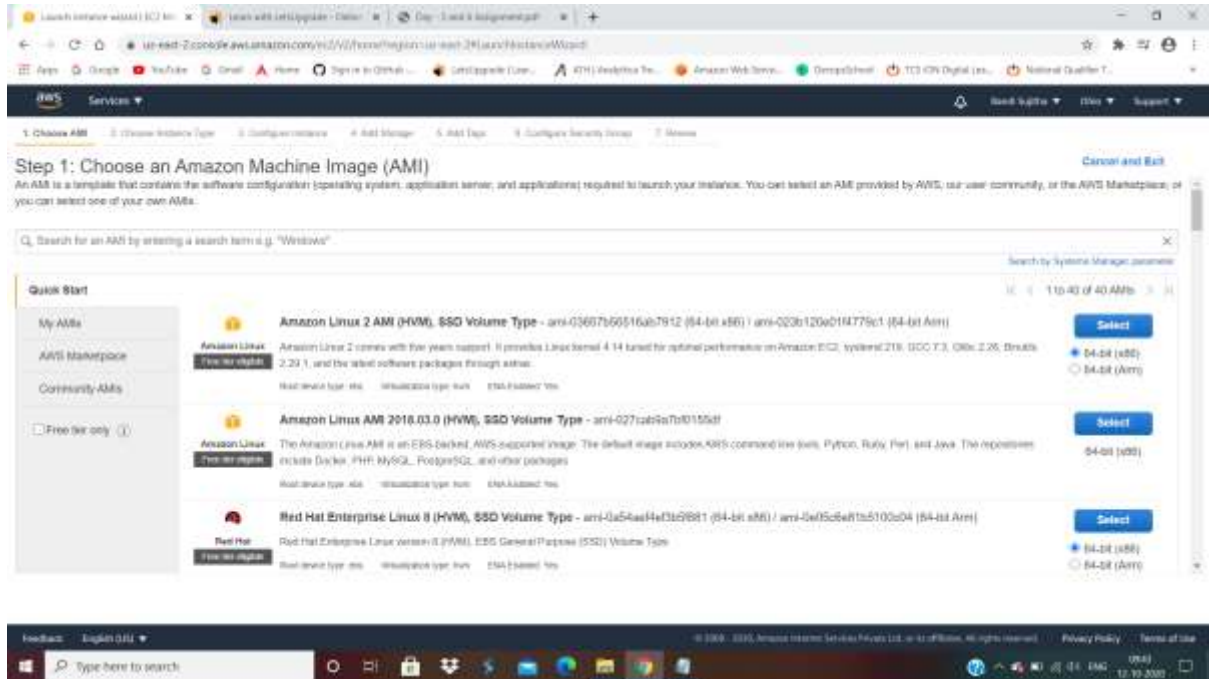


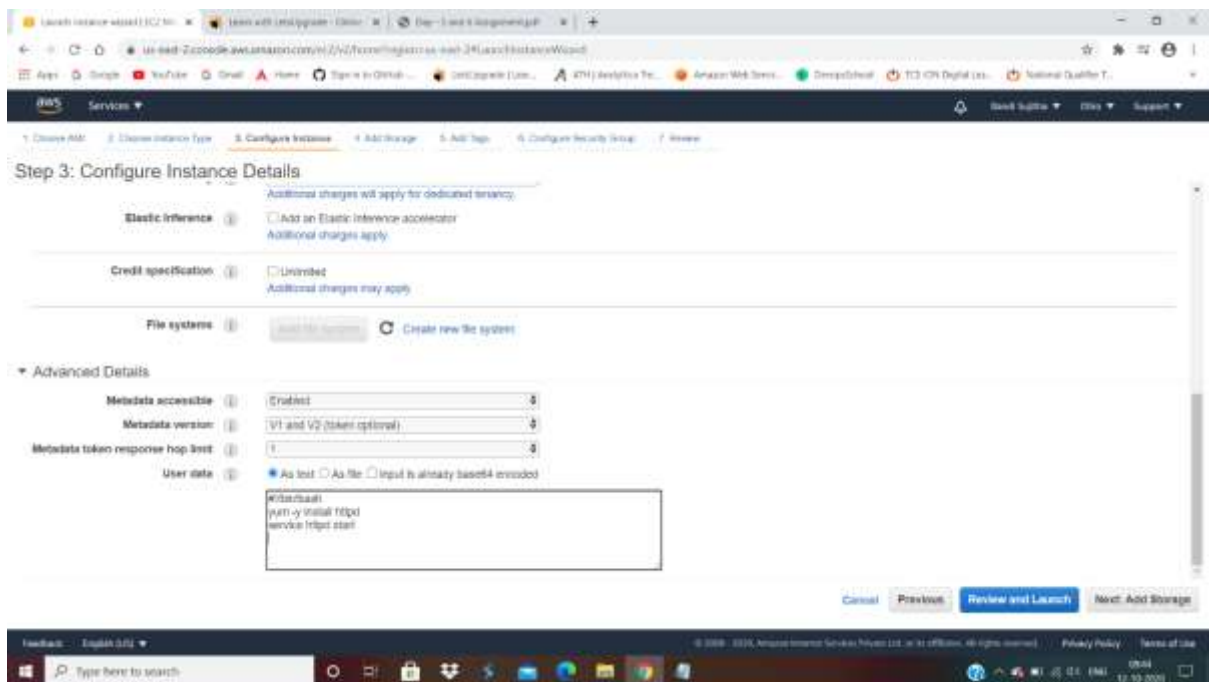
Advance AWS Project

PROJECT 1: Working with IAM Roles with S3 and bootstrapping with EC2

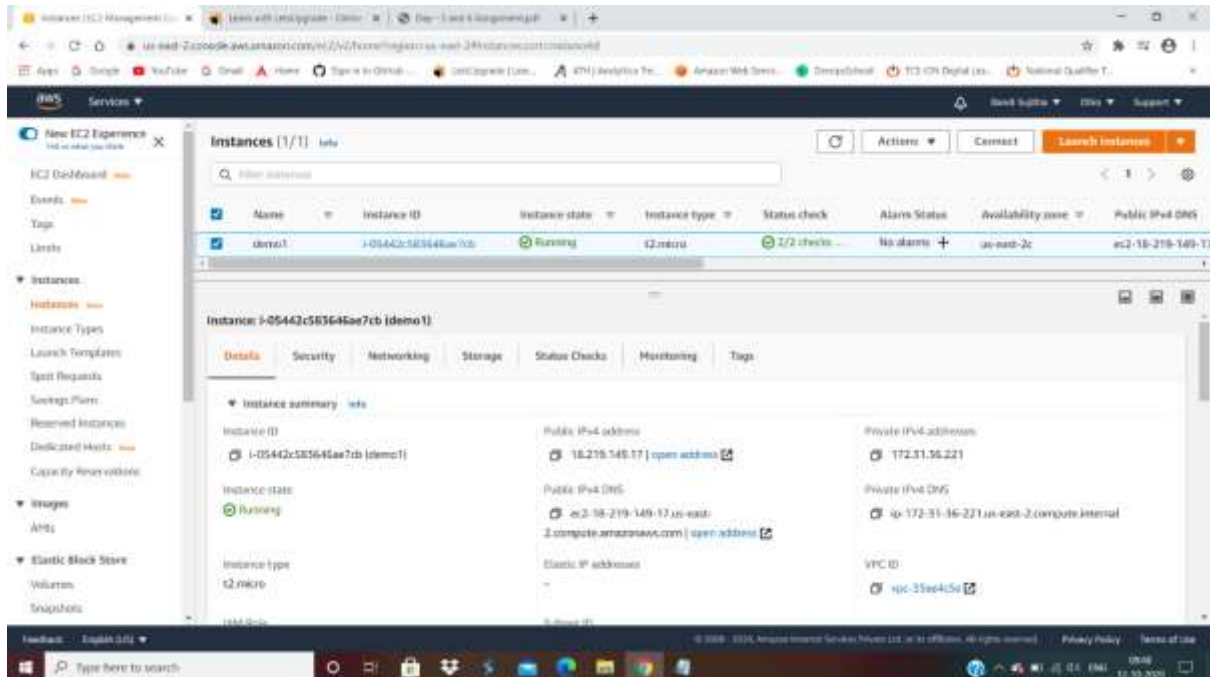
Task1: Creating a bootstrapped instance



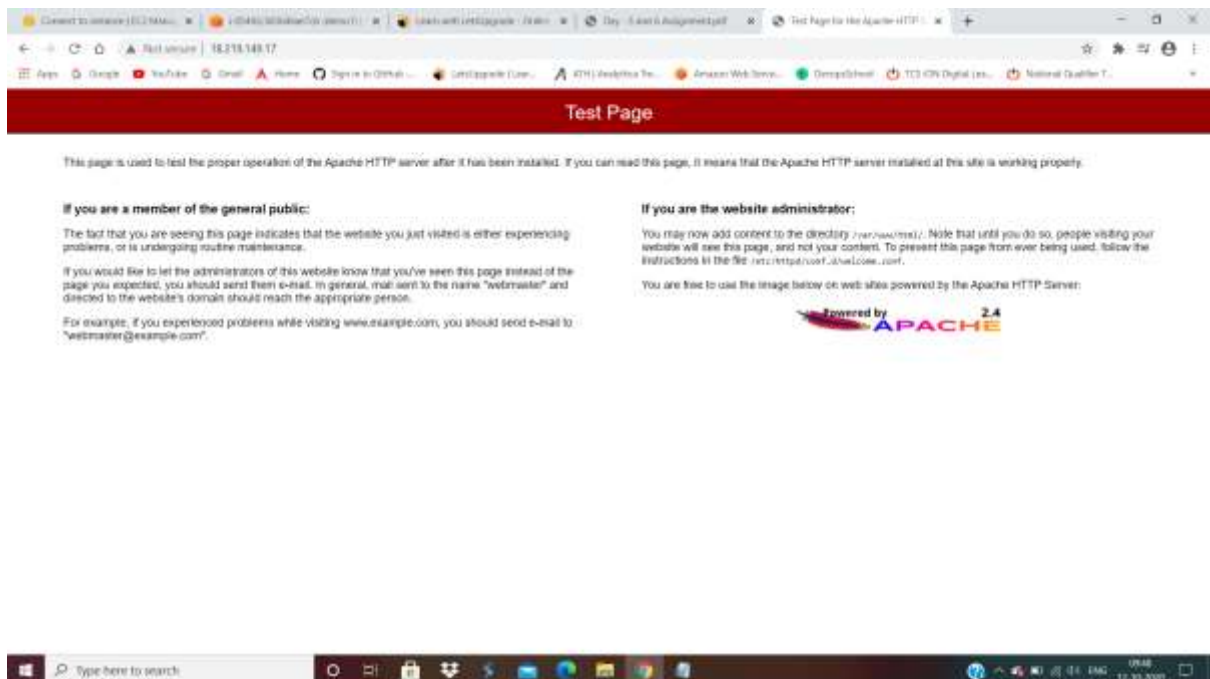
SS1: edit user data



Ss2: list of ec2 instances with description



Ss3: test page



Task 2: Checking bucket list and creating a new bucket from EC2 using IAM Roles

The screenshot shows the 'Create role' page in the AWS IAM console. The first step, 'Select type of trusted entity', is active. It offers four options: 'AWS service' (selected), 'Another AWS account', 'Web identity', and 'SAML 2.0 federation'. Below these, there's a section for 'Choose a use case' with 'Common use cases' like 'EC2' and 'Lambda'. A grid of services is also visible, including API Gateway, AWS Backup, AWS Chime, AWS Marketplace, CloudWatch Events, CodeBuild, CodeDeploy, CodeGuru, EKS, EMR, ElastiCache, Elastic Beanstalk, KMS, Kinesis, Lake Formation, Lambda, Rekognition, RoboMaker, S3, and SNS. At the bottom, there are 'Cancel' and 'Next: Permissions' buttons.

Create role

Select type of trusted entity

AWS service
EC2, Lambda and others

Another AWS account
Delegating to you an IAM entity

Web identity
Credentials from OpenID providers

SAML 2.0 federation
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose a use case

Common use cases

EC2
Allows EC2 instances to call AWS services on your behalf.

Lambda
Allows Lambda functions to call AWS services on your behalf.

Or select a service to view its use cases

API Gateway	CloudWatch Events	EKS	KMS	Rekognition
AWS Backup	CodeBuild	EMR	Kinesis	RoboMaker
AWS Chime	CodeDeploy	ElastiCache	Lake Formation	S3
AWS Marketplace	CodeGuru	Elastic Beanstalk	Lambda	SNS

* Required

Cancel

Next: Permissions

The screenshot shows the 'Review' step of the 'Create role' process. It displays the role name 's3_full_access', a description 'Allows EC2 instances to call AWS services on your behalf.', and the trusted entity 'AWS service: ec2.amazonaws.com'. The policy 'AmazonS3FullAccess' is attached. At the bottom, there's a table showing the role's permissions and 'Create role' button.

Create role

Review

Provide the required information below and review this role before you create it.

Role name: **s3_full_access**
Use alphanumeric and hyphen characters. Maximum 64 characters.

Role description: **Allows EC2 instances to call AWS services on your behalf.**
Maximum 255 characters. Use alphanumeric and hyphen characters.

