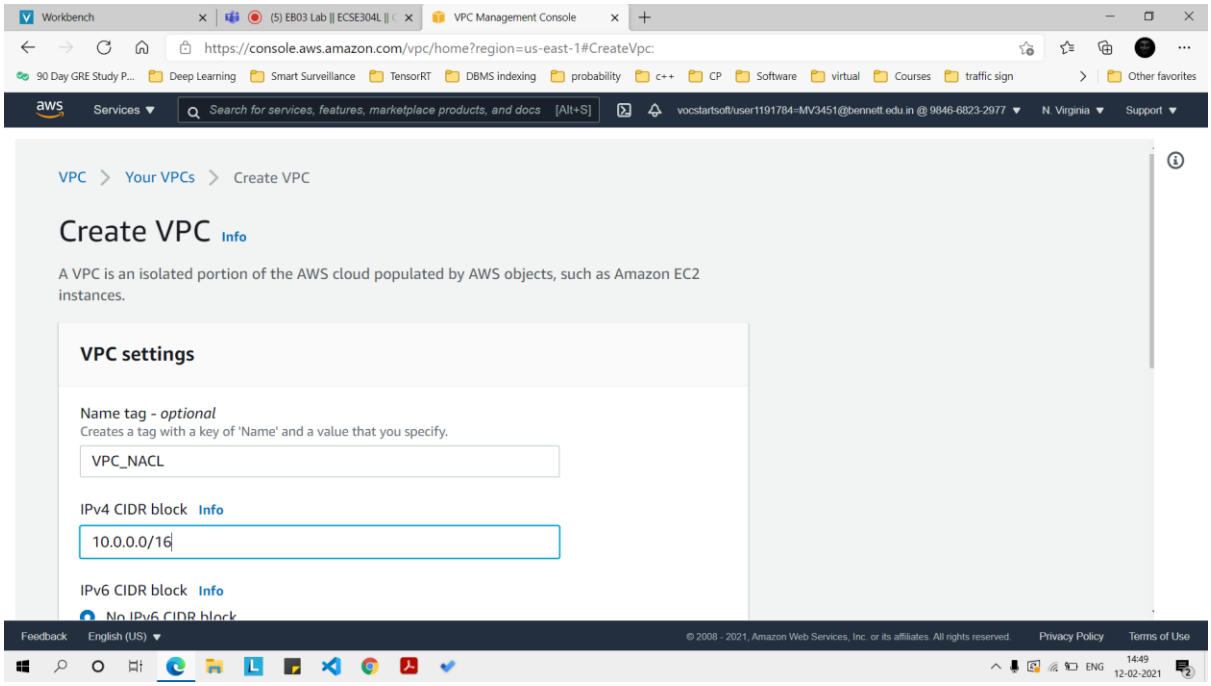
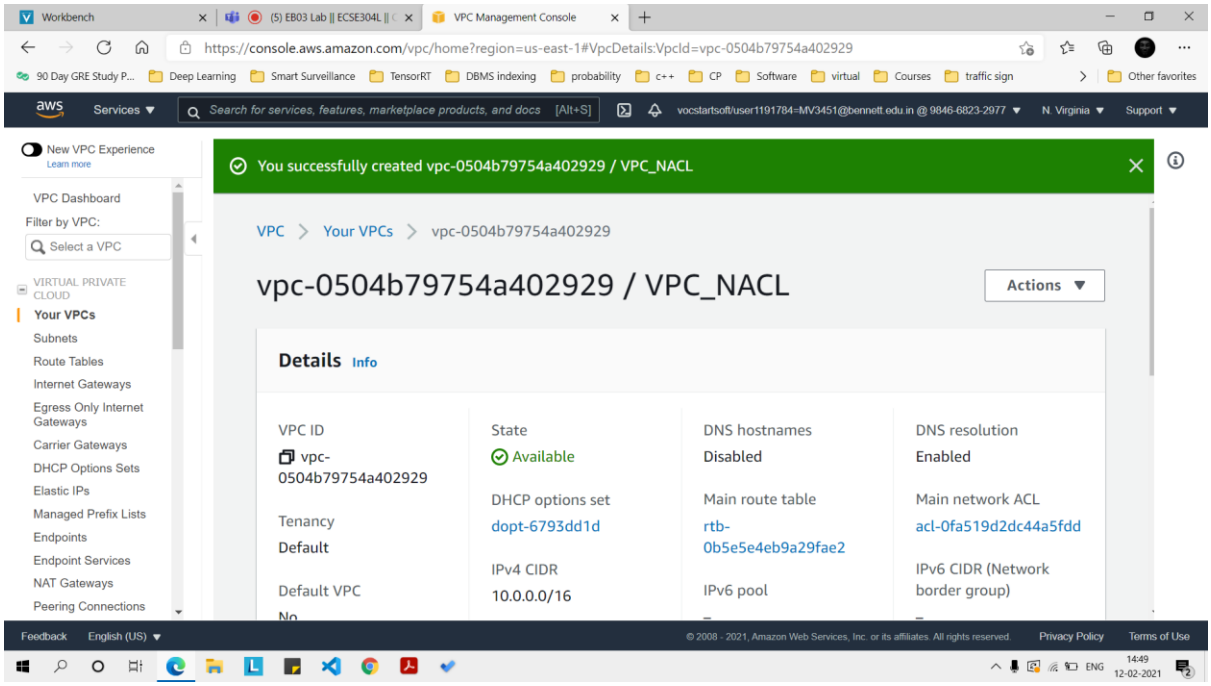
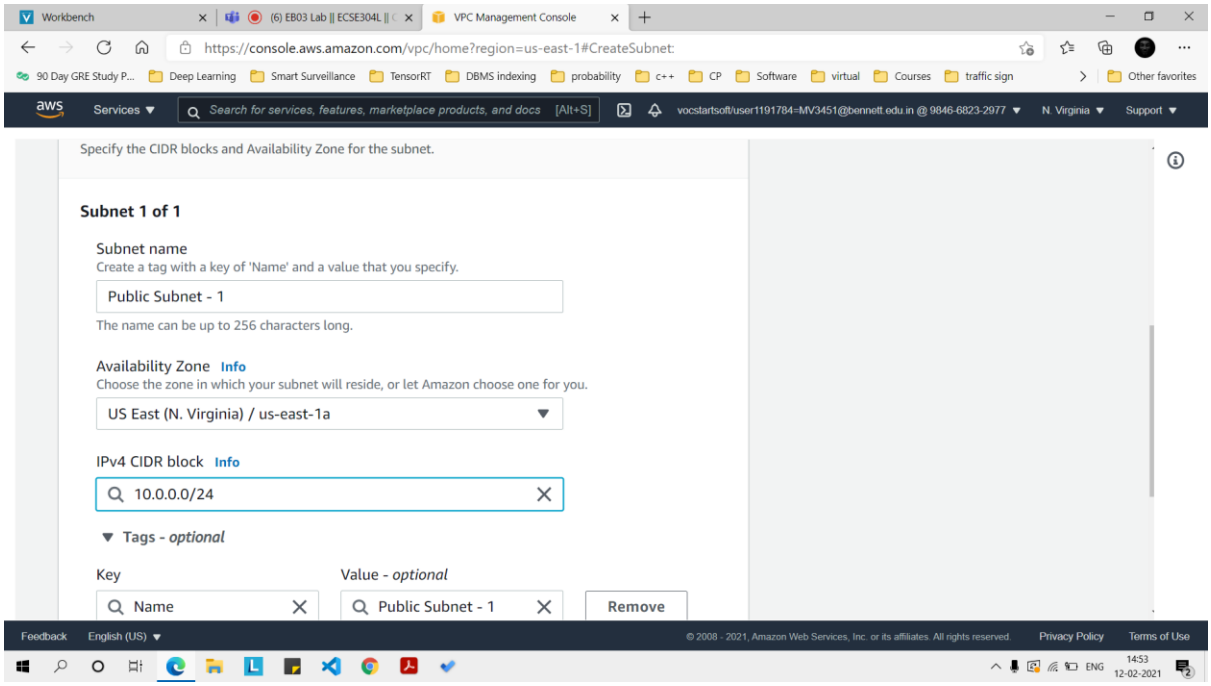
Lab Assignment – 05

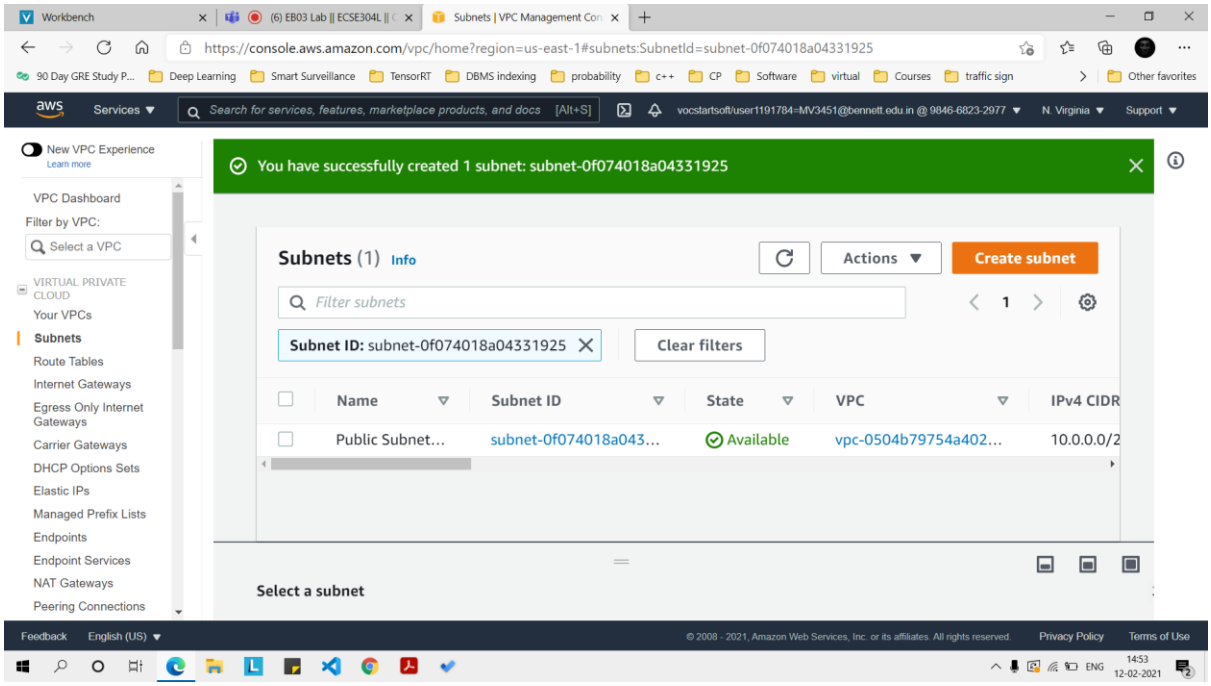
Part-1: NACL (Network Access Control List)

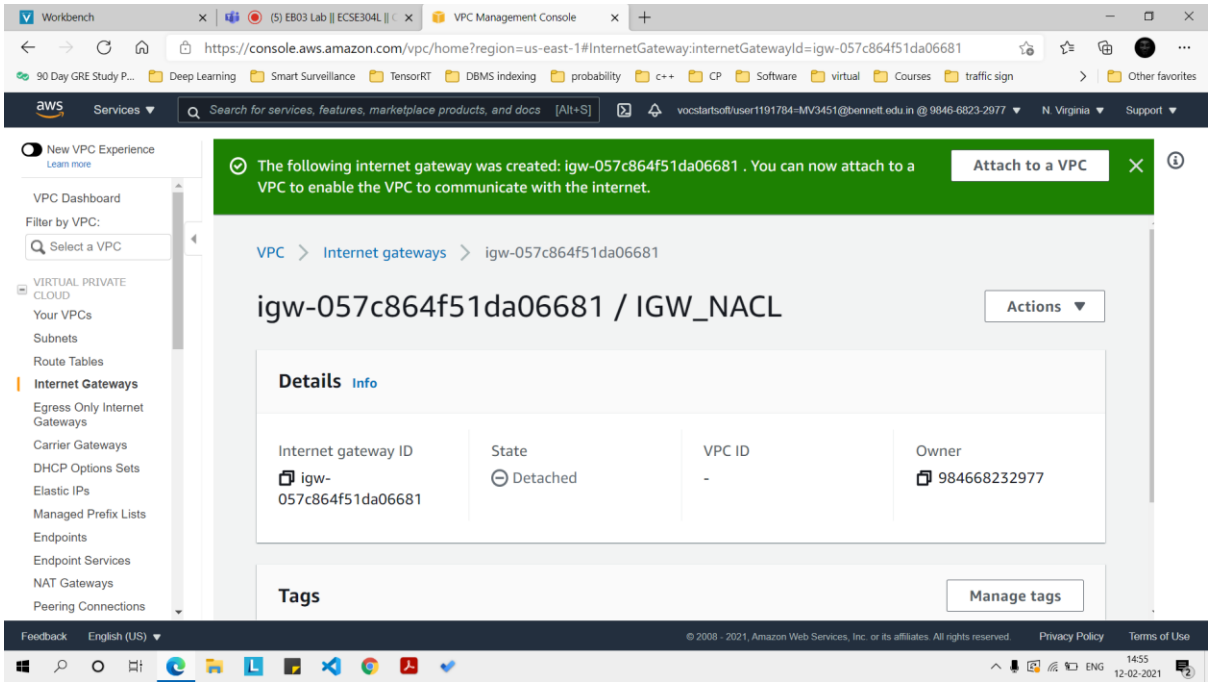
Task-1: Create a custom VPC in an availability zone at one region and create its necessary components like subnet, IGW and Route Table.



