AWS Cloud Monitoring Task 2 – Internship Report

Organization: **CODTECH IT SOLUTIONS PVT. LTD.**

Intern Name: **Harshada D Jagtap**

Project Title: ***SET UP MONITORING FOR A CLOUDBASED APPLICATION USING AWS CLOUDWATCH. CONFIGURED ALERTS AND A DASHBOARD SHOWCASING METRICS.***

Internship Duration: May 20, 2025 – July 20, 2025

Introduction

As part of the internship at Codtech IT Solutions Pvt. Ltd., we were assigned a task focused on AWS Cloud Monitoring. The goal of this task was to set up monitoring for EC2 instances using AWS CloudWatch, configure alarms, and validate resource metrics. This report outlines the steps followed and includes screenshots for each stage of the process.

Step-by-Step Execution

1. Navigate to the AWS Management Console and access the CloudWatch service.
2. Under the Metrics section, select EC2 metrics and choose relevant instances.
3. Create dashboards to monitor metrics like CPUUtilization, DiskReadOps, etc.
4. Navigate to the Alarms section and create a new alarm based on specific metrics.
5. Set threshold conditions and select appropriate SNS notifications.
6. Review and confirm the alarm creation.
7. Test the alarm by generating CPU load or waiting for metric breach.
8. Observe alarm state changes and notifications.
9. Save all CloudWatch dashboard views and alarm states for report documentation.

Screenshots

Instances (1/2) Info

Last updated
less than a minute ago   ⟳

Connect   Instance state ▾   Actions ▾   **Launch instances** ▾

< 1 >   ⚙

Q Find Instance by attribute or tag (case-sensitive)

All states ▾

☐	Name ✎ ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Zone ▾	Public IPv4 DNS
☑	cloudmonitori...	i-0623c152bb5cd53f8 ⊕ ⊖	⊘ Pending	t2.micro	–	View alarms +	ap-south-1b	ec2-13-204-68-5.ap-…
☐	DevOps	i-0c2917f6248ddb304 ⊕ ⊖	⊖ Stopped	t2.micro	–	View alarms +	ap-south-1a	–

i-0623c152bb5cd53f8 (cloudmonitoring-codtech)

⚙ ⌄

Details   Status and alarms   Monitoring   Security   Networking   Storage   **Tags**

▼ Instance summary Info

Instance ID
⎘ i-0623c152bb5cd53f8

Public IPv4 address
⎘ 13.204.68.5 | open address ⎋

Private IPv4 addresses
⎘ 172.31.7.226

IPv6 address
–

Instance state
⊘ Pending

Public DNS
⎘ ec2-13-204-68-5.ap-south-1.compute.amazonaws.com |
open address ⎋

Hostname type
IP name: ip-172-31-7-226.ap-south-1.compute.internal

Private IP DNS name (IPv4 only)
⎘ ip-172-31-7-226.ap-south-1.compute.internal

EC2 ‹

Dashboard
EC2 Global View ⎋
Events

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

▼ Images
   AMIs
   AMI Catalog

▼ Elastic Block Store
   Volumes
   Snapshots
   Lifecycle Manager

▼ Network & Security
   Security Groups
   Elastic IPs

Instances (1/2) Info

Last updated
3 minutes ago   ⟳

Connect   Instance state ▾   Actions ▴   **Launch instances** ▾

Q Find Instance by attribute or tag (case-sensitive)

All states ▾

⚙

☐	Name ✎ ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	DNS
☑	cloudmonitori...	i-0623c152bb5cd53f8 ⊕ ⊖	⊘ Running	t2.micro	⊘ Initializing	View alarms +	-68-5.ap-…
☐	DevOps	i-0c2917f6248ddb304 ⊕ ⊖	⊖ Stopped	t2.micro	–	View alarms +	

Instance diagnostics ▸
Instance settings ▸
Networking ▸
Security ▸
Image and templates ▸
Monitor and troubleshoot ▸

Get system log
Get instance screenshot
Manage detailed monitoring
Manage CloudWatch alarms
Configure CloudWatch agent
EC2 serial console
Replace root volume
Fleet Manager ⎋

i-0623c152bb5cd53f8 (cloudmonitoring-codtech)

⚙ ⌄

Details   Status and alarms   Monitoring   Security   Networking   Storage   Tags

▼ Instance summary Info

Instance ID
⎘ i-0623c152bb5cd53f8

Public IPv4 address
⎘ 13.204.68.5 | open address ⎋

Private IPv4 addresses
⎘ 172.31.7.226

IPv6 address
–

Instance state
⊘ Running

Public DNS
⎘ ec2-13-204-68-5.ap-south-1.compute.amazonaws.com |
open address ⎋

Hostname type
IP name: ip-172-31-7-226.ap-south-1.compute.internal

Private IP DNS name (IPv4 only)
⎘ ip-172-31-7-226.ap-south-1.compute.internal

EC2

- Dashboard
- EC2 Global View
- Events

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

Images
- AMIs
- AMI Catalog

Elastic Block Store
- Volumes
- Snapshots
- Lifecycle Manager

Network & Security
- Security Groups
- Elastic IPs

Instances (1/2)   Info

Last updated 3 minutes ago

Connect | Instance state ▾ | Actions ▾ | **Launch instances** ▾

Find Instance by attribute or tag (case-sensitive)   All states ▾

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
☑	cloudmonitori...	i-0623c152bb5cd53f8	⊘ Running	t2.micro	⊘ Initializing	View alarms +	ap-south-1b	ec2-13-204-68-5.ap-
☐	DevOps	i-0c2917f6248ddb304					ap-south-1a	–

Detailed monitoring   ✕

After you enable detailed monitoring for an instance, monitoring data is available in 1-minute periods. Learn more ⧉

Instance ID
⧉ i-0623c152bb5cd53f8 (cloudmonitoring-codtech)

Detailed monitoring
☑ Enable

ⓘ After you enable detailed monitoring, the Amazon EC2 console displays monitoring graphs with a 1-minute period for the instance.
Additional charges apply ⧉

Cancel   **Confirm**

i-0623c152bb5cd53f8 (cloudmonitoring-c...

Details | Status and alarms | Monitori...

▾ **Instance summary**   Info

Instance ID
⧉ i-0623c152bb5cd53f8

IPv6 address
–

Hostname type
IP name: ip-172-31-7-226.ap-south-1.compute.internal

Instance state
⊘ Running

Private IP DNS name (IPv4 only)
⧉ ip-172-31-7-226.ap-south-1.compute.internal

Public DNS
⧉ ec2-13-204-68-5.ap-south-1.compute.amazonaws.com |
open address ⧉

✎ **Compose**

- 📥 Inbox   4,097
- ⭐ Starred
- 🕐 Snoozed
- ➤ Sent
- 📄 Drafts   10
- ∨ More

Labels   +

← 🗄 🕐 🗑 | ✉ 📁 ⋮   1 of 4,940 ‹ ›

AWS Notification - Subscription Confirmation   Inbox ✕

AWS Notifications <no-reply@sns.amazonaws.com>
to me ▾   16:28 (2 minutes ago) ☆ ☺ ↩ ⋮

You have chosen to subscribe to the topic:
arn:aws:sns:us-east-1:891612580419:Default_CloudWatch_Alarms_Topic

To confirm this subscription, click or visit the link below (If this was in error no action is necessary):
Confirm subscription

Please do not reply directly to this email. If you wish to remove yourself from receiving all future SNS subscription confirmation requests please send an email to sns-opt-out

↩ Reply   → Forward   ☺

Step 1
● Specify metric and conditions

Step 2
○ Configure actions

Step 3
○ Add alarm details

Step 4
○ Preview and create

Specify metric and conditions

Metric   Edit

Graph
This alarm will trigger when the blue line goes above the red line for 1 datapoints within 5 minutes.

Percent
0.5

0.25

0

11:30   12:00   12:30   13:00   13:30   14:00
● CPUUtilization

Namespace
AWS/EC2

Metric name
CPUUtilization

Statistic
🔍 Average   ✕

Period
5 minutes ▾

Conditions

Threshold type

● Static
Use a value as a threshold

○ Anomaly detection
Use a band as a threshold

Whenever CPUUtilization is...

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...

🔍 Default_CloudWatch_Alarms_Topic   ✕

Only topics belonging to this account are listed here. All persons and applications subscribed to the selected topic will receive notifications.

Email (endpoints)
jagtapharshada129@gmail.com - View in SNS Console ⤢

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

● In alarm	○ OK	○ Insufficient data
The metric or expression is outside of the defined threshold.	The metric or expression is within the defined threshold.	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

Send a notification to...

🔍 Default_CloudWatch_Alarms_Topic   ✕

Only topics belonging to this account are listed here. All persons and applications subscribed to the selected topic will receive notifications.

Email (endpoints)
jagtapharshada129@gmail.com - View in SNS Console ⤢

[Add notification]

Step 1
Specify metric and conditions

Step 2
Configure actions

Step 3
Add alarm details

Step 4
Preview and create

Preview and create

Step 1: Specify metric and conditions   [Edit]

Metric

Graph
This alarm will trigger when the blue line goes above the red line for 1 datapoints within 5 minutes.

Percent

1.00k ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
   1,000

500

0.199
   11:30   12:00   12:30   13:00   13:30   14:00
   ● CPUUtilization

Namespace
AWS/EC2

Metric name
CPUUtilization

Statistic
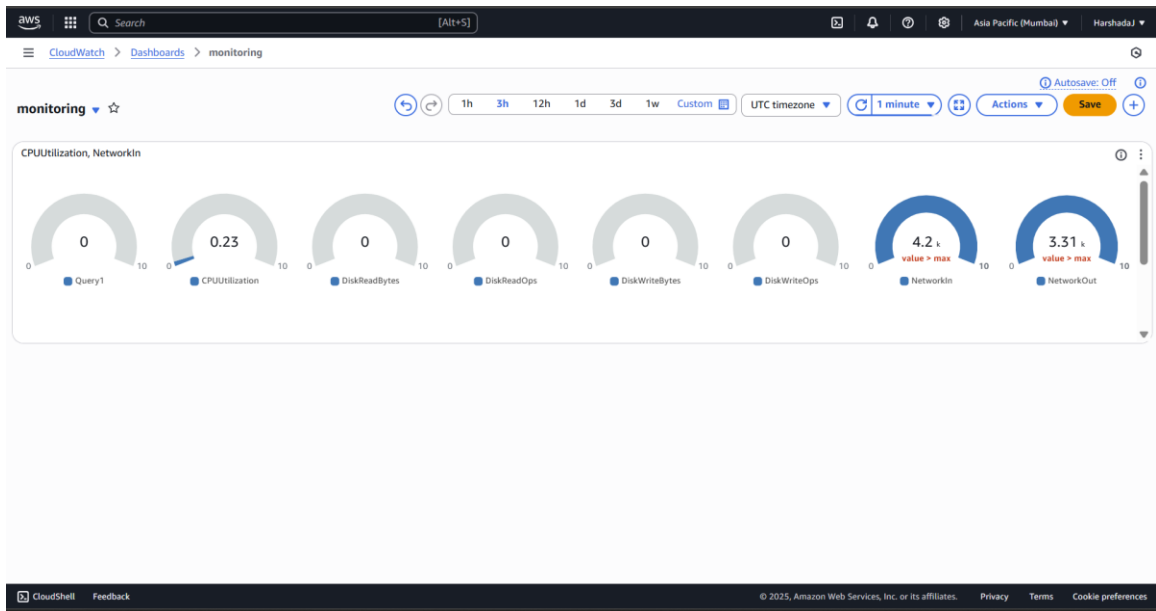Average

Period
5 minutes

Conditions

Threshold type
Static

Whenever CPUUtilization is