

Module-4 Case Study

Problem Statement: You work for XYZ Corporation and based on the expansion requirements of your corporation you have been asked to create and set up a distinct Amazon VPC for production and development team. You are expected to perform the following tasks for the respective VPCs:

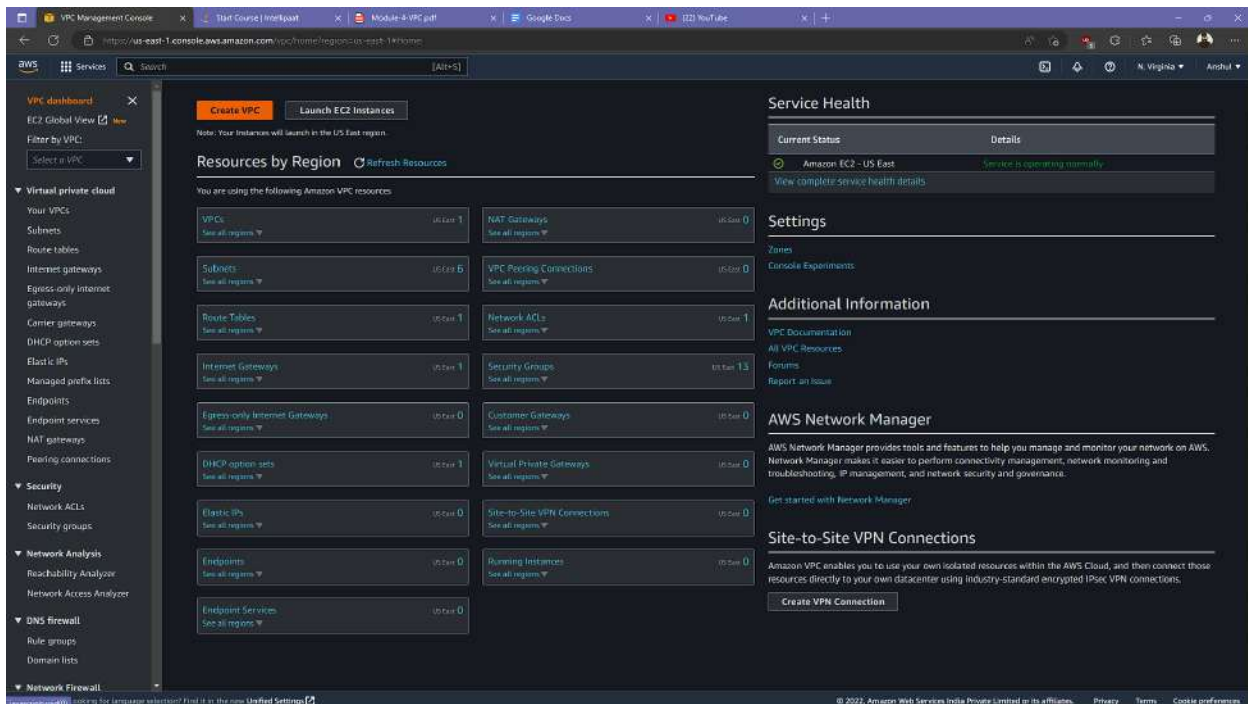
Production Network:

1. Design and build a 4 tier architecture
2. Create 5 subnets out of which 4 should be private with names app1, app2, dbcache and db and one should be public named web.
3. Launch instances in all subnets and name them as per the subnet that they have been launched in.
4. Allow dbcache instance and app1 subnet to send internet requests
5. Manage security groups and NACLs

Development Network:

1. Design and build 2 tier architecture with two subnets named web and db and launch instances in both subnets and name them as per the subnet names.
2. Make sure only web subnet can send internet requests
3. Create peering connection between production network and development network
4. Setup connection between db subnets of both production network and development network respectively.

Create a VPC named Production network.



The screenshot displays the AWS Management Console VPC dashboard. The left sidebar shows the navigation menu with categories like Virtual private cloud, Security, Network Analysis, and Network Firewall. The main content area features a 'Create VPC' button and a 'Launch EC2 Instances' button. Below these, a 'Resources by Region' section lists various AWS VPC resources and their counts for the 'us-east-1' region. The 'Service Health' section on the right indicates that the 'Amazon EC2 - US East' service is operating normally. The 'Settings' section shows the current user 'James' and the console language 'English (US)'. The 'Additional Information' section provides links to VPC documentation, resources, forums, and a report an issue button. The 'AWS Network Manager' section describes its capabilities for managing and monitoring networks. The 'Site-to-Site VPN Connections' section explains how to connect on-premise resources to the AWS Cloud using IPsec VPN connections.

Resource	Count
VPCs	1
Subnets	5
Route Tables	1
Internet Gateways	1
Egress-only Internet Gateways	0
DHCP option sets	1
Elastic IPs	0
Endpoints	0
Endpoint Services	0
NAT Gateways	0
VPC Peering Connections	0
Network ACLs	1
Security Groups	13
Customer Gateways	0
Virtual Private Gateways	0
Site-to-Site VPN Connections	0
Running Instances	0

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 - optional [info](#)
Creates a tag with a key of Name and a value that you specify.

Production-Network

IPv4 CIDR block [info](#)
☒ IPv4 CIDR manual input
☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR
10.0.0.0/16

IPv6 CIDR block [info](#)
☒ No IPv6 CIDR block
☐ IPAM-allocated IPv6 CIDR block
☐ Amazon-provided IPv6 CIDR block
☐ IPv6 CIDR owned by me

Tenancy [info](#)
Default

Tags [info](#)
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional

Name Production-Network Remove

Add new tag
You can add 49 more tags.

Cancel Create VPC

Create 5 subnets as named in the problem statement.

Subnets [info](#)

Filter subnets

search: vpc-082d529be0ce76c9 Clear filters

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses	Available IPv6 addresses
------	-----------	-------	-----	-----------	-----------	--------------------------	--------------------------

Select a subnet

Create subnet

app1 subnet

The screenshot shows the AWS VPC console's 'Create Subnet' wizard. The 'VPC ID' is set to 'vpc-082d5298e0ce76c5 (Production-Network)'. The 'Associated VPC CIDRs' section shows '10.0.0.0/16'. Under 'Subnet settings', 'Subnet 1 of 1' is configured with the name 'app1', 'Availability Zone' set to 'No preference', and 'IPv4 CIDR block' set to '10.0.1.0/24'. A tag is added with the key 'Name' and value 'app1'. The 'Add new subnet' button is visible at the bottom.

VPC ID
Create a new VPC ID or select an existing VPC ID.
vpc-082d5298e0ce76c5 (Production-Network)

Associated VPC CIDRs
IPv4 CIDRs
10.0.0.0/16

Subnet settings
Specify the CIDR block 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.
app1
The name can be up to 255 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
No preference

IPv4 CIDR block [Info](#)
10.0.1.0/24

Tags - optional

Key	Value - optional	
Name	app1	Remove

Add new tag
You can add 49 more tags.

Remove

Add new subnet

Feedback [Looking for language selection? Find it in the new Unified Settings.](#)

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app2 subnet

This screenshot shows the 'Create Subnet' wizard for 'Subnet 2 of 2'. The configuration is identical to the first subnet, with the name 'app2', 'Availability Zone' set to 'No preference', and 'IPv4 CIDR block' set to '10.0.2.0/24'. A tag with key 'Name' and value 'app2' is added. The 'Create subnet' button is highlighted in orange at the bottom.

Tags - optional

Key	Value - optional	
Name	app1	Remove

Add new tag
You can add 49 more tags.

Remove

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
app2
The name can be up to 255 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
No preference

IPv4 CIDR block [Info](#)
10.0.2.0/24

Tags - optional

Key	Value - optional	
Name	app2	Remove

Add new tag
You can add 49 more tags.

Remove

Add new subnet

Cancel **Create subnet**

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dbcache subnet

VPC Management Console

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

Services Search [Alt+S]

Tags - optional

Key	Value - optional	
Name	app2	X Remove

Add new tag

You can add 49 more tags.

Remove

Subnet 3 of 3

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

dbcache

The name can be up to 255 characters long.

Availability Zone [help](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block [help](#)

10.0.3.0/24

Tags - optional

Key	Value - optional	
Name	dbcache	X Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Cancel Create subnet

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db subnet

VPC Management Console

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

Services Search [Alt+S]

Add new tag

You can add 49 more tags.

Remove

Subnet 4 of 5

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

db

The name can be up to 255 characters long.

Availability Zone [help](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block [help](#)

10.0.4.0/24

Tags - optional

Key	Value - optional	
Name	db	X Remove

Add new tag

You can add 49 more tags.

Remove

Subnet 5 of 5

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

web

The name can be up to 255 characters long.

Availability Zone [help](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block [help](#)

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web subnet

Tags - optional

Key: Name Value: db Remove

Add new tag

You can add 49 more tags.

Remove

Subnet 5 of 5

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

web

The name can be up to 255 characters long.

Availability Zone [info](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block [info](#)

10.0.5.0/24

Tags - optional

Key: Name Value: web Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Cancel Create subnet

Launch 5 instances with same name as it's subnets name.

Launch an instance [info](#)

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 [info](#)

Name

app1

Add additional tags

Application and OS Images (Amazon Machine Image) [info](#)

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 S Browse more AMIs, including AMIs from AWS Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type [ami-0d74da7718a4b5548](#) (x64-bit) / [ami-0c2b535d65c5d6a5d](#) (x64-bit (arm64))

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Summary

Number of instances [info](#)

1

Software image (AMI)

Canonical, Ubuntu, 22.04 LTS, [read more](#) [ami-0d74da7718a4b5548](#)

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro (or t2.medium in the Regions in which t2.micro is unavailable) instance usage (on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOPS, 1 GiB of snapshots, and 100 GiB of bandwidth to the internet.)

Cancel Launch instance

app1 instance with app1 subnet name.

Launch an instance | EC2 Manu... | T1M Source | IntelSpot | Module 4-VPC.pdf | Google Docs | 02 YouFile

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

VPC - required info

vpc-063d52f9be0ce76c9 (Production-Network)
10.0.0.0/16

Subnet info

subnet-0a49e94a671d4f0b4 app1
VPC: vpc-063d52f9be0ce76c9 | Owner: 6331020272 | Availability Zone: us-east-1a
IP addresses available: 251 / 256 (30.0.0.0/24)

Create new subnet

Auto-assign public IP info

Disable

Firewall (security groups) info

A security group is part of a VPC and controls the traffic for your instances. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Security group name - required

launch-wizard-9

Description - required info

launch-wizard-9 created 2022-12-22T17:51:02Z-02

Inbound security groups rules

Security group rule 1 (TCP, 22, 0.0.0.0/0)

Type info Protocol info Port range info

ssh TCP 22

Source type info Source info Description - optional info

Anywhere 0.0.0.0/0 e.g. SSH for admin desktop

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Summary

Number of instances info

1

Software image (AMI) info

Canonical, Ubuntu, 22.04 LTS... read more
ami-057ada718ca65348

Virtual server type (instance type) info

t2.micro

Firewall (security group) info

New security group

Storage (volumes) info

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month: 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance

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EC2 Management Console | T1M Source | IntelSpot | Module 4-VPC.pdf | Google Docs | 02 YouFile

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

following the simple steps below.

Name and tags info

Name

app2 Add additional tags

Application and OS Images (Amazon Machine Image) info

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.

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Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat S Browse more AMIs including AMIs from AWS, Marketplace and Linux Community

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
ami-05eca76982371e91 | 64-bit x86_64 / ami-05eca76982371e91 | 64-bit ARM
Virtualization: HVM | ENA enabled: true | Root device type: ebs

Free tier eligible

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20221210.1 x86_64 HVM gp2

Architecture AMI ID

64-bit (x86) ami-0b5eca76982371e91 Verified provider

Summary

Number of instances info

1

Software image (AMI) info

Amazon Linux 2 Kernel 5.10 AMI... read more
ami-05eca76982371e91

Virtual server type (instance type) info

t2.micro

Firewall (security group) info

New security group

Storage (volumes) info

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month: 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance

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app2 instance

EC2 Management Console

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

Services

Search

[Alt+S]

VPC - required

vpc-063d52f9bdc76c9 (Production-Network)

10.0.0.0/16

Subnet info

subnet-035ee8cf51225e702

app2

Create new subnet

Auto-assign public IP

Disable

Firewall (security groups) info

Create security group

Select existing security group

Security group name - required

launch-wizard-10

Description - required

launch-wizard-10 created 2022-12-22T17:51:56.928Z

Inbound security groups rules

Security group rule 1 (TCP, 22, 0.0.0.0/0)

Remove

Type info

ssh

Protocol info

TCP

Port range info

22

Source type info

Anywhere

Source info

Any AWS CIDR, prefix list or security

Description - optional info

e.g. SSH for admin desktop

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Summary

Number of instances

1

Software image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...read more

ami-05eca76983371cd9

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

EC2 Management Console

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

Services

Search

[Alt+S]

EC2 > Instances > Launch an instance

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

ibcache

Add additional tags

Application and OS Images (Amazon Machine Image)

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Recently

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

S

Browse more AMIs

Including AMIs from AWS Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), 550 Volume Type

ami-0174de719baab5348 (64-bit x86) / ami-0a2b532a65c16aeb5 (64-bit arm)

Virtualization: hvm

Ena enabled: true

Root device type: ebs

Free tier eligible

Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Summary

Number of instances

1

Software image (AMI)

Canonical, Ubuntu, 22.04 LTS...read more

ami-0574da719baab5348

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

dbcache instance

VPC - required [info](#)

vpc-063d52f9bdc76c9 (Production-Network)
10.0.0.0/16

Subnet [info](#)

subnet-09dd2a4043ba50c98 dbcache
VPC: vpc-063d52f9bdc76c9 | Owner: 63310202172 | Availability Zone: us-east-1a
IP addresses available: 251 / 256 (30.0.0.0/24)

Create new subnet

Auto-assign public IP [info](#)

Disable

Firewall (security groups) [info](#)

A security group is part of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Security group name - required

launch-wizard-11

The security groups will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: A-Z, 0-9, hyphen, and underscore.