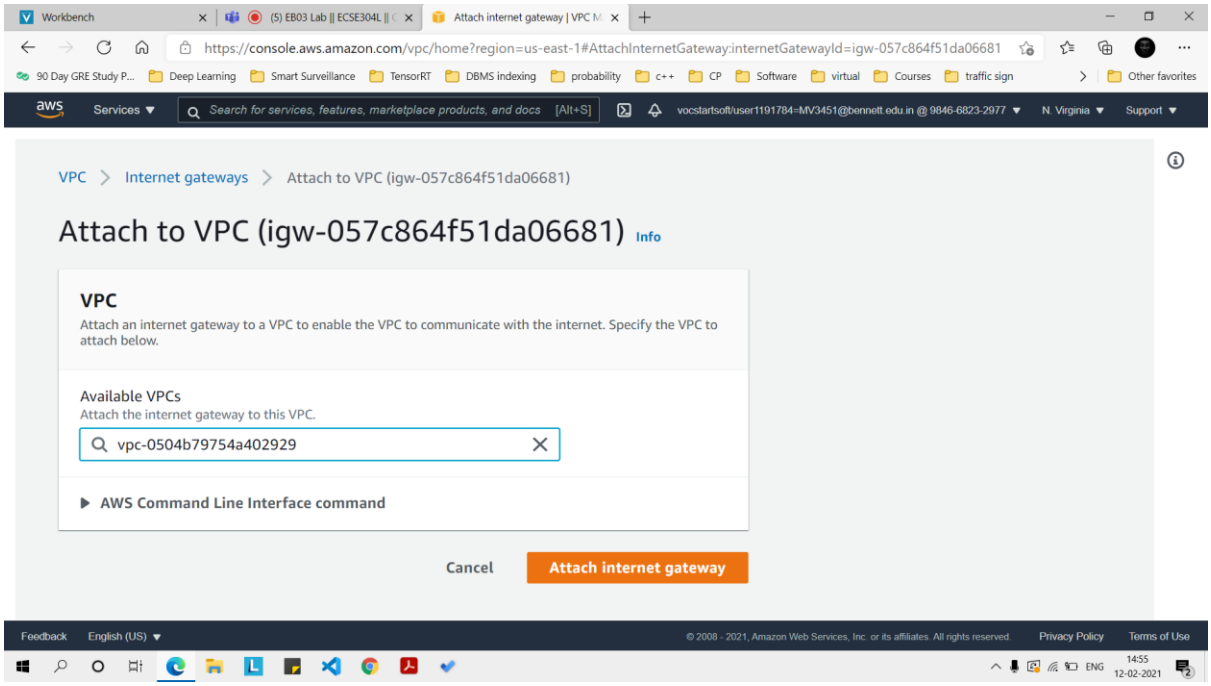


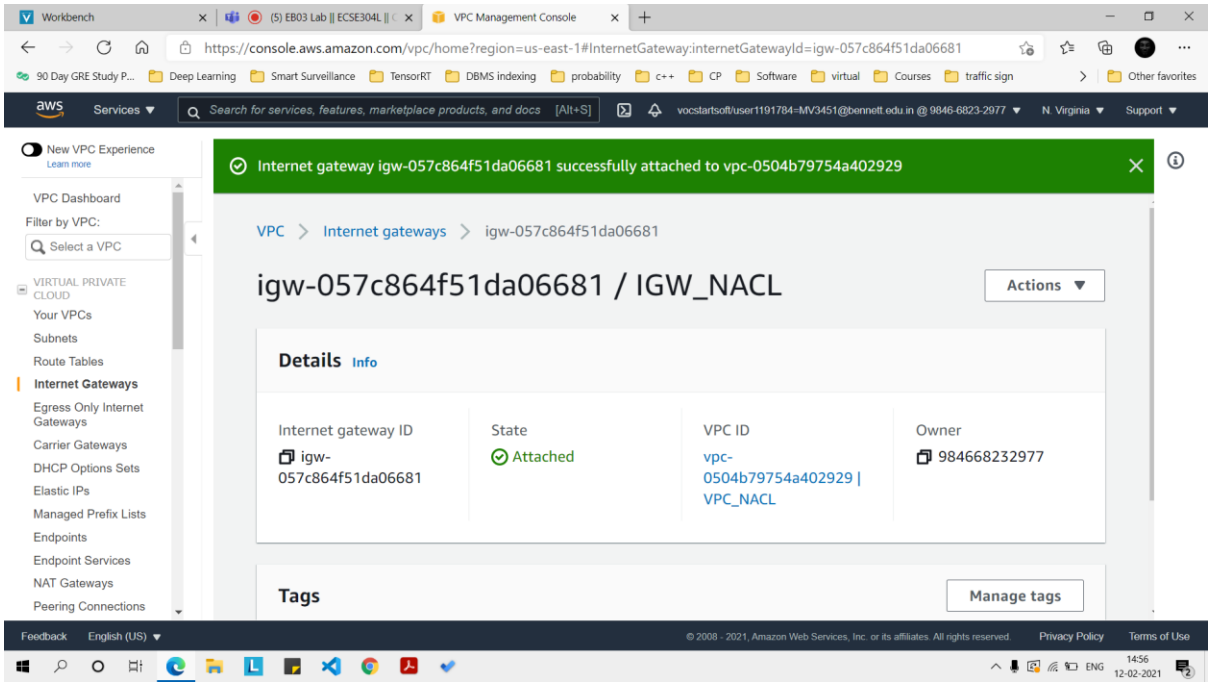

Workbench
(6) EB03 Lab || ECSE304L ||
VPC Management Console
https://console.aws.amazon.com/vpc/home?region=us-east-1#CreateSubnet:
Services
Search for services, features, marketplace products, and docs [Alt+S]
N. Virginia
Support
Specify the CIDR blocks and Availability Zone for the subnet.
Subnet 1 of 1
Subnet name
Create a tag with a key of 'Name' and a value that you specify.
Public Subnet - 1
The name can be up to 256 characters long.
Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
US East (N. Virginia) / us-east-1a
IPv4 CIDR block Info
10.0.0.0/24
Tags - optional
Key
Value - optional
Name
Public Subnet - 1
Remove
Feedback
English (US)
© 2008 - 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use

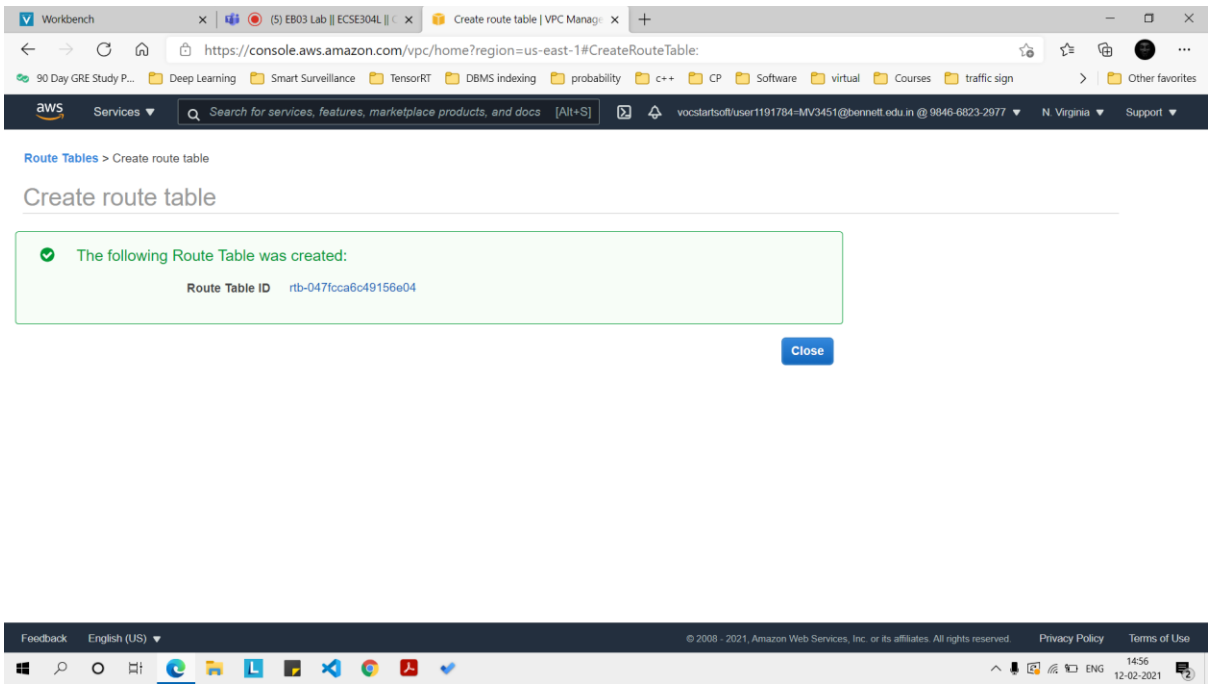

Workbench
(6) EB03 Lab || ECSE304L ||
Subnets | VPC Management Con
https://console.aws.amazon.com/vpc/home?region=us-east-1#subnets:SubnetId=subnet-0f074018a04331925
Services
Search for services, features, marketplace products, and docs [Alt+S]
N. Virginia
Support
New VPC Experience
Learn more
VPC Dashboard
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
You have successfully created 1 subnet: subnet-0f074018a04331925
Subnets (1) Info
Actions
Create subnet
Filter subnets
Subnet ID: subnet-0f074018a04331925
Clear filters
Name
Subnet ID
State
VPC
IPv4 CIDR
Public Subnet...
subnet-0f074018a043...
Available
vpc-0504b79754a402...
10.0.0.0/2
Select a subnet
Feedback
English (US)
© 2008 - 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use



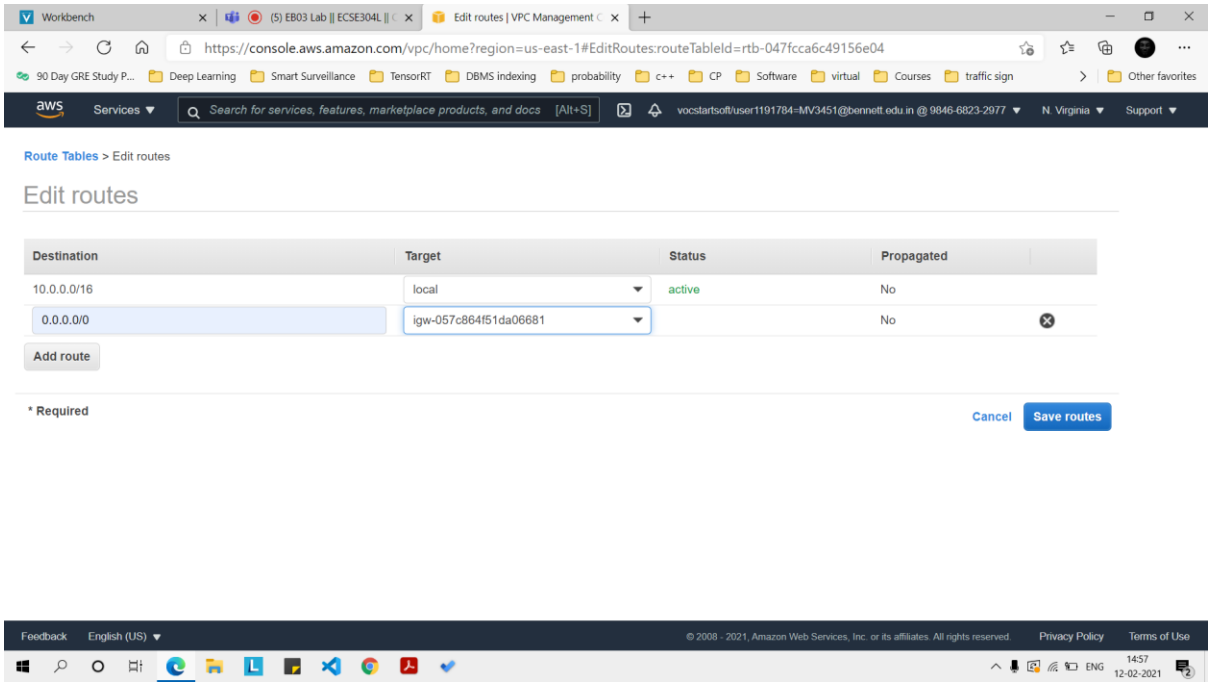
Attach IGW to VPC



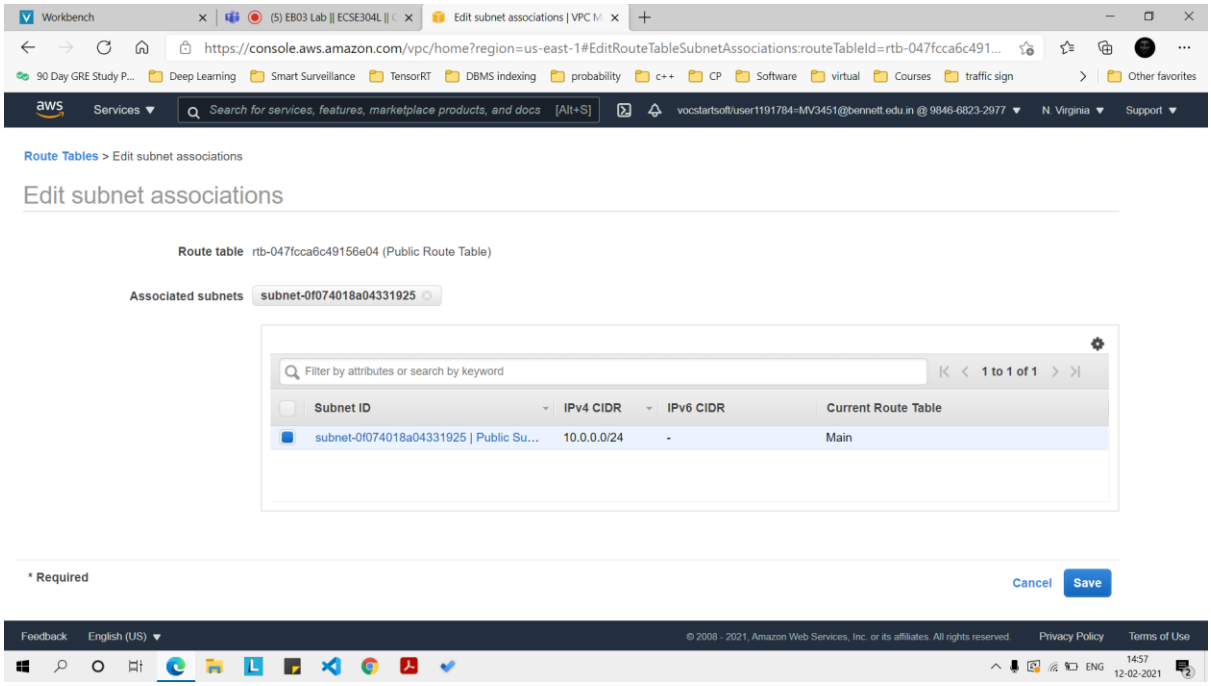

Workbench
(5) EB03 Lab || ECSE304L ||
VPC Management Console
https://console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:internetGatewayId=igw-057c864f51da06681
Services
Search for services, features, marketplace products, and docs [Alt+S]
N. Virginia
Support
New VPC Experience
Learn more
VPC Dashboard
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
Route Tables
Internet Gateways
Egress Only Internet Gateways
Carrier Gateways
DHCP Options Sets
Elastic IPs
Managed Prefix Lists
Endpoints
Endpoint Services
NAT Gateways
Peering Connections
Internet gateway igw-057c864f51da06681 successfully attached to vpc-0504b79754a402929
VPC > Internet gateways > igw-057c864f51da06681
igw-057c864f51da06681 / IGW_NACL
Actions
Details Info
Internet gateway ID
igw-057c864f51da06681
State
Attached
VPC ID
vpc-0504b79754a402929 | VPC_NACL
Owner
984668232977
Tags
Manage tags
Feedback
English (US)
© 2008 - 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use