Trusted entities: **AWS service: ec2.amazonaws.com**

Policies: **AmazonS3FullAccess**

Permissions boundary: **Permissions boundary is not set**

This new role will receive the following tag

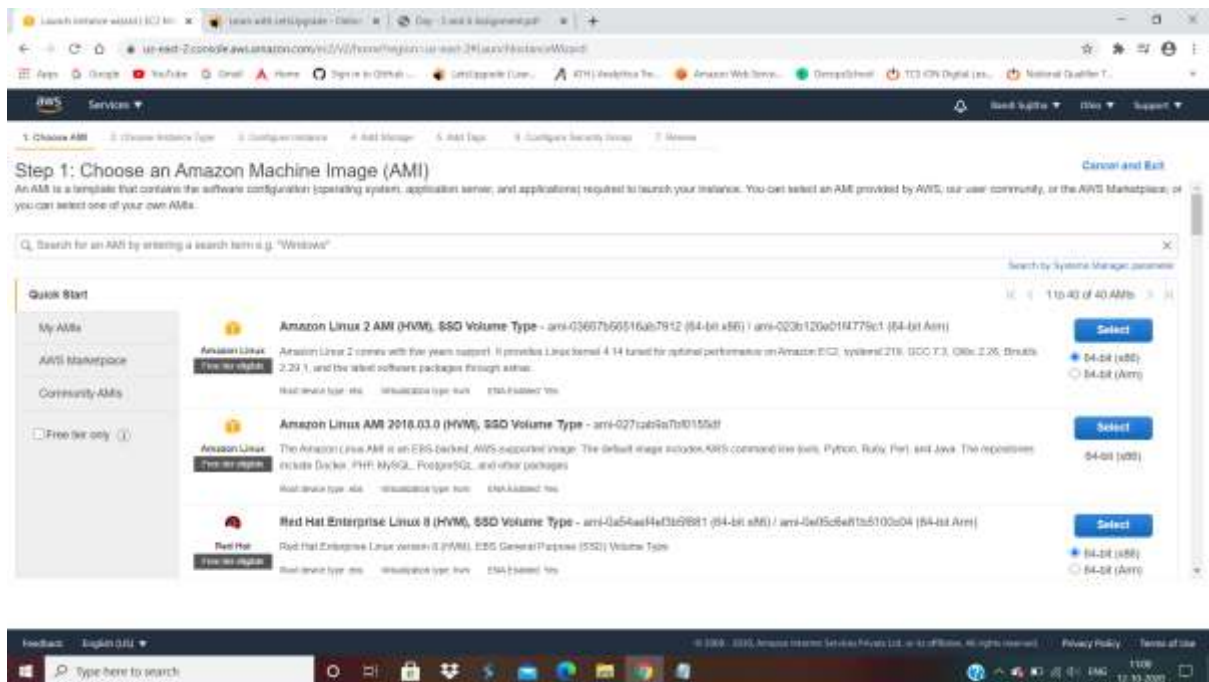
Key	Value
-----	-------

* Required

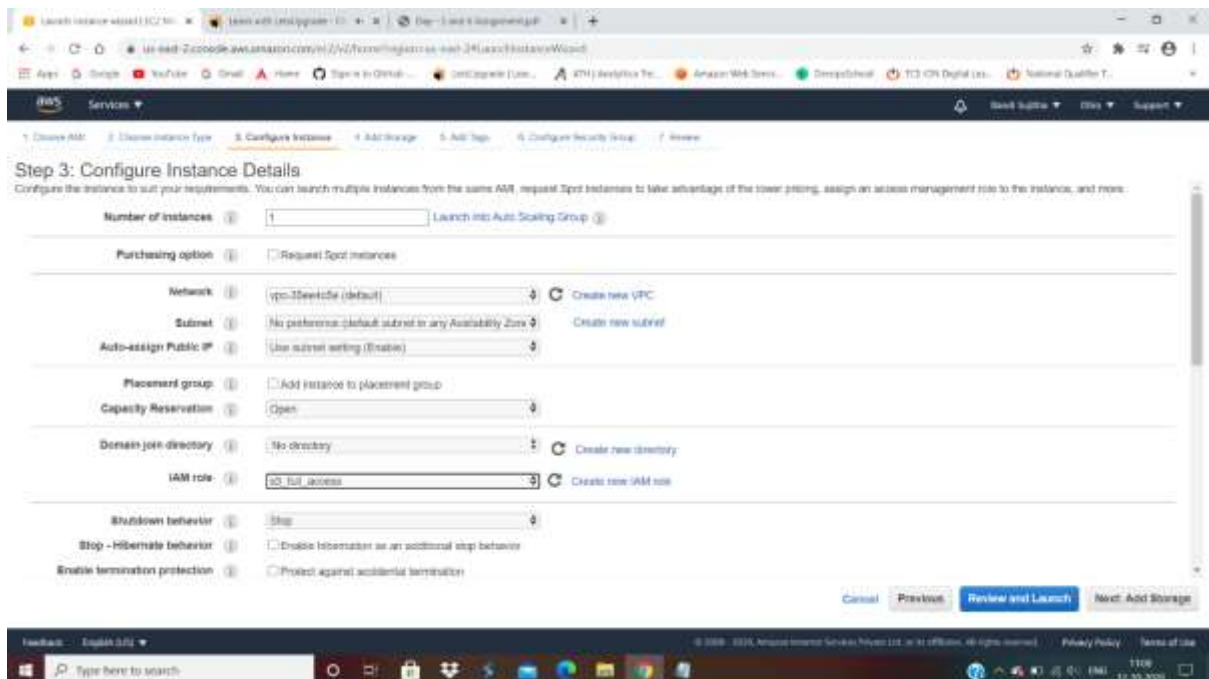
Cancel

Previous

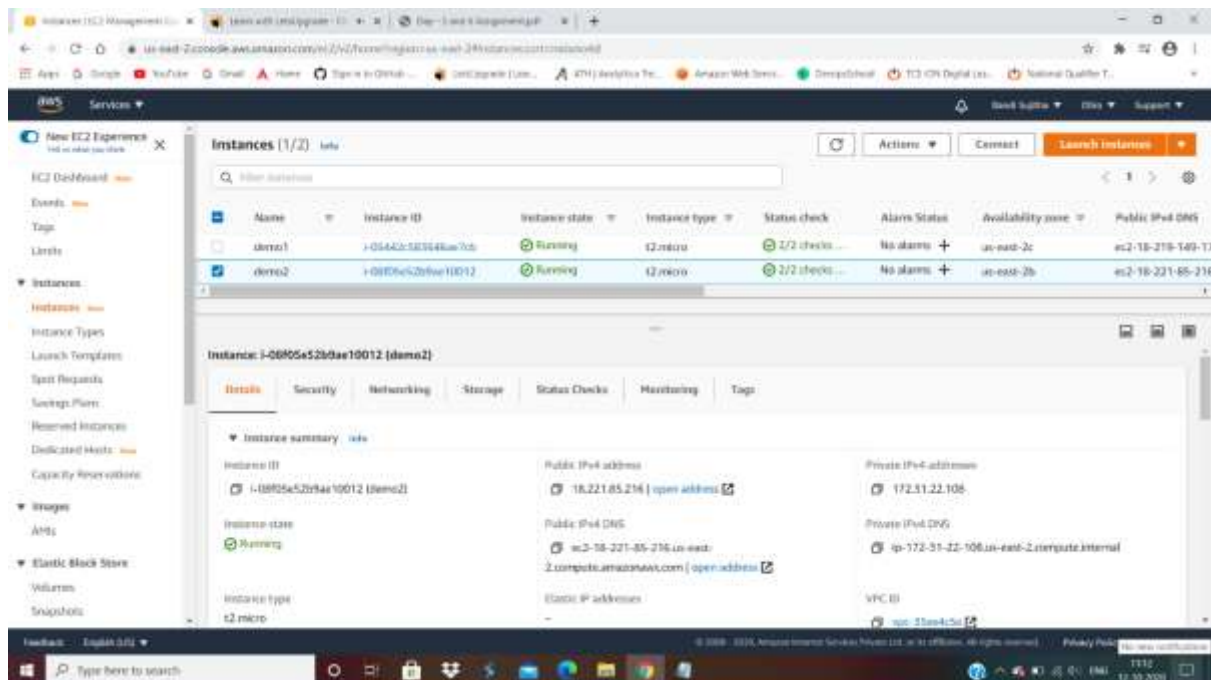
Create role



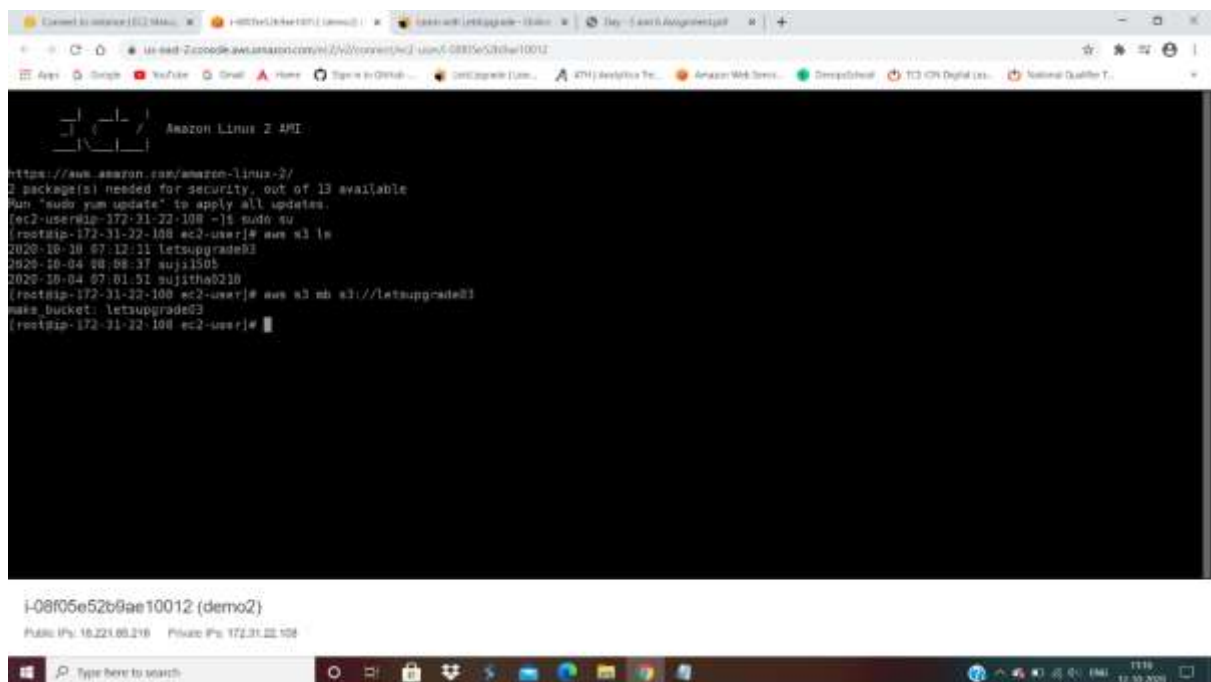
Ss1: user data

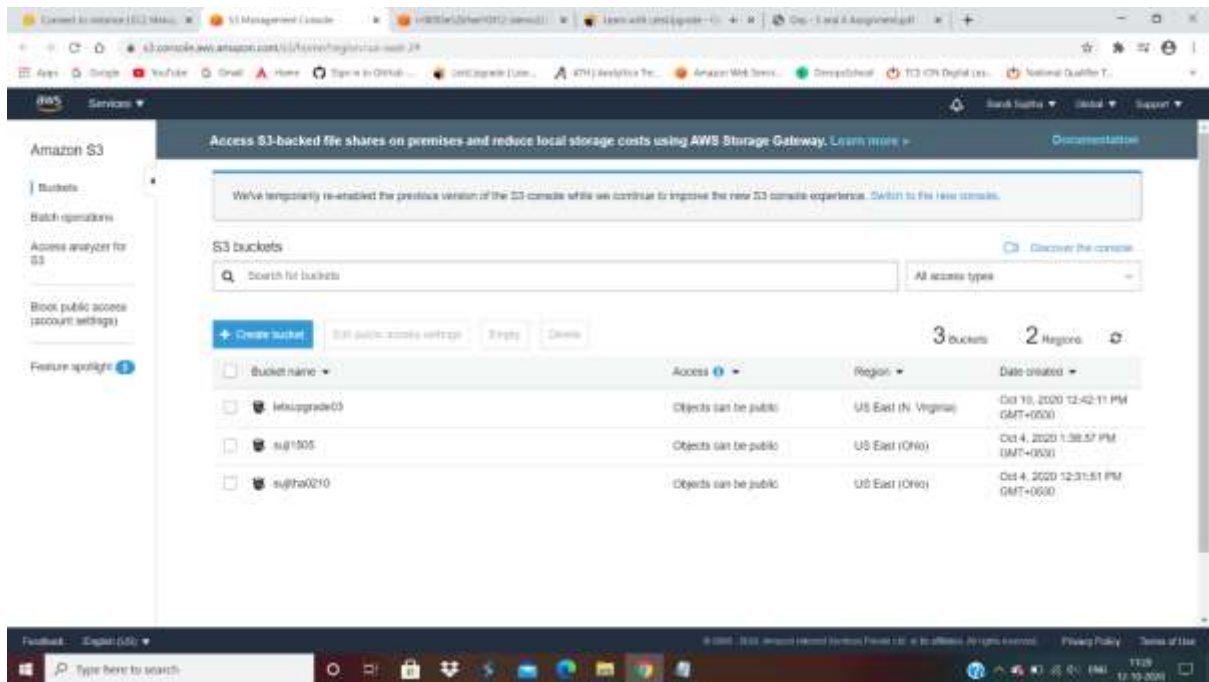


Ss2: list of ec2 instances with description

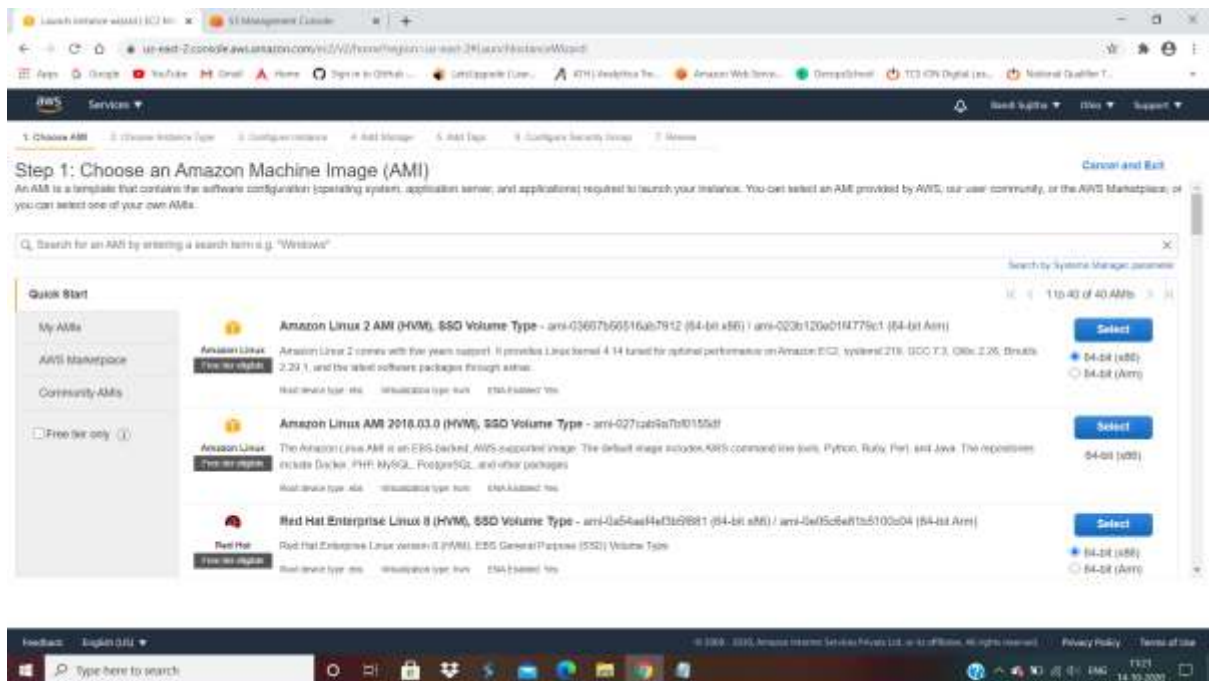


Ss3: 3 commands to be executed and outputs displayed





Task 3: Hosting a webpage using the bootstrap script on ec2.



Ss1: user data

Launch instance wizard | EC2 | AWS Management Console

us-east-2:ec2:aws.amazon.com/v2/home?region=us-east-2#/launch-instance-wizard

Services

1. Choose AMI 2. Choose instance type 3. **Configure instance details** 4. Add storage 5. Add tags 6. Configure security setup 7. Review

Step 3: Configure Instance Details

Placement group: Add instance to placement group

Capacity Reservation: Open

Domain join directory: No directory [Create new directory](#)

IAM role: EC2_DefaultRole [Create new IAM role](#)

Shutdown behavior: Stop

Stop - Hibernate behavior: ☐ Enable hibernation as an additional stop behavior

Enable termination protection: ☐ Protect against accidental termination

Monitoring: ☐ Enable CloudWatch detailed monitoring
[Additional charges apply](#)

Tenancy: Shared - Run a shared hardware instance
