



# Cloud Intern (CodTech)

## Task-2 : Cloud Monitoring and Alerts

**SET UP MONITORING FOR A CLOUD BASED APPLICATION USING AWS CLOUDWATCH, GOOGLE CLOUD MONITORING, OR AZURE MONITOR**

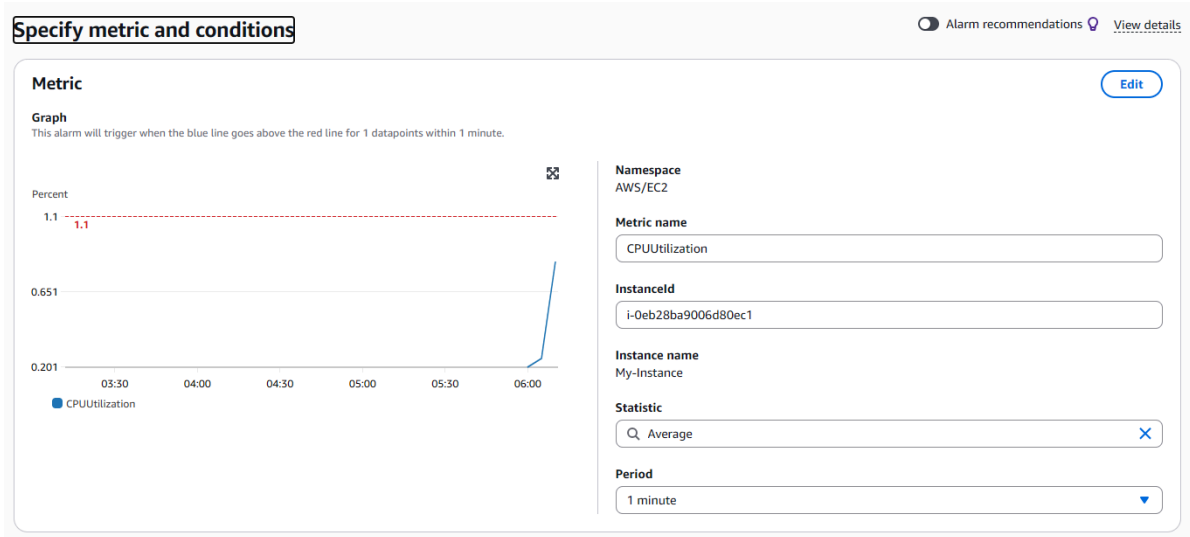
**DELIVERABLE: CONFIGURED ALERTS AND A DASHBOARD SHOWCASING METRICS**

### Creating an alert using email notification

Search cloudwatch → Go to alarm → create alarm

The screenshot shows the 'Specify metric and conditions' step of the AWS CloudWatch alarm creation process. On the left, a vertical list of steps is shown: Step 1 (Specify metric and conditions, highlighted with a blue circle), Step 2 (Configure actions), Step 3 (Add alarm details), and Step 4 (Preview and create). The main area is titled 'Specify metric and conditions' and contains a 'Metric' section with a 'Graph' preview area. Below the preview is a 'Select metric' button. At the bottom right, there are 'Cancel' and 'Next' buttons.

Here select metric → Go to browse → EC2 → Per-Instance Metrics → Select any instance with CPU Utilization → select metric



Do some change like

- Period → 1 min
- Statistic → average

**Conditions**

**Threshold type**

☒ Static  
Use a value as a threshold

☐ Anomaly detection  
Use a band as a threshold

**Whenever NetworkOut is...**  
Define the alarm condition.

☒ Greater  
> threshold

☐ Greater/Equal  
>= threshold

☐ Lower/Equal  
<= threshold

☐ Lower  
< threshold

**than...**  
Define the threshold value.

0.4

Must be a number

► Additional configuration

Do some change like

- alarm condition → Greater/Equal
- threshold value → 0.4 your chooses

▼ **Additional configuration**

**Datapoints to alarm**  
Define the number of datapoints within the evaluation period that must be breaching to cause the alarm to go to ALARM state.

1 out of 3

**Missing data treatment**  
How to treat missing data when evaluating the alarm.

Treat missing data as good (not breaching threshold)

keep this as per the period for 1 min → 3 unit

**Configure actions**

**Notification**

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

☒ **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.

**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

**Create a new topic...**  
The topic name must be unique.

Default\_CloudWatch\_Alarms\_Topic

SNS topic names can contain only alphanumeric characters, hyphens (-) and underscores (\_).

