

## VPC Assignment-1

1. Create a VPC with 120.0.0.0/16 CIDR block.
2. Create 1 public subnet 2 private subnets and make sure you connect a NAT gateway for internet connectivity to a private subnet.

The screenshot shows the AWS VPC Dashboard. At the top, there is a navigation bar with the AWS logo, search, notifications, settings, and user information (Frankfurt, Zaheer Ahamed). Below the navigation bar, the main header includes 'VPC dashboard' with a back arrow, 'EC2 Global View' with a refresh icon, and a 'Filter by VPC:' dropdown. A prominent orange button labeled 'Create VPC' is visible. To its right is a blue button labeled 'Launch EC2 Instances'. A note below the buttons states: 'Note: Your Instances will launch in the Europe region.' On the left, a sidebar titled 'Virtual private cloud' lists 'Your VPCs', 'Subnets', 'Route tables', and 'Internet gateways'. On the right, a section titled 'Resources by Region' displays 'You are using the following Amazon VPC resources'. It shows 'VPCs' with 1 in Europe and a link to 'See all regions'. It also shows 'NAT Gateways' with 0 in Europe and a link to 'See all regions'. There are also sections for 'AWS Lambda' and 'AWS CloudTrail' with their respective counts and region links.

**VPC dashboard**

EC2 Global View

Filter by VPC:

**Create VPC** **Launch EC2 Instances**

Note: Your Instances will launch in the Europe region.

**Resources by Region**

You are using the following Amazon VPC resources

**VPCs** Europe 1 [See all regions](#)

**NAT Gateways** Europe 0 [See all regions](#)

## VC dashboard &lt;

2 Global View

Filter by VPC:

## Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Transit-only Internet gateways

Transit gateways

Border gateway

IPCP option sets

Static IPs

Managed prefix lists

You successfully created vpc-07b68dc52803e30d3 / zaheer-vpc

## vpc-07b68dc52803e30d3 / zaheer-vpc

Actions

## Details

## VPC ID

vpc-07b68dc52803e30d3

## State

Available

## Block Public Access

Off

## DNS hostnames

Disabled

## DNS resolution

Enabled

## Tenancy

default

## DHCP option set

dopt-0ecd0523bc0166919

## Main route table

rtb-022ee582d8959c0cf

## Main network ACL

acl-0ece0a1b7cd6fdb8c

## Default VPC

No

## IPv4 CIDR

120.0.0.0/16

## IPv6 pool

-

## IPv6 CIDR (Network border group)

-

## Network Address Usage metrics

Disabled

## Route 53 Resolver DNS Firewall rule groups

-

## Owner ID

637423544770

Resource map

CIDRs

Flow logs

Tags

Integrations

## 2.Create subnets



## VPC dashboard &lt;

EC2 Global View

Filter by VPC:

## Virtual private cloud

Your VPCs

## Subnets

Route tables

Internet gateways

## Subnets (3)

Last updated  
16 minutes ago

Actions

Create subnet

	Name	Subnet ID	State	VPC	Block Public...	IPv4 C
	-	subnet-09be4140975a490fe	Available	vpc-05a3a5c3057ed6325	Off	172.31
	-	subnet-0b964dfd6bf8f2464	Available	vpc-05a3a5c3057ed6325	Off	172.31
	-	subnet-0528a94448d5ee9fb	Available	vpc-05a3a5c3057ed6325	Off	172.31

Create subnet

## Create subnet Info

### VPC

#### VPC ID

Create subnets in this VPC.

vpc-07b68dc52803e30d3 (zaheer-vpc)



#### Associated VPC CIDRs

##### IPv4 CIDRs

120.0.0.0/16

### Subnet settings

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.

zaheer-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.

Europe (Frankfurt) / eu-central-1a



##### IPv4 VPC CIDR block Info

Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

120.0.0.0/16



##### IPv4 subnet CIDR block

120.0.1.0/24

256 IPs



## Subnet 1 of 1

### Subnet name

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

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.



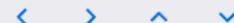
### IPv4 VPC CIDR block Info

Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.



### IPv4 subnet CIDR block

256 IPs



### ▼ Tags - optional

#### Subnet 1 of 1

### Subnet name

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

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.



### IPv4 VPC CIDR block Info

Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.



### IPv4 subnet CIDR block

256 IPs



### ▼ Tags - optional

#### Key



#### Value - optional



# Create internet gateway and attach to VPC to make subnet public

The screenshot shows the AWS CloudFormation console interface. At the top, there is a navigation bar with icons for search, refresh, and settings. Below the navigation bar, a header displays "Internet gateways (1) Info". A "Create internet gateway" button is highlighted with a green overlay. The main content area is a table with the following columns: Name, Internet gateway ID, State, VPC ID, and Owner. One row is listed, showing:

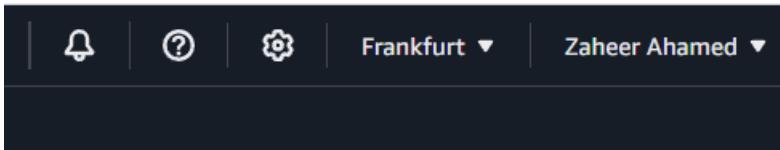
Name	Internet gateway ID	State	VPC ID	Owner
-	igw-04c5b3e5b38a88fa0	Attached	vpc-05a3a5c3057ed6325	637423544771

Below this, a breadcrumb trail shows the path: Internet gateways > igw-097d8143176a006aa. The detailed view for the internet gateway "igw-097d8143176a006aa / zaheer-internet-gateway" is displayed. The "Details" section includes:

Internet gateway ID	State	VPC ID	Owner
igw-097d8143176a006aa	Detached	-	637423544770

The "Tags" section shows a single tag: Name = zaheer-internet-gateway. A "Manage tags" button is located at the top right of the tags section.

On the left side of the screen, there is a sidebar with navigation links: Dashboard, View, PC, Create cloud, Internet gateways, and AWS Lambda.



### Actions ▲

Attach to VPC

Detach from VPC

Manage tags

Delete

Manage tags

#### Owner

637423544770

[Internet gateways](#) > Attach to VPC (igw-097d8143176a006aa)



## Attach to VPC (igw-097d8143176a006aa) Info

### VPC

Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

#### Available VPCs

Attach the internet gateway to this VPC.

`vpc-07b68dc52803e30d3`



▶ AWS Command Line Interface command

[Cancel](#)

[Attach internet gateway](#)

✓ Internet gateway igw-097d8143176a006aa successfully attached to vpc-07b68dc52803e30d3

X

## igw-097d8143176a006aa / zaheer-internet-gateway

Actions ▾

### Details Info

**Internet gateway ID**[igw-097d8143176a006aa](#)**State**[Attached](#)**VPC ID**[vpc-07b68dc52803e30d3 | zaheer-vpc](#)**Owner**[637423544770](#)

### Tags

[Manage tags](#) Search tags< 1 > **Key** [Value](#)

Name zaheer-internet-gateway

-07b68dc52803e30d3

## vpc-07b68dc52803e30d3 / zaheer-vpc

[Acti](#)

### Details Info

**VPC ID**[vpc-07b68dc52803e30d3](#)**State**[Available](#)**Block Public Access**[Off](#)**DNS hostnames**

Disabled

**DNS resolution**

Enabled

**Tenancy**

default

**DHCP option set**[dopt-0ecd0523bc0166919](#)**Main route table**[rtb-022ee582d8959c0cf](#)**Main network ACL**[acl-0ece0a1b7cd6fdb8c](#)**Default VPC**

No

**IPv4 CIDR**

120.0.0.0/16

**IPv6 pool**

-

**IPv6 CIDR (Network border group)**

-

**Network Address Usage metrics**

Disabled

**Route 53 Resolver DNS Firewall rule groups**

-

**Owner ID**[637423544770](#)[Resource map](#)[CIDRs](#)[Flow logs](#)[Tags](#)[Integrations](#)

## rtb-022ee582d8959c0cf / zaheer-public-RT

[Actions ▾](#)

### Details Info

Route table ID  
 rtb-022ee582d8959c0cf

Main  
 Yes

Explicit subnet associations  
-

Edge associations  
-

VPC  
 vpc-07b68dc52803e30d3 | zaheer-vpc

Owner ID  
 637423544770

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

### Routes (1)

 Filter routes[Both ▾](#)[Edit routes](#)

1

Destination	Target	Status	Propagated
120.0.0.0/16	local	Active	No

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

### Explicit subnet associations (0)

[Edit subnet associations](#)

1

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
<p>No subnet associations</p> <p>You do not have any subnet associations.</p>			

### Subnets without explicit associations (3)

[Edit subnet associations](#)

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

# Edit subnet associations

Change which subnets are associated with this route table.

## Available subnets (1/3)

Available subnets (1/3)				
<input type="text"/> Filter subnet associations				
Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input checked="" type="checkbox"/> zaheer-subnet-1(public)	<a href="#">subnet-0916afb1bb00f75c9</a>	120.0.1.0/24	-	Main (rtb-022ee582d8959c0cf / zaheer-public-RT)
<input type="checkbox"/> zaheer-subnet-2	<a href="#">subnet-0c6727016e79199a7</a>	120.0.2.0/24	-	Main (rtb-022ee582d8959c0cf / zaheer-public-RT)
<input type="checkbox"/> zaheer-subnet-3	<a href="#">subnet-027df0296ccacda39</a>	120.0.3.0/24	-	Main (rtb-022ee582d8959c0cf / zaheer-public-RT)

## Selected subnets

[subnet-0916afb1bb00f75c9 / zaheer-subnet-1\(public\)](#)

**rtb-022ee582d8959c0cf / zaheer-public-RT**

[Cancel](#)

[Save associations](#)

[Actions ▾](#)

### Details Info

#### Route table ID

rtb-022ee582d8959c0cf

Main

Yes

#### VPC

[vpc-07b68dc52803e30d3 | zaheer-vpc](#)

Owner ID

637423544770

#### Explicit subnet associations

[subnet-0916afb1bb00f75c9 / zaheer-subnet-1\(public\)](#)

#### Edge associations

-

[Routes](#)

[Subnet associations](#)

[Edge associations](#)

[Route propagation](#)

[Tags](#)

## Routes (1)

[Edit routes](#)

[Both ▾](#)

Filter routes

#### Destination

#### Target

#### Status

#### Propagated

120.0.0.0/16

local

Active

No

## Edit routes

Destination	Target	Status	Propagated
120.0.0.0/16	local	Active	No
	<input type="text"/> local		
<input type="text"/> 0.0.0.0/0	<input type="text"/> Internet Gateway	-	No
	<input type="text"/> igw-		

[Add route](#)

[Cancel](#) [Preview](#) [Save changes](#)

You have successfully changed subnet settings:

- Enable auto-assign public IPv4 address

**Subnets (1/6) [Info](#)** Last updated less than a minute ago

[Actions ▾](#) [Create subnet](#)

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	-	<a href="#">subnet-09be4140975a490fe</a>	Available	<a href="#">vpc-05a3a5c3057ed6325</a>
<input type="checkbox"/>	-	<a href="#">subnet-0b964dfd6bf8f2464</a>	Available	<a href="#">vpc-05a3a5c3057ed6325</a>
<input type="checkbox"/>	-	<a href="#">subnet-0528a94448d5ee9fb</a>	Available	<a href="#">vpc-05a3a5c3057ed6325</a>
<input checked="" type="checkbox"/>	zaheer-subnet-1(public)	<a href="#">subnet-0916afb1bb00f75c9</a>	Available	<a href="#">vpc-07b68dc52803e30d3   zaheer-subnet-1(public)</a>
<input type="checkbox"/>	zaheer-subnet-2	<a href="#">subnet-0c6727016e79199a7</a>	Available	<a href="#">vpc-07b68dc52803e30d3   zaheer-subnet-2</a>

[Find resources by attribute or tag](#)

[View details](#) [Create flow log](#) [Edit subnet settings](#) [Edit IPv6 CIDs](#) [Edit network ACL association](#) [Edit route table association](#) [Edit CIDR reservations](#) [Share subnet](#) [Manage tags](#) [Delete subnet](#)

**subnet-0916afb1bb00f75c9 / zaheer-subnet-1(public)**

## Edit subnet settings Info

### Subnet

#### Subnet ID

 [subnet-0916afb1bb00f75c9](#)

#### Name

 zaheer-subnet-1(public)

### Auto-assign IP settings Info

Enable AWS to automatically assign a public IPv4 or IPv6 address to a new primary network interface for an instance in this subnet.

Enable auto-assign public IPv4 address Info

Enable auto-assign customer-owned IPv4 address Info

Option disabled because no customer owned pools found.

### Resource-based name (RBN) settings Info

## Launch EC2 instance in public

### ▼ Network settings [Info](#)

#### VPC - required [Info](#)

vpc-07b68dc52803e30d3 (zaheer-vpc)  
120.0.0.0/16

#### Subnet [Info](#)

subnet-0916afb1bb00f75c9 zaheer-subnet-1(public)  
VPC: vpc-07b68dc52803e30d3 Owner: 637423544770 Availability Zone: eu-central-1a  
Zone type: Availability Zone IP addresses available: 251 CIDR: 120.0.1.0/24



Create new subnet [\[+\]](#)

#### Auto-assign public IP [Info](#)

Enable

[Additional charges apply](#) when outside of free tier allowance

#### Firewall (security groups) [Info](#)

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

Create security group

Select existing security group

#### Security group name - required

launch-wizard-1

This 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](#)

zaheer-sg

Description - required | [Info](#)

zaheer-sg

#### Inbound Security Group Rules

▼ Security group rule 1 (All, All, 0.0.0.0/0)

[Remove](#)

Type | [Info](#)

All traffic

Protocol | [Info](#)

All

Port range | [Info](#)

All

Source type | [Info](#)

Anywhere

Source | [Info](#)

Add CIDR, prefix list or security group

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. [X](#)

[Add security group rule](#)

► Advanced network configuration

eu-central-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressFamily=ipv4&connType=standard&instanceId=i-0626e0bcfc20f16f2&osUser=ubuntu&region=eu-central-1&ssh... ☆

aws | Search [Alt+S] | Frankfurt | Zaheer Ahmed | FSx

```
Get:44 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [560 kB]
Get:45 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [108 kB]
Get:46 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:47 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [12.2 kB]
Get:48 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [2940 B]
Get:49 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:50 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [356 B]
Fetched 31.7 MB in 7s (4735 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
58 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-120-0-1-237:~$ ping google.com
PING google.com (172.217.16.206) 56(84) bytes of data.
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=1 ttl=58 time=1.15 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=2 ttl=58 time=2.01 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=3 ttl=58 time=2.02 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=4 ttl=58 time=2.02 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=5 ttl=58 time=1.55 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=6 ttl=58 time=1.57 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=7 ttl=58 time=1.73 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=8 ttl=58 time=1.77 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=9 ttl=58 time=1.42 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=10 ttl=58 time=1.19 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=11 ttl=58 time=1.38 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=12 ttl=58 time=1.47 ms
64 bytes from fra16s65-in-f14.1e100.net (172.217.16.206): icmp_seq=13 ttl=58 time=1.24 ms
```

i-0626e0bcfc20f16f2 ([zaheerpublic-VPC](#))

Public IPs: 18.192.62.161 Private IPs: 120.0.1.237

To make subnet as private we have to deploy NAT Gateway in public subnet and via route table the private subnet can get connected to internet

[NAT gateways](#) > Create NAT gateway

✓ Elastic IP address 18.157.195.157 (eipalloc-0ba36d45edd97929b) allocated.

## NAT gateway settings

### Name - optional

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

zaheer-nat-gateway

The name can be up to 256 characters long.

### Subnet

Select a subnet in which to create the NAT gateway.

subnet-0916afb1bb00f75c9 (zaheer-subnet-1(public))

### 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.

eipalloc-0ba36d45edd97929b

Allocate Elastic IP

### ► Additional settings Info

## Create route table Info

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.

#### VPC

The VPC to use for this route table.



### 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



You can add 49 more tags.

rtb-036401830975956fd



## rtb-036401830975956fd / zaheer-peivate-RT



### Details Info

#### Route table ID

#### Main

 No

#### Explicit subnet associations

-

#### Edge associations

-

#### VPC

### Explicit subnet associations (0)



#### No subnet associations

You do not have any subnet associations.

## Edit subnet associations

Change which subnets are associated with this route table.

### Available subnets (2/3)

Filter subnet associations						<	1	>		
	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID					
<input type="checkbox"/>	zaheer-subnet-1(public)	<a href="#">subnet-0916afb1bb00f75c9</a>	120.0.1.0/24	-	<a href="#">rtb-022ee582d8959c0cf / zaheer-pub</a>					
<input checked="" type="checkbox"/>	zaheer-subnet-2	<a href="#">subnet-0c6727016e79199a7</a>	120.0.2.0/24	-	<a href="#">Main (rtb-022ee582d8959c0cf / zaheer-peivate-RT)</a>					
<input checked="" type="checkbox"/>	zaheer-subnet-3	<a href="#">subnet-027df0296ccacda39</a>	120.0.3.0/24	-	<a href="#">Main (rtb-022ee582d8959c0cf / zaheer-peivate-RT)</a>					

### Selected subnets

[subnet-0c6727016e79199a7 / zaheer-subnet-2](#) [subnet-027df0296ccacda39 / zaheer-subnet-3](#)

[Cancel](#)

[Save associations](#)

## rtb-036401830975956fd / zaheer-peivate-RT

[Actions ▾](#)

### Details

#### Route table ID

[rtb-036401830975956fd](#)

#### Main

No

#### VPC

[vpc-07b68dc52803e30d3 | zaheer-vpc](#)

#### Owner ID

637423544770

#### Explicit subnet associations

2 subnets

#### Edge associations

-

### Routes

### Subnet associations

### Edge associations

### Route propagation

### Tags

### Routes (1)

Filter routes

< 1 >

Destination ▾ | Target ▾ | Status ▾ | Propagated

120.0.0.0/16 local Active No

## Edit routes

Destination	Target	Status	Propagated
120.0.0.0/16	local	<input checked="" type="checkbox"/> Active	No
<input type="text" value="0.0.0.0/0"/> <span>X</span>	<input type="text" value="local"/> <span>X</span>	-	<span>X</span>
<input type="text" value="nat-083f48e42286e574f"/> <span>X</span>	<input type="text" value="NAT Gateway"/> <span>X</span>	-	<span>X</span>

[Add route](#)

[Cancel](#) [Preview](#) [Save changes](#)

## VPC Assignment-2

1. Create 2 VPCs in the North Virginia region named MYVPC1 and MYVPC2
2. Create one VPC in the Oregon region named VPCOregon1
3. Create a peering connection between MYVPC1 and MYVPC2
4. Create a peering connection between MYVPC2 and VPCOregon1

The screenshot shows the AWS VPC console interface. At the top, there is a dark header bar with a search field labeled "[Alt+S]", several small icons, and account information for "N. Virginia" and "Zaheer Ahamed". Below this is a toolbar with icons for help, notifications, and settings, along with a "Create VPC" button.

The main area is titled "Your VPCs (3)" and includes a "Info" link. It features a search bar with the placeholder "Search". To the right, there is a timestamp "Last updated less than a minute ago" and a "Actions" dropdown menu.

The central part of the screen is a table listing three VPCs:

Name	VPC ID	State	Block Public...	IPv4 CIDR	IPv6 CIDR
-	<a href="#">vpc-07fcaeb1b63876e7a</a>	Available	Off	172.31.0.0/16	-
MYVPC1	<a href="#">vpc-05545b4ff926485d5</a>	Available	Off	10.0.0.0/16	-
MYVPC2	<a href="#">vpc-0679177a1eeef5b16a</a>	Available	Off	10.1.0.0/16	-

## Your VPCs (2) Info

Last updated  
less than a minute ago

Actions

Create VPC

	Name	VPC ID	State	Block Public...	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	-	<a href="#">vpc-0c1514af2f2db2899</a>	Available	Off	172.31.0.0/16	-
<input type="checkbox"/>	VPCOregon1	<a href="#">vpc-0b754577e0538eb03</a>	Available	Off	120.0.0.0/16	-

> [Peering connections](#) > [pcx-08103d9bfea46e8d0](#)

Dashboard

View

VPC:

Private cloud

es  
gateways  
y InternetGateways  
on setsPrefix lists  
Tags

## pcx-08103d9bfea46e8d0 / vpc-peering-connection

Actions

### Details Info

Requester owner ID

637423544770

Acceptor owner ID

637423544770

Peering connection ID

ppx-08103d9bfea46e8d0

Requester VPC

vpc-05545b4ff926485d5 / MyVPC1

Status

Active

Requester CIDRs

10.0.0.0/16

Expiration time

-

Requester Region

N. Virginia (us-east-1)

VPC Peering connection ARN

arn:aws:ec2:us-east-1:637423544770:vpc-peering-connection/pcx-08103d9bfea46e8d0

Acceptor VPC

vpc-0679177a1eeef5b16a / MyVPC2

Acceptor CIDRs

10.1.0.0/16

Acceptor Region

N. Virginia (us-east-1)

DNS Route tables Tags

### Route tables Info

This VPC peering connection is referenced in a route in the following route tables.



> pcx-08773157718c77809



## pcx-08773157718c77809

Actions ▾

### Details Info

**Requester owner ID**

[637423544770](#)

**Peering connection ID**

[pcx-08773157718c77809](#)

**Status**

Active

**Expiration time**

-

**Acceptor owner ID**

[637423544770](#)

**Requester VPC**

[vpc-0679177a1eef5b16a](#)

**Requester CIDRs**

[10.1.0.0/16](#)

**Requester Region**

[N. Virginia \(us-east-1\)](#)

**VPC Peering connection ARN**

[arn:aws:ec2:us-west-2:637423544770:vpc-peering-connection/pcx-08773157718c77809](#)

**Acceptor VPC**

[vpc-0b754577e0538eb03 / VPCOregon1](#)

**Acceptor CIDRs**

[120.0.0.0/16](#)

**Acceptor Region**

[Oregon \(us-west-2\)](#)

DNS

Route tables

Tags



> pcx-08773157718c77809



## pcx-08773157718c77809 / peering2

Actions ▾

### Details Info

**Requester owner ID**

[637423544770](#)

**Peering connection ID**

[pcx-08773157718c77809](#)

**Status**

Active

**Expiration time**

-

**Acceptor owner ID**

[637423544770](#)

**Requester VPC**

[vpc-0679177a1eef5b16a / MYVPC2](#)

**Requester CIDRs**

[10.1.0.0/16](#)

**Requester Region**

[N. Virginia \(us-east-1\)](#)

**VPC Peering connection ARN**

[arn:aws:ec2:us-east-1:637423544770:vpc-peering-connection/pcx-08773157718c77809](#)

**Acceptor VPC**

[vpc-0b754577e0538eb03](#)

**Acceptor CIDRs**

[120.0.0.0/16](#)

**Acceptor Region**

[Oregon \(us-west-2\)](#)

DNS

Route tables

Tags

# VPC-Assignment-3

1. Create 2 EC2 instances in any public subnet of any VPC and name them Master and Client.
2. Using security groups, make sure that the Client instance can only be accessed (SSH) through the Master instance.

The screenshot shows the AWS EC2 Instances page with the following details:

Instances (2/3) [Info](#) Last updated less than a minute ago

Actions ▾ Launch instances ▾

Find Instance by attribute or tag (case-sensitive)

All states ▾

< 1 > ⚙

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/> client	i-04cebe0e68dd38058	<span>Running</span>	t2.micro	<span>2/2 checks passed</span>	<a href="#">View alarms</a>	eu-central-1a	-
<input checked="" type="checkbox"/> master	i-0a203fea16e21e40c	<span>Running</span>	t2.micro	<span>2/2 checks passed</span>	<a href="#">View alarms</a>	eu-central-1a	-
<input type="checkbox"/> zaheerpublic-...	i-0626e0bcfc20f16f2	<span>Terminated</span>	t2.micro	-	<a href="#">View alarms</a>	eu-central-1a	-

**Security Groups (3)**

Actions ▾

Export security groups to CSV

Create security group

Find resources by attribute or tag

&lt; 1 &gt;



<input type="checkbox"/>	Name	Security group ID	Security group name	VPC ID	Description
<input type="checkbox"/>	-	sg-07738ed00551dc53c	default	vpc-0062c4d6f48562ff3	default VPC sec
<input type="checkbox"/>	-	sg-0cc471f17bc222b0a	default	vpc-05a3a5c3057ed6325	default VPC sec
<input type="checkbox"/>	-	sg-00fce68899cb09c0f	launch-wizard-1	vpc-0062c4d6f48562ff3	zaheer-sg

Security Groups &gt; Create security group

**Create security group**

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

**Basic details****Security group name**

client-sg

Name cannot be edited after creation.

**Description**

allow ssh through master instance

**VPC Info**

vpc-0062c4d6f48562ff3 (zaheer-vpc)

ubuntu@ip-120-0-1-177:~\$

**i-0a203fea16e21e40c (master)**

Public IPs: 18.199.226.83 Private IPs: 120.0.1.177

**Inbound rules****Type****Protocol****Port range****Source****Description - optional**

SSH

TCP

22

Cus...



120.0.1.177/32 X

Delete

view

Instance summary for i-04cebe0e68dd38058 (client) [Info](#)

Updated less than a minute ago

## Instance ID

[i-04cebe0e68dd38058](#)

## IPv6 address

-

## Hostname type

IP name: ip-120-0-1-222.eu-central-1.compute.internal

## Answer private resource DNS name

-

## Auto-assigned IP address

[3.79.150.110 \[Public IP\]](#)

## Public IPv4 address

[3.79.150.110 | open address](#)

## Instance state

[Running](#)

## Private IP DNS name (IPv4 only)

[ip-120-0-1-222.eu-central-1.compute.internal](#)

## Instance type

t2.micro

## VPC ID

[vpc-0062c4d6f48562ff3 \(zaheer-vpc\)](#)

Connect

Instance state ▾

Actions ▾

## Private IPv4 address

[120.0.1.222](#)

## Public IPv4 DNS

## Change security groups

Get Windows password

Modify IAM role

## Elastic IP addresses

-

## AWS Compute Optimizer finding

[Opt-in to AWS Compute Optimizer for recommendation S.](#)

Connect

Manage instance state

Instance settings

Networking

## Security

Image and templates

Monitor and troubleshoot

Change security groups [Info](#)

Amazon EC2 evaluates all the rules of the selected security groups to control inbound and outbound traffic to and from your instance. You can use this window to add and remove security groups.

## Instance details

## Instance ID

[i-04cebe0e68dd38058](#)

## Network interface ID

[eni-0cb4028559fb5f08](#)

## Associated security groups

Add one or more security groups to the network interface. You can also remove security groups.

 sg-0b4231ccf3f74f03e

Add security group

## Security groups associated with the network interface (eni-0cb4028559fb5f08)

Security group ID	Security group name	Description	Owner ID	
sg-0b4231ccf3f74f03e	client-sg	allow ssh through master instance	637423544770	<a href="#">Remove</a>

Cancel

[Save](#)

## Connect master instance

```
* Management:      https://landscape.canonical.com
* Support:        https://ubuntu.com/pro

System information as of Thu Dec 19 16:03:06 UTC 2024

System load: 0.0          Processes:            109
Usage of /:   24.9% of 6.71GB  Users logged in:    1
Memory usage: 21%
Swap usage:   0%          IPv4 address for enx0: 120.0.1.222
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.  
See <https://ubuntu.com/esm> or run: sudo pro status

The list of available updates is more than a week old.  
To check for new updates run: sudo apt update

Last login: Thu Dec 19 15:29:13 2024 from 3.120.181.45  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo\_root" for details.

ubuntu@ip-120-0-1-222:~\$ █

**i-0a203fea16e21e40c (master)**

Public IPs: 18.199.226.83 Private IPs: 120.0.1.177

---

```
Connection to 120.0.1.222 closed.  
ubuntu@ip-120-0-1-177:~$ history  
      1 sudo apt update  
      2 clear  
      3 sudo nano zaheer.pem  
      4 sudo chmod 400 zaheer.pem  
      5 sudo ssh -i "zaheer.pem" ubuntu@3.79.150.110  
      6 ssh -i "zaheerfrankfurt.pem" ubuntu@3.79.150.110  
      7 sudo apt update  
      8 sudo nano zaheera.pem  
      9 sudo chmod 400 zaheera.pem  
     10 sudo ssh -i "zaheera.pem" ubuntu@120.0.1.222  
     11 history  
ubuntu@ip-120-0-1-177:~$ []
```

# VPC-Assignment-4

...

Introducing two new types of endpoints: Resource endpoint and Service network endpoint  
Use a Resource endpoint to access a VPC resource (ARN-based resource, domain name and IP address) in another VPC. Use a Service network endpoint to access a VPC Lattice service network. [Learn more](#)

**Endpoints** [Info](#)

Search

Name	VPC endpoint ID	Endpoint type	Status	Service name
No endpoint found				

vpce-04162b58c18469878

Successfully created VPC endpoint  
vpce-04162b58c18469878

Notifications 0 0 0 1 1 0 0

**vpce-04162b58c18469878 / zaheer-endpoint**

**Details**

Endpoint ID <a href="#">vpce-04162b58c18469878</a>	Status <span>Available</span>	Creation time Thursday 19 December 2024 at 21:45:28 GMT+5:30	Endpoint type Gateway
VPC ID <a href="#">vpc-0062c4d6f48562ff3 (zaheer-vpc)</a>	Status message -	Service name <a href="#">com.amazonaws.eu-central-1.s3</a>	Private DNS names enabled No

Route tables Policy Tags

**Route tables (1)**

Search

Name	Route Table ID	Main	Associated Id
-	<a href="#">rtb-08b5993d308089b83</a>	Yes	2 subnets

## Create IAM role for the instance to access S3 services and give S3 full access

Successfully attached zaheer-roleforec2s3fullaccess to instance i-076ae5588fab4e4a3

Last updated less than a minute ago

Name	Instance ID	Instance state	Instance type	Status check	Alarm s
master	i-0a203fea16e21e40c	Running	t2.micro	2/2 checks passed	<a href="#">View all</a>
client	i-04cebe0e68dd38058	Running	t2.micro	2/2 checks passed	<a href="#">View all</a>
<input checked="" type="checkbox"/> zaheer-endpoint	i-076ae5588fab4e4a3	Running	t2.micro		

**i-076ae5588fab4e4a3 (zaheer-endpoint)**

Actions ▲

- Connect
- View details
- Manage instance state
- Instance settings
- Networking
- Security**
- Image and templates
- Monitor and troubleshoot

Public IP

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary [Info](#)

```
'  
~\_#### Amazon Linux 2023  
~~ \###| https://aws.amazon.com/linux/amazon-linux-2023  
~~ \#/ V~'-'>  
~~~ /  
~~. /  
~/m/  
[ec2-user@ip-120-0-1-174 ~]$ sudo yum update  
Amazon Linux 2023 Kernel Livepatch repository      53 kB/s | 11 kB     00:00  
Dependencies resolved.  
Nothing to do.  
Complete!  
[ec2-user@ip-120-0-1-174 ~]$ aws s3 ls  
2024-12-05 06:56:43 cf-templates--11fd6kytt42d-us-east-1  
[ec2-user@ip-120-0-1-174 ~]$ 
```

```
2024-12-05 06:56:43 [ec2-user@ip-120-0-1-174 ~]  
1 sudo yum update  
2 aws s3 ls  
3 history
```

### i-076ae5588fab4e4a3 (zaheer-endpoint)

Public IPs: 18.157.165.51 Private IPs: 120.0.1.174

# Case Study

## 1. Create VPC and 5 subnets

vpc-0e442c6d697478550 / ProductionNetwork-VPC Actions ▾

Details <span>Info</span>	
VPC ID <a href="#">vpc-0e442c6d697478550</a>	State <span>Available</span>
DNS resolution Enabled	Tenancy default
Main network ACL <a href="#">acl-0f55c5a0d79ed2424</a>	Default VPC No
IPv6 CIDR (Network border group) -	Network Address Usage metrics Disabled
	Block Public Access <span>Off</span>
	DHCP option set <a href="#">dopt-0ecd0523bc0166919</a>
	IPv4 CIDR 120.0.0.0/16
	Route 53 Resolver DNS Firewall rule groups -
	DNS hostnames Disabled
	Main route table <a href="#">rtb-06c9726268b57e871</a>
	IPv6 pool -
	Owner ID <a href="#">637423544770</a>

[Resource map](#) | [CIDRs](#) | [Flow logs](#) | [Tags](#) | [Integrations](#)

**Resource map** Info

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

**Subnets (5)**  
Subnets within this VPC

**eu-central-1c**

- [C subnet-app2](#)
- [C Subnet-public-web](#)
- [C Subnet-db](#)
- [C Subnet-app1](#)
- [C Subnet-dbcache](#)

**Route tables (1)**  
Route network traffic to resources  
  
rtb-06c9726268b57e871

**Network connections**  
Connections to other networks

# Make sure that auto-assign IP setting is enable for all subnets

[fdbfd7fa663474](#) > Edit subnet settings

## Edit subnet settings Info

**Subnet**

Subnet ID	<input type="text"/> subnet-0ecfdbd7fa663474
Name	<input type="text"/> subnet-app2

**Auto-assign IP settings Info**  
Enable AWS to automatically assign a public IPv4 or IPv6 address to a new primary network interface for an instance in this subnet.

Enable auto-assign public IPv4 address Info

Enable auto-assign customer-owned IPv4 address Info  
Option disabled because no customer owned pools found.

**Resource-based name (RBN) settings Info**  
Specify the hostname type for EC2 instances in this subnet and optional RBN DNS query settings.

Enable resource name DNS A record on launch Info

Enable resource name DNS AAAA record on launch Info

**Hostname type Info**

Resource name  
 IP name

**DNS64 settings**  
Enable DNS64 to allow IPv6-only services in Amazon VPC to communicate with IPv4-only services and networks.

Enable DNS64 Info

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

## 2. Launch an instances in respective subnets

The screenshot shows the AWS CloudWatch Metrics console with a list of CloudWatch Metrics Insights instances. The table has the following columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, Public IPv4 DNS, Public IPv4 IP, Elastic IP, and IPv6 IPs. There are 5 instances listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 IP	Elastic IP	IPv6 IPs
subnet-app2	i-0466acb150c7fff60	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a> +	eu-central-1c	-	3.77.156.13	-	-
subnet-public	i-035e722c16d59e2a	Terminated	t2.micro	-	<a href="#">View alarms</a> +	eu-central-1c	-	-	-	-
Subnet-app1	i-0818119ac6676e6e8	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a> +	eu-central-1c	-	18.193.66.207	-	-
subnet-Public	i-0dfdba41f5ca53cd9	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a> +	eu-central-1c	-	3.66.228.236	-	-
subnet-dbcache	i-072907bd4fbe5ea2f	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a> +	eu-central-1c	-	-	-	-
Subnet-db	i-0378ff02283482034	Running	t2.micro	Initializing	<a href="#">View alarms</a> +	eu-central-1c	-	-	-	-

## 3. Create internet gateway and attach to VPC

39

The screenshot shows the AWS CloudWatch Metrics console displaying the details of an Internet Gateway named "igw-04272e0459771a539". The page includes sections for Details, Tags, and Actions.

**Details**

Internet gateway ID <a href="#">igw-04272e0459771a539</a>	State <a href="#">Attached</a>	VPC ID <a href="#">vpc-0e442c6d697478550</a>   <a href="#">ProductionNetwork-VPC</a>	Owner <a href="#">637423544770</a>
--	-----------------------------------	--	---------------------------------------

**Tags**

Key	Value
Name	productionpublic-IGW

**Actions**

4. Go to main route table->select subnet association->select public subnet->select Internet Gateway

The screenshot shows the 'Edit routes' interface for a specific route table. The table has two entries:

Destination	Target	Status	Propagated
120.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	-	No

Buttons at the bottom include 'Add route', 'Remove', 'Cancel', 'Preview', and 'Save changes'.

## Receiving traffic from internet

```
Reading state information... Done
58 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@ip-120-0-1-211:/home/ubuntu# ping google.com
PING google.com (142.250.185.78) 56(84) bytes of data.
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=1 ttl=116 time=0.887 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=2 ttl=116 time=0.725 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=3 ttl=116 time=0.778 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=4 ttl=116 time=0.756 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=5 ttl=116 time=0.893 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=6 ttl=116 time=1.91 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=7 ttl=116 time=0.790 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=8 ttl=116 time=1.06 ms
64 bytes from fra16s48-in-f14.1e100.net (142.250.185.78): icmp_seq=9 ttl=116 time=1.29 ms
^C
--- google.com ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8178ms
rtt min/avg/max/mdev = 0.725/1.010/1.908/0.359 ms
root@ip-120-0-1-211:/home/ubuntu# ||
```

i-0dfdba41f5ca53cd9 (subnet-Public)

Public IPs: 3.66.228.236 Private IPs: 120.0.1.211

5. To make subnet as private we have to deploy NAT Gateway in public subnet and via route table the private subnet can get connected to internet

Allow the dbcache-instance to route its traffic through the NAT Gateway or NAT Instance.

Elastic IP address 3.67.125.152 (eipalloc-09685efc8129cac62) allocated. X

### Create NAT gateway Info

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to 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.  
 The name can be up to 256 characters long.

**Subnet**  
Select a subnet in which to create the NAT gateway.

**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.  
 Allocate Elastic IP

**Additional settings Info**

**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	Remove
<input type="text" value="Name"/> <span style="border: 1px solid #0072bc; padding: 2px 5px; border-radius: 5px; color: #0072bc;">X</span>	<input type="text" value="production-NAT"/> <span style="border: 1px solid #0072bc; padding: 2px 5px; border-radius: 5px; color: #0072bc;">X</span> <span style="border: 1px solid #0072bc; padding: 2px 5px; border-radius: 5px; color: #0072bc;">Remove</span>	

You can add 49 more tags.

Create NAT gateway Cancel

## 6. Create RT

Route tables > Create route table

### Create route table Info

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.

production-RT

**VPC**  
The VPC to use for this route table.

vpc-0e442c6d697478550 (ProductionNetwork-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	Value - optional
<input type="text"/> Name	<input type="text"/> production-RT <span>X</span> <span>Remove</span>

**Add new tag**

You can add 49 more tags.

Cancel Create route table

## rtb-0c4badb30852e00db / production-RT

Actions ▾

### Details Info

Route table ID  
[rtb-0c4badb30852e00db](#)

Main

No

Explicit subnet associations  
2 subnets

Edge associations  
-

VPC  
[vpc-0e442c6d697478550](#) |  
ProductionNetwork-VPC

Owner ID  
[637423544770](#)

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

### Explicit subnet associations (2)

[Edit subnet associations](#)

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
Subnet-app1	<a href="#">subnet-010fd44a943dfd403</a>	120.0.2.0/24	-
Subnet-dbcache	<a href="#">subnet-08a8e2bba3dcdeb97</a>	120.0.4.0/24	-

### Subnets without explicit associations (2)

[Edit subnet associations](#)

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

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-app2	<a href="#">subnet-0ecfdbfd7fa663474</a>	120.0.3.0/24	-
Subnet-db	<a href="#">subnet-0fa35380f0c12ceab</a>	120.0.5.0/24	-

[rtb-0c4badb30852e00db](#) > Edit routes

### Edit routes

Destination	Target	Status	Propagated
120.0.0.0/16	local	<input checked="" type="checkbox"/> Active	No
<input type="text"/> 0.0.0.0/0	<input type="text"/> local	<input type="button" value="X"/>	
<input type="text"/> 0.0.0.0/0	NAT Gateway	<input type="button" value="X"/>	No <input type="button" value="Remove"/>

[Add route](#)

[Cancel](#)

[Preview](#)

[Save changes](#)

✓ You have successfully updated subnet associations for rtb-0b7afeaf8a37f2b22 / private-RT.



## rtb-0b7afeaf8a37f2b22 / private-RT

Actions ▾

### Details Info

Route table ID  
 rtb-0b7afeaf8a37f2b22

VPC  
vpc-0e442c6d697478550 |  
ProductionNetwork-VPC

Main  
 No

Owner ID  
 637423544770

Explicit subnet associations  
2 subnets

Edge associations  
-

Routes

Subnet associations

Edge associations

Route propagation

Tags

### Explicit subnet associations (2)

Edit subnet associations

< 1 > |

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
Subnet-app1	<a href="#">subnet-010fd44a943dfd403</a>	120.0.2.0/24	-
Subnet-dbcache	<a href="#">subnet-08a8e2bba3dcdeb97</a>	120.0.4.0/24	-

### Subnets without explicit associations (2)

Edit subnet associations

< 1 > |

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-app2	<a href="#">subnet-0ecfdbfd7fa663474</a>	120.0.3.0/24	-
Subnet-db	<a href="#">subnet-0fa35380f0c12ceab</a>	120.0.5.0/24	-



### Route tables (2/4) Info

Last updated less than a minute ago

Actions ▾

Create route table

< 1 > |

	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input checked="" type="checkbox"/>	production-RT	<a href="#">rtb-0c4badb30852e00db</a>	<a href="#">subnet-0cdb9e8f50904d...</a>	-	No	vpc-0e442c6d697478550   Pro...	637423544770
<input type="checkbox"/>	-	<a href="#">rtb-0a0aafb4772ed72b2</a>	-	-	Yes	vpc-05a3a5c3057ed6325	637423544770
<input type="checkbox"/>	-	<a href="#">rtb-06c9726268b57e871</a>	-	-	Yes	vpc-0e442c6d697478550   Pro...	637423544770
<input checked="" type="checkbox"/>	private-RT	<a href="#">rtb-0b7afeaf8a37f2b22</a>	<a href="#">2 subnets</a>	-	No	vpc-0e442c6d697478550   Pro...	637423544770

## vpc-04730821933005fce / Development-Network-VPC

[Actions ▾](#)

### Details Info

VPC ID  
 vpc-04730821933005fce

DNS resolution  
Enabled

Main network ACL  
acl-04b38dd445fb0e27

IPv6 CIDR (Network border group)  
-

State  
 Available

Tenancy  
default

Default VPC  
No

Network Address Usage metrics  
Disabled

Block Public Access  
 Off

DHCP option set  
dopt-0ecd0523bc0166919

IPv4 CIDR  
10.0.0.0/16

Route 53 Resolver DNS Firewall rule groups  
-

DNS hostnames  
Disabled

Main route table  
rtb-0dfcead1829402d78

IPv6 pool  
-

Owner ID  
 637423544770

[Resource map](#)[CIDRs](#)[Flow logs](#)[Tags](#)[Integrations](#)

### Resource map Info

#### VPC [Show details](#)

Your AWS virtual network

Development-Network-VPC

#### Subnets (2)

Subnets within this VPC

eu-central-1b

DB-subnet

WEB-subnet

#### Route tables (1)

Route network traffic to resources

rtb-0dfcead1829402d78

#### Network connectors

Connections to other networks

[Alt+S]

Frankfurt ▾ Zaheer Ahmed ▾



## Instances (2/7) Info

 Find Instance by attribute or tag (case-sensitive)

All states ▾

Last updated  
less than a minute ago

Connect

Instance state ▾

Actions ▾

Launch instances



1



	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs
<input type="checkbox"/>	subnet-app2	i-0466acb150c7fff60	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1c	-	3.77.156.13	-
<input type="checkbox"/>	Subnet-app1	i-0818119ac6676e6e8	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1c	-	18.193.66.207	-
<input type="checkbox"/>	subnet-Public	i-0dfdba41f5ca53cd9	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1c	-	3.66.228.236	-
<input type="checkbox"/>	subnet-dbcache	i-072907bd4fbe5ea2f	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1c	-	-	-
<input type="checkbox"/>	Subnet-db	i-0378ff02283482034	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1c	-	-	-
<input checked="" type="checkbox"/>	Subnet-DB	i-0aa3652f70405148d	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>Initializing</span>	<span>View alarms</span> +	eu-central-1b	-	3.121.196.101	-
<input checked="" type="checkbox"/>	Subnet-web	i-07ac4ec82005d8fb0	<span>Running</span>	<span>View</span> <span>Logs</span>	t2.micro	<span>2/2 checks passed</span>	<span>View alarms</span> +	eu-central-1b	-	3.127.230.107	-

[Internet gateways](#) > igw-0dd23c09d40623c99

Internet gateway igw-0dd23c09d40623c99 successfully attached to vpc-04730821933005fce


## igw-0dd23c09d40623c99 / Developmentpublic-IGW

Actions ▾

hboard

View

VPC:

Private cloud

sg

Gateways

/ Internet

Gateways

Sets

Prefix lists

Tags

### Details Info

**Internet gateway ID**  
igw-0dd23c09d40623c99
**State**  
Attached
**VPC ID**  
vpc-04730821933005fce | Development-Network-VPC
**Owner**  
637423544770

### Tags

Search tags

Key	Value
Name	Developmentpublic-IGW

Manage tags



1



Route table rtb-0951e0e8fc403ab57 | development-RT was created successfully.

## rtb-0951e0e8fc403ab57 / development-RT

[Actions](#)

**Details** [Info](#)

Route table ID	Main	Explicit subnet associations	Edge associations
<a href="#">rtb-0951e0e8fc403ab57</a>	<input type="checkbox"/> No	-	-
VPC	Owner ID		
vpc-04730821933005fce   Development-Network-VPC	<a href="#">637423544770</a>		

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

**Routes (1)**

Filter routes		Both	Edit routes
Destination	Target	Status	Propagated
10.0.0.0/16	local	<input checked="" type="checkbox"/> Active	No

✓ Updated routes for rtb-0951e0e8fc403ab57 / development-RT successfully Details X

## rtb-0951e0e8fc403ab57 / development-RT

Actions ▾

**Details** Info

Route table ID  
rtb-0951e0e8fc403ab57

VPC  
vpc-04730821933005fce | Development-Network-VPC

Main  
 No

Owner ID  
 637423544770

Explicit subnet associations  
subnet-0faf7cc33da0e8e0a / WEB-subnet

Edge associations  
-

Routes Subnet associations Edge associations Route propagation Tags

**Explicit subnet associations (1)**

Find subnet association Edit subnet associations < 1 > ⚙

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
WEB-subnet	subnet-0faf7cc33da0e8e0a	10.0.1.0/24	-

**Subnets without explicit associations (1)**

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

Find subnet association Edit subnet associations < 1 > ⚙

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
DB-subnet	subnet-08c3f905f58840c72	10.0.2.0/24	-

[rtb-0951e0e8fc403ab57](#) > Edit routes

## Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	<input style="width: 150px; height: 25px; border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px; margin-bottom: 5px;" type="text" value="local"/> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 10px; font-size: 0.8em;">local</span>	<span>Active</span>	No
<input style="width: 150px; height: 25px; border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px; margin-bottom: 5px;" type="text" value="0.0.0.0/0"/> <span>X</span>	<input style="width: 150px; height: 25px; border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px; margin-bottom: 5px;" type="text" value="Internet Gateway"/> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 10px; font-size: 0.8em;">Internet Gateway</span>	-	No

Add route Remove

Cancel Preview Save changes

```
Get:48 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [2940 B]
Get:49 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:50 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [356 B]
Fetched 31.8 MB in 6s (5598 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
58 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@ip-10-0-1-144:/home/ubuntu# ping google.com
PING google.com (142.250.186.142) 56(84) bytes of data.
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=1 ttl=59 time=1.21 ms
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=2 ttl=59 time=1.44 ms
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=3 ttl=59 time=1.34 ms
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=4 ttl=59 time=1.47 ms
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=5 ttl=59 time=1.22 ms
64 bytes from fra24s07-in-f14.1e100.net (142.250.186.142): icmp_seq=6 ttl=59 time=1.51 ms
^C
--- google.com ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5008ms
rtt min/avg/max/mdev = 1.210/1.364/1.508/0.117 ms
root@ip-10-0-1-144:/home/ubuntu# |
```

### i-07ac4ec82005d8fb0 (Subnet-web)

PublicIPs: 3.127.230.107 PrivateIPs: 10.0.1.144



## VPC dashboard &lt;

EC2 Global View

Filter by 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

NAT gateways

Peering connections

Peering connections Info

Find resources by attribute or tag

Actions

Create peering connection

&lt; 1 &gt;

Name | Peering connection ID | Status

Requester VPC

Acceptor VPC

Requester CIDRs

Acceptor CIDRs

Requester owner ID

No peering connection found

Select a peering connection above



15 &gt; Create peering connection

## 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.

Pro-Dev-Peering

## Select a local VPC to peer with

## VPC ID (Requester)

vpc-0e442c6d697478550 (ProductionNetwork-VPC)

## VPC CIDRs for vpc-0e442c6d697478550 (ProductionNetwork-VPC)

CIDR	Status	Status reason
120.0.0.0/16	Associated	-

## Select another VPC to peer with

## Account

- My account
- Another account

## Region

- This Region (eu-central-1)
- Another Region

## VPC ID (Acceptor)

vpc-04730821933005fce (Development-Network-VPC)

## VPC CIDRs for vpc-04730821933005fce (Development-Network-VPC)

CIDR	Status	Status reason
10.0.0.0/16	Associated	-

Peering connection ID	Status	Requester VPC	Acceptor VPC	Requester CIDRs
<a href="#">pcx-0e02d94da02c358c1</a>	Pending acceptance	<a href="#">vpc-0e442c6d697478550 / Pro...</a>	<a href="#">vpc-04730821933005fce / Dev...</a>	120.0.0.0/16

**Accept VPC peering connection request** Info X

Are you sure you want to accept this VPC peering connection request? (pcx-0e02d94da02c358c1 / Pro-Dev-Peering)

<b>Requester VPC</b> <a href="#">vpc-0e442c6d697478550 / ProductionNetwork-VPC</a>	<b>Acceptor VPC</b> <a href="#">vpc-04730821933005fce / Development-Network-VPC</a>	<b>Requester CIDRs</b> <input type="checkbox"/> 120.0.0.0/16
<b>Acceptor CIDRs</b> -	<b>Requester Region</b> Frankfurt (eu-central-1)	<b>Acceptor Region</b> Frankfurt (eu-central-1)
<b>Requester owner ID</b> <input type="checkbox"/> 637423544770 (This account)	<b>Acceptor owner ID</b> <input type="checkbox"/> 637423544770 (This account)	

[Cancel](#) Accept request

## rtb-060b77eec08000470 / dev-private-RT

Actions ▾

Details Info

## Route table ID

[rtb-060b77eec08000470](#)

## VPC

vpc-04730821933005fce | Development-Network-VPC

## Main

 No

## Owner ID

[637423544770](#)

## Explicit subnet associations

[subnet-08c3f905f58840c72 / DB-subnet](#)

## Edge associations

-

## Routes

## Subnet associations

## Edge associations

## Route propagation

## Tags

## Routes (3)

 Filter routes

Both ▾

Edit routes

&lt; 1 &gt;



Destination	Target	Status	Propagated
0.0.0.0/16	<a href="#">pcx-0e02d94da02c358c1</a>	<span>Active</span>	No
10.0.0.0/16	local	<span>Active</span>	No
120.0.0.0/16	<a href="#">pcx-0e02d94da02c358c1</a>	<span>Active</span>	No

```
^C
--- google.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4007ms
rtt min/avg/max/mdev = 1.361/1.554/1.952/0.210 ms
root@ip-120-0-1-211:/home/ubuntu# sudo su
root@ip-120-0-1-211:/home/ubuntu# nano zaheer.pem
root@ip-120-0-1-211:/home/ubuntu# chmod 400 zaheer.pem
root@ip-120-0-1-211:/home/ubuntu# ssh -i "zaheer.pem" ubuntu@3.127.230.107
The authenticity of host '3.127.230.107 (3.127.230.107)' can't be established.
ED25519 key fingerprint is SHA256:8Kz4y4lB/ZkhbRHJc0AB0edoRPfa8d47xi47UVQeszY.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.127.230.107' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1018-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

System information as of Mon Dec 23 10:50:18 UTC 2024

  System load:  0.0          Processes:           114
  Usage of /:   28.2% of 6.71GB  Users logged in:      1
  Memory usage: 24%          IPv4 address for enX0: 10.0.1.144
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

64 updates can be applied immediately.
32 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Mon Dec 23 09:47:00 2024 from 3.120.181.44
ubuntu@ip-10-0-1-144:~$ ||
```