

Module 5: VPC Creation Assignment

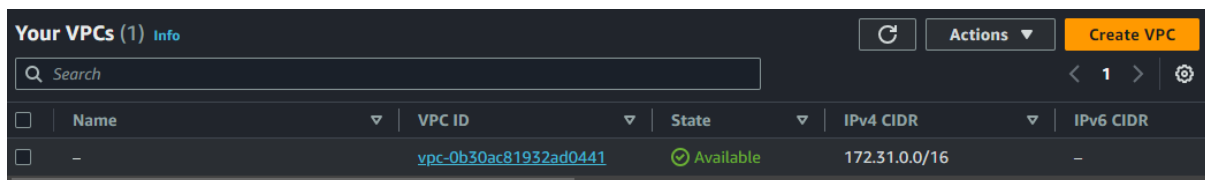
Problem Statement:

Working for an organization, you are required to provide them a safe and secure environment for the deployment of their resources. They might require different types of connectivity. Implement the following to fulfill the requirements of the company.

Tasks To Be Performed:

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.

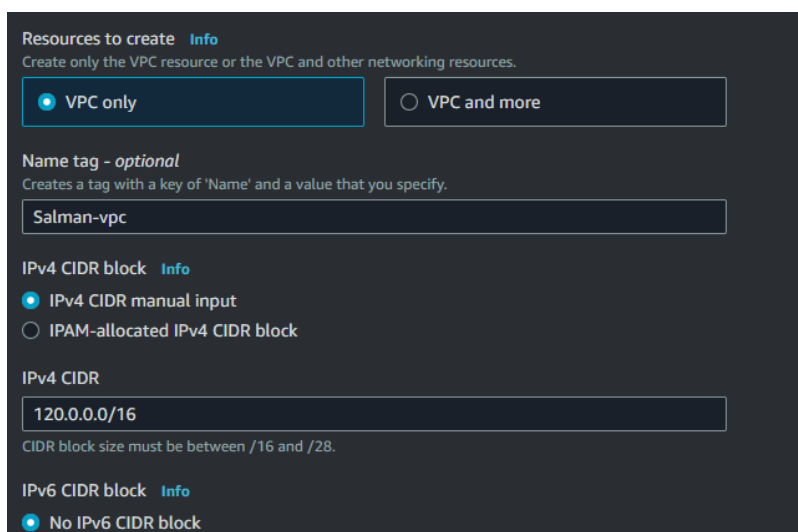
1. Go Search Menu Search VPC and Click Create VPC



The screenshot shows the 'Your VPCs (1)' page in the AWS console. It includes a search bar, a table with columns for Name, VPC ID, State, IPv4 CIDR, and IPv6 CIDR, and a 'Create VPC' button. The table contains one entry with VPC ID 'vpc-0b30ac81932ad0441' in an 'Available' state with an IPv4 CIDR of '172.31.0.0/16'.

	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	-	vpc-0b30ac81932ad0441	Available	172.31.0.0/16	-

2. And Select Below The Configure As Per the Assignment



The screenshot shows the 'Resources to create' configuration page. It has two radio buttons: 'VPC only' (selected) and 'VPC and more'. Below is a 'Name tag - optional' section with a text input containing 'Salman-vpc'. The 'IPv4 CIDR block' section has two radio buttons: 'IPv4 CIDR manual input' (selected) and 'IPAM-allocated IPv4 CIDR block'. The 'IPv4 CIDR' text input contains '120.0.0.0/16'. At the bottom, the 'IPv6 CIDR block' section has a radio button for 'No IPv6 CIDR block' which is selected.

Resources to create Info
Create only the VPC resource or the VPC and other networking resources.

