

project - 3 publishing amazon SNS messages

Industry: Healthcare

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.

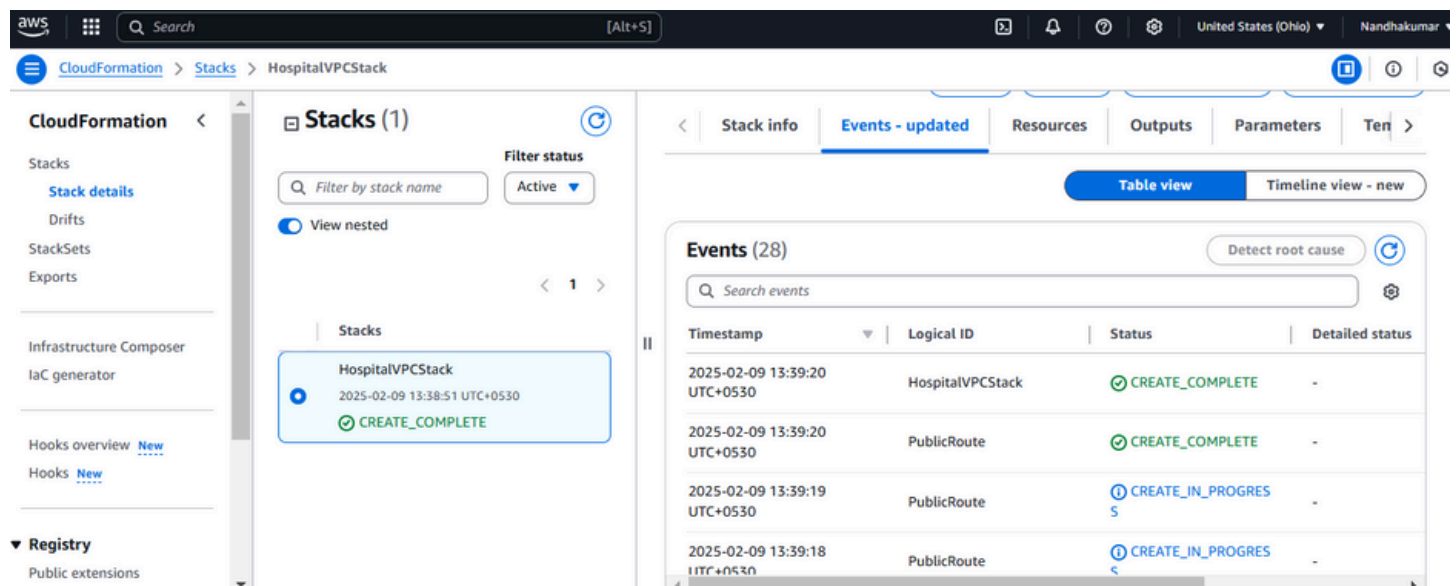
Highlights:

1. AWS CloudFormation to create a VPC

2. Connect VPC with AWS SNS

3. Publish message privately with SNS

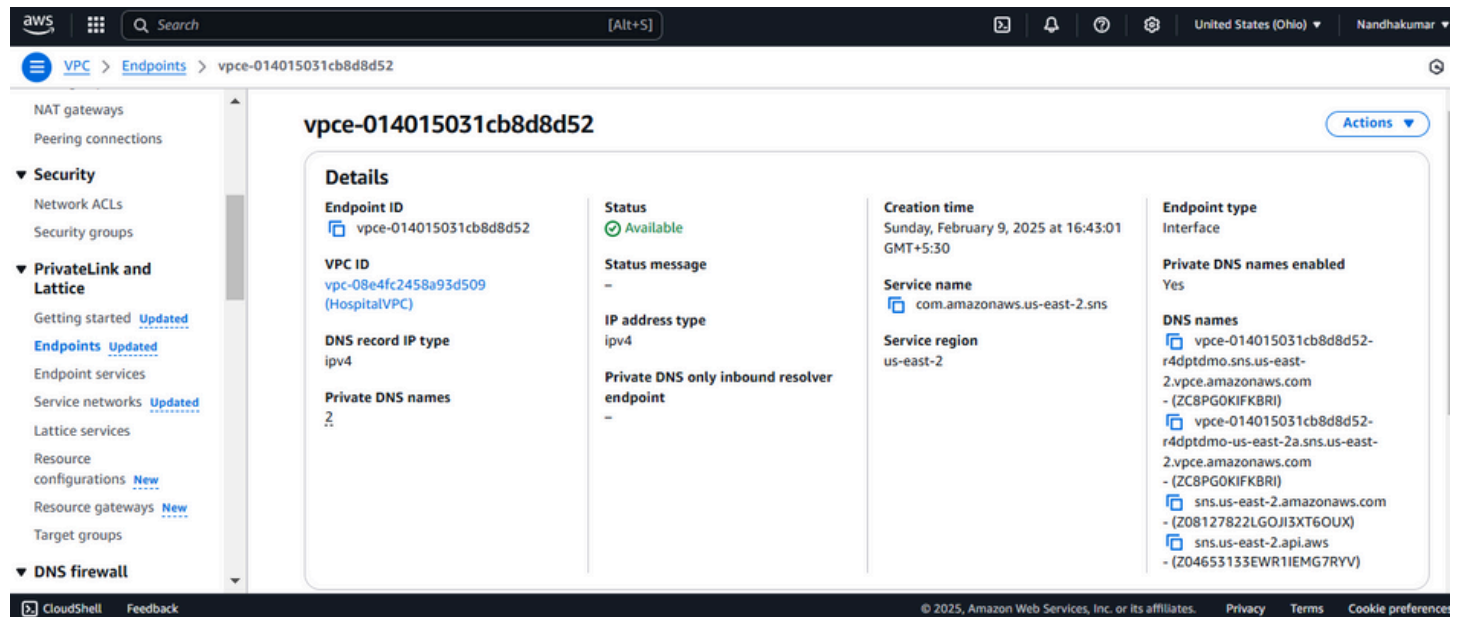
1. AWS CloudFormation to create a VPC:



The screenshot displays the AWS CloudFormation console interface. On the left, the 'CloudFormation' sidebar shows navigation options like 'Stacks', 'Stack details', 'Drifts', 'StackSets', 'Exports', 'Infrastructure Composer', 'laC generator', 'Hooks overview', and 'Hooks'. The main area is titled 'Stacks (1)' and shows a list of stacks. The 'HospitalVPCStack' is highlighted, showing its creation time as '2025-02-09 13:38:51 UTC+0530' and its status as 'CREATE_COMPLETE'. The right pane shows the 'Events - updated' tab for this stack, displaying a table of events.

Timestamp	Logical ID	Status	Detailed status
2025-02-09 13:39:20 UTC+0530	HospitalVPCStack	CREATE_COMPLETE	-
2025-02-09 13:39:20 UTC+0530	PublicRoute	CREATE_COMPLETE	-
2025-02-09 13:39:19 UTC+0530	PublicRoute	CREATE_IN_PROGRESS	-
2025-02-09 13:39:18 UTC+0530	PublicRoute	CREATE_IN_PROGRESS	-

2. Connect VPC with AWS SNS



vpce-014015031cb8d8d52

Details

Endpoint ID vpce-014015031cb8d8d52	Status Available	Creation time Sunday, February 9, 2025 at 16:43:01 GMT+5:30	Endpoint type Interface
VPC ID vpc-08e4fc2458a93d509 (HospitalVPC)	Status message -	Service name com.amazonaws.us-east-2.sns	Private DNS names enabled Yes
DNS record IP type ipv4	IP address type ipv4	Service region us-east-2	DNS names vpce-014015031cb8d8d52-r4dptdmo.sns.us-east-2.vpc.amazonaws.com - (ZC8PGOKIFKBRI) vpce-014015031cb8d8d52-r4dptdmo-us-east-2a.sns.us-east-2.vpc.amazonaws.com - (ZC8PGOKIFKBRI) sns.us-east-2.amazonaws.com - (Z08127822LGOJ13XT6OUX) sns.us-east-2.api.aws - (Z04653133EWR11EMG7RYV)
Private DNS names -	Private DNS only inbound resolver endpoint -		

