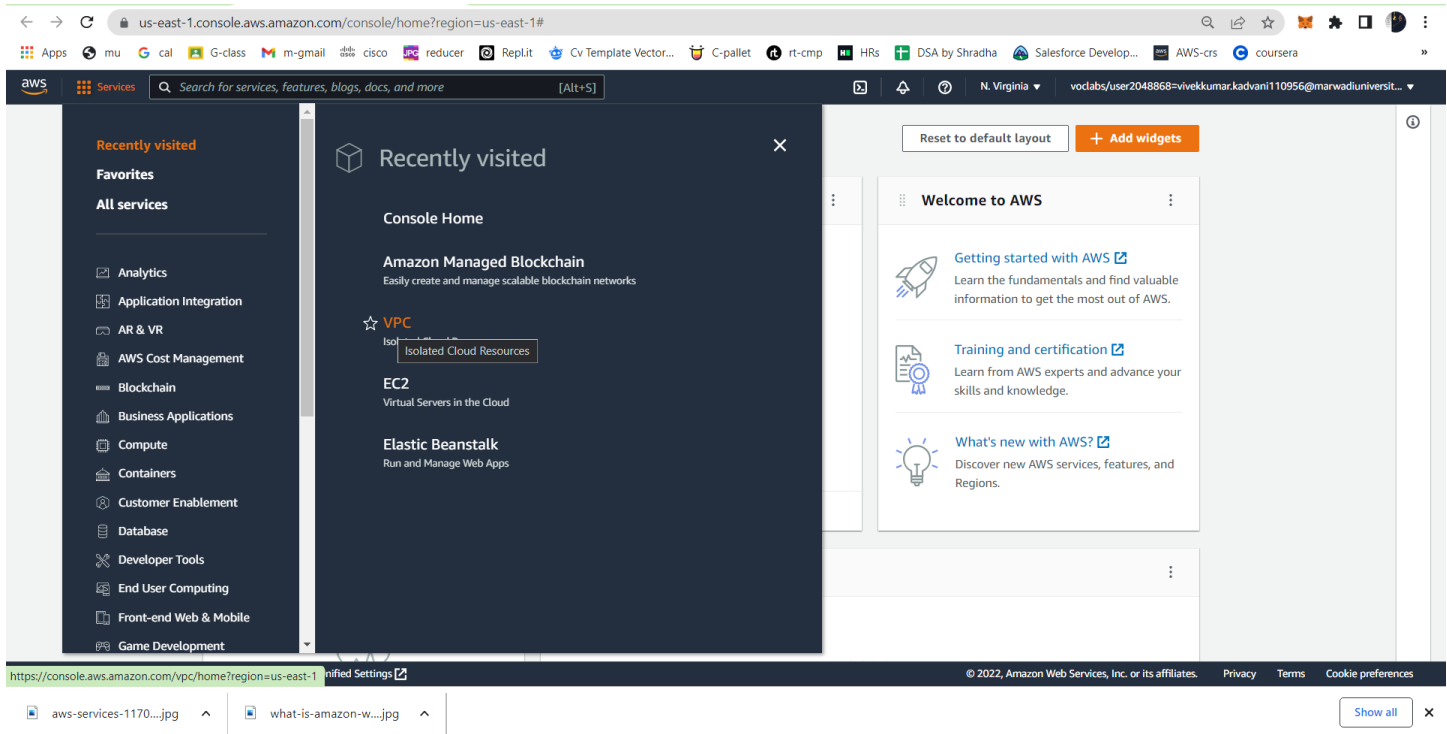


Practical - 3

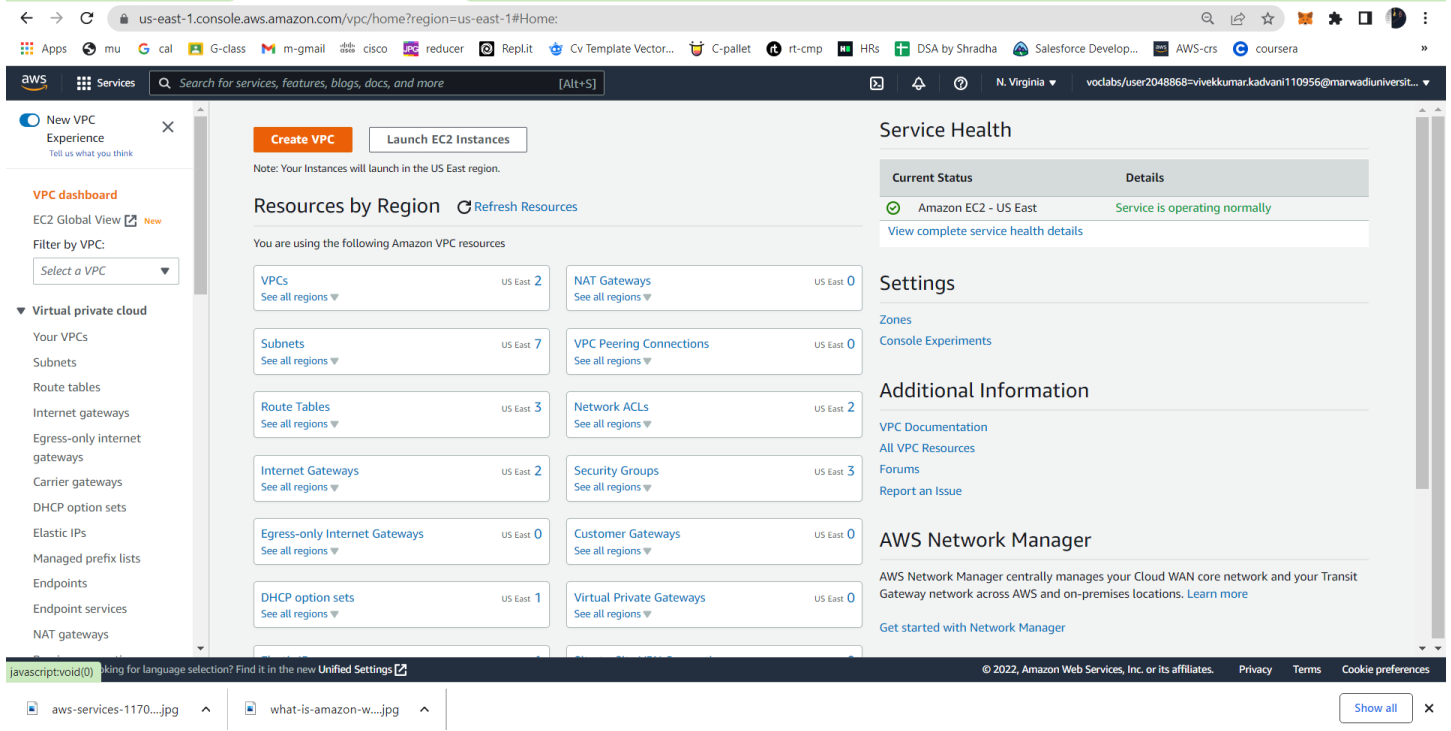
AIM : Build Your Virtual Private Cloud (VPC) and Launch a Web Server.

