

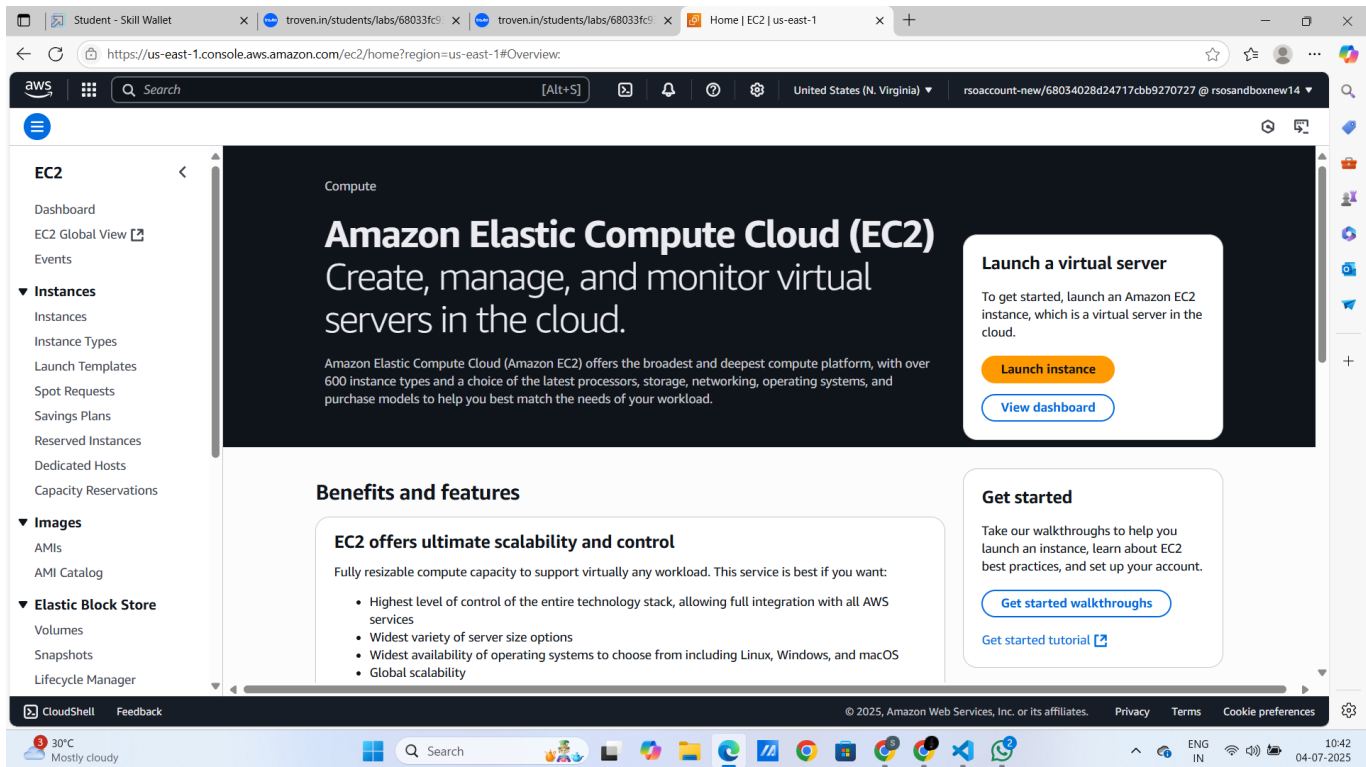
# MedTrack: AWS Cloud Deployment Documentation

## 1. Project Overview

MedTrack is a cloud-based healthcare management system built using Flask and deployed on AWS EC2. It integrates services like Amazon EC2, IAM, and SNS to provide backend processing, secure access control, and real-time email notifications for appointment updates.

## 2. AWS EC2 Instance Setup

The EC2 instance was launched using Amazon Linux 2 with t2.micro type. A key pair was used for SSH access and a security group allowed HTTP and SSH traffic. The instance was successfully launched and connected.



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Student - Skill Wallet | troven.in/students/labs/68033fc9 | troven.in/students/labs/68033fc9 | Launch an instance | EC2 | us-east-1

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

EC2 > Instances > Launch an instance

It seems like you may be new to launching instances in EC2. Take a walkthrough to learn about EC2, how to launch instances and about best practices.

[Take a walkthrough](#) [Do not show me this message again.](#)

### Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

#### Name and tags

Name: medtrack-server [Add additional tags](#)

#### Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

#### Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux Debian [Browse more AMIs](#)

#### Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI...[read more](#)  
ami-000ec6c25978d5999

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

[Cancel](#) [Launch instance](#) [Preview code](#)

Student - Skill Wallet | troven.in/students/labs/68033fc9 | troven.in/students/labs/68033fc9 | Launch an instance | EC2 | us-east-1

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

EC2 > Instances > Launch an instance

#### Key pair (login)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required: medtrack-server [Create new key pair](#)

#### Network settings

VPC - required: vpc-02d60b9cdad972471 (default) [Create new VPC](#)

Subnet: No preference [Create new subnet](#)

Availability Zone: No preference [Enable additional zones](#)

Auto-assign public IP: Enable

Firewall (security groups): [Info](#)  
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

#### Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI...[read more](#)  
ami-000ec6c25978d5999

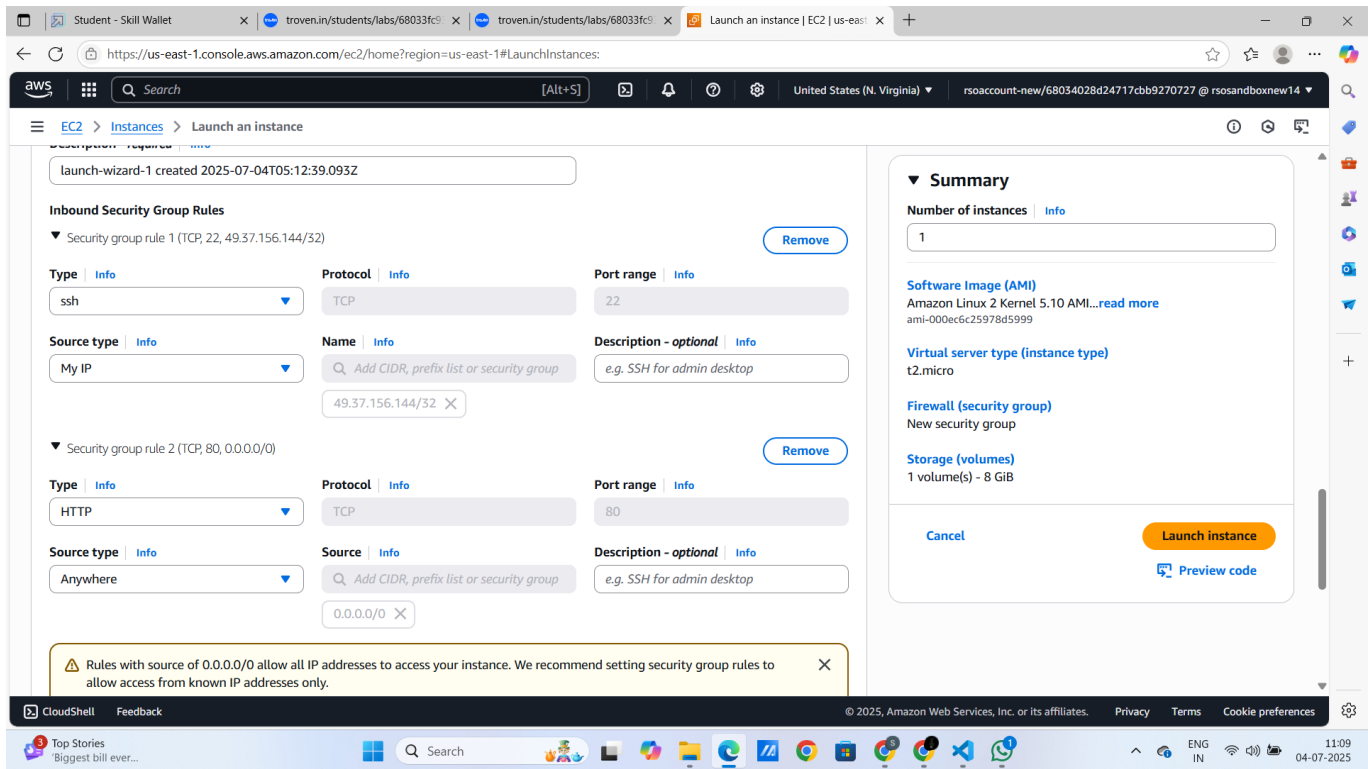
Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

