



# Task 2: AWS CloudWatch Monitoring and Alerting

## ✓ Objective

Set up monitoring and alerting for EC2 instances using **AWS CloudWatch**. This task focuses on tracking system performance, creating alarms, and configuring alert notifications via email.

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## 🔧 Steps Performed

### 1 Created a CloudWatch Dashboard

- Added a **line graph widget** to visualize metrics over time.
- Configured a dashboard to monitor **two EC2 instances**.

### 2 Added the Following 4 Metric Widgets:

- 🧠 **CPUUtilization** – Tracks the CPU usage.
- 📶 **NetworkIn** – Measures incoming traffic.
- 📶 **NetworkOut** – Measures outgoing traffic.
- ⚠️ **StatusCheckFailed** – Indicates instance health issues.

### 3 Created a CloudWatch Alarm

- Metric: **CPUUtilization**
- Condition: **Greater than 70%** for **2 evaluation periods** (5 minutes each)
- Associated the alarm with the CloudWatch dashboard.

### 4 Configured SNS for Alerts

- Created a new **SNS topic** for alarm notifications.
- Subscribed my email address to the topic.

- Received the **confirmation email** and successfully confirmed the subscription.

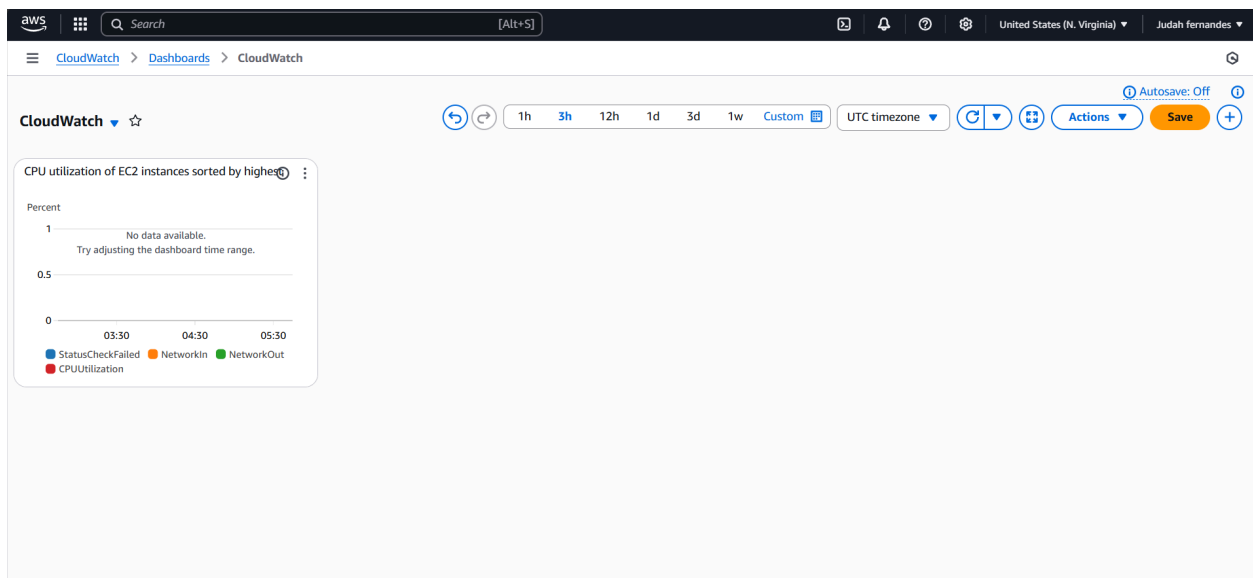
## 5 Final CloudWatch Dashboard

- Included CPU Utilization for **both EC2 instances**.
- Displayed alarm status on the dashboard.
- Real-time visualization for effective monitoring.