[Additional charges will apply for dedicated tenancy](#)

Elastic inference: ☐ Add an Elastic Inference accelerator
[Additional charges apply](#)

Credit specification: ☐ Unlimited
[Additional charges may apply](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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Type here to search

11:02 14.10.2024

Launch instance wizard | EC2 | AWS Management Console

us-east-2:ec2:aws.amazon.com/v2/home?region=us-east-2#/launch-instance-wizard

Services

1. Choose AMI 2. Choose instance type 3. **Configure instance details** 4. Add storage 5. Add tags 6. Configure security setup 7. Review

Step 3: Configure Instance Details

[Additional charges will apply for dedicated tenancy](#)

Elastic inference: ☐ Add an Elastic Inference accelerator
[Additional charges apply](#)

Credit specification: ☐ Unlimited
[Additional charges may apply](#)

File systems: [Add file system](#) [Create new file system](#)

Advanced Details

Metadata accessible: Enabled

Metadata version: V1 and V2 (token optional)

Metadata token response hop limit: 1

User data: ☒ As text ☐ As file ☐ Input is already base64 encoded

```
#!bin/bash
yum install httpd -y
aws s3 cp s3://s3-test-123/index.html s3://www.html
service httpd start
chkconfig httpd on
```

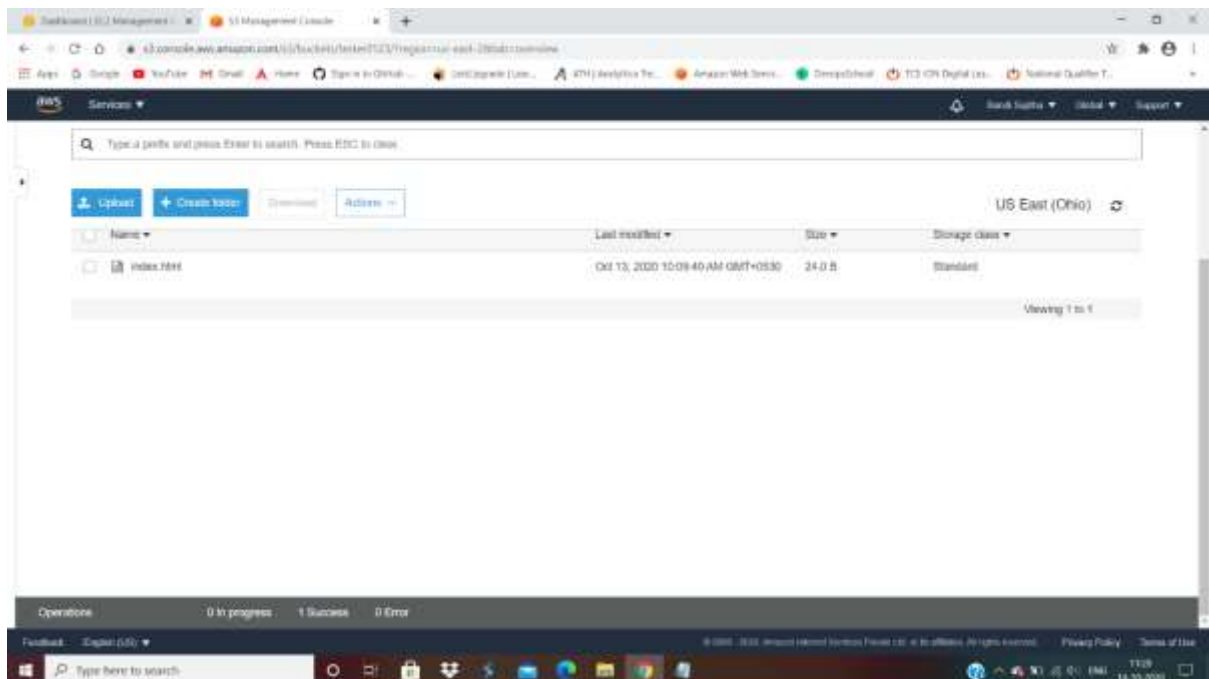
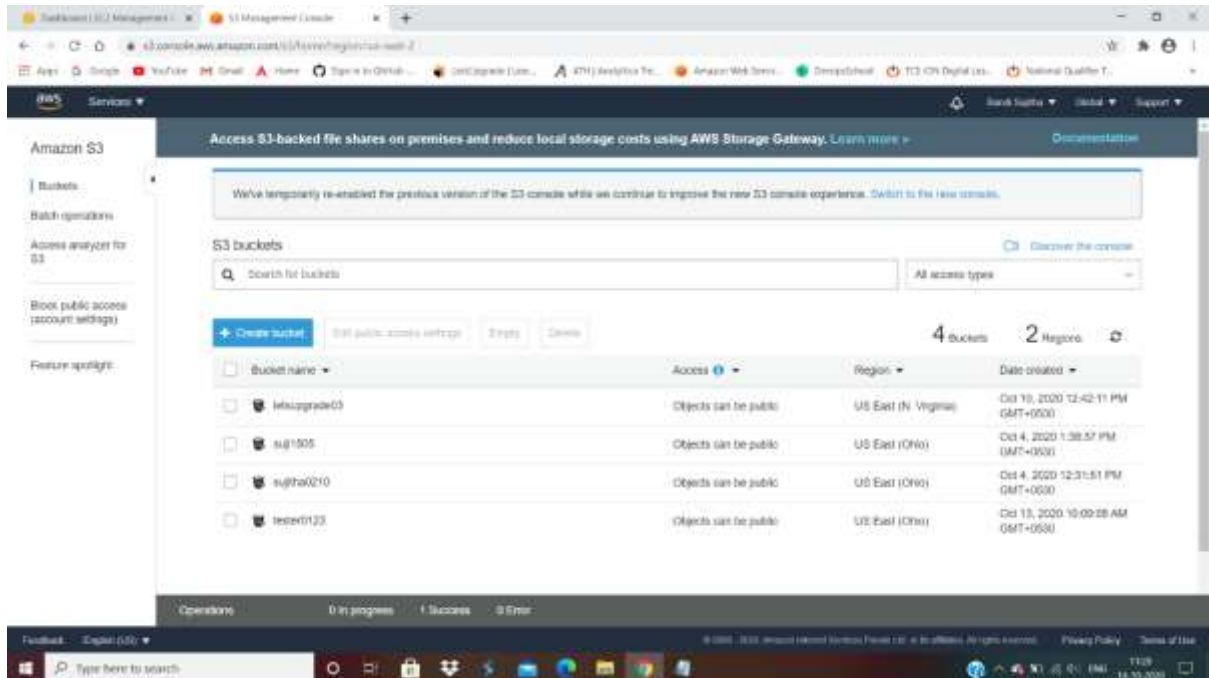
[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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Type here to search