❖ **For implementing this practical follow the steps.**

- First of all, go to EC2 dashboard.
- And open VPC service.



- VPC dashboard looks like this from that dashboard we click on create VPC.



us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#Home:

Services Search for services, features, blogs, docs, and more [Alt+S]

New VPC Experience Tell us what you think

VPC dashboard EC2 Global View New

Filter by VPC: Select a VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Create VPC Launch EC2 Instances

Note: Your Instances will launch in the US East region.

Resources by Region Refresh Resources

You are using the following Amazon VPC resources

VPCs See all regions US East 2

Subnets See all regions US East 7

Route Tables See all regions US East 3

Internet Gateways See all regions US East 2

Egress-only Internet Gateways See all regions US East 0

DHCP option sets See all regions US East 1

NAT Gateways See all regions US East 0

VPC Peering Connections See all regions US East 0

Network ACLs See all regions US East 2

Security Groups See all regions US East 3

Customer Gateways See all regions US East 0

Virtual Private Gateways See all regions US East 0

Service Health

Current Status Details

Amazon EC2 - US East Service is operating normally

View complete service health details

Settings

Zones

Console Experiments

Additional Information

VPC Documentation

All VPC Resources

Forums

Report an Issue

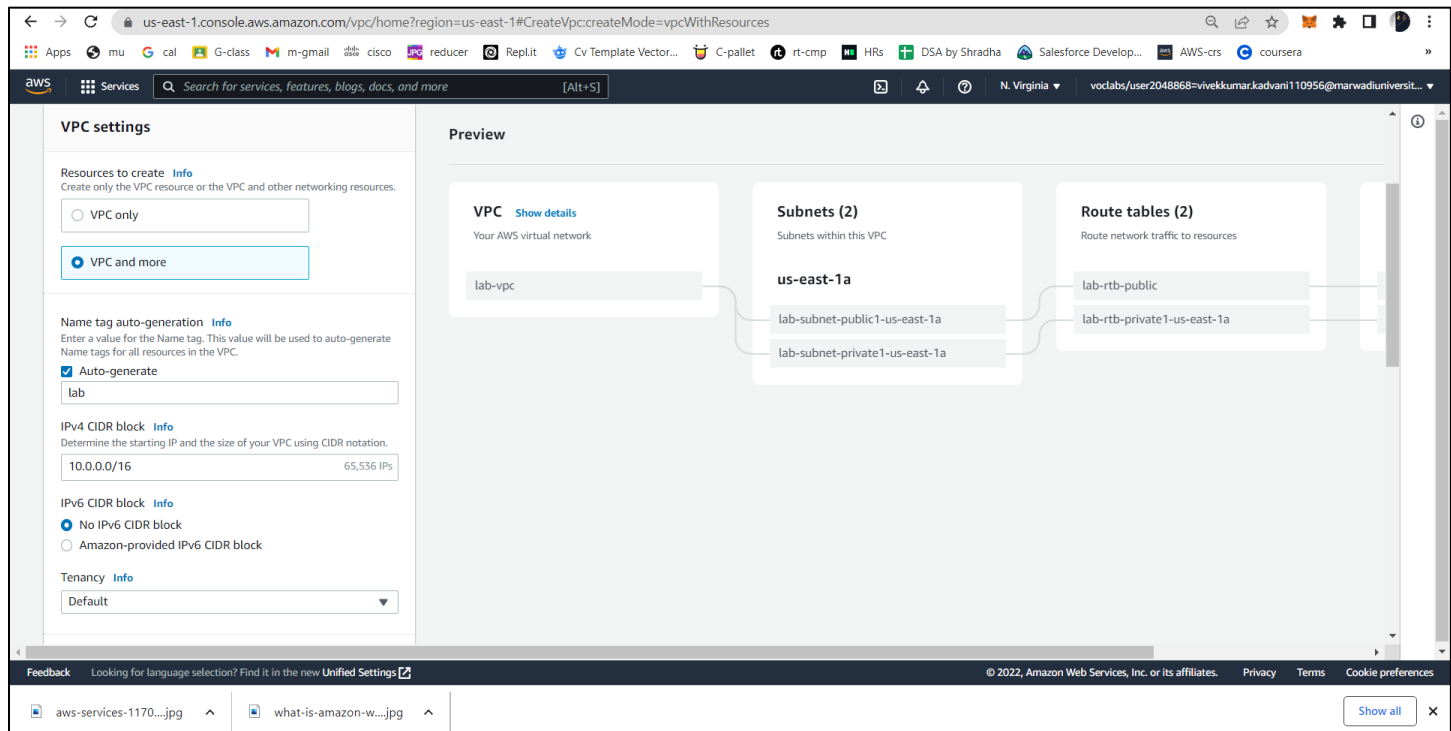
AWS Network Manager

AWS Network Manager centrally manages your Cloud WAN core network and your Transit Gateway network across AWS and on-premises locations. Learn more

Get started with Network Manager

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- It redirects us to VPC configuration page.
- Add following detail as shown in figure.



us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#CreateVpccreateMode=vpcWithResources

Services Search for services, features, blogs, docs, and more [Alt+S]

VPC settings

Resources to create Info

Create only the VPC resource or the VPC and other networking resources.

☐ VPC only

☒ VPC and more

Name tag auto-generation Info

Enter a value for the Name tag. This value will be used to auto-generate Name tags for all resources in the VPC.

☒ Auto-generate

lab

IPv4 CIDR block Info

Determine the starting IP and the size of your VPC using CIDR notation.

10.0.0.0/16 65,536 IPs

IPv6 CIDR block Info

☒ No IPv6 CIDR block

☐ Amazon-provided IPv6 CIDR block

Tenancy Info

Default

Preview

VPC Show details

Your AWS virtual network

lab-vpc

Subnets (2)

Subnets within this VPC

us-east-1a

lab-subnet-public1-us-east-1a

lab-subnet-private1-us-east-1a

Route tables (2)

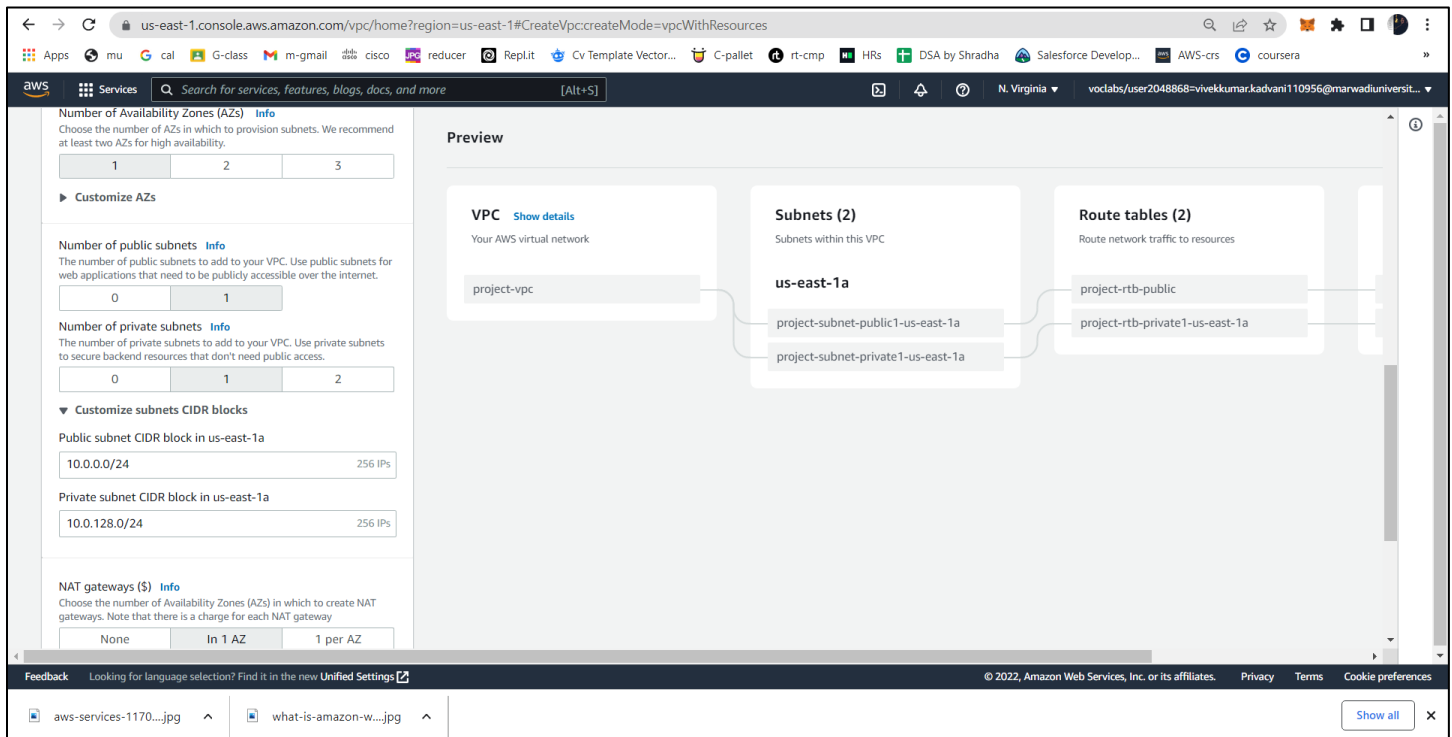
Route network traffic to resources

lab-rtb-public

lab-rtb-private1-us-east-1a

Feedback Looking for language selection? Find it in the new Unified Settings

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#CreateVpc:createMode=vpcWithResources

Number of Availability Zones (AZs) [Info](#)
Choose the number of AZs in which to provision subnets. We recommend at least two AZs for high availability.

1 2 3

Customize AZs

Number of public subnets [Info](#)
The number of public subnets to add to your VPC. Use public subnets for web applications that need to be publicly accessible over the internet.

0 1

Number of private subnets [Info](#)
The number of private subnets to add to your VPC. Use private subnets to secure backend resources that don't need public access.

0 1 2

Customize subnets CIDR blocks

Public subnet CIDR block in us-east-1a
10.0.0.0/24 256 IPs

Private subnet CIDR block in us-east-1a
10.0.128.0/24 256 IPs

NAT gateways (\$) [Info](#)
Choose the number of Availability Zones (AZs) in which to create NAT gateways. Note that there is a charge for each NAT gateway.

None In 1 AZ 1 per AZ

Preview

VPC [Show details](#)
Your AWS virtual network

Subnets (2)
Subnets within this VPC

us-east-1a

project-subnet-public1-us-east-1a

project-subnet-private1-us-east-1a

Route tables (2)
Route network traffic to resources

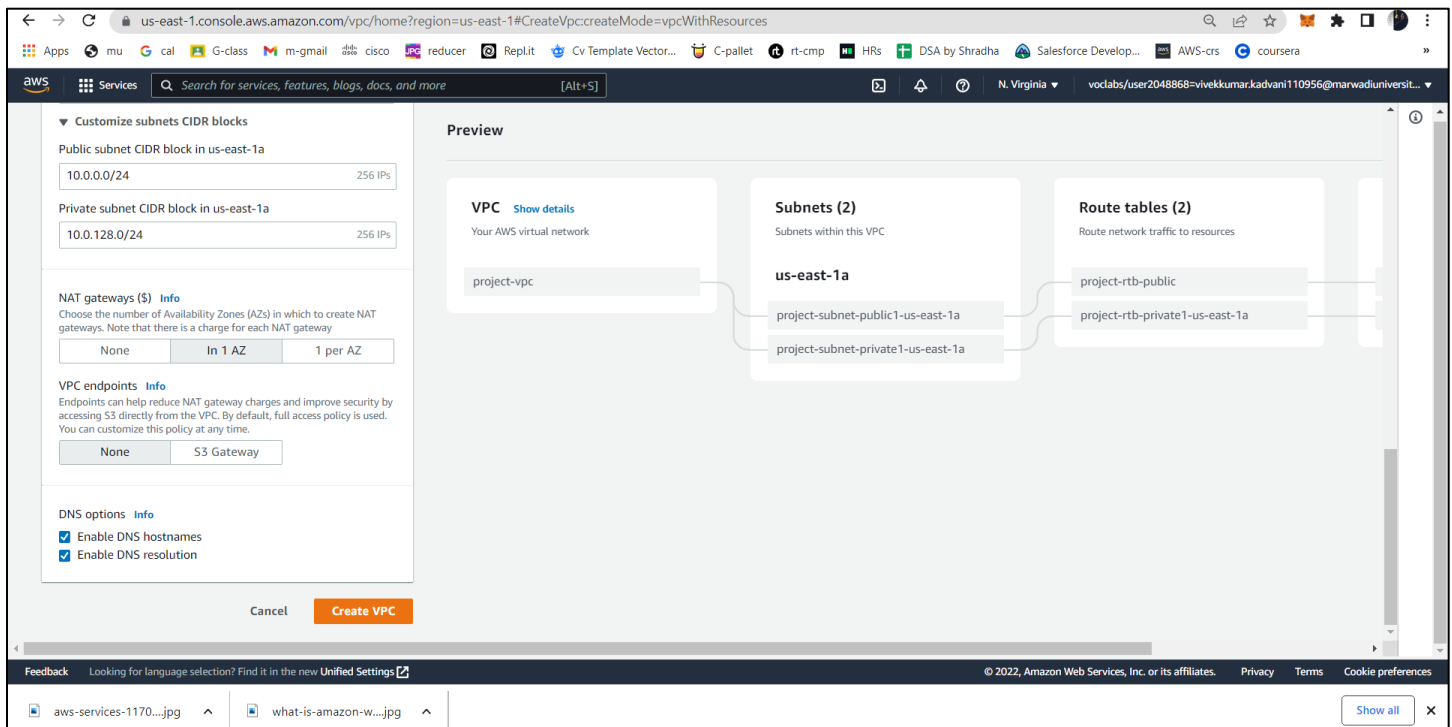
project-rtb-public

project-rtb-private1-us-east-1a

Feedback Looking for language selection? Find it in the new Unified Settings [\[Alt+S\]](#)

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aws-services-1170...jpg what-is-amazon-w...jpg [Show all](#)



us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#CreateVpc:createMode=vpcWithResources

Customize subnets CIDR blocks

Public subnet CIDR block in us-east-1a
10.0.0.0/24 256 IPs

Private subnet CIDR block in us-east-1a
10.0.128.0/24 256 IPs

NAT gateways (\$) [Info](#)
Choose the number of Availability Zones (AZs) in which to create NAT gateways. Note that there is a charge for each NAT gateway.

None In 1 AZ 1 per AZ

VPC endpoints [Info](#)
Endpoints can help reduce NAT gateway charges and improve security by accessing S3 directly from the VPC. By default, full access policy is used. You can customize this policy at any time.

None S3 Gateway

DNS options [Info](#)

☒ Enable DNS hostnames

☒ Enable DNS resolution

Cancel [Create VPC](#)

Preview

VPC [Show details](#)
Your AWS virtual network

Subnets (2)
Subnets within this VPC

us-east-1a

project-subnet-public1-us-east-1a

project-subnet-private1-us-east-1a

Route tables (2)
Route network traffic to resources

project-rtb-public

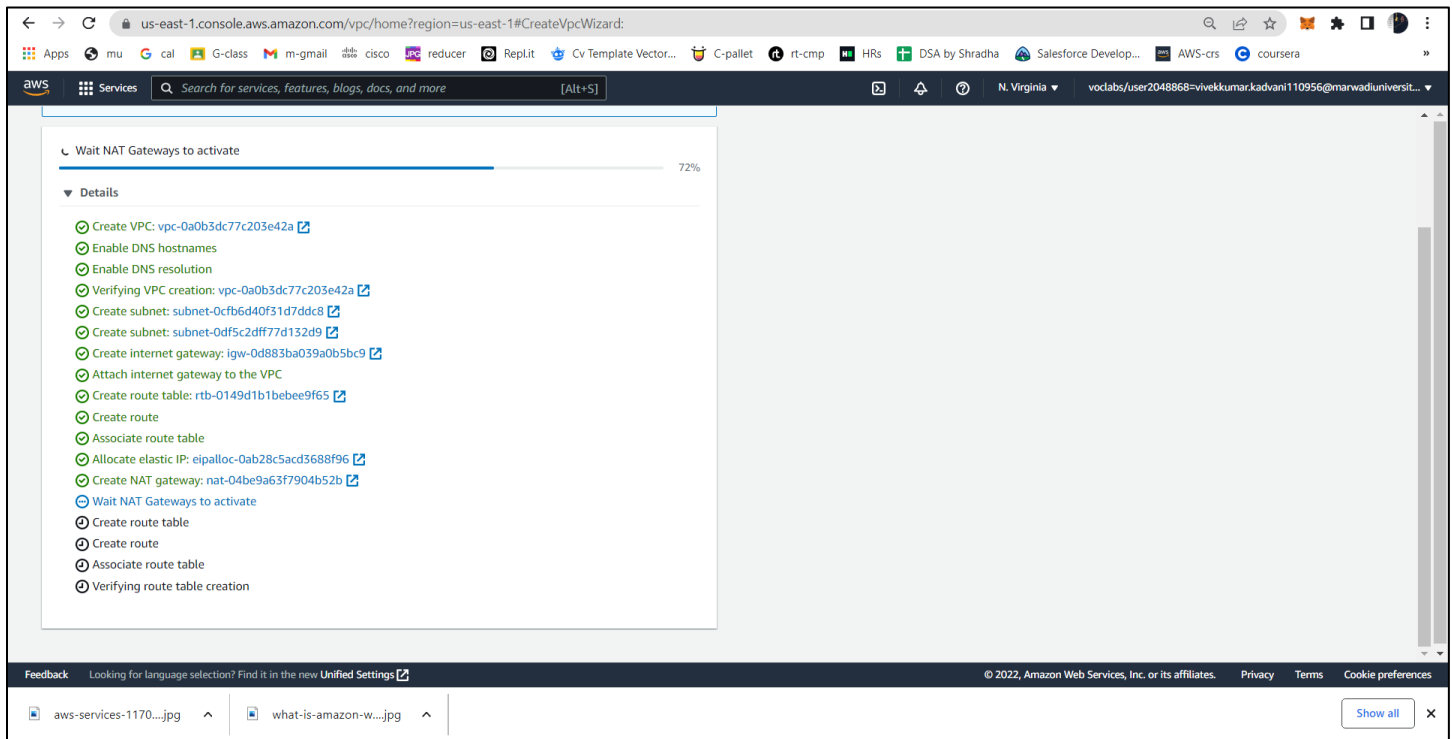
project-rtb-private1-us-east-1a

Feedback Looking for language selection? Find it in the new Unified Settings [\[Alt+S\]](#)

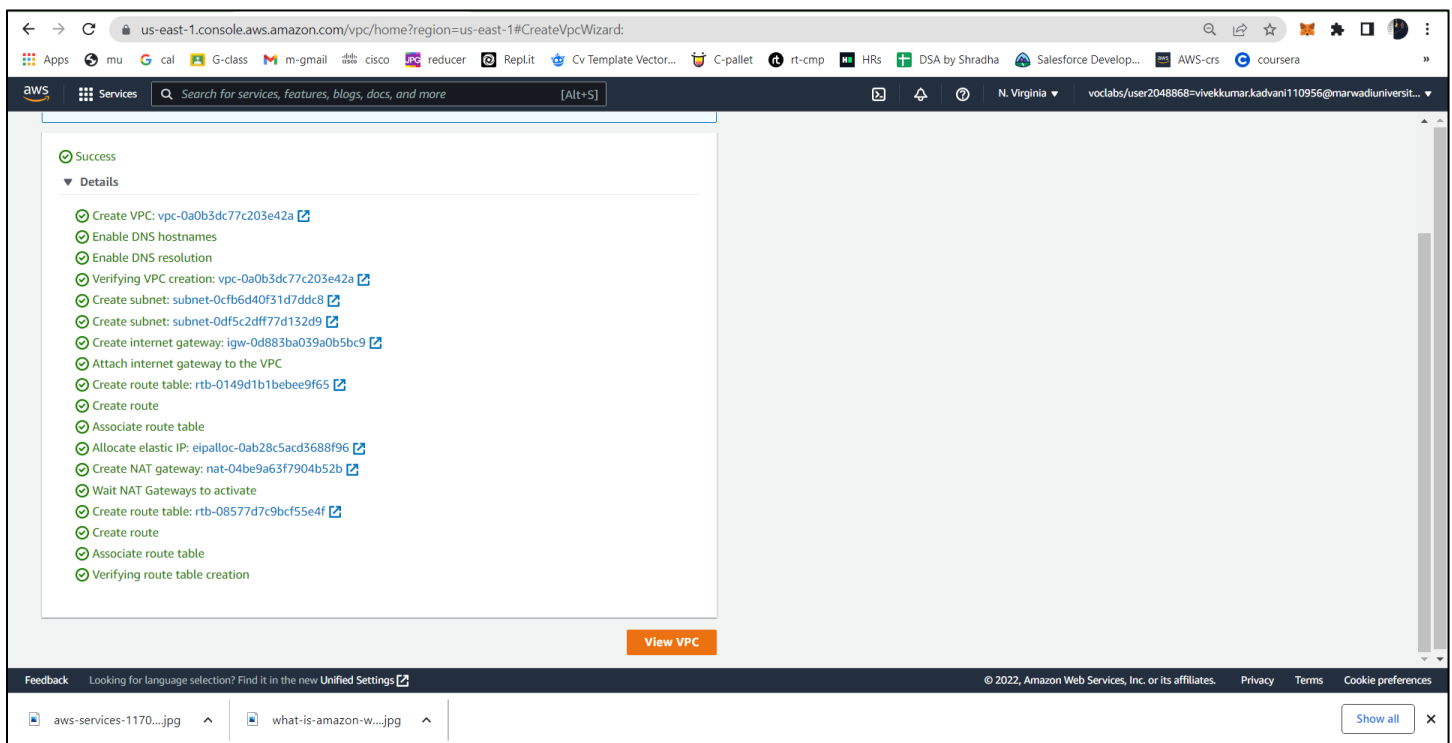
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aws-services-1170...jpg what-is-amazon-w...jpg [Show all](#)