3. Publish message privately with SNS

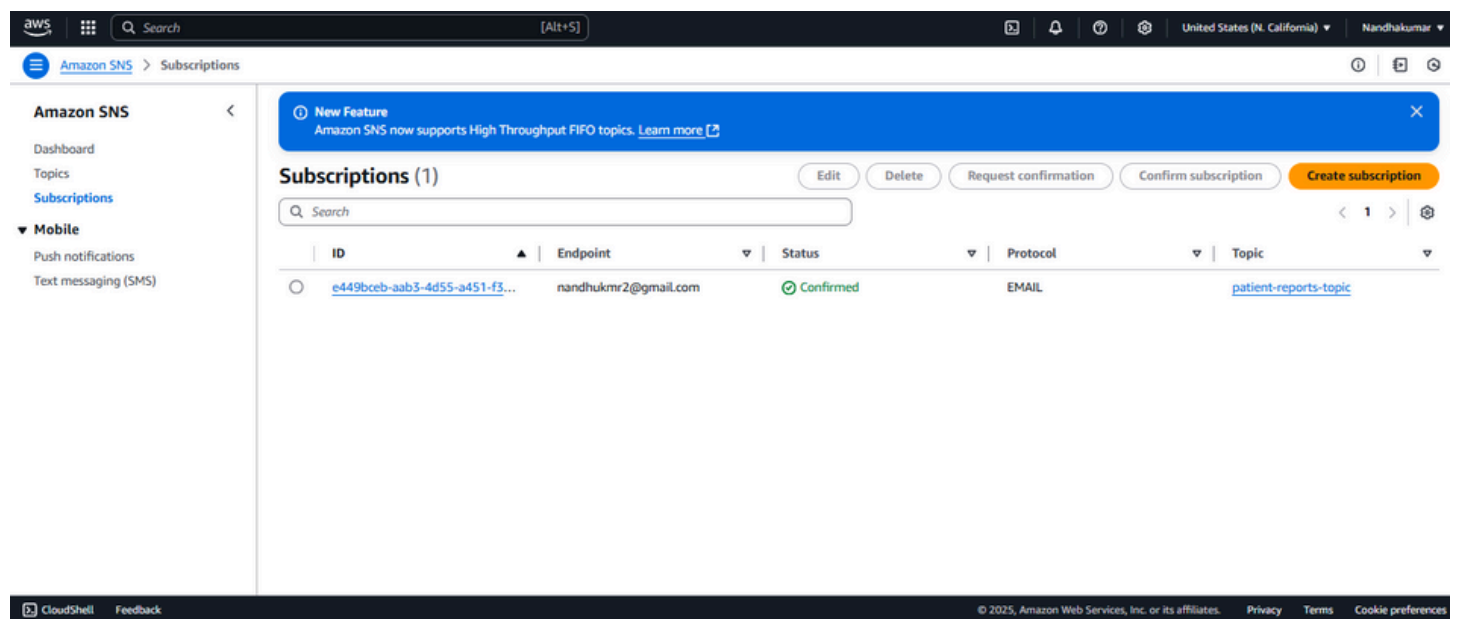
```
ec2-user@ip-10-0-1-93: ~$ cat /etc/motd
AL2 End of Life is 2026-06-30.

A newer version of Amazon Linux is available!

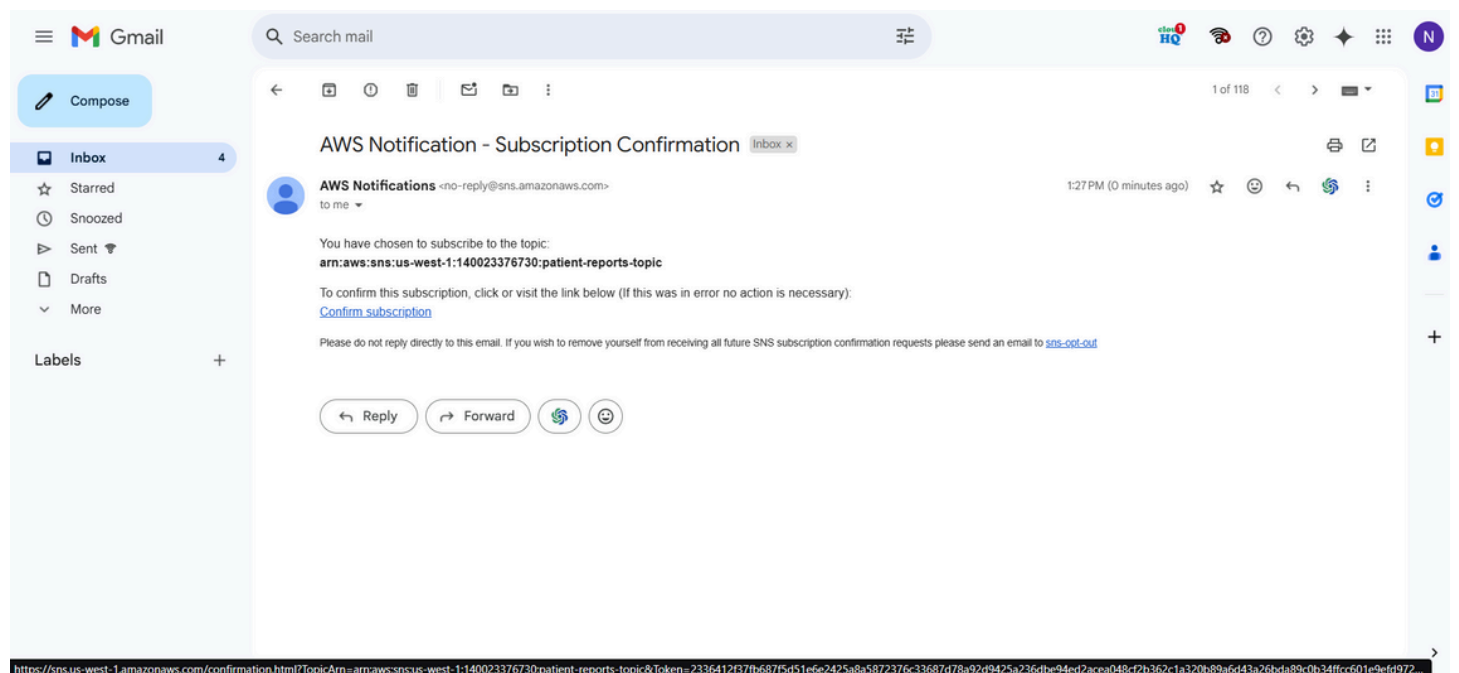
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-10-0-1-93 ~]$ ping amazon.com
PING amazon.com (205.251.242.103) 56(84) bytes of data:
64 bytes from s3-console-us-standard.console.aws.amazon.com (205.251.242.103): icmp_seq=1 ttl=242 time=11.4 ms
64 bytes from s3-console-us-standard.console.aws.amazon.com (205.251.242.103): icmp_seq=2 ttl=242 time=11.6 ms
64 bytes from s3-console-us-standard.console.aws.amazon.com (205.251.242.103): icmp_seq=3 ttl=242 time=10.9 ms
64 bytes from s3-console-us-standard.console.aws.amazon.com (205.251.242.103): icmp_seq=4 ttl=242 time=11.4 ms
64 bytes from s3-console-us-standard.console.aws.amazon.com (205.251.242.103): icmp_seq=5 ttl=242 time=10.9 ms
^C
--- amazon.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4006ms
rtt min/avg/max/mdev = 10.914/11.280/11.612/0.290 ms
[ec2-user@ip-10-0-1-93 ~]$ aws sns publish --region us-east-2 --topic-arn arn:aws:sns:us-east-2:140023376730:HospitalSNS
Topic --message "Hello"
Unable to locate credentials. You can configure credentials by running "aws configure".
[ec2-user@ip-10-0-1-93 ~]$
[ec2-user@ip-10-0-1-93 ~]$ aws sns publish --region us-east-2 --topic-arn arn:aws:sns:us-east-2:140023376730:HospitalSNS
Topic --message "Hello"
{
  "MessageId": "8d82616b-fcaf-5856-805b-01497503791e"
}
[ec2-user@ip-10-0-1-93 ~]$
```

4.added subscription:



5.confirmend from endpoint mail:



<https://sns.us-west-1.amazonaws.com/confirmation.html?TopicArn=arn:aws:sns:us-west-1:14002376730:patient-reports-topic&Token=2336412f37fb687f5d51e6e2425a8a5872376c36687d78a92d9425a236dbe94ed2acea048cf2b362c1a320b89a6d43a26bda89c0b34ffcc601e9fd972>

6.successfully received the message:

