TASK 2 – EC2 INSTANCE MONITORING USING AMAZON CLOUDWATCH

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TASK 2 – EC2 INSTANCE MONITORING USING AMAZON CLOUDWATCH

 INTERN ID: CT04DR2400

Cloud Platform: Amazon Web Services (AWS)

Duration: 1 MONTH

1. Aim

To launch an Amazon EC2 instance, deploy a web server, monitor its performance using Amazon CloudWatch, and configure an alarm for high CPU utilization with email notifications.

2. Tools & Services Used

- Amazon EC2

- Amazon CloudWatch

- Amazon SNS (Simple Notification Service)

- Amazon Linux 2023

- Apache HTTP Server (httpd)

3. Procedure

Step 1: Launch EC2 Instance

- An EC2 instance was launched using **Amazon Linux 2023 AMI**

- Instance type: **t3.micro**

- Security Group configured to allow:

    o SSH (port 22)

    o HTTP (port 80)

- A public IPv4 address was enabled

Step 2: Install and Run Web Server

- Connected to EC2 using **EC2 Instance Connect**

- Installed Apache web server

- Started and enabled the httpd service

- Created a simple HTML page

- Verified web server using public IP in browser
  ("It works!" page displayed successfully)

Step 3: Enable CloudWatch Monitoring

- Detailed monitoring was enabled for the EC2 instance

- Metrics such as:

    o CPU Utilization

    o Network In/Out

    o Network Packets
       were observed in CloudWatch

Step 4: Create CloudWatch Alarm

- Metric selected: **CPUUtilization**

- Threshold condition: **CPUUtilization > 70%**

- Evaluation period: **5 minutes**

- Datapoints to alarm: **1 out of 1**

Step 5: Configure SNS Notification

- Created a new SNS topic: **ec2-cpu-alarm**

- Added email subscription

- Email confirmation completed successfully

- Alarm configured to send notification when threshold is breached

4. Result

- EC2 instance was successfully launched and web server deployed

- CloudWatch metrics were monitored successfully

- CPU Utilization alarm was created and is currently in **OK** state

- Email notification system was configured successfully
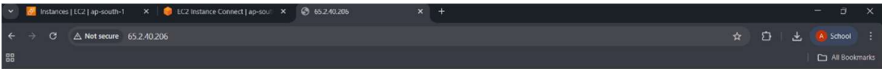
5. Conclusion

This task demonstrates how Amazon CloudWatch can be used to monitor EC2 instances and proactively detect performance issues. Setting alarms and notifications helps in effective resource management and ensures high availability of cloud applications.

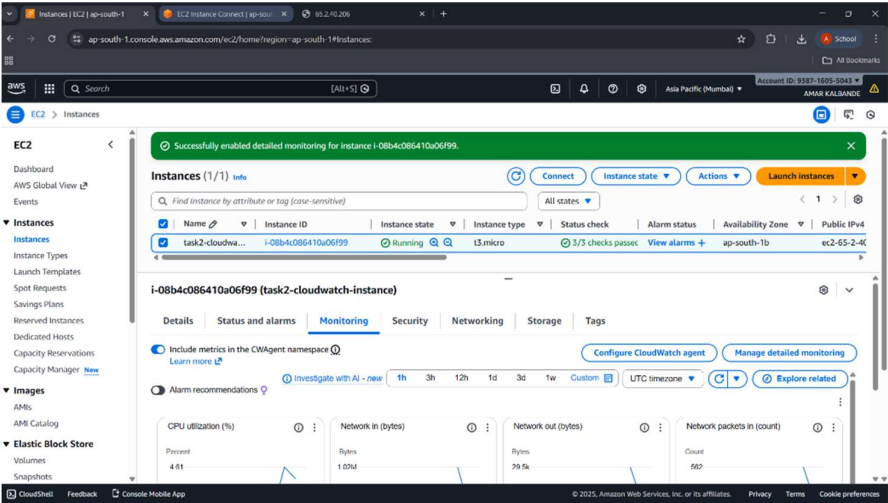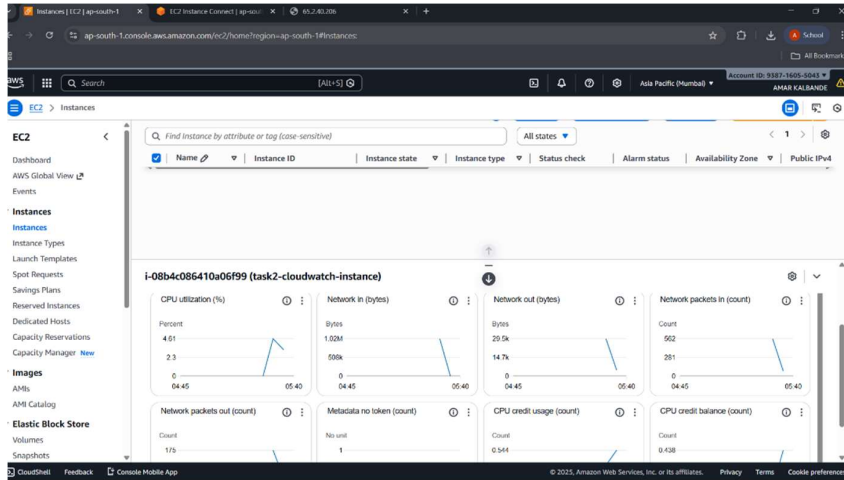## 6. Screenshots Included

EC2 Instance Running
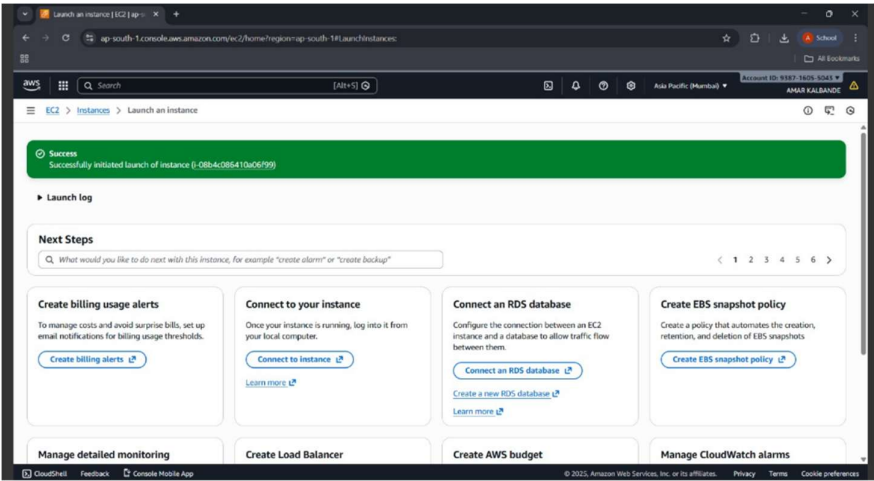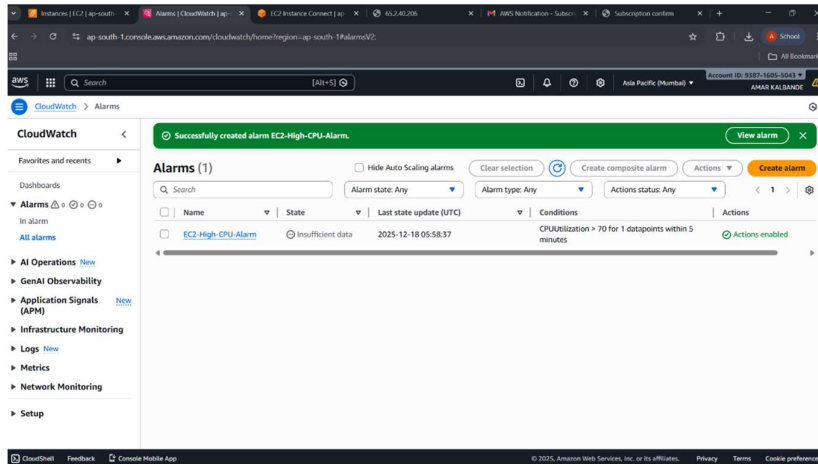

Web Server Output in Browser

CloudWatch Metrics Graph

CloudWatch Alarm Configuration

Alarm Status (OK)