Workbench
(5) EB03 Lab || ECSE304L ||
Create route table | VPC Manage
https://console.aws.amazon.com/vpc/home?region=us-east-1#CreateRouteTable:
Services
Search for services, features, marketplace products, and docs [Alt+S]
N. Virginia
Support
Route Tables > Create route table
Create route table
The following Route Table was created:
Route Table ID rtb-047fcca6c49156e04
Close
Feedback
English (US)
© 2008 - 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use

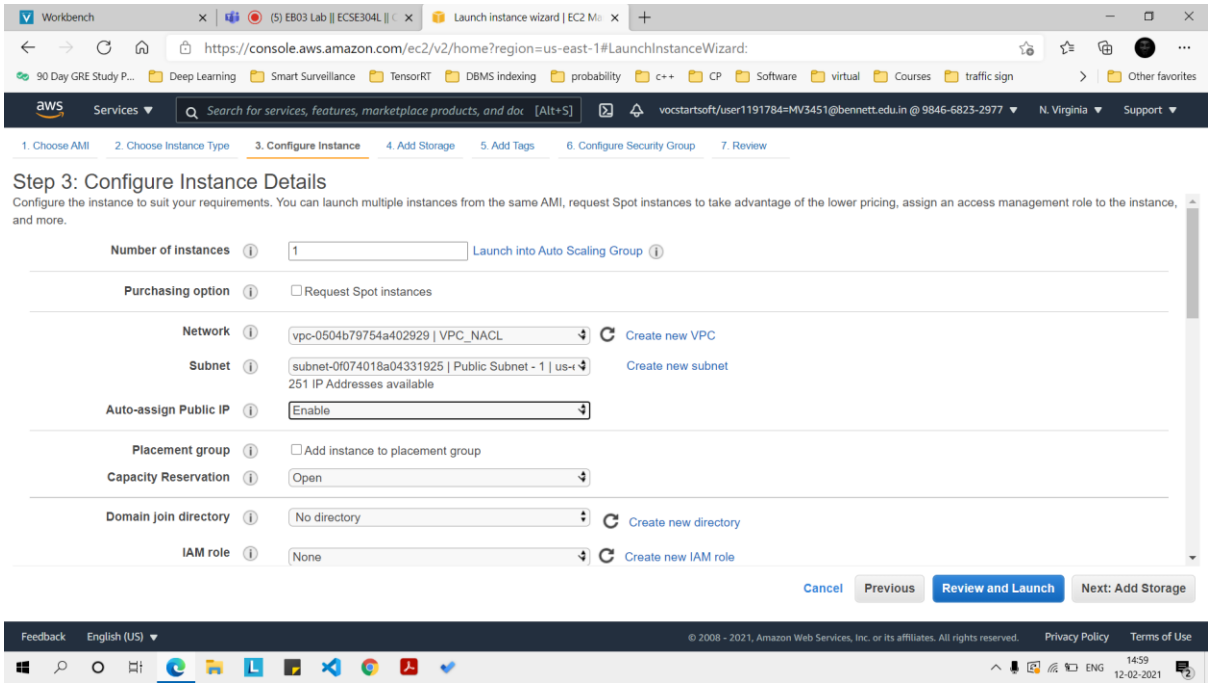
Edit route add IGW

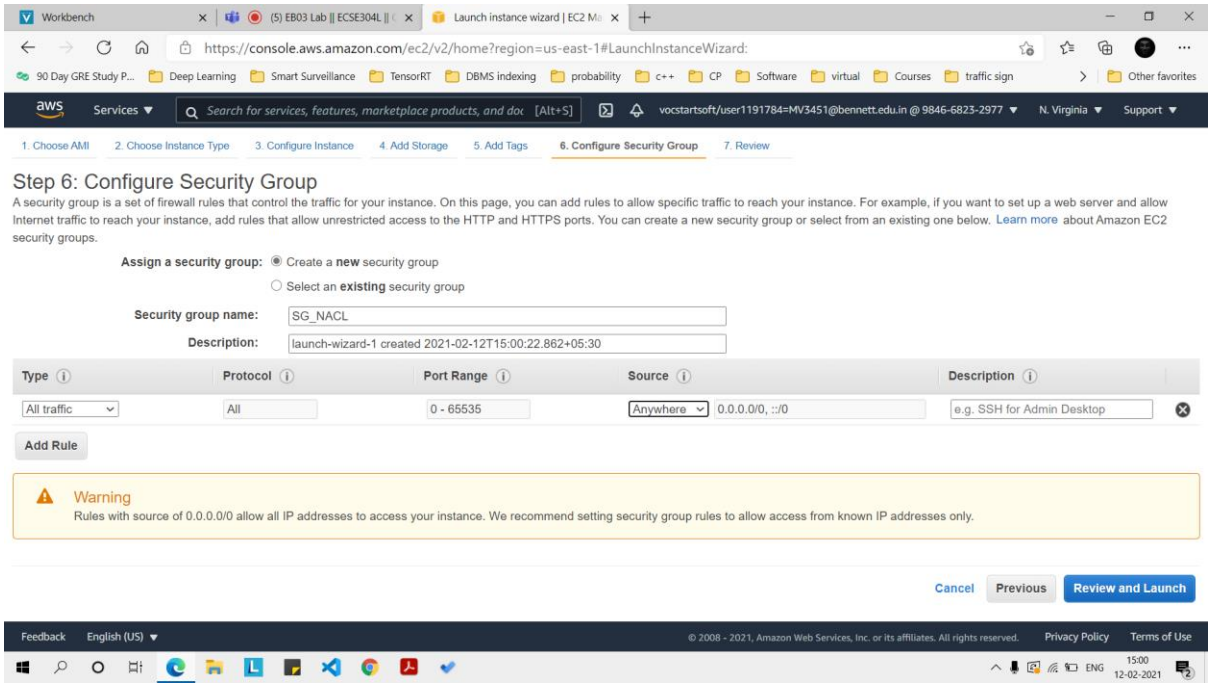


Edit Subnet association

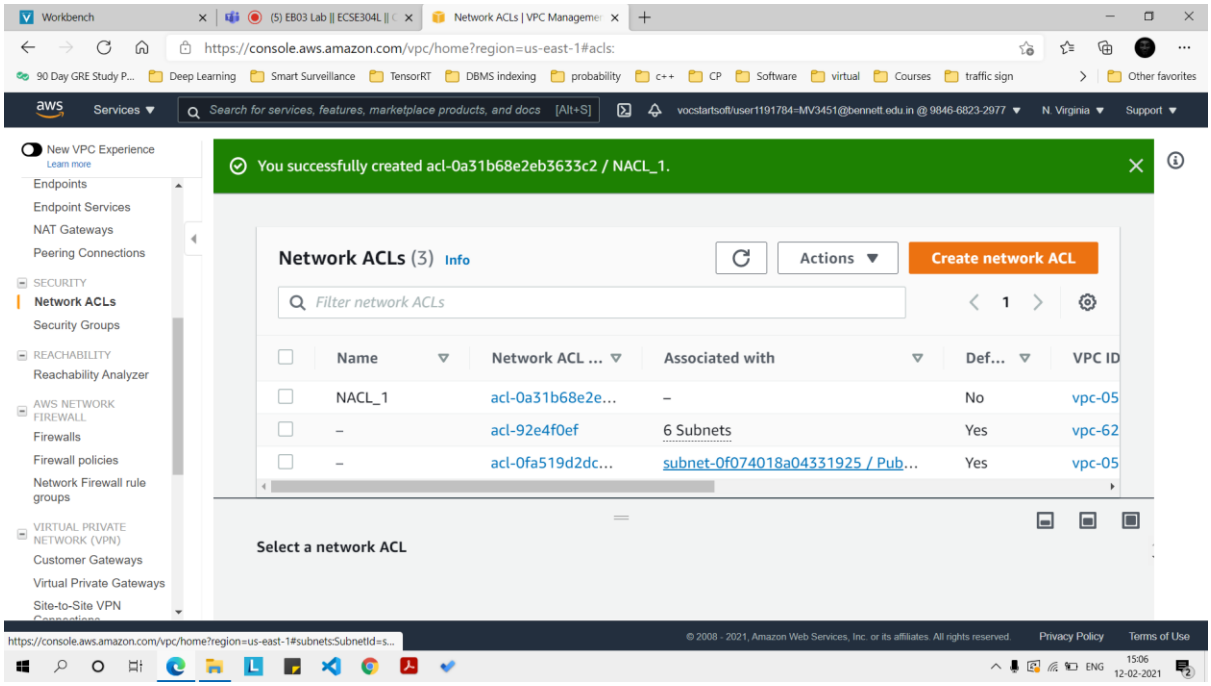


Task-2: Launch Window server in the public subnet and allow all traffic.

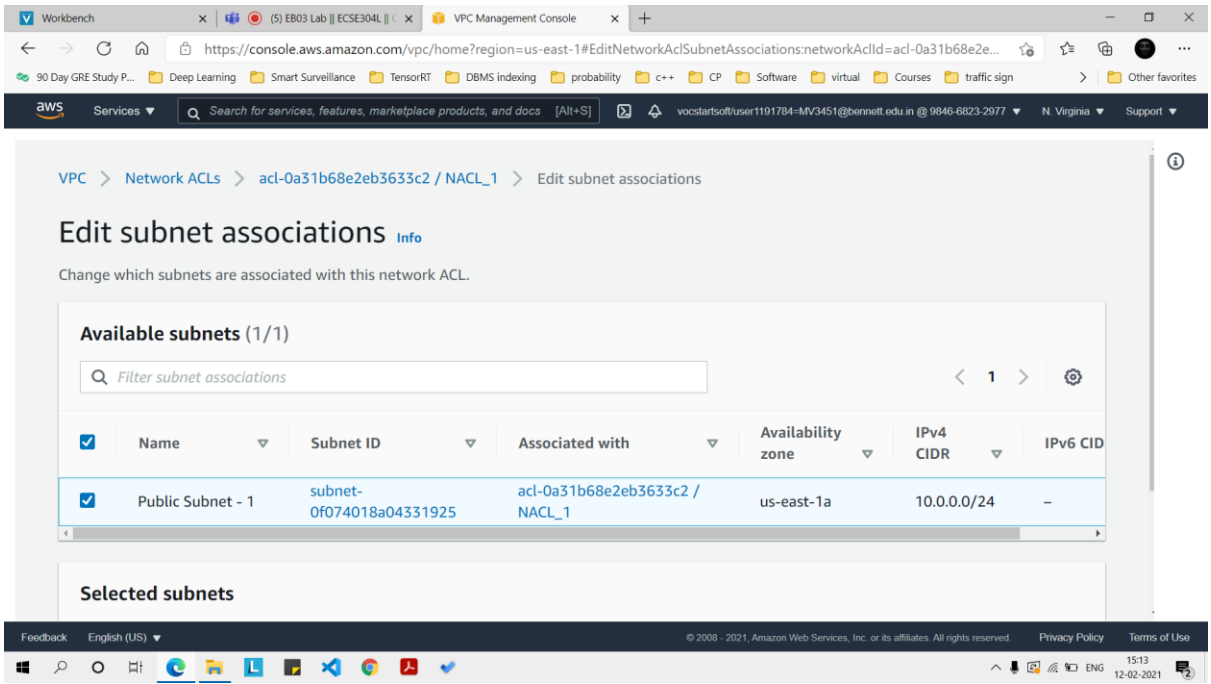




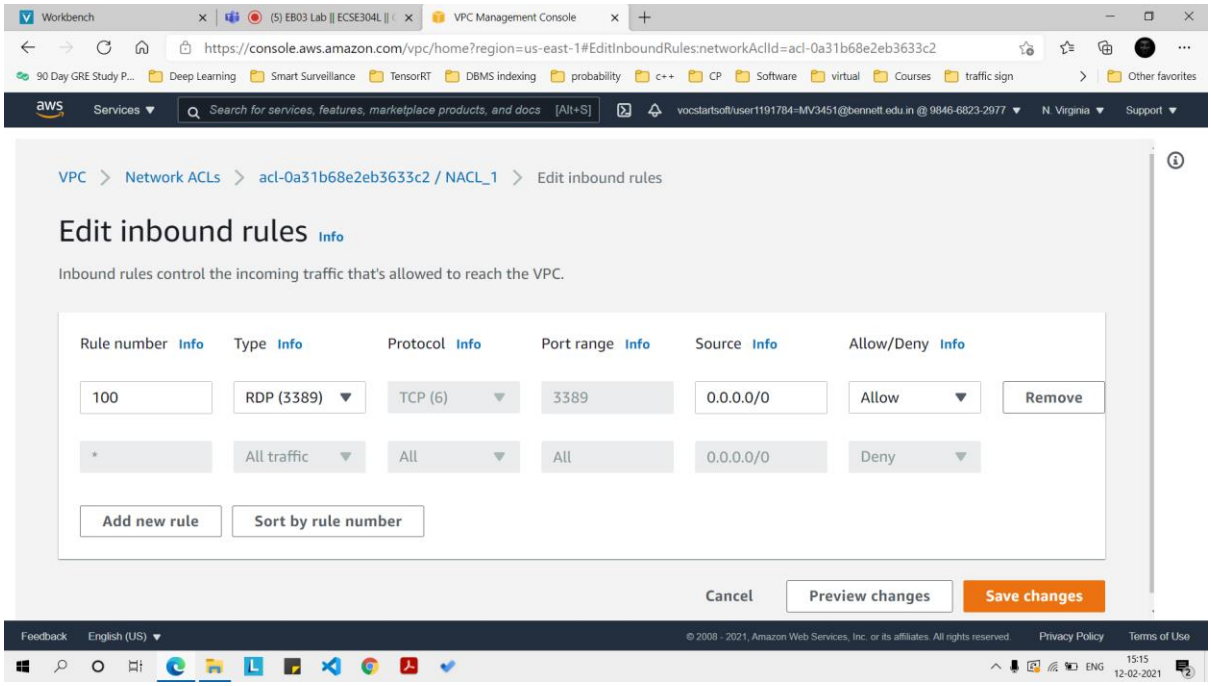
Task-3: Create a custom Network ACL and attach the subnet to the default NACL.