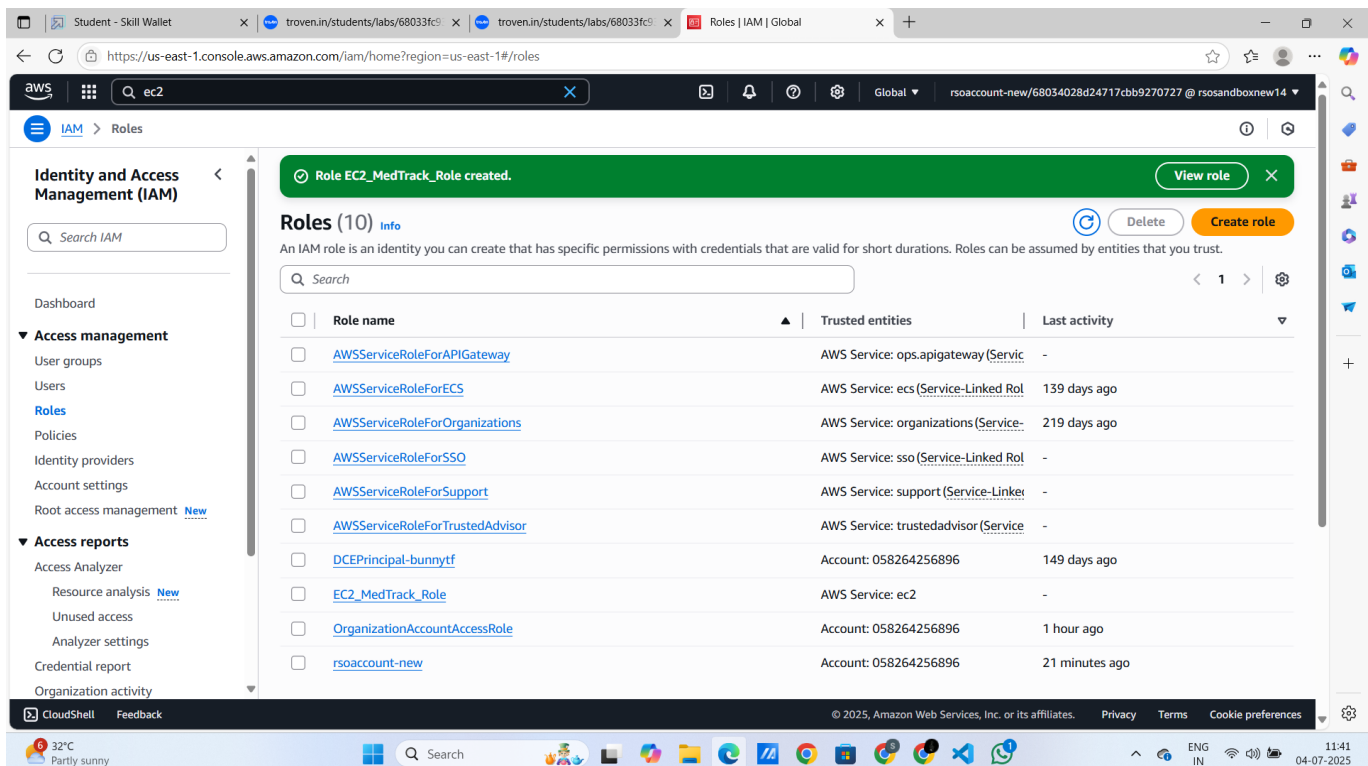
[Cancel](#) [Launch instance](#) [Preview code](#)