11:02 14.10.2024

Ss2:s3 bucket,index.html



Ss3: testing using public IP

The screenshot shows the AWS Management Console interface. On the left, there is a navigation menu with options like 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMI's', 'Elastic Block Store', 'Volumes', and 'Snapshots'. The main area displays the 'Instances' page with a table of instances. One instance, 'demo3', is listed with ID 'i-08ec6707cbf803030', status 'Running', and type 't2.micro'. Below the table, the 'Instance: i-08ec6707cbf803030 (demo3)' details are shown. The 'Instance summary' section includes the instance ID, name, status, type, public IP address (3.137.41.166), private IP address (172.31.3.88), public DNS (ec2-3-137-41-166.us-east-2.compute.amazonaws.com), private DNS (ip-172-31-3-88.us-east-2.compute.internal), elastic IP addresses, and VPC ID (vpc-35ee4c5a).

Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public IPv4 DNS
demo3	i-08ec6707cbf803030	Running	t2.micro	2/2 checks...	No alarms	us-east-2a	ec2-3-137-41-166.us-east-2.compute.amazonaws.com

Instance: i-08ec6707cbf803030 (demo3)

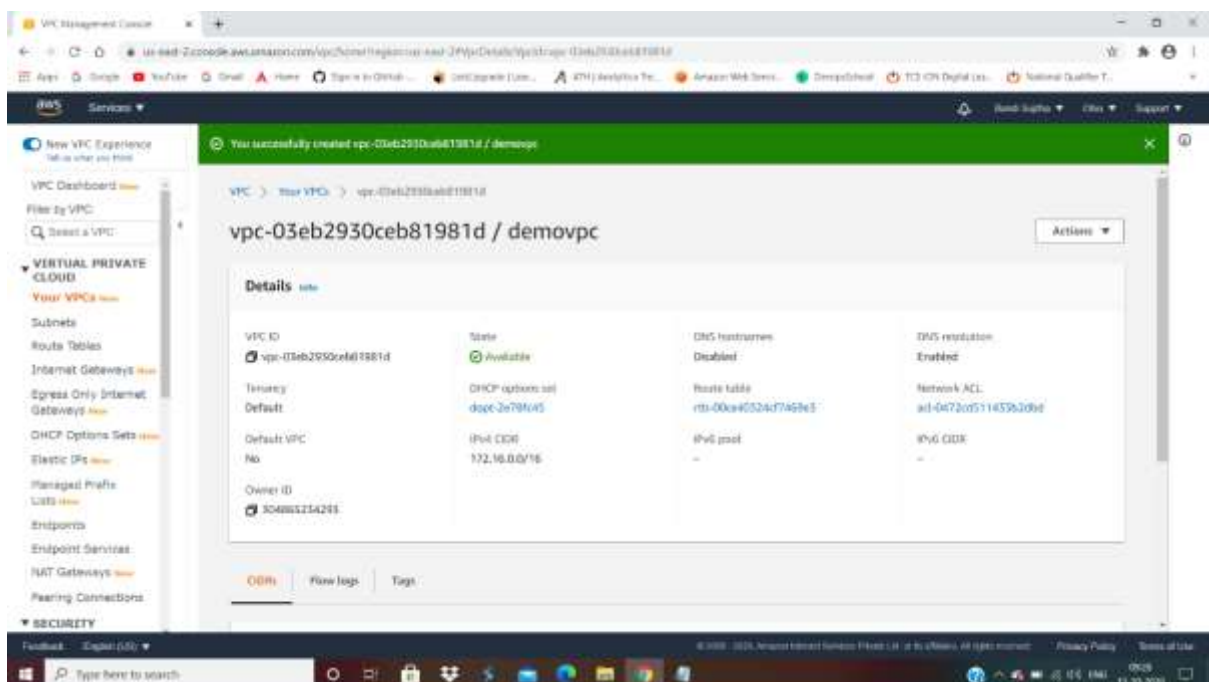
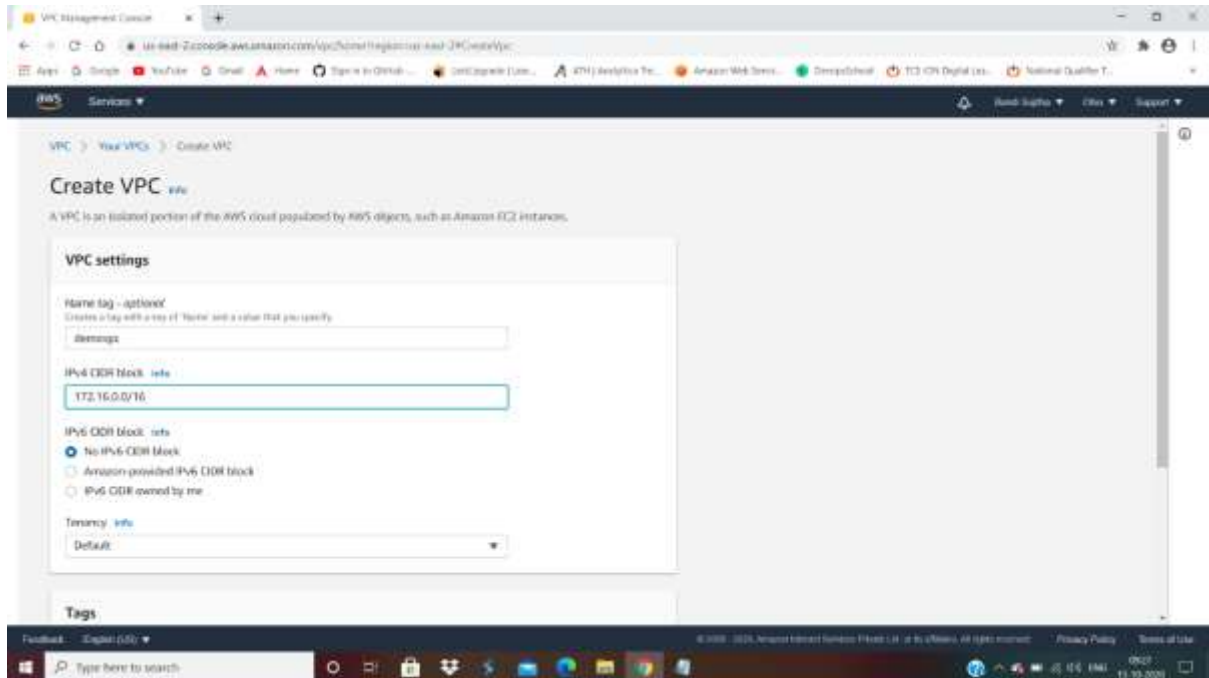
Instance summary

- Instance ID: i-08ec6707cbf803030 (demo3)
- Instance state: Running
- Instance type: t2.micro
- Public IPv4 address: 3.137.41.166 | [open address](#)
- Private IPv4 address: 172.31.3.88
- Public IPv4 DNS: ec2-3-137-41-166.us-east-2.compute.amazonaws.com | [open address](#)
- Private IPv4 DNS: ip-172-31-3-88.us-east-2.compute.internal
- Elastic IP addresses: -
- VPC ID: vpc-35ee4c5a | [open address](#)