☒ VPC only ☐ VPC and more

Name tag - optional
Creates a tag with a key of 'Name' and a value that you specify.
Salman-vpc

IPv4 CIDR block Info
☒ IPv4 CIDR manual input ☐ IPAM-allocated IPv4 CIDR block

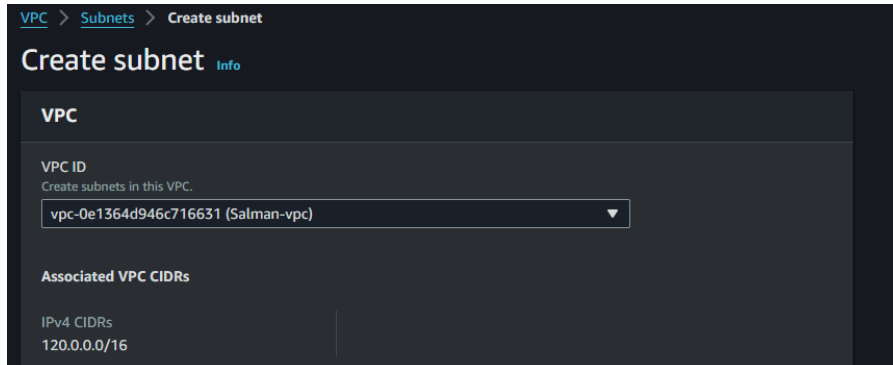
IPv4 CIDR
120.0.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block Info
☒ No IPv6 CIDR block

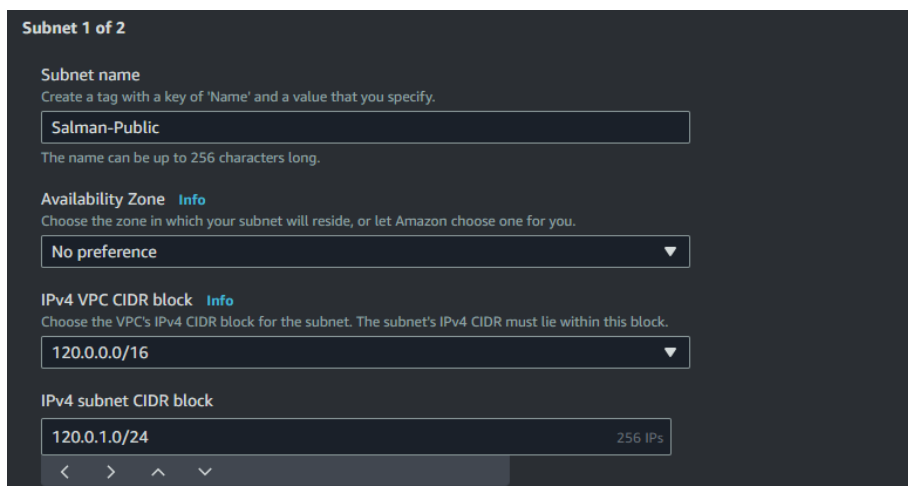
- Go Subnet Section Below the VPC U will find Click Create Subnet



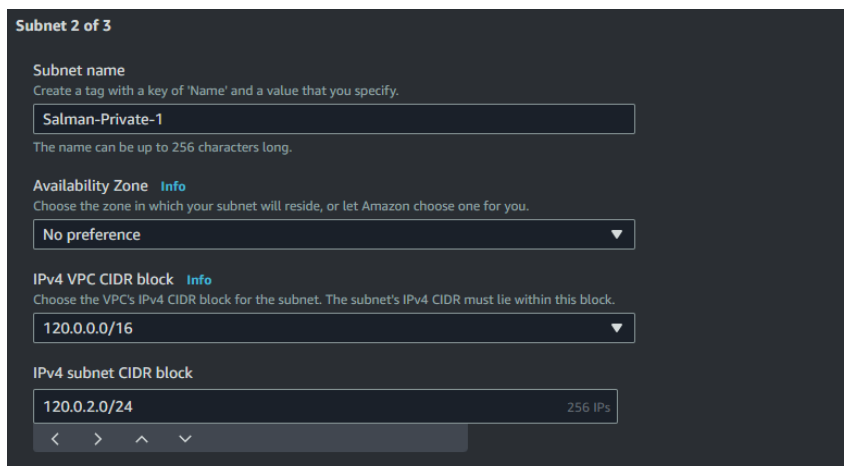
- Select Created VPC



- Create 1 Public Subnet



- Create 2 Private Subnet



7. Second Private Subnet

Subnet 3 of 3

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

Salman-Private-2

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.

No preference

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

120.0.3.0/24 256 IPs

< > ^ v

8. Now Subnets are Created Successfully

<input type="checkbox"/>	Salman-Private-1	subnet-0f4f7b3d491c56ca2	Available	vpc-0e1364d946c716631 Sal...	120.0.2
<input type="checkbox"/>	Salman-Private-2	subnet-0c81f60bc25c6addb	Available	vpc-0e1364d946c716631 Sal...	120.0.3
<input type="checkbox"/>	Salman-Public	subnet-07707478ec4216d7f	Available	vpc-0e1364d946c716631 Sal...	120.0.1

9. Create IGW

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Internet gateways (1) [Info](#)

Search

<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	-	igw-06f8a7799e76cc0db	Attached	vpc-0b30ac81932ad0441

10. Give Name as ur wish

[VPC](#) > [Internet gateways](#) > **Create internet gateway**

Create internet gateway [Info](#)

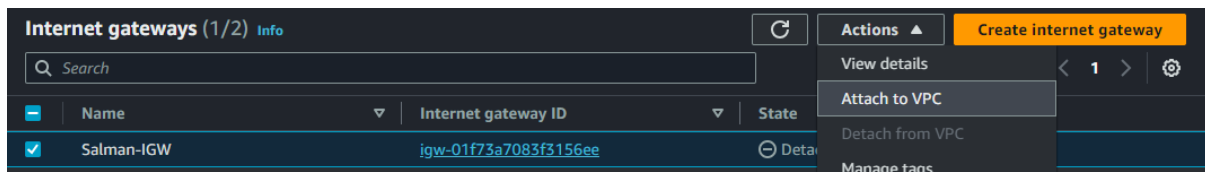
An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

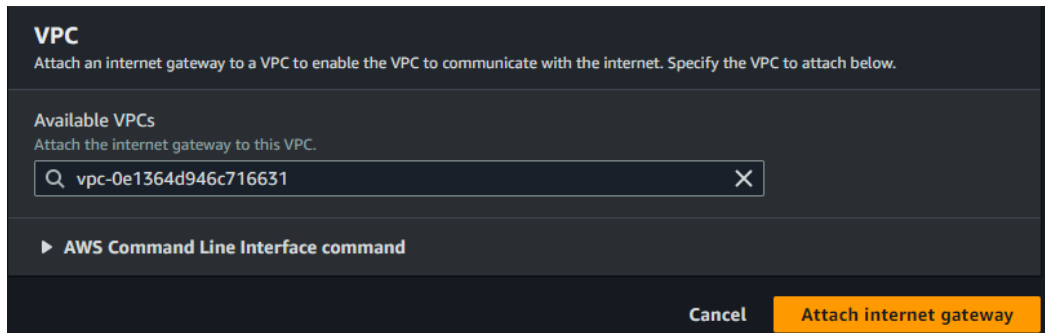
Name tag
Creates a tag with a key of 'Name' and a value that you specify.

Salman-IGW

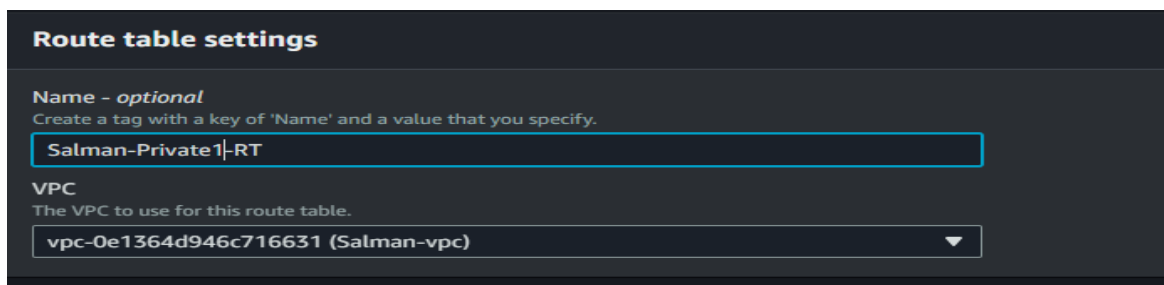
11. Attach To VPC



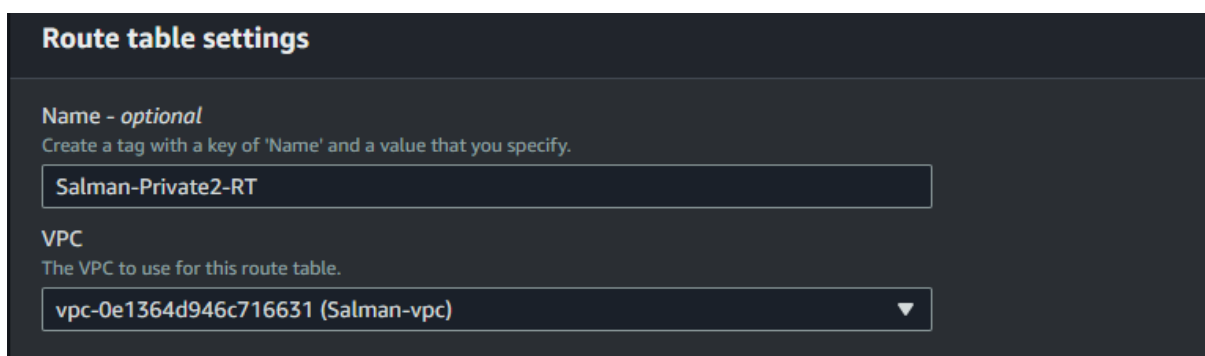
12. Select Created VPC



13. Create Private-1 RT's



14. Create Private-2 RT



15. Create Public RT

Route table settings

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

Salman-Public-RT

VPC
The VPC to use for this route table.

vpc-0e1364d946c716631 (Salman-vpc)

16. Successfully Created

<input checked="" type="checkbox"/>	Salman-Public-RT	rtb-0651fa438f9da7324	—
<input type="checkbox"/>	Salman-Private1-RT	rtb-0fa7ad84c846a4de1	—
<input type="checkbox"/>	Salman-Private2-RT	rtb-0b55c01c4ab9b68fb	—

17. Now Select Public Subnet > Go Routes > Edit Routes

<input checked="" type="checkbox"/>	Salman-Public-RT	rtb-0651fa438f9da7324	—	—	Yes
<input type="checkbox"/>	Salman-Private1-RT	rtb-0fa7ad84c846a4de1	—	—	No
<input type="checkbox"/>	Salman-Private2-RT	rtb-0b55c01c4ab9b68fb	—	—	No

rtb-0651fa438f9da7324 / Salman-Public-RT

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (1) Both Edit routes

Filter routes

Destination	Target	Status	Propagated
120.0.0.0/16	local	Active	No

18. Destination Choose everyone and Target is IGW and Save Changes

VPC > Route tables > [rtb-0651fa438f9da7324](#) > Edit routes

Edit routes

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

Q igw-01f73a7083f3156ee

Use: "igw-01f73a7083f3156ee"

igw-01f73a7083f3156ee (Salman-IGW)

Add route

Remove

Cancel Preview Save changes

19. Now Again Select Public RT and This Select Edit Subnet Associations and click

The screenshot shows the AWS console interface for editing subnet associations. At the top, a table lists route tables: 'Salman-Public-RT' (selected), 'Salman-Private1-RT', and 'Salman-Private2-RT'. Below this, the 'Subnet associations' tab is active. It shows 'Explicit subnet associations (0)' and a search bar. A table at the bottom lists columns: Name, Subnet ID, IPv4 CIDR, IPv6 CIDR, and Route table ID. The 'Edit subnet associations' button is located in the top right of the tab area.

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
Salman-Public-RT	rtb-0651fa438f9da7324	–	–	Yes
Salman-Private1-RT	rtb-0fa7ad84c846a4de1	–	–	No
Salman-Private2-RT	rtb-0b55c01c4ab9b68fb	–	–	No

20. Select Public Subnet and Save Associations

The screenshot shows the AWS console interface for selecting subnets. The 'Available subnets (1/3)' tab is active, displaying a table with columns: Name, Subnet ID, IPv4 CIDR, IPv6 CIDR, and Route table ID. The 'Salman-Public' subnet is selected. Below the table, the 'Selected subnets' section shows the selected subnet: 'subnet-07707478ec4216d7f / Salman-Public'. The 'Save associations' button is located in the bottom right corner.

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
Salman-Private-1	subnet-0f4f7b3d491c56ca2	120.0.2.0/24	–	Main (rtb-0651fa438f9da7324 / Sal
Salman-Private-2	subnet-0c81f60bc25c6addb	120.0.3.0/24	–	Main (rtb-0651fa438f9da7324 / Sal
Salman-Public	subnet-07707478ec4216d7f	120.0.1.0/24	–	Main (rtb-0651fa438f9da7324 / Sal

21. Now **Create Nat Gateway** and Select **Public Subnet**

VPC > NAT gateways > Create NAT gateway

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.

Salman-NGW

The name can be up to 256 characters long.

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

subnet-07707478ec4216d7f (Salman-Public) ▼

Connectivity type
Select a connectivity type for the NAT gateway.

☒ Public

☐ Private

22. Now U will find the **Created Nat Gateway**

Elastic IPs
Managed prefix lists
Endpoints
Endpoint services
NAT gateways
Peering connections

Find resources by attribute or tag

Created = Friday, March 15, 2024 at 15:39:54 GMT+5:30 X Clear filters

Name	NAT gateway ID	Connectivity...	State	State message	Primary public
Salman-NGW	nat-08cad47f62eca9813	Public	Available	–	54.254.24.117

23. Select **Private RT** and Go to **Routes** and **Click Edit Routes**

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

<input type="checkbox"/>	–	rtb-04a7294e34e1bc5a5	–	–	Yes
<input type="checkbox"/>	Salman-Private2-RT	rtb-0b55c01c4ab9b68fb	–	–	No
<input checked="" type="checkbox"/>	Salman-Private1-RT	rtb-0fa7ad84c846a4de1	–	–	No
<input type="checkbox"/>	Salman-Public-RT	rtb-0651fa438f9da7324	subnet-07707478ec4216...	–	Yes

rtb-0fa7ad84c846a4de1 / Salman-Private1-RT

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (1) Both Edit routes

Filter routes

Destination	Target	Status	Propagated
120.0.0.0/16	local	Active	No

24. Destination Everyone and Target NAT GATEWAY

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

nat-08cad47f62eca9813

Use: "nat-08cad47f62eca9813"

nat-08cad47f62eca9813 (Salman-NGW)

nat-09a6975f0417b06f9

Add route

Cancel Preview Save changes

25. Now Go To Subnet Associations and Edit and Select Private Subnet Associations and I Forgotted to take the Screenshot

Virtual private cloud

Your VPCs

Subnets

Route tables

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Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Salman-Private2-RT

Salman-Private1-RT

Salman-Public-RT

rtb-0fa7ad84c846a4de1 / Salman-Private1-RT

Details Routes Subnet associations Edge associations Route propagation Tags

Explicit subnet associations (0)

Find subnet association

Name Subnet ID IPv4 CIDR IPv6 CIDR

26. Now Repeat like Private-1 to Private-2

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Find resources by attribute or tag

Name Route table ID Explicit subnet associ... Edge associations Main

Salman-Private2-RT

Salman-Private1-RT

Salman-Public-RT

rtb-0b55c01c4ab9b68fb / Salman-Private2-RT

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (1)

Filter routes

Destination Target Status Propagated

120.0.0.0/16 local Active No

27. Allow Natgateway

VPC > Route tables > rtb-0b55c01c4ab9b68fb > Edit routes

Edit routes

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

nat-08cad47f62eca9813

Use: "nat-08cad47f62eca9813"

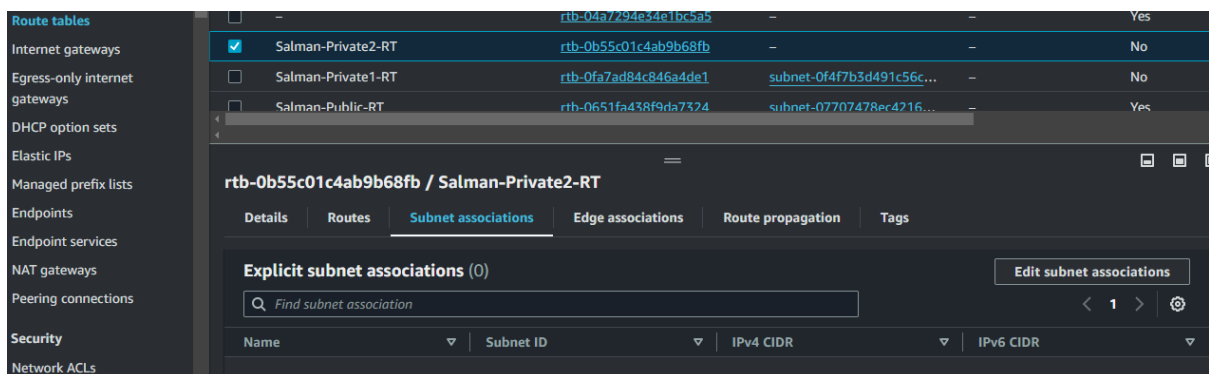
nat-08cad47f62eca9813 (Salman-NGW)

nat-09a6975f0417b06f9

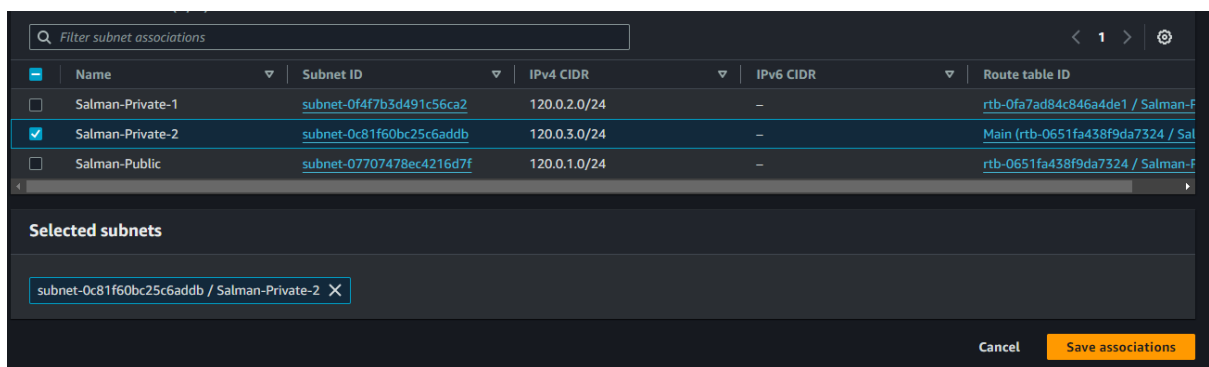
Add route

Cancel Preview Save changes

28. Now Come Again Select Subnet Associations and Click Edit



29. Attach Like This for Private-1 which I Forgott to Attach the Screenshot



Thank You