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## 3. IAM Role Configuration

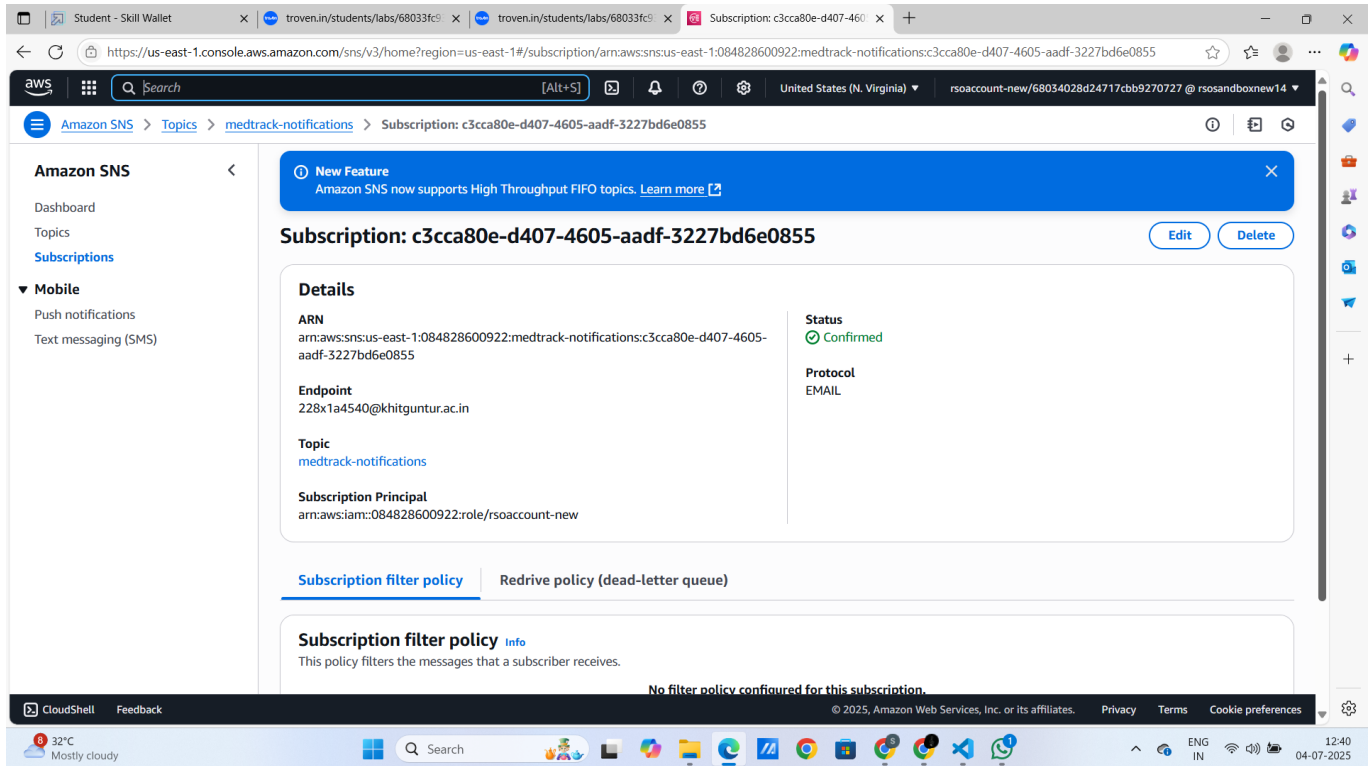
An IAM role named 'EC2\_MedTrack\_Role' was created and attached to the EC2 instance to enable secure interactions with other AWS services like SNS.



## 4. SNS Email Notifications

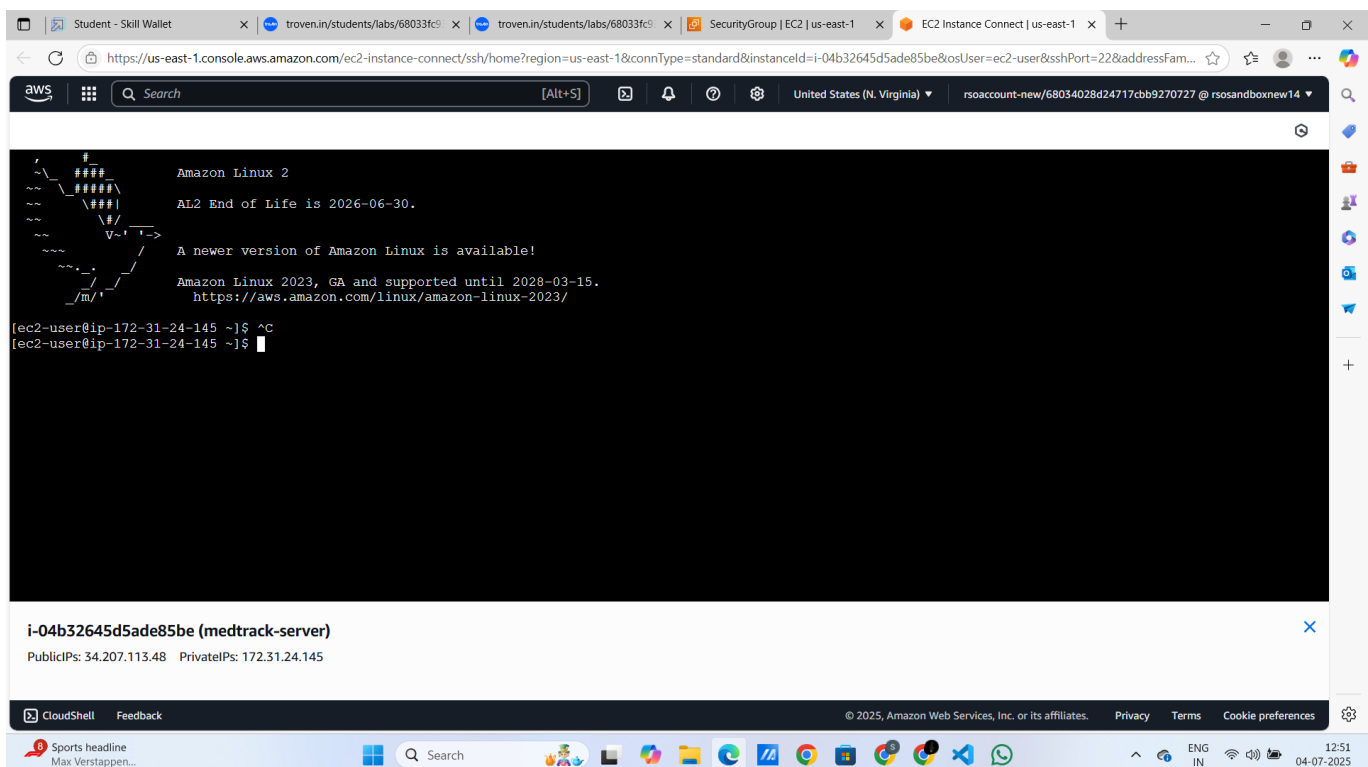
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Amazon SNS was configured to send appointment confirmation emails. A topic was created and a subscription was confirmed using an institutional email address.