Description - required [info](#)

launch-wizard-11 created 2022-12-22T17:52:55.971Z

Inbound security groups rules

Security group rule 1 (TCP, 22, 0.0.0.0/0)

Remove

Type [info](#)

ssh

Protocol [info](#)

TCP

Port range [info](#)

22

Source type [info](#)

Anywhere

Source [info](#)

0.0.0.0/0

Description - optional [info](#)

e.g. SSH for admin desktop

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Summary

Number of instances [info](#)

1

Software image (AMI) [info](#)

Canonical, Ubuntu, 22.04 LTS, [load more](#)
ami-0574d3719dc65348

Virtual server type (instance type) [info](#)

t2.micro

Firewall (security group) [info](#)

New security group

Storage (volumes) [info](#)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance

following the simple steps below.

Name and tags [info](#)

Name

db

Add additional tags

Application and OS Images (Amazon Machine Image) [info](#)

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.

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

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Amazon Linux [info](#) macOS [info](#) Ubuntu [info](#) Windows [info](#) Red Hat [info](#) S [info](#)

Browse more AMIs including AMIs from AWS, Marketplace and Linux Community

Amazon Machine Image (AMI) [info](#)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type [info](#) Free tier eligible

ami-0574d3719dc65348 64-bit (x86) / ami-0c8337a0556bc05 64-bit (arm64)
Virtualization: hvm | ENA enabled: true | Root device type: ebs

Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Architecture

AMI ID

64-bit (x86) ami-0574d3719dc65348 [Verified provider](#)

Summary

Number of instances [info](#)

1

Software image (AMI) [info](#)

Canonical, Ubuntu, 22.04 LTS, [load more](#)
ami-0574d3719dc65348

Virtual server type (instance type) [info](#)

t2.micro

Firewall (security group) [info](#)

New security group

Storage (volumes) [info](#)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is unavailable. Instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance

db instance

EC2 Management Console

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

Services

Search

[Alt+S]

Key pair name - required

For-VPC-Assignment

Create new key pair

Network settings

VPC - required

vpc-082d52f9be0ce76c9 (Production-Network)

Subnet

subnet-0b42f90b1f6c1263

Auto-assign public IP

Disable

Firewall (security groups)

Create security group

Select existing security group

Security group name - required

launch-wizard-12

Description - required

launch-wizard-12 created 2022-12-22T17:53:31.092Z

Inbound security groups rules

Security group rule 1 (TCP, 22, 0.0.0.0/0)

Type

ssh

Protocol

TCP

Port range

22

Source type

Anywhere

Source

0.0.0.0/0

Description - optional

e.g. SSH for admin desktop

Summary

Number of instances

1

Software image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is available. Instance usage on free tier: 750 hours per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

EC2 Management Console

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

Services

Search

[Alt+S]

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

web

Add additional tags

Application and OS Images (Amazon Machine Image)

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Recently

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

Search

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

ami-0174de719a0a5348 (64-bit x86) / ami-0c2b53265c160a55 (64-bit arm64)

Virtualization: hvm

Ena enabled: true

Root device type: ebs

Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Summary

Number of instances

1

Software image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is available. Instance usage on free tier: 750 hours per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

web instance

VPC - required info
vpc-063d52f9b0dc76c9 (Production-Network)
10.0.0.0/16

Subnet info
subnet-0bdc610aee1e862d0 web
VPC: vpc-063d52f9b0dc76c9 | Owner: 63313020172 | Availability Zone: us-east-1a
IP addresses available: 251 - ECRN: 10.0.0.0/16

Auto-assign public IP info
Enable
Enable
Disable
public traffic to reach your

Security group name - required
launch-wizard-13
The security groups will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters are A-Z, 0-9, hyphen, and underscore.

Description - required info
launch-wizard-13 created 2022-12-22T17:54:42.567Z

Inbound security groups rules
Security group rule 1 (TCP, 22, 0.0.0.0/0)

Type info
ssh

Protocol info
TCP

Port range info
22

Source type info
Anywhere

Source info
Any IPv4 address

Description - optional info
e.g. SSH for admin desktop

Summary
Number of instances: 1
Software image (AMI): Canonical, Ubuntu, 22.04 LTS, ...
Virtual server type (instance type): t2.micro
Firewall (security group): New security group
Storage (volumes): 1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro for 12 months in the Regions in which t2.micro is available. Instance usage on free tier AMIs per month: 30 GB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Launch Instance

5 instances with respective subnets in production vpc are created.

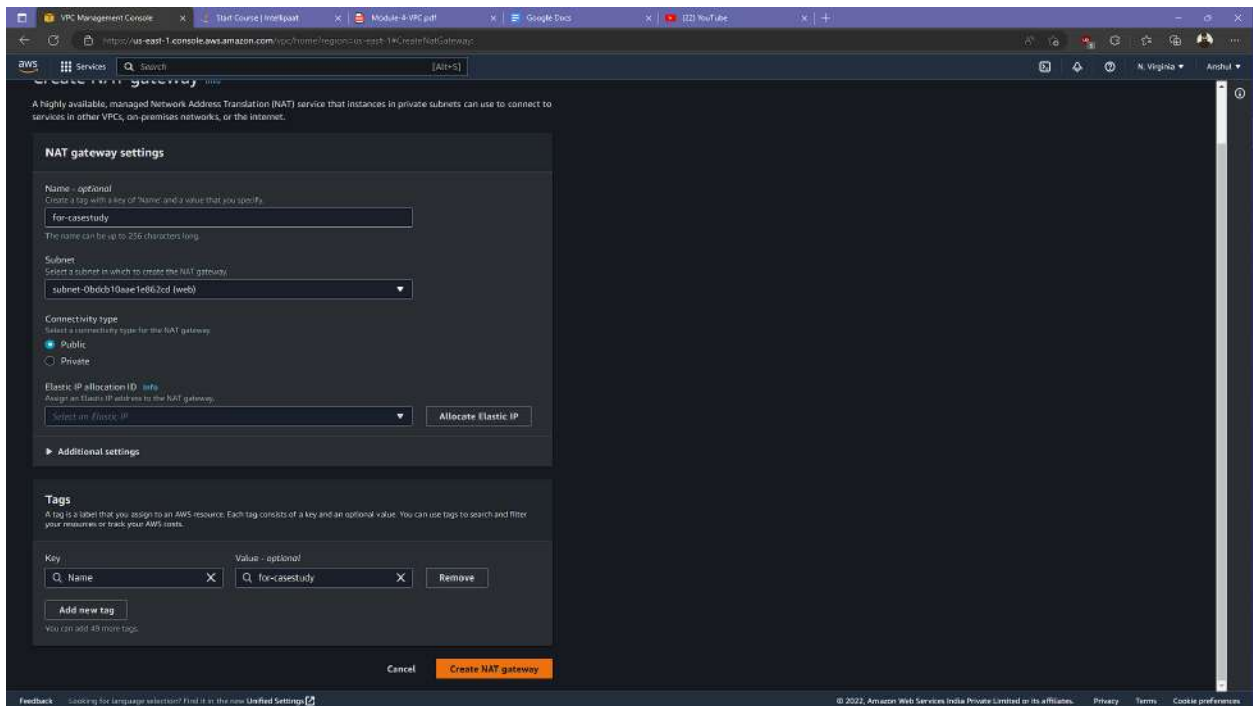
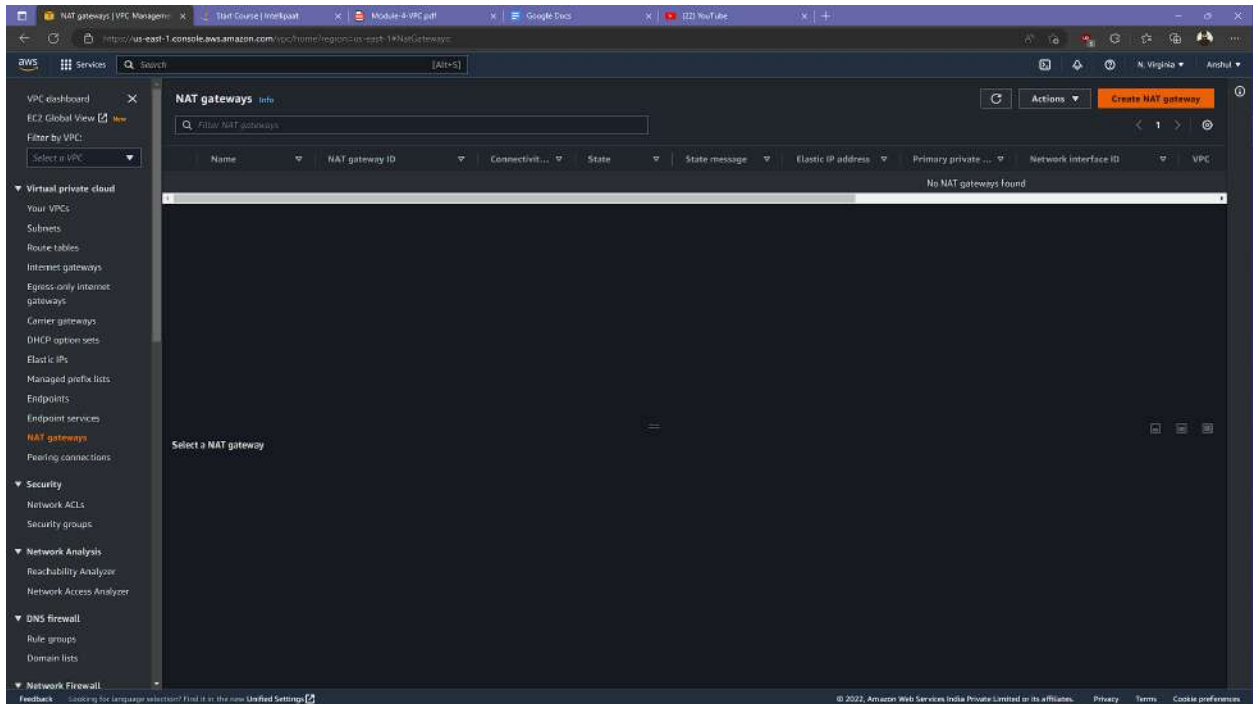
Instances (5) info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP
app02	i-02333a09c256a9a95	Running	t2.micro	Initializing	No alarms	us-east-1a	-	-	-
dbcache	i-0a969ea6d609da6	Running	t2.micro	Initializing	No alarms	us-east-1a	-	-	-
web	i-0715ec3d63a348c25	Running	t2.micro	Initializing	No alarms	us-east-1a	-	3.239.222.98	-
app1	i-0816c0da7d86f558f	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
db	i-050dc1201d57a86c	Running	t2.micro	Initializing	No alarms	us-east-1a	-	-	-

Select an instance

Create a NAT gateway.



VP Management Console

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Module 4- VPC.pdf

Google Docs

ED2 Notepad

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

Elastic IP address 54.227.82.165 (ipalloc-0681132683eb74b0c) allocated.

services in other VPCs, on-premises networks, or the internet.

NAT gateway settings

Name - optional

Create a tag with a key of Name and a value that you specify.

for-casestudy

The name can be up to 256 characters long.

Subnet

Select a subnet in which to create the NAT gateway.

subnet-0bdc10aee1e862cd (web)

Connectivity type

Select a connectivity type for the NAT gateway.

Public

Private

Elastic IP allocation ID

info

Assign an Elastic IP address to the NAT gateway.

ipalloc-0681132683eb74b0c

Allocate Elastic IP

Additional settings

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key

Value - optional

Q Name X

Q for-casestudy X

Remove

Add new tag

You can add 49 more tags.