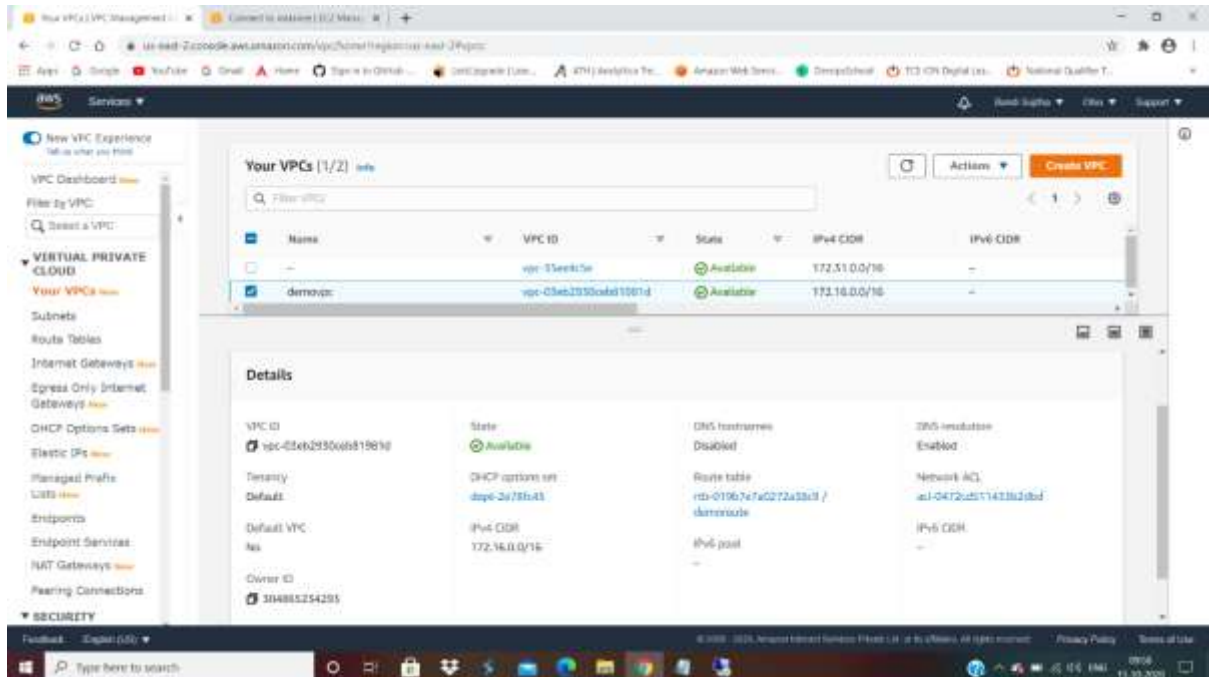
The screenshot shows a web browser window with the address bar displaying '3.137.41.166'. The page content is a simple text message: 'Welcome to my webpage!!!'. The browser's address bar also shows 'Not secure | 3.137.41.166'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons.

PROJECT 2: Creating an EC2 instance in custom VPC

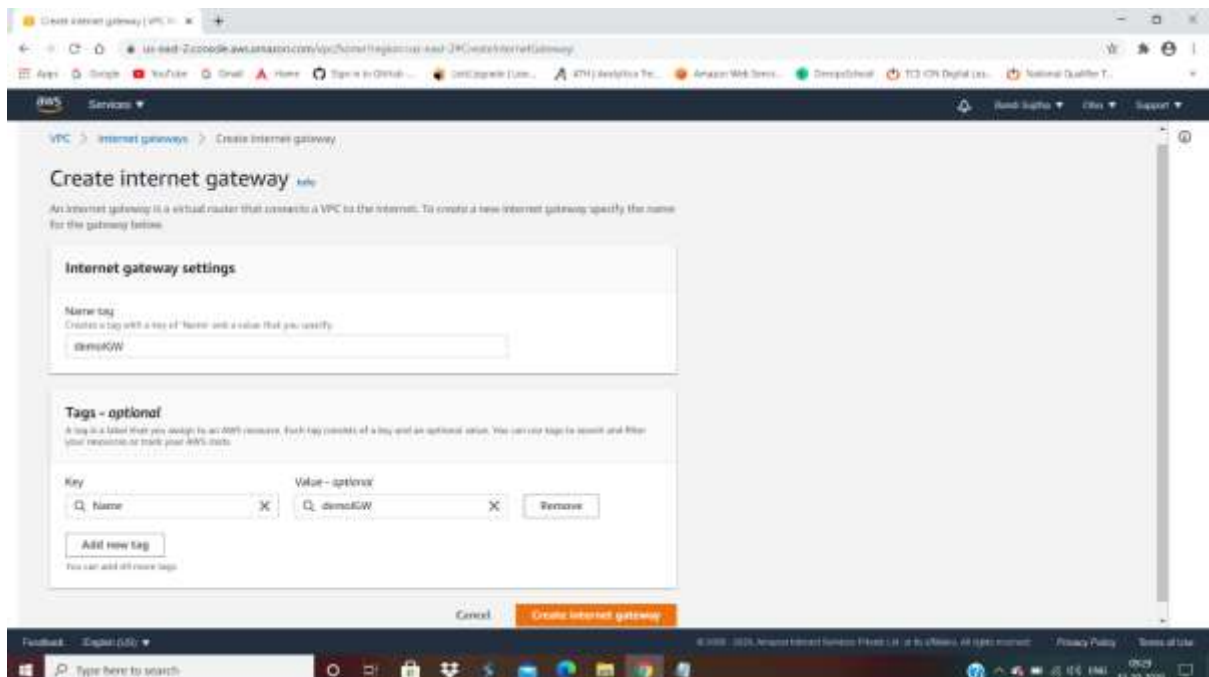
Task1: Create a VPC

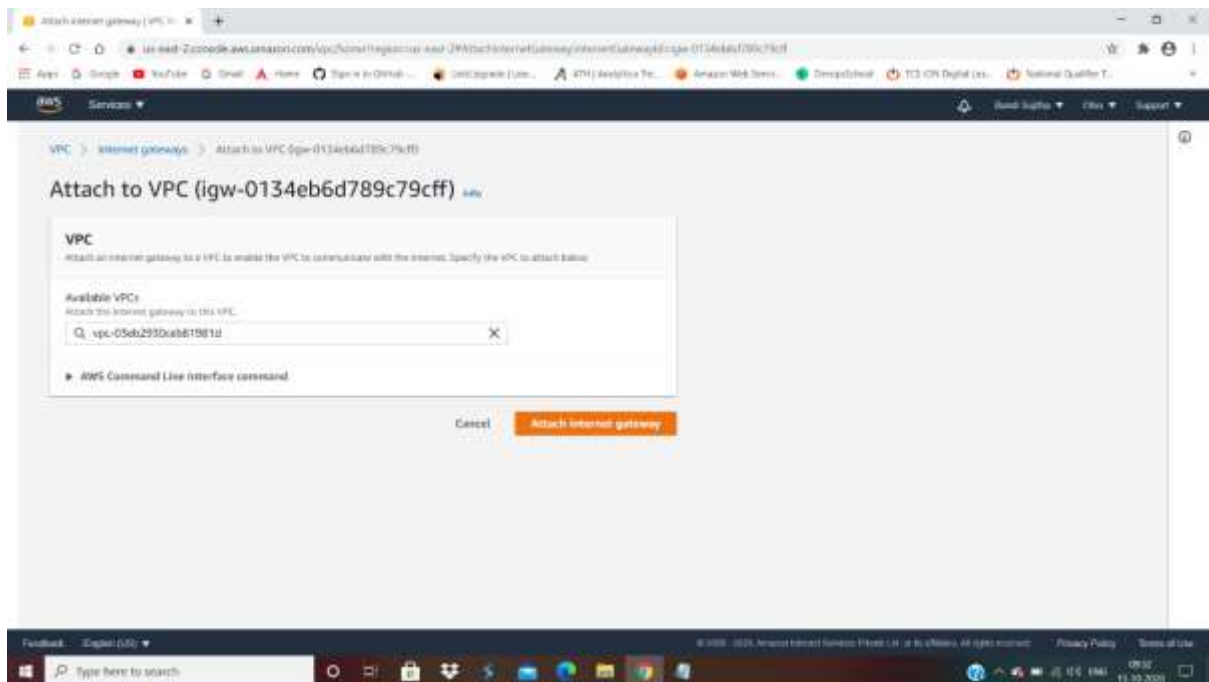


Ss1: vpc created

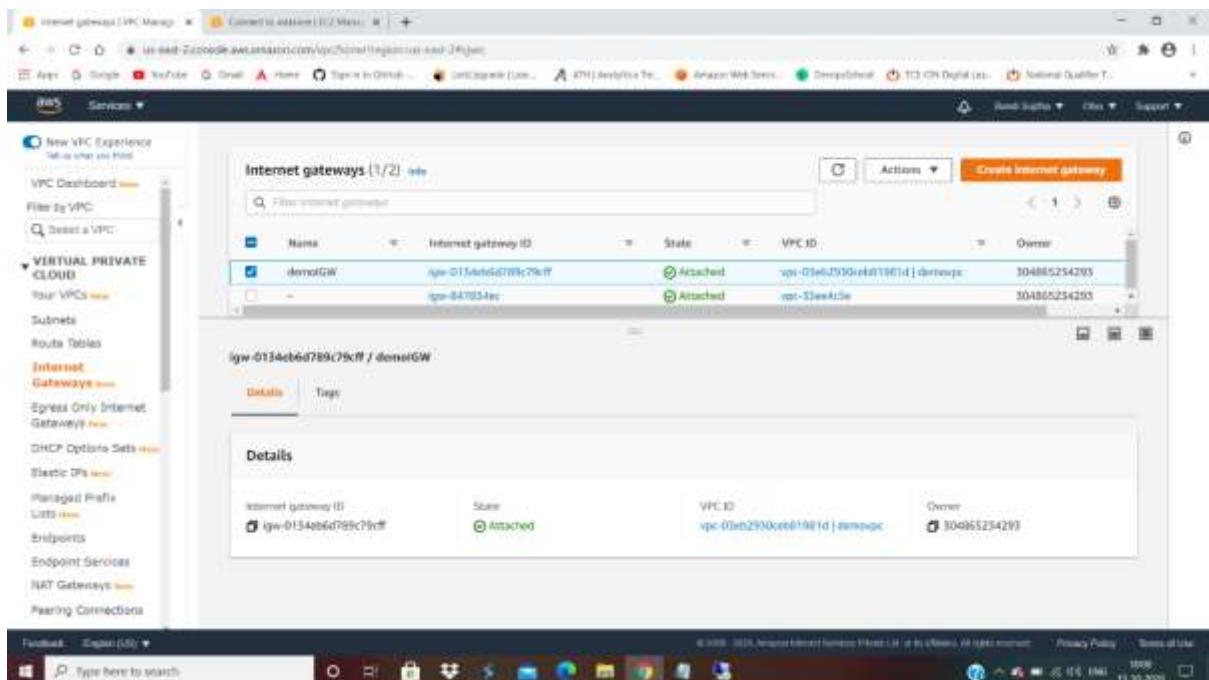


Task 2: Create an Internet gateway





Ss2: igw with vpc associated



Task3: Create a route table

Route Tables > Create route table

Create route table

A route table specifies how packets are forwarded between the subnets within your VPC, the Internet, and your VPN connection.

Name tag demo000009

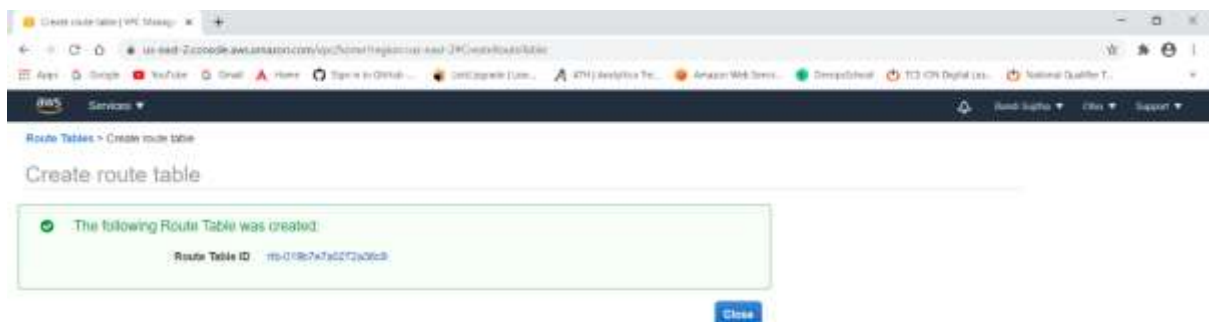
VPC vpc-03ab2930sub011981d

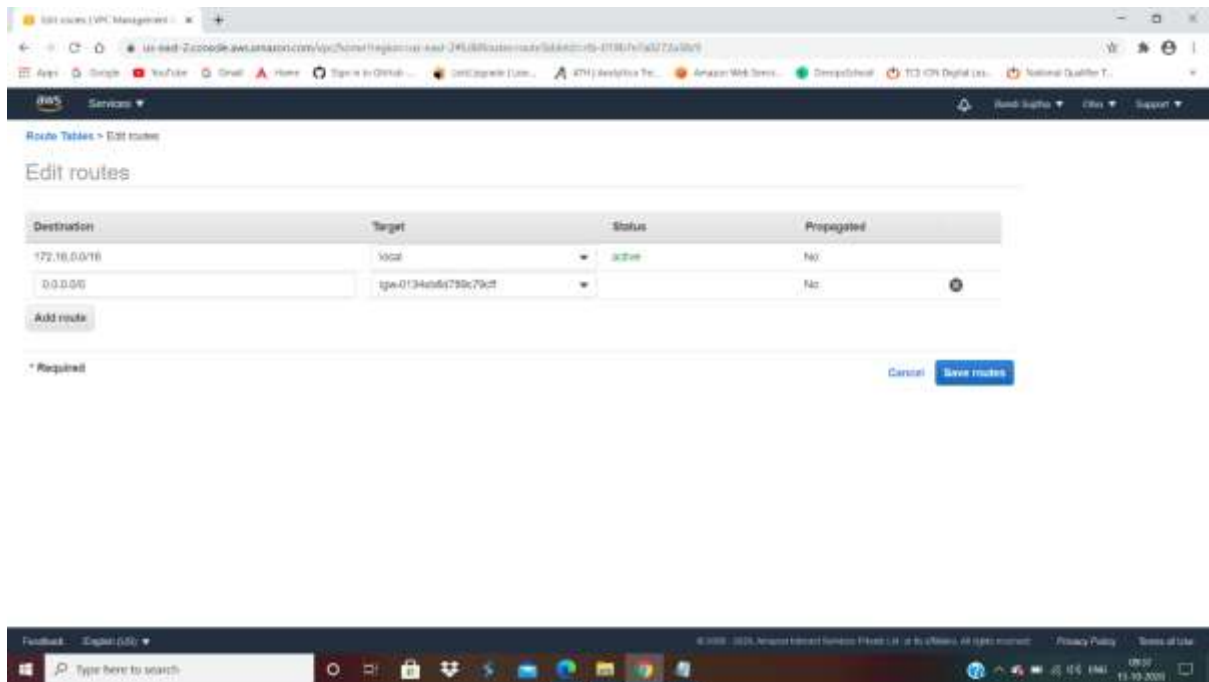
Key (128 characters maximum)	Value (256 characters maximum)
This resource currently has no tags	

Add Tag 30 remaining (1 to 50 tags maximum)

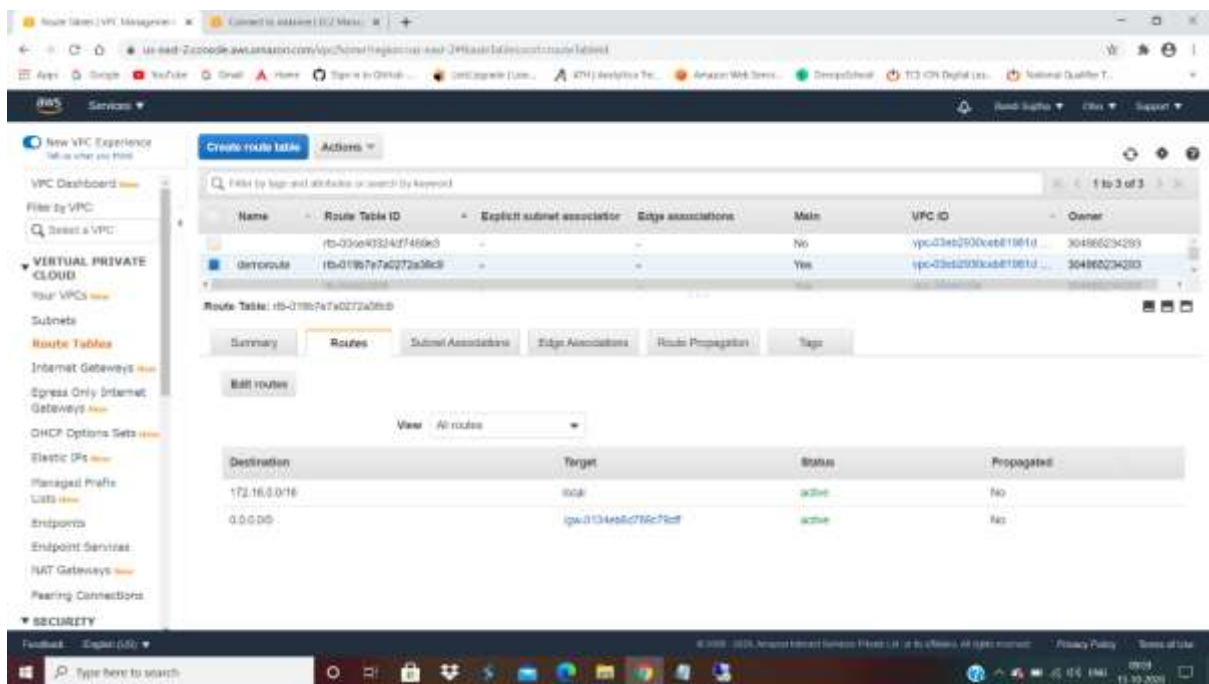
* Required

Cancel Create





Ss3: route table with routes



Task4: Create a subnet

Create subnet | VPC Management

Subnets > Create subnet

Create subnet

Specify your subnet's IP address block in CIDR format, for example, 10.0.0.0/24. IPv4 block sizes must be between a /16 network and /29 network, and can be the same size as your VPC. An IPv6 CIDR block must be a /64 CIDR block.

Name tag:

VPC:

Availability Zone:

VPC CIDRs	CIDR	Status	Status Reason
	172.16.0.0/16	associated	

IPv4 CIDR block*:

* Required

[Cancel](#) [Create](#)



Create subnet | VPC Management

Subnets > Create subnet

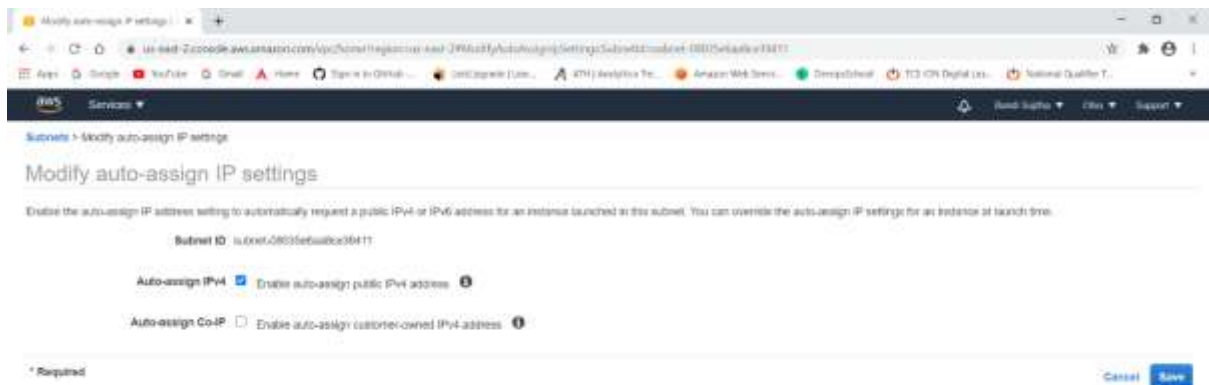
Create subnet

✓ The following Subnet was created.

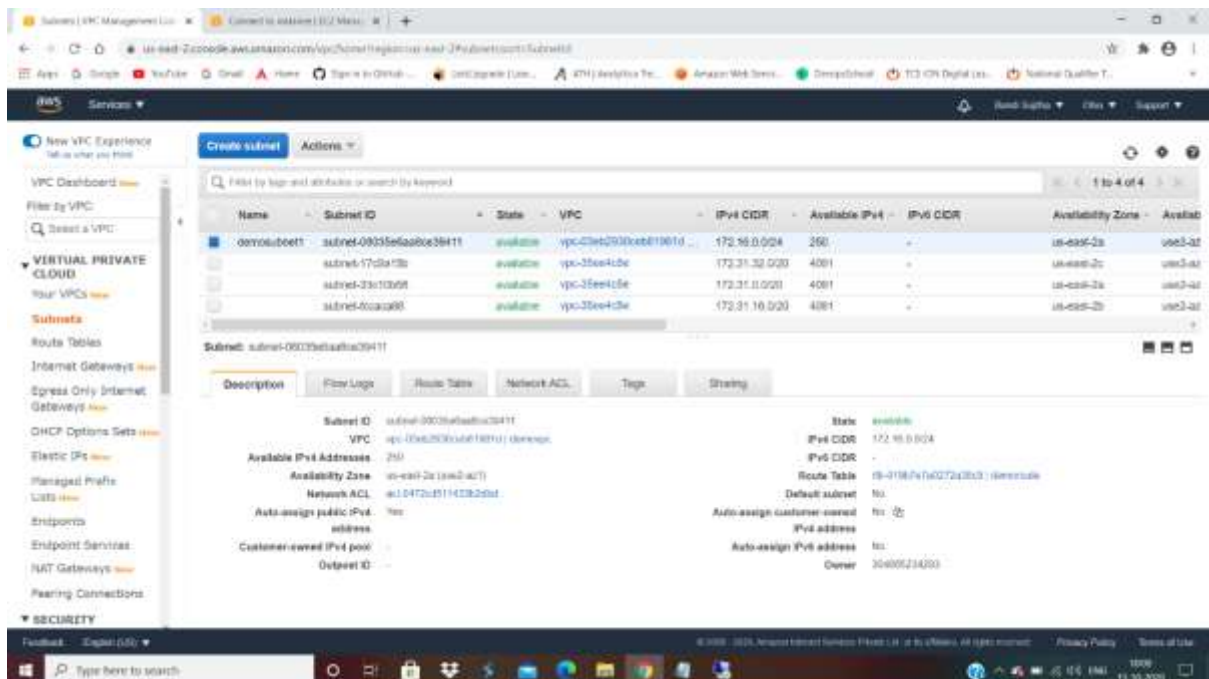
Subnet ID: [subnet-03035efaa539411f](#)

[Close](#)





Ss4: subnet screen



Task5: Create an EC2 in custom vpc

The image shows two screenshots of the AWS Management Console during the EC2 instance creation process.

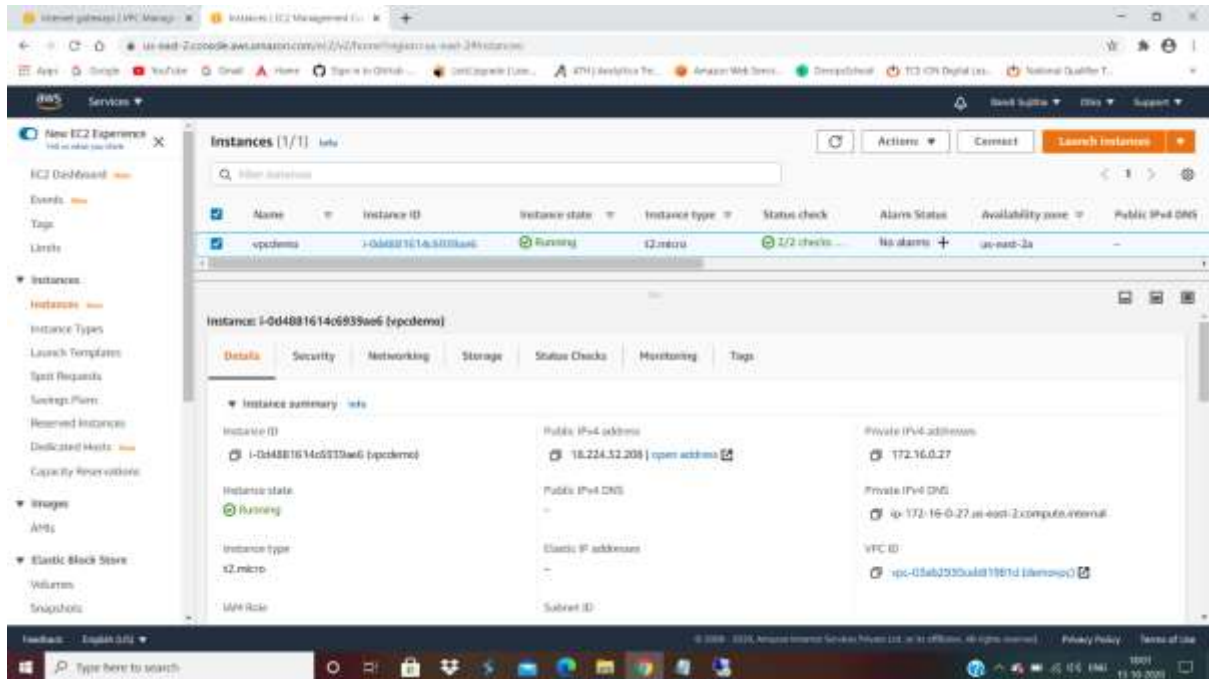
Step 1: Choose an Amazon Machine Image (AMI)

This screen displays a list of AMIs. The first AMI is highlighted: **Microsoft Windows Server 2019 Base** - ami-0ca1b6d1a3835d. It is a Windows AMI, 64-bit x86_64 architecture, and has a size of 64 GB. The price is \$4.00 per hour. Other AMIs listed include Microsoft Windows Server 2019 Base with Containers, Microsoft Windows Server 2019 with SQL Server 2017 Standard, and Microsoft Windows Server 2019 with SQL Server 2019 Standard.

Step 3: Configure Instance Details

This screen shows the configuration for the instance. The number of instances is set to 1. The purchasing option is set to On-Demand. The network is set to vpc-034b2900c8b1f811f / default. The subnet is set to subnet-0903b6f6d3a3b411 / default. The auto-assign public IP is set to Enable. The placement group is set to Default. The capacity reservation is set to Open. The domain join directory is set to No directory. The IAM role is set to None. The shutdown behavior is set to Stop. The stop-hibernate behavior is set to Default.

Ss5: ec2 dashboard



Task 6: Check ipconfig in VM command prompt



Ss6: cmd prompt:ipconfig

