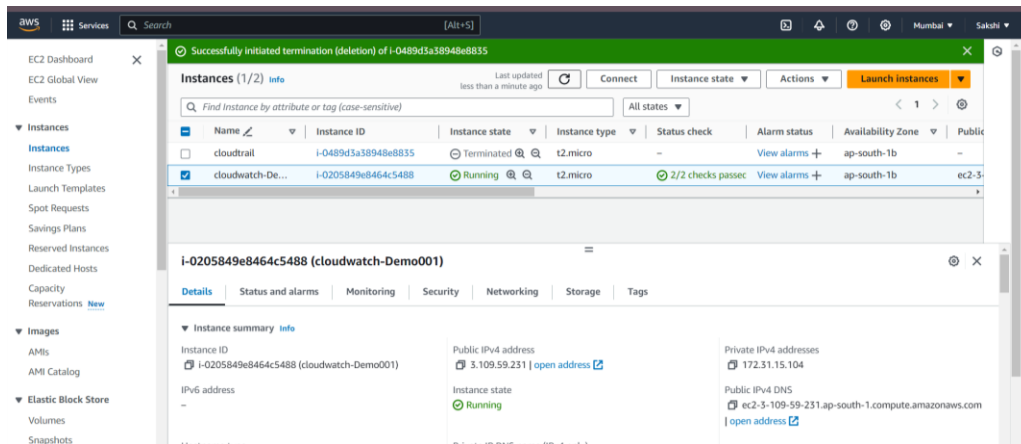


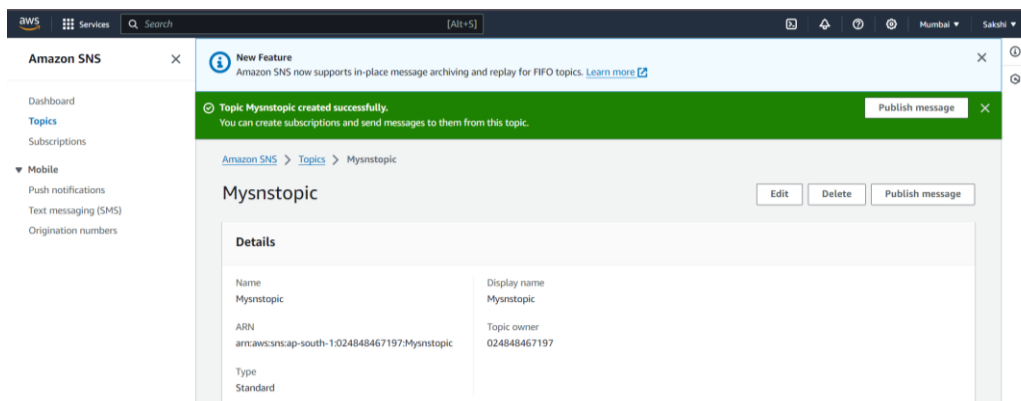
09th September 2024 – CloudWatch

Monitor the CPU utilization of instance and set threshold of CPU utilization greater than 80% and send a alert via SNS (Simple Notification Service).