Cancel

Create NAT gateway

Feedback

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NAT gateways (VPC Management)

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Google Docs

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

VP dashboard

EC2 Global View

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

Peering connections

Security

Network ACLs

Security groups

Network Analysis

Reachability Analyzer

Network Access Analyzer

DNS firewall

Rule groups

Domain lists

Network Firewall

NAT gateways (1/1)

Filter NAT gateways

Name	NAT gateway ID	Connectivity type	State	State message	Elastic IP address	Primary private IP address	Network interface ID	VPC
for-casestudy	nat-00a472c989b4c7b32	Public	Pending			10.0.5.246	eni-0b801bc7f83d0777c	vpc-06a...

nat-00a472c989b4c7b32 / for-casestudy

DetailsMonitoringTags

Details

NAT gateway ID

nat-00a472c989b4c7b32

NAT gateway ARN

arn:aws:ec2:us-east-1:625532020272:natgateway/nat-00a472c989b4c7b32

VPC

vpc-082d52f9a0ce74c3 / Production- Network

Connectivity type

Public

Elastic IP address

Subnet

subnet-0bdc10aee1e862cd / web

State

Pending

Primary private IPv4 address

10.0.5.246

Created

Thursday, December 22, 2022 at 23:27:02 GMT+5:30

State message

Network interface ID

eni-0b801bc7f83d0777c

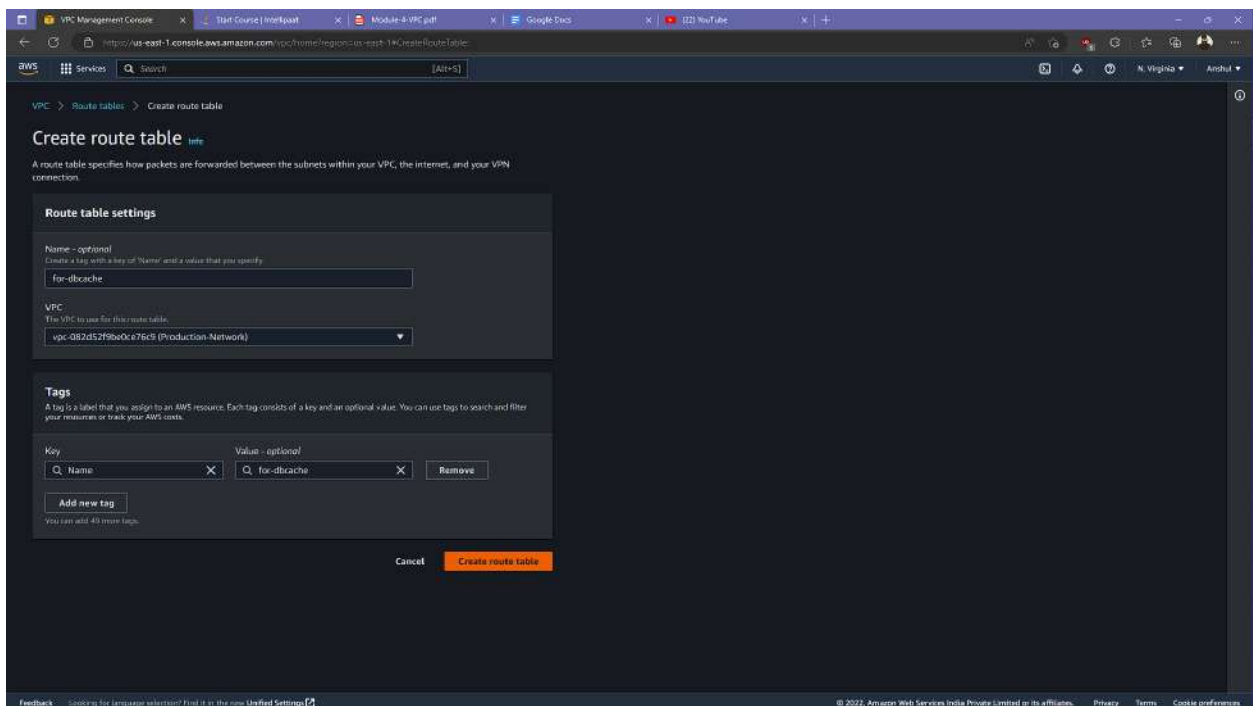
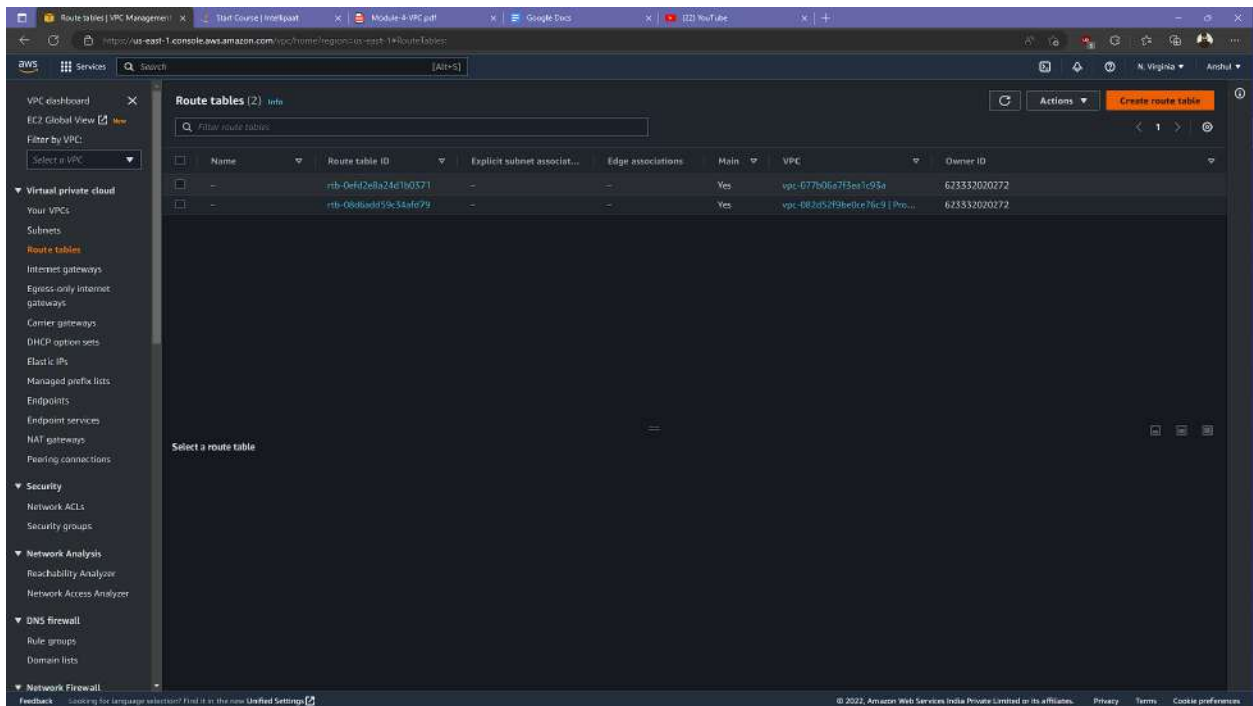
Deleted

Feedback

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Create route table and assign NAT gateway to dbcache and app1 subnet so that they can gain internet from NAT gateway.



Route table rtb-0edba97a9f4bf672 [for-database] was created successfully.

VPC > Route tables > rtb-0edba97a9f4bf672

rtb-0edba97a9f4bf672 / for-database

You can now check network connectivity with Reachability Analyzer [Run Reachability Analyzer](#)

Details info

Route table ID rtb-0edba97a9f4bf672	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-082d52f9bdc6e76c9 Production-Network	Owner ID 623332020272		

Routes **Subnet associations** **Edge associations** **Route propagation** **Tags**

Explicit subnet associations (0) [Edit subnet associations](#)

Find subnet associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
No subnet associations You do not have any subnet associations.		

Subnets without explicit associations (5) [Edit subnet associations](#)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table.

Find subnet associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
-----------	-----------	-----------

[Feedback](#) [Settings](#)

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VPC > Route tables > rtb-0edba97a9f4bf672 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/5) [Filter: subnet associations](#)

	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input type="checkbox"/>	app2	subnet-035e9dcf51225e702	10.0.2.0/24	-	Main (rtb-0886ad59c34af79)
<input type="checkbox"/>	db	subnet-0ba42f98b17f6cf2b3	10.0.4.0/24	-	Main (rtb-0886ad59c34af79)
<input checked="" type="checkbox"/>	database	subnet-09d62a4043be50c98	10.0.3.0/24	-	Main (rtb-0886ad59c34af79)
<input type="checkbox"/>	app1	subnet-0a3e9e4e7f94f8b4	10.0.1.0/24	-	Main (rtb-0886ad59c34af79)
<input type="checkbox"/>	web	subnet-0bdc03aa1681c0d	10.0.5.0/24	-	Main (rtb-0886ad59c34af79)

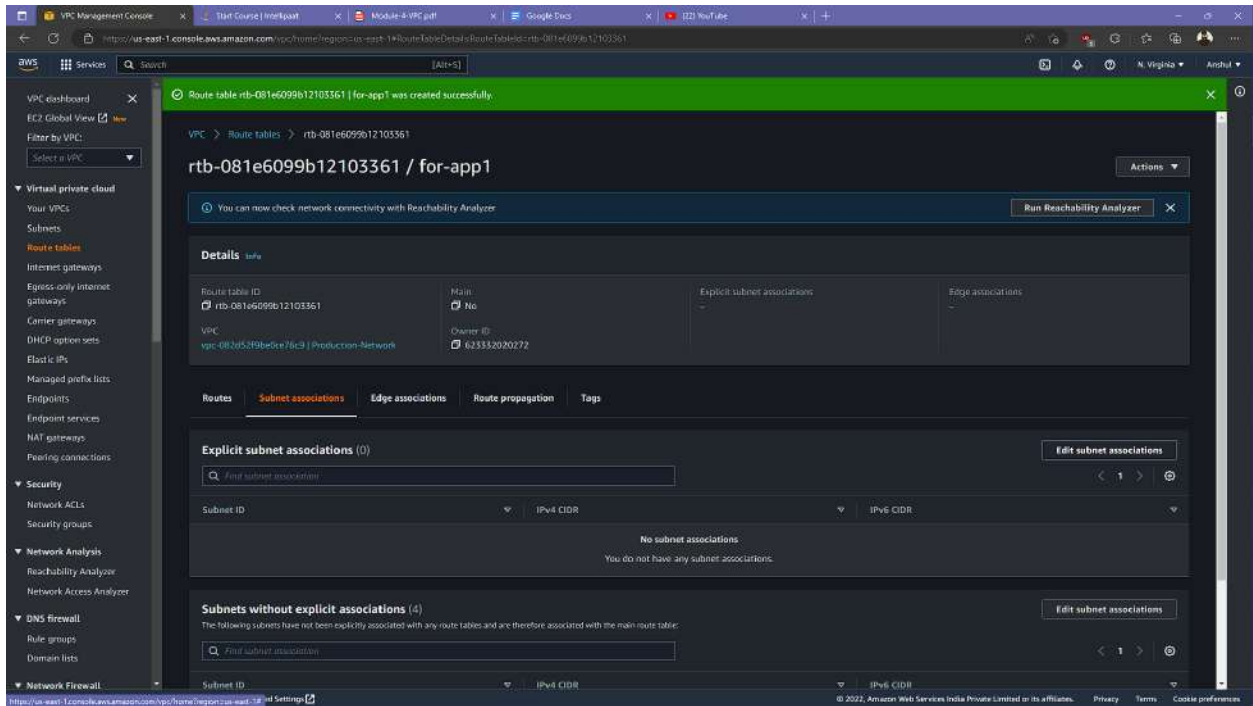
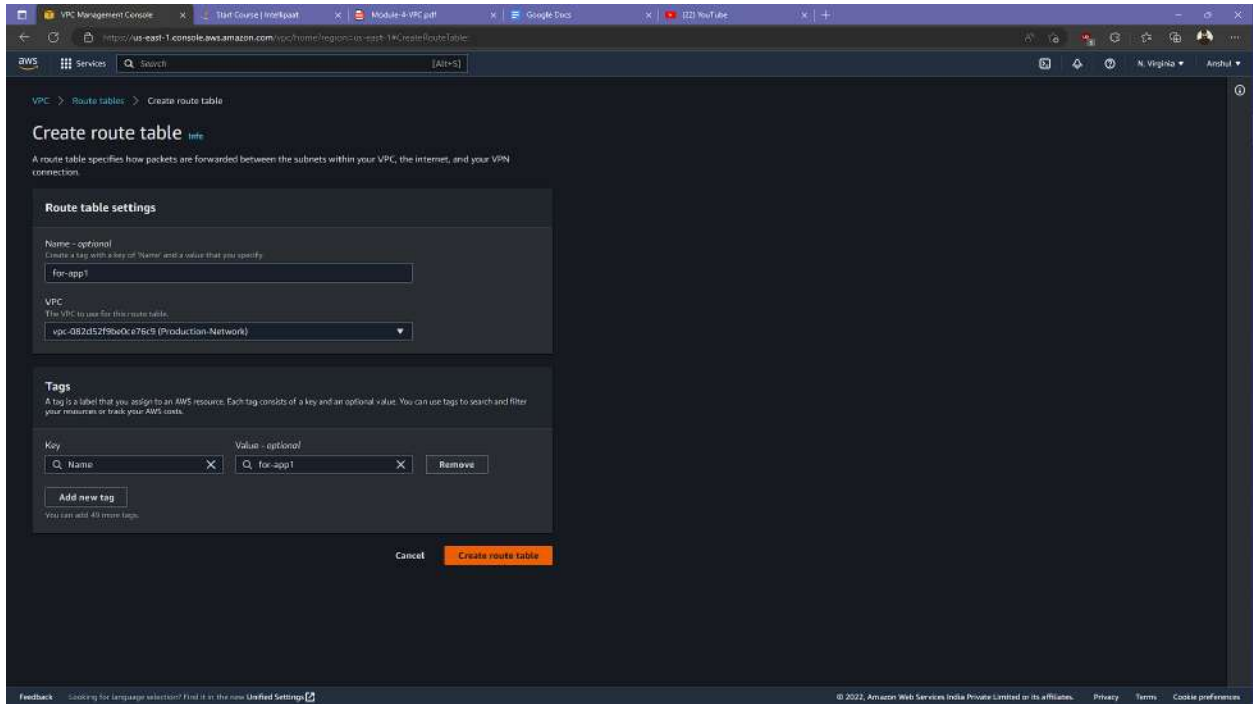
Selected subnets