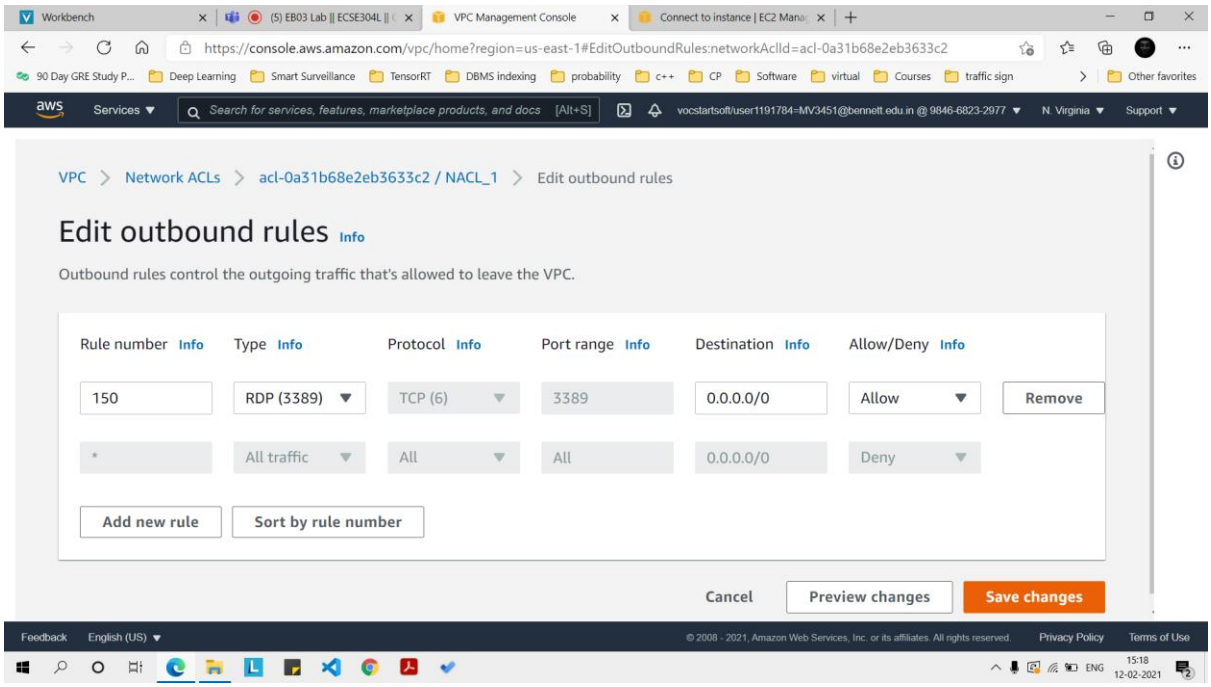
Note: Edit subnet association for this NACL to act as the main one. 2 NACLs cannot work on one subnet.

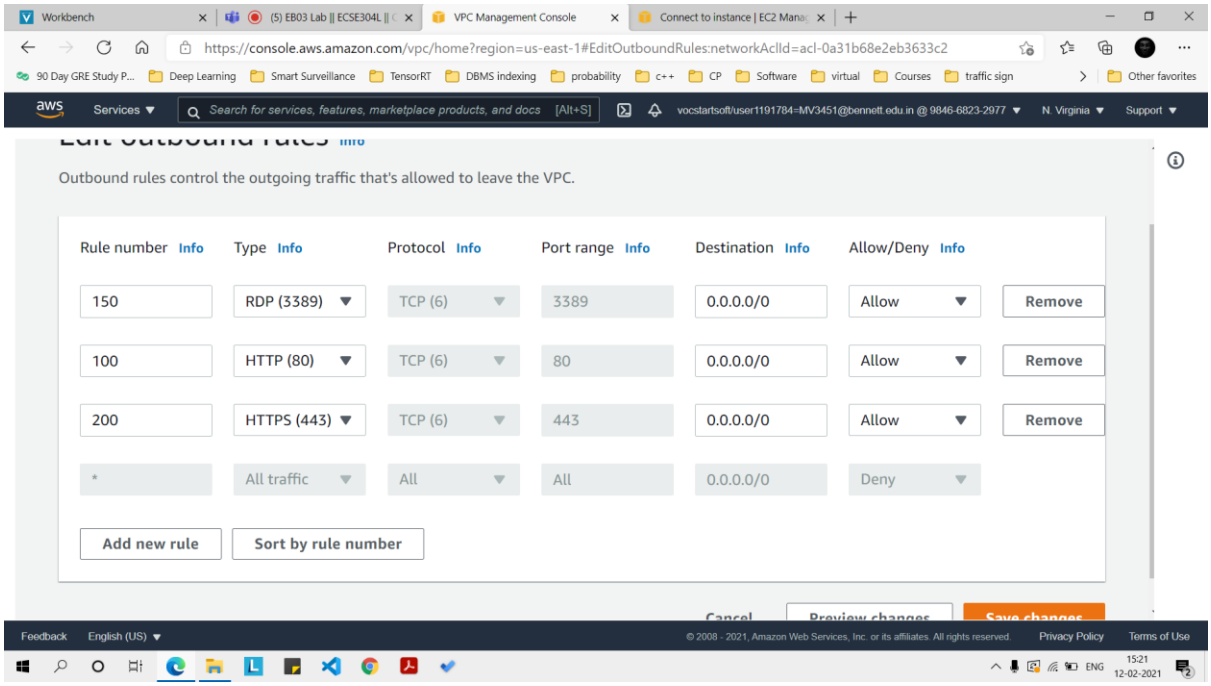


Task-4: Set the inbound rules in NACL such as 100 for RDP.

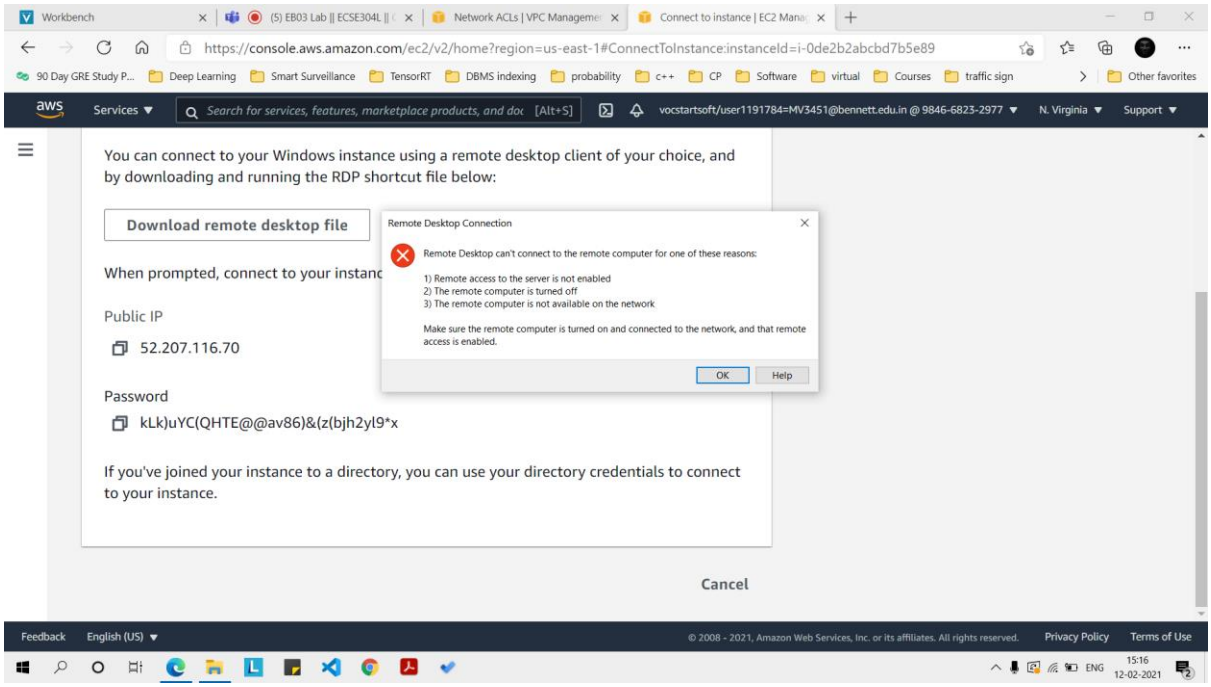


Task-5: Set the outbound rules in NACL such as 100 for HTTP and 200 for HTTPS.

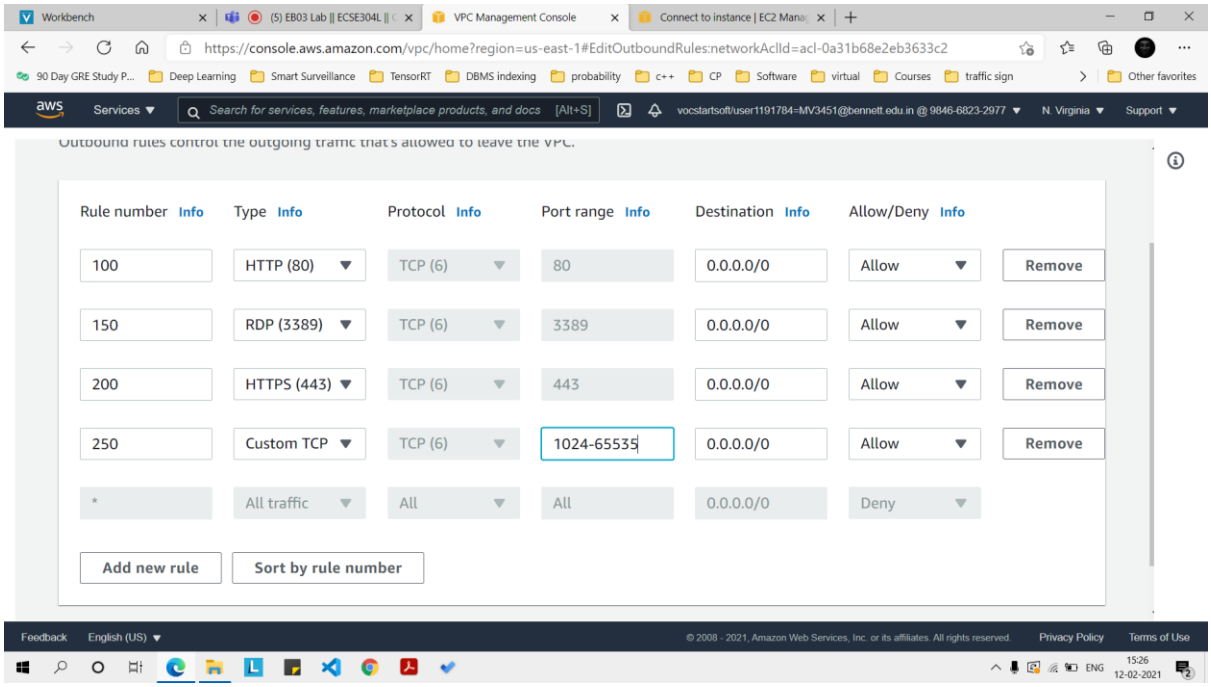




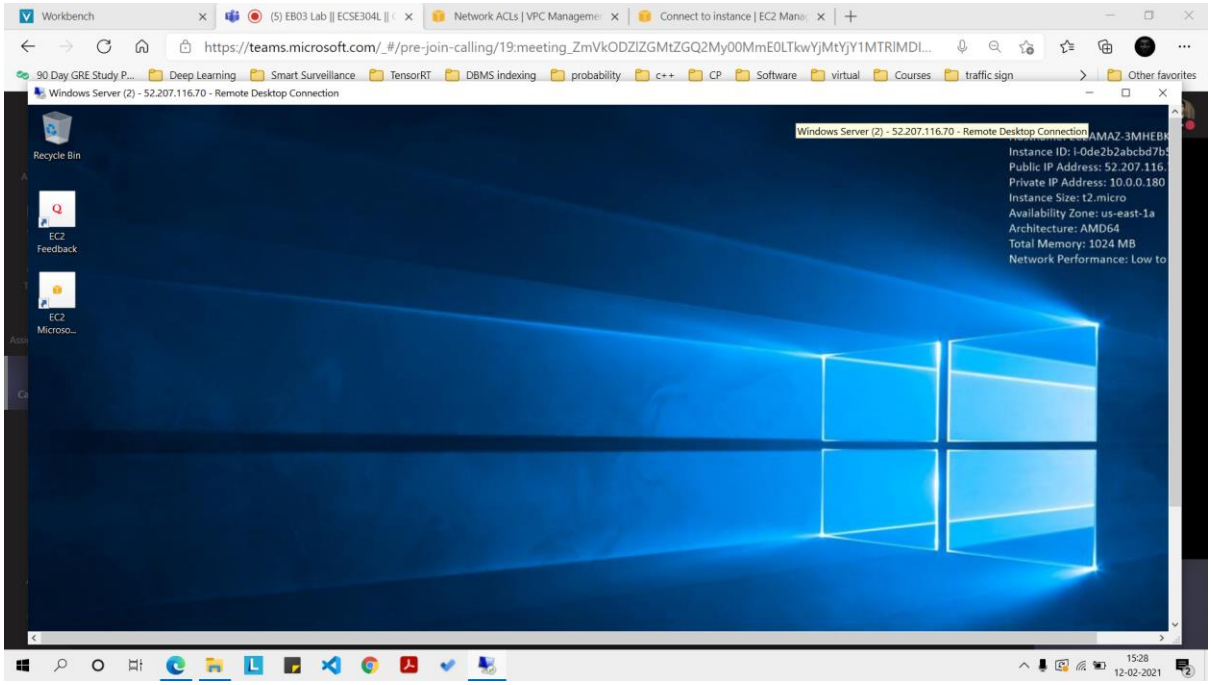
Task-6: Check the connection of the server using RDP (Error would occur)



Task-7: Go to custom VPC NACL and change the outbound rules as 250 for custom TCP and open the port range 1024 to 65535.