## 5. EC2 Instance Running and Access

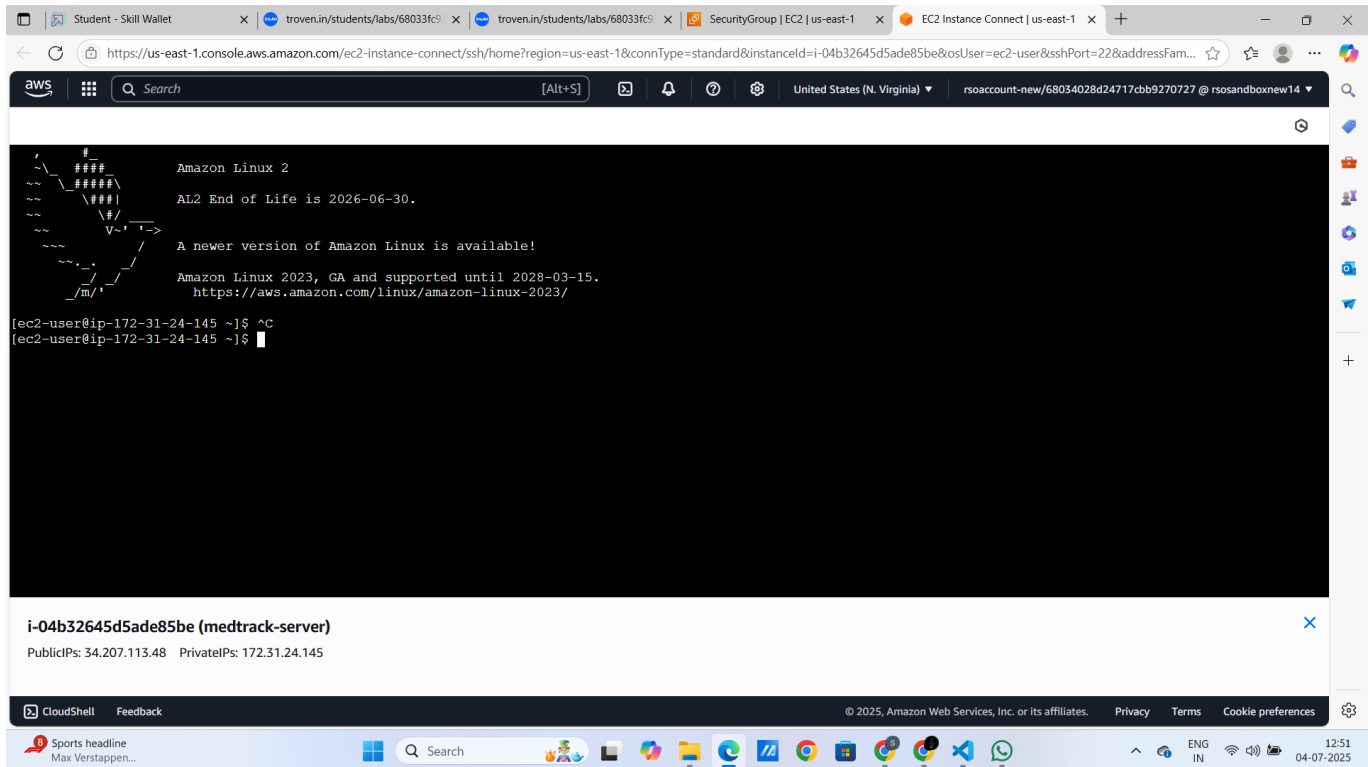
After successful launch, the EC2 instance was accessed via the public IPv4 using EC2 Instance Connect.