**Email endpoints that will receive the notification...**  
Add a comma-separated list of email addresses. Each address will be added as a subscription to the topic above.

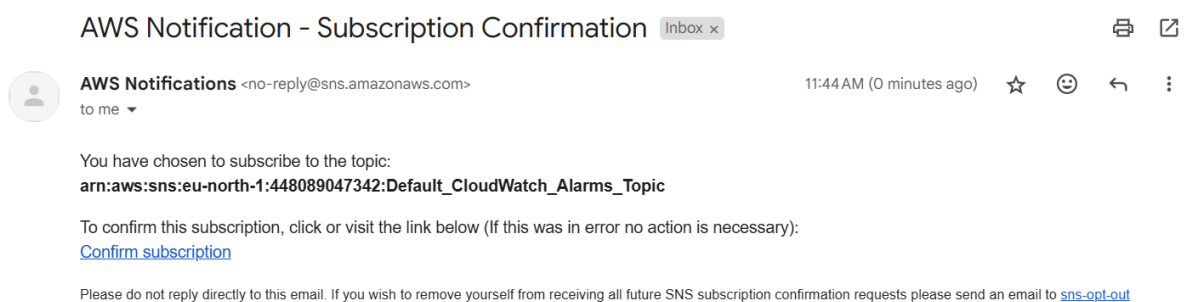
norrishrui27@gmail.com

user1@example.com, user2@example.com

Create topic

Add notification

Set the notification setting



you will get an email to confirm the subscription

### Add alarm details

#### Name and description

Alarm name

Alarm description - optional [View formatting guidelines](#)

Edit Preview

```
# This is an H1
**double asterisks will produce strong character**
This is [an example](https://example.com/) inline link.
```

Up to 1024 characters (0/1024)

Markdown formatting is only applied when viewing your alarm in the console. The description will remain in plain text in the alarm notifications.