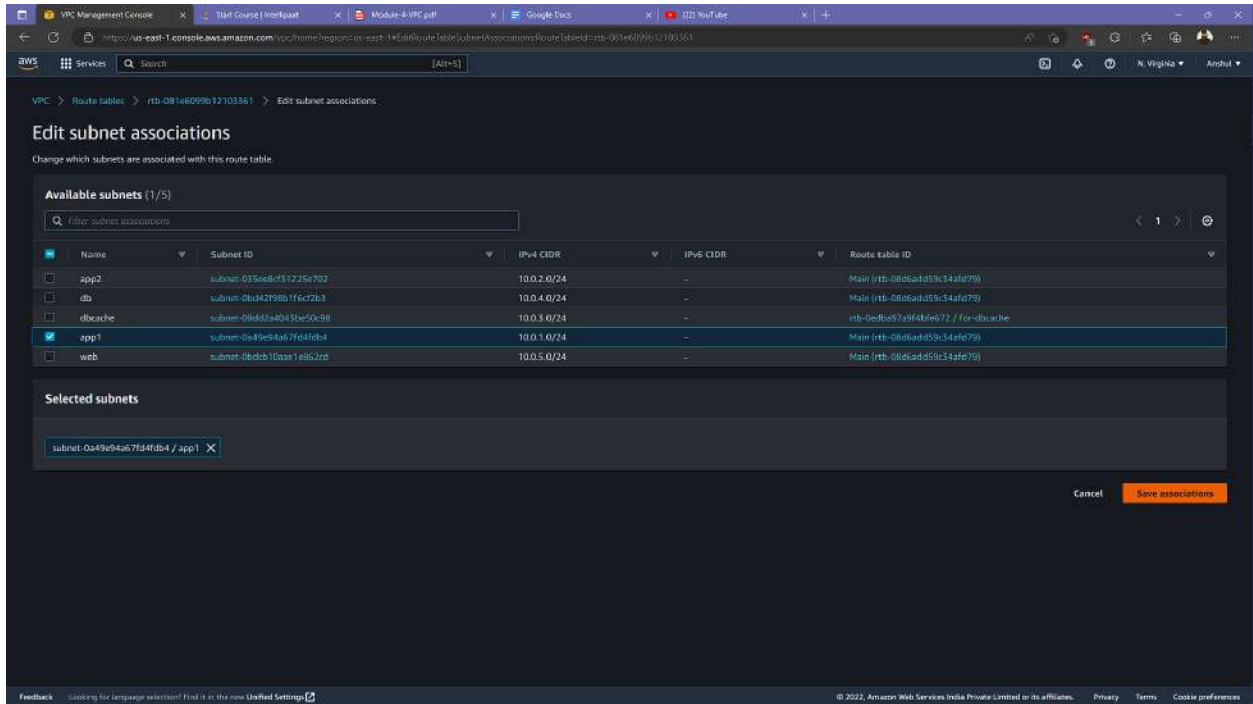
subnet-09d62a4043be50c98 / database X

[Cancel](#) [Save associations](#)

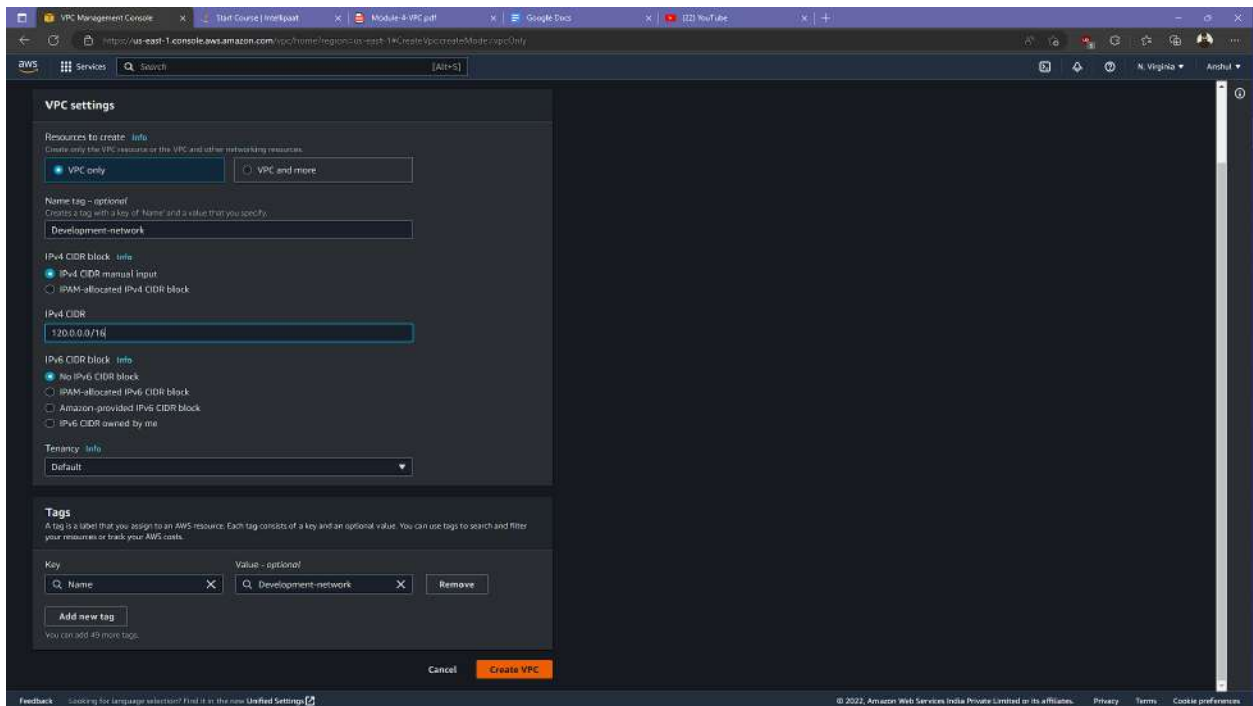
[Feedback](#) [Settings](#)

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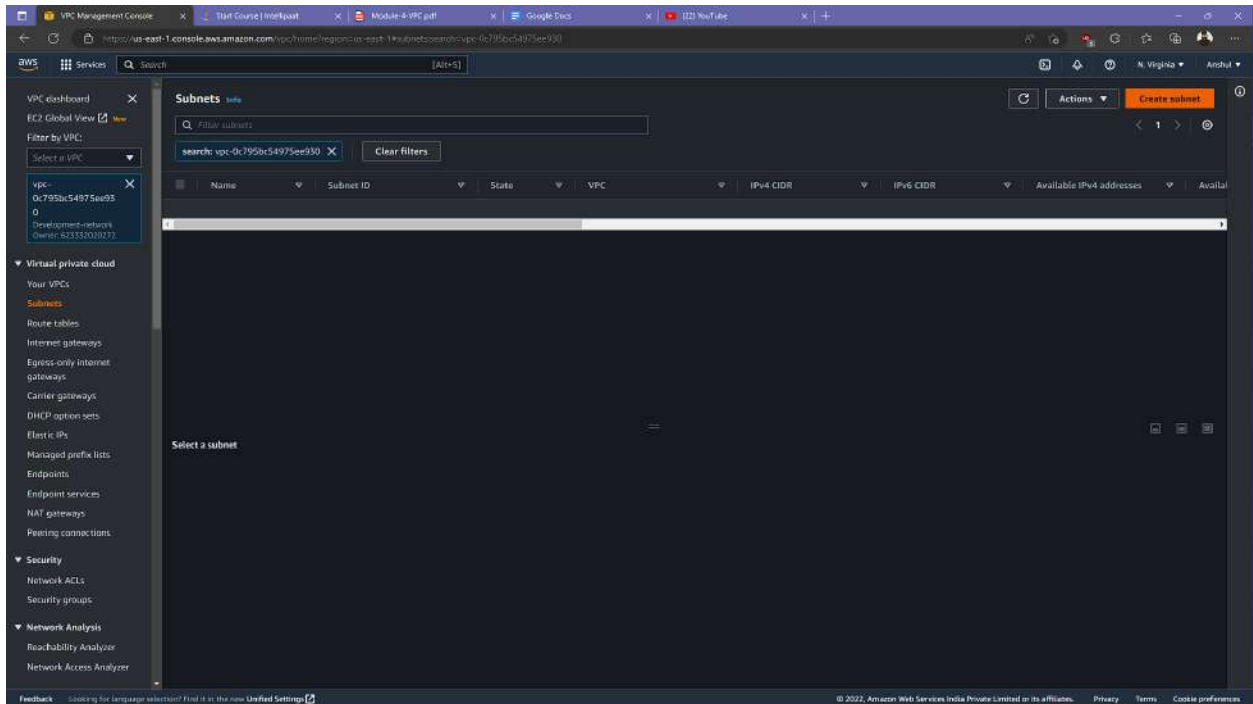




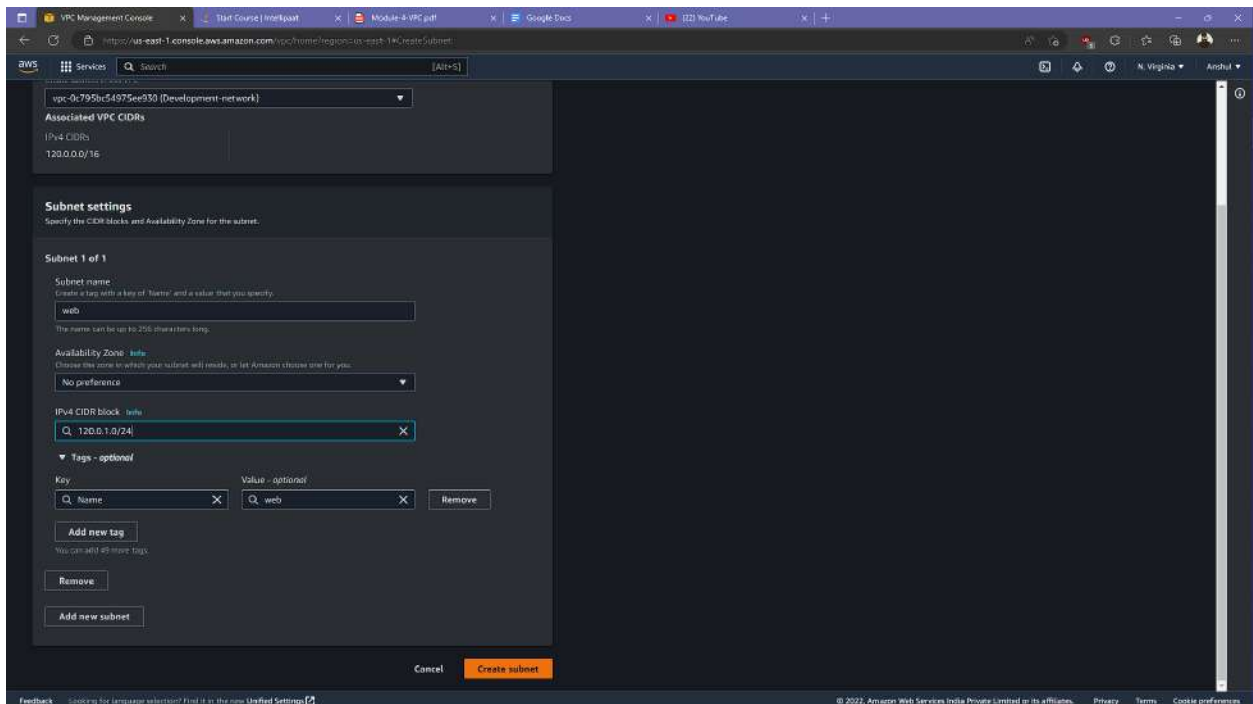
Create Developer VPC.



Create subnets.



First web subnet.



Second db subnet.

The screenshot shows the 'Create Subnet' page in the AWS VPC console. The page is titled 'Subnet 2 of 2'. The 'Subnet name' field is set to 'db'. The 'Availability Zone' is set to 'No preference'. The 'IPv4 CIDR block' is set to '120.0.2.0/24'. There are two tag groups: the first has a key 'Name' and value 'web'; the second has a key 'Name' and value 'db'. The 'Create subnet' button is highlighted in orange.

Tags - optional

Key	Value - optional
Name	web

Add new tag

Remove

Subnet 2 of 2

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

db

The name can be up to 255 characters long.

Availability Zone

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block

120.0.2.0/24

Tags - optional

Key	Value - optional
Name	db

Add new tag

Remove

Add new subnet

Cancel Create subnet

Subnets created.