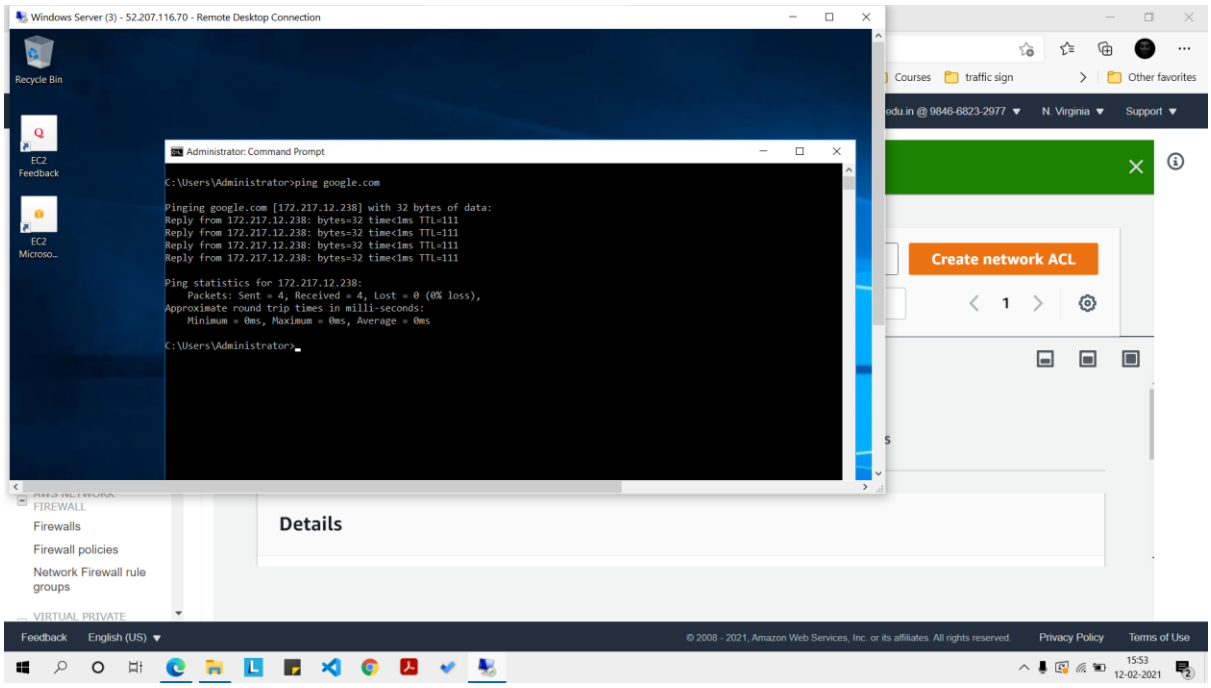
Task-8: Connect again using RDP.



Note: In inbound we just require RDP for us to connect to the Ec2 instance.

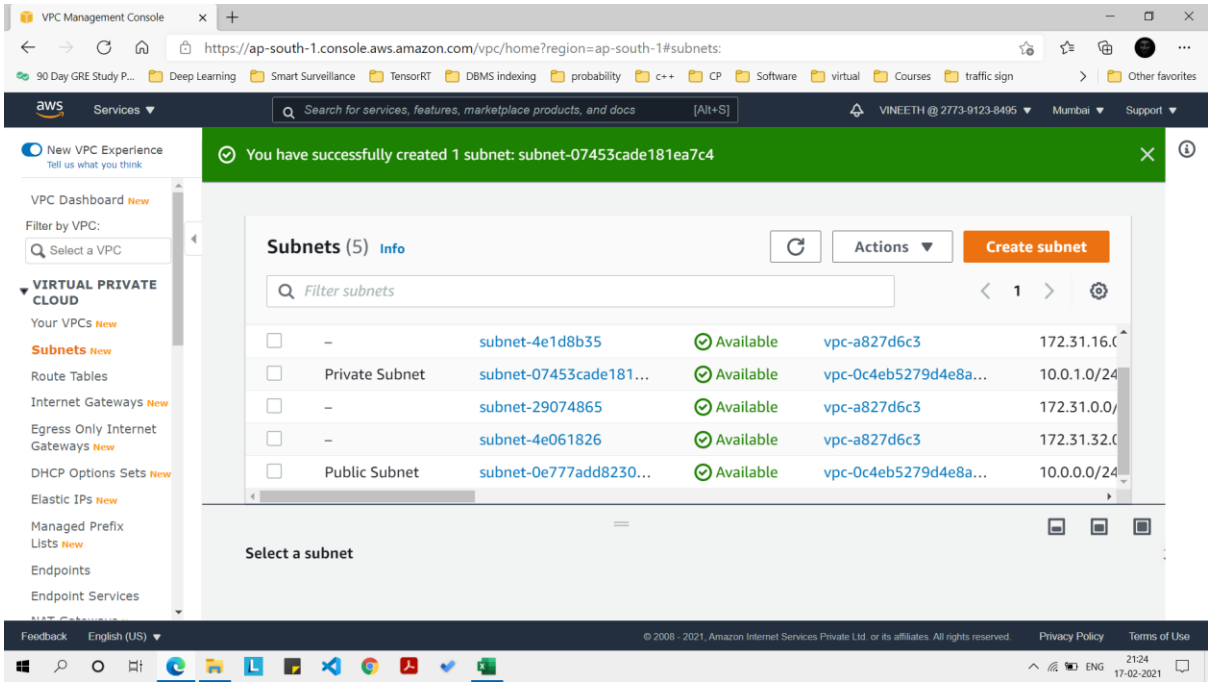
In outbound we require custom TCP for the instance to connect to servers in AWS.

Task-9: Check the internet connectivity using cmd or browser.

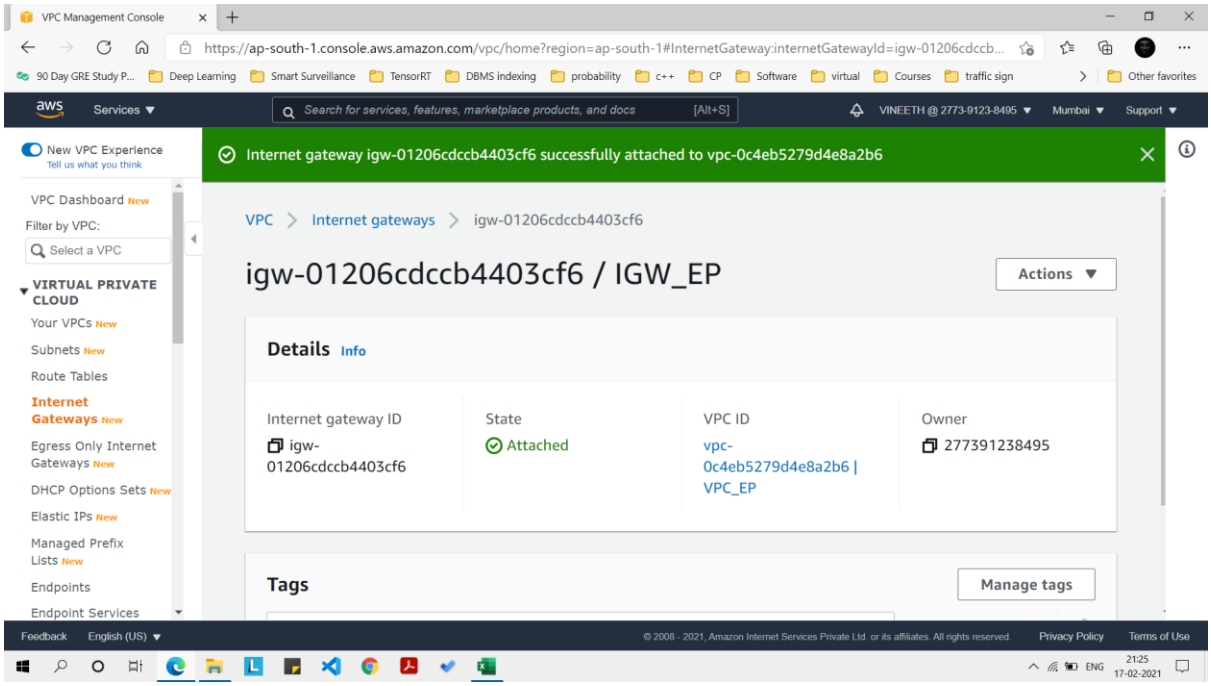


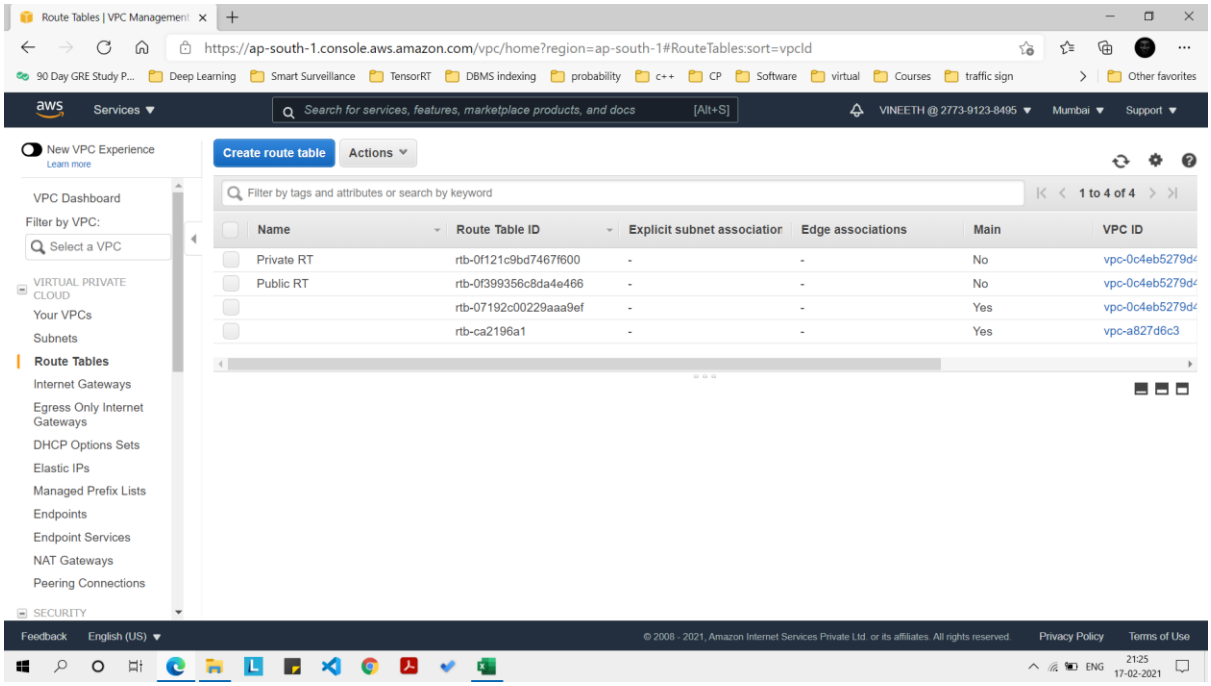
Part-2: Access AWS resources using VPC Endpoints

Task-1: Create VPC by creating 2 subnets in it (1 public and private).

