provided message will be will be received to the mail ID from SES







Multi-Tier Architecture – Case Study

Problem Statement

You work for XYZ Corporation, Your Corporation wants to launch a new webbased application. The development team has prepared the code but it is not tested yet. The development team needs the system admins to build a web server to test the code but the system admins are not available.

Tasks To Be performed:

- 1. Web tier: launch an instance in a public subnet and that instance should allow HTTP and SSH from the internet.
- 2. Application Tier: Launch an instance in private subnet of the wen tier and it should allow only SHH from the public subnet of Web Tier-3
- 3. DB tier: Launch as RND MYSQL instance in a private subnet and it should allow connection on port 3306 only from the private subnet of application Tier-4.
- 4. Setup a Route 53 hosted Zone and direct traffic to the EC2 Instance.

You have been also asked to propose a solution so that

- 1. Development team can test their code without having the system admins and can invest their time in testing the code rather than provisioning, configuring and updating the resources needed to test the code.
- 2. Make sure when the development team deletes the stack, RDS DB instances should not be deleted.

Steps

- Click the create stack
- Next upload the code-yaml file to create the necessary resource (Provide the **deletionpolicy: Retain** for RDS DB instances in code-yaml file. Even if the development team deletes the stack the RDS DB instances resource Remain without deleting)
- Provide the name for the stack
- Select the key pair, provide the password for data base and master user name under parameter
- And provide the necessary cornification
- Click the submit
- Finally the stack is created
- Now all the resource is created as per the problem statement with help of code-yaml file

- Next select the stack which was created and click the delete
- Now stack and all the resource will be deleted which was created by the cloudformation expect the RDS DB instance because already provided in the **deletionpolicy: Retain** in the code-yaml file which was uploaded in stack.
- Even if the development team deletes the stack the RDS DB instances resource Remain without deleting because already Provided the deletionpolicy: Retain for RDS DB instances in code-yaml file which was uploaded in stack.