The screenshot shows the 'Subnets' page in the AWS VPC console. A green banner at the top states: 'You have successfully created 2 subnets: subnet-0043de467da555833, subnet-099ebcf865577054b'. The 'Subnets (2)' table lists the following subnets:

Name	Subnet ID	Status	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses	Availability Zone
web	subnet-0043de467da555833	Available	vpc-0c795bc54975ae930	120.0.1.0/24	-	251	us-east-1
db	subnet-099ebcf865577054b	Available	vpc-0c795bc54975ae930	120.0.2.0/24	-	251	us-east-1

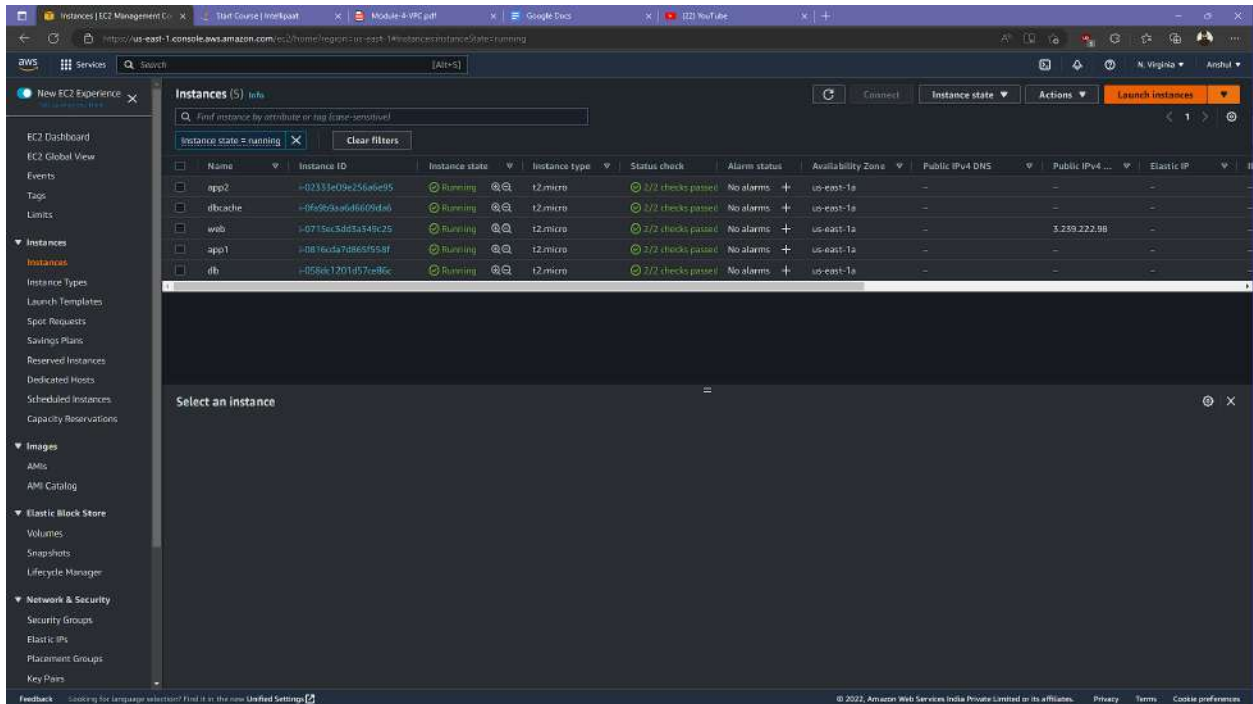
Subnets (2)

Filter subnets

Subnet ID: subnet-0043de467da555833 Subnet ID: subnet-099ebcf865577054b VPC: vpc-0c795bc54975ae930 Clear filters

Select a subnet

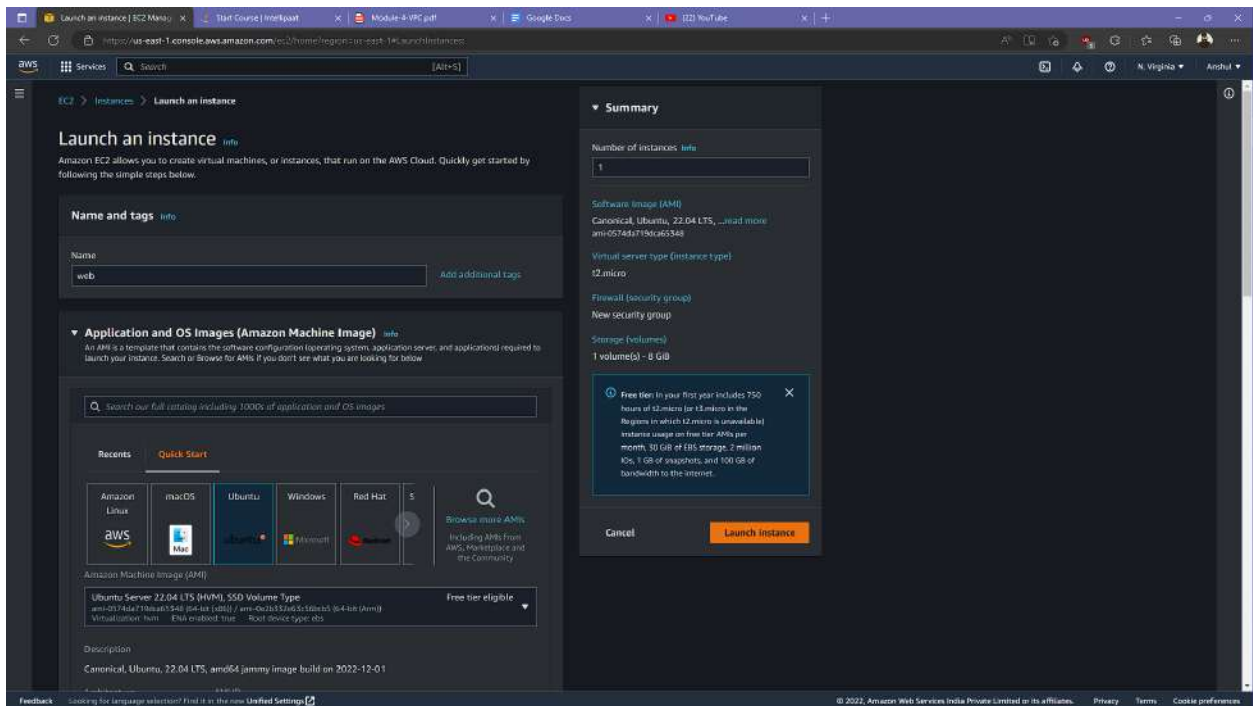
Launch instance for respective subnets as did earlier.



The screenshot shows the AWS Management Console 'Instances' page. The left sidebar contains navigation links for EC2 Dashboard, Events, Tags, Limits, and various instance types. The main content area displays a table of five running EC2 instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP
app2	i-0233e09e256ae695	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
ibcache	i-069b9a9d6609dad6	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
web	i-0715ec3dd5a349c25	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	3.239.222.98	-
app1	i-0816uda7d865f559f	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
db	i-0586k1201d57ce80c	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-

Below the table is a 'Select an instance' dialog box.



The screenshot shows the 'Launch an instance' wizard in the AWS Management Console. The 'Summary' tab is selected, showing the following configuration:

- Number of instances:** 1
- Software image (AMI):** Canonical, Ubuntu, 22.04 LTS, ... (ami-0574da71b8ca63348)
- Virtual server type (instance type):** t2.micro
- Firewall (security group):** New security group
- Storage (volumes):** 1 volume(s) - 8 GiB

A 'Free tier' notification box is displayed, stating: 'Free tier in your first year includes 750 hours of t2.micro (or t2.medium in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.'

At the bottom, there are 'Cancel' and 'Launch instance' buttons.

web instance.

The screenshot shows the 'Launch instance' wizard in the AWS Management Console. The 'Key pair (login)' section is expanded, showing a dropdown for 'Key pair name' set to 'For-VPC-Assignment' and a 'Create new key pair' button. The 'Network settings' section is also expanded, showing VPC and Subnet selection. The VPC is set to 'vpc-0c795bc54975ee930 (Development-network)' and the Subnet is set to 'subnet-0043de467da555833'. The 'Summary' section on the right shows the configuration: 1 instance, Canonical Ubuntu 22.04 LTS AMI, t2.micro instance type, new security group, and 1 volume (8 GiB). A 'Free tier' notification is displayed, stating that the first year includes 750 hours of t2.micro usage. The 'Launch instance' button is visible at the bottom right.

Key pair (login) info
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
For-VPC-Assignment [Create new key pair](#)

Network settings info
VPC - required info
vpc-0c795bc54975ee930 (Development-network) 120.0.0.0/16
vpc-082d52f9be0ce76c9 (Production-Network) 10.0.0.0/16
vpc-0770906a7f5ea1c93a (default) 172.31.0.0/16
vpc-0c795bc54975ee930 (Development-network) 120.0.0.0/16
[Create new subnet](#)

Subnet info
subnet-0043de467da555833 web
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.1.0/24
subnet-0043de467da555833 web
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.1.0/24
subnet-0996bcbf865577054b db
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.2.0/24

Firewall (security group) info
A security group is a set of firewall rules that control the traffic to your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Security group name - required
launch-wizard-14
The security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _/./:/-~*().

Description - required info
launch-wizard-14 created 2022-12-22T18:05:21.564Z

Inbound security groups rules
Security group rule 1 (TCP, 22, 0.0.0.0/0) [Remove](#)

Summary
Number of instances info
1
Software image (AMI)
Canonical, Ubuntu, 22.04 LTS, ... [Load more](#)
ami-057ada7186ca63348
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (Volumes)
1 volume(s) - 8 GiB
Free tier in your first year includes 750 hours of t2.micro for t2.micro in the Regions in which t2.micro is unavailable.
Instance usage on free tier: 750 hours per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel [Launch instance](#)

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

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db instance.

The screenshot shows the 'Launch instance' wizard in the AWS Management Console, similar to the web instance but with a database instance type. The 'Key pair (login)' section is expanded, showing a dropdown for 'Key pair name' set to 'For-VPC-Assignment' and a 'Create new key pair' button. The 'Network settings' section is also expanded, showing VPC and Subnet selection. The VPC is set to 'vpc-0c795bc54975ee930 (Development-network)' and the Subnet is set to 'subnet-0043de467da555833'. The 'Summary' section on the right shows the configuration: 1 instance, Canonical Ubuntu 22.04 LTS AMI, t2.micro instance type, new security group, and 1 volume (8 GiB). A 'Free tier' notification is displayed, stating that the first year includes 750 hours of t2.micro usage. The 'Launch instance' button is visible at the bottom right.

Key pair (login) info
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
For-VPC-Assignment [Create new key pair](#)

Network settings info
VPC - required info
vpc-0c795bc54975ee930 (Development-network) 120.0.0.0/16
vpc-082d52f9be0ce76c9 (Production-Network) 10.0.0.0/16
vpc-0770906a7f5ea1c93a (default) 172.31.0.0/16
vpc-0c795bc54975ee930 (Development-network) 120.0.0.0/16
[Create new subnet](#)

Subnet info
subnet-0043de467da555833 web
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.1.0/24
subnet-0043de467da555833 web
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.1.0/24
subnet-0996bcbf865577054b db
VPC: vpc-0c795bc54975ee930 Owner: 623552020272
Availability Zone: us-east-1a IP addresses: available: 251 CIDR: 120.0.2.0/24

Firewall (security group) info
A security group is a set of firewall rules that control the traffic to your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Security group name - required
launch-wizard-14
The security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _/./:/-~*().

Description - required info
launch-wizard-14 created 2022-12-22T18:05:21.564Z

Inbound security groups rules
Security group rule 1 (TCP, 22, 0.0.0.0/0) [Remove](#)

Summary
Number of instances info
1
Software image (AMI)
Canonical, Ubuntu, 22.04 LTS, ... [Load more](#)
ami-057ada7186ca63348
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (Volumes)
1 volume(s) - 8 GiB
Free tier in your first year includes 750 hours of t2.micro for t2.micro in the Regions in which t2.micro is unavailable.
Instance usage on free tier: 750 hours per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel [Launch instance](#)

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

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Instances (EC2 Management Console) | Tutorial Course | WordPress | Module 4 - VPC part | Google Docs | EC2 NewTab

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

Search [Alt+S]

New EC2 Experience

EC2 Dashboard
EC2 Global View
Events
Tags
Limits

Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Scheduled Instances
Capacity Reservations

Images
AMIs
AMI Catalog

Elastic Block Store
Volumes
Snapshots
Lifecycle Manager

Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs

Instances (6) Info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP
app2	i-02335a092356a9e95	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
dbcache	i-0fa9b9a6a66009da6	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
web	i-0715ec34d6a349c25	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	3.239.222.98	-
app1	i-0816eda7d6a5f558f	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
db	i-086dc1201d57ca86c	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-
web	i-0022c51b25b57720d	Pending	t2.micro	-	No alarms	us-east-1a	-	35.172.231.200	-

Select an instance

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

Search [Alt+S]

following the simple steps below:

Name and tags Info

Name
db Add additional tags

Application and OS Images (Amazon Machine Image) Info

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 or browse for AMIs if you don't see what you are looking for below

Search or browse for AMIs if you don't see what you are looking for below

Recently Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat S Browse more AMIs including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
ami-0574dc3719dc65348 (64-bit x86) / ami-0c2b33a5c59c035 (64-bit ARM)
Virtualization: hvm EBS: standard EBS Root device type: ebs Free tier eligible

Description
Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Architecture AMI ID
64-bit (x86) ami-0574dc3719dc65348 Verified provider

Summary

Number of instances Info
1

Software image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0574dc3719dc65348