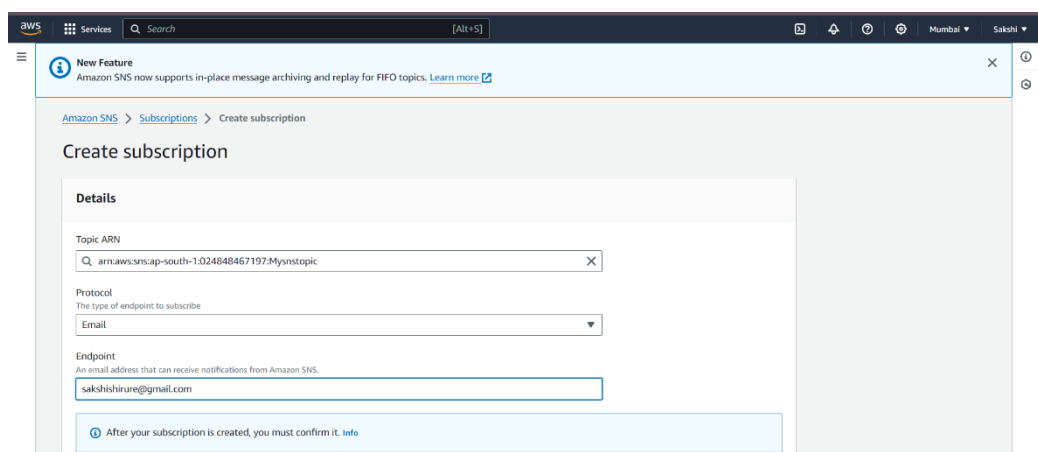
1) Create instance



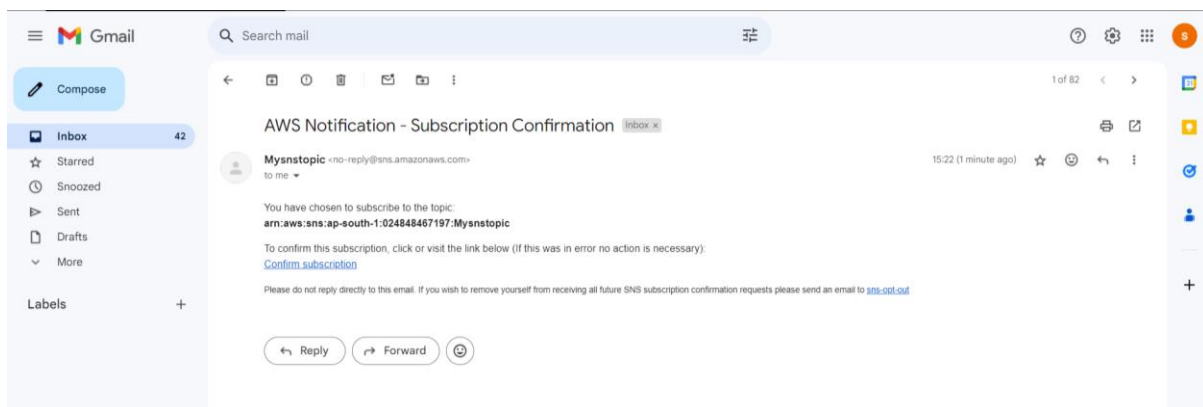
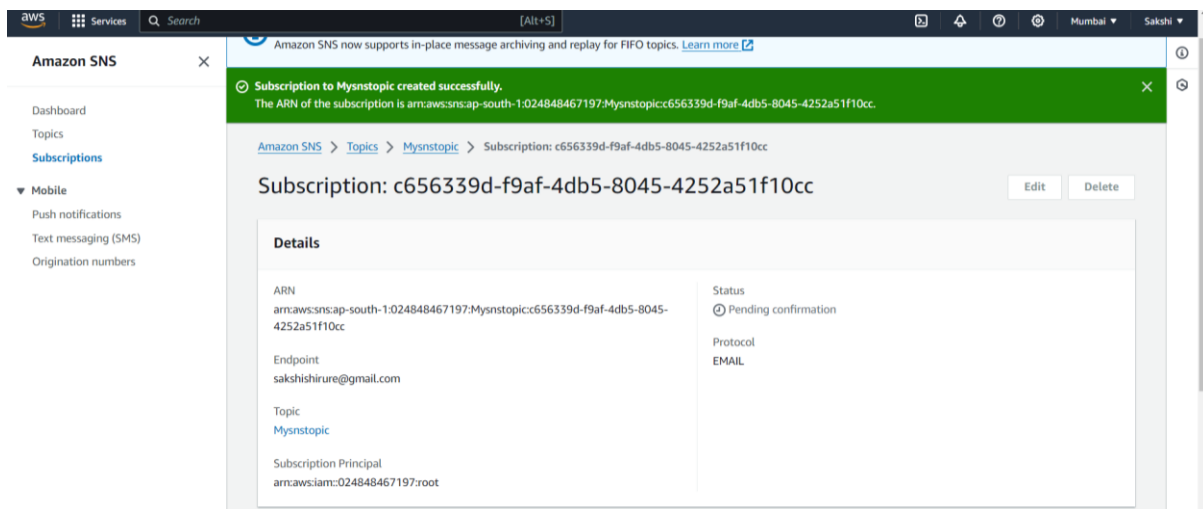
2) By default there is no alarm, to set alarm go to SNS service and create topic first



