AWS Project 2

Problem Statement:

How to secure patient records online and send it privately to the intended party

Topics:

In this project, you will be working on a hospital project to send reports online and develop a platform so the patients can access the reports via mobile and push notifications. You will publish the report to an Amazon SNS keeping it secure and private. Your message will be hosted on an EC2 instance within your Amazon VPC. By publishing the messages privately, you can improve the message delivery and receipt through Amazon SNS.
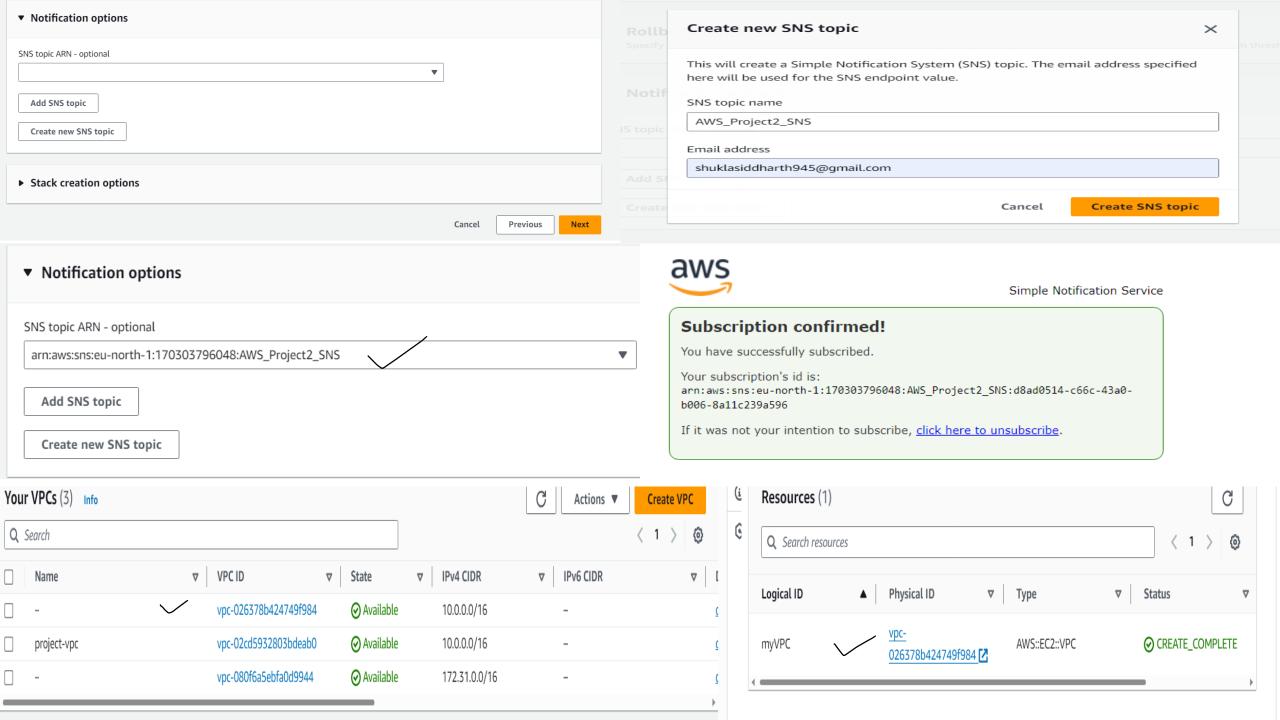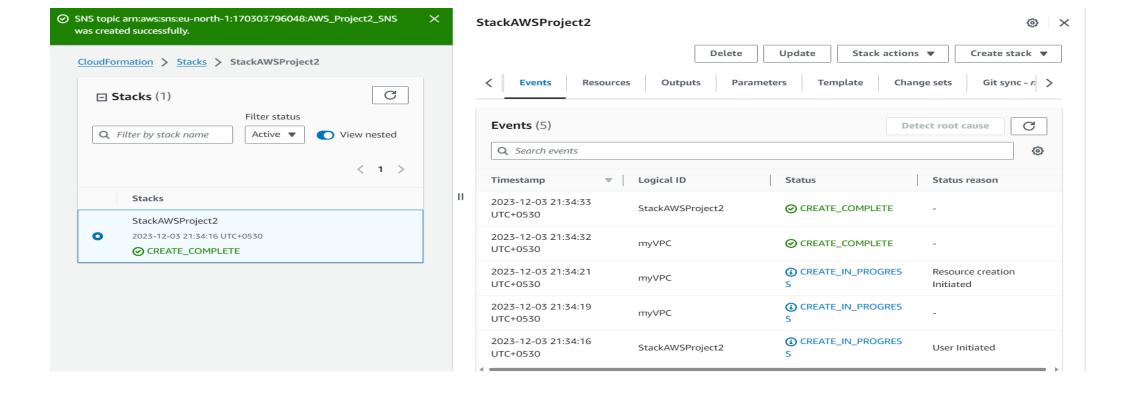
Highlights:

1. AWS CloudFormation to create a VPC
2. Connect VPC with AWS SNS
3. Publish message privately with SNS

AWS template for VPC creation.

```json
{    "AWSTemplateFormatVersion": "2010-09-09",
"Metadata": {        "AWS::CloudFormation::Designer": {}
},    "Resources": {"myVPC" : {   "Type" :
"AWS::EC2::VPC",   "Properties" : {      "CidrBlock" :
"10.0.0.0/16",      "EnableDnsSupport" : "true",
"EnableDnsHostnames" : "true",      "Tags" : [
{"Key" : "stack", "Value" : "production"}      ]   }}         }}
```