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

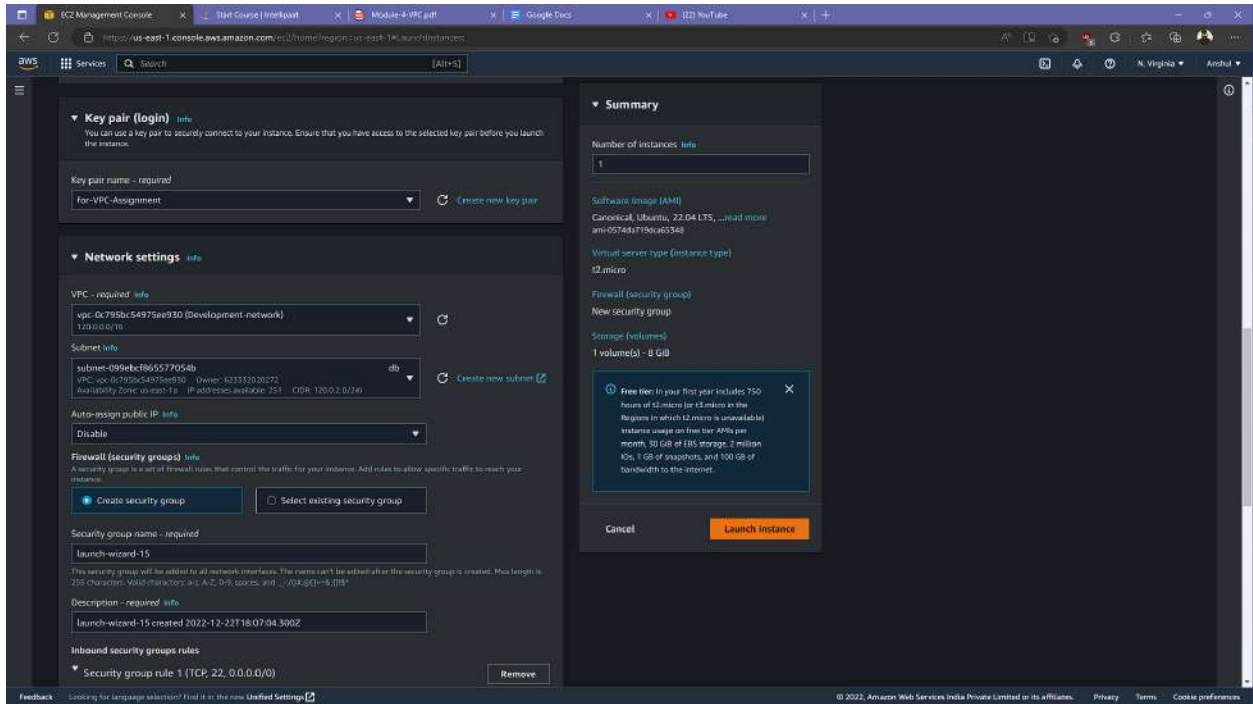
Storage (volumes)
1 volume(s) - 8 GiB

Free tier in your first year includes 750 hours of t2.micro (or t2.medium in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 10 GiB of EBS storage, 2 million IPs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

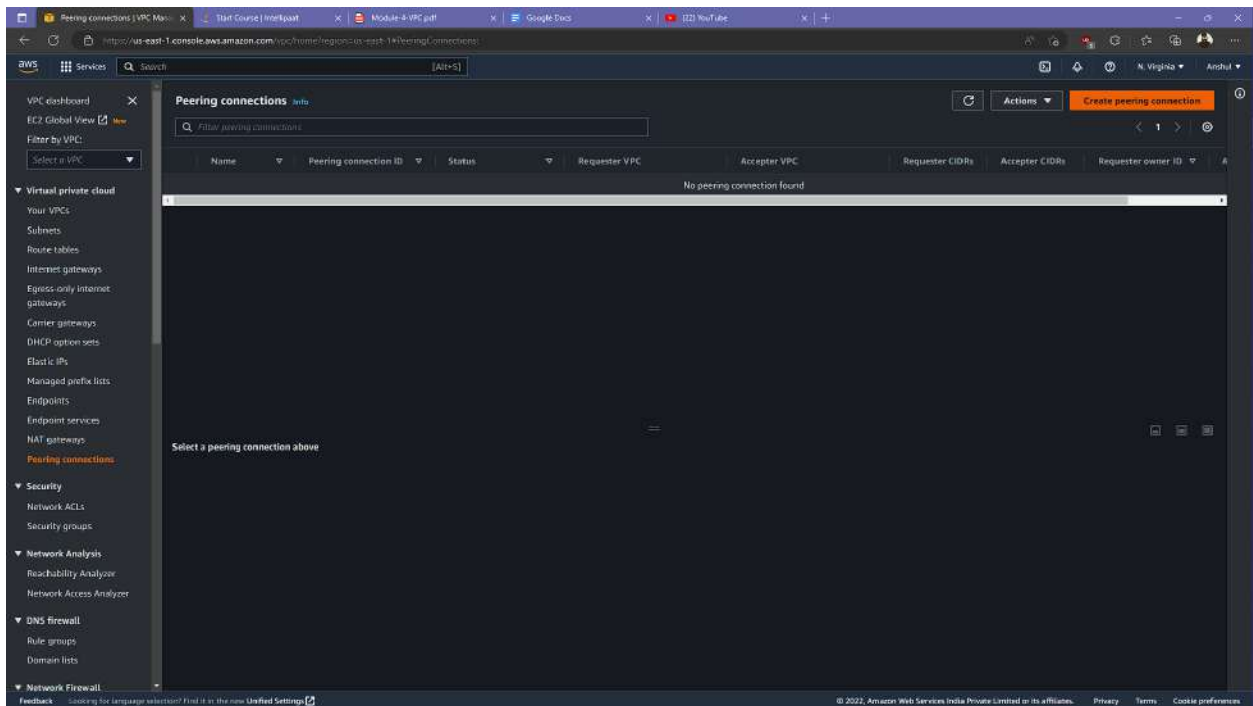
Cancel Launch Instance

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

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Create peering connection.



Choose any one of VPC that we created.

Create peering connection

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately. [Info](#)

Peering connection settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.
for-casestudy

Select a local VPC to peer with

VPC ID (Requester)
Select a VPC
vpc-082d52f9bdc0e76c9 (Production-Network)
vpc-077b06a7f1ea1c93a (default)
vpc-0c795bc54975ee330 (Development-network)

Region
☒ This Region (us-east-1)
☐ Another Region

VPC ID (Acceptor)
Select a VPC

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key
Name

Value - optional
for-casestudy

Remove

Now choose another VPC with which we want to peer.

Create peering connection

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately. [Info](#)

Peering connection settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.
for-casestudy

Select a local VPC to peer with

VPC ID (Requester)
Select a VPC
vpc-082d52f9bdc0e76c9 (Production-Network)

VPC CIDRs for vpc-082d52f9bdc0e76c9 (Production-Network)

CIDR	Status	Status reason
10.0.0.0/16	Associated	-

Select another VPC to peer with

Account
☒ My account
☐ Another account

Region
☒ This Region (us-east-1)
☐ Another Region

VPC ID (Acceptor)
Select a VPC
vpc-0c795bc54975ee330 (Development-network)
vpc-082d52f9bdc0e76c9 (Production-Network)
vpc-077b06a7f1ea1c93a (default)
vpc-0c795bc54975ee330 (Development-network)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key
Name

Value - optional
for-casestudy

Remove

Add new tag

Accept the peering request.

The screenshot shows the AWS Management Console for the 'us-east-1' region. The 'VPC dashboard' is selected on the left sidebar. The main content area displays 'Peering connections (1/1)' with a table showing one pending request. The 'Actions' menu is open, highlighting 'Accept request'.

Name	Peering connection ID	Status	Requester VPC	Accepter VPC	Requester CIDRs
for-casestudy	pcx-0bc9703fda91125a	Pending acceptance	vpc-082d52f9be0ca76c9 / Production-network	vpc-0c799bc54975ee930 / Development-network	10.0.0.0/16

pcx-0bc9703fda91125a / for-casestudy

Pending acceptance
You can accept or reject this peering connection request using the 'Actions' menu. You have until Thursday, December 29, 2022 at 23:39:31 GMT+5:30 to accept or reject the request, otherwise it expires.

Details

Requester owner ID	Accepter owner ID	VPC Peering connection ARN
623332020272	623332020272	arn:aws:ec2:us-east-1:623332020272:vpc-peering-connection/pcx-0bc9703fda91125a
Peering connection ID	Requester VPC	Accepter VPC
pcx-0bc9703fda91125a	vpc-082d52f9be0ca76c9 / Production-network	vpc-0c799bc54975ee930 / Development-network

Accepted.

The screenshot shows the same AWS Management Console page, but with the 'Accept VPC peering connection request' dialog box open. The dialog box contains the following information:

Accept VPC peering connection request

Are you sure you want to accept this VPC peering connection request? (pcx-0bc9703fda91125a / for-casestudy)

Requester VPC	Accepter VPC	Requester CIDRs
vpc-082d52f9be0ca76c9 / Production-network	vpc-0c799bc54975ee930 / Development-network	10.0.0.0/16

Requester Region	Accepter Region
N. Virginia (us-east-1)	N. Virginia (us-east-1)

Requester owner ID	Accepter owner ID
623332020272 (This account)	623332020272 (This account)

Cancel **Accept request**

Peering connections (VPC Main) x | Tutorial Course | Notebook x | Module 4 - VPC pdf x | Google Docs x | IED YouTube x | +

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

Services Search [Alt+S]

Virtual private cloud

Peering connections

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

Peering connections

Security

Network ACLs

Security groups

Network Analysis

Reachability Analyzer

Network Access Analyzer

DNS firewall

Rule groups

Domain lists

Network Firewall

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Your VPC peering connection (pcx-0bcb9703fd91125a) has been established.
To send and receive traffic across this VPC peering connection, you must add a route to the peered VPC in one or more of your VPC route tables. [Info](#)

[Modify my route tables now](#)

Peering connections (1/1) [Info](#)

Filter peering connections

Name	Peering connection ID	Status	Requester VPC	Accepter VPC	Requester CIDRs	Accepter CIDRs	Requester owner ID
for-casestudy	pcx-0bcb9703fd91125a	Active	vpc-082d52f8ba0a76c9 / Production-Network	vpc-0c795bc54975ee930 / Development-network	10.0.0.0/16	120.0.0.0/16	623332020272

Requester owner ID: 623332020272

Accepter owner ID: 623332020272

Peering connection ID: pcx-0bcb9703fd91125a

Requester VPC: vpc-082d52f8ba0a76c9 / Production-Network

Accepter VPC: vpc-0c795bc54975ee930 / Development-network

Requester CIDRs: 10.0.0.0/16

Accepter CIDRs: 120.0.0.0/16

Requester Region: N. Virginia (us-east-1)

Accepter Region: N. Virginia (us-east-1)

Status: Active

Expiration time: -

Create route table to let web subnet connect with internet.

VPC Management Console x | Tutorial Course | Notebook x | Module 4 - VPC pdf x | Google Docs x | IED YouTube x | +

https://us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#route-tablessearch:vpc-0c795bc54975ee930

Services Search [Alt+S]

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Peering connections

Security

Network ACLs

Security groups

Network Analysis

Reachability Analyzer

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Route tables (1/1) [Info](#)

Filter route tables

search: vpc-0c795bc54975ee930 [Clear filters](#)

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-043b48b3d5f648716	-	-	Yes	vpc-0c795bc54975ee930 Development-network	623332020272

rtb-043b48b3d5f648716

[Details](#) [Routes](#) [Subnet associations](#) [Edge associations](#) [Route propagation](#) [Tags](#)

[You can now check network connectivity with Reachability Analyzer](#) [Run Reachability Analyzer](#)

Details

Route table ID: rtb-043b48b3d5f648716

Main: Yes

Explicit subnet associations: -

Edge associations: -

VPC: vpc-0c795bc54975ee930 | Development-network

Owner ID: 623332020272

Name it and select developer VPC.

The screenshot shows the 'Create route table' page in the AWS Management Console. The page is titled 'Create route table' and includes a brief description: 'A route table specifies how packets are forwarded between the subnets within your VPC, the Internet, and your VPN connection.' The 'Route table settings' section contains a 'Name' field with the value 'for-casestudy' and a 'VPC' dropdown menu showing 'vpc-dc795bc54975ee930 (Development-network)'. Below this is a 'Tags' section with a 'Key' field containing 'Name' and a 'Value' field containing 'for-casestudy'. There are 'Add new tag' and 'Remove' buttons. At the bottom right, there are 'Cancel' and 'Create route table' buttons.

Create route table

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

Route table settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

for-casestudy

VPC
The VPC to use for this route table.

vpc-dc795bc54975ee930 (Development-network)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional

for-casestudy for-casestudy Remove

Add new tag

You can add 40 more tags.

Cancel Create route table

Create internet gateway.

The screenshot shows the 'Internet gateways' page in the AWS Management Console. The page is titled 'Internet gateways' and includes a 'Create internet gateway' button. The page shows a list of internet gateways, but it is currently empty, displaying 'No matching resource found'. The left sidebar shows the 'Virtual private cloud' section with 'Internet gateways' selected. The bottom of the page shows the 'Network Firewall' section.