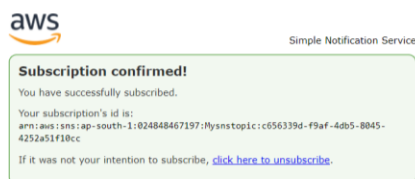
3) Create Subscription



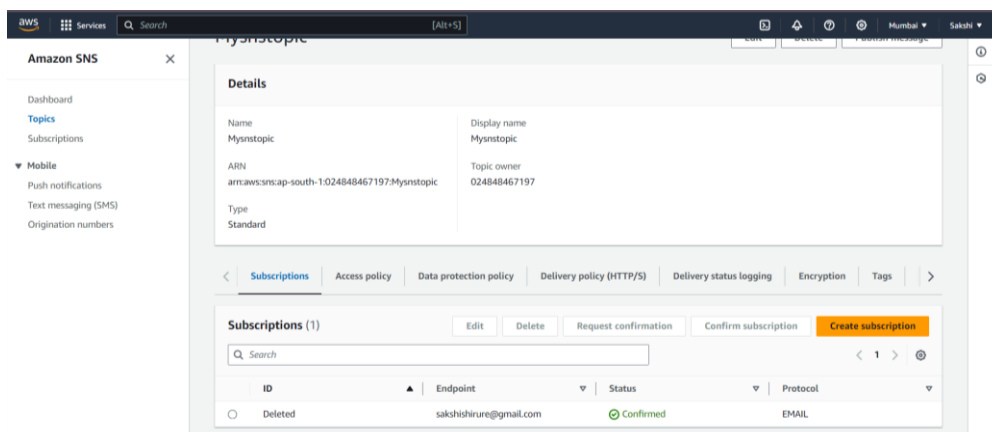
4) After creating subscription, got email for confirmation



5) Subscription confirmed



6) After confirmation, status will change to "Confirmed"



7) Now go to “CloudWatch” service and create alarm

a. Specify metric and condition

The screenshot shows the 'Specify metric and conditions' step in the AWS CloudWatch console. On the left, a sidebar lists the steps: Step 1 (Specify metric and conditions), Step 2 (Configure actions), Step 3 (Add name and description), and Step 4 (Preview and create). The main area features a 'Metric' section with a graph showing CPU utilization over time. To the right of the graph, fields are provided for 'Namespace' (AWS/EC2), 'Metric name' (CPUUtilization), 'Instanceid' (i-0205849e8464c5488), 'Instance name' (cloudwatch-demo001), 'Statistic' (Average), and 'Period' (2 minutes).

The screenshot shows the 'Configure actions' step in the AWS CloudWatch console. The 'Notification' section is active, showing the 'Alarm state trigger' options: 'In alarm' (selected), 'OK', and 'Insufficient data'. Below this, there's a section to 'Send a notification to the following SNS topic', with options to 'Select an existing SNS topic' (chosen), 'Create new topic', or 'Use topic ARN to notify other accounts'. A search bar shows 'Mysnstopic'. At the bottom, an email endpoint 'sakshishirure@gmail.com' is listed with an 'Add notification' button.

c. Add name and description

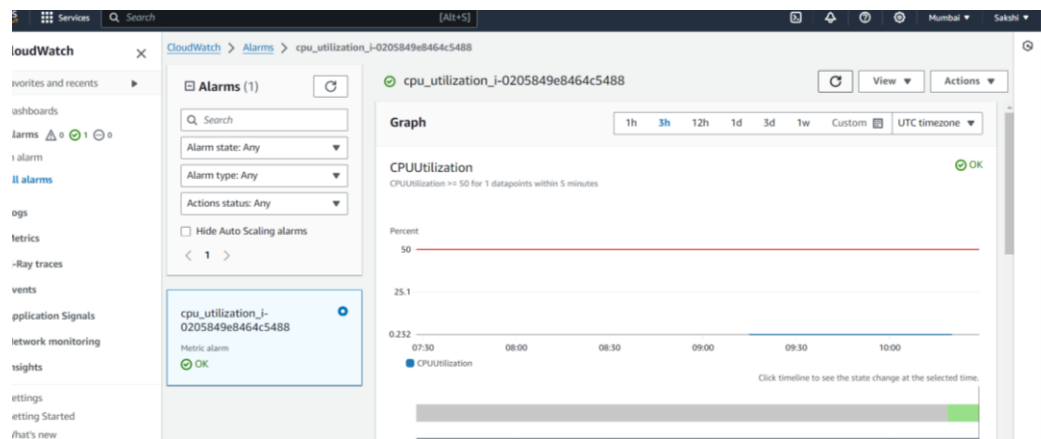
The screenshot shows the 'Add name and description' step in the AWS CloudWatch console. The 'Name and description' section is active. The 'Alarm name' field contains 'cpu_utilization_j-0205849e8464c5488'. The 'Alarm description - optional' field contains a markdown-formatted text: '# This is an H1', '""double asterisks will produce strong character""', and 'This is [an example](https://example.com/) inline link.' Below the description field, a note states: 'Markdown formatting is only applied when viewing your alarm in the console. The description will remain in plain text in the alarm notifications.'

d. Created alarm Successfully

The screenshot shows the 'Alarms' page in the AWS CloudWatch console. A green banner at the top reads 'Successfully created alarm cpu_utilization_j-0205849e8464c5488.' Below this, the 'Alarms (1)' section displays a table with one alarm. The table has columns for Name, State, Last state update (UTC), Conditions, and Actions. The alarm 'cpu_utilization_j-0205849e8464c5488' is in the 'Insufficient data' state, with a last state update of '2024-09-19 10:17:55'. The condition is 'CPUUtilization >= 50 for 1 datapoints within 5 minutes', and the actions are 'Actions enabled'.

Name	State	Last state update (UTC)	Conditions	Actions
cpu_utilization_j-0205849e8464c5488	Insufficient data	2024-09-19 10:17:55	CPUUtilization >= 50 for 1 datapoints within 5 minutes	Actions enabled

e. CPU Utilization



8) To increase CPU utilization

installed stress package with below steps:

{

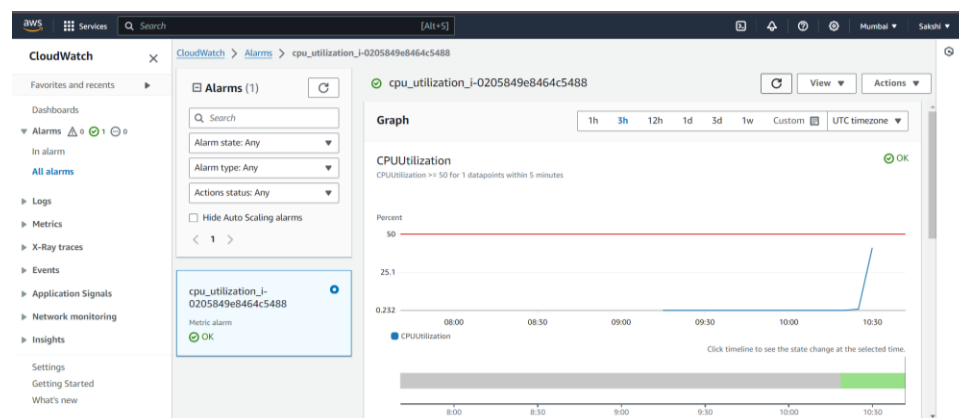
1. sudo amazon-linux-extras install epel -y

2. sudo yum install stress -y

}

```
Install 1 Package
Total download size: 34 k
Installed size: 68 k
Is this ok [y/N]: y
Downloading Packages:
stress-1.0.7-2.amzn2023.0.1.x86_64.rpm                                485 kB/s | 34 kB  00:00
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      : stress-1.0.7-2.amzn2023.0.1.x86_64                1/1
  Installing     : stress-1.0.7-2.amzn2023.0.1.x86_64                1/1
  Running scriptlet: stress-1.0.7-2.amzn2023.0.1.x86_64                1/1
  Verifying      : stress-1.0.7-2.amzn2023.0.1.x86_64                1/1
Installed:
  stress-1.0.7-2.amzn2023.0.1.x86_64
Complete!
[root@ip-172-31-15-104 ~]# stress --cpu 20 --timeout 1000
stress: info: [28037] dispatching hogs: 20 cpu, 0 io, 0 vm, 0 hdd
```

9) We can see CPU Utilization is in Alarm state



Install CloudAgent using bootstrapping and create dashboard of Utilization

- 1) Create IAM role (EC2-CloudWatch-Role) with CloudWatchFullAccess and SSM