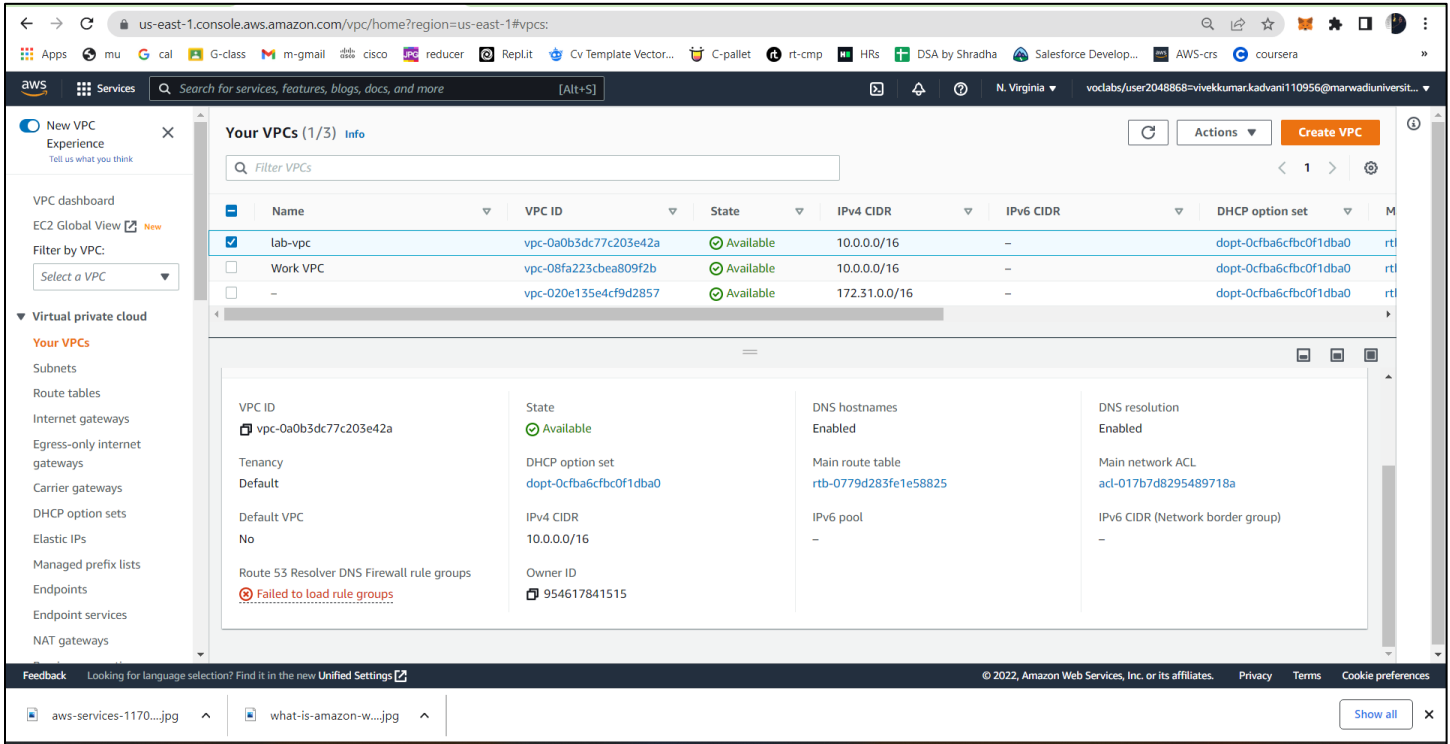
- After filling that detail click on create VPC.
- It takes some times and showing all task green one by one.



➤ And after completing all process view VPC button enabled.



- By clicking one view VPC button you redirect to VPC dashboard and here you get all detail about your VPC.



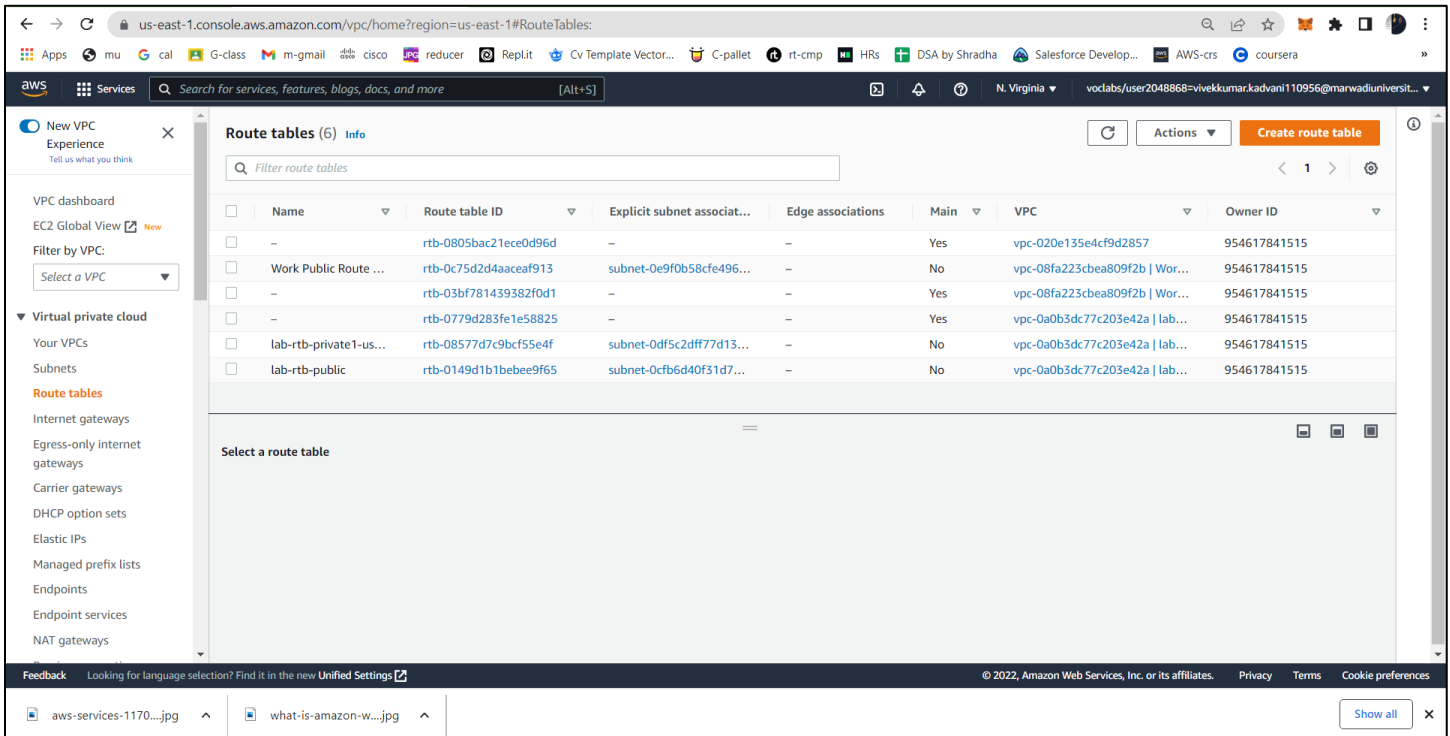
The screenshot shows the AWS VPC dashboard for the region 'us-east-1'. The 'Your VPCs (1/3)' section displays a table of VPCs:

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP option set	Main route table
lab-vpc	vpc-0a0b3dc77c203e42a	Available	10.0.0.0/16	-	dopt-0cfba6cfbc0f1dba0	rtb-0779d283fe1e58825
Work VPC	vpc-08fa223cbea809f2b	Available	10.0.0.0/16	-	dopt-0cfba6cfbc0f1dba0	rtb-0779d283fe1e58825
-	vpc-020e135e4cf9d2857	Available	172.31.0.0/16	-	dopt-0cfba6cfbc0f1dba0	rtb-0779d283fe1e58825

The 'lab-vpc' details are expanded, showing:

- VPC ID: vpc-0a0b3dc77c203e42a
- State: Available
- DNS hostnames: Enabled
- DNS resolution: Enabled
- Tenancy: Default
- DHCP option set: dopt-0cfba6cfbc0f1dba0
- Main route table: rtb-0779d283fe1e58825
- Main network ACL: acl-017b7d8295489718a
- Default VPC: No
- IPv4 CIDR: 10.0.0.0/16
- IPv6 pool: -
- IPv6 CIDR (Network border group): -
- Owner ID: 954617841515
- Route 53 Resolver DNS Firewall rule groups: Failed to load rule groups

- Showing route table details.



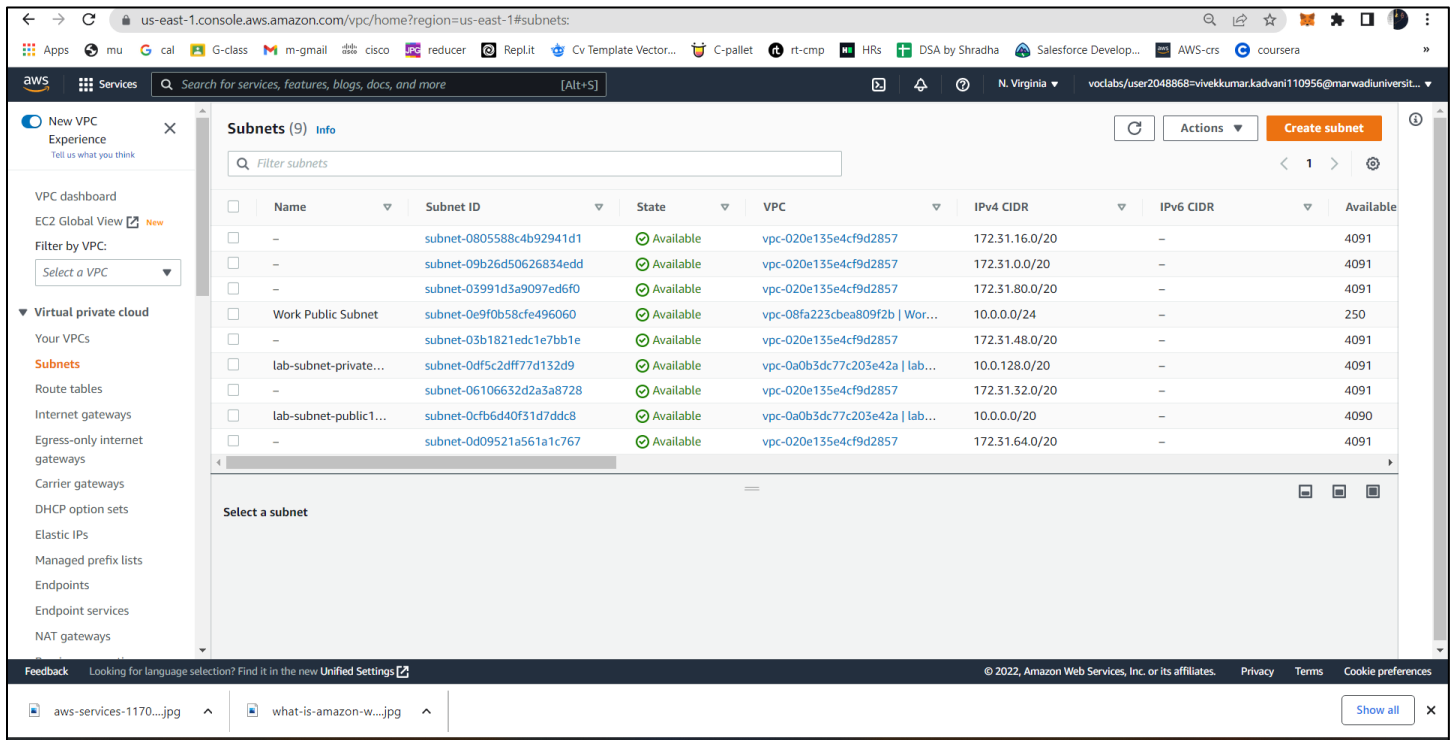
The screenshot shows the AWS VPC dashboard for the region 'us-east-1'. The 'Route tables (6)' section displays a table of route tables:

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC	Owner ID
-	rtb-0805bac21ece0d96d	-	-	Yes	vpc-020e135e4cf9d2857	954617841515
Work Public Route ...	rtb-0c75d2d4aaceaf913	subnet-0e9f0b58cfe496...	-	No	vpc-08fa223cbea809f2b Wor...	954617841515
-	rtb-03bf781439382f0d1	-	-	Yes	vpc-08fa223cbea809f2b Wor...	954617841515
-	rtb-0779d283fe1e58825	-	-	Yes	vpc-0a0b3dc77c203e42a lab...	954617841515
lab-rtb-private1-us...	rtb-08577d7c9bcf55e4f	subnet-0df5c2dff77d13...	-	No	vpc-0a0b3dc77c203e42a lab...	954617841515
lab-rtb-public	rtb-0149d1b1bebee965	subnet-0cfb6d40f31d7...	-	No	vpc-0a0b3dc77c203e42a lab...	954617841515

The 'lab-rtb-public' route table is selected, showing its details:

- Name: lab-rtb-public
- Route table ID: rtb-0149d1b1bebee965
- Explicit subnet associations: subnet-0cfb6d40f31d7...
- Edge associations: -
- Main: No
- VPC: vpc-0a0b3dc77c203e42a | lab...
- Owner ID: 954617841515

- Showing subnet details.



Subnets (9) Info

Filter subnets

	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available
<input type="checkbox"/>	-	subnet-0805588c4b92941d1	Available	vpc-020e135e4cf9d2857	172.31.16.0/20	-	4091
<input type="checkbox"/>	-	subnet-09b26d50626834edd	Available	vpc-020e135e4cf9d2857	172.31.0.0/20	-	4091
<input type="checkbox"/>	-	subnet-03991d3a9097ed6f0	Available	vpc-020e135e4cf9d2857	172.31.80.0/20	-	4091
<input type="checkbox"/>	Work Public Subnet	subnet-0e9f0b58cfe496060	Available	vpc-08fa223cbea809f2b Wor...	10.0.0.0/24	-	250
<input type="checkbox"/>	-	subnet-03b1821edc1e7bb1e	Available	vpc-020e135e4cf9d2857	172.31.48.0/20	-	4091
<input type="checkbox"/>	lab-subnet-private...	subnet-0df5c2dff7d132d9	Available	vpc-0a0b3dc77c203e42a lab...	10.0.128.0/20	-	4091
<input type="checkbox"/>	-	subnet-06106632d2a3a8728	Available	vpc-020e135e4cf9d2857	172.31.32.0/20	-	4091
<input type="checkbox"/>	lab-subnet-public1...	subnet-0cfb6d40f31d7ddc8	Available	vpc-0a0b3dc77c203e42a lab...	10.0.0.0/20	-	4090
<input type="checkbox"/>	-	subnet-0d09521a561a1c767	Available	vpc-020e135e4cf9d2857	172.31.64.0/20	-	4091

Select a subnet