Give the name for the alarm

### Preview and create

#### Step 1: Specify metric and conditions

##### Metric

Graph

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

Percent

1.1 0.651 0.201

03:30 04:00 04:30 05:00 05:30 06:00

CPUUtilization

Namespace

AWS/EC2

Metric name

CPUUtilization

Instanceid

i-0eb28ba9006d80ec1

Instance name

My-Instance

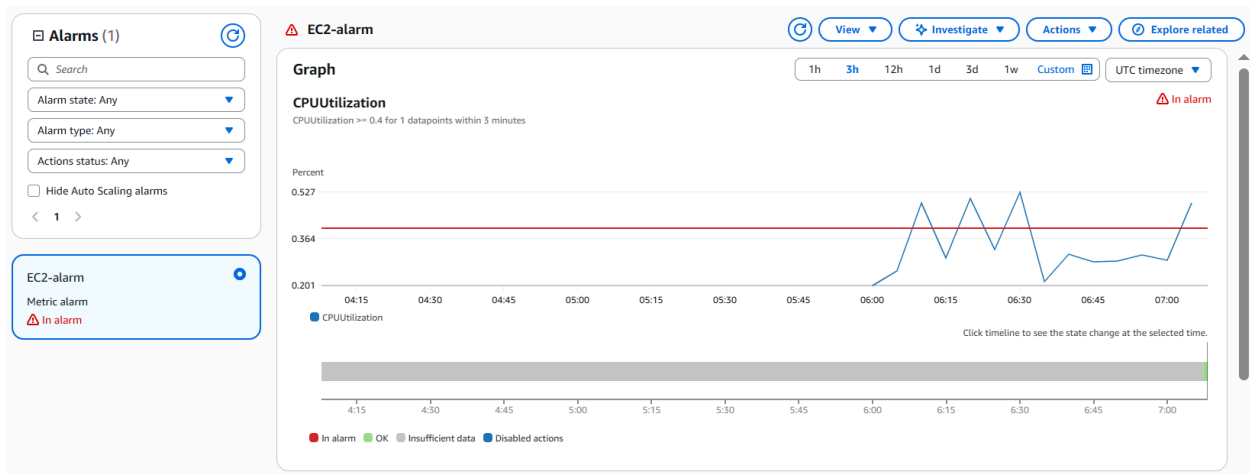
Statistic

Average

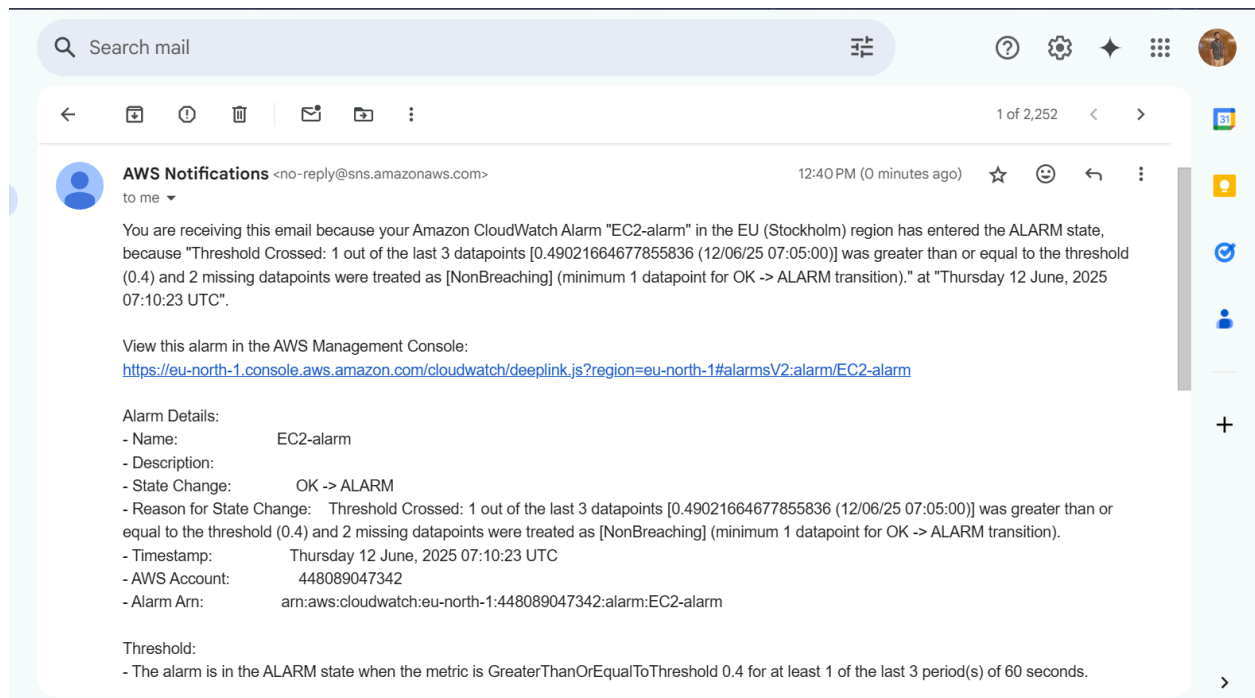
Period

1 minute

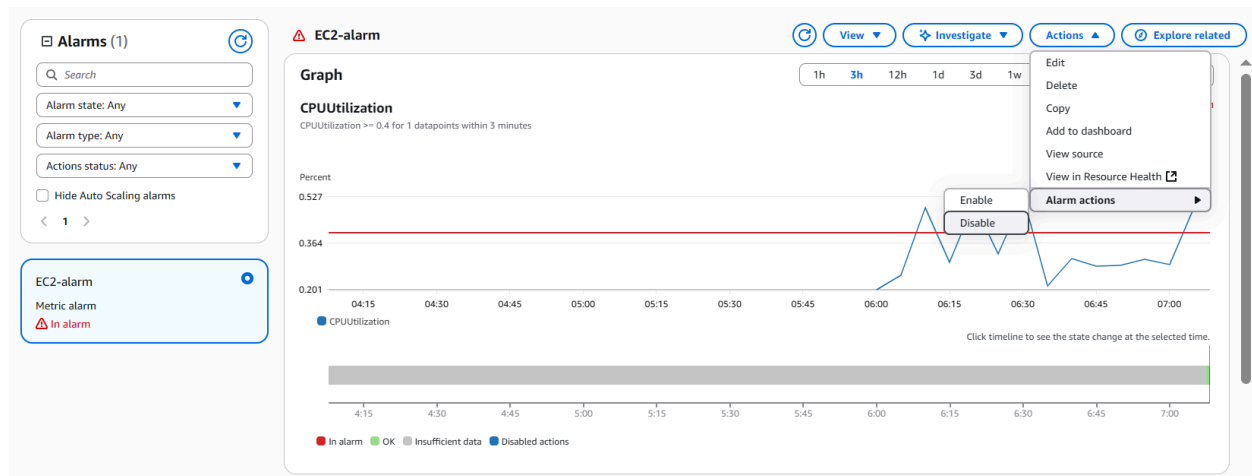
You will get a preview of all the details → click create alarm



here i got an warring alarm (this will take same time)



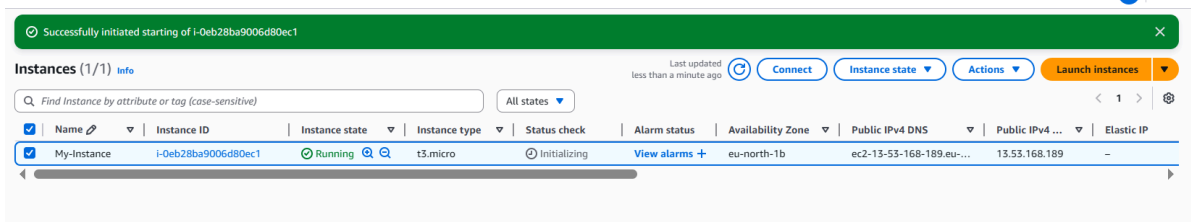
And you will also get an email for the warring alarm as you had put notification for email



After using the Disable the alarm.

## Creating a Dashboard for an Instance that will showcase metrics

First go and start your instance



Go to connect

### Connect Info

Connect to an instance using the browser-based client.

EC2 Instance Connect

Session Manager

SSH client

EC2 serial console

Instance ID

i-0eb28ba9006d80ec1 (My-Instance)

Connect using a Public IP

Connect using a public IPv4 or IPv6 address

Public IPv4 address

13.53.168.189

IPv6 address

-

Connect using a Private IP

Connect using a private IP address and a VPC endpoint

Username

Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

ec2-user

Note:

In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

Connect

click connect

```
~ ~ ~ \#####\
~ ~ ~ \###|
~ ~ ~ \#/\
~ ~ ~ V~' -> https://aws.amazon.com/linux/amazon-linux-2023
~ ~ ~ /m/'
~ ~ ~ /m/'

Last login: Thu Jun 12 07:08:54 2025 from 13.48.4.202
[ec2-user@ip-172-31-38-106 ~]$ sudo su
[root@ip-172-31-38-106 ec2-user]# yum install docker -y
Last metadata expiration check: 1 day, 1:23:43 ago on Thu Jun 12 06:01:57 2025.
Dependencies resolved.
=====
Package                                Architecture Version                                Repository                               Size
-----
Installing:
docker                                x86_64      25.0.8-1.amzn2023.0.4                  amazonlinux                               44 M
Installing dependencies:
container-selinux                     noarch      3:2.233.0-1.amzn2023                   amazonlinux                               55 k
containerd                            x86_64      1.7.27-1.amzn2023.0.2                  amazonlinux                               37 M
iptables-libs                         x86_64      1.8.8-3.amzn2023.0.2                  amazonlinux                               401 k
iptables-nft                         x86_64      1.8.8-3.amzn2023.0.2                  amazonlinux                               183 k
libgroup                              x86_64      3.0-1.amzn2023.0.1                    amazonlinux                               75 k
libnetfilter_conntrack               x86_64      1.0.8-2.amzn2023.0.2                  amazonlinux                               58 k
libnftnl                             x86_64      1.0.1-19.amzn2023.0.2                 amazonlinux                               30 k
libnftnl                             x86_64      1.2.2-2.amzn2023.0.2                  amazonlinux                               84 k
pigz                                  x86_64      2.5-1.amzn2023.0.3                    amazonlinux                               83 k
runc                                  x86_64      1.2.4-1.amzn2023.0.1                  amazonlinux                               3.4 M
=====
Transaction Summary
-----
Install 11 Packages
```

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```
[root@ip-172-31-38-106 ec2-user]# yum install java -y
Last metadata expiration check: 1 day, 1:24:46 ago on Thu Jun 12 06:01:57 2025.
Dependencies resolved.
```

Package	Arch	Version	Repository	Size
<b>Installing:</b>				
java-24-amazon-corretto	x86_64	1:24.0.1+9-1.amzn2023.1	amazonlinux	204 k
<b>Installing dependencies:</b>				
alsa-lib	x86_64	1.2.7.2-1.amzn2023.0.2	amazonlinux	504 k
cairo	x86_64	1.18.0-4.amzn2023.0.1	amazonlinux	718 k
dejavu-sans-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.3 M
dejavu-sans-mono-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	467 k
dejavu-serif-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.0 M
fontconfig	x86_64	2.13.94-2.amzn2023.0.2	amazonlinux	273 k
fonts-filesystem	noarch	1:2.0.5-12.amzn2023.0.2	amazonlinux	9.5 k
freetype	x86_64	2.13.2-5.amzn2023.0.1	amazonlinux	423 k
giflib	x86_64	5.2.1-9.amzn2023.0.1	amazonlinux	49 k
google-noto-fonts-common	noarch	20201206-2.amzn2023.0.2	amazonlinux	15 k
google-noto-sans-vf-fonts	noarch	20201206-2.amzn2023.0.2	amazonlinux	492 k
graphite2	x86_64	1.3.14-7.amzn2023.0.2	amazonlinux	97 k
harfbuzz	x86_64	7.0.0-2.amzn2023.0.2	amazonlinux	873 k
java-24-amazon-corretto-headless	x86_64	1:24.0.1+9-1.amzn2023.1	amazonlinux	108 M
javapackages-filesystem	noarch	6.0.0-7.amzn2023.0.6	amazonlinux	12 k
langpacks-core-font-en	noarch	3.0-21.amzn2023.0.4	amazonlinux	10 k
libICE	x86_64	1.1.1-3.amzn2023.0.1	amazonlinux	76 k
libSM	x86_64	1.2.4-3.amzn2023.0.1	amazonlinux	45 k
libX11	x86_64	1.8.10-2.amzn2023.0.1	amazonlinux	659 k
libX11-common	noarch	1.8.10-2.amzn2023.0.1	amazonlinux	147 k
libXau	x86_64	1.0.11-6.amzn2023.0.1	amazonlinux	33 k
libXext	x86_64	1.3.6-1.amzn2023.0.1	amazonlinux	42 k

Type the following commands

```
$ sudo su
$ yum install docker -y
$ yum install java -y

# This will install docker and java
```



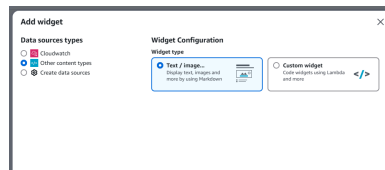
Now go to Dashboard Search Cloudwatch → right side click Dashboard.

Click Create dashboard

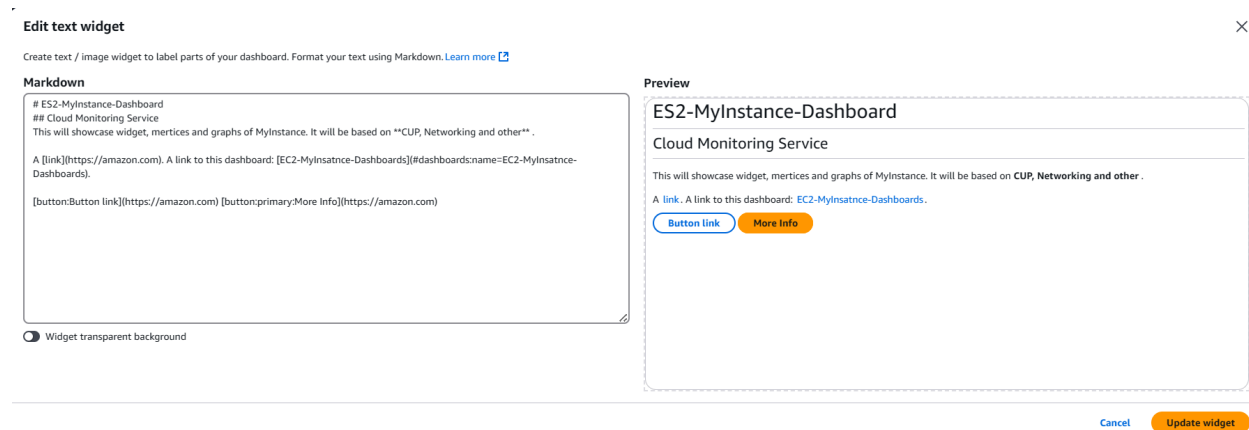




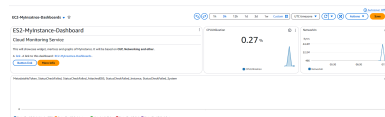
Select the type of resources you want the statistics for



You can also give a description for your Dashboard click next



Here you can edit your description what you want



This is how the Dashboard will look try doing some more computation usage to get more statistics.