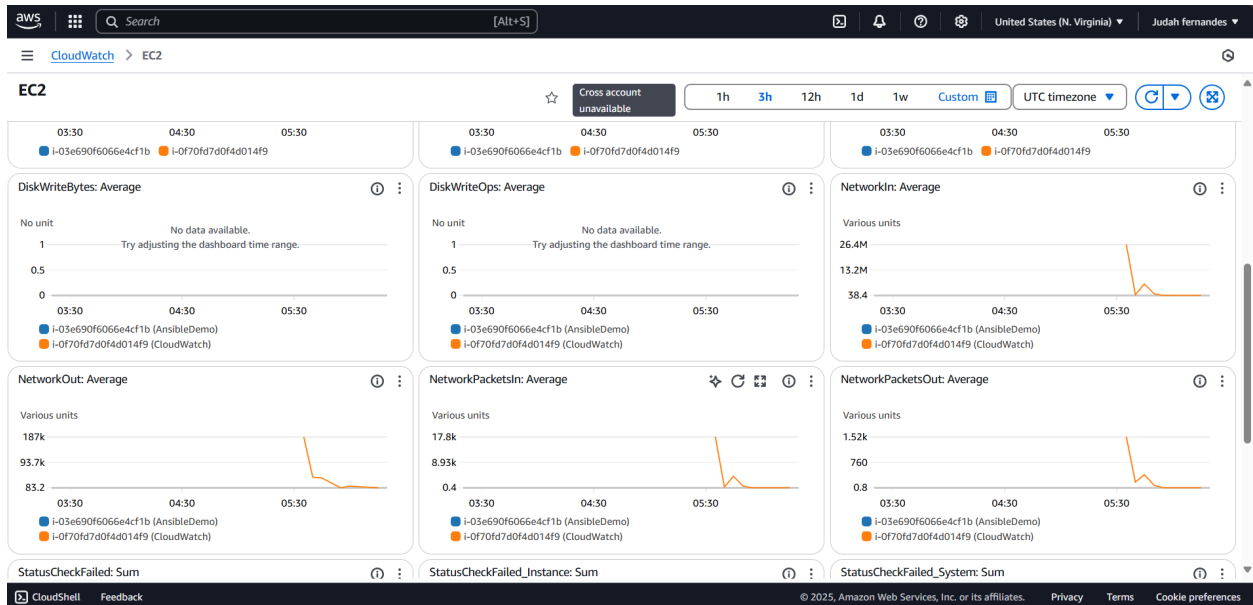
## Screenshots

(Add these to a /screenshots/ folder and reference them as shown)

## CloudWatch Dashboard



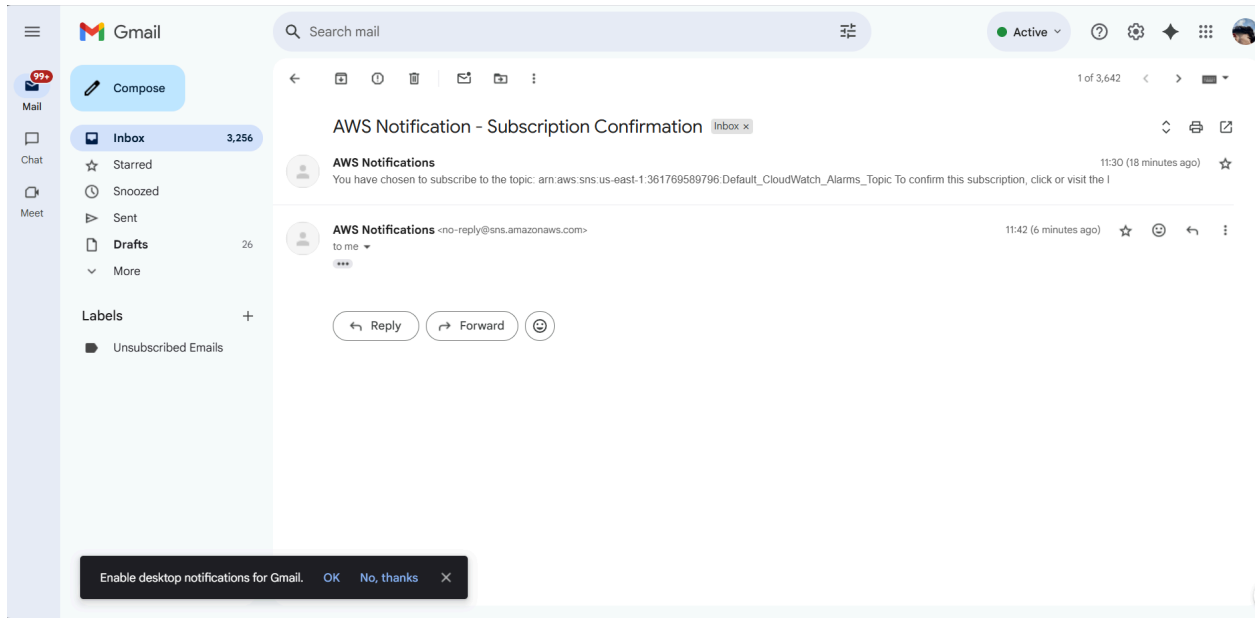
## CPU Utilization Widget



## ! Alarm Creation

The screenshot shows the AWS CloudWatch console for the Alarms page. A green banner at the top indicates "Successfully created alarm CloudWatchOverEC2." Below this, a blue banner states "Some subscriptions are pending confirmation" with a "View SNS Subscriptions" link. The "Alarms (1)" section shows a table with one alarm: CloudWatchOverEC2, which is in an "Insufficient data" state. The conditions for the alarm are "CPUUtilization > 70 for 1 datapoints within 5 minutes". The "Actions" column shows "Actions enabled" and a "Warnin" status.

## Email Confirmation





## What I Learned

- How to create and manage dashboards in **AWS CloudWatch**.
- How to configure **CloudWatch Alarms** for metric-based triggers.
- How to use **SNS** for alerting via email.
- Importance of real-time monitoring in a cloud infrastructure.

## Status

 **Task Completed**

 Date: [4th July 2025]

 AWS Service Used: CloudWatch, EC2, SNS