Internet gateways

Filter internet gateways

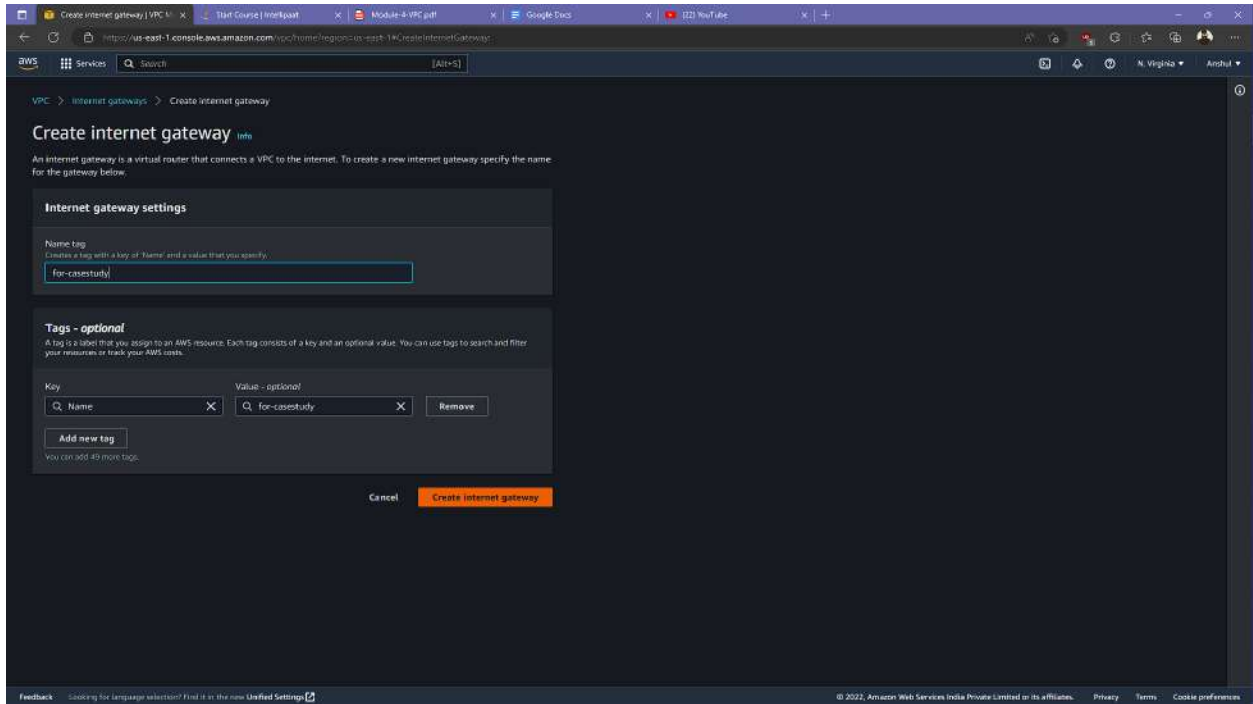
search: vpc-dc795bc54975ee930 Clear filters

Name	Internet gateway ID	State	VPC ID	Owner
No matching resource found				

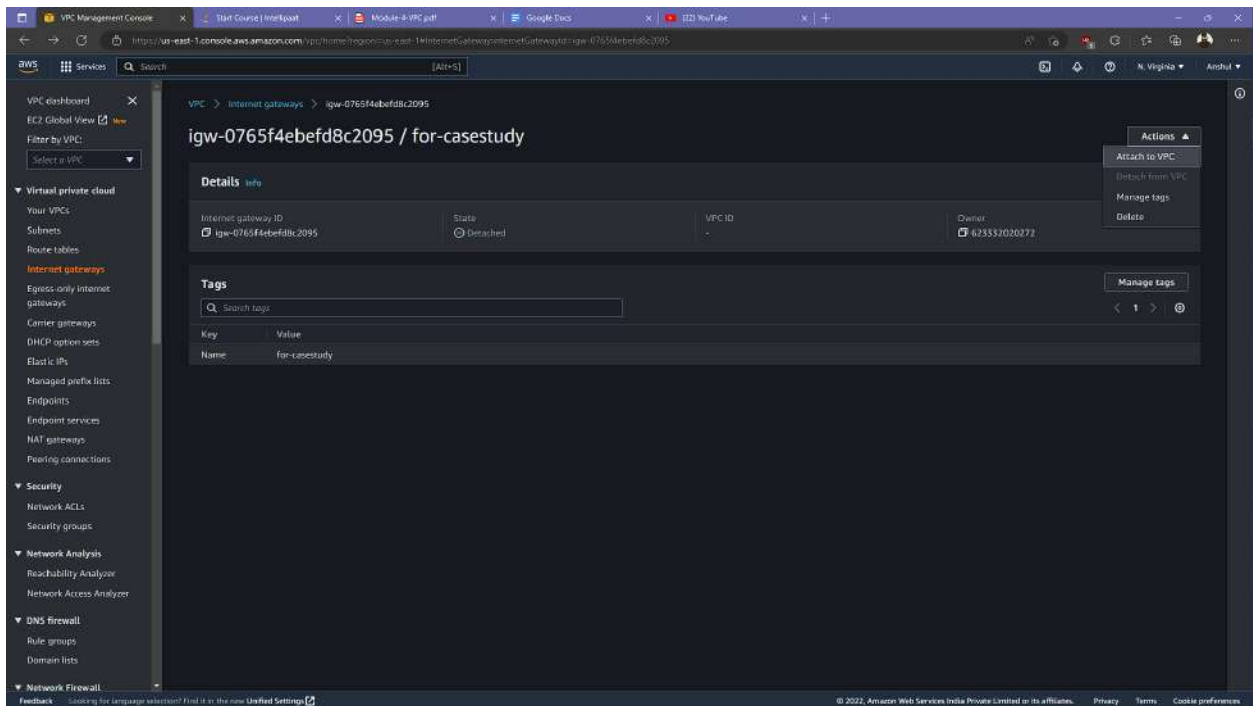
Select an internet gateway above

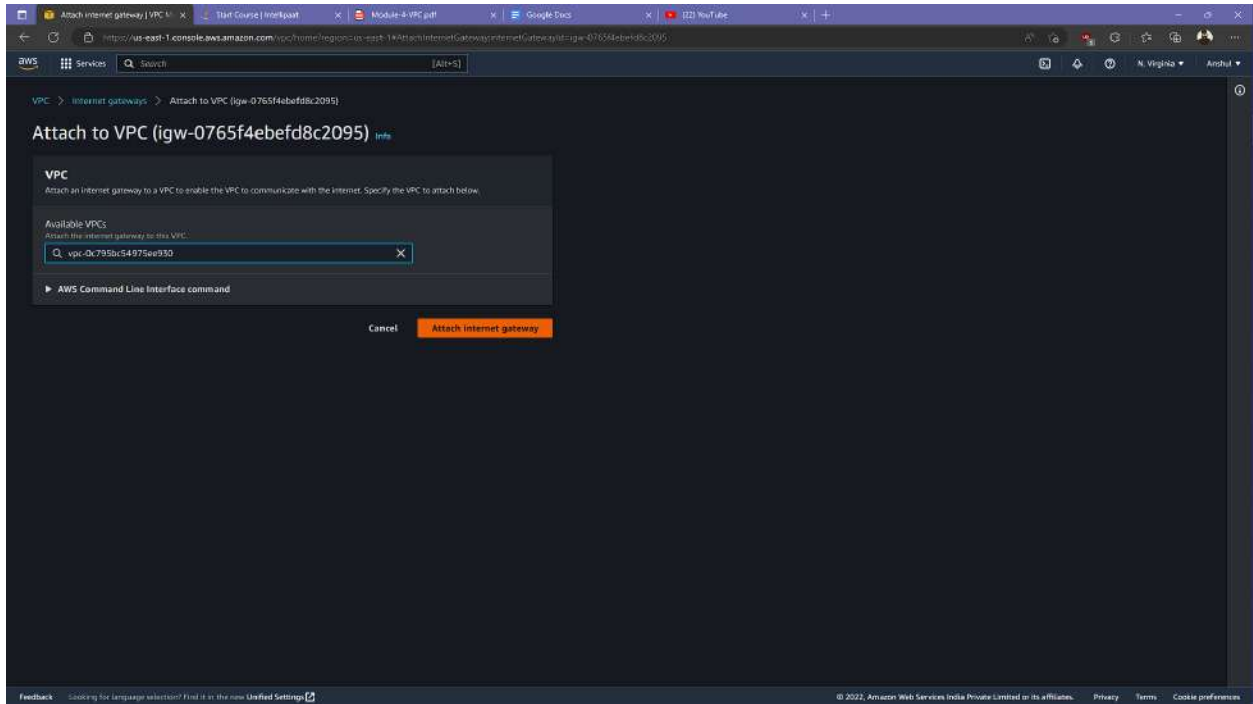
Virtual private cloud

- EC2 Global View
- 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 gateway
- Peering connections
- Security
- Network ACLs
- Security groups
- Network Analysis
- Reachability Analyzer
- Network Access Analyzer
- DNS Firewall
- Rule groups
- Domain lists
- Network Firewall

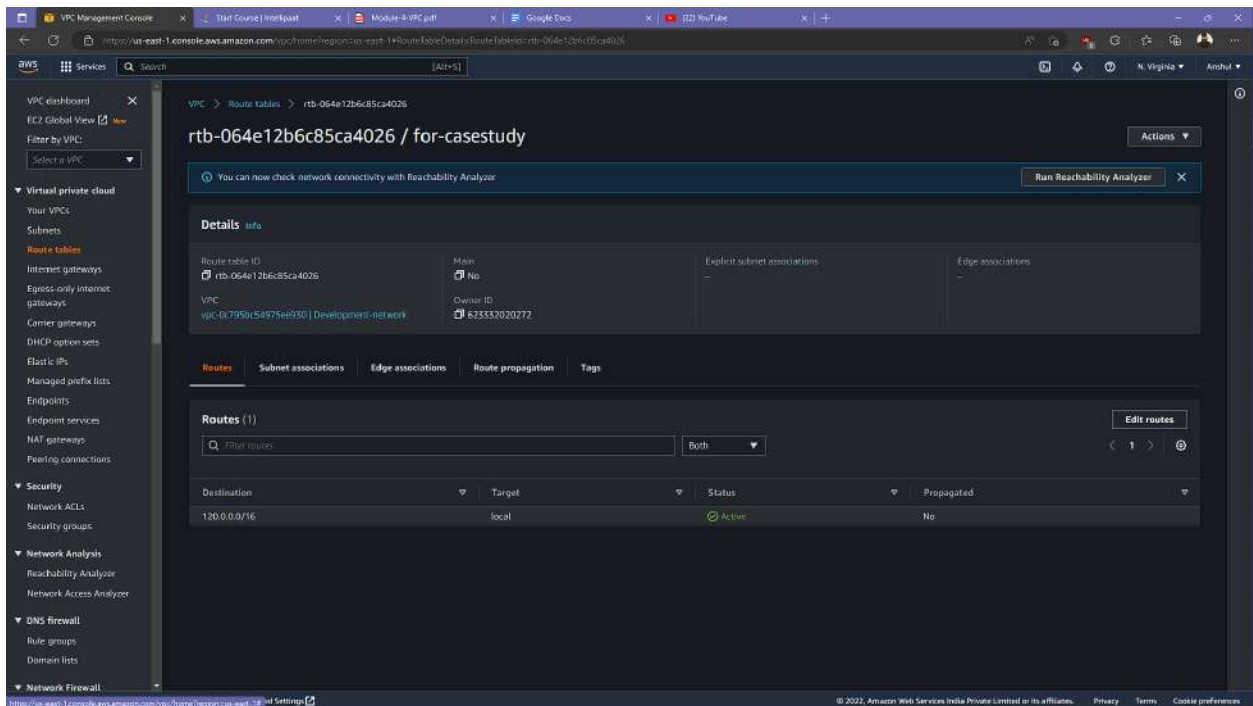


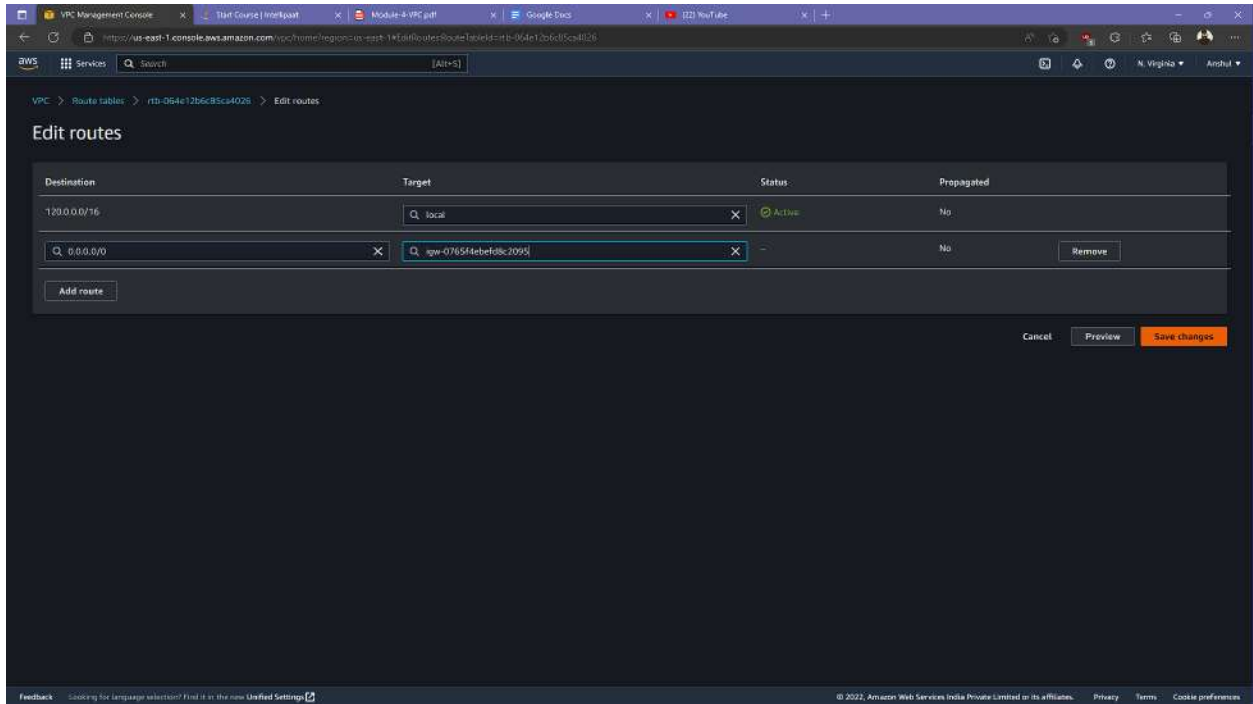
Attach it to developer VPC.



