

## Assignment 2

To create an alarm to stop an idle instance and terminate an idle instance (Amazon EC2 console)

- Select the instance for which you want to create alarm.
- Go to the Monitoring section select the CPU Utilization metrics, click on the 3dots to get the widgets actions, and select view in metrics.
- In the cloudwatch management console scroll to left and click on the bell icon to create the alarm
- In step 1 select the required settings and click on next.
- In step 2 Create new topic and select the EC2 action for the triggered alarm (here terminate this instance) leave the rest of settings to default and click next.
- In step 3 create the name and description for the mail notification and click on next.
- In step 4 confirm the settings and select create alarm.

The screenshot displays the AWS Management Console interface. At the top, a green banner states "Successfully terminated i-0504df67e0ce98a8c". Below this, the "Instances (1/2)" table is visible, listing two instances: "cw" (Terminated) and "assignment2" (Pending). The details for "assignment2" (i-0fbe9dc8dd6cd4538) are shown, including its instance type (t2.micro), public IP address (34.209.135.180), and private IP address (10.0.0.100). The console also shows the "Instance summary" section with various configuration details.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
cw	i-0504df67e0ce98a8c	Terminated	t2.micro	-	1/1 has no data	us-west-2a	-
assignment2	i-0fbe9dc8dd6cd4538	Pending	t2.micro	-	No alarms	us-west-2a	ec2-34

**Instance: i-0fbe9dc8dd6cd4538 (assignment2)**

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

**Instance summary**

Instance ID: i-0fbe9dc8dd6cd4538 (assignment2)

Public IPv4 address: 34.209.135.180 | [open address](#)

Private IPv4 addresses: 10.0.0.100

Instance state: Pending

Public IPv4 DNS: ec2-34-209-135-180.us-west-2.compute.amazonaws.com | [open address](#)

Private IP DNS name (IPv4 only): ip-10-0-0-100.us-west-2.compute.internal

Instance type: t2.micro

Auto-assigned IP address: VPC ID

AWS Compute Optimizer finding

CloudWatch > Alarms > Create alarm

Step 1  
Specify metric and conditions

Step 2  
Configure actions

Step 3  
Add name and description

Step 4  
Preview and create

### Specify metric and conditions

**Metric** Edit

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

Percent

0.99

0.785

0.581

04:30 05:30 06:30

I-0f9e9dc8dd6cd4538 (assignment2)

Namespace  
AWS/EC2

Metric name  
CPUUtilization

InstanceId  
i-0f9e9dc8dd6cd4538

Instance name  
assignment2

Statistic  
Average

Period

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ENG US 12:47 PM 23-01-2023

CloudWatch > Alarms > Create alarm

Step 1  
Specify metric and conditions

Step 2  
Configure actions

Step 3  
Add name and description

Step 4  
Preview and create

### Specify metric and conditions

Period  
1 minute

**Conditions**

**Threshold type**

☒ Static  
Use a value as a threshold

☐ Anomaly detection  
Use a band as a threshold

Whenever CPUUtilization is...

Define the alarm condition.

☐ Greater  
> threshold

☐ Greater/Equal  
≥ threshold

☒ Lower/Equal  
≤ threshold

☐ Lower  
< threshold

than...

Define the threshold value.

0.99

Must be a number

Additional configuration

Cancel Next

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CloudWatch > Alarms > Create alarm

Step 1  
Specify metric and conditions

Step 2  
Configure actions

Step 3  
Add name and description

Step 4  
Preview and create

### Configure actions

**Notification**

Alarm state trigger  
Define the alarm state that will trigger this action.

☒ In alarm  
The metric or expression is outside of the defined threshold.

☐ OK  
The metric or expression is within the defined threshold.

☐ Insufficient data  
The alarm has just started or not enough data is available.

Remove

Send a notification to the following SNS topic.  
Define the SNS (Simple Notification Service) topic that will receive the notification.

☒ Select an existing SNS topic

☐ Create new topic

☐ Use topic ARN to notify other accounts

Send a notification to...

EC2CPUStateStopped

Only email lists for this account are available.

Email (endpoints)  
imjmanoj@gmail.com - View in SNS Console

Add notification

**Auto Scaling action**

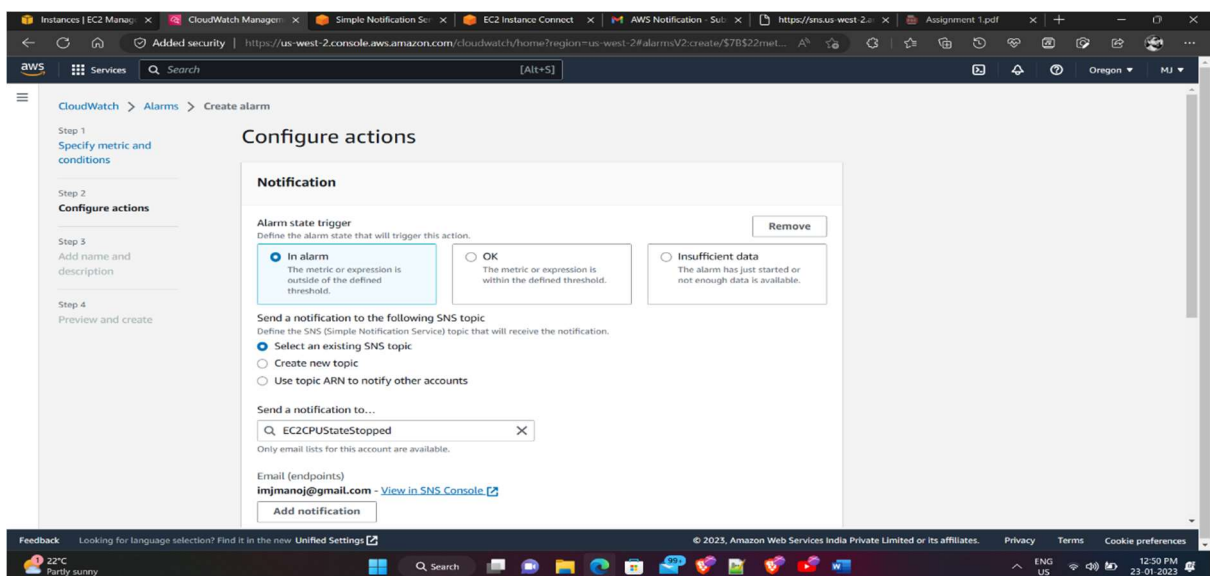
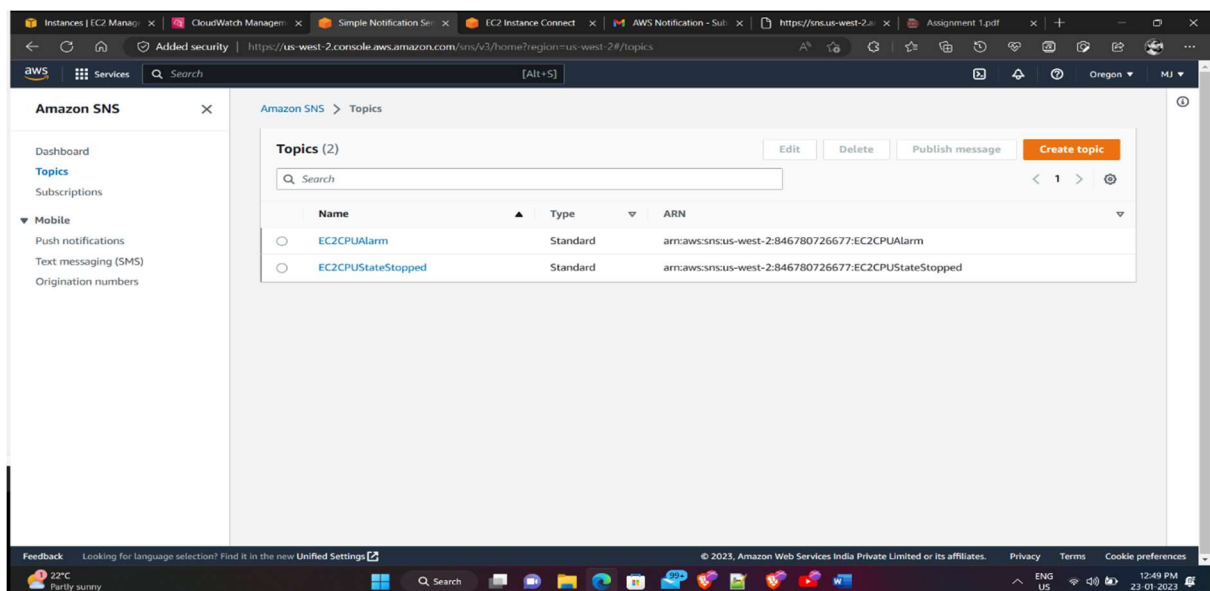
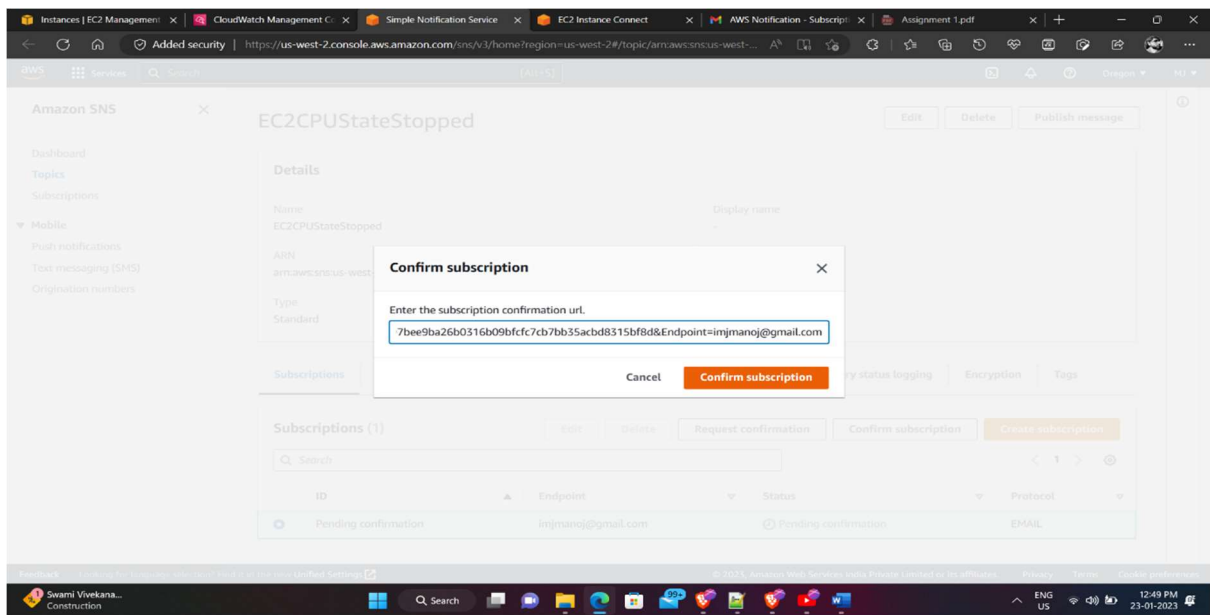
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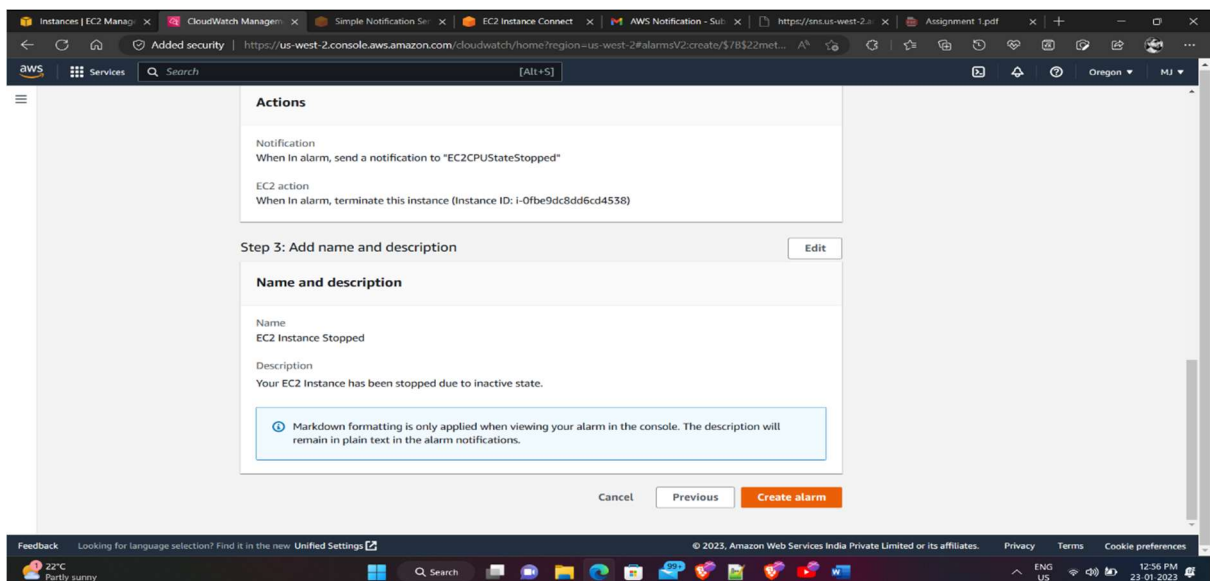
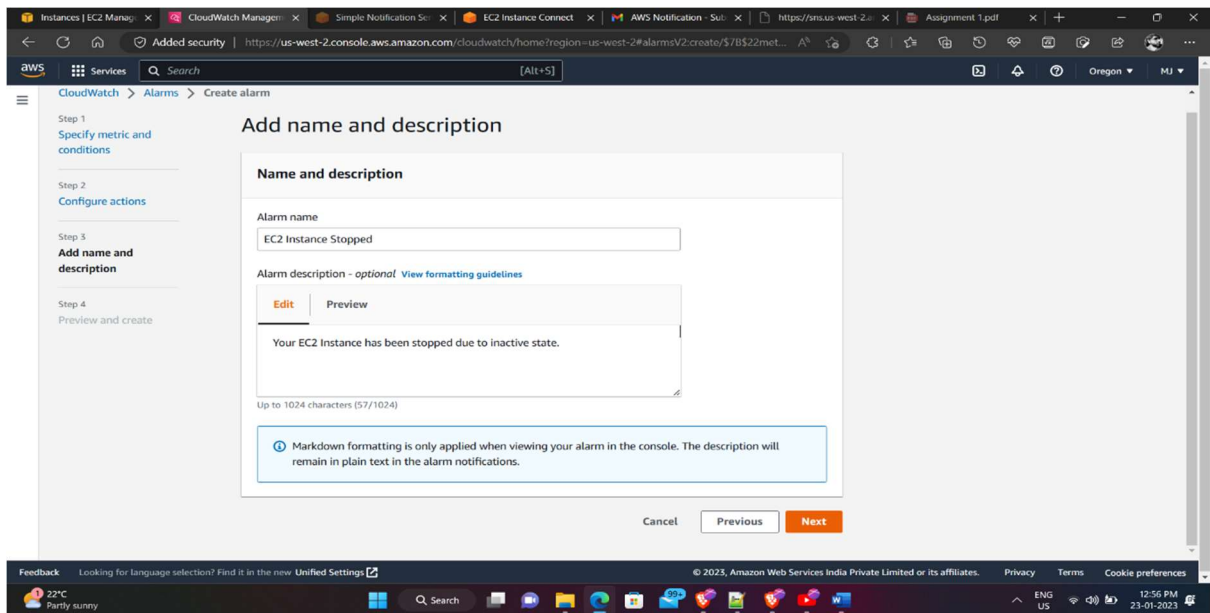
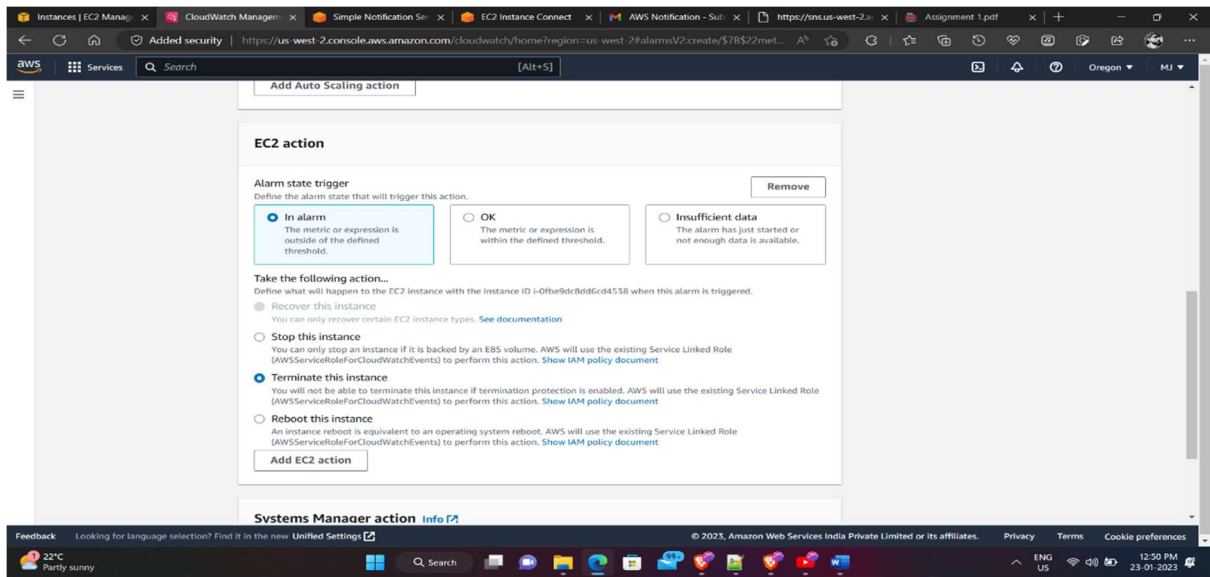
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Swami Vivekananda... Construction

Search

ENG US 12:48 PM 23-01-2023





Instances | EC2 Manager | CloudWatch Manager | Simple Notification Ser... | EC2 Instance Connect | AWS Notification - Sub... | https://sns.us-west-2... | Assignment 1.pdf

Added security | https://us-west-2.console.aws.amazon.com/ec2/home?region=us-west-2#instancescv=3:\$case=tags:true%5C.d... | [Alt+S] | Oregon | MJ

New EC2 Experience

EC2 Dashboard  
EC2 Global View  
Events  
Tags  
Limits

Instances  
Instances  
Instance Types  
Launch Templates  
Spot Requests  
Savings Plans  
Reserved Instances  
Dedicated Hosts  
Scheduled Instances  
Capacity Reservations

Images  
AMIs  
AMI Catalog

Elastic Block Store

Instances (2) Info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
cw	i-0504df67e0ce98a8c	Terminated	t2.micro	-	1/1 has no data	us-west-2a	-
assignment2	i-0f8e9dc8dd6cd4538	Shutting-down	t2.micro	-	1/1 in alarm	us-west-2a	ec2-34

Select an instance

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Instances | EC2 Manager | CloudWatch Manager | Simple Notification Ser... | EC2 Instance Connect | AWS Notification - Sub... | https://sns.us-west-2... | Assignment 1.pdf

Added security | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#alarmsV2?~(alarmStateFilter... | [Alt+S] | Oregon | MJ

CloudWatch

Favorites and recents

Dashboards

Alarms 1 0 0 1

In alarm

All alarms

Logs

Metrics

X-Ray traces

Events

Application monitoring

Insights

Settings

Getting Started

CloudWatch > Alarms

Alarms (2) ☐ Hide Auto Scaling alarms

Search

In alarm

Any type

Any actions ...

Name	State	Last state update	Conditions	Actions
EC2 Instance Stopped	In alarm	2023-01-23 12:57:48	CPUUtilization <= 0.99 for 1 datapoints within 1 minute	Actions enabled

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Instances | EC2 Manager | CloudWatch Manager | Simple Notification Ser... | EC2 Instance Connect | ALARM: "EC2 Instance Stopped" | https://sns.us-west-2... | Assignment 1.pdf

Added security | https://mail.google.com/mail/u/0/#inbox/FMkgcGrCvPhKRDnNWDVqkNdlCJD | Search mail

Gmail

Compose

Inbox 10,229

Starred

Snoozed

Sent

Drafts

More

Labels

[imap]/Drafts

ALARM: "EC2 Instance Stopped" in US West (Oregon) inbox

AWS Notifications no-reply@amazonaws.com 12:57 (0 minutes ago) star reply

You are receiving this email because your Amazon CloudWatch Alarm "EC2 Instance Stopped" in the US West (Oregon) region has entered the ALARM state, because "Threshold Crossed: 1 out of the last 1 datapoints [0 165045846063522 (23/01/23 07:21:00)] was less than or equal to the threshold (0.99) (minimum 1 datapoint for OK -> ALARM transition)." at Monday 23 January, 2023 07:27:48 UTC.

View this alarm in the AWS Management Console:  
<https://us-west-2.console.aws.amazon.com/cloudwatch/quicklink-to?region=us-west-2#alarmsV2?alarm=EC2%20Instance%20Stopped>

Alarm Details:

- Name: EC2 Instance Stopped
- Description: Your EC2 Instance has been stopped due to inactive state.
- State Change: INSUFFICIENT\_DATA -> ALARM
- Reason for State Change: Threshold Crossed: 1 out of the last 1 datapoints [0 165045846063522 (23/01/23 07:21:00)] was less than or equal to the threshold (0.99) (minimum 1 datapoint for OK -> ALARM transition).
- Timestamp: Monday 23 January, 2023 07:27:48 UTC
- AWS Account: 846780726677
- Alarm Arn: arn:aws:cloudwatch:us-west-2:846780726677:alarm:EC2 Instance Stopped

Threshold:

- The alarm is in the ALARM state when the metric is LessThanOrEqualToThreshold 0.99 for at least 1 of the last 1 period(s) of 60 seconds.

Monitored Metric:

- MetricNamespace: AWS/EC2
- MetricName: CPUUtilization
- Dimensions: [InstanceId = i-0f8e9dc8dd6cd4538]
- Period: 60 seconds
- Statistic: Average
- Unit: not specified
- TreatMissingData: missing

State Change Actions:

- OK
- ALARM: [arn:aws:sns:us-west-2:846780726677:action/actions/AWS\_EC2\_Instanceid\_Terminate/1\_0] [arn:aws:sns:us-west-2:846780726677:EC2CPUStateStopped]
- INSUFFICIENT\_DATA:

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