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## 6. Terminal View

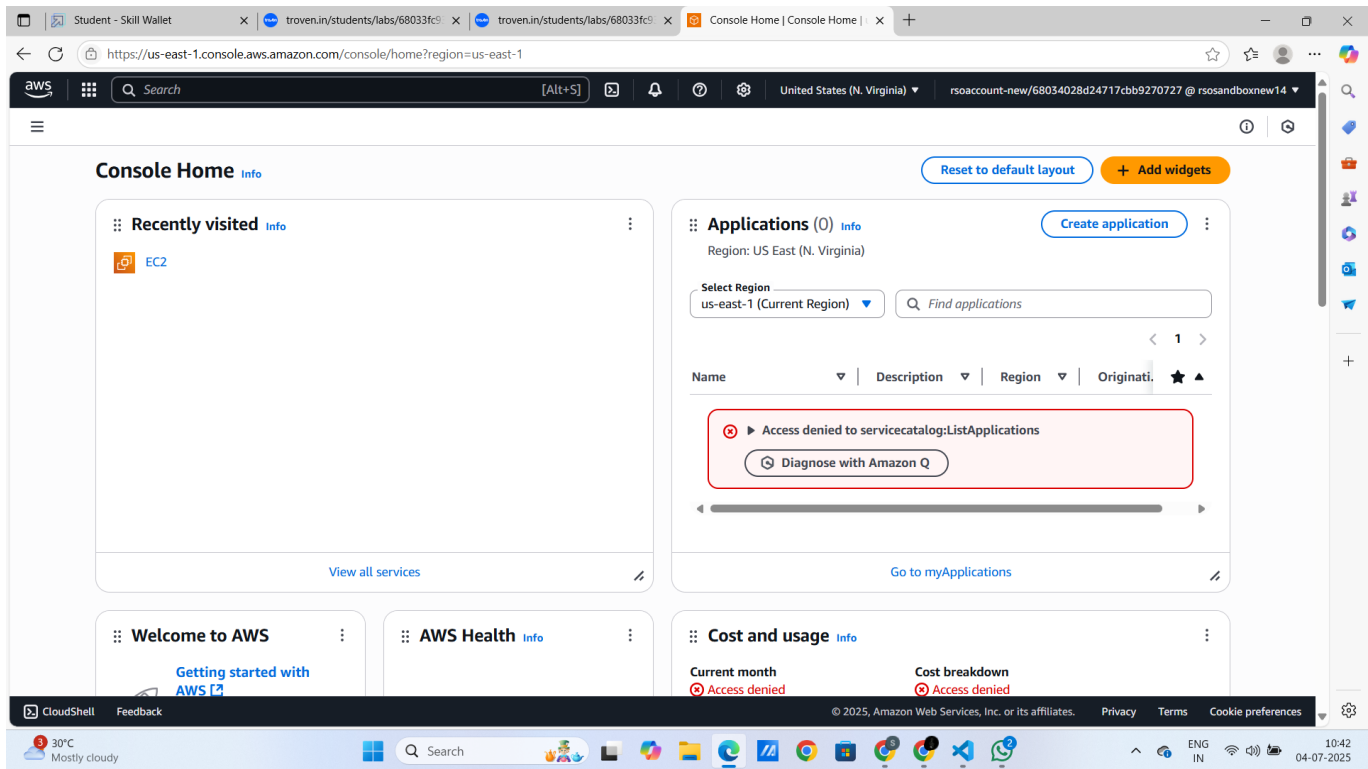
The EC2 instance running Amazon Linux 2 was connected successfully using the web-based terminal.



## 7. Sample Code Snippets (Backend Setup)

Below are sample parts of the Flask backend (`app.py`) showing key integration points for SNS and DynamoDB:

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## 8. Conclusion

This project demonstrates a successful deployment of a healthcare management backend using Flask on AWS EC2. It showcases the integration of multiple AWS services including IAM and SNS for secure and scalable cloud deployment. With proper key management, security groups, and role-based permissions, this project is a foundation for more advanced cloud-based applications.