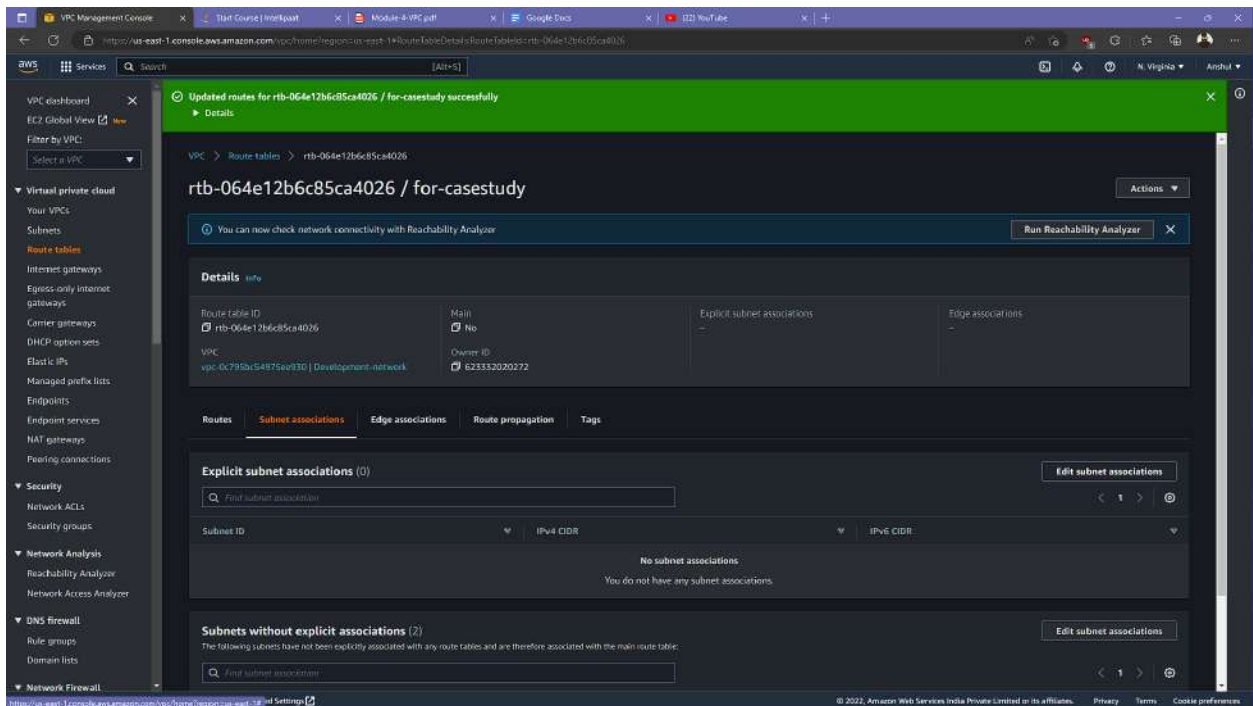


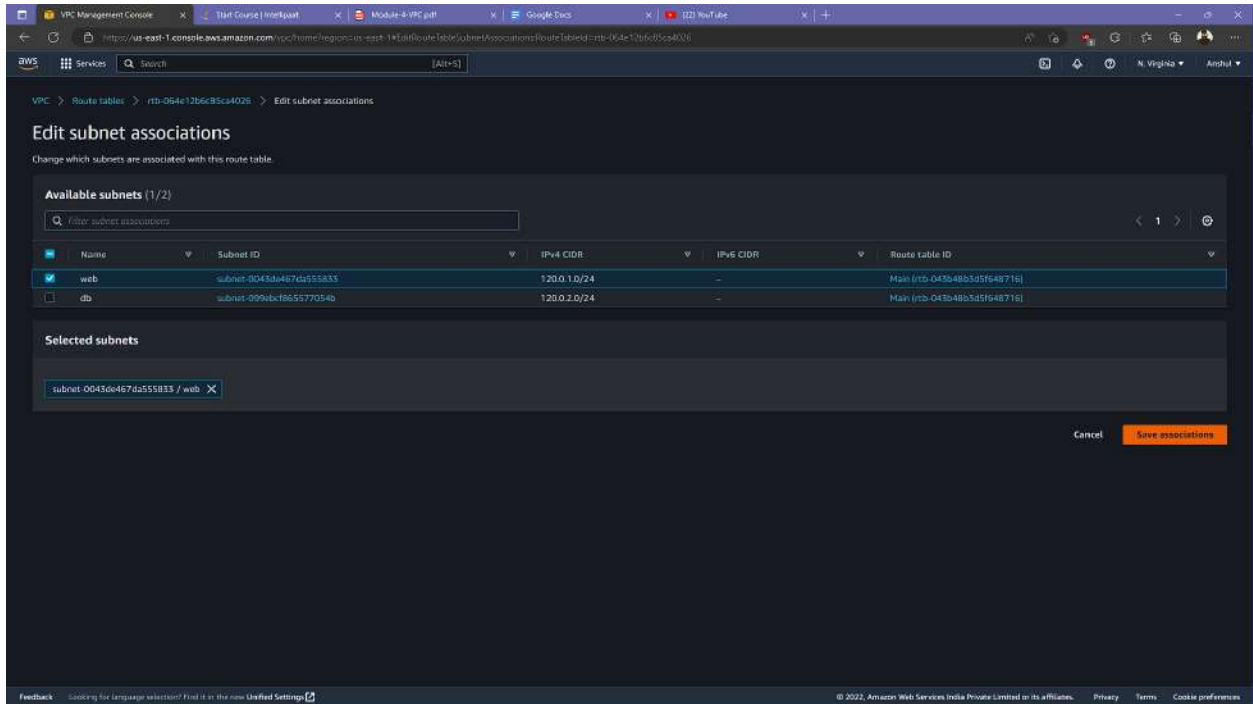
Edit routes in Subnet and add Internet gateway route,



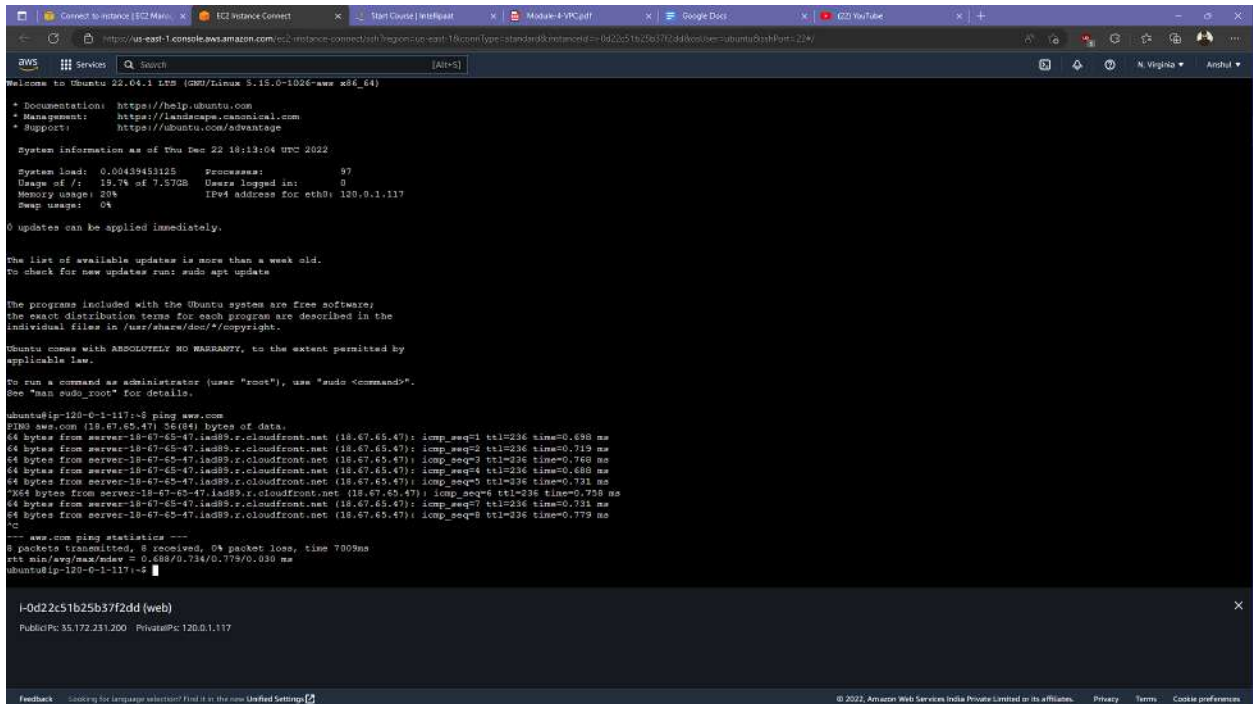


Add subnet association and choose Web Subnet.





Web instance can ping and hence connected to internet.



To setup connection between subnet, choose sharing in subnet.

The screenshot shows the AWS VPC console interface. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC resources. The main content area displays the details for the subnet 'subnet-0bd42f98b1f6cf2b3'. The 'Sharing' tab is selected, showing a 'Resource sharing' section with a search bar and a table of resource shares. The table is currently empty, and a message states 'This resource is not part of any resource share.'.

subnets > subnet-0bd42f98b1f6cf2b3

subnet-0bd42f98b1f6cf2b3 / db

Details

Subnet ID subnet-0bd42f98b1f6cf2b3	Subnet ARN arn:aws:ec2:us-east-1:623332020272:subnet/subnet-0bd42f98b1f6cf2b3	State Available	IPv4 CIDR 10.0.4.0/24
Available IPv4 addresses 250	IPv6 CIDR -	Availability Zone us-east-1a	Availability Zone ID use1-az1
Network border group us-east-1	VPC vpc-08d5a059a34a4f79 (Production-Network)	Route table rtb-08d5a059a34a4f79	Network ACL acl-0a1189b769749b7d
Default subnet No	Auto-assign public IPv4 address No	Auto-assign IPv6 address No	Auto-assign customer-owned IPv4 address No
Customer-owned IPv4 pool -	Output ID -	IPv4 CIDR reservations -	IPv6 CIDR reservations -
IPv6-only No	Hostname type IP name	Resource name DNS A record Disabled	Resource name DNS AAAA record Disabled
DNS64 Disabled	Owner 623332020272		

Resource sharing

Filter resource share

Name	Resource share ARN	Status	Created at	Last update
This resource is not part of any resource share.				

The screenshot shows the 'Share subnet' page in the AWS VPC console. The page title is 'Share subnet' and the subtitle is 'Share subnet subnet-0bd42f98b1f6cf2b3 / db with an AWS account or your organization.' The main content area displays the 'Available resource shares' section with a search bar and a table of resource shares. The table is currently empty, and a message states 'No resource share found.'.

subnets > subnet-0bd42f98b1f6cf2b3 > Share subnet

Share subnet

Share subnet subnet-0bd42f98b1f6cf2b3 / db with an AWS account or your organization.

Available resource shares

Filter resource share

Name	Status	Owner ID	Resource share ID
No resource share found.			

Cancel Share subnet

choose db subnet from another VPC.

The screenshot shows the AWS Resource Access Manager console. The 'Resources - optional' section is active, displaying a list of subnets. The 'db' subnet is selected.

ID	Name	VPC ID	Availability zone	Availability zone ID	IPv4 CIDR
subnet-035eebf31225e702	app2	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.2.0/24
subnet-0da3de467da555835	web	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.1.0/24
subnet-0b42f98b1f6cf203	db	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.4.0/24
subnet-09d024043be50c98	dbcache	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.5.0/24
subnet-0a9d9467d4f4db4	app1	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.1.0/24
subnet-099ebcf865577054b	db	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.2.0/24
subnet-0b4b10aae1e862cd	web	vpc-082d52f990e0c76c9	us-east-1a	us-east-1a	10.0.5.0/24

Selected resources: subnet-099ebcf865577054b

The screenshot shows the AWS Resource Access Manager console. The 'Principals - optional' section is active, displaying the 'Allow external accounts' checkbox, which is checked.

Selected principals: No principals

Tags: Add tags to the resource share. The tags you add will only be available to this account.

Key	Value - optional	Remove tag
Enter key	Enter value	Remove tag

Add tag

Cancel Create resource share

Sharing is done.

The screenshot displays the AWS Resource Access Manager (RAM) console. A blue notification banner at the top states: "Resource share successfully created. Resource share jdb9e7d7a-43f0-439a-b5da-42a21ed9249 created. The selected resources and/or principals are being added to the resource share. This could take a few minutes to complete." The left sidebar shows the "Resource Access Manager" menu with options for "Shared by me" (Resource shares, Shared resources, Principals) and "Shared with me" (Resource shares, Shared resources, Principals). The main content area, titled "Shared by me: Resource shares", shows "Resource shares (1)" and "Resource shares owned by your account". A search bar is present with the placeholder "Filter by attributes or search by keyword". Below the search bar is a table with one entry:

	Name	ID	Owner	Allow external principals	Status
<input type="radio"/>	iam-casualty	jdb9e7d7a-43f0-439a-b5da-42a21ed9249	623332020272	Yes	Active

The bottom of the console shows a footer with "Feedback", a link for "Looking for language selection? Find it in the new Unified Settings", and copyright information: "© 2022, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences".