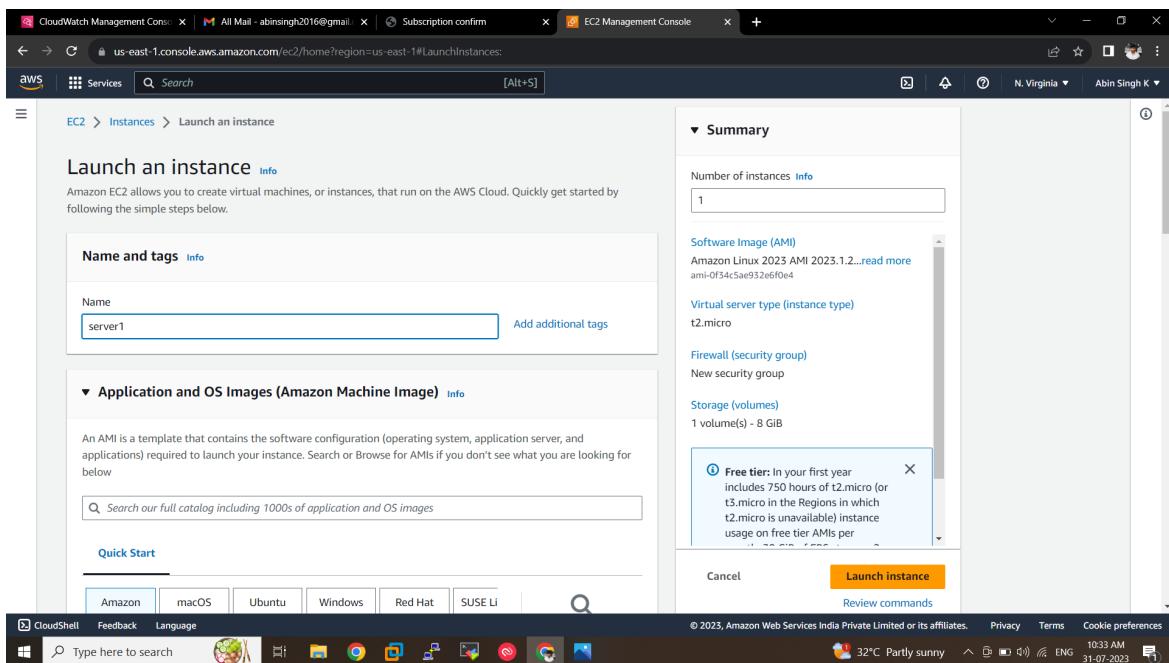
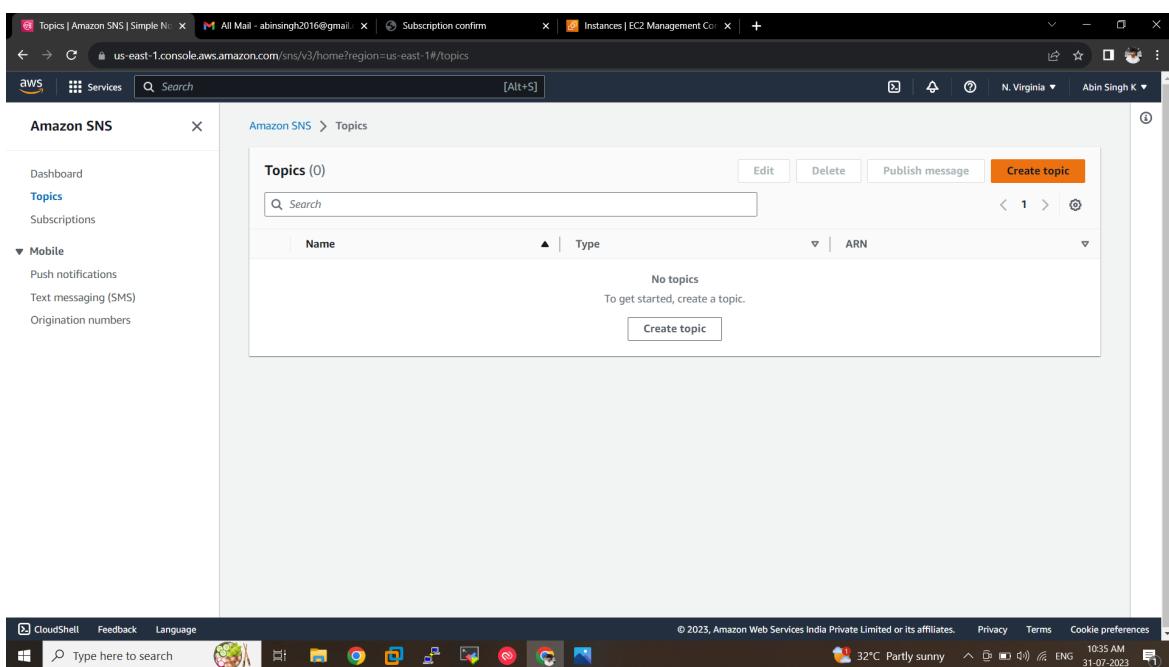


Creating an SNS for monitoring cpu usage Using Cloud Watch

Step 1 : Create an Instance



Step 2 : Go to SNS & Create a topic



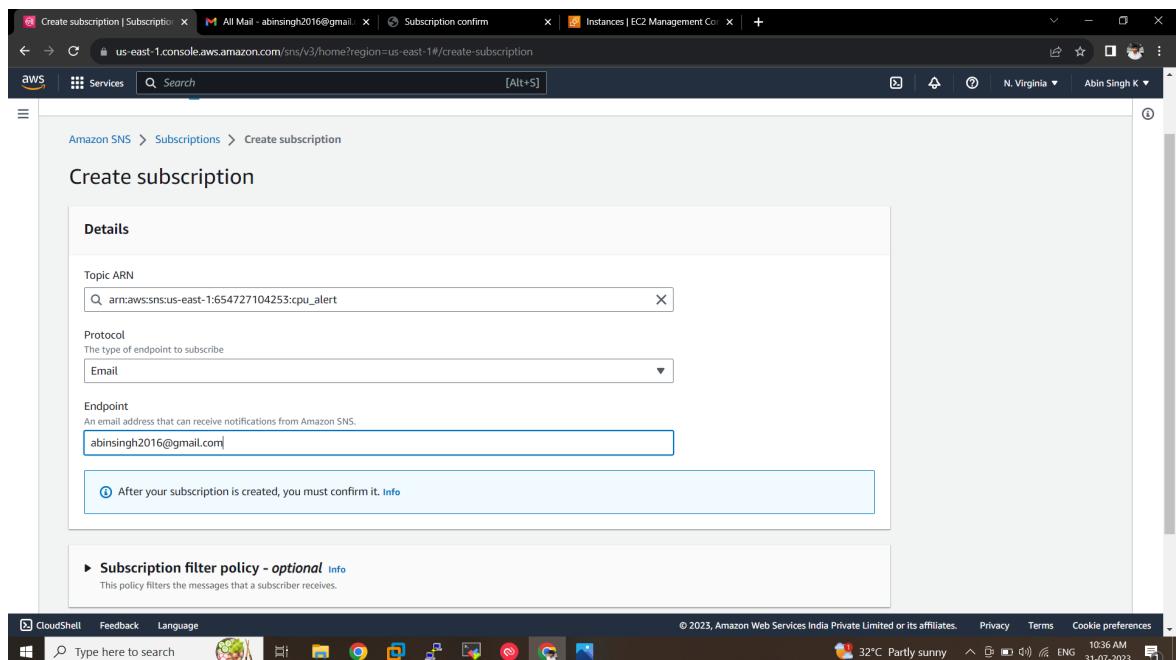
Step 3 : Select Standard

The screenshot shows the 'Create topic' page in the AWS SNS console. The 'Details' section is open, showing two topic types: 'FIFO (first-in, first-out)' and 'Standard'. The 'Standard' option is selected, indicated by a blue border around its radio button. Below each type is a list of characteristics. The 'Name' field contains 'cpu_alert' and the 'Display name - optional' field contains 'cpu_alert_usage'. The 'Encryption - optional' section is collapsed. The browser's address bar shows the URL 'us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/create-topic'. The status bar at the bottom right shows '32°C Partly sunny' and the date '31-07-2023'.

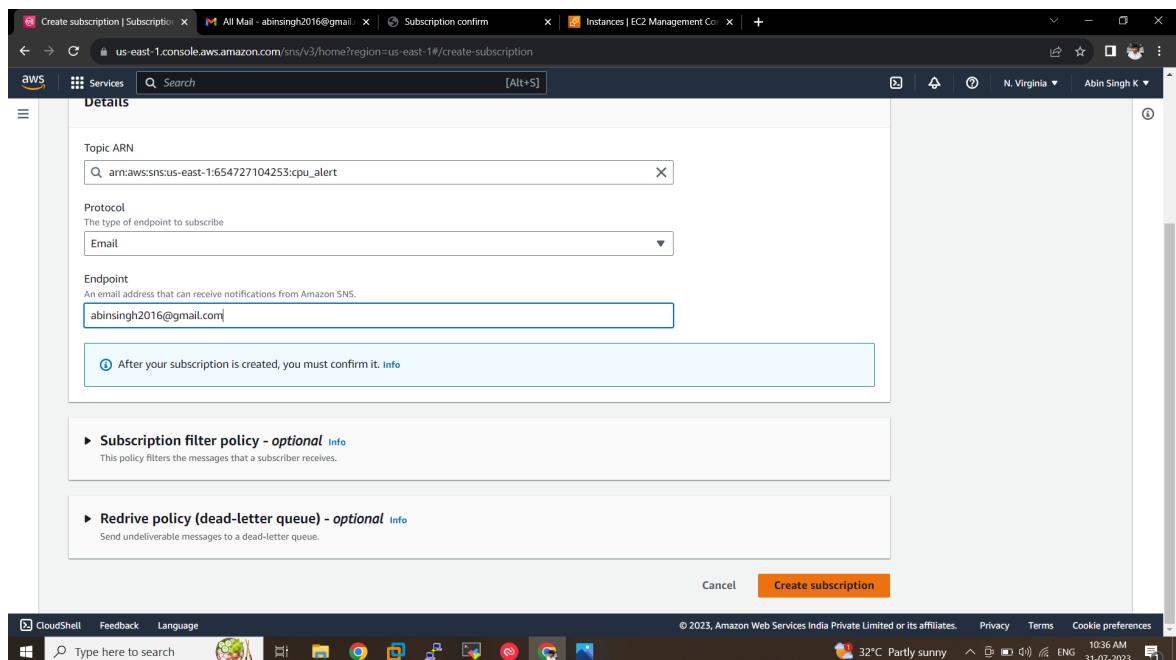
Step 4 : Create Subscription

The screenshot shows the 'Subscriptions' page in the AWS SNS console. The left sidebar shows 'Topics' and 'Subscriptions' under 'Amazon SNS'. The main area displays a table titled 'Subscriptions (0)' with columns: ID, Endpoint, Status, Protocol, and Topic. A search bar and several buttons ('Edit', 'Delete', 'Request confirmation', 'Confirm subscription', 'Create subscription') are at the top of the table. A message 'No subscriptions found' is displayed below the table. The browser's address bar shows the URL 'us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/subscriptions'. The status bar at the bottom right shows '32°C Partly sunny' and the date '31-07-2023'.

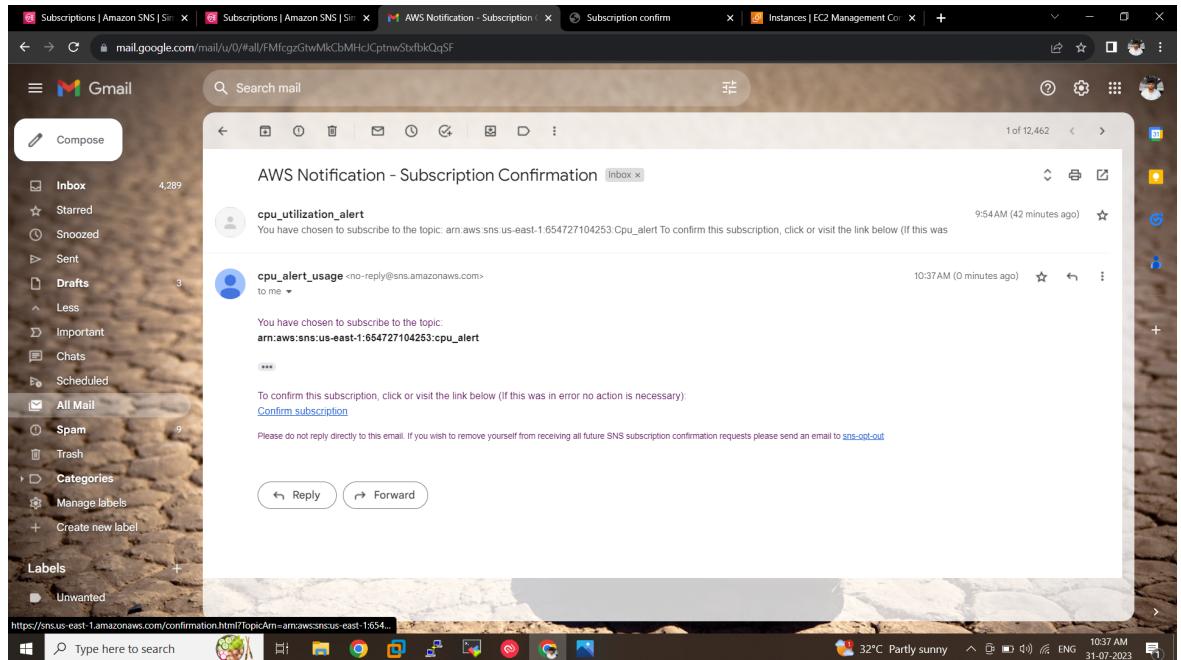
Step 5 : Choose ARN & Choose Protocol = Mail



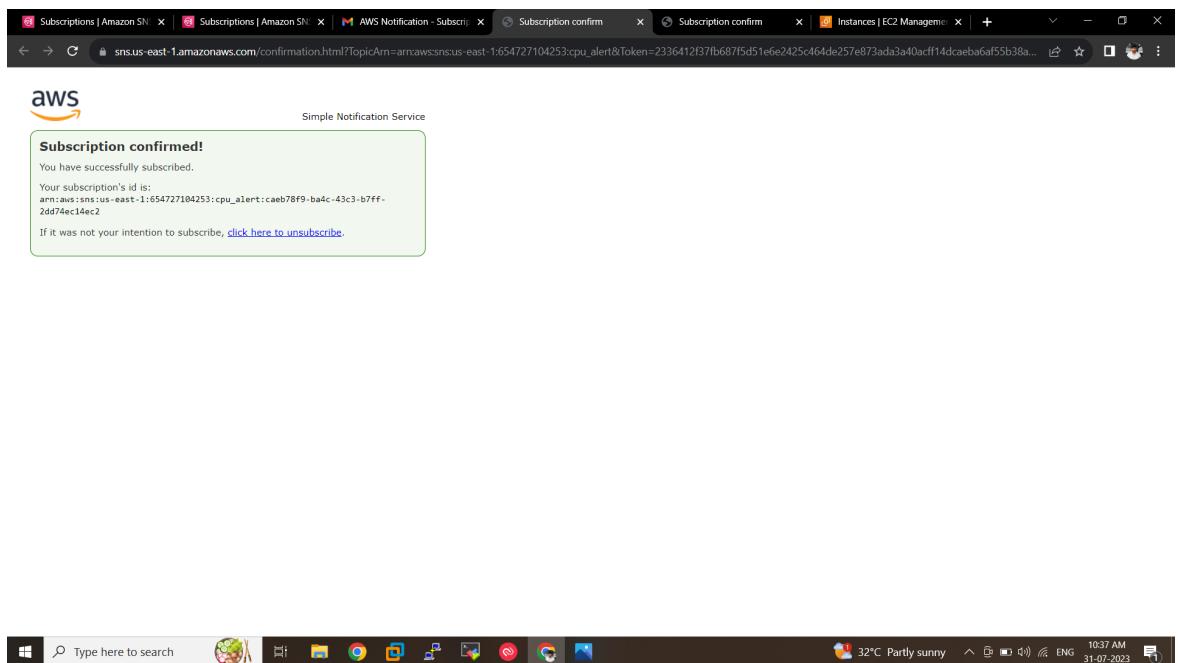
Step 6 : Enter Mail ID in Endpoint



Step 7 : Go to Mail Box



Step 8 : Click On Subscribe



Subscription Added

The screenshot shows the AWS SNS Subscriptions page. On the left, there's a sidebar with options like Dashboard, Topics, Subscriptions (which is selected), Mobile, Push notifications, Text messaging (SMS), and Origination numbers. The main area has a heading 'Subscriptions (1)' with buttons for Edit, Delete, Request confirmation, Confirm subscription, and Create subscription. A table lists one subscription: ID caeb78f9-ba4c-43c3-b7..., Endpoint abinsingh2016@gmail.com, Status Confirmed, Protocol EMAIL, and Topic cpu_alert.

Step 9 : Go to Cloud Watch & Create Alarm >> Select Metric

The screenshot shows the 'Specify metric and conditions' step of creating a CloudWatch alarm. It's part of a four-step process: Step 1 (current), Step 2 (Configure actions), Step 3 (Add name and description), and Step 4 (Preview and create). The main panel has sections for 'Metric' and 'Graph'. Below the graph is a 'Select metric' button. At the bottom right are 'Cancel' and 'Next' buttons.

shows EC2 Pre instance Metrics 17

The screenshot shows the 'Select metric' dialog box from the AWS CloudWatch Metrics interface. The search bar at the top contains the identifier 'i-047f72b0e67eae89a'. Below the search bar, the results are categorized under 'Metrics (17)'. One specific metric, 'EC2 > Per-Instance Metrics 17', is highlighted with a blue border. At the bottom right of the dialog, there is a 'Select a single metric to continue' button.

Step 10 : Choose CPU Utilization

The screenshot shows the 'Select metric' dialog box again, but this time the 'CPUUtilization' metric for the instance 'i-047f72b0e67eae89a' is selected. The 'Select metric' button at the bottom right is now highlighted in orange.

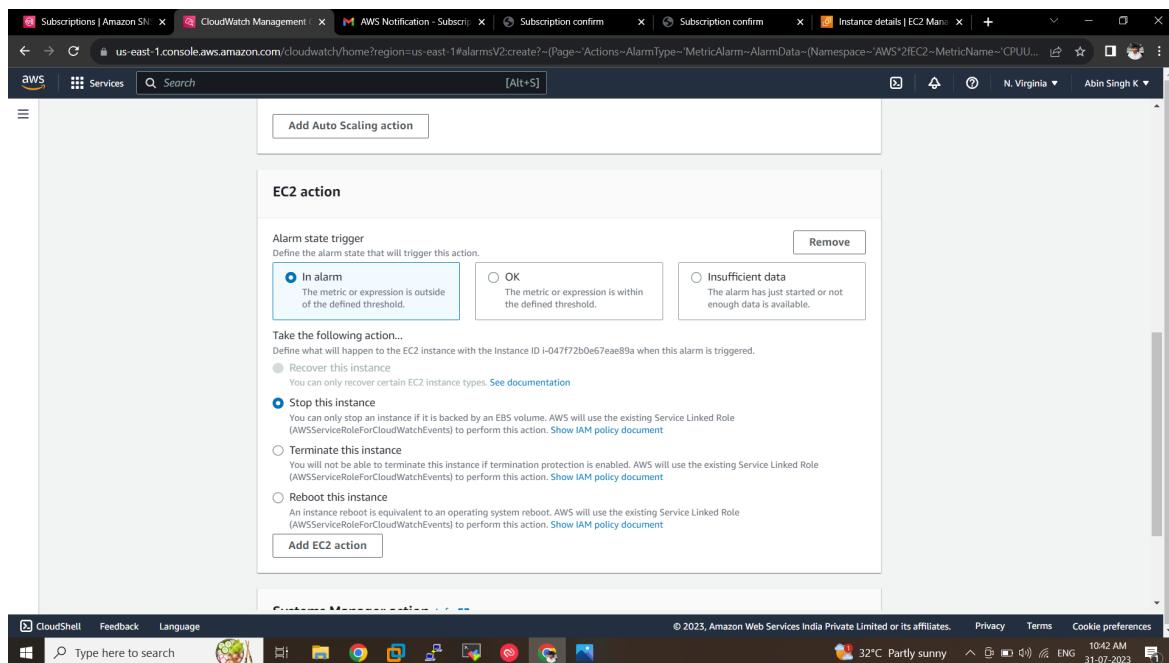
Step 11 : Choose condition Static, CPU utilization = Lower/Equal & Define threshold value = 2

The screenshot shows the 'Conditions' section of the AWS CloudWatch Metrics Alarm configuration. Under 'Threshold type', 'Static' is selected. In the 'Whenever CPUUtilization is...' dropdown, 'Lower/Equal' is chosen. The 'than...' field contains the value '2'. The 'Next Step' button is visible at the bottom right.

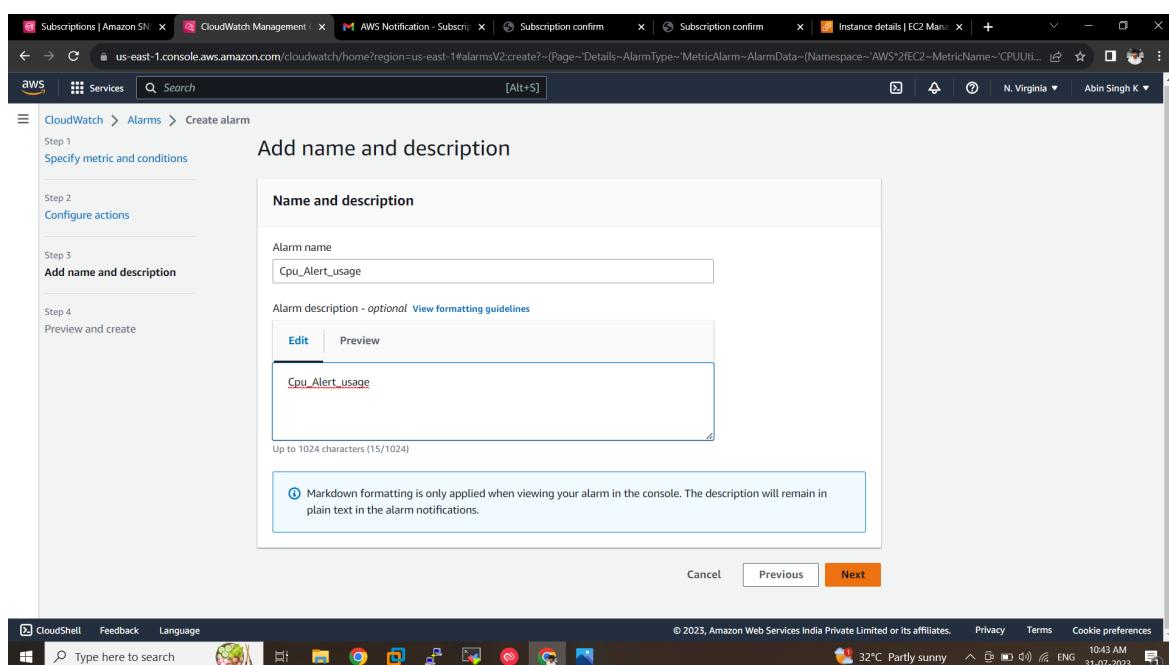
Step 12 : Select alarm trigger = In Alarm & select existing SNS topic

The screenshot shows the 'Configure actions' section of the AWS CloudWatch Metrics Alarm configuration. Under 'Notification', 'In alarm' is selected. Below it, there are options for 'OK' and 'Insufficient data'. A search bar for 'Send a notification to...' contains 'cpu_alert'. The 'Auto Scaling action' section is partially visible below.

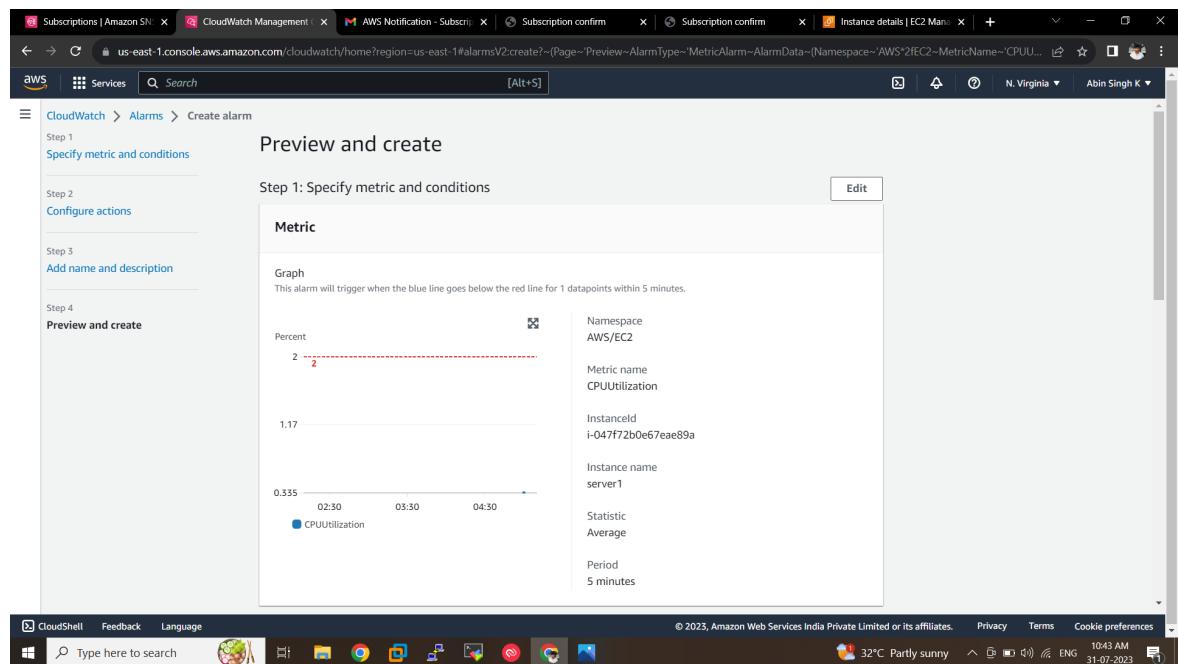
Step 13 : EC2 Action = In alarm & Choose Stop the instance in following action



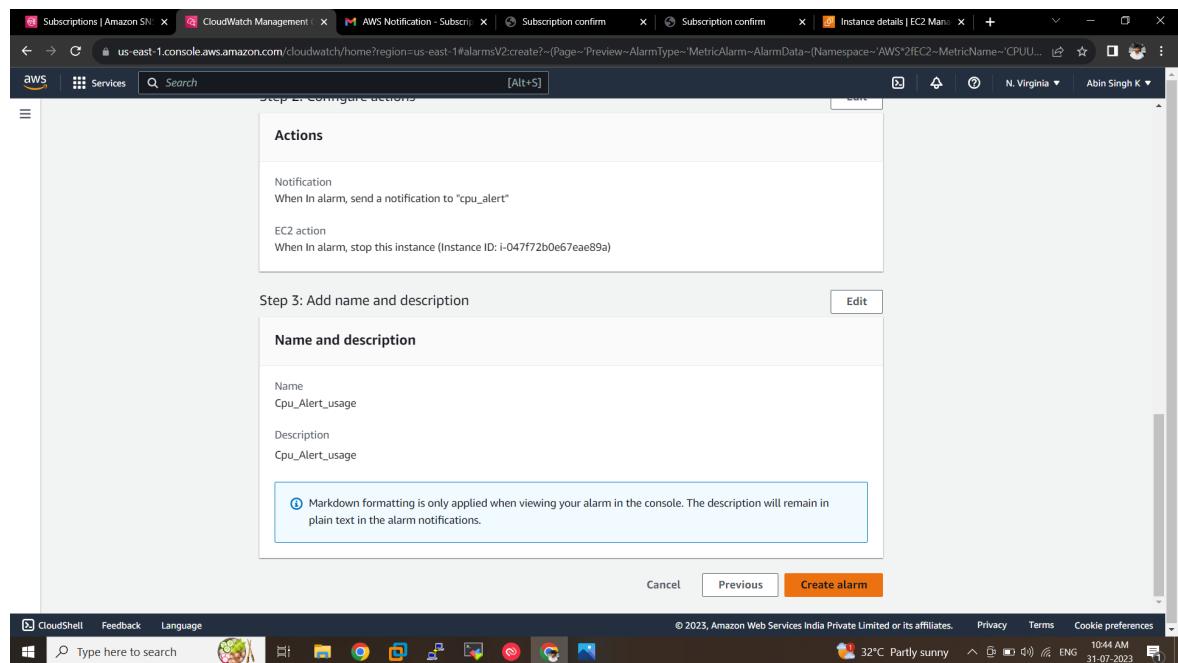
Step 14 : Add alarm name



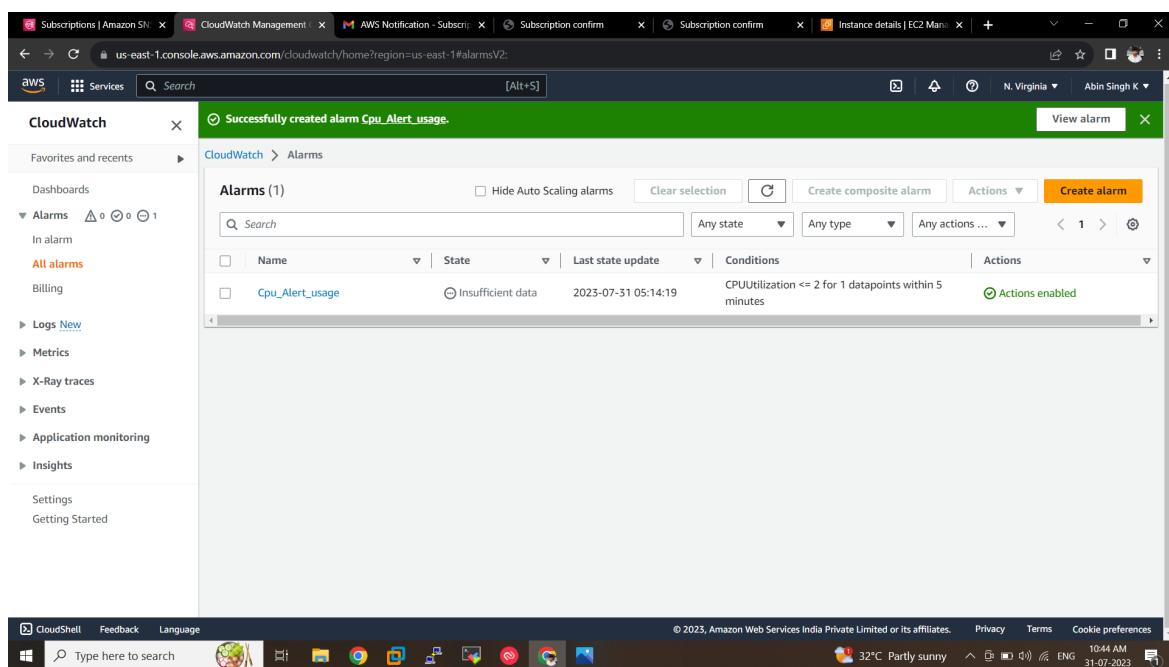
Cloud Watch Will Send Notification Mail & Stop The instance if the cpu usage crosses 2 %



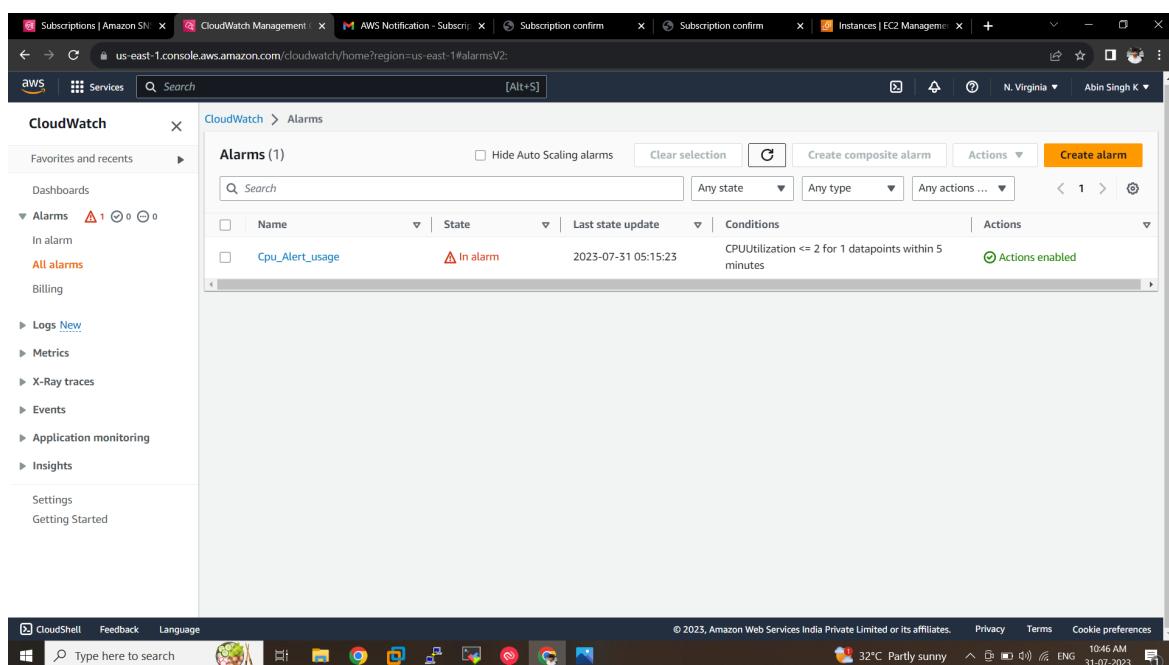
Step 15 : Click on Create Alarm



Successfully Created Alarm



If the CPU metrics matches the condition then it generates an alarm



If Metric Condition matches then Cloud Watch send Notification mail to the Endpoint mail id & Stops the EC2 Instance

The screenshot shows the AWS EC2 Instances page. There are two instances listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
cpu_alert	i-02817c34776161553	Terminated	t2.micro	-	No alarms	us-east-1d	-
server1	i-047f72b0e67eae89a	Stopped	t2.micro	-	1/1 in al	us-east-1d	-

The 'server1' instance is currently stopped. The 'Alarm status' column indicates '1/1 in al', which corresponds to the alarm name shown in the screenshot below.

The screenshot shows a Gmail inbox with one email received at 10:45AM (0 minutes ago). The email is from 'cpu_alert_usage <no-reply@sns.amazonaws.com>' with the subject 'ALARM: "Cpu_Alert_usage" in US East (N. Virginia)'.

The email body contains the following text:

You are receiving this email because your Amazon CloudWatch Alarm "Cpu_Alert_usage" in the US East (N. Virginia) region has entered the ALARM state, because "Threshold Crossed: 1 out of the last 1 datapoints [0.23395387607668763 (31/07/23 05:05:00)] was less than or equal to the threshold (2.0) (minimum 1 datapoint for OK->ALARM transition)." at "Monday 31 July, 2023 05:15:23 UTC".

View this alarm in the AWS Management Console:
https://us-east-1.console.aws.amazon.com/cloudwatch/deeplink/s?region=us-east-1#alarmsV2.alarm/Cpu_Alert_usage

Alarm Details:

- Name: Cpu_Alert_usage
- Description: Cpu_Alert_usage
- State Change: INSUFFICIENT_DATA -> ALARM
- Reason for State Change: Threshold Crossed: 1 out of the last 1 datapoints [0.23395387607668763 (31/07/23 05:05:00)] was less than or equal to the threshold (2.0) (minimum 1 datapoint for OK->ALARM transition).
- Timestamp: Monday 31 July, 2023 05:15:23 UTC
- AWS Account: 654727104253
- Alarm Arn: arn:aws:cloudwatch:us-east-1:654727104253:alarm:Cpu_Alert_usage

Threshold:

- The alarm is in the ALARM state when the metric is LessThanOrEqualToThreshold 2.0 for at least 1 of the last 1 period(s) of 300 seconds.

Monitored Metric:

- MetricNamespace: AWS/EC2
- MetricName: CPUUtilization
- Dimensions: [InstanceId = i-047f72b0e67eae89a]
- Period: 300 seconds