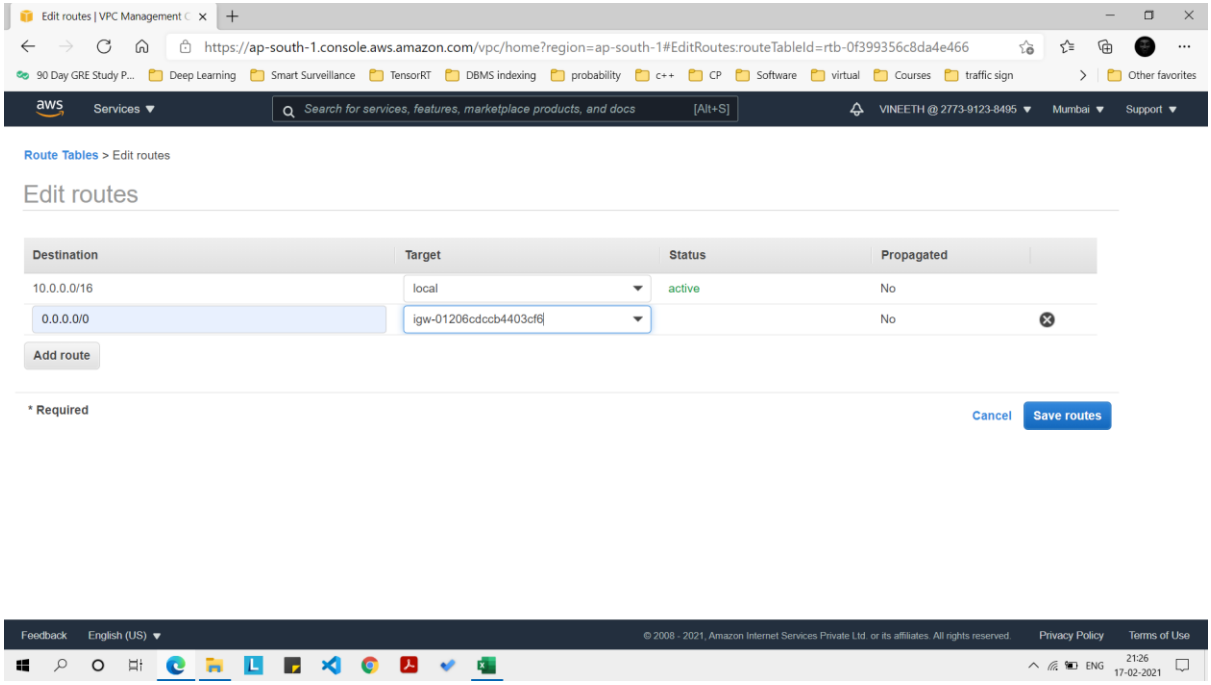


Task-2: Attach IGW to the VPC and configure the Route Table.

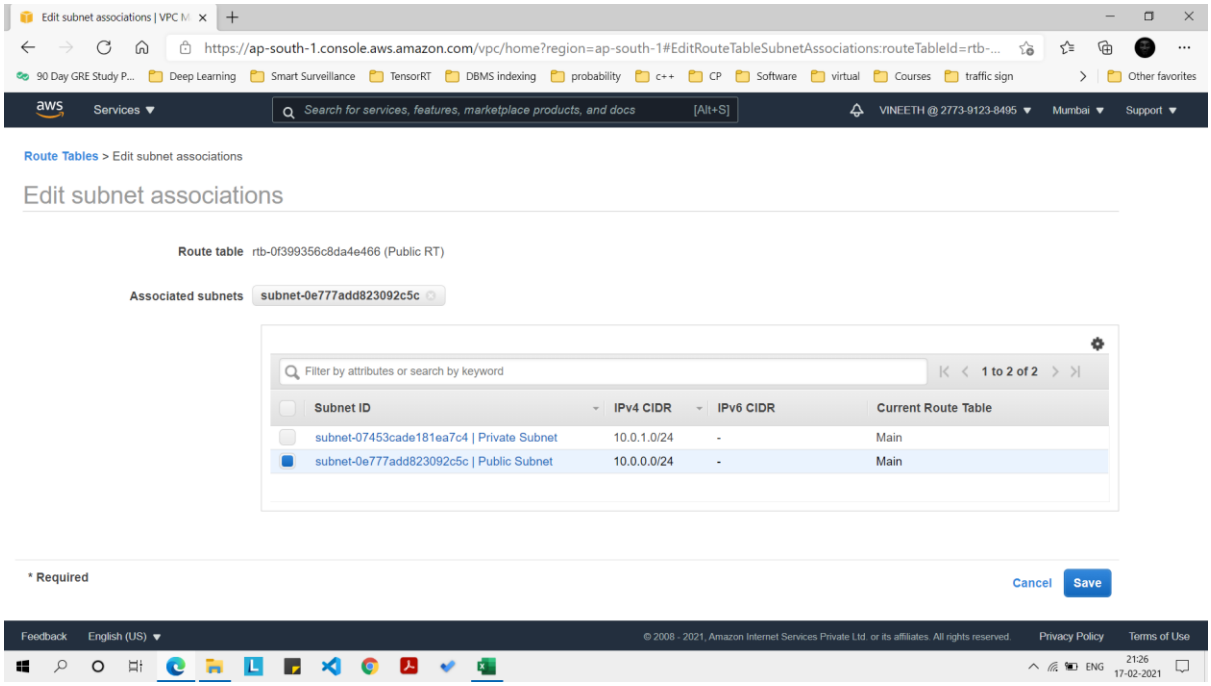




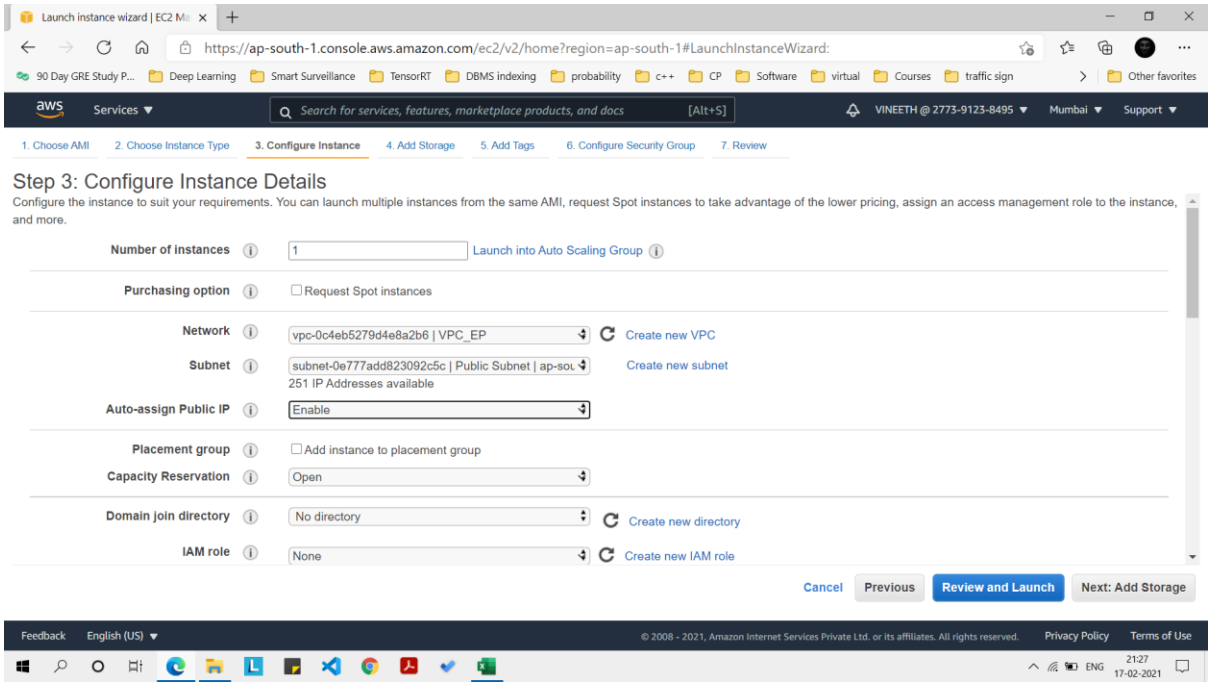
Edit Routes and direct traffic via IGW.

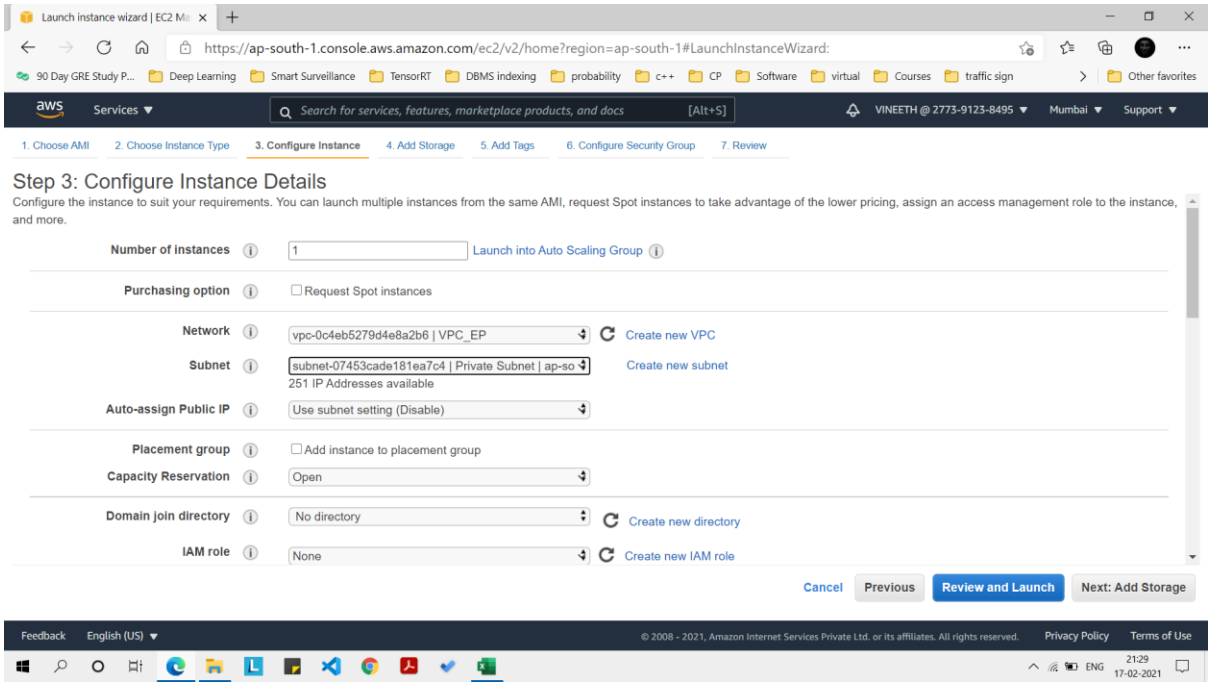


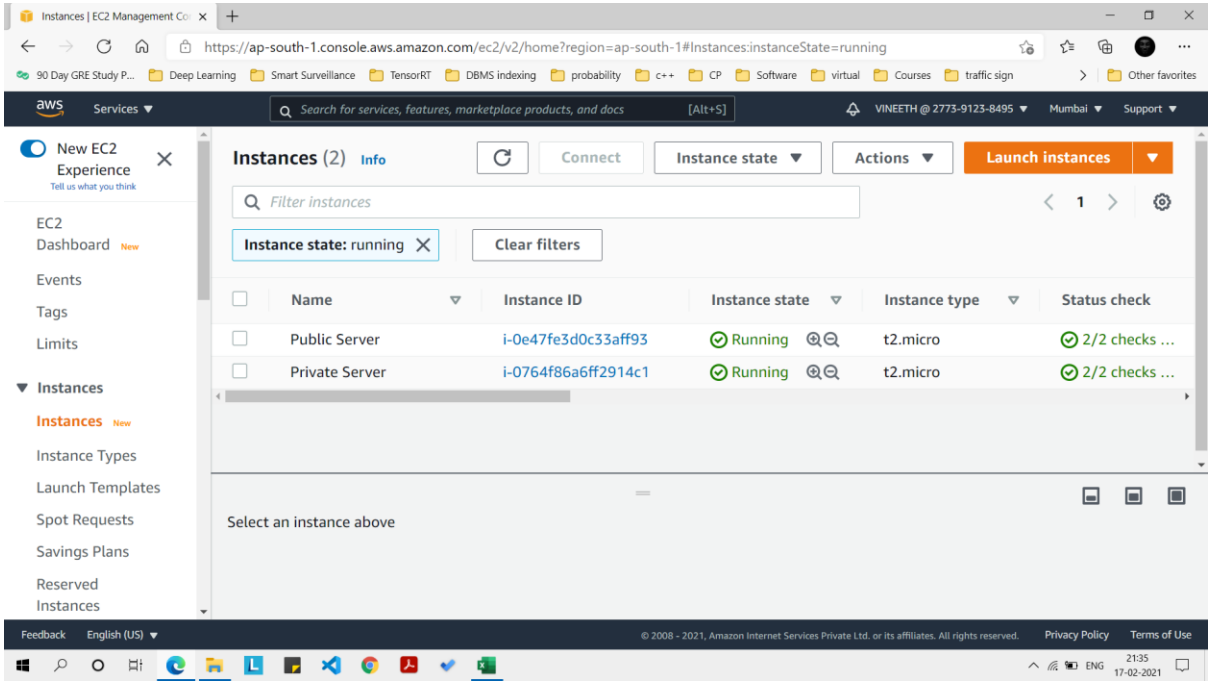
Edit Subnet associations



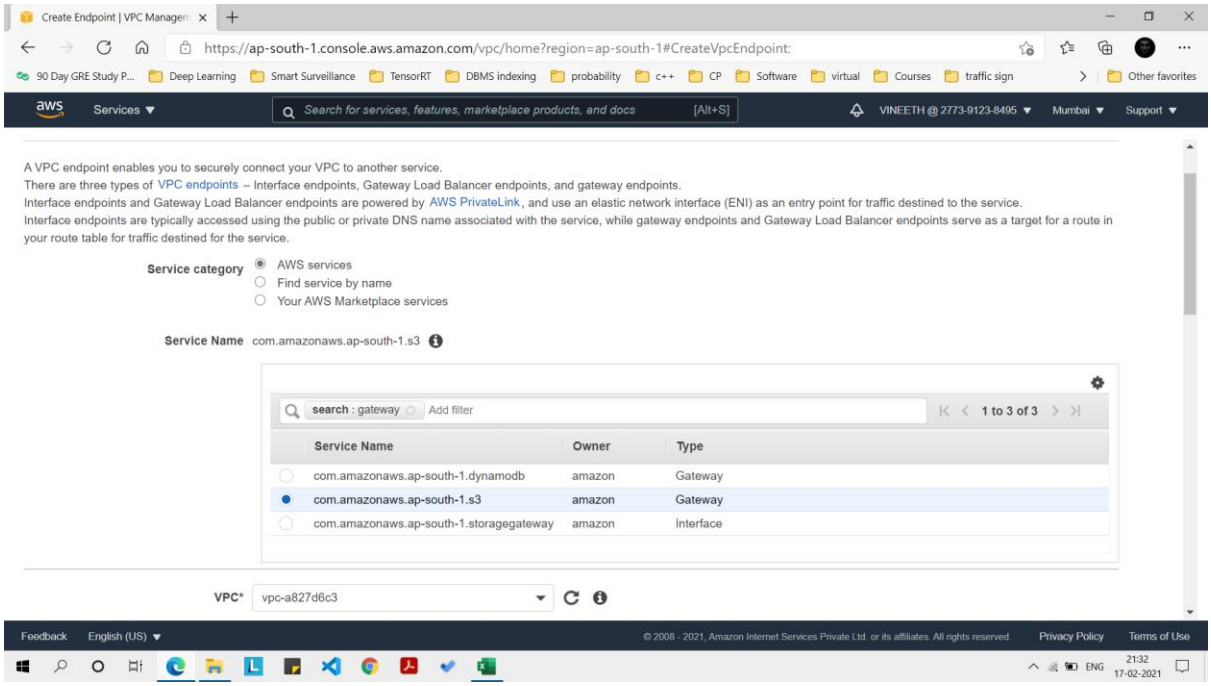
Task-3: Launch 1 EC2 Linux instance in each subnet.