CloudFormation Designer interface:

Close

Resource types
- SDC
- ACMPCA
- APS
- ARCZonalShift
- AccessAnalyzer
- AmazonMQ
- Amplify
- AmplifyUIBuilder
- ApiGateway
- ApiGatewayV2

File: 'new.template'

myVPC

Messages

new.template ✏

Choose template language: ◉ JSON ○ YAML ❓

```json
1  {
2      "AWSTemplateFormatVersion": "2010-09-09",
3      "Metadata": {
4          "AWS::CloudFormation::Designer": {}
5      },
6      "Resources": {"myVPC" : {
7      "Type" : "AWS::EC2::VPC",
8      "Properties" : {
9         "CidrBlock" : "10.0.0.0/16",
10        "EnableDnsSupport" : "true",
11        "EnableDnsHostnames" : "true",
12        "Tags" : [
13          {"Key" : "stack", "Value" : "production"}
```

Components   Template

Notification options

SNS topic ARN - optional

[▼]

[Add SNS topic]

[Create new SNS topic]

▶ Stack creation options

Cancel   [Previous]   [Next]

Create new SNS topic   ✕

This will create a Simple Notification System (SNS) topic. The email address specified here will be used for the SNS endpoint value.

SNS topic name

[AWS_Project2_SNS]

Email address

[shuklasiddharth945@gmail.com]

Cancel   [Create SNS topic]

Rollb
Specif

Notif

IS topic

Add S

Create

Notification options

SNS topic ARN - optional

[arn:aws:sns:eu-north-1:170303796048:AWS_Project2_SNS   ▼]

[Add SNS topic]

[Create new SNS topic]

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aws

Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:
arn:aws:sns:eu-north-1:170303796048:AWS_Project2_SNS:d8ad0514-c66c-43a0-b006-8a11c239a596

If it was not your intention to subscribe, click here to unsubscribe.

Your VPCs (3)   Info

[↻]   [Actions ▼]   [Create VPC]

[🔍 Search]

< 1 >   ⚙

	Name ▽	VPC ID ▽	State ▽	IPv4 CIDR ▽	IPv6 CIDR ▽	
☐	–	vpc-026378b424749f984	✓ Available	10.0.0.0/16	–	
☐	project-vpc	vpc-02cd5932803bdeab0	✓ Available	10.0.0.0/16	–	
☐	–	vpc-080f6a5ebfa0d9944	✓ Available	172.31.0.0/16	–	

Resources (1)

[↻]

[🔍 Search resources]

< 1 >   ⚙

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽
myVPC	vpc-026378b424749f984 ↗	AWS::EC2::VPC	✓ CREATE_COMPLETE

CloudFormation > Stacks > StackAWSProject2

Stacks (1)

Filter status
Active | View nested

Filter by stack name

< 1 >

Stacks

StackAWSProject2
2023-12-03 21:34:16 UTC+0530
CREATE_COMPLETE

StackAWSProject2

Delete | Update | Stack actions | Create stack

< | Events | Resources | Outputs | Parameters | Template | Change sets | Git sync - r | >

Events (5)

Detect root cause

Search events

Timestamp	Logical ID	Status	Status reason
2023-12-03 21:34:33 UTC+0530	StackAWSProject2	CREATE_COMPLETE	-
2023-12-03 21:34:32 UTC+0530	myVPC	CREATE_COMPLETE	-
2023-12-03 21:34:21 UTC+0530	myVPC	CREATE_IN_PROGRESS	Resource creation Initiated
2023-12-03 21:34:19 UTC+0530	myVPC	CREATE_IN_PROGRESS	-
2023-12-03 21:34:16 UTC+0530	StackAWSProject2	CREATE_IN_PROGRESS	User Initiated

Amazon SNS > Topics

Topics (1)

Edit | Delete | Publish message | Create topic

Search

< 1 >

Name ▲	Type ▼	ARN ▼
AWS_Project2_SNS	Standard	arn:aws:sns:eu-north-1:170303796048:AWS_...

Publish message to topic

Message details

Topic ARN

arn:aws:sns:eu-north-1:170303796048:AWS_Project2_SNS

Subject - *optional*

stack

Maximum 100 printable ASCII characters

Time to Live (TTL) - *optional*   Info

This setting applies only to mobile application endpoints. The number of seconds that the push notification service has to deliver the message to the endpoint.

Message body

Message structure

- ● Identical payload for all delivery protocols.
  The same payload is sent to endpoints subscribed to the topic, regardless of their delivery protocol.

- ○ Custom payload for each delivery protocol.
  Different payloads are sent to endpoints subscribed to the topic, based on their delivery protocol.

Message body to send to the endpoint

```
1  THIS MESSAGE PUBLISH PRIVATELY.
```

Message attributes Info

Message attributes let you provide structured metadata items (such as timestamps, geospatial data, signatures, and identifiers) for the message.

Type

Select attribute type

Name

Enter attribute name

Value

value or ["value1", "value2"]

Remove

Add another attribute

Cancel   Publish message

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stack Inbox ×

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

to me ▾

THIS MESSAGE PUBLISH PRIVATELY.

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