

Assignment 1

Create a CloudWatch alarm for an instance

You can create a CloudWatch alarm that monitors CloudWatch metrics for one of your instances. CloudWatch will automatically send you a notification when the metric reaches a threshold you specify. You can create a CloudWatch alarm using the Amazon EC2 console or using the more advanced options provided by the CloudWatch console.

- Select the instance for which you want to set the alarm in EC2 → Instance.
- Then go to the Monitoring section in the Details Pane
- Select the metrics for which you want to create the alarm
- Click on the 3dots to get the widgets actions. Here you have select View in metrics.
- In CloudWatch go the Alarm, then Create Alarm. Then Select Metric.
- In the pop-up options select EC2 and next select Per-Instance Metrics.
- Search for the instance and the select the option having the required Metric name and click on Select Metric.
- In Metric and Conditions select the required conditions and click on Next.
- In Step 2 under Notification keep it has In alarm and Create new topic, give the desired name and mail id to get the notification when the threshold is reached and click on Create topic. Leave the rest of options as it is and click on Next.
- In Step 3 give the Alarm name and description and click on Next.
- In Step 4 Preview and create your alarm by clicking on Create alarm.
- It will take some time to gate the state of the instance, hence the state is being displayed as Insufficient data. Wait for some time or carry out work in the instance created.
- Run few stress tests then you will get the mail notification for the threshold, you can also see the state of alarm as In alarm in cloudwatch.

Instances | EC2 Management Console | EC2 Instance Connect | ExcelR Contents/Project - 1/ | Model Building & Deployment | EDA & Visualization - Jupyter N...

Added security | https://us-west-2.console.aws.amazon.com/ec2/home?region=us-west-2#Instances

Find instance by attribute or tag (case-sensitive)

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS |
|------|---------------------|----------------|---------------|-------------------|--------------|-------------------|-----------------|
| cw | i-0504df67e0ce98a8c | Running | t2.micro | 2/2 checks passed | No alarms | us-west-2a | ec2-52-41-227-7 |

Instance: i-0504df67e0ce98a8c (cw)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary info

Instance ID: i-0504df67e0ce98a8c (cw)

IPV6 address: -

Hostname type: IP name: ip-10-0-14-108.us-west-2.compute.internal

Answer private resource DNS name: IPV4 (A)

Auto-assigned IP address: -

Public IPv4 address: 52.41.227.74 | open address

Instance state: Running

Private IPv4 addresses: 10.0.14.108

Public IPv4 DNS: ec2-52-41-227-74.us-west-2.compute.amazonaws.com | open address

Private IP DNS name (IPv4 only): ip-10-0-14-108.us-west-2.compute.internal

Instance type: t2.micro

Elastic IP addresses: It is taking a bit longer than usual to fetch your data

AWS Compute Optimizer finding

Instances | EC2 Management Console | EC2 Instance Connect | ExcelR Contents/Project - 1/ | Model Building & Deployment | EDA & Visualization - Jupyter N...

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Instance: i-0504df67e0ce98a8c (cw)

manage detailed monitoring

1h 3h 12h 1d 3d 1w Custom

CPU utilization (%)

Percent

0.198

0.099

0

05:05

06:05

Network in (bytes)

Bytes

1.00k

807

Status check failed (any) (co...)

Enlarge

Refresh

Apply time range

View in metrics

View in Resource Health

View logs

Status check failed (instance)...

1

No data available.

Try adjusting the dashboard time range.

0.5

05:05

06:05

Status check failed (system) (...)

1

No data available.

Try adjusting the dashboard time range.

0.5

05:05

06:05

Network packets in (count)

Count

11.2

11.2

Network packets out (count)

Count

11.8

11.8

Instances | EC2 Management Console | CloudWatch Management Console | EC2 Instance Connect | ExcelR Contents/Project - 1/ | Model Building & Deployment | EDA & Visualization - Jupyter N...

Added security | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#metricsV2:graph=~(view~"bl...

CloudWatch

CloudWatch > Metrics

CPU utilization (%)

1h 3h 12h 1d 3d 1w Custom

Line

Actions

Percent

0.198

0.099

0

05:05

05:10

05:15

05:20

05:25

05:30

05:35

05:40

05:45

05:50

05:55

06:00

06:05

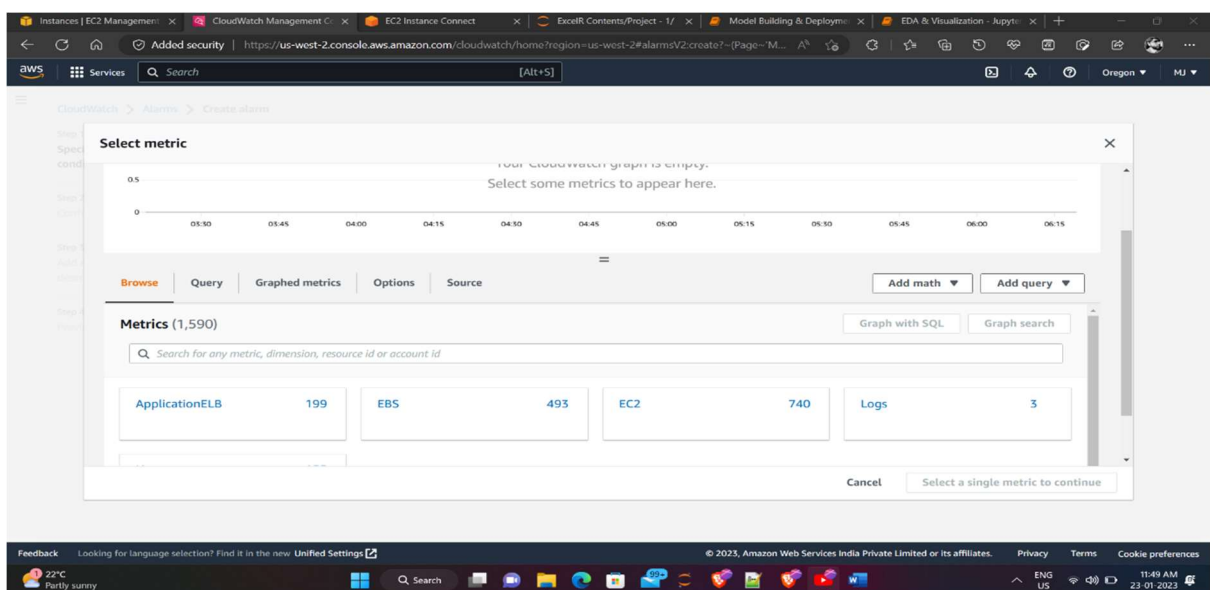
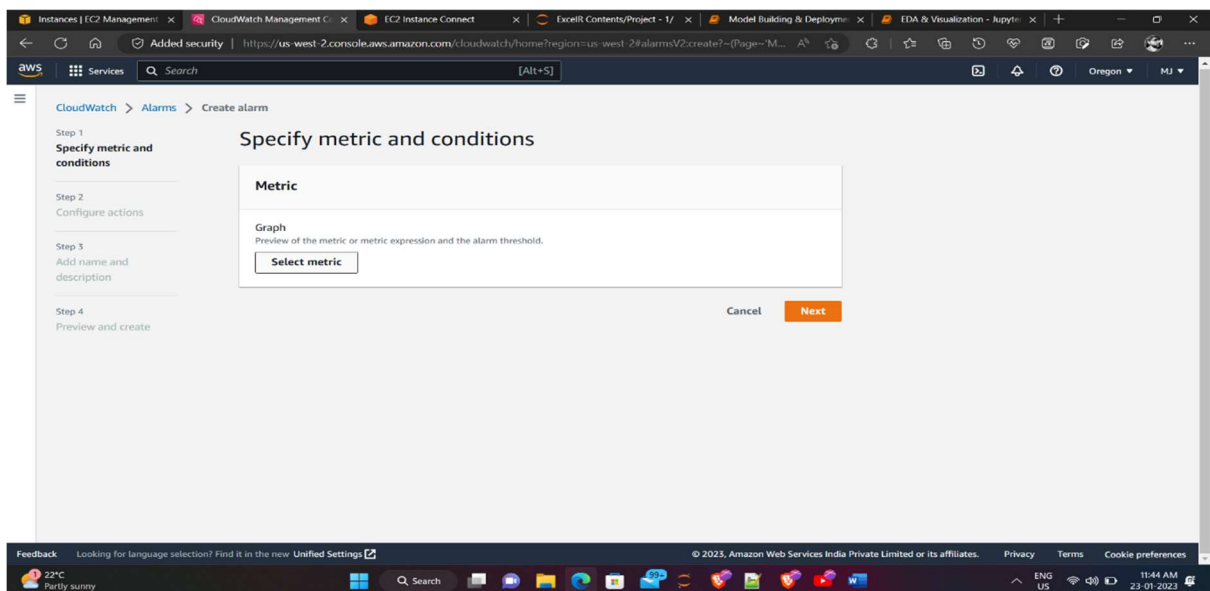
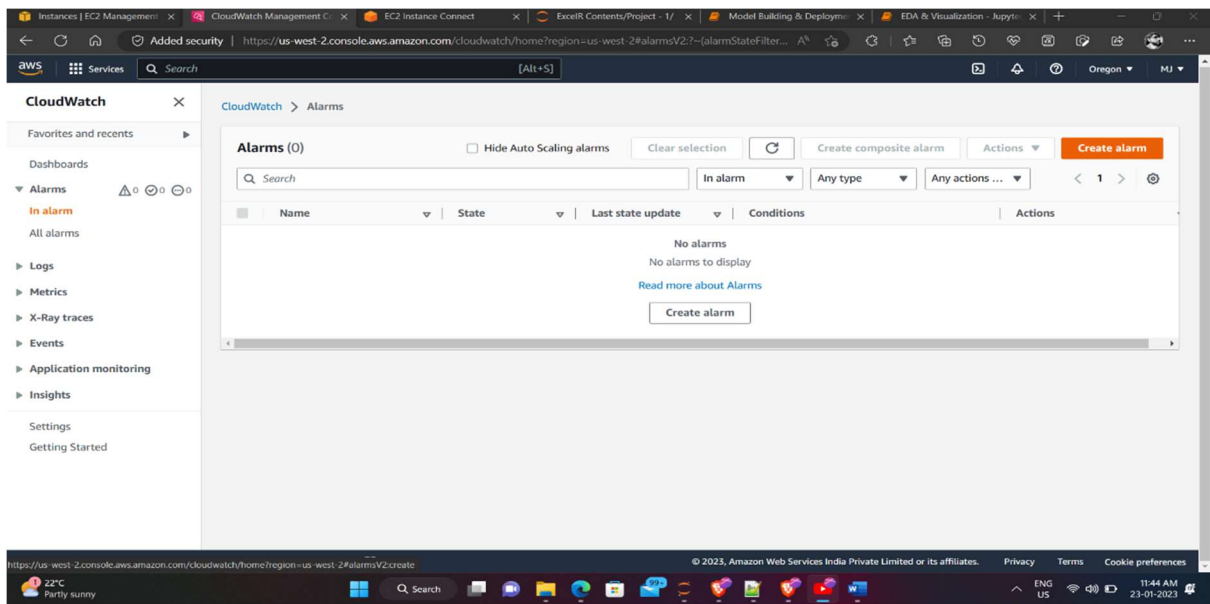
Browse | Query | Graphed metrics (1) | Options | Source

Add math | Add query

Add dynamic label | Info

Statistic: Average | Period: 5 minutes | Clear graph

| Label | Details | Statistic | Period | Y axis | Actions |
|--------------------------|---|-----------|-----------|--------|---------|
| i-0504df67e0ce98a8c (cw) | EC2 - CPUUtilization - InstanceId: i-0504df67 | Average | 5 minutes | | |



Instances | EC2 Management | CloudWatch Management | EC2 Instance Connect | ExcelR Contents/Project - 1/ | Model Building & Deployment | EDA & Visualization - Jupyter |

Added security | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#alarmsV2:create?--(Page~M... |

Services Search [Alt+S] Oregon MJ

CloudWatch > Alarms > Create alarm

Select metric

Your CloudWatch graphs are empty. Select some metrics to appear here.

0.5
0
03:30 03:45 04:00 04:15 04:30 04:45 05:00 05:15 05:30 05:45 06:00 06:15

Browse Query Graphed metrics Options Source Add math Add query

Metrics (740)

All > EC2 Search for any metric, dimension, resource id or account id

By Auto Scaling Group 17 Per-Instance Metrics 723

Per Instance Metrics

Cancel Select a single metric to continue

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Added security | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#alarmsV2:create?--(Page~M... |

Services Search [Alt+S] Oregon MJ

CloudWatch > Alarms > Create alarm

Select metric

4.04
2.1
0.168
03:30 03:45 04:00 04:15 04:30 04:45 05:00 05:15 05:30 05:45 06:00 06:15

CPUUtilization

Browse Query Graphed metrics (1) Options Source Add math Add query

| | | | |
|-------------------------------------|----|---------------------|-------------------|
| <input type="checkbox"/> | cw | i-0504df67e0ce98a8c | StatusCheckFailed |
| <input type="checkbox"/> | cw | i-0504df67e0ce98a8c | NetworkPacketsIn |
| <input type="checkbox"/> | cw | i-0504df67e0ce98a8c | NetworkPacketsOut |
| <input checked="" type="checkbox"/> | cw | i-0504df67e0ce98a8c | CPUUtilization |
| <input type="checkbox"/> | cw | i-0504df67e0ce98a8c | NetworkIn |
| <input type="checkbox"/> | cw | i-0504df67e0ce98a8c | NetworkOut |

Cancel Select metric

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Services Search [Alt+S] Oregon MJ

conditions

Step 2 Configure actions

Step 3 Add name and description

Step 4 Preview and create

Metric

Graph

This alarm will trigger when the blue line goes above the red line for 1 datapoints within 1 minute.

Percent
4.04
2.1
0.168
03:30 04:30 05:30

CPUUtilization

Namespace AWS/EC2

Metric name CPUUtilization

InstanceId i-0504df67e0ce98a8c

Instance name cw

Statistic Average

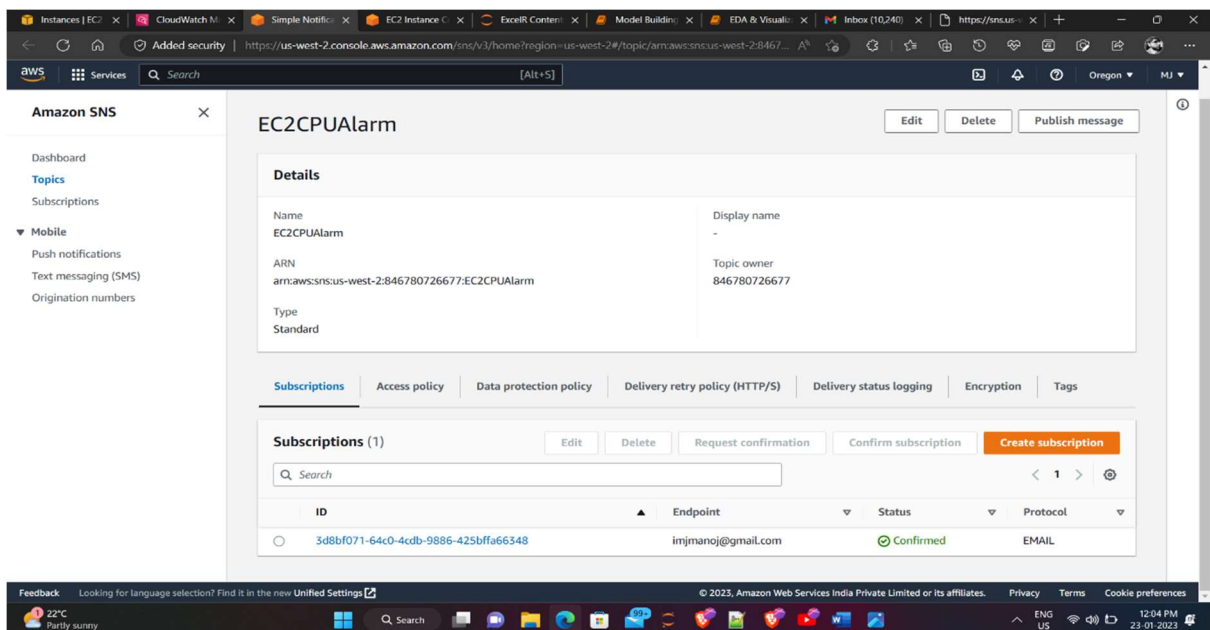
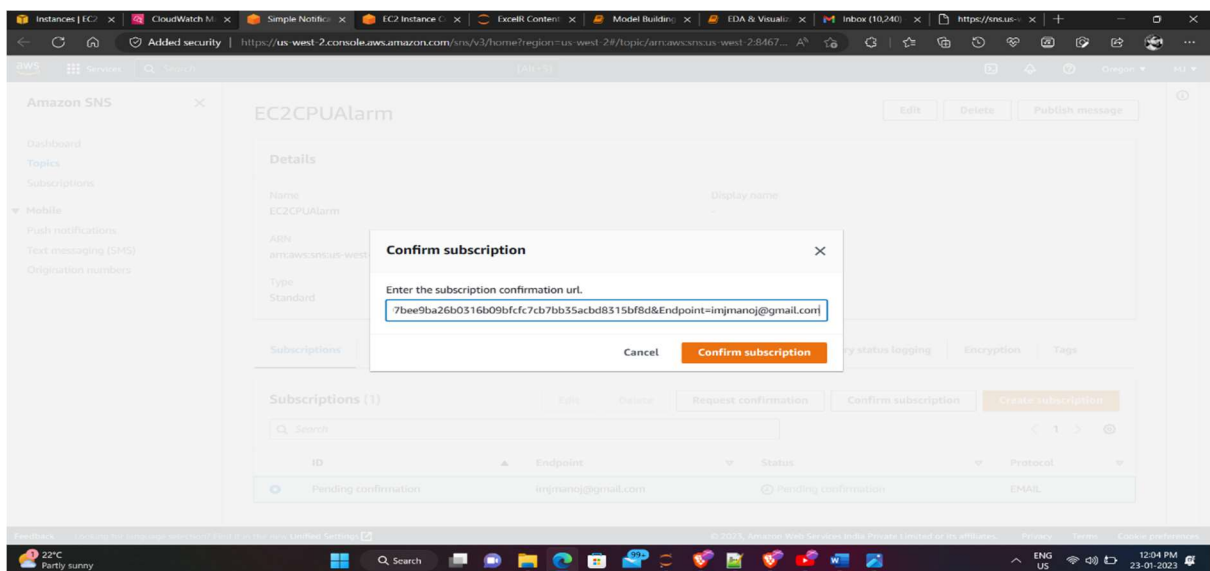
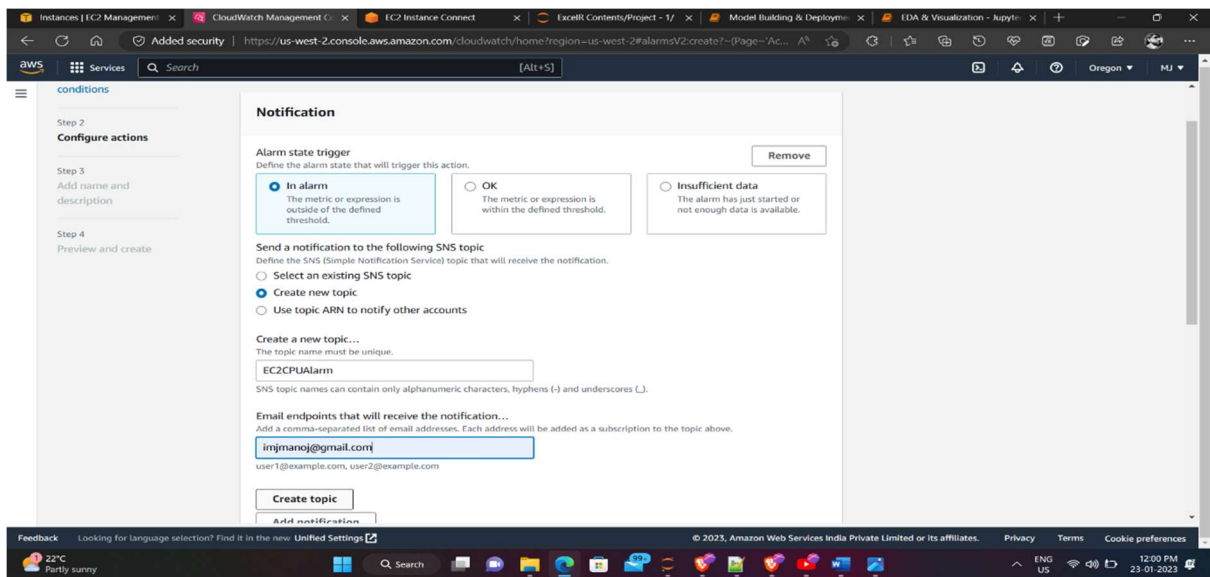
Period 1 minute

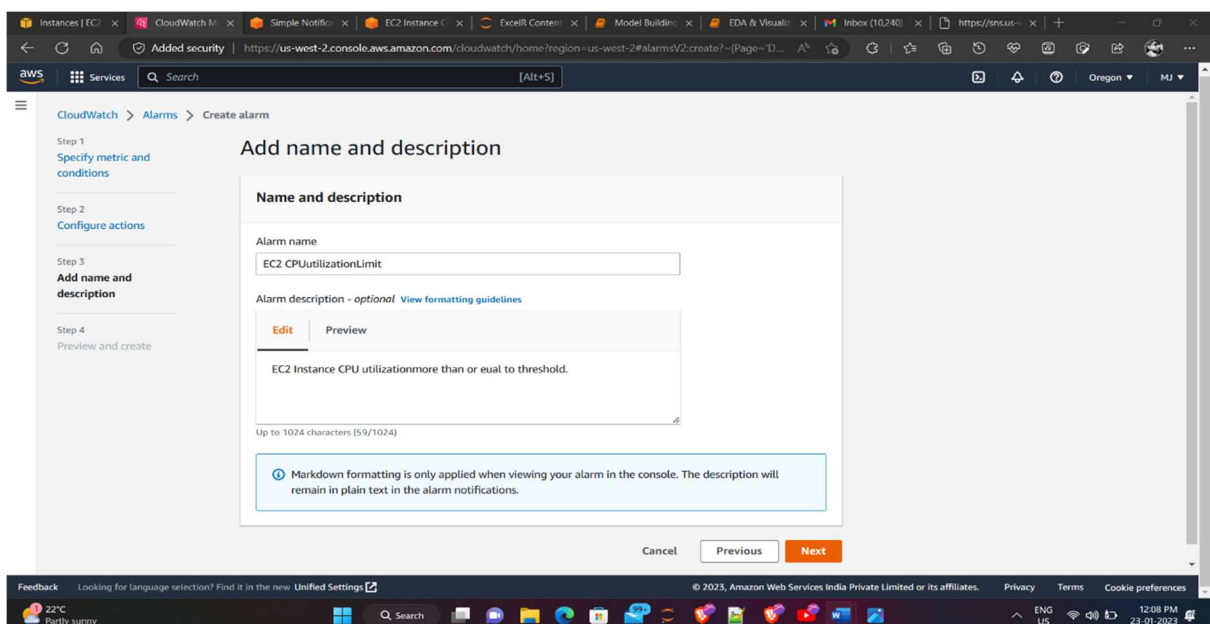
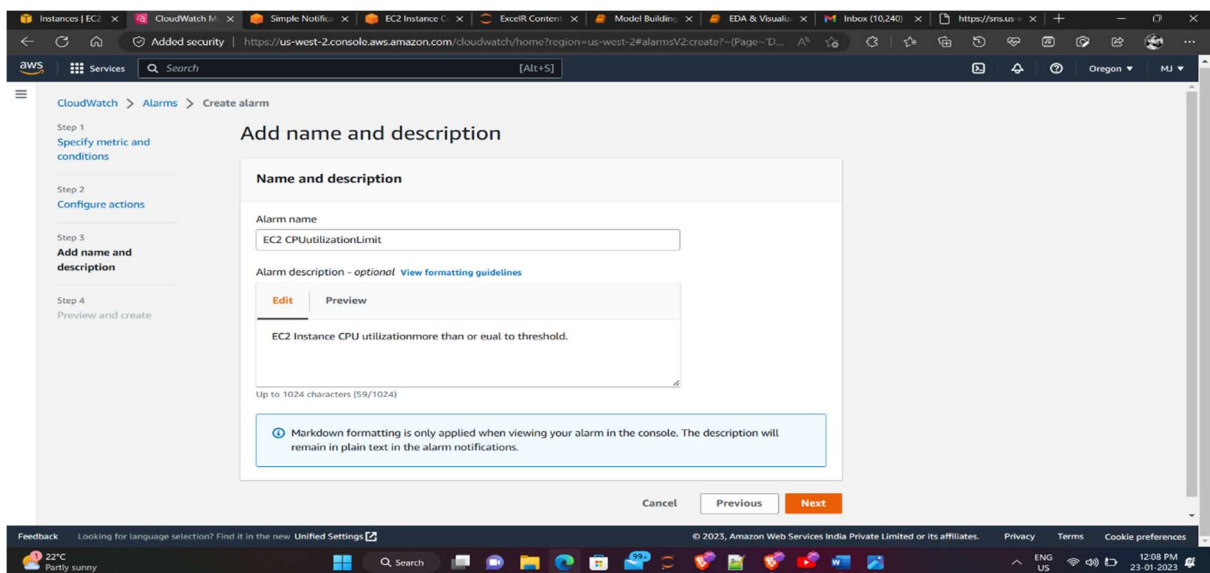
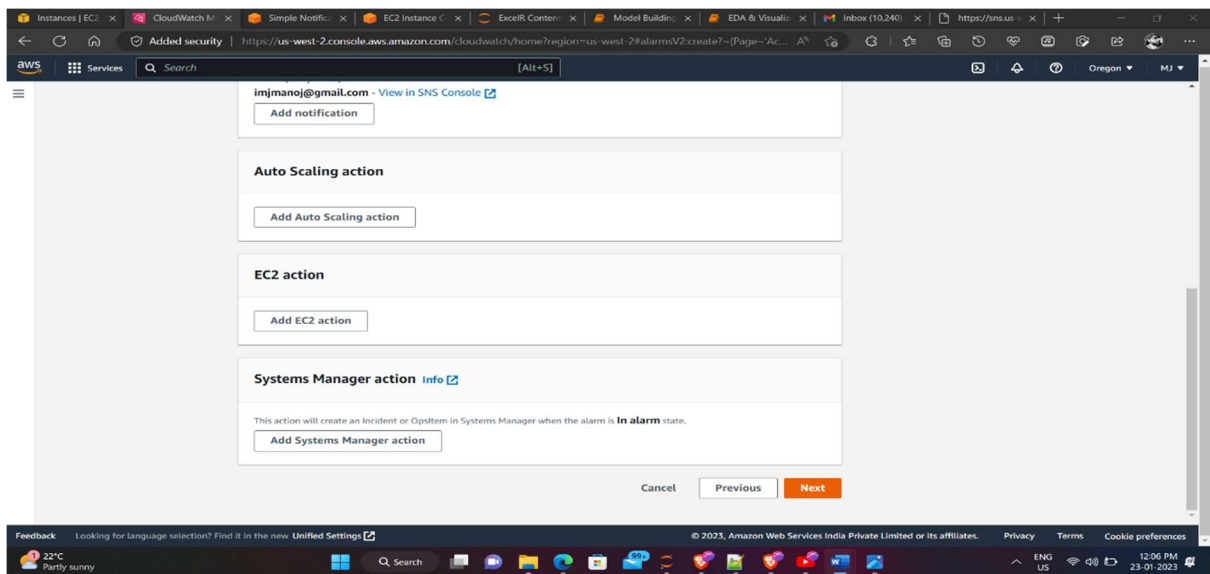
Conditions

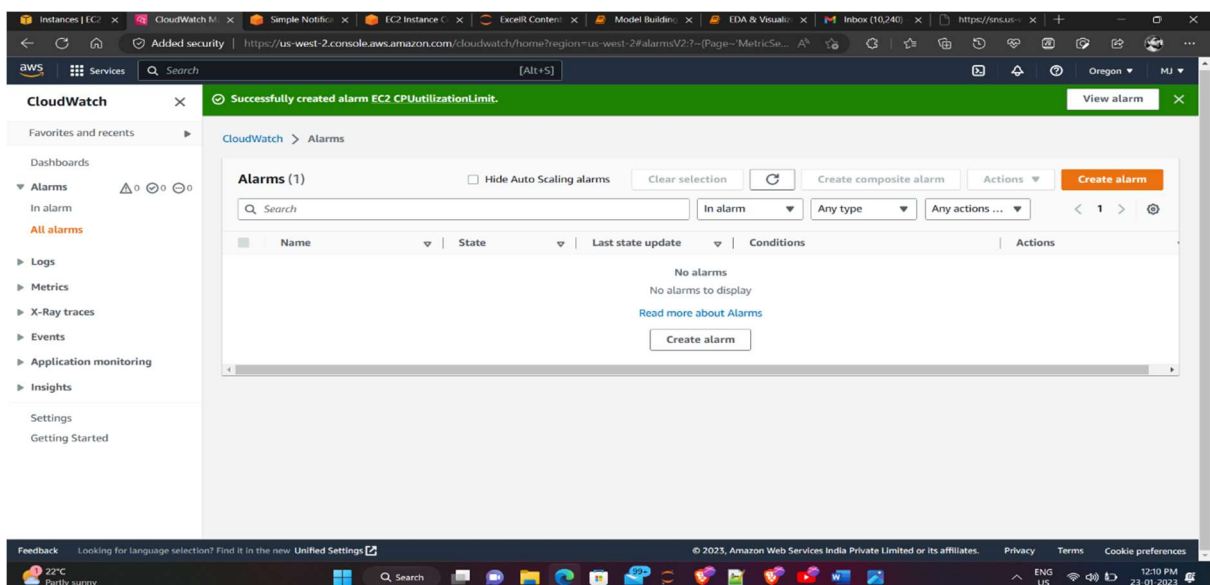
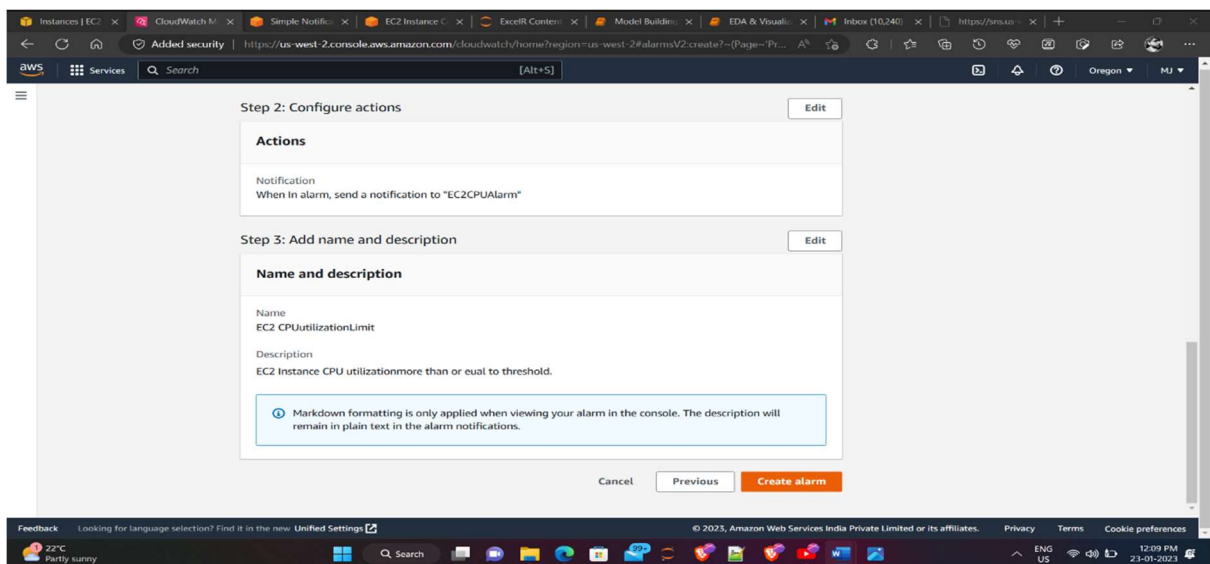
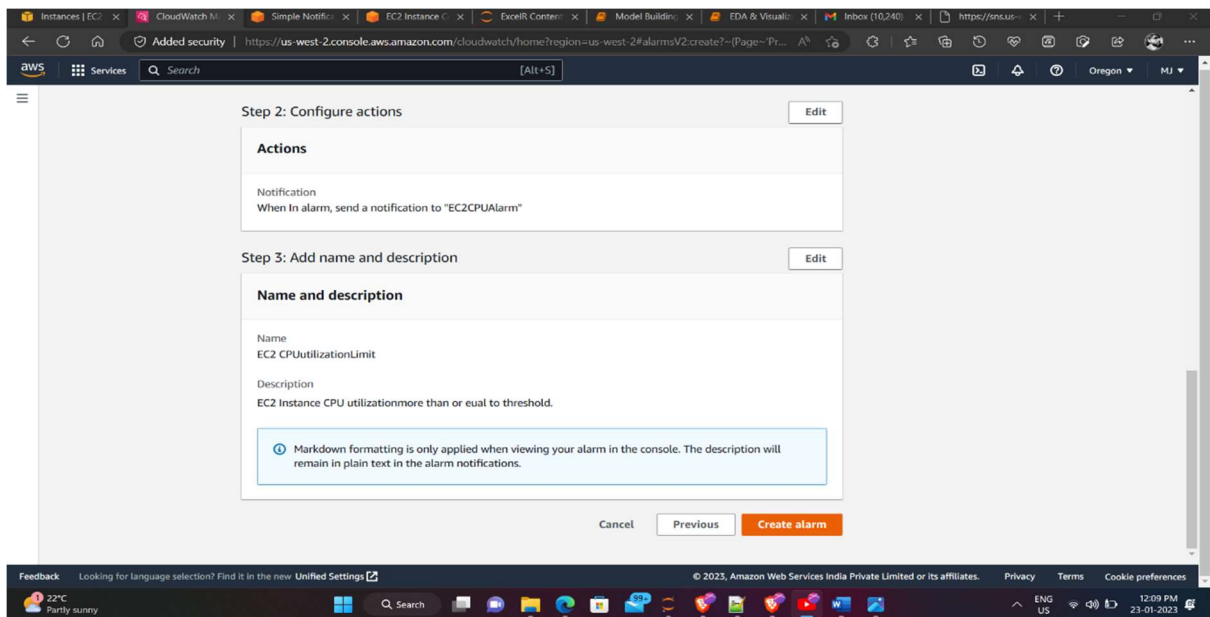
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CloudWatch Alarms

Successfully created alarm EC2 CPUUtilizationLimit.

CloudWatch > Alarms

Alarms (1)

Hide Auto Scaling alarms

Clear selection

Create composite alarm

Actions

Create alarm

Search

Any state

Any type

Any actions ...

< 1 >

| Name | State | Last state update | Conditions | Actions |
|-------------------------|-------------------|---------------------|---|-----------------|
| EC2 CPUUtilizationLimit | Insufficient data | 2023-01-23 12:09:59 | CPUUtilization >= 2.25 for 1 datapoints within 1 minute | Actions enabled |

Feedback

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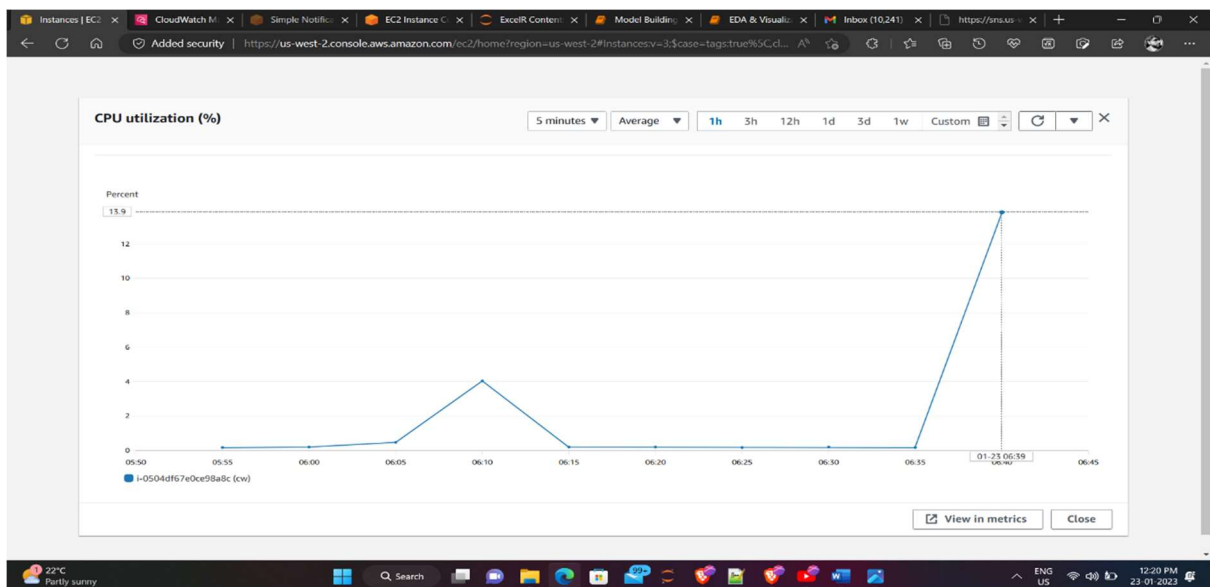
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Search

ENG US

12:10 PM 23-01-2023



ALARM: "EC2 CPUUtilizationLimit" in US West (Oregon)

AWS Notifications

You are receiving this email because your Amazon CloudWatch Alarm "EC2 CPUUtilizationLimit" in the US West (Oregon) region has entered the ALARM state, because Threshold Crossed: 1 out of the last 1 datapoints [13.83475039362788 (23/01/23 06:42:00)] was greater than or equal to the threshold (2.25) (minimum 1 datapoint for OK -> ALARM transition) "at "Monday 23 January, 2023 06:48:18 UTC".

View this alarm in the AWS Management Console

<https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#alarmsV2:alarm=EC2-CPUUtilizationLimit>

Alarm Details:

- Name: EC2 CPUUtilizationLimit
- Description: EC2 Instance CPU utilization more than or equal to threshold
- State Change: INSUFFICIENT_DATA -> ALARM
- Reason for State Change: Threshold Crossed: 1 out of the last 1 datapoints [13.83475039362788 (23/01/23 06:42:00)] was greater than or equal to the threshold (2.25) (minimum 1 datapoint for OK -> ALARM transition).
- Timestamp: Monday 23 January, 2023 06:48:18 UTC
- AWS Account: 846790729677
- Alarm Arn: arn:aws:cloudwatch:us-west-2:846790729677:alarm:EC2-CPUUtilizationLimit

Threshold:

- The alarm is in the ALARM state when the metric is GreaterThanOrEqualToThreshold 2.25 for at least 1 of the last 1 period(s) of 60 seconds.

Monitored Metric:

- MetricNamespace: AWS/EC2
- MetricName: CPUUtilization
- Dimensions: [InstanceId => i-0504d67e0ce98a8c]
- Period: 60 seconds
- Statistic: Average
- Unit: Percent
- TrueMissingData: missing

State Change Actions:

- OK
- ALARM [arn:aws:sns:us-west-2:846790729677:EC2CPUAlarm]
- INSUFFICIENT_DATA

If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:

<https://sns.us-west-2.amazonaws.com/unsubscribe?SubscriptionArn=arn:aws:sns:us-west-2:846790729677:EC2CPUAlarm:3d050715-640b-4c0b-8006-4250e6653985&Topic=tm-maps@gmail.com>