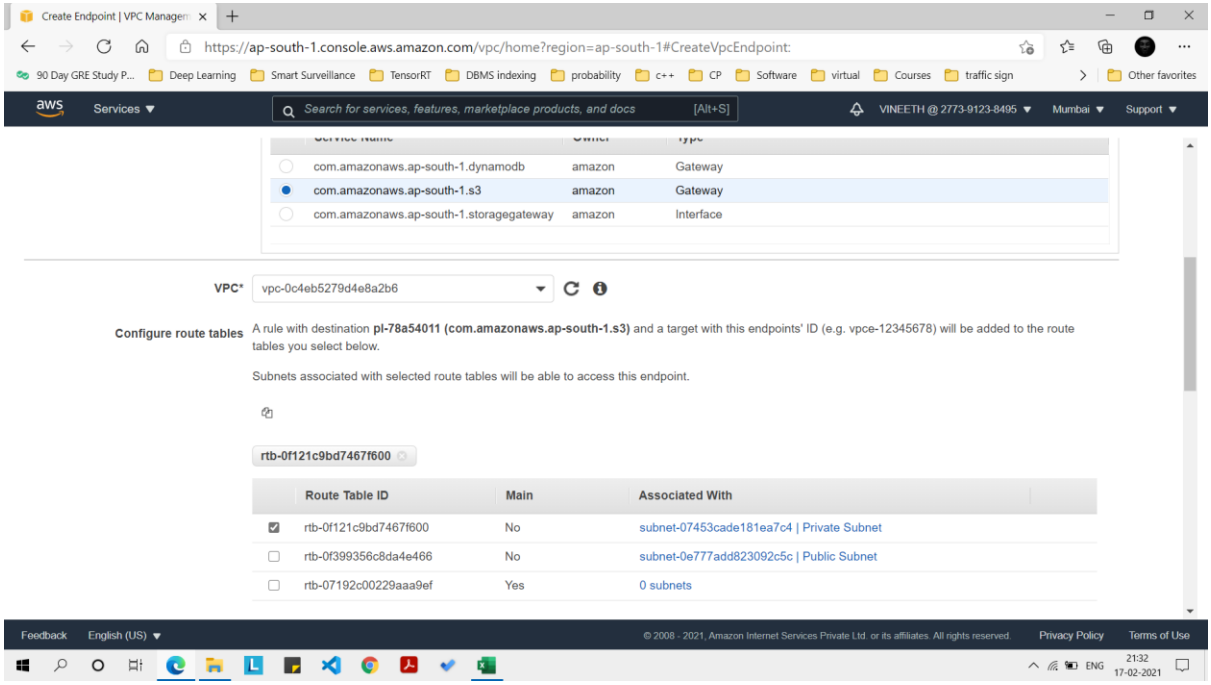

Launch instance wizard | EC2 M
https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
VINEETH @ 2773-9123-8495
Mumbai
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 3: Configure Instance Details
Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.
Number of instances
1
Launch into Auto Scaling Group
Purchasing option
Request Spot instances
Network
vpc-0c4eb5279d4e8a2b6 | VPC_EP
Create new VPC
Subnet
subnet-07453cade181ea7c4 | Private Subnet | ap-so
Create new subnet
251 IP Addresses available
Auto-assign Public IP
Use subnet setting (Disable)
Placement group
Add instance to placement group
Capacity Reservation
Open
Domain join directory
No directory
Create new directory
IAM role
None
Create new IAM role
Cancel
Previous
Review and Launch
Next: Add Storage
Feedback
English (US)
© 2008 - 2021, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
21:29
17-02-2021

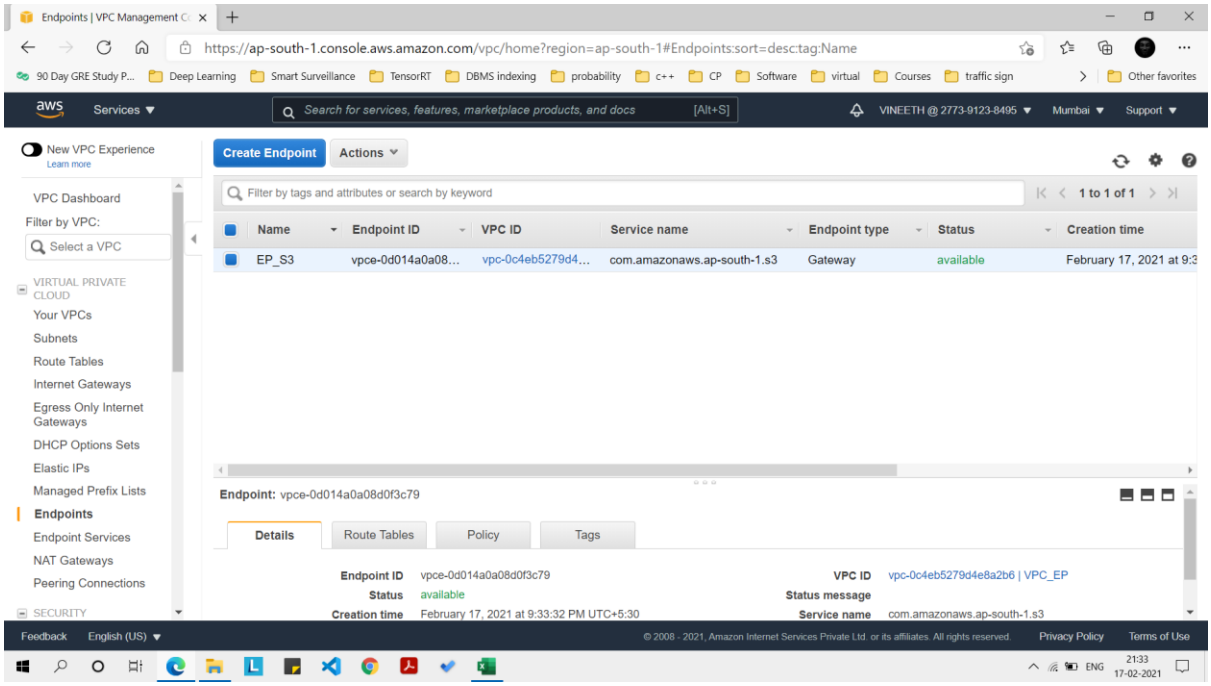

Instances | EC2 Management Co
https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:instanceState=running
Services
Search for services, features, marketplace products, and docs [Alt+S]
VINEETH @ 2773-9123-8495
Mumbai
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard New
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Instances (2) Info
Connect
Instance state
Actions
Launch instances
Filter instances
Instance state: running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Public Server
i-0e47fe3d0c33aff93
Running
t2.micro
2/2 checks ...
Private Server
i-0764f86a6ff2914c1
Running
t2.micro
2/2 checks ...
Select an instance above
Feedback
English (US)
© 2008 - 2021, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use
21:35
17-02-2021

Task-4: Create a VPC Endpoint and select the S3 Gateway service.

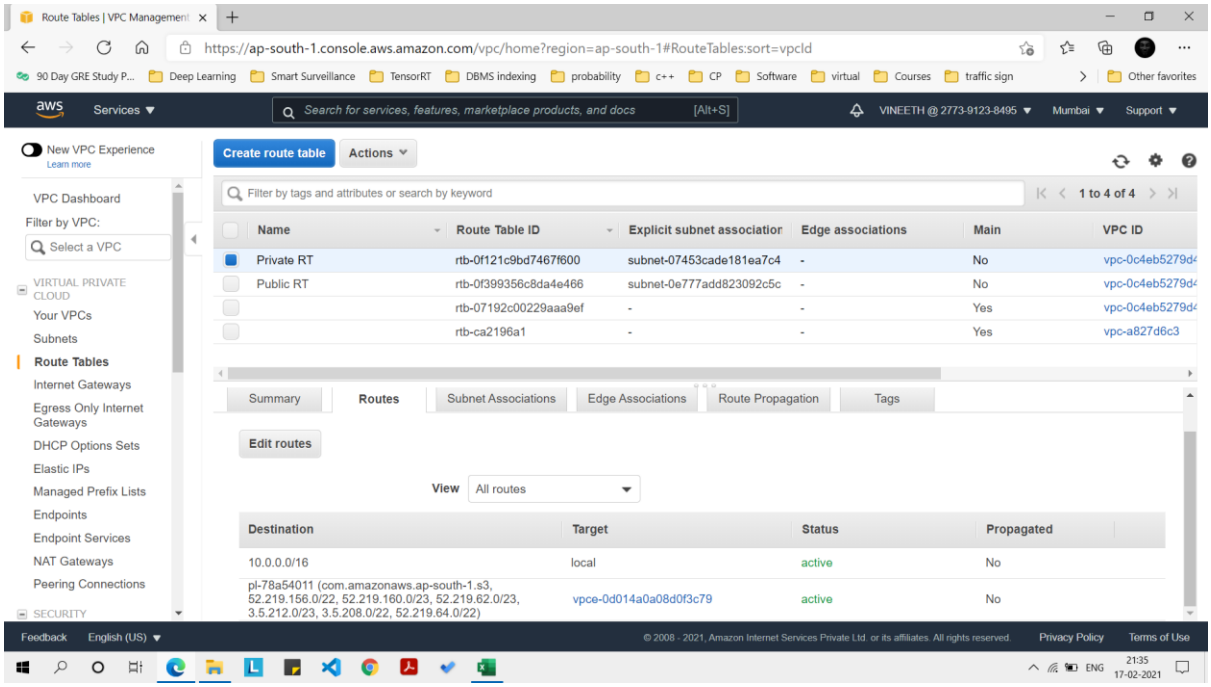


Task-5: associate it with the private subnet.

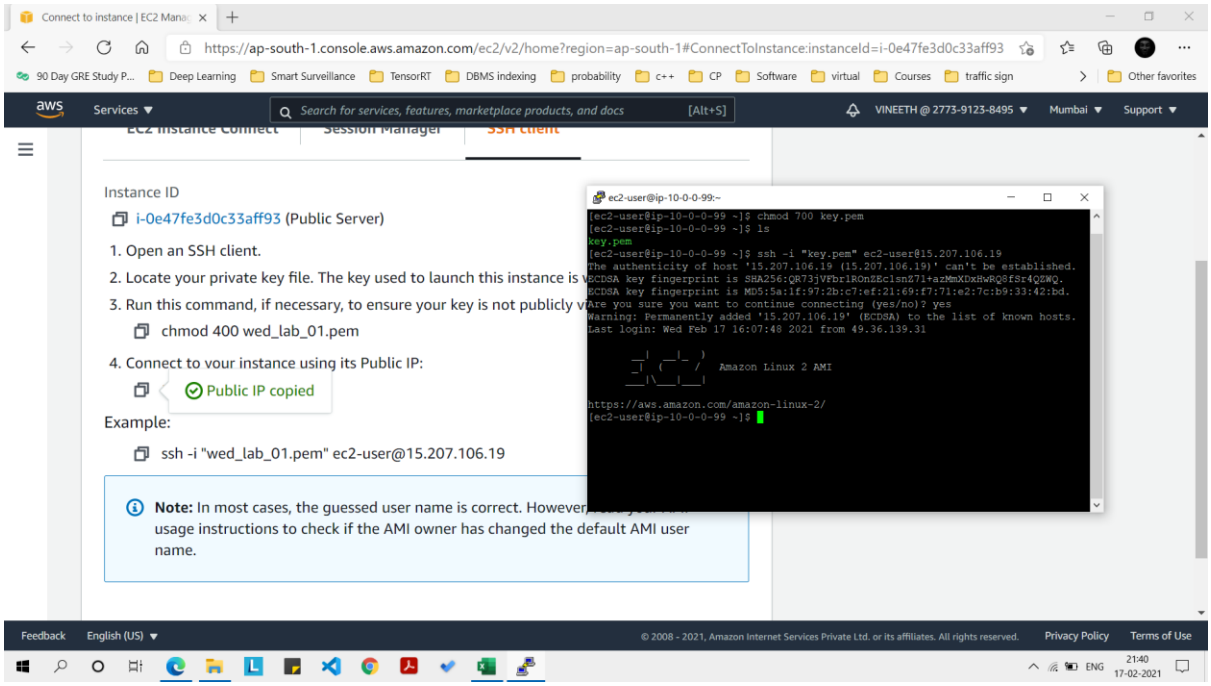




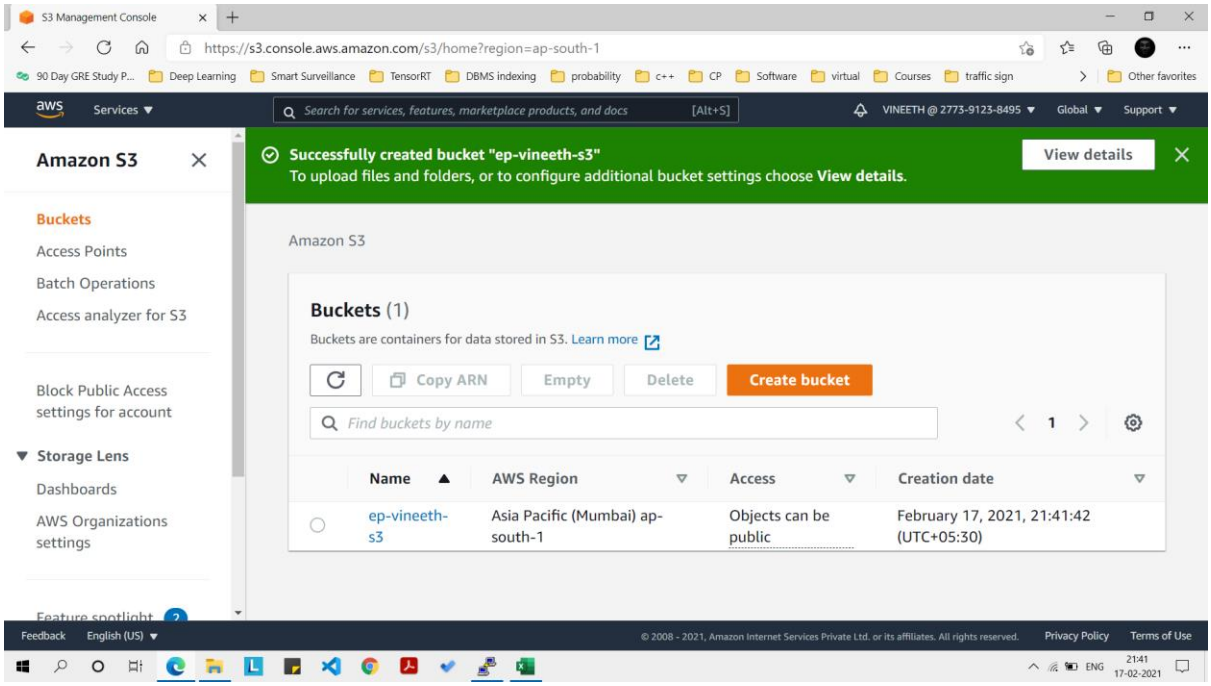
Task-6: Check the Private Route Table to make sure you see a route using the VPC Endpoint to S3.



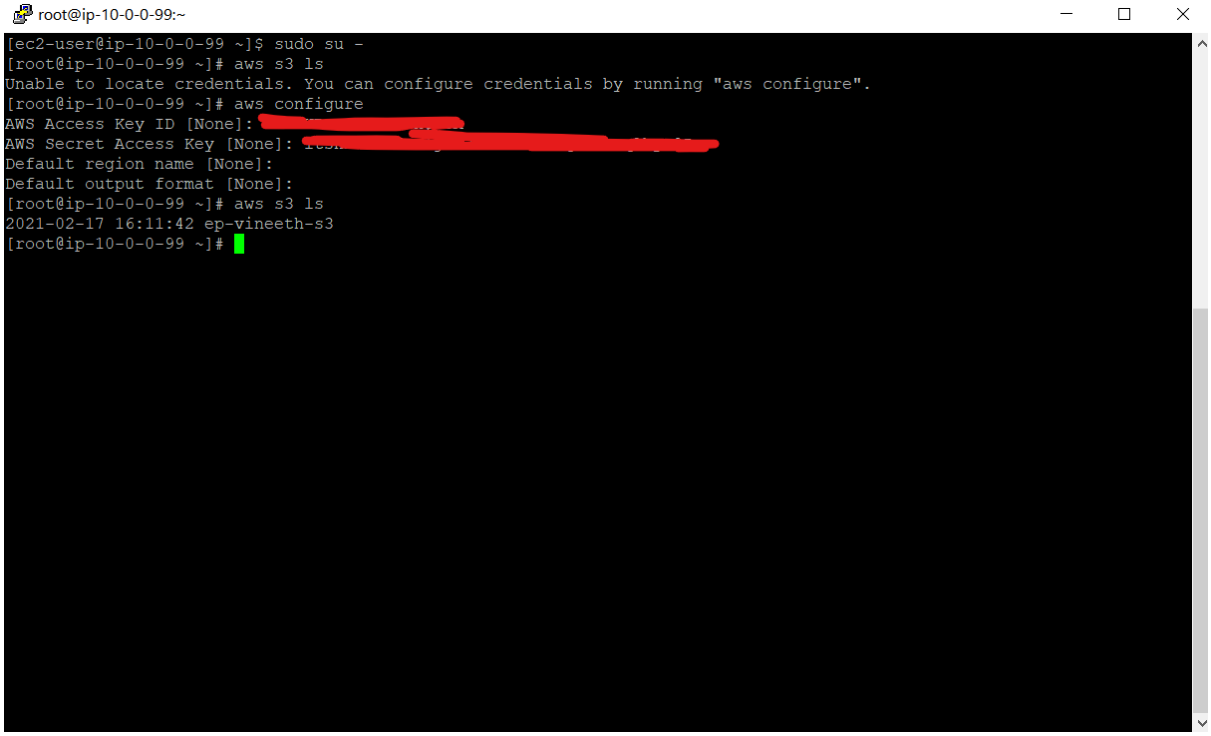
Task-7: Verify by doing SSH into the public instance.



Task-8: Create a S3 bucket.



Task-9: Check the availability of the AWS resources publicly and confirm the S3 buckets are shown in the current environment.

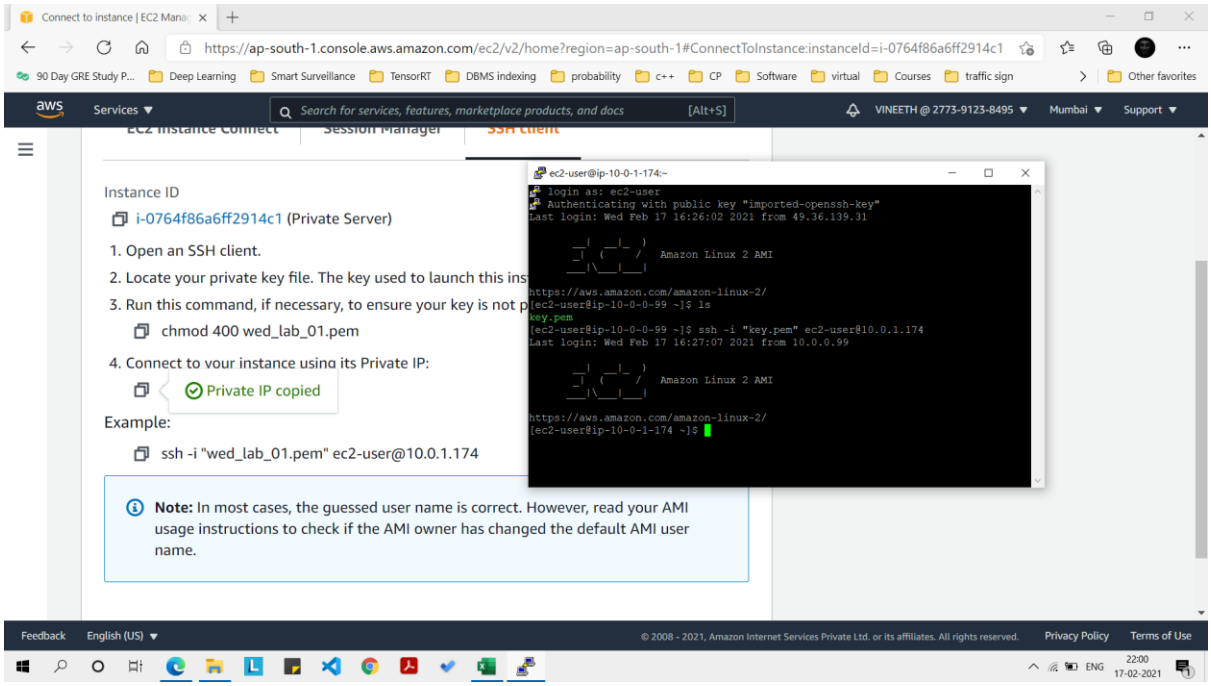


Task-10: Check the availability of the AWS resources privately and confirm the S3 buckets are shown in the current environment.

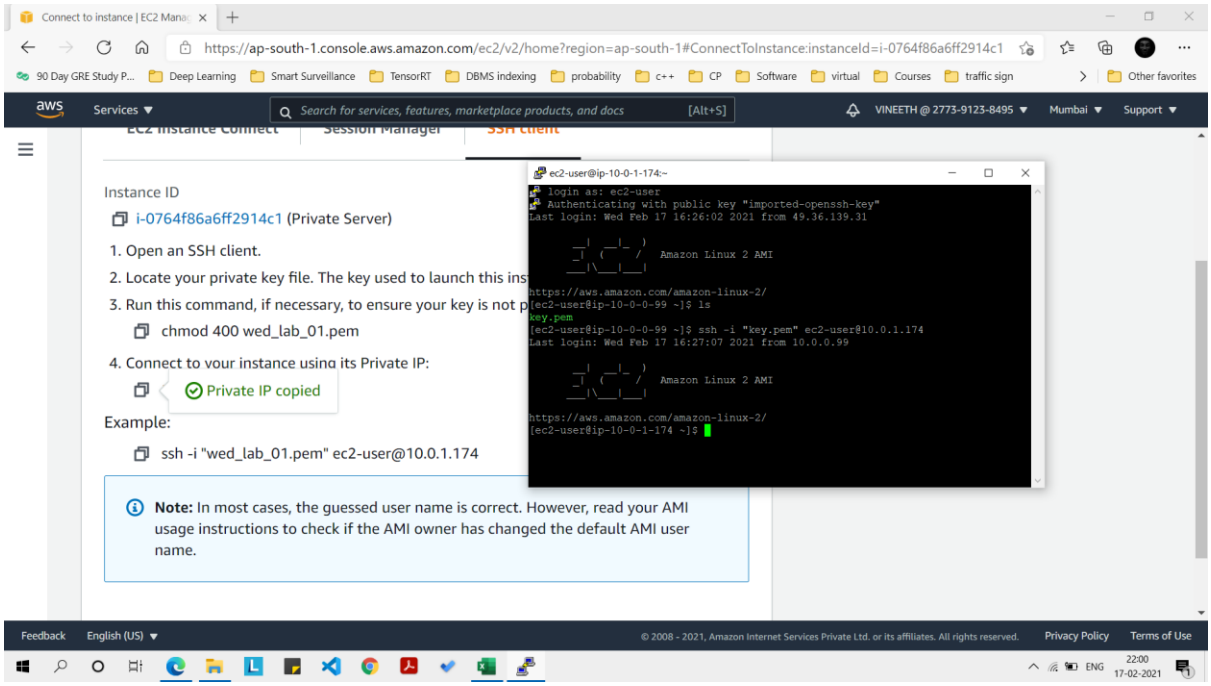
Access the private resource by SSH from the public server terminal.

Steps:

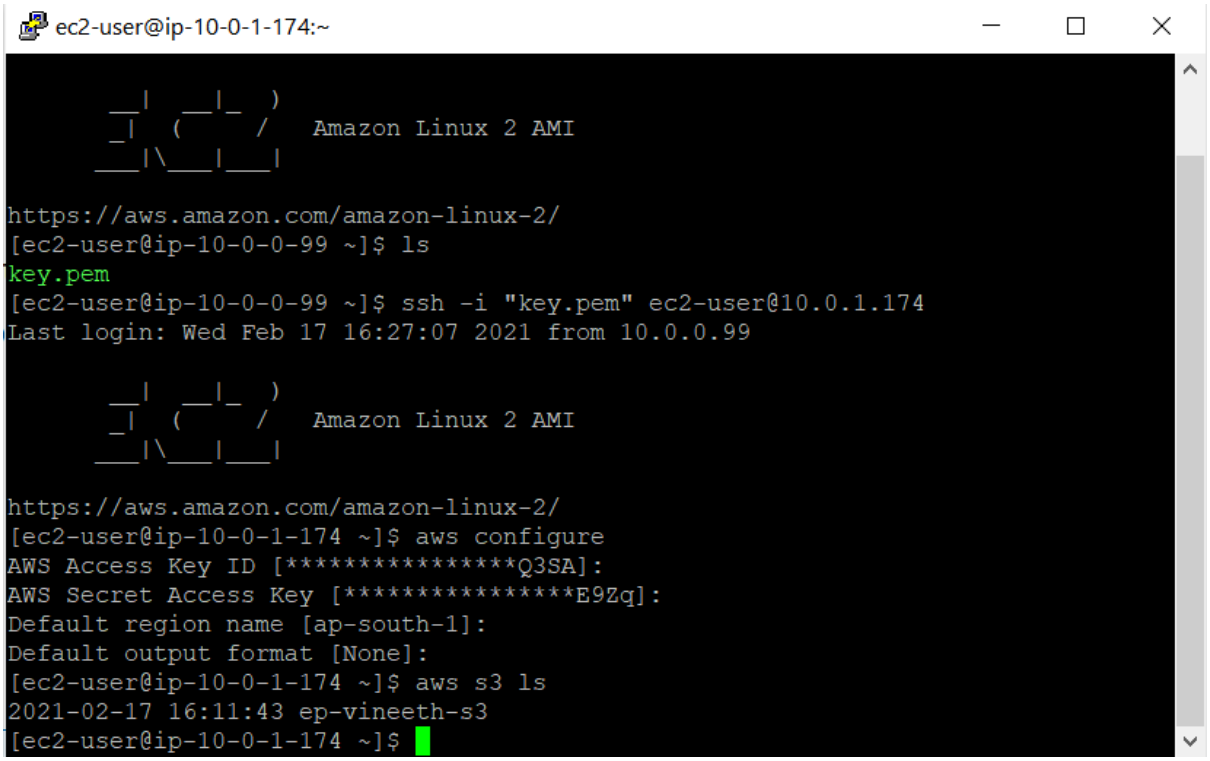
1. Putty into Public Server as private server cannot be directly accessed.
2. Remote login into private server via the public server using SSH.



3. Run the AWS configure command and set the default region.



Now try to access the S3 bucket via this private server.



Hence, we are able to successfully access this S3 bucket from the private server via the VPC Endpoint and without using NAT Gateway.